

DATE IN 4.29.11	SUSPENSE	ENGINEER DKB	LOGGED IN 4.29.11	TYPE NSL	APP NO. 1111956915
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



RECEIVED 6/37
2011 APR 29 P 12:40

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

Cotton Draw Un
#150, 153, 159,
160 & 161

- [1] TYPE OF APPLICATION - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD
 Check One Only for [B] or [C]
 [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
 [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR
 [D] Other: Specify _____

5 wells -
30-015-38536
-38535
-38952
-38433
-38432

- [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply
 [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

Feed
Eddy

- [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

- [4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Sam McCurdy		Landman	4/26/2011
Print or Type Name	Signature	Title	Date
		Sam.McCurdy@divn.com	
		e-mail Address	



Sam McCurdy
Landman

Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260
Phone 405-228-2406
Fax 405-552-8113

April 26, 2011

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: David Brooks

RE: Cotton Draw Unit
#150, #153, #154, #160 & #161
Section 34 T24S-R31E,
Sections 2 & 3 T25S-R31E
Eddy County, New Mexico

30-015-38536
30-015-38535
30-015-38952
5 wells
30-015-38433
30-015-38432

Gentlemen:

Devon Energy Production Company, L.P. ("Devon"), as Operator, intends to drill the referenced horizontal Delaware formation wells with permitted SHL, BHL, TVD & TMD as follows:

Section 34, Township 24 South, Range 31 East, Eddy County, NM

Cotton Draw Unit #150H:	SHL: 330' FNL & 660' FEL
	BHL: 200' FSL & 660' FEL
	TVD: 8,245'; TMD: 12,660'

Section 2, Township 25 South, Range 31 East, Eddy County, NM

Cotton Draw Unit #160H:	SHL: 200' FNL & 2160' FWL
	BHL: 200' FSL & 1980' FWL
	TVD: 8,250'; TMD: 12,878'

Cotton Draw Unit #161H:	SHL: 200' FNL & 440' FWL
	BHL: 200' FSL & 660' FWL
	TVD: 8,262'; TMD: 12,871'

Section 3, Township 25 South, Range 31 East, Eddy County, NM

Cotton Draw Unit #153H:	SHL: 200' FNL & 1980' FEL
	BHL: 400' FSL & 1980' FEL
	TVD: 8,238'; TMD: 12,636'

Cotton Draw Unit #154H:	SHL: 200' FNL & 660' FEL
	BHL: 330' FSL & 660' FEL
	TVD: 8,240'; TMD: 12,725'

Devon will penetrate the target formation at a non-standard location for the wells listed below in an effort to maximize the productive length of the wellbore. Because of this Devon will penetrate the top of the target Delaware formation at non-standard locations of:

Cotton Draw Unit #153H	200' FNL & 1980' FEL
Cotton Draw Unit #154H	200' FNL & 660' FEL
Cotton Draw Unit #160H	200' FNL & 2160' FWL
Cotton Draw Unit #161H	200' FNL & 440' FWL

After penetrating the Delaware formation at the above listed locations, Devon will continue drilling through the referenced formation with the horizontal portion of the wellbore. Although the target formation will be penetrated at a non-standard location the highest perforation in the well will not occur closer than 330' to the outer boundary of the project area. By spotting the surface hole location 200' from the section line, this allows for room to build the curve and land horizontally at a standard location within the target Delaware interval.

Devon will drill the following wells through the target formation until the bottom hole location reaches non-standard locations of:

Cotton Draw Unit #150H	200' FSL & 660' FEL
Cotton Draw Unit #160H	200' FSL & 1980' FWL
Cotton Draw Unit #161H	200' FSL & 660' FWL

By spotting the bottom hole location 200' from the outer boundary, this allows room to drill sufficient rathole for casing shoe joints. According to Division rules, the above mentioned penetration points would be classified as non-standard locations.

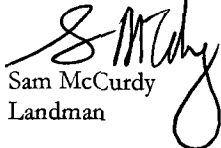
Devon respectfully requests that the Commission administratively approve this application for a non-standard location in accordance with Division Rule 104(F) (3). These non-standard locations affect the leasehold owners as follows: The Cotton Draw Unit #150H affects the leasehold owner in unit letter A of Section 3-T25S-R31E, Eddy County, NM. The Cotton Draw Unit #153H affects the leasehold owner in unit letter O of Section 34-T24S-R31E, Eddy County, NM. The Cotton Draw Unit #154H affects the leasehold owner in unit letter P of Section 34-T24S-R31E, Eddy County, NM. The Cotton Draw Unit #160H affects the leasehold owner in unit letters N & O of Section 35-T24S-R31E, Eddy County, NM and unit letter C of Section 11-T25S-R31E, Eddy County, NM. The Cotton Draw Unit #161H affects the leasehold owner in unit letter M of Section 35-T24S-R31E, Eddy County, NM and unit letter D of Section 11-T25S-R31E, Eddy County, NM. The ownership in all affected units is the same as the ownership in the wells; therefore no additional notification should be required as only working interest parties are affected.

Attached for your review you will find a structure map on top of the Delaware formation, Weatherford Drilling Services drilling plans for each of the five (5) wells, a land plat reflecting the affected parties and a State of New Mexico form C-102 for each of the five (5) wells.

Feel free to contact the undersigned at (405) 228-2406 if there are any concerns or questions regarding this application.

Yours very truly,

DEVON ENERGY PRODUCTION COMPANY, L.P.


Sam McCurdy
Landman

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT *under 5 Acre*

¹ API Number		² Pool Code		³ Pool Name DELAWARE ; BRUSHY CANYON					
⁴ Property Code		⁵ Property Name COTTON DRAW UNIT						⁶ Well Number 150-H	
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.						⁹ Elevation 3495.0	
¹⁰ Surface Location									
UL or lot no. A	Section 34	Township 24 S	Range 31 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 660	East/West line EAST	County EDDY
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. P	Section 34	Township 24 S	Range 31 E	Lot Idn	Feet from the 200	North/South line SOUTH	Feet from the 660	East/West line EAST	County EDDY
¹² Dedicated Acres 160		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.

COTTON DRAW UNIT #150 ELEV = 3495.0' LAT. = 32°10'48.68"N(NAD83) LONG. = 103°45'33.35"W NMSP EAST (FT) N = 428702.94 E = 718952.92		SURFACE LOCATION 660' 330'	
NE CORNER SEC. 34 LAT. = 32°10'51.95"N LONG. = 103°45'25.66"W NMSP EAST (FT) N = 430036.93 E = 719612.25			
SW CORNER SEC. 34 LAT. = 32°10'00.71"N LONG. = 103°46'26.95"W NMSP EAST (FT) N = 424829.32 E = 714369.93		BOTTOM OF HOLE LAT. = 32°10'02.40"N LONG. = 103°45'33.54"W NMSP EAST (FT) N = 425024.77 E = 718960.85	
		BOTTOM OF HOLE 200' 660'	
17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature <i>Spence Laird</i> 11/12/11 Printed Name Spence Laird, Devon Energy			
18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NOVEMBER 24, 2011 MEXICO Date of Survey Signature and Seal of Professional Surveyor Certificate Number: JILMON JARAMILLO, PLS 12797 SURVEY NO. 229			

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-102

Revised October 15, 2009

Submit one copy to appropriate

District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

¹ API Number	² Pool Code	³ Pool Name <i>under</i> Cotton Draw DELAWARE ; BRUSHY CANYON
⁴ Property Code	⁵ Property Name COTTON DRAW UNIT	⁶ Well Number 153 H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3445.4

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
B	3	25 S	31 E		200	NORTH	1980	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
O	3	25 S	31 E		400	SOUTH	1980	EAST	EDDY

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

NW CORNER SEC. 3 LAT. = 32.166863°N LONG. = 103.774154°W NMSP EAST (FT) N = 424829.32 E = 714369.93	200' SURFACE LOCATION 1980' NE CORNER SEC. 3 LAT. = 32.166774°N LONG. = 103.757183°W NMSP EAST (FT) N = 424824.54 E = 719621.10	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Spence Laird</i> 1/12/11 Signature Date Printed Name Spence Laird, Devon Energy
COTTON DRAW UNIT #153 ELEV. = 3445.4' LAT. = 32.166255°N (NAD83) LONG. = 103.763584°W NMSP EAST (FT) N = 424625.12 E = 717642.60		
SW CORNER SEC. 3 LAT. = 32.152289°N LONG. = 103.774360°W NMSP EAST (FT) N = 419518.48 E = 714333.76	400' BOTTOM OF HOLE 1980' SE CORNER SEC. 3 LAT. = 32.152267°N LONG. = 103.757231°W NMSP EAST (FT) N = 419545.75 E = 719636.14	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. DECEMBER 12, 2010 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number FILMON P. JARAMILLO, PLS 12797 SURVEY NO. 232

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 15, 2009

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name <i>under 50 Acres</i> DELAWARE ; BRUSHY CANYON
⁴ Property Code	⁵ Property Name COTTON DRAW UNIT	⁶ Well Number 154
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3452.7

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	3	25 S	31 E		200	NORTH	660	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	3	25 S	31 E		330	SOUTH	660	EAST	EDDY

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

NW CORNER SEC. 3 LAT. = 32.166863°N LONG. = 103.774154°W NMSP EAST (FT) N = 424829.32 E = 714369.93	COTTON DRAW UNIT #154 ELEV. = 3452.7' LAT. = 32.166234°N (NAD83) LONG. = 103.759319°W NMSP EAST (FT) N = 424828.70 E = 718962.78	200' SURFACE LOCATION NE CORNER SEC. 3 LAT. = 32.166774°N LONG. = 103.757188°W NMSP EAST (FT) N = 424824.54 E = 719621.10	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Spence Laird</i> 1/13/11 Signature Date Printed Name Spence Laird, Devon Energy
BOTTOM OF HOLE LAT. = 32.153174°N (NAD83) LONG. = 103.759354°W NMSP EAST (FT) N = 419872.44 E = 718977.07	SE CORNER SEC. 3 LAT. = 32.152267°N LONG. = 103.757231°W NMSP EAST (FT) N = 419545.75 E = 719636.14	330' BOTTOM OF HOLE	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. DECEMBER 14, 2010 Date of Survey <i>Edmon F. Jaramillo</i> Signature and Seal of Professional Surveyor Certificate Number: EDMON F. JARAMILLO, PLS 12797 SURVEY NO. 233

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102
 Permit 125861

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-015-38432	2. Pool Code 96757	3. Pool Name <i>5 Cotton Draw</i> COTTON DRAW; DELAWARE SOUTH (O)
4. Property Code 300635	5. Property Name COTTON DRAW UNIT	6. Well No. 160H
7. OGRID No. 6137	8. Operator Name DEVON ENERGY PRODUCTION COMPANY, LP	9. Elevation 3463

10. Surface Location

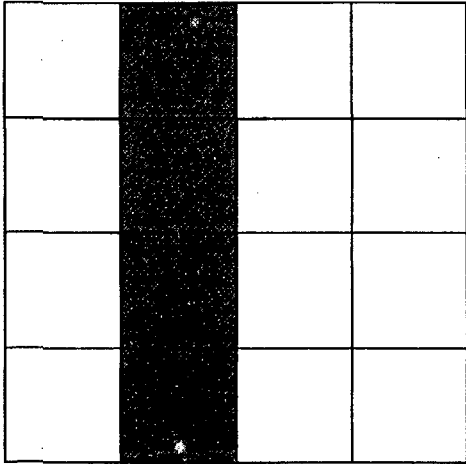
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
3	2	25S	31E		200	N	2160	W	EDDY

11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
N	2	25S	31E		200	S	1980	W	EDDY

12. Dedicated Acres 159.88	13. Joint or Infill	14. Consolidation Code	15. Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION <i>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(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> E-Signed By: Randy Bolles Title: Date: 1/21/2011 SURVEYOR CERTIFICATION <i>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.</i> Surveyed By: Filimon Jaramillo Date of Survey: 11/24/2010 Certificate Number: 12797
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District I

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District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102
 Permit 125863

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-015-38433	2. Pool Code 96757	3. Pool Name <i>3 Cotton Draw</i> COTTON DRAW;DELAWARE SOUTH (O)
4. Property Code 300635	5. Property Name COTTON DRAW UNIT	6. Well No. 161H
7. OGRID No. 6137	8. Operator Name DEVON ENERGY PRODUCTION COMPANY, LP	9. Elevation 3457

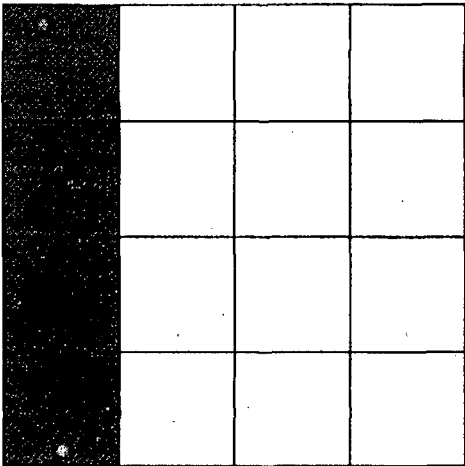
10. Surface Location

UL - Lot 4	Section 2	Township 25S	Range 31E	Lot Idn	Feet From 200	N/S Line N	Feet From 440	E/W Line W	County EDDY
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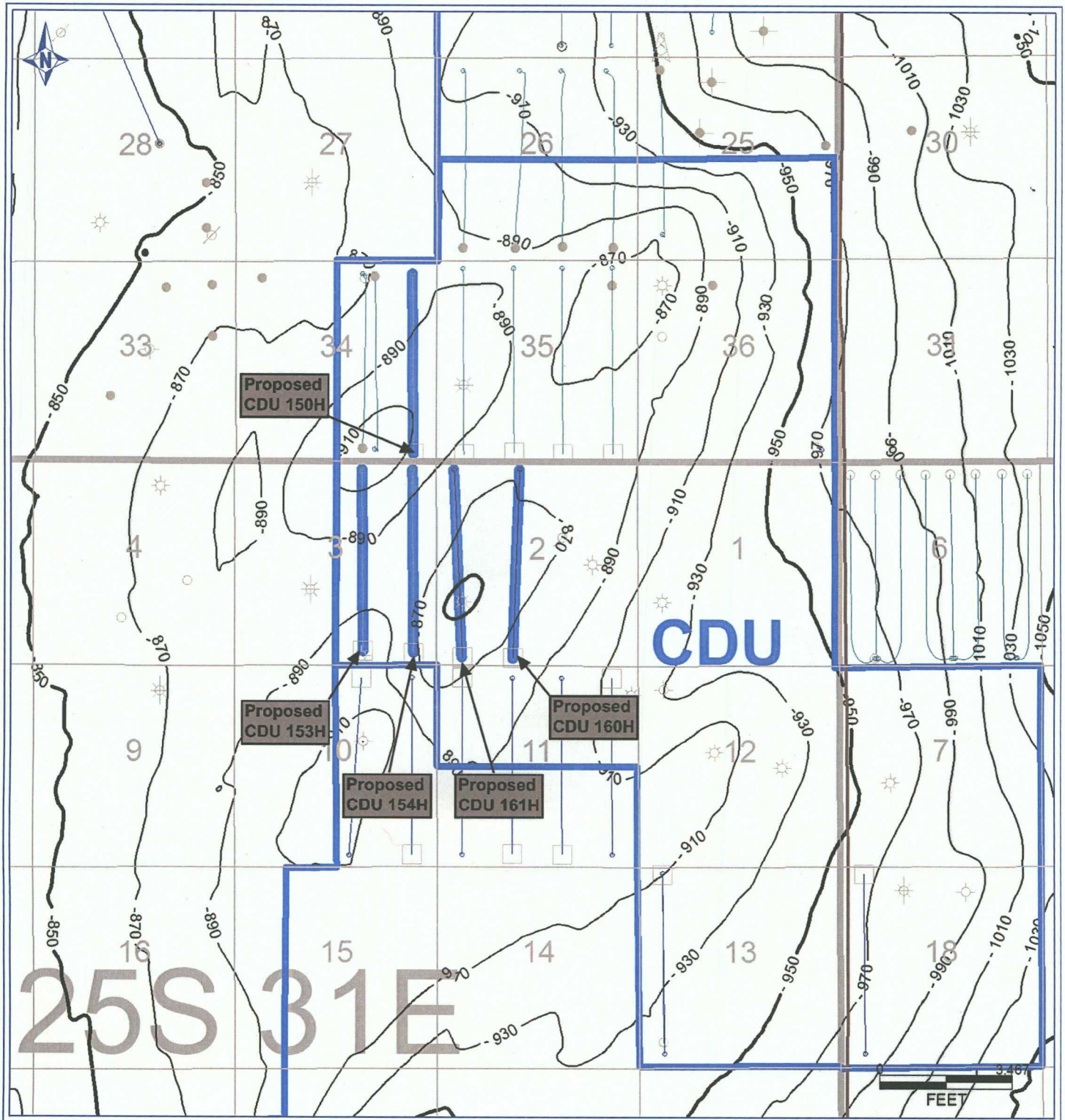
11. Bottom Hole Location If Different From Surface

UL - Lot M	Section 2	Township 25S	Range 31E	Lot Idn	Feet From 200	N/S Line S	Feet From 660	E/W Line W	County EDDY
12. Dedicated Acres 159.66		13. Joint or Infill		14. Consolidation Code		15. Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION <i>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(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> E-Signed By: Randy Bolles Title: Date: 1/21/2011		
	SURVEYOR CERTIFICATION <i>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.</i> Surveyed By: Filimon Jaramillo Date of Survey: 11/24/2010 Certificate Number: 12797		

Cotton Draw Area Delaware Mtn Group Subsea Structure





Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW UNIT #150H

EDDY COUNTY, NM

WELL FILE. PLAN 1

JANUARY 10, 2011

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com



Cotton Draw #150H
Eddy Co., New Mexico

SECTION DETAILS

Sec	MD	Inc	Asi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7655.05	89.76	179.90	7655.05	0.00	0.00	0.00	0.00	0.00	0.00
3	8553.68	89.76	179.90	8553.68	-578.59	0.97	10.00	179.90	578.59	578.59
4	12660.30	89.76	179.90	8245.00	-4678.17	7.93	0.00	0.00	4678.18	Pbhl

WELL DETAILS

Name	+N-S	+E-W	North	East	Latitude	Longitude	Slot
#150H	0.00	0.00	429702.94	718952.92	32°10'48.094N	103°45'33.273W	N/A

TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Shape
Pbhl	8245.00	-4678.17	7.93	425024.77	718960.85	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 Unit #150H
Site Centre Northing: 429702.94
Easting: 718952.92
Ground Level: 3495.00
Positional Uncertainty: 0.00
Convergence: 0.31

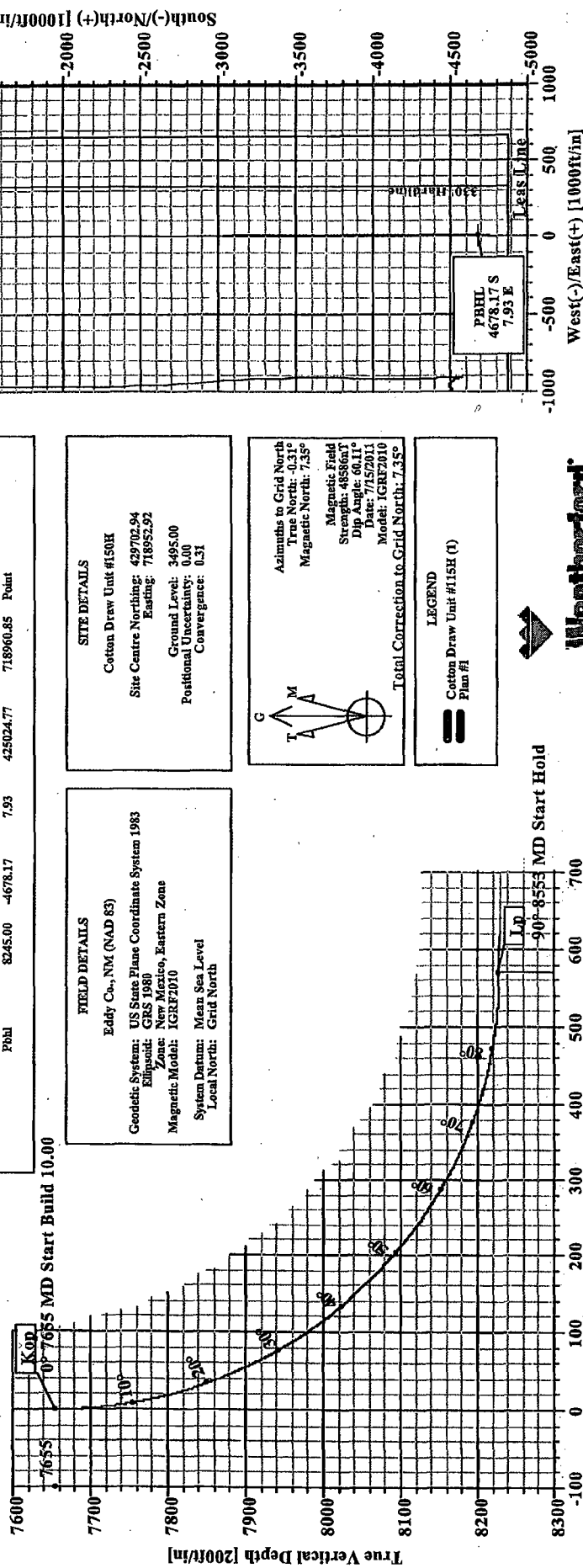
Azimuths to Grid North
True North: -0.31°
Magnetic North: 7.35°
Magnetic Field
Strength: 48860 nT
Dip Angle: 60.11°
Date: 7/15/2011
Model: IGRF2010
Total Correction to Grid North: 7.35°

LEGEND
= Cotton Draw Unit #150H (1)
Plan #1



Weatherford

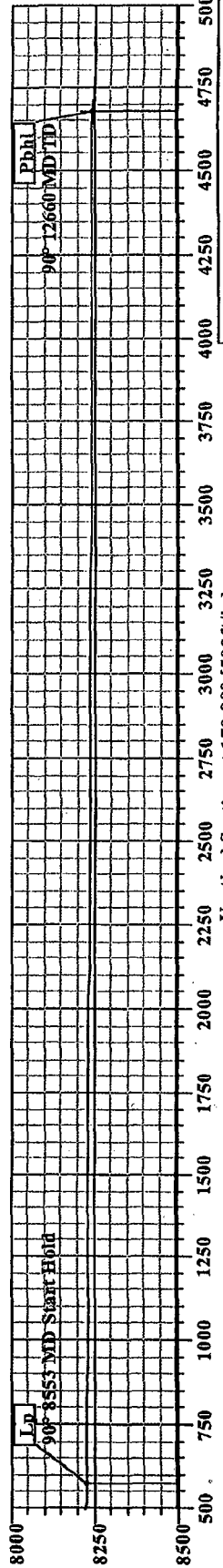
KB ELEV: 3520
GL ELEV: 3495



True Vertical Depth [500ft/in]

Vertical Section at 179.90° [200ft/in]

Vertical Section at 179.90° [500ft/in]



Vertical Section at 179.90° [500ft/in]

Plan: Plan #1 (#150H/1)

Created By: Russell W. Joyner

Date: 1/10/2011



Company: Devon Energy Field: Eddy Co., NM (NAD 83) Site: Cotton Draw Unit #150H Well: #150H Wellpath: 1		Date: 1/8/2011 Co-ordinate(NE) Reference: Well: #150H, Grid North Vertical (TVD) Reference: SITE 3520.0 Section (VS) Reference: Well (0.00N,0.00E,179.90Azi) Survey Calculation Method: Minimum Curvature		Time: 16:38:36 Page: 1 Db: Sybase						
Plan: Plan #1 Principal: Yes		Date Composed: 1/8/2011 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 Unit #150H										
Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 3495.00 ft		Northing: 429702.94 ft Easting: 718952.92 ft Latitude: 32 10 48.094 N Longitude: 103 45 33.273 W North Reference: Grid Grid Convergence: 0.31 deg								
Well: #150H Well Position: +N/-S 0.00 ft Position Uncertainty: 0.00 ft		Slot Name: Northing: 429702.94 ft Easting: 718952.92 ft Latitude: 32 10 48.094 N Longitude: 103 45 33.273 W								
Wellpath: 1 Current Datum: SITE Magnetic Data: 7/15/2011 Field Strength: 48586 nT Vertical Section: Depth From (TVD) ft		Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 7.66 deg Mag Dip Angle: 60.11 deg +E/-W ft Direction deg								
8245.00		0.00		0.00	179.90					
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	179.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7655.05	0.00	179.90	7655.05	0.00	0.00	0.00	0.00	0.00	0.00	
8552.68	89.76	179.90	8228.00	-570.59	0.97	10.00	10.00	0.00	179.90	
12660.30	89.76	179.90	8245.00	-4678.17	7.93	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
7600.00	0.00	179.90	7600.00	0.00	0.00	0.00	0.00	429702.94	718952.92	
7655.05	0.00	179.90	7655.05	0.00	0.00	0.00	0.00	429702.94	718952.92	Kop
7700.00	4.50	179.90	7699.95	-1.76	0.00	1.76	10.00	429701.18	718952.92	
7800.00	14.50	179.90	7798.46	-18.24	0.03	18.24	10.00	429684.70	718952.95	
7900.00	24.50	179.90	7892.61	-51.57	0.09	51.57	10.00	429651.37	718953.01	
8000.00	34.50	179.90	7979.54	-100.74	0.17	100.74	10.00	429602.20	718953.09	
8100.00	44.50	179.90	8056.61	-164.26	0.28	164.26	10.00	429538.68	718953.20	
8200.00	54.50	179.90	8121.47	-240.20	0.41	240.20	10.00	429462.74	718953.33	
8300.00	64.50	179.90	8172.17	-326.25	0.55	326.25	10.00	429376.69	718953.47	
8400.00	74.50	179.90	8207.16	-419.79	0.71	419.79	10.00	429283.15	718953.63	
8500.00	84.50	179.90	8225.36	-517.99	0.88	517.99	10.00	429184.95	718953.80	
8552.68	89.76	179.90	8228.00	-570.59	0.97	570.59	10.00	429132.35	718953.89	Lp
8600.00	89.76	179.90	8228.20	-617.91	1.05	617.91	0.00	429085.03	718953.97	
8700.00	89.76	179.90	8228.61	-717.91	1.22	717.91	0.00	428985.03	718954.14	
8800.00	89.76	179.90	8229.03	-817.91	1.39	817.91	0.00	428885.03	718954.31	
8900.00	89.76	179.90	8229.44	-917.90	1.56	917.91	0.00	428785.04	718954.48	
9000.00	89.76	179.90	8229.85	-1017.90	1.73	1017.90	0.00	428685.04	718954.65	



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #150H
Well: #150H
Wellpath: 1

Date: 1/8/2011 Time: 16:38:36 Page: 2
Co-ordinate(NE) Reference: Well: #150H, Grid North
Vertical (TVD) Reference: SITE 3520.0
Section (VS) Reference: Well (0.00N,0.00E,179.90Azi)
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
9100.00	89.76	179.90	8230.27	-1117.90	1.89	1117.90	0.00	428585.04	718954.81	
9200.00	89.76	179.90	8230.68	-1217.90	2.06	1217.90	0.00	428485.04	718954.98	
9300.00	89.76	179.90	8231.09	-1317.90	2.23	1317.90	0.00	428385.04	718955.15	
9400.00	89.76	179.90	8231.51	-1417.90	2.40	1417.90	0.00	428285.04	718955.32	
9500.00	89.76	179.90	8231.92	-1517.90	2.57	1517.90	0.00	428185.04	718955.49	
9600.00	89.76	179.90	8232.34	-1617.90	2.74	1617.90	0.00	428085.04	718955.66	
9700.00	89.76	179.90	8232.75	-1717.90	2.91	1717.90	0.00	427985.04	718955.83	
9800.00	89.76	179.90	8233.16	-1817.90	3.08	1817.90	0.00	427885.04	718956.00	
9900.00	89.76	179.90	8233.58	-1917.89	3.25	1917.90	0.00	427785.05	718956.17	
10000.00	89.76	179.90	8233.99	-2017.89	3.42	2017.90	0.00	427685.05	718956.34	
10100.00	89.76	179.90	8234.41	-2117.89	3.59	2117.90	0.00	427585.05	718956.51	
10200.00	89.76	179.90	8234.82	-2217.89	3.76	2217.89	0.00	427485.05	718956.68	
10300.00	89.76	179.90	8235.23	-2317.89	3.93	2317.89	0.00	427385.05	718956.85	
10400.00	89.76	179.90	8235.65	-2417.89	4.10	2417.89	0.00	427285.05	718957.02	
10500.00	89.76	179.90	8236.06	-2517.89	4.27	2517.89	0.00	427185.05	718957.19	
10600.00	89.76	179.90	8236.47	-2617.89	4.44	2617.89	0.00	427085.05	718957.36	
10700.00	89.76	179.90	8236.89	-2717.89	4.61	2717.89	0.00	426985.05	718957.53	
10800.00	89.76	179.90	8237.30	-2817.89	4.78	2817.89	0.00	426885.05	718957.70	
10900.00	89.76	179.90	8237.72	-2917.88	4.95	2917.89	0.00	426785.06	718957.87	
11000.00	89.76	179.90	8238.13	-3017.88	5.12	3017.89	0.00	426685.06	718958.04	
11100.00	89.76	179.90	8238.54	-3117.88	5.29	3117.89	0.00	426585.06	718958.21	
11200.00	89.76	179.90	8238.96	-3217.88	5.45	3217.89	0.00	426485.06	718958.37	
11300.00	89.76	179.90	8239.37	-3317.88	5.62	3317.89	0.00	426385.06	718958.54	
11400.00	89.76	179.90	8239.78	-3417.88	5.79	3417.88	0.00	426285.06	718958.71	
11500.00	89.76	179.90	8240.20	-3517.88	5.96	3517.88	0.00	426185.06	718958.88	
11600.00	89.76	179.90	8240.61	-3617.88	6.13	3617.88	0.00	426085.06	718959.05	
11700.00	89.76	179.90	8241.03	-3717.88	6.30	3717.88	0.00	425985.06	718959.22	
11800.00	89.76	179.90	8241.44	-3817.88	6.47	3817.88	0.00	425885.06	718959.39	
11900.00	89.76	179.90	8241.85	-3917.87	6.64	3917.88	0.00	425785.07	718959.56	
12000.00	89.76	179.90	8242.27	-4017.87	6.81	4017.88	0.00	425685.07	718959.73	
12100.00	89.76	179.90	8242.68	-4117.87	6.98	4117.88	0.00	425585.07	718959.90	
12200.00	89.76	179.90	8243.10	-4217.87	7.15	4217.88	0.00	425485.07	718960.07	
12300.00	89.76	179.90	8243.51	-4317.87	7.32	4317.88	0.00	425385.07	718960.24	
12400.00	89.76	179.90	8243.92	-4417.87	7.49	4417.88	0.00	425285.07	718960.41	
12500.00	89.76	179.90	8244.34	-4517.87	7.66	4517.87	0.00	425185.07	718960.58	
12600.00	89.76	179.90	8244.75	-4617.87	7.83	4617.87	0.00	425085.07	718960.75	
12660.30	89.76	179.90	8245.00	-4678.17	7.93	4678.18	0.00	425024.77	718960.85	Pbhl

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			8245.00	-4678.17	7.93	425024.77	718960.85	32	10	1.800 N	103	45	33.471 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #150H
Well: #150H
Wellpath: 1

Date: 1/8/2011 Time: 16:38:36 Page: 3
Co-ordinate(NE) Reference: Well: #150H, Grid North
Vertical (TVD) Reference: SITE 3520.0
Section (VS) Reference: Well (0.00N,0.00E,179.90Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD ft	
7655.05	7655.05	Kop
8552.68	8228.00	Lp
12660.30	8245.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

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

GeoDec v5.03

Report Date: January 10, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #150H
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 429702.940 USFT	Latitude 32.1800283 DEG
East/West 718952.920 USFT	Longitude -103 7592379 DEG
Grid Convergence: .31°	
Total Correction: +7.35°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.18003° N	32° 10 min 48.102 sec
Longitude =	103.75924° W	103° 45 min 33.257 sec

Magnetic Declination =	7.66°	[True North Offset]	
Local Gravity =	.9988 g	Checksum =	6518
Local Field Strength =	48582 nT	Magnetic Vector X =	23993 nT
Magnetic Dip =	60.11°	Magnetic Vector Y =	3227 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42121 nT
Spud Date =	Jul 15, 2011	Magnetic Vector H =	24209 nT

Signed: _____

Date: _____



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW UNIT #153H

EDDY COUNTY, NM

WELL FILE: PLAN 1

JANUARY 10, 2011

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com



Cotton Draw #153H
Eddy Co., New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.82	0.00	0.00	0.00	0.00	0.00	0.00	
2	7620.07	0.00	179.82	7620.07	0.00	0.00	0.00	0.00	0.00	
3	8513.82	89.37	179.82	8193.00	-566.70	1.76	10.00	179.82	566.70	Pbhl
4	12636.71	89.37	179.82	8238.00	-4689.32	14.60	0.00	0.00	4689.34	Pbhl

WELL DETAILS

Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
#153H	0.00	0.00	424625.12	717642.60	32°09'57.914N	103°45'48.832W	N/A

KB ELEV: 3470
GL ELEV: 3445

TARGET DETAILS

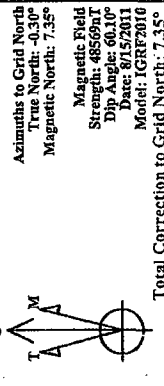
Name	TV	+N-S	+E-W	Northing	Easting	Surge	Point
Pbhl	8238.00	-4689.32	14.60	419935.80	717657.20		

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 Unit #153H
Site Centre Northing: 424625.12
Easting: 717642.60
Ground Level: 3445.00
Positional Uncertainty: 0.00
Convergence: 0.30

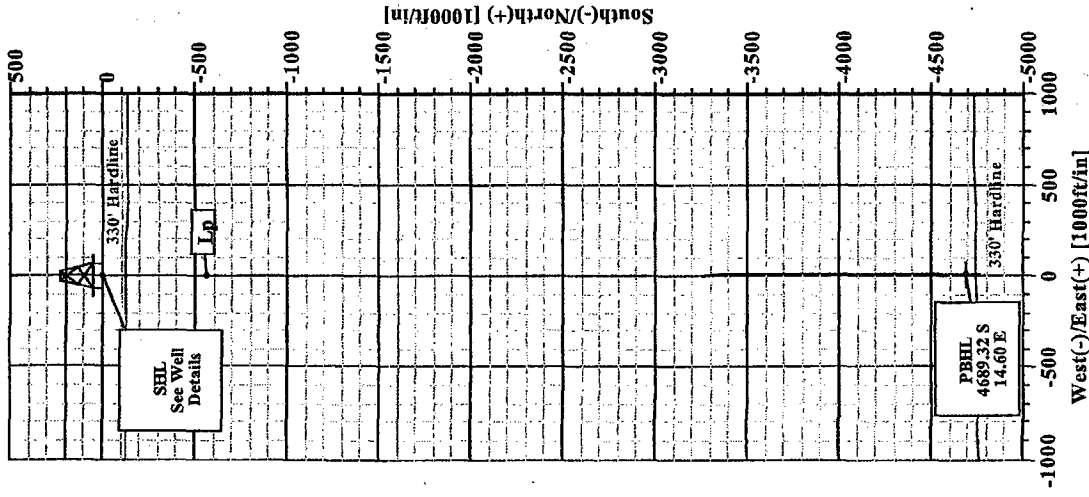
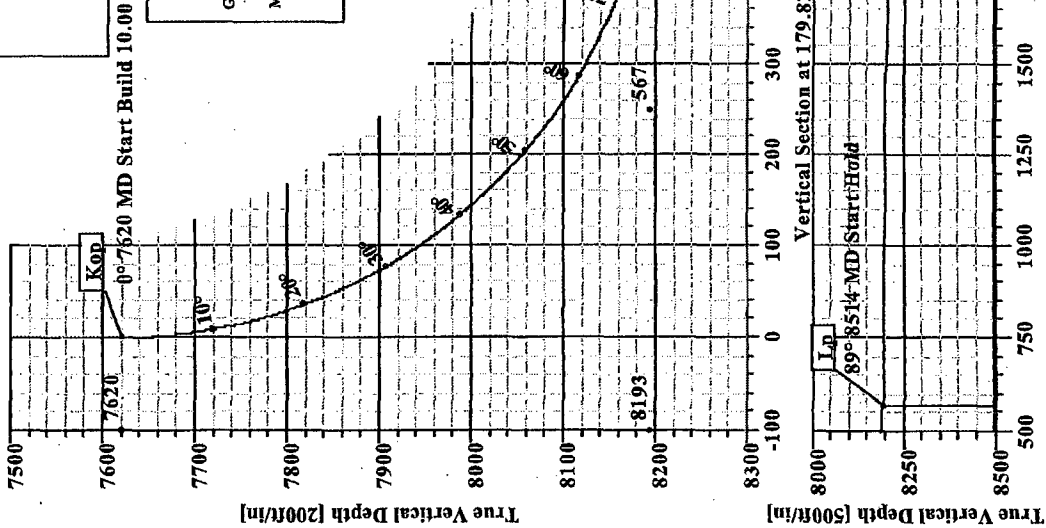


LEGEND

Plan #1



Weatherford



Plan: Plan #1 (#153H/I)

Created By: Russell W. Joyner

Date: 1/10/2011



Company: Devon Energy	Date: 1/10/2011	Time: 09:24:01	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #153H, Grid North		
Site: Cotton Draw Unit #153H	Vertical (TVD) Reference: SITE 3470.0		
Well: #153H	Section (VS) Reference: Well (0.00N,0.00E,179.82Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 1/10/2011
	Version: 1
Principal: Yes	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 Unit #153H

Site Position:	Northing: 424625.12 ft	Latitude: 32 9 57.914 N
From: Map	Easting: 717642.60 ft	Longitude: 103 45 48.832 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3445.00 ft		Grid Convergence: 0.30 deg

Well: #153H

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 424625.12 ft	Latitude: 32 9 57.914 N
+E/-W 0.00 ft	Easting: 717642.60 ft	Longitude: 103 45 48.832 W
Position Uncertainty: 0.00 ft		

Wellpath: 1

Drilled From: Surface

Current Datum: SITE	Height 3470.00 ft	Tie-on Depth: 0.00 ft
Magnetic Data: 8/15/2011		Above System Datum: Mean Sea Level
Field Strength: 48569 nT		Declination: 7.65 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.10 deg
ft	ft	+E/-W
		ft
		Direction
		deg
8238.00	0.00	0.00 179.82

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	179.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7620.07	0.00	179.82	7620.07	0.00	0.00	0.00	0.00	0.00	0.00	
8513.82	89.37	179.82	8193.00	-566.70	1.76	10.00	10.00	0.00	179.82	
12636.71	89.37	179.82	8238.00	-4689.32	14.60	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
7600.00	0.00	179.82	7600.00	0.00	0.00	0.00	0.00	424625.12	717642.60	
7620.07	0.00	179.82	7620.07	0.00	0.00	0.00	0.00	424625.12	717642.60	Kop
7700.00	7.99	179.82	7699.74	-5.57	0.02	5.57	10.00	424619.55	717642.62	
7800.00	17.99	179.82	7797.06	-28.02	0.09	28.02	10.00	424597.10	717642.69	
7900.00	27.99	179.82	7889.00	-67.03	0.21	67.03	10.00	424558.09	717642.81	
8000.00	37.99	179.82	7972.76	-121.41	0.38	121.41	10.00	424503.71	717642.98	
8100.00	47.99	179.82	8045.82	-189.52	0.59	189.52	10.00	424435.60	717643.19	
8200.00	57.99	179.82	8105.93	-269.27	0.84	269.27	10.00	424355.85	717643.44	
8300.00	67.99	179.82	8151.28	-358.25	1.12	358.25	10.00	424266.87	717643.72	
8400.00	77.99	179.82	8180.50	-453.76	1.41	453.76	10.00	424171.36	717644.01	
8500.00	87.99	179.82	8192.68	-552.88	1.72	552.89	10.00	424072.24	717644.32	
8513.82	89.37	179.82	8193.00	-566.70	1.76	566.70	10.00	424058.42	717644.36	Lp
8600.00	89.37	179.82	8193.94	-652.87	2.03	652.88	0.00	423972.25	717644.63	
8700.00	89.37	179.82	8195.03	-752.87	2.34	752.87	0.00	423872.25	717644.94	
8800.00	89.37	179.82	8196.12	-852.86	2.66	852.87	0.00	423772.26	717645.26	
8900.00	89.37	179.82	8197.21	-952.86	2.97	952.86	0.00	423672.26	717645.57	
9000.00	89.37	179.82	8198.31	-1052.85	3.28	1052.85	0.00	423572.27	717645.88	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #153H
Well: #153H
Wellpath: 1

Date: 1/10/2011 Time: 09:24:01 Page: 2
Co-ordinate(NE) Reference: Well: #153H, Grid North
Vertical (TVD) Reference: SITE 3470.0
Section (VS) Reference: Well (0.00N,0.00E,179.82Azi)
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
9100.00	89.37	179.82	8199.40	-1152.84	3.59	1152.85	0.00	423472.28	717646.19	
9200.00	89.37	179.82	8200.49	-1252.84	3.90	1252.84	0.00	423372.28	717646.50	
9300.00	89.37	179.82	8201.58	-1352.83	4.21	1352.84	0.00	423272.29	717646.81	
9400.00	89.37	179.82	8202.67	-1452.82	4.52	1452.83	0.00	423172.30	717647.12	
9500.00	89.37	179.82	8203.76	-1552.82	4.83	1552.82	0.00	423072.30	717647.43	
9600.00	89.37	179.82	8204.85	-1652.81	5.15	1652.82	0.00	422972.31	717647.75	
9700.00	89.37	179.82	8205.95	-1752.80	5.46	1752.81	0.00	422872.32	717648.06	
9800.00	89.37	179.82	8207.04	-1852.80	5.77	1852.81	0.00	422772.32	717648.37	
9900.00	89.37	179.82	8208.13	-1952.79	6.08	1952.80	0.00	422672.33	717648.68	
10000.00	89.37	179.82	8209.22	-2052.78	6.39	2052.79	0.00	422572.34	717648.99	
10100.00	89.37	179.82	8210.31	-2152.78	6.70	2152.79	0.00	422472.34	717649.30	
10200.00	89.37	179.82	8211.40	-2252.77	7.01	2252.78	0.00	422372.35	717649.61	
10300.00	89.37	179.82	8212.49	-2352.77	7.33	2352.78	0.00	422272.35	717649.93	
10400.00	89.37	179.82	8213.59	-2452.76	7.64	2452.77	0.00	422172.36	717650.24	
10500.00	89.37	179.82	8214.68	-2552.75	7.95	2552.76	0.00	422072.37	717650.55	
10600.00	89.37	179.82	8215.77	-2652.75	8.26	2652.76	0.00	421972.37	717650.86	
10700.00	89.37	179.82	8216.86	-2752.74	8.57	2752.75	0.00	421872.38	717651.17	
10800.00	89.37	179.82	8217.95	-2852.73	8.88	2852.75	0.00	421772.39	717651.48	
10900.00	89.37	179.82	8219.04	-2952.73	9.19	2952.74	0.00	421672.39	717651.79	
11000.00	89.37	179.82	8220.14	-3052.72	9.50	3052.74	0.00	421572.40	717652.10	
11100.00	89.37	179.82	8221.23	-3152.71	9.82	3152.73	0.00	421472.41	717652.42	
11200.00	89.37	179.82	8222.32	-3252.71	10.13	3252.72	0.00	421372.41	717652.73	
11300.00	89.37	179.82	8223.41	-3352.70	10.44	3352.72	0.00	421272.42	717653.04	
11400.00	89.37	179.82	8224.50	-3452.69	10.75	3452.71	0.00	421172.43	717653.35	
11500.00	89.37	179.82	8225.59	-3552.69	11.06	3552.71	0.00	421072.43	717653.66	
11600.00	89.37	179.82	8226.68	-3652.68	11.37	3652.70	0.00	420972.44	717653.97	
11700.00	89.37	179.82	8227.78	-3752.68	11.68	3752.69	0.00	420872.44	717654.28	
11800.00	89.37	179.82	8228.87	-3852.67	12.00	3852.69	0.00	420772.45	717654.60	
11900.00	89.37	179.82	8229.96	-3952.66	12.31	3952.68	0.00	420672.46	717654.91	
12000.00	89.37	179.82	8231.05	-4052.66	12.62	4052.68	0.00	420572.46	717655.22	
12100.00	89.37	179.82	8232.14	-4152.65	12.93	4152.67	0.00	420472.47	717655.53	
12200.00	89.37	179.82	8233.23	-4252.64	13.24	4252.66	0.00	420372.48	717655.84	
12300.00	89.37	179.82	8234.32	-4352.64	13.55	4352.66	0.00	420272.48	717656.15	
12400.00	89.37	179.82	8235.42	-4452.63	13.86	4452.65	0.00	420172.49	717656.46	
12500.00	89.37	179.82	8236.51	-4552.62	14.17	4552.65	0.00	420072.50	717656.77	
12600.00	89.37	179.82	8237.60	-4652.62	14.49	4652.64	0.00	419972.50	717657.09	
12636.71	89.37	179.82	8238.00	-4689.32	14.60	4689.34	0.00	419935.80	717657.20	Pbhl

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			8238.00	-4689.32	14.60	419935.80	717657.20	32 9 11.510 N	103 45 48.951 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #153H
Well: #153H
Wellpath: 1

Date: 1/10/2011 Time: 09:24:01 Page: 3
Co-ordinate(NE) Reference: Well: #153H, Grid North
Vertical (TVD) Reference: SITE 3470.0
Section (VS) Reference: Well (0.00N,0.00E,179.82Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD ft	
7620.07	7620.07	Kop
8513.82	8193.00	Lp
12636.70	8238.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

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

GeoDec v5.03

Report Date: January 10, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #153H
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 424625.120 USFT	Latitude 32.1660896 DEG
East/West 717642.600 USFT	Longitude 103.7635599 DEG
Grid Convergence: .30°	
Total Correction: +7.35°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.16609° N	32° 9 min 57.923 sec
Longitude =	103.76356° W	103° 45 min 48.816 sec

Magnetic Declination =	7.65°	[True North Offset]	
Local Gravity =	.9988 g	Checksum =	6509
Local Field Strength =	48565 nT	Magnetic Vector X =	23997 nT
Magnetic Dip =	60.10°	Magnetic Vector Y =	3224 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42099 nT
Spud Date =	Aug 15, 2011	Magnetic Vector H =	24212 nT

Signed: _____

Date: _____



Weatherford[®]

Drilling Services

Proposal



devon

COTTON DRAW UNIT #154H

EDDY COUNTY, NM

WELL FILE: PLAN 1

JANUARY 12, 2011

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com

devon

Cotton Draw #154H
Eddy Co., New Mexico

KB ELEV: 3478
GL ELEV: 3453

0° 7646 MD Start Build 10.00

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SECTION DETAILS									
Sec	MD	Inc	Ad	TVD	+N/-S	+E/-W	DLeg	IFace	VSec Target
1	0.00	0.00	179.83	0.00	0.00	0.00	0.00	0.00	0.00
2	7646.05	0.00	179.83	7646.05	0.00	0.00	0.00	0.00	0.00
3	8543.17	89.71	179.83	8219.00	-570.08	1.71	10.00	179.83	570.08
4	12725.43	89.71	179.83	8240.00	-4752.26	14.29	0.00	0.00	4752.26

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude	Slot
#154H	0.00	0.00	424624.70	718962.78	32°09'57.841N	105°45'33.474W	N/A

TARGET DETAILS

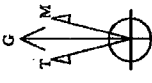
Name	TVD	+N/-S	+E/-W	Northing	Eastng	Shape
Pbhl	8240.00	-4752.26	14.29	419872.44	718977.07	Point

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 Unit #154H
Site Centre Northing: 424624.70
Eastng: 718962.78
Ground Level: 3453.00
Positional Uncertainty: 0.60
Convergence: 0.31



LEGEND

Plan #1

Weatherford

Vertical Section at 179.83° [200ft/in]

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0° 7646 MD Start Build 10.00

Vertical Section at 179.83° [200ft/in]

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0° 7646 MD Start Build 10.00

Vertical Section at 179.83° [500ft/in]

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0° 7646 MD Start Build 10.00

0° 7646 MD Start Build 10.00

0° 7646 MD Start Build 10.00

Vertical Section at 179.83° [1000ft/in]

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0° 7646 MD Start Build 10.00

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0° 7646 MD Start Build 10.00

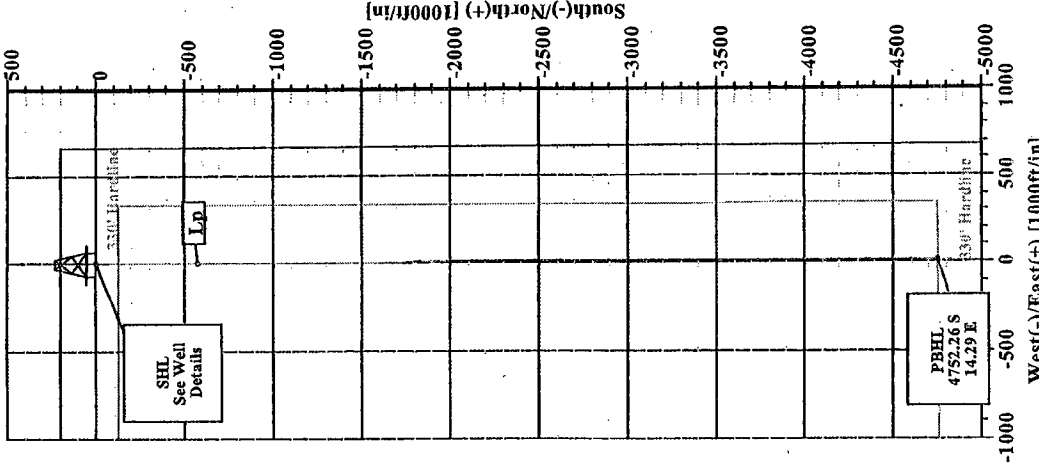
0° 7646 MD Start Build 10.00

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0° 7646 MD Start Build 10.00



Plan: Plan #1 (#154H/1)

Created By: R Joyner

Date: 1/12/2011

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

GeoDec v5.1.000

Report Date: January 12, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #154H
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 424624 700 USFT	Latitude 32 1660692 DEG
East/West 718962 780 USFT	Longitude 103.7592936 DEG
Grid Convergence: 30563616°	
Total Correction: +7.3329°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32 16607° N	32° 9 min 57.849 sec
Longitude =	103.75929° W	103° 45 min 33.457 sec

Magnetic Declination =	7.6390°	[True North Offset]
Local Gravity =	.9988 g	
Local Field Strength =	48557 nT	Magnetic Vector X = 23994 nT
Magnetic Dip =	60.0950°	Magnetic Vector Y = 3218 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42091 nT
Spud Date =	Sep 15, 2011	Magnetic Vector H = 24209 nT

Signed: _____

Date: _____



Weatherford International, Inc.

DIRECTIONAL PLAN REPORT

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #154H
Well: #154H
Wellpath: 1

Date: 1/12/2011 Time: 15:00:20 Page: 1
Co-ordinate(NE) Reference: Well: #154H, Grid North
Vertical (TVD) Reference: SITE 3478.0
Section (VS) Reference: Well (0.00N,0.00E,179.83Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1

Date Composed: 1/12/2011
Version: 1
Tied-to: From Surface

Principal: Yes

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 Unit #154H

Site Position: Northing: 424624.70 ft Latitude: 32 9 57.841 N
From: Map Easting: 718962.78 ft Longitude: 103 45 33.474 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3453.00 ft Grid Convergence: 0.31 deg

Well: #154H

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 424624.70 ft Latitude: 32 9 57.841 N
+E/-W 0.00 ft Easting: 718962.78 ft Longitude: 103 45 33.474 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.64 deg
Mag Dip Angle: 60.09 deg

Current Datum: SITE Height 3478.00 ft
Magnetic Data: 9/15/2011
Field Strength: 48561 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
8240.00 0.00

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	179.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7646.05	0.00	179.83	7646.05	0.00	0.00	0.00	0.00	0.00	0.00	
8543.17	89.71	179.83	8219.00	-570.08	1.71	10.00	10.00	0.00	179.83	
12725.43	89.71	179.83	8240.00	-4752.26	14.29	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
7600.00	0.00	179.83	7600.00	0.00	0.00	0.00	0.00	424624.70	718962.78	
7646.05	0.00	179.83	7646.05	0.00	0.00	0.00	0.00	424624.70	718962.78	Kop
7700.00	5.40	179.83	7699.92	-2.54	0.01	2.54	10.00	424622.16	718962.79	
7800.00	15.40	179.83	7798.15	-20.56	0.06	20.56	10.00	424604.14	718962.84	
7900.00	25.40	179.83	7891.77	-55.36	0.17	55.36	10.00	424569.34	718962.95	
8000.00	35.40	179.83	7977.91	-105.90	0.32	105.90	10.00	424518.80	718963.10	
8100.00	45.40	179.83	8053.98	-170.62	0.51	170.62	10.00	424454.08	718963.29	
8200.00	55.40	179.83	8117.64	-247.57	0.74	247.57	10.00	424377.13	718963.52	
8300.00	65.40	179.83	8166.98	-334.40	1.01	334.40	10.00	424290.30	718963.79	
8400.00	75.40	179.83	8200.49	-428.48	1.29	428.49	10.00	424196.22	718964.07	
8500.00	85.40	179.83	8217.16	-526.96	1.58	526.96	10.00	424097.74	718964.36	
8543.17	89.71	179.83	8219.00	-570.08	1.71	570.08	10.00	424054.62	718964.49	Lp
8600.00	89.71	179.83	8219.28	-626.91	1.89	626.91	0.00	423997.79	718964.67	
8700.00	89.71	179.83	8219.79	-726.90	2.19	726.91	0.00	423897.80	718964.97	
8800.00	89.71	179.83	8220.29	-826.90	2.49	826.91	0.00	423797.80	718965.27	
8900.00	89.71	179.83	8220.79	-926.90	2.79	926.90	0.00	423697.80	718965.57	
9000.00	89.71	179.83	8221.29	-1026.90	3.09	1026.90	0.00	423597.80	718965.87	



Weatherford International, Inc.

DIRECTIONAL PLAN REPORT

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #154H
Well: #154H
Wellpath: 1

Date: 1/12/2011 Time: 15:00:20 Page: 2
Co-ordinate(N/E) Reference: Well: #154H, Grid North
Vertical (TVD) Reference: SITE 3478.0
Section (VS) Reference: Well (0.00N,0.00E,179.83Azi)
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
9100.00	89.71	179.83	8221.80	-1126.90	3.39	1126.90	0.00	423497.80	718966.17	
9200.00	89.71	179.83	8222.30	-1226.89	3.69	1226.90	0.00	423397.81	718966.47	
9300.00	89.71	179.83	8222.80	-1326.89	3.99	1326.90	0.00	423297.81	718966.77	
9400.00	89.71	179.83	8223.30	-1426.89	4.29	1426.90	0.00	423197.81	718967.07	
9500.00	89.71	179.83	8223.80	-1526.89	4.59	1526.90	0.00	423097.81	718967.37	
9600.00	89.71	179.83	8224.31	-1626.89	4.89	1626.90	0.00	422997.81	718967.67	
9700.00	89.71	179.83	8224.81	-1726.89	5.19	1726.89	0.00	422897.81	718967.97	
9800.00	89.71	179.83	8225.31	-1826.88	5.49	1826.89	0.00	422797.82	718968.27	
9900.00	89.71	179.83	8225.81	-1926.88	5.79	1926.89	0.00	422697.82	718968.57	
10000.00	89.71	179.83	8226.31	-2026.88	6.09	2026.89	0.00	422597.82	718968.87	
10100.00	89.71	179.83	8226.82	-2126.88	6.40	2126.89	0.00	422497.82	718969.18	
10200.00	89.71	179.83	8227.32	-2226.88	6.70	2226.89	0.00	422397.82	718969.48	
10300.00	89.71	179.83	8227.82	-2326.88	7.00	2326.89	0.00	422297.82	718969.78	
10400.00	89.71	179.83	8228.32	-2426.87	7.30	2426.89	0.00	422197.83	718970.08	
10500.00	89.71	179.83	8228.83	-2526.87	7.60	2526.88	0.00	422097.83	718970.38	
10600.00	89.71	179.83	8229.33	-2626.87	7.90	2626.88	0.00	421997.83	718970.68	
10700.00	89.71	179.83	8229.83	-2726.87	8.20	2726.88	0.00	421897.83	718970.98	
10800.00	89.71	179.83	8230.33	-2826.87	8.50	2826.88	0.00	421797.83	718971.28	
10900.00	89.71	179.83	8230.83	-2926.87	8.80	2926.88	0.00	421697.83	718971.58	
11000.00	89.71	179.83	8231.34	-3026.86	9.10	3026.88	0.00	421597.84	718971.88	
11100.00	89.71	179.83	8231.84	-3126.86	9.40	3126.88	0.00	421497.84	718972.18	
11200.00	89.71	179.83	8232.34	-3226.86	9.70	3226.88	0.00	421397.84	718972.48	
11300.00	89.71	179.83	8232.84	-3326.86	10.00	3326.87	0.00	421297.84	718972.78	
11400.00	89.71	179.83	8233.34	-3426.86	10.30	3426.87	0.00	421197.84	718973.08	
11500.00	89.71	179.83	8233.85	-3526.86	10.61	3526.87	0.00	421097.84	718973.39	
11600.00	89.71	179.83	8234.35	-3626.85	10.91	3626.87	0.00	420997.85	718973.69	
11700.00	89.71	179.83	8234.85	-3726.85	11.21	3726.87	0.00	420897.85	718973.99	
11800.00	89.71	179.83	8235.35	-3826.85	11.51	3826.87	0.00	420797.85	718974.29	
11900.00	89.71	179.83	8235.86	-3926.85	11.81	3926.87	0.00	420697.85	718974.59	
12000.00	89.71	179.83	8236.36	-4026.85	12.11	4026.87	0.00	420597.85	718974.89	
12100.00	89.71	179.83	8236.86	-4126.85	12.41	4126.86	0.00	420497.85	718975.19	
12200.00	89.71	179.83	8237.36	-4226.84	12.71	4226.86	0.00	420397.86	718975.49	
12300.00	89.71	179.83	8237.86	-4326.84	13.01	4326.86	0.00	420297.86	718975.79	
12400.00	89.71	179.83	8238.37	-4426.84	13.31	4426.86	0.00	420197.86	718976.09	
12500.00	89.71	179.83	8238.87	-4526.84	13.61	4526.86	0.00	420097.86	718976.39	
12600.00	89.71	179.83	8239.37	-4626.84	13.91	4626.86	0.00	419997.86	718976.69	
12700.00	89.71	179.83	8239.87	-4726.83	14.21	4726.86	0.00	419897.87	718976.99	
12725.43	89.71	179.83	8240.00	-4752.26	14.29	4752.28	0.00	419872.44	718977.07	Pbhl

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			8240.00	-4752.26	14.29	419872.44	718977.07	32 9 10.813 N	103 45 33.602 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International, Inc.

DIRECTIONAL PLAN REPORT



Weatherford

Company: Devon Energy
Field: Eddy Co, NM (NAD 83)
Site: Cotton Draw Unit #154H
Well: #154H
Wellpath: 1

Date: 1/12/2011 Time: 15:00:20 Page: 3
Co-ordinate(NE) Reference: Well: #154H, Grid North
Vertical (TVD) Reference: SITE 3478.0
Section (VS) Reference: Well (0.00N,0.00E,179.83Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD ft	
7646.05	7646.05	Kop
8543.17	8219.00	Lp
12725.43	8240.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW UNIT #160H

EDDY COUNTY, NM

WELL FILE: PLAN 1

JANUARY 18, 2011

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

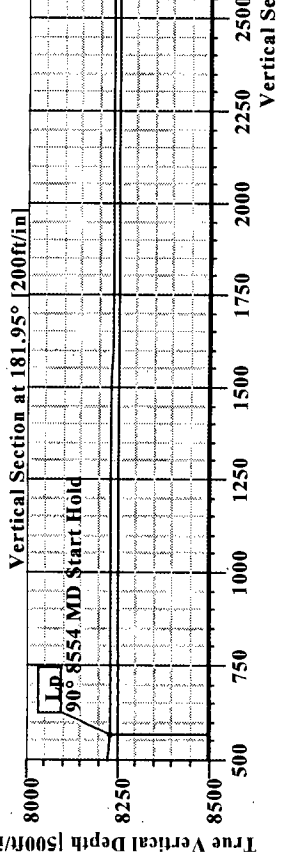
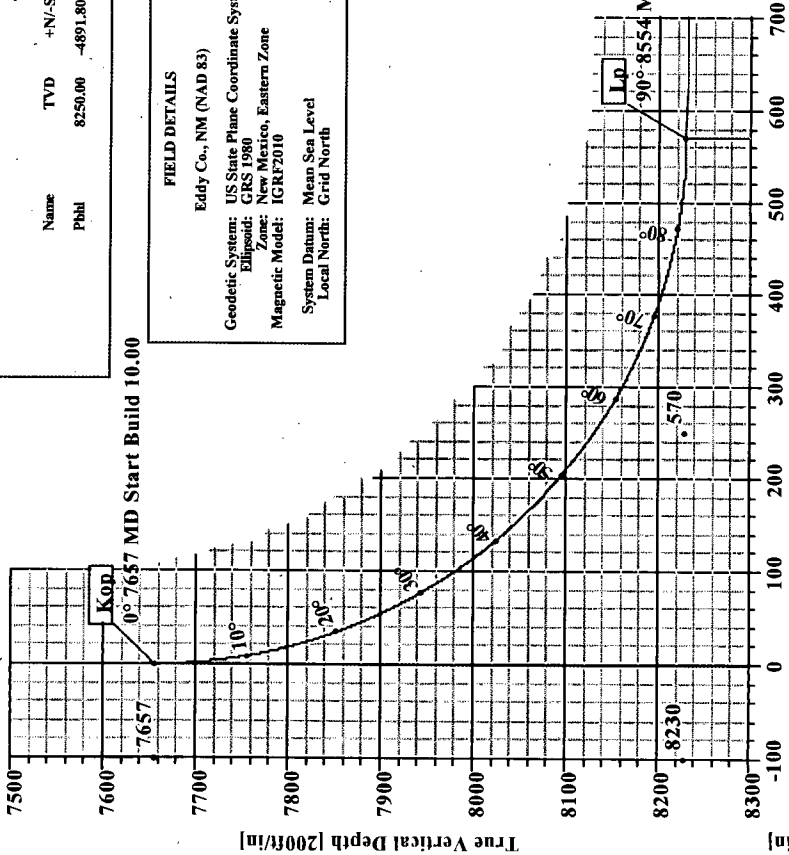
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www.weatherford.com



Cotton Draw #160H
Eddy Co., New Mexico

KB ELEV: 3488
GL ELEV: 3463



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	181.95	0.00	0.00	0.00	0.00	0.00	0.00	
2	7657.05	0.00	181.95	7657.05	0.00	0.00	0.00	181.95	0.00	
3	8554.40	89.74	181.95	8230.00	-569.98	-19.38	10.00	181.95	570.31	Pbhl
4	12878.77	89.74	181.95	8250.00	-4891.80	-166.32	0.00	0.00	4894.63	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#160H	0.00	0.00	424623.07	721783.07	32°09'57.674N	103°45'00.663W	N/A

TARGET DETAILS

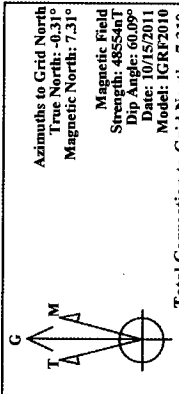
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	8250.00	-4891.80	-166.32	419731.27	721616.75	Point

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 Unit #160H
Site Centre Northing: 424623.07
Easting: 721783.07
Ground Level: 3463.00
Positional Uncertainty: 0.00
Convergence: 0.31

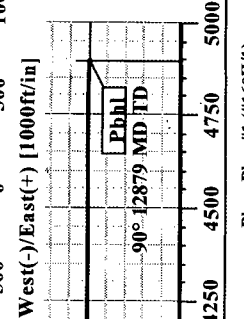
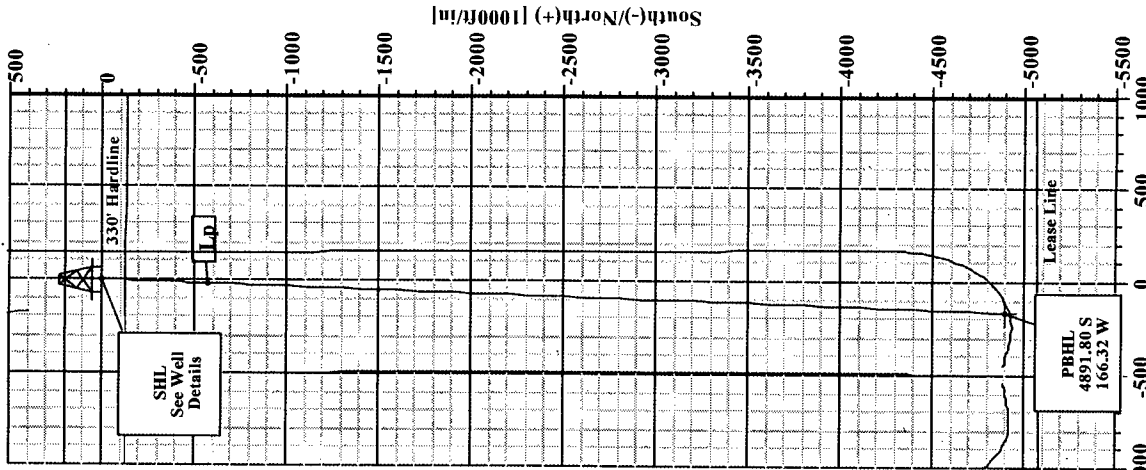


LEGEND

Cotton Draw Unit #135H (I)
Cotton Draw Unit #136H (I)
Cotton Draw Unit #137H (I)
Cotton Draw Unit #152H (I)
Pin #1



Weatherford



Vertical Section at 181.95° [500ft/in]

Plan: Plan #1 (#160H/I)

Created By: R Joyner

Date: 1/18/2011



Weatherford International, Inc.

WELL PLAN REPORT

**Weatherford**

Company: Devon Energy	Date: 1/18/2011	Time: 12:22:22	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #160H, Grid North		
Site: Cotton Draw Unit #160H	Vertical (TVD) Reference: SITE 3488.0		
Well: #160H	Section (VS) Reference: Well: (0.00N,0.00E,181.95Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 1/18/2011
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 Unit #160H

Site Position:	Northing: 424623.07 ft	Latitude: 32 9 57.674 N
From: Map	Easting: 721783.07 ft	Longitude: 103 45 0.663 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3463.00 ft		Grid Convergence: 0.31 deg

Well: #160H	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 32 9 57.674 N
+E/-W 0.00 ft	Longitude: 103 45 0.663 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 10/15/2011	Above System Datum: Mean Sea Level
Field Strength: 48554 nT	Declination: 7.62 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.09 deg
ft	+N/-S ft
	+E/-W ft
	Direction deg
8250.00	0.00
	0.00
	181.95

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	181.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7657.05	0.00	181.95	7657.05	0.00	0.00	0.00	0.00	0.00	181.95	
8554.40	89.74	181.95	8230.00	-569.98	-19.38	10.00	10.00	0.00	181.95	
12878.77	89.74	181.95	8250.00	-4891.80	-166.32	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	Build deg/100ft	Turn deg/100ft	Comment
7600.00	0.00	181.95	7600.00	0.00	0.00	0.00	0.00	0.00	0.00	
7657.05	0.00	181.95	7657.05	0.00	0.00	0.00	0.00	0.00	0.00	Kop
7700.00	4.30	181.95	7699.96	-1.61	-0.05	1.61	10.00	10.00	0.00	
7800.00	14.30	181.95	7798.52	-17.73	-0.60	17.74	10.00	10.00	0.00	
7900.00	24.30	181.95	7892.78	-50.71	-1.72	50.74	10.00	10.00	0.00	
8000.00	34.30	181.95	7979.89	-99.55	-3.38	99.61	10.00	10.00	0.00	
8100.00	44.30	181.95	8057.18	-162.77	-5.53	162.86	10.00	10.00	0.00	
8200.00	54.30	181.95	8122.31	-238.43	-8.11	238.57	10.00	10.00	0.00	
8300.00	64.30	181.95	8173.31	-324.26	-11.02	324.44	10.00	10.00	0.00	
8400.00	74.30	181.95	8208.62	-417.63	-14.20	417.87	10.00	10.00	0.00	
8500.00	84.30	181.95	8227.17	-515.70	-17.53	516.00	10.00	10.00	0.00	
8554.40	89.74	181.95	8230.00	-569.98	-19.38	570.31	10.00	10.00	0.00	Lp
8600.00	89.74	181.95	8230.21	-615.55	-20.93	615.91	0.00	0.00	0.00	
8700.00	89.74	181.95	8230.68	-715.49	-24.33	715.91	0.00	0.00	0.00	
8800.00	89.74	181.95	8231.14	-815.43	-27.72	815.91	0.00	0.00	0.00	
8900.00	89.74	181.95	8231.60	-915.38	-31.12	915.90	0.00	0.00	0.00	
9000.00	89.74	181.95	8232.06	-1015.32	-34.52	1015.90	0.00	0.00	0.00	



Weatherford International, Inc.

WELL PLAN REPORT

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #160H
Well: #160H
Wellpath: 1

Date: 1/18/2011 Time: 12:22:22 Page: 2
Co-ordinate(NE) Reference: Well: #160H; Grid North
Vertical (TVD) Reference: SITE 3488.0
Section (VS) Reference: Well (0.00N;0.00E;181.95Azi)
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	Build deg/100ft	Turn deg/100ft	Comment
9100.00	89.74	181.95	8232.52	-1115.26	-37.92	1115.90	0.00	0.00	0.00	
9200.00	89.74	181.95	8232.99	-1215.20	-41.32	1215.90	0.00	0.00	0.00	
9300.00	89.74	181.95	8233.45	-1315.14	-44.71	1315.90	0.00	0.00	0.00	
9400.00	89.74	181.95	8233.91	-1415.08	-48.11	1415.90	0.00	0.00	0.00	
9500.00	89.74	181.95	8234.37	-1515.02	-51.51	1515.90	0.00	0.00	0.00	
9600.00	89.74	181.95	8234.84	-1614.96	-54.91	1615.90	0.00	0.00	0.00	
9700.00	89.74	181.95	8235.30	-1714.90	-58.31	1715.90	0.00	0.00	0.00	
9800.00	89.74	181.95	8235.76	-1814.85	-61.70	1815.89	0.00	0.00	0.00	
9900.00	89.74	181.95	8236.22	-1914.79	-65.10	1915.89	0.00	0.00	0.00	
10000.00	89.74	181.95	8236.69	-2014.73	-68.50	2015.89	0.00	0.00	0.00	
10100.00	89.74	181.95	8237.15	-2114.67	-71.90	2115.89	0.00	0.00	0.00	
10200.00	89.74	181.95	8237.61	-2214.61	-75.30	2215.89	0.00	0.00	0.00	
10300.00	89.74	181.95	8238.07	-2314.55	-78.69	2315.89	0.00	0.00	0.00	
10400.00	89.74	181.95	8238.54	-2414.49	-82.09	2415.89	0.00	0.00	0.00	
10500.00	89.74	181.95	8239.00	-2514.43	-85.49	2515.89	0.00	0.00	0.00	
10600.00	89.74	181.95	8239.46	-2614.38	-88.89	2615.89	0.00	0.00	0.00	
10700.00	89.74	181.95	8239.92	-2714.32	-92.29	2715.88	0.00	0.00	0.00	
10800.00	89.74	181.95	8240.39	-2814.26	-95.68	2815.88	0.00	0.00	0.00	
10900.00	89.74	181.95	8240.85	-2914.20	-99.08	2915.88	0.00	0.00	0.00	
11000.00	89.74	181.95	8241.31	-3014.14	-102.48	3015.88	0.00	0.00	0.00	
11100.00	89.74	181.95	8241.77	-3114.08	-105.88	3115.88	0.00	0.00	0.00	
11200.00	89.74	181.95	8242.24	-3214.02	-109.28	3215.88	0.00	0.00	0.00	
11300.00	89.74	181.95	8242.70	-3313.96	-112.67	3315.88	0.00	0.00	0.00	
11400.00	89.74	181.95	8243.16	-3413.90	-116.07	3415.88	0.00	0.00	0.00	
11500.00	89.74	181.95	8243.62	-3513.85	-119.47	3515.88	0.00	0.00	0.00	
11600.00	89.74	181.95	8244.09	-3613.79	-122.87	3615.88	0.00	0.00	0.00	
11700.00	89.74	181.95	8244.55	-3713.73	-126.27	3715.87	0.00	0.00	0.00	
11800.00	89.74	181.95	8245.01	-3813.67	-129.66	3815.87	0.00	0.00	0.00	
11900.00	89.74	181.95	8245.47	-3913.61	-133.06	3915.87	0.00	0.00	0.00	
12000.00	89.74	181.95	8245.94	-4013.55	-136.46	4015.87	0.00	0.00	0.00	
12100.00	89.74	181.95	8246.40	-4113.49	-139.86	4115.87	0.00	0.00	0.00	
12200.00	89.74	181.95	8246.86	-4213.43	-143.26	4215.87	0.00	0.00	0.00	
12300.00	89.74	181.95	8247.32	-4313.38	-146.65	4315.87	0.00	0.00	0.00	
12400.00	89.74	181.95	8247.79	-4413.32	-150.05	4415.87	0.00	0.00	0.00	
12500.00	89.74	181.95	8248.25	-4513.26	-153.45	4515.87	0.00	0.00	0.00	
12600.00	89.74	181.95	8248.71	-4613.20	-156.85	4615.86	0.00	0.00	0.00	
12700.00	89.74	181.95	8249.17	-4713.14	-160.25	4715.86	0.00	0.00	0.00	
12800.00	89.74	181.95	8249.64	-4813.08	-163.64	4815.86	0.00	0.00	0.00	
12878.77	89.74	181.95	8250.00	-4891.80	-166.32	4894.63	0.00	0.00	0.00	Pbhl

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			8250.00	-4891.80	-166.32	419731.27	721616.75	32	9	9.276 N	103	45	2.906 W



Weatherford International, Inc.

WELL PLAN REPORT



Weatherford

Company:	Devon Energy	Date:	1/18/2011	Time:	12:22:22	Page:	3
Field:	Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: #160H; Grid North				
Site:	Cotton Draw Unit #160H	Vertical (TVD) Reference:	SITE 3488.0				
Well:	#160H	Section (VS) Reference:	Well (0.00N,0.00E;181.95Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
7657.05	7657.05	Kop
8554.40	8230.00	Lp
12878.76	8250.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy Date: 1/18/2011 Time: 12:27:55 Page: 1
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H Co-ordinate(NE) Reference: Well: #160H, Grid North
Reference Well: #160H Vertical (TVD) Reference: SITE 3488.0
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 12878.77 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: 1/18/2011

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	Cotton Draw Unit #131	V0 Plan: Plan #1 V1	12878.77	8139.14	396.12	288.14	3.67	
Cotton Draw Unit #13	Cotton Draw Unit #131	V0 Plan: Plan #1 V1	12878.77	8208.00	329.96	220.39	3.01	
Cotton Draw Unit #13	Cotton Draw Unit #131	V0 Plan: Plan #1 V1	12878.77	8329.00	227.28	128.22	2.29	
Cotton Draw Unit #15	Cotton Draw Unit #151	V0 Plan: Plan #1 V1	8200.00	12846.88	669.89	575.73	7.11	

Site: Cotton Draw Unit #135H

Well: Cotton Draw Unit #135H

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	186.38	-4888.91	-546.27	4919.51			No Data
100.00	100.00	58.00	58.00	0.08	0.05	186.38	-4888.91	-546.27	4919.33	4919.20	36939.19	
200.00	200.00	158.00	158.00	0.31	0.21	186.38	-4888.91	-546.27	4919.33	4918.81	9393.33	
300.00	300.00	258.00	258.00	0.53	0.44	186.38	-4888.91	-546.27	4919.33	4918.36	5054.61	
400.00	400.00	358.00	358.00	0.76	0.66	186.38	-4888.91	-546.27	4919.33	4917.91	3457.58	
500.00	500.00	458.00	458.00	0.98	0.89	186.38	-4888.91	-546.27	4919.33	4917.46	2627.43	
600.00	600.00	558.00	558.00	1.21	1.11	186.38	-4888.91	-546.27	4919.33	4917.01	2118.73	
700.00	700.00	658.00	658.00	1.43	1.34	186.38	-4888.91	-546.27	4919.33	4916.56	1775.06	
800.00	800.00	758.00	758.00	1.66	1.56	186.38	-4888.91	-546.27	4919.33	4916.11	1527.32	
900.00	900.00	858.00	858.00	1.88	1.79	186.38	-4888.91	-546.27	4919.33	4915.66	1340.26	
1000.00	1000.00	958.00	958.00	2.11	2.01	186.38	-4888.91	-546.27	4919.33	4915.21	1194.02	
1100.00	1100.00	1058.00	1058.00	2.33	2.24	186.38	-4888.91	-546.27	4919.33	4914.77	1076.56	
1200.00	1200.00	1158.00	1158.00	2.56	2.46	186.38	-4888.91	-546.27	4919.33	4914.32	980.14	
1300.00	1300.00	1258.00	1258.00	2.78	2.69	186.38	-4888.91	-546.27	4919.33	4913.87	899.57	
1400.00	1400.00	1358.00	1358.00	3.01	2.91	186.38	-4888.91	-546.27	4919.33	4913.42	831.24	
1500.00	1500.00	1458.00	1458.00	3.23	3.14	186.38	-4888.91	-546.27	4919.33	4912.97	772.55	
1600.00	1600.00	1558.00	1558.00	3.46	3.36	186.38	-4888.91	-546.27	4919.33	4912.52	721.61	
1700.00	1700.00	1658.00	1658.00	3.68	3.59	186.38	-4888.91	-546.27	4919.33	4912.07	676.97	
1800.00	1800.00	1758.00	1758.00	3.91	3.81	186.38	-4888.91	-546.27	4919.33	4911.62	637.53	
1900.00	1900.00	1858.00	1858.00	4.13	4.04	186.38	-4888.91	-546.27	4919.33	4911.17	602.44	
2000.00	2000.00	1958.00	1958.00	4.35	4.26	186.38	-4888.91	-546.27	4919.33	4910.72	571.00	
2100.00	2100.00	2058.00	2058.00	4.58	4.49	186.38	-4888.91	-546.27	4919.33	4910.27	542.68	
2200.00	2200.00	2158.00	2158.00	4.80	4.71	186.38	-4888.91	-546.27	4919.33	4909.82	517.04	
2300.00	2300.00	2258.00	2258.00	5.03	4.93	186.38	-4888.91	-546.27	4919.33	4909.37	493.72	
2400.00	2400.00	2358.00	2358.00	5.25	5.16	186.38	-4888.91	-546.27	4919.33	4908.92	472.40	
2500.00	2500.00	2458.00	2458.00	5.48	5.38	186.38	-4888.91	-546.27	4919.33	4908.47	452.85	
2600.00	2600.00	2558.00	2558.00	5.70	5.61	186.38	-4888.91	-546.27	4919.33	4908.02	434.86	
2700.00	2700.00	2658.00	2658.00	5.93	5.83	186.38	-4888.91	-546.27	4919.33	4907.57	418.24	
2800.00	2800.00	2758.00	2758.00	6.15	6.06	186.38	-4888.91	-546.27	4919.33	4907.12	402.84	
2900.00	2900.00	2858.00	2858.00	6.38	6.28	186.38	-4888.91	-546.27	4919.33	4906.67	388.54	
3000.00	3000.00	2958.00	2958.00	6.60	6.51	186.38	-4888.91	-546.27	4919.33	4906.22	375.22	
3100.00	3100.00	3058.00	3058.00	6.83	6.73	186.38	-4888.91	-546.27	4919.33	4905.77	362.78	
3200.00	3200.00	3158.00	3158.00	7.05	6.96	186.38	-4888.91	-546.27	4919.33	4905.32	351.14	
3300.00	3300.00	3258.00	3258.00	7.28	7.18	186.38	-4888.91	-546.27	4919.33	4904.88	340.22	
3400.00	3400.00	3358.00	3358.00	7.50	7.41	186.38	-4888.91	-546.27	4919.33	4904.43	329.96	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD:83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011 Time: 12:27:55
Co-ordinate(N/E) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 2

Db: Sybase

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3500.00	3500.00	3458.00	3458.00	7.73	7.63	186.38	-4888.91	-546.27	4919.33	4903.98	320.31	
3600.00	3600.00	3558.00	3558.00	7.95	7.86	186.38	-4888.91	-546.27	4919.33	4903.53	311.20	
3700.00	3700.00	3658.00	3658.00	8.18	8.08	186.38	-4888.91	-546.27	4919.33	4903.08	302.59	
3800.00	3800.00	3758.00	3758.00	8.40	8.31	186.38	-4888.91	-546.27	4919.33	4902.63	294.45	
3900.00	3900.00	3858.00	3858.00	8.63	8.53	186.38	-4888.91	-546.27	4919.33	4902.18	286.73	
4000.00	4000.00	3958.00	3958.00	8.85	8.76	186.38	-4888.91	-546.27	4919.33	4901.73	279.41	
4100.00	4100.00	4058.00	4058.00	9.07	8.98	186.38	-4888.91	-546.27	4919.33	4901.28	272.46	
4200.00	4200.00	4158.00	4158.00	9.30	9.21	186.38	-4888.91	-546.27	4919.33	4900.83	265.84	
4300.00	4300.00	4058.00	4058.00	9.52	9.42	186.38	-4888.91	-546.27	4919.33	4900.38	259.28	
4400.00	4400.00	3958.00	3958.00	9.75	9.65	186.38	-4888.91	-546.27	4919.33	4900.00	253.12	
4500.00	4500.00	3858.00	3858.00	9.97	9.87	186.38	-4888.91	-546.27	4919.33	4900.00	247.00	
4600.00	4600.00	3758.00	3758.00	10.20	10.10	186.38	-4888.91	-546.27	4919.33	4900.00	240.88	
4700.00	4700.00	3658.00	3658.00	10.42	10.32	186.38	-4888.91	-546.27	4919.33	4900.00	234.76	
4800.00	4800.00	3558.00	3558.00	10.65	10.55	186.38	-4888.91	-546.27	4919.33	4900.00	228.64	
4900.00	4900.00	3458.00	3458.00	10.87	10.77	186.38	-4888.91	-546.27	4919.33	4900.00	222.52	
5000.00	5000.00	3358.00	3358.00	11.10	11.00	186.38	-4888.91	-546.27	4919.33	4900.00	216.40	
5100.00	5100.00	3258.00	3258.00	11.32	11.22	186.38	-4888.91	-546.27	4919.33	4900.00	210.28	
5200.00	5200.00	3158.00	3158.00	11.55	11.45	186.38	-4888.91	-546.27	4919.33	4900.00	204.16	
5300.00	5300.00	3058.00	3058.00	11.77	11.67	186.38	-4888.91	-546.27	4919.33	4900.00	198.04	
5400.00	5400.00	2958.00	2958.00	12.00	11.90	186.38	-4888.91	-546.27	4919.33	4900.00	191.92	
5500.00	5500.00	2858.00	2858.00	12.22	12.12	186.38	-4888.91	-546.27	4919.33	4900.00	185.80	
5600.00	5600.00	2758.00	2758.00	12.45	12.35	186.38	-4888.91	-546.27	4919.33	4900.00	179.68	
5700.00	5700.00	2658.00	2658.00	12.67	12.57	186.38	-4888.91	-546.27	4919.33	4900.00	173.56	
5800.00	5800.00	2558.00	2558.00	12.90	12.80	186.38	-4888.91	-546.27	4919.33	4900.00	167.44	
5900.00	5900.00	2458.00	2458.00	13.12	13.02	186.38	-4888.91	-546.27	4919.33	4900.00	161.32	
6000.00	6000.00	2358.00	2358.00	13.35	13.25	186.38	-4888.91	-546.27	4919.33	4900.00	155.20	
6100.00	6100.00	2258.00	2258.00	13.57	13.47	186.38	-4888.91	-546.27	4919.33	4900.00	149.08	
6200.00	6200.00	2158.00	2158.00	13.80	13.70	186.38	-4888.91	-546.27	4919.33	4900.00	142.96	
6300.00	6300.00	2058.00	2058.00	14.02	13.92	186.38	-4888.91	-546.27	4919.33	4900.00	136.84	
6400.00	6400.00	1958.00	1958.00	14.24	14.14	186.38	-4888.91	-546.27	4919.33	4900.00	130.72	
6500.00	6500.00	1858.00	1858.00	14.47	14.37	186.38	-4888.91	-546.27	4919.33	4900.00	124.60	
6600.00	6600.00	1758.00	1758.00	14.69	14.59	186.38	-4888.91	-546.27	4919.33	4900.00	118.48	
6700.00	6700.00	1658.00	1658.00	14.92	14.82	186.38	-4888.91	-546.27	4919.33	4900.00	112.36	
6800.00	6800.00	1558.00	1558.00	15.14	15.04	186.38	-4888.91	-546.27	4919.33	4900.00	106.24	
6900.00	6900.00	1458.00	1458.00	15.37	15.27	186.38	-4888.91	-546.27	4919.33	4900.00	100.12	
7000.00	7000.00	1358.00	1358.00	15.59	15.49	186.38	-4888.91	-546.27	4919.33	4900.00	94.00	
7100.00	7100.00	1258.00	1258.00	15.82	15.72	186.38	-4888.91	-546.27	4919.33	4900.00	87.88	
7200.00	7200.00	1158.00	1158.00	16.04	15.94	186.38	-4888.91	-546.27	4919.33	4900.00	81.76	
7300.00	7300.00	1058.00	1058.00	16.27	16.17	186.38	-4888.91	-546.27	4919.33	4900.00	75.64	
7400.00	7400.00	958.00	958.00	16.49	16.39	186.38	-4888.91	-546.27	4919.33	4900.00	69.52	
7500.00	7500.00	858.00	858.00	16.72	16.62	186.38	-4888.91	-546.27	4919.33	4900.00	63.40	
7600.00	7600.00	758.00	758.00	16.94	16.84	186.38	-4888.91	-546.27	4919.33	4900.00	57.28	
7700.00	7699.96	658.00	658.00	17.17	17.07	186.38	-4888.91	-546.27	4919.33	4900.00	51.16	
7800.00	7798.52	558.00	558.00	17.40	17.30	186.38	-4888.91	-546.27	4919.33	4900.00	45.04	
7900.00	7892.78	458.00	458.00	17.65	17.55	186.38	-4888.91	-546.27	4919.33	4900.00	38.92	
8000.00	7979.89	358.00	358.00	17.94	17.84	186.38	-4888.91	-546.27	4919.33	4900.00	32.80	
8100.00	8057.18	258.00	258.00	18.29	18.19	186.38	-4888.91	-546.27	4919.33	4900.00	26.68	
8200.00	8122.31	158.00	158.00	18.74	18.64	186.38	-4888.91	-546.27	4919.33	4900.00	20.56	
8300.00	8173.31	58.00	58.00	19.31	19.21	186.38	-4888.91	-546.27	4919.33	4900.00	14.44	
8400.00	8208.62	0.00	0.00	20.01	19.91	186.38	-4888.91	-546.27	4919.33	4900.00	8.32	
8500.00	8227.17	0.00	0.00	20.83	20.73	186.38	-4888.91	-546.27	4919.33	4900.00	2.20	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011 Time: 12:27:55
Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 3

Db: Sybase

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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		
8600.00	8230.21	13211.52	8980.03	21.75	80.61	124.65	-619.52	-1167.24	1393.21	1305.84	15.95	
8700.00	8230.68	13111.59	8980.03	22.78	78.84	124.72	-719.45	-1166.90	1389.87	1303.21	16.04	
8800.00	8231.14	13011.66	8980.03	23.90	77.08	124.79	-819.38	-1166.55	1386.53	1300.49	16.12	
8900.00	8231.60	12911.73	8980.03	25.10	75.33	124.86	-919.31	-1166.21	1383.19	1297.70	16.18	
9000.00	8232.06	12811.80	8980.03	26.37	73.57	124.94	-1019.23	-1165.86	1379.85	1294.85	16.23	
9100.00	8232.52	12711.88	8980.03	27.71	71.82	125.01	-1119.16	-1165.51	1376.52	1291.95	16.28	
9200.00	8232.99	12611.95	8980.03	29.09	70.07	125.08	-1219.09	-1165.17	1373.19	1289.00	16.31	
9300.00	8233.45	12512.02	8980.03	30.52	68.33	125.16	-1319.02	-1164.82	1369.86	1286.00	16.34	
9400.00	8233.91	12412.09	8980.03	31.99	66.59	125.23	-1418.95	-1164.48	1366.53	1282.98	16.35	
9500.00	8234.37	12312.16	8980.02	33.50	64.86	125.31	-1518.88	-1164.13	1363.21	1279.92	16.37	
9600.00	8234.84	12212.23	8980.02	35.03	63.13	125.38	-1618.80	-1163.79	1359.89	1276.83	16.37	
9700.00	8235.30	12112.30	8980.02	36.59	61.41	125.46	-1718.73	-1163.44	1356.57	1273.71	16.37	
9800.00	8235.76	12012.37	8980.02	38.17	59.69	125.53	-1818.66	-1163.10	1353.25	1270.58	16.37	
9900.00	8236.22	11912.45	8980.02	39.78	57.98	125.61	-1918.59	-1162.75	1349.93	1267.42	16.36	
10000.00	8236.69	11812.52	8980.02	41.40	56.28	125.69	-2018.52	-1162.40	1346.62	1264.24	16.35	
10100.00	8237.15	11712.59	8980.02	43.03	54.58	125.76	-2118.45	-1162.06	1343.31	1261.04	16.33	
10200.00	8237.61	11612.66	8980.02	44.68	52.90	125.84	-2218.37	-1161.71	1340.00	1257.83	16.31	
10300.00	8238.07	11512.73	8980.02	46.34	51.22	125.92	-2318.30	-1161.37	1336.70	1254.60	16.28	
10400.00	8238.54	11412.80	8980.02	48.02	49.55	126.00	-2418.23	-1161.02	1333.40	1251.35	16.25	
10500.00	8239.00	11312.87	8980.02	49.70	47.90	126.08	-2518.16	-1160.68	1330.10	1248.09	16.22	
10600.00	8239.46	11212.94	8980.01	51.39	46.26	126.16	-2618.09	-1160.33	1326.80	1244.81	16.18	
10700.00	8239.92	11113.01	8980.01	53.09	44.63	126.23	-2718.01	-1159.99	1323.50	1241.51	16.14	
10800.00	8240.39	11013.09	8980.01	54.80	43.02	126.31	-2817.94	-1159.64	1320.21	1238.20	16.10	
10900.00	8240.85	10913.16	8980.01	56.52	41.43	126.40	-2917.87	-1159.30	1316.92	1234.86	16.05	
11000.00	8241.31	10813.23	8980.01	58.24	39.85	126.48	-3017.80	-1158.95	1313.63	1231.51	16.00	
11100.00	8241.77	10713.30	8980.01	59.96	38.30	126.56	-3117.73	-1158.60	1310.35	1228.13	15.94	
11200.00	8242.24	10613.37	8980.01	61.69	36.77	126.64	-3217.66	-1158.26	1307.07	1224.73	15.88	
11300.00	8242.70	10513.44	8980.01	63.43	35.28	126.72	-3317.58	-1157.91	1303.79	1221.31	15.81	
11400.00	8243.16	10413.51	8980.01	65.17	33.81	126.80	-3417.51	-1157.57	1300.51	1217.85	15.73	
11500.00	8243.62	10313.58	8980.01	66.92	32.38	126.88	-3517.44	-1157.22	1297.24	1214.37	15.65	
11600.00	8244.09	10213.66	8980.01	68.67	30.99	126.97	-3617.37	-1156.88	1293.97	1210.84	15.57	
11700.00	8244.55	8114.49	8114.19	70.42	18.07	76.33	-4890.01	-552.43	1254.21	1167.43	14.45	
11800.00	8245.01	8116.21	8115.90	72.17	18.08	76.58	-4890.05	-552.67	1159.79	1071.24	13.10	
11900.00	8245.47	8117.99	8117.66	73.93	18.08	76.83	-4890.09	-552.93	1066.38	976.05	11.81	
12000.00	8245.94	8119.82	8119.48	75.69	18.08	77.10	-4890.14	-553.19	974.27	882.16	10.58	
12100.00	8246.40	8121.73	8121.36	77.45	18.09	77.37	-4890.19	-553.47	883.87	789.97	9.41	
12200.00	8246.86	8123.70	8123.30	79.22	18.09	77.66	-4890.24	-553.77	795.76	700.07	8.32	
12300.00	8247.32	8125.74	8125.32	80.99	18.10	77.95	-4890.30	-554.08	710.80	613.31	7.29	
12400.00	8247.79	8127.85	8127.40	82.76	18.10	78.26	-4890.36	-554.41	630.25	530.96	6.35	
12500.00	8248.25	8130.04	8129.57	84.53	18.11	78.57	-4890.42	-554.76	556.04	454.95	5.50	
12600.00	8248.71	8132.32	8131.81	86.30	18.11	78.90	-4890.48	-555.13	491.05	388.16	4.77	
12700.00	8249.17	8134.68	8134.14	88.08	18.11	79.24	-4890.55	-555.53	439.38	334.68	4.20	
12800.00	8249.64	8137.13	8136.56	89.86	18.12	79.60	-4890.63	-555.95	406.16	299.64	3.81	
12878.77	8250.00	8139.14	8138.53	91.26	18.12	79.89	-4890.69	-556.29	396.12	288.14	3.67	

Site: Cotton Draw Unit #136H
Well: Cotton Draw Unit #136H
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	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy Date: 1/18/2011 Time: 12:27:55 Page: 4
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H Co-ordinate(NE) Reference: Well: #160H, Grid North
Reference Well: #160H Vertical (TVD) Reference: SITE 3488.0
Reference Wellpath: 1 Db: Sybase

Site: Cotton Draw Unit #136H
Well: Cotton Draw Unit #136H
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	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	
0.00	0.00	0.00	0.00	0.00	0.00	185.80	-4889.35	-496.27	4914.65		No Data
100.00	100.00	58.00	58.00	0.08	0.05	185.80	-4889.35	-496.27	4914.47	4914.34	36902.67
200.00	200.00	158.00	158.00	0.31	0.21	185.80	-4889.35	-496.27	4914.47	4913.95	9384.05
300.00	300.00	258.00	258.00	0.53	0.44	185.80	-4889.35	-496.27	4914.47	4913.50	5049.61
400.00	400.00	358.00	358.00	0.76	0.66	185.80	-4889.35	-496.27	4914.47	4913.05	3454.16
500.00	500.00	458.00	458.00	0.98	0.89	185.80	-4889.35	-496.27	4914.47	4912.60	2624.83
600.00	600.00	558.00	558.00	1.21	1.11	185.80	-4889.35	-496.27	4914.47	4912.15	2116.63
700.00	700.00	658.00	658.00	1.43	1.34	185.80	-4889.35	-496.27	4914.47	4911.70	1773.30
800.00	800.00	758.00	758.00	1.66	1.56	185.80	-4889.35	-496.27	4914.47	4911.25	1525.81
900.00	900.00	858.00	858.00	1.88	1.79	185.80	-4889.35	-496.27	4914.47	4910.80	1338.94
1000.00	1000.00	958.00	958.00	2.11	2.01	185.80	-4889.35	-496.27	4914.47	4910.35	1192.84
1100.00	1100.00	1058.00	1058.00	2.33	2.24	185.80	-4889.35	-496.27	4914.47	4909.90	1075.50
1200.00	1200.00	1158.00	1158.00	2.56	2.46	185.80	-4889.35	-496.27	4914.47	4909.45	979.17
1300.00	1300.00	1258.00	1258.00	2.78	2.69	185.80	-4889.35	-496.27	4914.47	4909.00	898.68
1400.00	1400.00	1358.00	1358.00	3.01	2.91	185.80	-4889.35	-496.27	4914.47	4908.55	830.42
1500.00	1500.00	1458.00	1458.00	3.23	3.14	185.80	-4889.35	-496.27	4914.47	4908.10	771.79
1600.00	1600.00	1558.00	1558.00	3.46	3.36	185.80	-4889.35	-496.27	4914.47	4907.65	720.90
1700.00	1700.00	1658.00	1658.00	3.68	3.59	185.80	-4889.35	-496.27	4914.47	4907.20	676.30
1800.00	1800.00	1758.00	1758.00	3.91	3.81	185.80	-4889.35	-496.27	4914.47	4906.75	636.90
1900.00	1900.00	1858.00	1858.00	4.13	4.04	185.80	-4889.35	-496.27	4914.47	4906.31	601.84
2000.00	2000.00	1958.00	1958.00	4.35	4.26	185.80	-4889.35	-496.27	4914.47	4905.86	570.44
2100.00	2100.00	2058.00	2058.00	4.58	4.49	185.80	-4889.35	-496.27	4914.47	4905.41	542.15
2200.00	2200.00	2158.00	2158.00	4.80	4.71	185.80	-4889.35	-496.27	4914.47	4904.96	516.53
2300.00	2300.00	2258.00	2258.00	5.03	4.93	185.80	-4889.35	-496.27	4914.47	4904.51	493.23
2400.00	2400.00	2358.00	2358.00	5.25	5.16	185.80	-4889.35	-496.27	4914.47	4904.06	471.94
2500.00	2500.00	2458.00	2458.00	5.48	5.38	185.80	-4889.35	-496.27	4914.47	4903.61	452.41
2600.00	2600.00	2558.00	2558.00	5.70	5.61	185.80	-4889.35	-496.27	4914.47	4903.16	434.43
2700.00	2700.00	2658.00	2658.00	5.93	5.83	185.80	-4889.35	-496.27	4914.47	4902.71	417.83
2800.00	2800.00	2758.00	2758.00	6.15	6.06	185.80	-4889.35	-496.27	4914.47	4902.26	402.44
2900.00	2900.00	2858.00	2858.00	6.38	6.28	185.80	-4889.35	-496.27	4914.47	4901.81	388.16
3000.00	3000.00	2958.00	2958.00	6.60	6.51	185.80	-4889.35	-496.27	4914.47	4901.36	374.85
3100.00	3100.00	3058.00	3058.00	6.83	6.73	185.80	-4889.35	-496.27	4914.47	4900.91	362.42
3200.00	3200.00	3158.00	3158.00	7.05	6.96	185.80	-4889.35	-496.27	4914.47	4900.46	350.79
3300.00	3300.00	3258.00	3258.00	7.28	7.18	185.80	-4889.35	-496.27	4914.47	4900.01	339.89
3400.00	3400.00	3358.00	3358.00	7.50	7.41	185.80	-4889.35	-496.27	4914.47	4899.56	329.64
3500.00	3500.00	3458.00	3458.00	7.73	7.63	185.80	-4889.35	-496.27	4914.47	4899.11	319.99
3600.00	3600.00	3558.00	3558.00	7.95	7.86	185.80	-4889.35	-496.27	4914.47	4898.66	310.89
3700.00	3700.00	3658.00	3658.00	8.18	8.08	185.80	-4889.35	-496.27	4914.47	4898.21	302.29
3800.00	3800.00	3758.00	3758.00	8.40	8.31	185.80	-4889.35	-496.27	4914.47	4897.76	294.16
3900.00	3900.00	3858.00	3858.00	8.63	8.53	185.80	-4889.35	-496.27	4914.47	4897.31	286.45
4000.00	4000.00	3958.00	3958.00	8.85	8.76	185.80	-4889.35	-496.27	4914.47	4896.87	279.14
4100.00	4100.00	4058.00	4058.00	9.07	8.98	185.80	-4889.35	-496.27	4914.47	4896.42	272.19
4200.00	4200.00	13609.13	8980.00	9.30	90.34	269.69	-2.72	-500.17	4847.87	4800.85	103.10
4300.00	4300.00	13609.13	8980.00	9.52	90.34	269.69	-2.72	-500.17	4748.42	4701.13	100.41
4400.00	4400.00	13609.13	8980.00	9.75	90.34	269.69	-2.72	-500.17	4648.99	4601.43	97.76
4500.00	4500.00	13609.13	8980.00	9.97	90.34	269.69	-2.72	-500.17	4549.58	4501.75	95.12
4600.00	4600.00	13609.13	8980.00	10.20	90.34	269.69	-2.72	-500.17	4450.20	4402.10	92.51
4700.00	4700.00	13609.13	8980.00	10.42	90.34	269.69	-2.72	-500.17	4350.85	4302.47	89.93
4800.00	4800.00	13609.13	8980.00	10.65	90.34	269.69	-2.72	-500.17	4251.52	4202.86	87.37
4900.00	4900.00	13609.13	8980.00	10.87	90.34	269.69	-2.72	-500.17	4152.24	4103.29	84.83
5000.00	5000.00	13609.13	8980.00	11.10	90.34	269.69	-2.72	-500.17	4052.98	4003.75	82.32



Weatherford International, Inc.

Anticollision Report

**Weatherford***

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011
Time: 12:27:55
Page: 5

Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0
Db: Sybase

Site: Cotton Draw Unit #136H
Well: Cotton Draw Unit #136H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
5100.00	5100.00	13609.13	8980.00	11.32	90.34	269.69	-2.72	-500.17	3953.77	3904.24	79.83	
5200.00	5200.00	13609.13	8980.00	11.55	90.34	269.69	-2.72	-500.17	3854.59	3804.76	77.36	
5300.00	5300.00	13609.13	8980.00	11.77	90.34	269.69	-2.72	-500.17	3755.46	3705.32	74.91	
5400.00	5400.00	13609.13	8980.00	12.00	90.34	269.69	-2.72	-500.17	3656.37	3605.93	72.48	
5500.00	5500.00	13609.13	8980.00	12.22	90.34	269.69	-2.72	-500.17	3557.34	3506.57	70.07	
5600.00	5600.00	13609.13	8980.00	12.45	90.34	269.69	-2.72	-500.17	3458.36	3407.27	67.69	
5700.00	5700.00	13609.13	8980.00	12.67	90.34	269.69	-2.72	-500.17	3359.44	3308.02	65.32	
5800.00	5800.00	13609.13	8980.00	12.90	90.34	269.69	-2.72	-500.17	3260.59	3208.82	62.98	
5900.00	5900.00	13609.13	8980.00	13.12	90.34	269.69	-2.72	-500.17	3161.81	3109.69	60.65	
6000.00	6000.00	13609.13	8980.00	13.35	90.34	269.69	-2.72	-500.17	3063.11	3010.62	58.35	
6100.00	6100.00	13609.13	8980.00	13.57	90.34	269.69	-2.72	-500.17	2964.50	2911.62	56.06	
6200.00	6200.00	13609.13	8980.00	13.80	90.34	269.69	-2.72	-500.17	2865.98	2812.71	53.79	
6300.00	6300.00	13609.13	8980.00	14.02	90.34	269.69	-2.72	-500.17	2767.57	2713.88	51.55	
6400.00	6400.00	13609.13	8980.00	14.24	90.34	269.69	-2.72	-500.17	2669.28	2615.15	49.32	
6500.00	6500.00	13609.13	8980.00	14.47	90.34	269.69	-2.72	-500.17	2571.12	2516.54	47.10	
6600.00	6600.00	13609.13	8980.00	14.69	90.34	269.69	-2.72	-500.17	2473.11	2418.04	44.91	
6700.00	6700.00	13609.13	8980.00	14.92	90.34	269.69	-2.72	-500.17	2375.26	2319.68	42.73	
6800.00	6800.00	13609.13	8980.00	15.14	90.34	269.69	-2.72	-500.17	2277.60	2221.47	40.57	
6900.00	6900.00	13609.13	8980.00	15.37	90.34	269.69	-2.72	-500.17	2180.15	2123.43	38.43	
7000.00	7000.00	13609.13	8980.00	15.59	90.34	269.69	-2.72	-500.17	2082.95	2025.58	36.31	
7100.00	7100.00	13609.13	8980.00	15.82	90.34	269.69	-2.72	-500.17	1986.02	1927.96	34.21	
7200.00	7200.00	13609.13	8980.00	16.04	90.34	269.69	-2.72	-500.17	1889.41	1830.59	32.12	
7300.00	7300.00	13609.13	8980.00	16.27	90.34	269.69	-2.72	-500.17	1793.17	1733.52	30.06	
7400.00	7400.00	13609.13	8980.00	16.49	90.34	269.69	-2.72	-500.17	1697.37	1636.79	28.02	
7500.00	7500.00	13609.13	8980.00	16.72	90.34	269.69	-2.72	-500.17	1602.08	1540.46	26.00	
7600.00	7600.00	13609.13	8980.00	16.94	90.34	269.69	-2.72	-500.17	1507.40	1444.60	24.00	
7700.00	7699.96	13607.52	8980.00	17.17	90.31	99.02	-4.33	-500.16	1413.47	1349.36	22.05	
7800.00	7798.52	13591.42	8980.00	17.40	90.03	119.56	-20.43	-500.08	1321.51	1256.14	20.22	
7900.00	7892.78	13558.48	8980.00	17.65	89.44	131.91	-53.38	-499.90	1234.23	1167.94	18.62	
8000.00	7979.89	13509.69	8980.00	17.94	88.57	139.03	-102.16	-499.64	1154.24	1087.44	17.28	
8100.00	8057.18	13446.55	8980.00	18.29	87.45	143.22	-165.30	-499.31	1083.84	1016.90	16.19	
8200.00	8122.31	13370.97	8980.00	18.74	86.11	145.72	-240.88	-498.93	1024.87	958.13	15.36	
8300.00	8173.31	13285.24	8980.00	19.31	84.59	147.22	-326.61	-498.51	978.74	912.48	14.77	
8400.00	8208.62	13191.98	8980.00	20.01	82.93	148.14	-419.87	-498.07	946.43	880.88	14.44	
8500.00	8227.17	13094.01	8980.00	20.83	81.20	148.70	-517.84	-497.62	928.57	863.86	14.35	
8600.00	8230.21	12994.27	8980.00	21.75	79.44	148.99	-617.58	-497.19	923.99	860.11	14.46	
8700.00	8230.68	12894.43	8980.00	22.78	77.68	149.18	-717.41	-496.77	921.63	858.46	14.59	
8800.00	8231.14	12794.60	8980.00	23.90	75.92	149.36	-817.25	-496.38	919.29	856.76	14.70	
8900.00	8231.60	12694.76	8980.00	25.10	74.16	149.55	-917.09	-496.00	916.98	855.03	14.80	
9000.00	8232.06	12594.92	8980.00	26.37	72.41	149.74	-1016.92	-495.64	914.68	853.26	14.89	
9100.00	8232.52	12495.08	8980.00	27.71	70.66	149.93	-1116.76	-495.30	912.40	851.47	14.98	
9200.00	8232.99	12395.24	8980.00	29.09	68.92	150.12	-1216.61	-494.98	910.14	849.66	15.05	
9300.00	8233.45	12295.39	8980.00	30.52	67.18	150.30	-1316.45	-494.68	907.90	847.83	15.11	
9400.00	8233.91	12195.55	8980.00	31.99	65.44	150.49	-1416.29	-494.40	905.68	845.99	15.17	
9500.00	8234.37	12095.70	8980.00	33.50	63.71	150.68	-1516.14	-494.14	903.48	844.13	15.22	
9600.00	8234.84	11995.85	8980.00	35.03	61.98	150.87	-1615.99	-493.90	901.30	842.27	15.27	
9700.00	8235.30	11896.01	8980.00	36.59	60.26	151.05	-1715.84	-493.67	899.14	840.41	15.31	
9800.00	8235.76	11796.15	8980.00	38.17	58.55	151.24	-1815.69	-493.47	896.99	838.54	15.35	
9900.00	8236.22	11696.30	8980.00	39.78	56.84	151.43	-1915.54	-493.29	894.87	836.67	15.38	
10000.00	8236.69	11596.45	8980.00	41.40	55.15	151.61	-2015.39	-493.12	892.76	834.80	15.40	
10100.00	8237.15	11496.60	8980.00	43.03	53.46	151.80	-2115.24	-492.98	890.67	832.92	15.42	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co. NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011 Time: 12:27:55
Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 6

Db: Sybase

Site: Cotton Draw Unit #136H
Well: Cotton Draw Unit #136H
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 ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft	Distance ft	Distance ft	Factor	
10200.00	8237.61	11396.74	8980.00	44.68	51.77	151.98	-2215.10	-492.85	888.60	831.05	15.44	
10300.00	8238.07	11296.88	8980.00	46.34	50.10	152.17	-2314.96	-492.74	886.55	829.18	15.45	
10400.00	8238.54	11197.02	8980.00	48.02	48.44	152.36	-2414.82	-492.65	884.52	827.32	15.46	
10500.00	8239.00	11097.16	8980.00	49.70	46.79	152.54	-2514.68	-492.58	882.51	825.45	15.47	
10600.00	8239.46	10997.30	8980.00	51.39	45.16	152.73	-2614.54	-492.53	880.51	823.58	15.47	
10700.00	8239.92	10897.44	8980.00	53.09	43.54	152.91	-2714.40	-492.50	878.53	821.72	15.46	
10800.00	8240.39	10797.58	8980.00	54.80	41.94	153.10	-2814.26	-492.49	876.57	819.85	15.46	
10900.00	8240.85	10697.71	8980.00	56.52	40.35	153.28	-2914.13	-492.50	874.63	817.99	15.44	
11000.00	8241.31	10597.84	8980.00	58.24	38.79	153.46	-3014.00	-492.53	872.70	816.12	15.42	
11100.00	8241.77	10497.98	8980.00	59.96	37.25	153.65	-3113.86	-492.57	870.80	814.25	15.40	
11200.00	8242.24	10398.11	8980.00	61.69	35.73	153.83	-3213.73	-492.64	868.91	812.37	15.37	
11300.00	8242.70	10298.24	8980.00	63.43	34.25	154.01	-3313.60	-492.72	867.03	810.49	15.33	
11400.00	8243.16	10198.36	8980.00	65.17	32.80	154.20	-3413.47	-492.83	865.18	808.59	15.29	
11500.00	8243.62	10098.49	8980.00	66.92	31.39	154.38	-3513.35	-492.95	863.34	806.69	15.24	
11600.00	8244.09	9998.62	8980.00	68.67	30.03	154.56	-3613.22	-493.10	861.52	804.77	15.18	
11700.00	8244.55	9898.74	8980.00	70.42	28.72	154.74	-3713.10	-493.26	859.72	802.83	15.11	
11800.00	8245.01	9798.87	8980.00	72.17	27.46	154.92	-3812.97	-493.44	857.93	800.87	15.04	
11900.00	8245.47	9698.99	8980.00	73.93	26.27	155.10	-3912.85	-493.64	856.16	798.89	14.95	
12000.00	8245.94	9599.11	8980.00	75.69	25.16	155.28	-4012.73	-493.86	854.41	796.88	14.85	
12100.00	8246.40	9499.23	8980.00	77.45	24.13	155.46	-4112.61	-494.10	852.67	794.84	14.74	
12200.00	8246.86	9399.35	8204.86	79.22	18.30	89.45	-4889.35	-496.27	762.55	665.03	7.82	
12300.00	8247.32	9299.47	8205.32	80.99	18.30	89.53	-4889.35	-496.27	673.78	574.49	6.79	
12400.00	8247.79	9205.79	8205.79	82.76	18.30	89.61	-4889.35	-496.27	588.62	487.56	5.82	
12500.00	8248.25	9106.25	8206.25	84.53	18.30	89.69	-4889.35	-496.27	508.89	406.06	4.95	
12600.00	8248.71	9006.71	8206.71	86.30	18.31	89.77	-4889.35	-496.27	437.57	332.96	4.18	
12700.00	8249.17	8907.17	8207.17	88.08	18.31	89.85	-4889.35	-496.27	379.42	273.04	3.57	
12800.00	8249.64	8807.64	8207.64	89.86	18.31	89.93	-4889.35	-496.27	341.26	233.09	3.15	
12878.77	8250.00	8708.00	8208.00	91.26	18.31	89.99	-4889.35	-496.27	329.96	220.39	3.01	

Site: Cotton Draw Unit #137H
Well: Cotton Draw Unit #137H
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	185.22	-4889.67	-446.29	4910.18			No Data
100.00	100.00	57.00	57.00	0.08	0.05	185.22	-4889.67	-446.29	4909.99	4909.86	37103.89	
200.00	200.00	157.00	157.00	0.31	0.21	185.22	-4889.67	-446.29	4909.99	4909.47	9415.91	
300.00	300.00	257.00	257.00	0.53	0.44	185.22	-4889.67	-446.29	4909.99	4909.02	5056.69	
400.00	400.00	357.00	357.00	0.76	0.66	185.22	-4889.67	-446.29	4909.99	4908.57	3456.47	
500.00	500.00	457.00	457.00	0.98	0.89	185.22	-4889.67	-446.29	4909.99	4908.12	2625.59	
600.00	600.00	557.00	557.00	1.21	1.11	185.22	-4889.67	-446.29	4909.99	4907.68	2116.76	
700.00	700.00	657.00	657.00	1.43	1.34	185.22	-4889.67	-446.29	4909.99	4907.23	1773.13	
800.00	800.00	757.00	757.00	1.66	1.56	185.22	-4889.67	-446.29	4909.99	4906.78	1525.48	
900.00	900.00	857.00	857.00	1.88	1.79	185.22	-4889.67	-446.29	4909.99	4906.33	1338.54	
1000.00	1000.00	957.00	957.00	2.11	2.01	185.22	-4889.67	-446.29	4909.99	4905.88	1192.41	
1100.00	1100.00	1057.00	1057.00	2.33	2.24	185.22	-4889.67	-446.29	4909.99	4905.43	1075.05	
1200.00	1200.00	1157.00	1157.00	2.56	2.46	185.22	-4889.67	-446.29	4909.99	4904.98	978.71	
1300.00	1300.00	1257.00	1257.00	2.78	2.68	185.22	-4889.67	-446.29	4909.99	4904.53	898.23	
1400.00	1400.00	1357.00	1357.00	3.01	2.91	185.22	-4889.67	-446.29	4909.99	4904.08	829.97	
1500.00	1500.00	1457.00	1457.00	3.23	3.13	185.22	-4889.67	-446.29	4909.99	4903.63	771.36	
1600.00	1600.00	1557.00	1557.00	3.46	3.36	185.22	-4889.67	-446.29	4909.99	4903.18	720.48	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011 Time: 12:27:55
Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 7

Dh: Sybase

Site: Cotton Draw Unit #137H
Well: Cotton Draw Unit #137H
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		
1700.00	1700.00	1657.00	1657.00	3.68	3.58	185.22	-4889.67	-446.29	4909.99	4902.73	675.89	
1800.00	1800.00	1757.00	1757.00	3.91	3.81	185.22	-4889.67	-446.29	4909.99	4902.28	636.51	
1900.00	1900.00	1857.00	1857.00	4.13	4.03	185.22	-4889.67	-446.29	4909.99	4901.83	601.46	
2000.00	2000.00	1957.00	1957.00	4.35	4.26	185.22	-4889.67	-446.29	4909.99	4901.38	570.07	
2100.00	2100.00	2057.00	2057.00	4.58	4.48	185.22	-4889.67	-446.29	4909.99	4900.93	541.79	
2200.00	2200.00	2157.00	2157.00	4.80	4.71	185.22	-4889.67	-446.29	4909.99	4900.48	516.18	
2300.00	2300.00	2257.00	2257.00	5.03	4.93	185.22	-4889.67	-446.29	4909.99	4900.03	492.89	
2400.00	2400.00	2357.00	2357.00	5.25	5.16	185.22	-4889.67	-446.29	4909.99	4899.58	471.61	
2500.00	2500.00	2457.00	2457.00	5.48	5.38	185.22	-4889.67	-446.29	4909.99	4899.13	452.09	
2600.00	2600.00	2557.00	2557.00	5.70	5.61	185.22	-4889.67	-446.29	4909.99	4898.68	434.12	
2700.00	2700.00	2657.00	2657.00	5.93	5.83	185.22	-4889.67	-446.29	4909.99	4898.23	417.53	
2800.00	2800.00	2757.00	2757.00	6.15	6.06	185.22	-4889.67	-446.29	4909.99	4897.79	402.15	
2900.00	2900.00	2857.00	2857.00	6.38	6.28	185.22	-4889.67	-446.29	4909.99	4897.34	387.87	
3000.00	3000.00	2957.00	2957.00	6.60	6.51	185.22	-4889.67	-446.29	4909.99	4896.89	374.57	
3100.00	3100.00	3057.00	3057.00	6.83	6.73	185.22	-4889.67	-446.29	4909.99	4896.44	362.15	
3200.00	3200.00	3157.00	3157.00	7.05	6.96	185.22	-4889.67	-446.29	4909.99	4895.99	350.53	
3300.00	3300.00	3257.00	3257.00	7.28	7.18	185.22	-4889.67	-446.29	4909.99	4895.54	339.63	
3400.00	3400.00	3357.00	3357.00	7.50	7.40	185.22	-4889.67	-446.29	4909.99	4895.09	329.39	
3500.00	3500.00	3457.00	3457.00	7.73	7.63	185.22	-4889.67	-446.29	4909.99	4894.64	319.74	
3600.00	3600.00	3557.00	3557.00	7.95	7.85	185.22	-4889.67	-446.29	4909.99	4894.19	310.65	
3700.00	3700.00	3657.00	3657.00	8.18	8.08	185.22	-4889.67	-446.29	4909.99	4893.74	302.06	
3800.00	3800.00	3757.00	3757.00	8.40	8.30	185.22	-4889.67	-446.29	4909.99	4893.29	293.93	
3900.00	3900.00	3857.00	3857.00	8.63	8.53	185.22	-4889.67	-446.29	4909.99	4892.84	286.23	
4000.00	4000.00	3957.00	3957.00	8.85	8.75	185.22	-4889.67	-446.29	4909.99	4892.39	278.92	
4100.00	4100.00	4057.00	4057.00	9.07	8.98	185.22	-4889.67	-446.29	4909.99	4891.94	271.97	
4200.00	4200.00	13842.59	8980.00	9.30	90.25	89.74	0.67	145.77	4825.20	4776.78	99.65	
4300.00	4300.00	13842.59	8980.00	9.52	90.25	89.74	0.67	145.77	4725.24	4676.60	97.14	
4400.00	4400.00	13842.59	8980.00	9.75	90.25	89.74	0.67	145.77	4625.29	4576.42	94.64	
4500.00	4500.00	13842.59	8980.00	9.97	90.25	89.74	0.67	145.77	4525.34	4476.25	92.17	
4600.00	4600.00	13842.59	8980.00	10.20	90.25	89.74	0.67	145.77	4425.40	4376.07	89.72	
4700.00	4700.00	13842.59	8980.00	10.42	90.25	89.74	0.67	145.77	4325.45	4275.90	87.29	
4800.00	4800.00	13842.59	8980.00	10.65	90.25	89.74	0.67	145.77	4225.51	4175.73	84.89	
4900.00	4900.00	13842.59	8980.00	10.87	90.25	89.74	0.67	145.77	4125.57	4075.57	82.50	
5000.00	5000.00	13842.59	8980.00	11.10	90.25	89.74	0.67	145.77	4025.64	3975.40	80.14	
5100.00	5100.00	13842.59	8980.00	11.32	90.25	89.74	0.67	145.77	3925.70	3875.24	77.80	
5200.00	5200.00	13842.59	8980.00	11.55	90.25	89.74	0.67	145.77	3825.77	3775.08	75.48	
5300.00	5300.00	13842.59	8980.00	11.77	90.25	89.74	0.67	145.77	3725.85	3674.93	73.17	
5400.00	5400.00	13842.59	8980.00	12.00	90.25	89.74	0.67	145.77	3625.93	3574.78	70.89	
5500.00	5500.00	13842.59	8980.00	12.22	90.25	89.74	0.67	145.77	3526.01	3474.64	68.63	
5600.00	5600.00	13842.59	8980.00	12.45	90.25	89.74	0.67	145.77	3426.10	3374.49	66.39	
5700.00	5700.00	13842.59	8980.00	12.67	90.25	89.74	0.67	145.77	3326.19	3274.36	64.17	
5800.00	5800.00	13842.59	8980.00	12.90	90.25	89.74	0.67	145.77	3226.29	3174.23	61.97	
5900.00	5900.00	13842.59	8980.00	13.12	90.25	89.74	0.67	145.77	3126.40	3074.10	59.78	
6000.00	6000.00	13842.59	8980.00	13.35	90.25	89.74	0.67	145.77	3026.51	2973.98	57.62	
6100.00	6100.00	13842.59	8980.00	13.57	90.25	89.74	0.67	145.77	2926.63	2873.87	55.47	
6200.00	6200.00	13842.59	8980.00	13.80	90.25	89.74	0.67	145.77	2826.76	2773.76	53.34	
6300.00	6300.00	13842.59	8980.00	14.02	90.25	89.74	0.67	145.77	2726.89	2673.66	51.23	
6400.00	6400.00	13842.59	8980.00	14.24	90.25	89.74	0.67	145.77	2627.04	2573.57	49.13	
6500.00	6500.00	13842.59	8980.00	14.47	90.25	89.74	0.67	145.77	2527.20	2473.49	47.05	
6600.00	6600.00	13842.59	8980.00	14.69	90.25	89.74	0.67	145.77	2427.38	2373.43	44.99	
6700.00	6700.00	13842.59	8980.00	14.92	90.25	89.74	0.67	145.77	2327.56	2273.37	42.95	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011 Time: 12:27:55
Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 8

Db: Sybase

Site: Cotton Draw Unit #137H
Well: Cotton Draw Unit #137H
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 deg	Offset Location North	Offset Location East	Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
6800.00	6800.00	13842.59	8980.00	15.14	90.25	89.74	0.67	145.77	2227.77	2173.33	40.92	
6900.00	6900.00	13842.59	8980.00	15.37	90.25	89.74	0.67	145.77	2127.99	2073.31	38.91	
7000.00	7000.00	13842.59	8980.00	15.59	90.25	89.74	0.67	145.77	2028.24	1973.30	36.92	
7100.00	7100.00	13842.59	8980.00	15.82	90.25	89.74	0.67	145.77	1928.51	1873.31	34.94	
7200.00	7200.00	13842.59	8980.00	16.04	90.25	89.74	0.67	145.77	1828.81	1773.35	32.97	
7300.00	7300.00	13842.59	8980.00	16.27	90.25	89.74	0.67	145.77	1729.15	1673.41	31.02	
7400.00	7400.00	13842.59	8980.00	16.49	90.25	89.74	0.67	145.77	1629.53	1573.50	29.08	
7500.00	7500.00	13842.59	8980.00	16.72	90.25	89.74	0.67	145.77	1529.96	1473.63	27.16	
7600.00	7600.00	13842.59	8980.00	16.94	90.25	89.74	0.67	145.77	1430.44	1373.81	25.26	
7700.00	7699.96	13840.98	8980.00	17.17	90.22	234.31	-0.94	145.78	1331.05	1274.10	23.37	
7800.00	7798.52	13824.86	8980.00	17.40	89.94	205.43	-17.06	145.86	1233.20	1176.30	21.67	
7900.00	7892.78	13791.88	8980.00	17.65	89.35	197.43	-50.03	146.01	1139.82	1083.45	20.22	
8000.00	7979.89	13743.05	8980.00	17.94	88.48	194.16	-98.87	146.23	1053.79	998.34	19.01	
8100.00	8057.18	13679.85	8980.00	18.29	87.36	192.62	-162.07	146.52	977.71	923.51	18.04	
8200.00	8122.31	13604.19	8980.00	18.74	86.02	191.90	-237.72	146.86	913.92	861.15	17.32	
8300.00	8173.31	13518.38	8980.00	19.31	84.50	191.63	-323.53	147.26	864.31	813.01	16.85	
8400.00	8208.62	13425.03	8980.00	20.01	82.84	191.63	-416.88	147.68	830.31	780.36	16.62	
8500.00	8227.17	13326.97	8980.00	20.83	81.11	191.80	-514.94	148.13	812.89	763.93	16.60	
8600.00	8230.21	13227.14	8980.00	21.75	79.35	192.06	-614.77	148.59	810.71	762.23	16.72	
8700.00	8230.68	13127.21	8980.00	22.78	77.59	192.33	-714.70	149.05	811.07	762.87	16.83	
8800.00	8231.14	13027.29	8980.00	23.90	75.83	192.61	-814.62	149.51	811.45	763.49	16.92	
8900.00	8231.60	12927.36	8980.00	25.10	74.07	192.88	-914.55	149.96	811.85	764.07	16.99	
9000.00	8232.06	12827.44	8980.00	26.37	72.32	193.15	-1014.47	150.42	812.27	764.64	17.05	
9100.00	8232.52	12727.51	8980.00	27.71	70.57	193.42	-1114.39	150.88	812.71	765.18	17.10	
9200.00	8232.99	12627.59	8980.00	29.09	68.83	193.69	-1214.32	151.33	813.16	765.70	17.13	
9300.00	8233.45	12527.66	8980.00	30.52	67.09	193.97	-1314.24	151.79	813.63	766.22	17.16	
9400.00	8233.91	12427.74	8980.00	31.99	65.36	194.24	-1414.16	152.25	814.13	766.72	17.17	
9500.00	8234.37	12327.81	8980.00	33.50	63.63	194.51	-1514.09	152.71	814.64	767.21	17.18	
9600.00	8234.84	12227.89	8980.00	35.03	61.90	194.78	-1614.01	153.16	815.16	767.70	17.17	
9700.00	8235.30	12127.97	8980.00	36.59	60.19	195.05	-1713.93	153.62	815.71	768.18	17.16	
9800.00	8235.76	12028.04	8980.00	38.17	58.48	195.32	-1813.86	154.08	816.27	768.66	17.14	
9900.00	8236.22	11928.12	8980.00	39.78	56.77	195.59	-1913.78	154.54	816.86	769.13	17.12	
10000.00	8236.69	11828.19	8980.00	41.40	55.08	195.86	-2013.70	154.99	817.46	769.61	17.08	
10100.00	8237.15	11728.27	8980.00	43.03	53.39	196.12	-2113.63	155.45	818.07	770.08	17.05	
10200.00	8237.61	11628.34	8980.00	44.68	51.71	196.39	-2213.55	155.91	818.71	770.56	17.00	
10300.00	8238.07	11528.42	8980.00	46.34	50.04	196.66	-2313.48	156.36	819.36	771.04	16.95	
10400.00	8238.54	11428.49	8980.00	48.02	48.39	196.93	-2413.40	156.82	820.04	771.52	16.90	
10500.00	8239.00	11328.57	8980.00	49.70	46.74	197.19	-2513.32	157.28	820.73	772.00	16.84	
10600.00	8239.46	11228.64	8980.00	51.39	45.11	197.46	-2613.25	157.74	821.43	772.48	16.78	
10700.00	8239.92	11128.72	8980.00	53.09	43.50	197.72	-2713.17	158.19	822.16	772.96	16.71	
10800.00	8240.39	11028.80	8980.00	54.80	41.90	197.99	-2813.09	158.65	822.90	773.44	16.64	
10900.00	8240.85	10928.87	8980.00	56.52	40.32	198.25	-2913.02	159.11	823.66	773.92	16.56	
11000.00	8241.31	10828.95	8980.00	58.24	38.77	198.52	-3012.94	159.57	824.44	774.40	16.48	
11100.00	8241.77	10729.02	8980.00	59.96	37.24	198.78	-3112.86	160.02	825.24	774.88	16.39	
11200.00	8242.24	10629.10	8980.00	61.69	35.73	199.05	-3212.79	160.48	826.05	775.36	16.29	
11300.00	8242.70	10529.17	8980.00	63.43	34.26	199.31	-3312.71	160.94	826.88	775.82	16.20	
11400.00	8243.16	10429.25	8980.00	65.17	32.83	199.57	-3412.63	161.40	827.73	776.29	16.09	
11500.00	8243.62	10329.32	8980.00	66.92	31.43	199.83	-3512.56	161.85	828.60	776.74	15.98	
11600.00	8244.09	10229.40	8980.00	68.67	30.08	200.09	-3612.48	162.31	829.48	777.18	15.86	
11700.00	8244.55	10129.47	8980.00	70.42	28.78	200.35	-3712.40	162.77	830.38	777.60	15.73	
11800.00	8245.01	10029.55	8980.00	72.17	27.54	200.61	-3812.33	163.22	831.29	778.01	15.60	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011
Time: 12:27:55
Page: 9

Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical(TVD) Reference: SITE 3488.0
Db: Sybase

Site: Cotton Draw Unit #137H
Well: Cotton Draw Unit #137H
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		
11900.00	8245.47	9929.62	8980.00	73.93	26.37	200.87	-3912.25	163.68	832.23	778.39	15.46	
12000.00	8245.94	9829.70	8980.00	75.69	25.28	201.13	-4012.18	164.14	833.18	778.75	15.31	
12100.00	8246.40	8236.78	8231.39	77.45	18.33	95.85	-4899.86	-404.18	830.07	734.64	8.70	
12200.00	8246.86	8245.91	8239.88	79.22	18.35	97.97	-4900.65	-400.90	734.81	637.90	7.58	
12300.00	8247.32	8255.69	8248.91	80.99	18.37	100.29	-4901.53	-397.26	640.88	542.64	6.52	
12400.00	8247.79	8266.18	8258.54	82.76	18.39	102.81	-4902.52	-393.20	548.93	449.57	5.52	
12500.00	8248.25	8277.47	8268.82	84.53	18.42	105.55	-4903.61	-388.67	460.16	359.93	4.59	
12600.00	8248.71	8289.63	8279.80	86.30	18.45	108.55	-4904.84	-383.59	376.77	276.03	3.74	
12700.00	8249.17	8302.76	8291.54	88.08	18.48	111.82	-4906.23	-377.87	303.20	202.45	3.01	
12800.00	8249.64	8316.97	8304.10	89.86	18.52	115.38	-4907.79	-371.43	248.28	148.21	2.48	
12878.77	8250.00	8329.00	8314.62	91.26	18.55	118.41	-4909.16	-365.75	227.28	128.22	2.29	

Site: Cotton Draw Unit #152H
Well: Cotton Draw Unit #152H
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	41.50	41.50	0.00	0.03	357.91	5225.96	-190.35	5229.43			No Data
100.00	100.00	141.50	141.50	0.08	0.18	357.91	5225.96	-190.35	5229.43	5229.16	19970.89	
200.00	200.00	241.50	241.50	0.31	0.40	357.91	5225.96	-190.35	5229.43	5228.71	7351.05	
300.00	300.00	341.50	341.50	0.53	0.63	357.91	5225.96	-190.35	5229.43	5228.26	4504.57	
400.00	400.00	441.50	441.50	0.76	0.85	357.91	5225.96	-190.35	5229.43	5227.82	3247.19	
500.00	500.00	541.50	541.50	0.98	1.08	357.91	5225.96	-190.35	5229.43	5227.37	2538.58	
600.00	600.00	641.50	641.50	1.21	1.30	357.91	5225.96	-190.35	5229.43	5226.92	2083.84	
700.00	700.00	741.50	741.50	1.43	1.53	357.91	5225.96	-190.35	5229.43	5226.47	1767.27	
800.00	800.00	841.50	841.50	1.66	1.75	357.91	5225.96	-190.35	5229.43	5226.02	1534.20	
900.00	900.00	941.50	941.50	1.88	1.98	357.91	5225.96	-190.35	5229.43	5225.57	1355.44	
1000.00	1000.00	1041.50	1041.50	2.11	2.20	357.91	5225.96	-190.35	5229.43	5225.12	1213.99	
1100.00	1100.00	1141.50	1141.50	2.33	2.43	357.91	5225.96	-190.35	5229.43	5224.67	1099.27	
1200.00	1200.00	1241.50	1241.50	2.56	2.65	357.91	5225.96	-190.35	5229.43	5224.22	1004.36	
1300.00	1300.00	1341.50	1341.50	2.78	2.87	357.91	5225.96	-190.35	5229.43	5223.77	924.54	
1400.00	1400.00	1441.50	1441.50	3.01	3.10	357.91	5225.96	-190.35	5229.43	5223.32	856.47	
1500.00	1500.00	1541.50	1541.50	3.23	3.32	357.91	5225.96	-190.35	5229.43	5222.87	797.74	
1600.00	1600.00	1641.50	1641.50	3.46	3.55	357.91	5225.96	-190.35	5229.43	5222.42	746.55	
1700.00	1700.00	1741.50	1741.50	3.68	3.77	357.91	5225.96	-190.35	5229.43	5221.97	701.53	
1800.00	1800.00	1841.50	1841.50	3.91	4.00	357.91	5225.96	-190.35	5229.43	5221.52	661.63	
1900.00	1900.00	1941.50	1941.50	4.13	4.22	357.91	5225.96	-190.35	5229.43	5221.07	626.02	
2000.00	2000.00	2041.50	2041.50	4.35	4.45	357.91	5225.96	-190.35	5229.43	5220.62	594.05	
2100.00	2100.00	2141.50	2141.50	4.58	4.67	357.91	5225.96	-190.35	5229.43	5220.17	565.19	
2200.00	2200.00	2241.50	2241.50	4.80	4.90	357.91	5225.96	-190.35	5229.43	5219.72	539.00	
2300.00	2300.00	2341.50	2341.50	5.03	5.12	357.91	5225.96	-190.35	5229.43	5219.27	515.14	
2400.00	2400.00	2441.50	2441.50	5.25	5.35	357.91	5225.96	-190.35	5229.43	5218.82	493.29	
2500.00	2500.00	2541.50	2541.50	5.48	5.57	357.91	5225.96	-190.35	5229.43	5218.37	473.22	
2600.00	2600.00	2641.50	2641.50	5.70	5.80	357.91	5225.96	-190.35	5229.43	5217.93	454.73	
2700.00	2700.00	2741.50	2741.50	5.93	6.02	357.91	5225.96	-190.35	5229.43	5217.48	437.62	
2800.00	2800.00	2841.50	2841.50	6.15	6.25	357.91	5225.96	-190.35	5229.43	5217.03	421.75	
2900.00	2900.00	2941.50	2941.50	6.38	6.47	357.91	5225.96	-190.35	5229.43	5216.58	407.00	
3000.00	3000.00	3041.50	3041.50	6.60	6.70	357.91	5225.96	-190.35	5229.43	5216.13	393.24	
3100.00	3100.00	12846.88	8267.00	6.83	90.49	335.53	400.17	-182.14	5144.32	5101.50	120.13	
3200.00	3200.00	12846.88	8267.00	7.05	90.49	335.53	400.17	-182.14	5044.70	5001.64	117.18	
3300.00	3300.00	12846.88	8267.00	7.28	90.49	335.53	400.17	-182.14	4945.08	4901.80	114.25	



Weatherford International, Inc.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011

Time: 12:27:55

Page: 10

Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Db: Sybase

Site: Cotton Draw Unit #152H
Well: Cotton Draw Unit #152H
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
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	
3400.00	3400.00	12846.88	8267.00	7.50	90.49	335.53	400.17	-182.14	4845.49	4801.98	111.36
3500.00	3500.00	12846.88	8267.00	7.73	90.49	335.53	400.17	-182.14	4745.91	4702.17	108.50
3600.00	3600.00	12846.88	8267.00	7.95	90.49	335.53	400.17	-182.14	4646.35	4602.38	105.66
3700.00	3700.00	12846.88	8267.00	8.18	90.49	335.53	400.17	-182.14	4546.81	4502.60	102.86
3800.00	3800.00	12846.88	8267.00	8.40	90.49	335.53	400.17	-182.14	4447.29	4402.85	100.08
3900.00	3900.00	12846.88	8267.00	8.63	90.49	335.53	400.17	-182.14	4347.79	4303.12	97.33
4000.00	4000.00	12846.88	8267.00	8.85	90.49	335.53	400.17	-182.14	4248.31	4203.41	94.61
4100.00	4100.00	12846.88	8267.00	9.07	90.49	335.53	400.17	-182.14	4148.86	4103.73	91.92
4200.00	4200.00	12846.88	8267.00	9.30	90.49	335.53	400.17	-182.14	4049.44	4004.07	89.25
4300.00	4300.00	12846.88	8267.00	9.52	90.49	335.53	400.17	-182.14	3950.05	3904.44	86.62
4400.00	4400.00	12846.88	8267.00	9.75	90.49	335.53	400.17	-182.14	3850.68	3804.84	84.00
4500.00	4500.00	12846.88	8267.00	9.97	90.49	335.53	400.17	-182.14	3751.35	3705.28	81.42
4600.00	4600.00	12846.88	8267.00	10.20	90.49	335.53	400.17	-182.14	3652.06	3605.75	78.85
4700.00	4700.00	12846.88	8267.00	10.42	90.49	335.53	400.17	-182.14	3552.81	3506.26	76.32
4800.00	4800.00	12846.88	8267.00	10.65	90.49	335.53	400.17	-182.14	3453.60	3406.81	73.81
4900.00	4900.00	12846.88	8267.00	10.87	90.49	335.53	400.17	-182.14	3354.44	3307.41	71.32
5000.00	5000.00	12846.88	8267.00	11.10	90.49	335.53	400.17	-182.14	3255.33	3208.05	68.86
5100.00	5100.00	12846.88	8267.00	11.32	90.49	335.53	400.17	-182.14	3156.27	3108.75	66.42
5200.00	5200.00	12846.88	8267.00	11.55	90.49	335.53	400.17	-182.14	3057.28	3009.51	64.00
5300.00	5300.00	12846.88	8267.00	11.77	90.49	335.53	400.17	-182.14	2958.35	2910.34	61.61
5400.00	5400.00	12846.88	8267.00	12.00	90.49	335.53	400.17	-182.14	2859.50	2811.24	59.24
5500.00	5500.00	12846.88	8267.00	12.22	90.49	335.53	400.17	-182.14	2760.74	2712.21	56.90
5600.00	5600.00	12846.88	8267.00	12.45	90.49	335.53	400.17	-182.14	2662.06	2613.28	54.57
5700.00	5700.00	12846.88	8267.00	12.67	90.49	335.53	400.17	-182.14	2563.49	2514.45	52.27
5800.00	5800.00	12846.88	8267.00	12.90	90.49	335.53	400.17	-182.14	2465.03	2415.72	49.99
5900.00	5900.00	12846.88	8267.00	13.12	90.49	335.53	400.17	-182.14	2366.70	2317.12	47.74
6000.00	6000.00	12846.88	8267.00	13.35	90.49	335.53	400.17	-182.14	2268.52	2218.66	45.50
6100.00	6100.00	12846.88	8267.00	13.57	90.49	335.53	400.17	-182.14	2170.50	2120.36	43.29
6200.00	6200.00	12846.88	8267.00	13.80	90.49	335.53	400.17	-182.14	2072.67	2022.24	41.10
6300.00	6300.00	12846.88	8267.00	14.02	90.49	335.53	400.17	-182.14	1975.06	1924.32	38.93
6400.00	6400.00	12846.88	8267.00	14.24	90.49	335.53	400.17	-182.14	1877.70	1826.65	36.78
6500.00	6500.00	12846.88	8267.00	14.47	90.49	335.53	400.17	-182.14	1780.64	1729.25	34.65
6600.00	6600.00	12846.88	8267.00	14.69	90.49	335.53	400.17	-182.14	1683.91	1632.17	32.55
6700.00	6700.00	12846.88	8267.00	14.92	90.49	335.53	400.17	-182.14	1587.60	1535.48	30.46
6800.00	6800.00	12846.88	8267.00	15.14	90.49	335.53	400.17	-182.14	1491.76	1439.24	28.40
6900.00	6900.00	12846.88	8267.00	15.37	90.49	335.53	400.17	-182.14	1396.52	1343.54	26.36
7000.00	7000.00	12846.88	8267.00	15.59	90.49	335.53	400.17	-182.14	1301.98	1248.50	24.34
7100.00	7100.00	12846.88	8267.00	15.82	90.49	335.53	400.17	-182.14	1208.33	1154.27	22.35
7200.00	7200.00	12846.88	8267.00	16.04	90.49	335.53	400.17	-182.14	1115.78	1061.04	20.38
7300.00	7300.00	12846.88	8267.00	16.27	90.49	335.53	400.17	-182.14	1024.63	969.07	18.44
7400.00	7400.00	12846.88	8267.00	16.49	90.49	335.53	400.17	-182.14	935.29	878.72	16.53
7500.00	7500.00	12846.88	8267.00	16.72	90.49	335.53	400.17	-182.14	848.33	790.45	14.66
7600.00	7600.00	12846.88	8267.00	16.94	90.49	335.53	400.17	-182.14	764.57	704.91	12.82
7700.00	7699.96	12846.88	8267.00	17.17	90.49	155.72	400.17	-182.14	686.13	624.01	11.04
7800.00	7798.52	12846.88	8267.00	17.40	90.49	158.79	400.17	-182.14	624.43	559.01	9.55
7900.00	7892.78	12846.88	8267.00	17.65	90.49	160.15	400.17	-182.14	588.68	518.69	8.41
8000.00	7979.89	12846.88	8267.00	17.94	90.49	160.29	400.17	-182.14	584.81	508.34	7.65
8100.00	8057.18	12846.88	8267.00	18.29	90.49	159.23	400.17	-182.14	613.53	528.55	7.22
8200.00	8122.31	12846.88	8267.00	18.74	90.49	156.63	400.17	-182.14	669.89	575.73	7.11
8300.00	8173.31	12846.88	8267.00	19.31	90.49	151.38	400.17	-182.14	746.19	645.00	7.37
8400.00	8208.62	12846.88	8267.00	20.01	90.49	140.34	400.17	-182.14	835.03	729.61	7.92



Weatherford International, Inc.

Anticollision Report

**Weatherford***

Company: Devon Energy
Field: Eddy Co., NM (NAD:83)
Reference Site: Cotton Draw Unit #160H
Reference Well: #160H
Reference Wellpath: 1

Date: 1/18/2011
Time: 12:27:55
Co-ordinate(NE) Reference: Well: #160H, Grid North
Vertical (TVD) Reference: SITE 3488.0

Page: 11
Db: Sybase

Site: Cotton Draw Unit #152H
Well: Cotton Draw Unit #152H
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-IIS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
8500.00	8227.17	12846.88	8267.00	20.83	90.49	114.41	400.17	-182.14	930.55	820.62	8.46	
8600.00	8230.21	12846.88	8267.00	21.75	90.49	89.99	400.17	-182.14	1028.45	916.24	9.17	
8700.00	8230.68	12846.88	8267.00	22.78	90.49	89.99	400.17	-182.14	1126.78	1013.56	9.95	
8800.00	8231.14	12846.88	8267.00	23.90	90.49	89.99	400.17	-182.14	1225.39	1111.05	10.72	
8900.00	8231.60	12846.88	8267.00	25.10	90.49	89.99	400.17	-182.14	1324.20	1208.67	11.46	
9000.00	8232.06	12846.88	8267.00	26.37	90.49	89.99	400.17	-182.14	1423.18	1306.40	12.19	
9100.00	8232.52	12846.88	8267.00	27.71	90.49	89.99	400.17	-182.14	1522.29	1404.19	12.89	
9200.00	8232.99	12846.88	8267.00	29.09	90.49	89.99	400.17	-182.14	1621.51	1502.04	13.57	
9300.00	8233.45	12846.88	8267.00	30.52	90.49	89.99	400.17	-182.14	1720.82	1599.95	14.24	
9400.00	8233.91	12846.88	8267.00	31.99	90.49	89.99	400.17	-182.14	1820.21	1697.89	14.88	
9500.00	8234.37	12846.88	8267.00	33.50	90.49	89.99	400.17	-182.14	1919.66	1795.86	15.51	
9600.00	8234.84	12846.88	8267.00	35.03	90.49	89.99	400.17	-182.14	2019.17	1893.87	16.11	
9700.00	8235.30	12846.88	8267.00	36.59	90.49	89.99	400.17	-182.14	2118.72	1991.89	16.71	
9800.00	8235.76	12846.88	8267.00	38.17	90.49	89.99	400.17	-182.14	2218.31	2089.95	17.28	
9900.00	8236.22	12846.88	8267.00	39.78	90.49	89.99	400.17	-182.14	2317.94	2188.02	17.84	
10000.00	8236.69	12846.88	8267.00	41.40	90.49	89.99	400.17	-182.14	2417.60	2286.11	18.39	
10100.00	8237.15	12846.88	8267.00	43.03	90.49	89.99	400.17	-182.14	2517.28	2384.22	18.92	
10200.00	8237.61	12846.88	8267.00	44.68	90.49	89.99	400.17	-182.14	2616.99	2482.35	19.44	
10300.00	8238.07	12846.88	8267.00	46.34	90.49	89.99	400.17	-182.14	2716.72	2580.50	19.94	
10400.00	8238.54	12846.88	8267.00	48.02	90.49	89.99	400.17	-182.14	2816.47	2678.67	20.44	
10500.00	8239.00	12846.88	8267.00	49.70	90.49	89.99	400.17	-182.14	2916.24	2776.87	20.92	
10600.00	8239.46	12846.88	8267.00	51.39	90.49	89.99	400.17	-182.14	3016.02	2875.08	21.40	
10700.00	8239.92	12846.88	8267.00	53.09	90.49	89.99	400.17	-182.14	3115.82	2973.32	21.87	
10800.00	8240.39	12846.88	8267.00	54.80	90.49	89.99	400.17	-182.14	3215.62	3071.60	22.33	
10900.00	8240.85	12846.88	8267.00	56.52	90.49	89.99	400.17	-182.14	3315.44	3169.90	22.78	
11000.00	8241.31	12846.88	8267.00	58.24	90.49	89.99	400.17	-182.14	3415.28	3268.24	23.23	
11100.00	8241.77	12846.88	8267.00	59.96	90.49	89.99	400.17	-182.14	3515.12	3366.63	23.67	
11200.00	8242.24	12846.88	8267.00	61.69	90.49	89.99	400.17	-182.14	3614.97	3465.08	24.12	
11300.00	8242.70	12846.88	8267.00	63.43	90.49	89.99	400.17	-182.14	3714.82	3563.58	24.56	
11400.00	8243.16	12846.88	8267.00	65.17	90.49	89.99	400.17	-182.14	3814.69	3662.17	25.01	
11500.00	8243.62	12846.88	8267.00	66.92	90.49	89.99	400.17	-182.14	3914.56	3760.85	25.47	
11600.00	8244.09	12846.88	8267.00	68.67	90.49	89.99	400.17	-182.14	4014.44	3859.66	25.94	
11700.00	8244.55	12846.88	8267.00	70.42	90.49	89.99	400.17	-182.14	4114.32	3958.60	26.42	
11800.00	8245.01	12846.88	8267.00	72.17	90.49	89.99	400.17	-182.14	4214.21	4057.74	26.93	
11900.00	8245.47	12846.88	8267.00	73.93	90.49	89.99	400.17	-182.14	4314.11	4157.11	27.48	
12000.00	8245.94	12846.88	8267.00	75.69	90.49	89.99	400.17	-182.14	4414.01	4256.78	28.07	
12100.00	8246.40	12846.88	8267.00	77.45	90.49	89.99	400.17	-182.14	4513.91	4356.83	28.74	
12200.00	8246.86	12846.88	8267.00	79.22	90.49	89.99	400.17	-182.14	4613.82	4457.35	29.49	
12300.00	8247.32	12846.88	8267.00	80.99	90.49	89.99	400.17	-182.14	4713.73	4558.48	30.36	
12400.00	8247.79	12846.88	8267.00	82.76	90.49	89.99	400.17	-182.14	4813.65	4660.35	31.40	
12500.00	8248.25	12846.88	8267.00	84.53	90.49	89.99	400.17	-182.14	4913.56	4763.09	32.65	
12600.00	8248.71	12846.88	8267.00	86.30	90.49	89.99	400.17	-182.14	5013.49	4866.77	34.17	
12700.00	8249.17	12846.88	8267.00	88.08	90.49	89.99	400.17	-182.14	5113.41	4971.30	35.98	
12800.00	8249.64	12846.88	8267.00	89.86	90.49	89.99	400.17	-182.14	5213.34	5076.24	38.03	
12878.77	8250.00	12846.88	8267.00	91.26	90.49	89.99	400.17	-182.14	5292.05	5158.59	39.65	

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

GeoDec v5.1.000

Report Date: January 18, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #160H
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 424623.070 USFT	Latitude 32.1660230 DEG
East/West 721783.070 USFT	Longitude -103.7501796 DEG
Grid Convergence: .31048859°	
Total Correction: +7.3138°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.16602° N	32° 9 min 57.683 sec
Longitude =	103.75018° W	103° 45 min .647 sec

Magnetic Declination =	7.6240°	[True North Offset]
Local Gravity =	.9988 g	
Local Field Strength =	48550 nT	Magnetic Vector X = 23992 nT
Magnetic Dip =	60.0940°	Magnetic Vector Y = 3212 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42085 nT
Spud Date =	Oct 15, 2011	Magnetic Vector H = 24206 nT

Signed: _____

Date: _____

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Job : 308
 Date: 4/26/2011
 Time: 9:29:04 AM



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW UNIT #161H

EDDY COUNTY, NM

WELL FILE: PLAN 1

JANUARY 20, 2011

Weatherford International, Ltd.

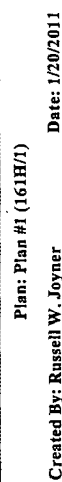
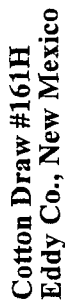
P.O. Box 61028

Midland, TX 79711 USA

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www.weatherford.com





Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy	Date: 1/20/2011	Time: 12:57:12	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: 161H, Grid North		
Site: Cotton Draw Unit 161H	Vertical (TVD) Reference: SITE 3483.0		
Well: 161H	Section (VS) Reference: Well (0.00N,0.00E,177.26Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 1/20/2011
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 Unit 161H

Site Position:	Northing: 424624.19 ft	Latitude: 32 9 57.777 N
From: Map	Easting: 720062.93 ft	Longitude: 103 45 20.675 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3458.00 ft		Grid Convergence: 0.31 deg

Well: 161H	Slot Name:	
Well Position: +N-S 0.00 ft	Northing: 424624.19 ft	Latitude: 32 9 57.777 N
+E-W 0.00 ft	Easting: 720062.93 ft	Longitude: 103 45 20.675 W
Position Uncertainty: 0.00 ft		

Wellpath: 1	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 11/15/2011	Above System Datum: Mean Sea Level		
Field Strength: 48545 nT	Declination: 7.62 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.09 deg		
ft	+N-S ft	+E-W ft	Direction deg
8262.00	0.00	0.00	177.26

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	177.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7655.06	0.00	177.26	7655.06	0.00	0.00	0.00	0.00	0.00	177.26	
8550.55	89.55	177.26	8228.00	-567.80	27.18	10.00	10.00	0.00	177.26	
12871.12	89.55	177.26	8262.00	-4883.29	233.77	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
7600.00	0.00	177.26	7600.00	0.00	0.00	0.00	0.00	424624.19	720062.93	Kop
7655.06	0.00	177.26	7655.06	0.00	0.00	0.00	0.00	424624.19	720062.93	
7700.00	4.49	177.26	7699.95	-1.76	0.08	1.76	10.00	424622.43	720063.01	
7800.00	14.49	177.26	7798.46	-18.21	0.87	18.24	10.00	424605.98	720063.80	
7900.00	24.49	177.26	7892.61	-51.50	2.47	51.56	10.00	424572.69	720065.40	
8000.00	34.49	177.26	7979.54	-100.62	4.82	100.73	10.00	424523.57	720067.75	Lp
8100.00	44.49	177.26	8056.61	-164.07	7.85	164.25	10.00	424460.12	720070.78	
8200.00	54.49	177.26	8121.48	-239.92	11.49	240.19	10.00	424384.27	720074.42	
8300.00	64.49	177.26	8172.18	-325.87	15.60	326.24	10.00	424298.32	720078.53	
8400.00	74.49	177.26	8207.16	-419.30	20.07	419.78	10.00	424204.89	720083.00	
8500.00	84.49	177.26	8225.37	-517.39	24.77	517.98	10.00	424106.80	720087.70	
8550.55	89.55	177.26	8228.00	-567.80	27.18	568.45	10.00	424056.39	720090.11	
8600.00	89.55	177.26	8228.39	-617.19	29.55	617.90	0.00	424007.00	720092.48	
8700.00	89.55	177.26	8229.18	-717.07	34.33	717.89	0.00	423907.12	720097.26	
8800.00	89.55	177.26	8229.96	-816.95	39.11	817.89	0.00	423807.24	720102.04	
8900.00	89.55	177.26	8230.75	-916.84	43.89	917.89	0.00	423707.35	720106.82	
9000.00	89.55	177.26	8231.54	-1016.72	48.67	1017.88	0.00	423607.47	720111.60	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit 161H
Well: 161H
Wellpath: 1

Date: 1/20/2011 Time: 12:57:12 Page: 2
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0
Section (VS) Reference: Well (0.00N,0.00E,177.26Azi)
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
9100.00	89.55	177.26	8232.32	-1116.60	53.45	1117.88	0.00	423507.59	720116.38	
9200.00	89.55	177.26	8233.11	-1216.48	58.23	1217.88	0.00	423407.71	720121.16	
9300.00	89.55	177.26	8233.90	-1316.37	63.02	1317.87	0.00	423307.82	720125.95	
9400.00	89.55	177.26	8234.68	-1416.25	67.80	1417.87	0.00	423207.94	720130.73	
9500.00	89.55	177.26	8235.47	-1516.13	72.58	1517.87	0.00	423108.06	720135.51	
9600.00	89.55	177.26	8236.26	-1616.01	77.36	1617.87	0.00	423008.18	720140.29	
9700.00	89.55	177.26	8237.05	-1715.90	82.14	1717.86	0.00	422908.29	720145.07	
9800.00	89.55	177.26	8237.83	-1815.78	86.92	1817.86	0.00	422808.41	720149.85	
9900.00	89.55	177.26	8238.62	-1915.66	91.71	1917.86	0.00	422708.53	720154.64	
10000.00	89.55	177.26	8239.41	-2015.54	96.49	2017.85	0.00	422608.65	720159.42	
10100.00	89.55	177.26	8240.19	-2115.43	101.27	2117.85	0.00	422508.76	720164.20	
10200.00	89.55	177.26	8240.98	-2215.31	106.05	2217.85	0.00	422408.88	720168.98	
10300.00	89.55	177.26	8241.77	-2315.19	110.83	2317.84	0.00	422309.00	720173.76	
10400.00	89.55	177.26	8242.55	-2415.07	115.61	2417.84	0.00	422209.12	720178.54	
10500.00	89.55	177.26	8243.34	-2514.96	120.39	2517.84	0.00	422109.23	720183.32	
10600.00	89.55	177.26	8244.13	-2614.84	125.18	2617.83	0.00	422009.35	720188.11	
10700.00	89.55	177.26	8244.91	-2714.72	129.96	2717.83	0.00	421909.47	720192.89	
10800.00	89.55	177.26	8245.70	-2814.60	134.74	2817.83	0.00	421809.59	720197.67	
10900.00	89.55	177.26	8246.49	-2914.49	139.52	2917.83	0.00	421709.70	720202.45	
11000.00	89.55	177.26	8247.28	-3014.37	144.30	3017.82	0.00	421609.82	720207.23	
11100.00	89.55	177.26	8248.06	-3114.25	149.08	3117.82	0.00	421509.94	720212.01	
11200.00	89.55	177.26	8248.85	-3214.14	153.87	3217.82	0.00	421410.05	720216.80	
11300.00	89.55	177.26	8249.64	-3314.02	158.65	3317.81	0.00	421310.17	720221.58	
11400.00	89.55	177.26	8250.42	-3413.90	163.43	3417.81	0.00	421210.29	720226.36	
11500.00	89.55	177.26	8251.21	-3513.78	168.21	3517.81	0.00	421110.41	720231.14	
11600.00	89.55	177.26	8252.00	-3613.67	172.99	3617.80	0.00	421010.52	720235.92	
11700.00	89.55	177.26	8252.78	-3713.55	177.77	3717.80	0.00	420910.64	720240.70	
11800.00	89.55	177.26	8253.57	-3813.43	182.55	3817.80	0.00	420810.76	720245.48	
11900.00	89.55	177.26	8254.36	-3913.31	187.34	3917.79	0.00	420710.88	720250.27	
12000.00	89.55	177.26	8255.14	-4013.20	192.12	4017.79	0.00	420610.99	720255.05	
12100.00	89.55	177.26	8255.93	-4113.08	196.90	4117.79	0.00	420511.11	720259.83	
12200.00	89.55	177.26	8256.72	-4212.96	201.68	4217.78	0.00	420411.23	720264.61	
12300.00	89.55	177.26	8257.51	-4312.84	206.46	4317.78	0.00	420311.35	720269.39	
12400.00	89.55	177.26	8258.29	-4412.73	211.24	4417.78	0.00	420211.46	720274.17	
12500.00	89.55	177.26	8259.08	-4512.61	216.02	4517.78	0.00	420111.58	720278.95	
12600.00	89.55	177.26	8259.87	-4612.49	220.81	4617.77	0.00	420011.70	720283.74	
12700.00	89.55	177.26	8260.65	-4712.37	225.59	4717.77	0.00	419911.82	720288.52	
12800.00	89.55	177.26	8261.44	-4812.26	230.37	4817.77	0.00	419811.93	720293.30	
12871.12	89.55	177.26	8262.00	-4883.29	233.77	4888.88	0.00	419740.90	720296.70	Pbhl

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			8262.00	-4883.29	233.77	419740.90	720296.70	32	9	9.442 N	103	45	18.261 W



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company:	Devon Energy	Date:	1/20/2011	Time:	12:57:12	Page:	3
Field:	Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: 161H, Grid North				
Site:	Cotton Draw Unit 161H	Vertical (TVD) Reference:	SITE 3483.0				
Well:	161H	Section (VS) Reference:	Well (0.00N,0.00E,177.26Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
7655.06	7655.06	Kop
8550.55	8228.00	Lp
12871.11	8262.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011
Time: 13:13:50
Page: 1

Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0
Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria

Interpolation Method: MD
Depth Range: 0.00 to 12871.12 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: 1/20/2011

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 #134H	Cotton Draw #134H	1 V1		12871.12	8221.22	264.05	170.46	2.82	
Cotton Draw Unit #13	Cotton Draw Unit #131 V0	Plan: Plan #1 V1		12871.12	8820.77	741.97	650.41	8.10	
Cotton Draw Unit #15	Cotton Draw Unit #151 V0	Plan: Plan #1 V1		8100.00	12821.03	622.60	533.04	6.95	

Site: Cotton Draw #134H

Well: Cotton Draw #134H

Wellpath: 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	181.13	-4880.77	-96.12	4881.88			No Data
100.00	100.00	40.77	40.77	0.08	0.01	181.13	-4880.85	-96.21	4881.84	4881.75	55068.28	
200.00	200.00	111.97	111.97	0.31	0.03	181.14	-4881.37	-96.80	4882.57	4882.25	15208.07	
300.00	300.00	211.78	211.76	0.53	0.10	181.15	-4882.35	-97.92	4883.58	4882.97	8109.60	
400.00	400.00	317.45	317.42	0.76	0.16	181.16	-4883.31	-99.20	4884.51	4883.64	5589.98	
500.00	500.00	420.53	420.49	0.98	0.23	181.18	-4884.16	-100.55	4885.36	4884.22	4278.14	
600.00	600.00	523.65	523.59	1.21	0.30	181.20	-4884.95	-101.98	4886.15	4884.74	3470.35	
700.00	700.00	629.13	629.07	1.43	0.38	181.21	-4885.67	-103.50	4886.87	4885.19	2921.83	
800.00	800.00	744.72	744.64	1.66	0.45	181.23	-4886.22	-105.11	4887.37	4885.44	2527.83	
900.00	900.00	860.96	860.87	1.88	0.53	181.25	-4886.34	-106.66	4887.50	4885.32	2241.59	
1000.00	1000.00	972.98	972.88	2.11	0.60	181.27	-4886.17	-107.91	4887.38	4884.97	2032.38	
1100.00	1100.00	1078.31	1078.21	2.33	0.66	181.28	-4885.80	-108.95	4887.05	4884.44	1870.84	
1200.00	1200.00	1200.57	1200.46	2.56	0.71	181.29	-4885.10	-109.88	4886.50	4883.72	1754.09	
1300.00	1300.00	1308.74	1308.63	2.78	0.72	181.29	-4884.12	-110.22	4885.60	4882.69	1675.96	
1400.00	1400.00	1422.73	1422.61	3.01	0.70	181.29	-4882.87	-109.94	4884.50	4881.46	1605.55	
1500.00	1500.00	1545.16	1545.02	3.23	0.67	181.28	-4881.01	-109.07	4882.96	4879.66	1480.85	
1600.00	1600.00	1661.43	1661.27	3.46	0.65	181.27	-4878.84	-108.11	4881.08	4877.47	1353.12	
1700.00	1700.00	1761.24	1761.05	3.68	0.63	181.26	-4876.74	-106.90	4878.95	4875.05	1250.16	
1800.00	1800.00	1853.69	1853.47	3.91	0.60	181.24	-4874.96	-105.24	4876.98	4872.80	1168.30	
1900.00	1900.00	1950.66	1950.39	4.13	0.57	181.21	-4873.20	-103.05	4875.12	4870.69	1100.31	
2000.00	2000.00	2039.28	2038.98	4.35	0.53	181.19	-4871.66	-100.97	4873.33	4868.66	1042.37	
2100.00	2100.00	2122.60	2122.26	4.58	0.50	181.16	-4870.54	-98.85	4871.94	4867.03	992.29	
2200.00	2200.00	2219.77	2219.39	4.80	0.46	181.13	-4869.35	-96.36	4870.66	4865.52	949.18	
2300.00	2300.00	2300.00	2299.59	5.03	0.42	181.11	-4868.59	-94.19	4869.65	4864.31	910.62	
2400.00	2400.00	2392.81	2392.36	5.25	0.37	181.08	-4867.97	-91.45	4868.93	4863.38	877.72	
2500.00	2500.00	2479.78	2479.28	5.48	0.32	181.04	-4867.56	-88.71	4868.40	4862.66	848.11	
2600.00	2600.00	2572.50	2571.96	5.70	0.26	181.01	-4867.34	-85.84	4868.11	4862.19	822.56	
2700.00	2700.00	2658.06	2657.48	5.93	0.20	180.98	-4867.28	-83.35	4868.00	4861.91	800.40	
2800.00	2800.00	2753.29	2752.68	6.15	0.16	180.95	-4867.50	-80.64	4868.18	4861.93	779.87	
2900.00	2900.00	2859.03	2858.39	6.38	0.20	180.92	-4867.64	-78.04	4868.26	4861.73	744.76	
3000.00	3000.00	2965.52	2964.85	6.60	0.28	180.89	-4867.67	-75.55	4868.25	4861.41	711.73	
3100.00	3100.00	3068.97	3068.27	6.83	0.36	180.86	-4867.56	-73.26	4868.11	4860.99	683.93	
3200.00	3200.00	3182.02	3181.28	7.05	0.45	180.83	-4867.31	-70.32	4867.86	4860.47	658.81	
3300.00	3300.00	3291.64	3290.84	7.28	0.52	180.78	-4866.77	-66.62	4867.32	4859.66	635.92	
3400.00	3400.00	3398.26	3397.40	7.50	0.58	180.74	-4866.08	-63.18	4866.63	4858.71	614.66	
3500.00	3500.00	3509.14	3508.23	7.73	0.65	180.71	-4865.15	-60.14	4865.75	4857.57	594.59	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 2

Db: Sybase

Site: Cotton Draw #134H
Well: Cotton Draw #134H
Wellpath: 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 deg	Offset Location North	Offset Location East	Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
3600.00	3600.00	3611.62	3610.67	7.95	0.72	180.68	-4864.13	-57.51	4864.72	4856.28	576.16	
3700.00	3700.00	3697.33	3696.34	8.18	0.79	180.65	-4863.40	-54.95	4863.84	4855.15	559.52	
3800.00	3800.00	3787.84	3786.79	8.40	0.85	180.61	-4862.86	-51.81	4863.20	4854.27	544.14	
3900.00	3900.00	3869.68	3868.57	8.63	0.90	180.57	-4862.59	-48.75	4862.84	4853.66	530.19	
4000.00	4000.00	3935.37	3934.22	8.85	0.93	180.54	-4862.68	-46.24	4862.97	4853.58	517.95	
4100.00	4100.00	4000.00	3998.80	9.07	0.96	180.52	-4863.37	-43.84	4863.96	4854.37	506.89	
4200.00	4200.00	13728.19	8958.43	9.30	86.18	314.94	58.36	-58.49	4798.65	4748.49	95.67	
4300.00	4300.00	13727.31	8958.44	9.52	86.17	314.50	57.48	-58.50	4698.66	4648.28	93.27	
4400.00	4400.00	13726.41	8958.46	9.75	86.15	314.04	56.59	-58.52	4598.68	4548.08	90.89	
4500.00	4500.00	13725.51	8958.47	9.97	86.14	313.57	55.68	-58.53	4498.69	4447.87	88.53	
4600.00	4600.00	13724.59	8958.48	10.20	86.12	313.09	54.77	-58.54	4398.71	4347.67	86.19	
4700.00	4700.00	13723.67	8958.49	10.42	86.11	312.60	53.85	-58.56	4298.72	4247.47	83.87	
4800.00	4800.00	13722.73	8958.50	10.65	86.09	312.09	52.91	-58.57	4198.74	4147.27	81.57	
4900.00	4900.00	13721.79	8958.51	10.87	86.08	311.57	51.96	-58.58	4098.76	4047.07	79.29	
5000.00	5000.00	13720.83	8958.52	11.10	86.06	311.04	51.00	-58.60	3998.78	3946.86	77.03	
5100.00	5100.00	13719.86	8958.54	11.32	86.04	310.49	50.03	-58.61	3898.80	3846.66	74.78	
5200.00	5200.00	13718.88	8958.55	11.55	86.03	309.92	49.05	-58.63	3798.82	3746.46	72.56	
5300.00	5300.00	13717.88	8958.56	11.77	86.01	309.34	48.06	-58.64	3698.84	3646.27	70.36	
5400.00	5400.00	13716.88	8958.57	12.00	85.99	308.74	47.05	-58.65	3598.86	3546.07	68.17	
5500.00	5500.00	13715.86	8958.59	12.22	85.98	308.12	46.04	-58.67	3498.88	3445.87	66.00	
5600.00	5600.00	13714.83	8958.60	12.45	85.96	307.49	45.01	-58.68	3398.91	3345.67	63.85	
5700.00	5700.00	13713.78	8958.61	12.67	85.94	306.83	43.96	-58.69	3298.93	3245.48	61.72	
5800.00	5800.00	13712.73	8958.63	12.90	85.92	306.16	42.91	-58.71	3198.95	3145.29	59.60	
5900.00	5900.00	13711.66	8958.64	13.12	85.91	305.47	41.84	-58.72	3098.98	3045.09	57.51	
6000.00	6000.00	13710.57	8958.66	13.35	85.89	304.75	40.75	-58.73	2999.01	2944.90	55.43	
6100.00	6100.00	13709.48	8958.67	13.57	85.87	304.02	39.65	-58.75	2899.04	2844.71	53.36	
6200.00	6200.00	13708.36	8958.69	13.80	85.85	303.26	38.54	-58.76	2799.07	2744.52	51.31	
6300.00	6300.00	13707.24	8958.70	14.02	85.83	302.48	37.42	-58.78	2699.10	2644.33	49.28	
6400.00	6400.00	13706.10	8958.72	14.24	85.81	301.68	36.27	-58.79	2599.14	2544.15	47.27	
6500.00	6500.00	13704.94	8958.73	14.47	85.79	300.85	35.12	-58.80	2499.17	2443.96	45.27	
6600.00	6600.00	13703.77	8958.75	14.69	85.77	299.99	33.95	-58.82	2399.21	2343.78	43.28	
6700.00	6700.00	13702.58	8958.77	14.92	85.75	299.11	32.76	-58.83	2299.25	2243.60	41.32	
6800.00	6800.00	13701.38	8958.78	15.14	85.73	298.20	31.56	-58.84	2199.30	2143.43	39.36	
6900.00	6900.00	13700.16	8958.80	15.37	85.71	297.27	30.34	-58.85	2099.34	2043.25	37.43	
7000.00	7000.00	13698.92	8958.82	15.59	85.69	296.31	29.10	-58.87	1999.40	1943.08	35.50	
7100.00	7100.00	13697.67	8958.84	15.82	85.67	295.31	27.85	-58.88	1899.45	1842.91	33.60	
7200.00	7200.00	13696.40	8958.85	16.04	85.65	294.29	26.58	-58.89	1799.51	1742.75	31.70	
7300.00	7300.00	13695.11	8958.87	16.27	85.63	293.24	25.29	-58.91	1699.58	1642.59	29.82	
7400.00	7400.00	13693.80	8958.89	16.49	85.60	292.15	23.99	-58.92	1599.66	1542.44	27.96	
7500.00	7500.00	13692.48	8958.91	16.72	85.58	291.03	22.66	-58.93	1499.74	1442.29	26.11	
7600.00	7600.00	13691.14	8958.93	16.94	85.56	289.88	21.32	-58.94	1399.84	1342.16	24.27	
7700.00	7699.95	13688.16	8958.98	17.17	85.51	155.03	18.34	-58.97	1300.02	1242.15	22.46	
7800.00	7798.46	13671.61	8959.24	17.40	85.23	169.64	1.79	-59.09	1201.94	1144.28	20.84	
7900.00	7892.61	13639.09	8959.81	17.65	84.68	172.81	-30.72	-59.17	1108.61	1051.63	19.45	
8000.00	7979.54	13584.13	8960.72	17.94	83.72	173.90	-85.67	-59.35	1022.80	966.95	18.31	
8100.00	8056.61	13510.96	8961.50	18.30	82.45	174.22	-158.84	-60.04	946.84	892.46	17.41	
8200.00	8121.48	13419.00	8961.05	18.75	80.84	174.17	-250.79	-60.68	882.09	829.44	16.75	
8300.00	8172.18	13331.69	8959.60	19.33	79.33	174.08	-338.09	-60.87	830.54	779.56	16.29	
8400.00	8207.16	13258.62	8959.41	20.04	78.06	173.99	-411.16	-61.09	795.94	746.31	16.04	
8500.00	8225.37	13155.98	8960.23	20.88	76.28	173.64	-513.79	-61.51	779.16	730.61	16.05	
8600.00	8228.39	13058.06	8960.97	21.82	74.59	173.37	-611.70	-60.52	777.33	729.25	16.17	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 3

Db: Sybase

Site: Cotton Draw #134H
Well: Cotton Draw #134H
Wellpath: 1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		Offset Location			Ctr-Ctr	Edge	Separation	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft	Distance ft	Distance ft	Factor	
8700.00	8229.18	12949.82	8961.33	22.87	72.72	173.13	-719.92	-58.64	777.24	729.48	16.27	
8800.00	8229.96	12847.06	8960.84	24.01	70.94	172.86	-822.67	-57.21	776.39	728.86	16.33	
8900.00	8230.75	12746.53	8960.31	25.24	69.19	172.57	-923.20	-56.17	775.57	728.19	16.37	
9000.00	8231.54	12643.11	8959.24	26.54	67.41	172.27	-1026.60	-55.15	774.26	727.02	16.39	
9100.00	8232.32	12552.56	8958.36	27.90	65.86	171.95	-1117.15	-54.98	773.18	725.92	16.36	
9200.00	8233.11	12456.51	8959.21	29.32	64.18	171.65	-1213.19	-54.38	773.85	726.60	16.38	
9300.00	8233.90	12343.48	8958.73	30.78	62.18	171.36	-1326.20	-52.82	773.12	725.96	16.39	
9400.00	8234.68	12238.01	8957.28	32.28	60.33	171.12	-1431.65	-50.71	771.41	724.28	16.37	
9500.00	8235.47	12151.40	8956.40	33.81	58.83	170.95	-1518.23	-48.58	770.02	722.77	16.30	
9600.00	8236.26	12068.70	8957.41	35.37	57.39	170.80	-1600.90	-46.70	770.85	723.46	16.26	
9700.00	8237.05	11972.70	8960.19	36.96	55.72	170.58	-1696.85	-45.45	773.48	725.97	16.28	
9800.00	8237.83	11869.41	8962.72	38.57	53.93	170.38	-1800.09	-43.56	775.61	728.01	16.30	
9900.00	8238.62	11780.20	8965.16	40.20	52.39	170.19	-1889.25	-42.21	778.11	730.33	16.29	
10000.00	8239.41	11677.93	8969.15	41.85	50.62	169.89	-1991.45	-42.07	781.99	734.03	16.31	
10100.00	8240.19	11551.07	8971.08	43.51	48.42	169.50	-2118.28	-41.59	783.53	735.47	16.30	
10200.00	8240.98	11461.54	8971.45	45.19	46.89	169.22	-2207.81	-41.08	783.94	735.59	16.21	
10300.00	8241.77	11366.92	8972.81	46.88	45.26	168.94	-2302.42	-40.56	785.38	736.75	16.15	
10400.00	8242.55	11235.42	8972.14	48.58	42.99	168.46	-2433.90	-40.63	785.02	736.22	16.09	
10500.00	8243.34	11135.78	8968.82	50.30	41.28	167.99	-2533.49	-41.64	782.17	732.99	15.90	
10600.00	8244.13	11052.74	8967.38	52.02	39.85	167.49	-2616.47	-44.15	781.32	731.60	15.71	
10700.00	8244.91	10961.78	8967.05	53.75	38.32	166.98	-2707.39	-46.69	781.88	731.65	15.57	
10800.00	8245.70	10871.18	8968.38	55.48	36.76	166.58	-2797.97	-48.14	783.99	733.28	15.46	
10900.00	8246.49	10763.35	8970.08	57.23	34.86	166.23	-2905.78	-48.19	785.89	734.80	15.38	
11000.00	8247.28	10654.85	8971.15	58.97	32.96	165.94	-3014.27	-47.05	786.99	735.53	15.29	
11100.00	8248.06	10559.15	8971.65	60.73	31.30	165.81	-3109.93	-44.33	787.23	735.39	15.19	
11200.00	8248.85	10463.73	8973.74	62.49	29.64	165.76	-3205.26	-40.76	788.83	736.65	15.12	
11300.00	8249.64	10372.77	8975.97	64.25	28.06	165.77	-3296.10	-36.70	790.56	738.01	15.05	
11400.00	8250.42	10250.84	8978.95	66.02	25.97	165.51	-3417.97	-35.03	793.26	740.32	14.98	
11500.00	8251.21	10140.64	8977.36	67.80	24.09	165.13	-3528.15	-34.58	792.18	738.69	14.81	
11600.00	8252.00	10044.08	8976.19	69.57	22.50	164.89	-3624.69	-32.88	791.03	737.00	14.64	
11700.00	8252.78	9958.86	8976.39	71.35	21.70	164.76	-3709.87	-30.61	791.06	736.44	14.48	
11800.00	8253.57	9864.54	8978.07	73.13	21.41	164.67	-3804.13	-27.60	792.43	737.27	14.37	
11900.00	8254.36	9752.55	8979.66	74.92	21.16	164.59	-3916.04	-23.65	793.38	737.72	14.25	
12000.00	8255.14	9649.14	8980.24	76.71	20.94	164.56	-4019.35	-19.00	793.23	737.04	14.12	
12100.00	8255.93	9555.97	8980.98	78.50	20.77	164.56	-4112.41	-14.59	793.26	736.49	13.97	
12200.00	8256.72	9463.88	8198.03	80.29	1.59	84.66	-4914.26	-28.19	738.26	657.28	9.12	
12300.00	8257.51	9203.07	8201.22	82.09	1.59	85.34	-4914.34	-28.22	645.88	563.06	7.80	
12400.00	8258.29	9206.26	8204.40	83.89	1.59	86.04	-4914.42	-28.24	556.11	471.48	6.57	
12500.00	8259.08	9209.44	8207.59	85.69	1.59	86.73	-4914.50	-28.27	470.47	384.04	5.44	
12600.00	8259.87	9212.62	8210.77	87.49	1.59	87.42	-4914.58	-28.30	391.66	303.42	4.44	
12700.00	8260.65	9215.80	8213.94	89.29	1.59	88.11	-4914.65	-28.33	324.72	234.61	3.60	
12800.00	8261.44	9218.97	8217.11	91.10	1.59	88.79	-4914.73	-28.35	278.32	186.22	3.02	
12871.12	8262.00	9221.22	8219.36	92.38	1.59	89.28	-4914.79	-28.38	264.05	170.46	2.82	

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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	166.50	-4890.03	1173.87	5029.09			No Data
100.00	100.00	63.00	63.00	0.08	0.05	166.50	-4890.03	1173.87	5028.95	5028.82	36603.96	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 4

Db: Sybase

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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		
200.00	200.00	163.00	163.00	0.31	0.23	166.50	-4890.03	1173.87	5028.95	5028.42	9400.91	
300.00	300.00	263.00	263.00	0.53	0.45	166.50	-4890.03	1173.87	5028.95	5027.97	5108.26	
400.00	400.00	363.00	363.00	0.76	0.68	166.50	-4890.03	1173.87	5028.95	5027.52	3506.92	
500.00	500.00	463.00	463.00	0.98	0.90	166.50	-4890.03	1173.87	5028.95	5027.07	2669.95	
600.00	600.00	563.00	563.00	1.21	1.12	166.50	-4890.03	1173.87	5028.95	5026.62	2155.51	
700.00	700.00	663.00	663.00	1.43	1.35	166.50	-4890.03	1173.87	5028.95	5026.17	1807.28	
800.00	800.00	763.00	763.00	1.66	1.57	166.50	-4890.03	1173.87	5028.95	5025.72	1555.92	
900.00	900.00	863.00	863.00	1.88	1.80	166.50	-4890.03	1173.87	5028.95	5025.27	1365.94	
1000.00	1000.00	963.00	963.00	2.11	2.02	166.50	-4890.03	1173.87	5028.95	5024.82	1217.31	
1100.00	1100.00	1063.00	1063.00	2.33	2.25	166.50	-4890.03	1173.87	5028.95	5024.37	1097.85	
1200.00	1200.00	1163.00	1163.00	2.56	2.47	166.50	-4890.03	1173.87	5028.95	5023.92	999.74	
1300.00	1300.00	1263.00	1263.00	2.78	2.70	166.50	-4890.03	1173.87	5028.95	5023.47	917.73	
1400.00	1400.00	1363.00	1363.00	3.01	2.92	166.50	-4890.03	1173.87	5028.95	5023.02	848.15	
1500.00	1500.00	1463.00	1463.00	3.23	3.15	166.50	-4890.03	1173.87	5028.95	5022.57	788.38	
1600.00	1600.00	1563.00	1563.00	3.46	3.37	166.50	-4890.03	1173.87	5028.95	5022.12	736.48	
1700.00	1700.00	1663.00	1663.00	3.68	3.60	166.50	-4890.03	1173.87	5028.95	5021.67	690.99	
1800.00	1800.00	1763.00	1763.00	3.91	3.82	166.50	-4890.03	1173.87	5028.95	5021.23	650.79	
1900.00	1900.00	1863.00	1863.00	4.13	4.05	166.50	-4890.03	1173.87	5028.95	5020.78	615.01	
2000.00	2000.00	1963.00	1963.00	4.35	4.27	166.50	-4890.03	1173.87	5028.95	5020.33	582.96	
2100.00	2100.00	2063.00	2063.00	4.58	4.50	166.50	-4890.03	1173.87	5028.95	5019.88	554.09	
2200.00	2200.00	2163.00	2163.00	4.80	4.72	166.50	-4890.03	1173.87	5028.95	5019.43	527.94	
2300.00	2300.00	2263.00	2263.00	5.03	4.95	166.50	-4890.03	1173.87	5028.95	5018.98	504.15	
2400.00	2400.00	2363.00	2363.00	5.25	5.17	166.50	-4890.03	1173.87	5028.95	5018.53	482.41	
2500.00	2500.00	2463.00	2463.00	5.48	5.40	166.50	-4890.03	1173.87	5028.95	5018.08	462.47	
2600.00	2600.00	2563.00	2563.00	5.70	5.62	166.50	-4890.03	1173.87	5028.95	5017.63	444.11	
2700.00	2700.00	2663.00	2663.00	5.93	5.85	166.50	-4890.03	1173.87	5028.95	5017.18	427.15	
2800.00	2800.00	2763.00	2763.00	6.15	6.07	166.50	-4890.03	1173.87	5028.95	5016.73	411.44	
2900.00	2900.00	2863.00	2863.00	6.38	6.29	166.50	-4890.03	1173.87	5028.95	5016.28	396.85	
3000.00	3000.00	2963.00	2963.00	6.60	6.52	166.50	-4890.03	1173.87	5028.95	5015.83	383.25	
3100.00	3100.00	3063.00	3063.00	6.83	6.74	166.50	-4890.03	1173.87	5028.95	5015.38	370.56	
3200.00	3200.00	3163.00	3163.00	7.05	6.97	166.50	-4890.03	1173.87	5028.95	5014.93	358.68	
3300.00	3300.00	3263.00	3263.00	7.28	7.19	166.50	-4890.03	1173.87	5028.95	5014.48	347.53	
3400.00	3400.00	3363.00	3363.00	7.50	7.42	166.50	-4890.03	1173.87	5028.95	5014.03	337.06	
3500.00	3500.00	3463.00	3463.00	7.73	7.64	166.50	-4890.03	1173.87	5028.95	5013.58	327.20	
3600.00	3600.00	3563.00	3563.00	7.95	7.87	166.50	-4890.03	1173.87	5028.95	5013.13	317.91	
3700.00	3700.00	3663.00	3663.00	8.18	8.09	166.50	-4890.03	1173.87	5028.95	5012.68	309.12	
3800.00	3800.00	3763.00	3763.00	8.40	8.32	166.50	-4890.03	1173.87	5028.95	5012.23	300.81	
3900.00	3900.00	3863.00	3863.00	8.63	8.54	166.50	-4890.03	1173.87	5028.95	5011.78	292.93	
4000.00	4000.00	3963.00	3963.00	8.85	8.77	166.50	-4890.03	1173.87	5028.95	5011.34	285.46	
4100.00	4100.00	13834.03	8980.04	9.07	91.65	89.81	1.86	550.75	4947.79	4898.28	99.94	
4200.00	4200.00	13834.03	8980.04	9.30	91.65	89.81	1.86	550.75	4848.42	4798.64	97.39	
4300.00	4300.00	13834.03	8980.04	9.52	91.65	89.81	1.86	550.75	4749.08	4699.02	94.87	
4400.00	4400.00	13834.03	8980.04	9.75	91.65	89.81	1.86	550.75	4649.77	4599.43	92.37	
4500.00	4500.00	13834.03	8980.04	9.97	91.65	89.81	1.86	550.75	4550.49	4499.87	89.89	
4600.00	4600.00	13834.03	8980.04	10.20	91.65	89.81	1.87	550.75	4451.24	4400.33	87.43	
4700.00	4700.00	13834.03	8980.04	10.42	91.65	89.81	1.87	550.75	4352.03	4300.82	84.99	
4800.00	4800.00	13834.03	8980.04	10.65	91.65	89.81	1.87	550.75	4252.85	4201.35	82.58	
4900.00	4900.00	13834.03	8980.04	10.87	91.65	89.81	1.87	550.75	4153.71	4101.91	80.19	
5000.00	5000.00	13834.03	8980.04	11.10	91.65	89.81	1.87	550.75	4054.62	4002.51	77.81	
5100.00	5100.00	13834.04	8980.04	11.32	91.65	89.81	1.87	550.75	3955.57	3903.15	75.46	
5200.00	5200.00	13834.04	8980.04	11.55	91.65	89.81	1.87	550.75	3856.57	3803.83	73.13	



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 5

Db: Sybase

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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
5300.00	5300.00	13834.04	8980.04	11.77	91.65	89.81	1.87	550.75	3757.62	3704.56	70.81	
5400.00	5400.00	13834.04	8980.04	12.00	91.65	89.81	1.87	550.75	3658.73	3605.33	68.52	
5500.00	5500.00	13834.04	8980.04	12.22	91.65	89.81	1.87	550.75	3559.90	3506.16	66.25	
5600.00	5600.00	13834.04	8980.04	12.45	91.65	89.81	1.87	550.75	3461.14	3407.05	63.99	
5700.00	5700.00	13834.04	8980.04	12.67	91.65	89.80	1.88	550.75	3362.45	3308.00	61.75	
5800.00	5800.00	13834.04	8980.04	12.90	91.65	89.80	1.88	550.75	3263.84	3209.02	59.54	
5900.00	5900.00	13834.04	8980.04	13.12	91.65	89.80	1.88	550.75	3165.32	3110.11	57.34	
6000.00	6000.00	13834.04	8980.04	13.35	91.65	89.80	1.88	550.75	3066.89	3011.29	55.15	
6100.00	6100.00	13834.04	8980.04	13.57	91.65	89.80	1.88	550.75	2968.57	2912.55	52.99	
6200.00	6200.00	13834.05	8980.04	13.80	91.65	89.80	1.88	550.75	2870.37	2813.91	50.84	
6300.00	6300.00	13834.05	8980.04	14.02	91.65	89.80	1.88	550.75	2772.29	2715.39	48.71	
6400.00	6400.00	13834.05	8980.04	14.24	91.65	89.80	1.88	550.75	2674.36	2616.97	46.60	
6500.00	6500.00	13834.05	8980.04	14.47	91.65	89.80	1.88	550.75	2576.59	2518.70	44.51	
6600.00	6600.00	13834.05	8980.04	14.69	91.65	89.80	1.88	550.75	2478.99	2420.57	42.43	
6700.00	6700.00	13834.05	8980.04	14.92	91.65	89.80	1.88	550.75	2381.59	2322.60	40.37	
6800.00	6800.00	13834.05	8980.04	15.14	91.65	89.80	1.88	550.75	2284.42	2224.82	38.33	
6900.00	6900.00	13834.05	8980.04	15.37	91.65	89.80	1.89	550.75	2187.50	2127.25	36.30	
7000.00	7000.00	13834.05	8980.04	15.59	91.65	89.80	1.89	550.75	2090.88	2029.91	34.30	
7100.00	7100.00	13834.05	8980.04	15.82	91.65	89.80	1.89	550.75	1994.58	1932.85	32.31	
7200.00	7200.00	13834.05	8980.04	16.04	91.65	89.80	1.89	550.75	1898.67	1836.10	30.34	
7300.00	7300.00	13834.05	8980.04	16.27	91.65	89.80	1.89	550.75	1803.20	1739.71	28.40	
7400.00	7400.00	13834.06	8980.04	16.49	91.65	89.80	1.89	550.75	1708.26	1643.73	26.47	
7500.00	7500.00	13834.06	8980.04	16.72	91.65	89.80	1.89	550.75	1613.92	1548.24	24.58	
7600.00	7600.00	13834.06	8980.04	16.94	91.65	89.80	1.89	550.75	1520.30	1453.34	22.70	
7700.00	7699.95	13832.30	8980.04	17.17	91.62	261.84	0.13	550.75	1427.57	1359.17	20.87	
7800.00	7798.46	13815.84	8980.04	17.40	91.33	242.88	-16.32	550.81	1336.92	1267.15	19.16	
7900.00	7892.61	13782.55	8980.04	17.65	90.73	230.98	-49.62	550.92	1251.06	1180.23	17.66	
8000.00	7979.54	13733.43	8980.04	17.94	89.86	223.88	-98.74	551.09	1172.53	1101.05	16.40	
8100.00	8056.61	13669.97	8980.04	18.30	88.73	219.62	-162.19	551.31	1103.53	1031.79	15.38	
8200.00	8121.48	13594.11	8980.04	18.75	87.38	217.04	-238.06	551.58	1045.81	974.18	14.60	
8300.00	8172.18	13508.14	8980.03	19.33	85.86	215.46	-324.02	551.87	1000.69	929.47	14.05	
8400.00	8207.16	13414.69	8980.03	20.04	84.20	214.48	-417.47	552.20	969.05	898.49	13.73	
8500.00	8225.37	13316.59	8980.03	20.88	82.47	213.86	-515.57	552.54	951.45	881.72	13.64	
8600.00	8228.39	13216.78	8980.03	21.82	80.70	213.55	-615.39	552.88	946.49	877.60	13.74	
8700.00	8229.18	13116.88	8980.03	22.87	78.94	213.35	-715.28	553.23	943.38	875.21	13.84	
8800.00	8229.96	13016.98	8980.03	24.01	77.18	213.15	-815.18	553.57	940.29	872.78	13.93	
8900.00	8230.75	12917.08	8980.03	25.24	75.42	212.95	-915.08	553.92	937.21	870.29	14.00	
9000.00	8231.54	12817.18	8980.03	26.54	73.67	212.75	-1014.98	554.26	934.14	867.76	14.07	
9100.00	8232.32	12717.28	8980.03	27.90	71.92	212.55	-1114.88	554.61	931.08	865.20	14.13	
9200.00	8233.11	12617.38	8980.03	29.32	70.17	212.34	-1214.77	554.95	928.04	862.62	14.19	
9300.00	8233.90	12517.49	8980.03	30.78	68.43	212.14	-1314.67	555.30	925.00	860.01	14.23	
9400.00	8234.68	12417.59	8980.03	32.28	66.69	211.93	-1414.57	555.64	921.98	857.38	14.27	
9500.00	8235.47	12317.69	8980.02	33.81	64.96	211.72	-1514.47	555.99	918.97	854.73	14.30	
9600.00	8236.26	12217.79	8980.02	35.37	63.23	211.51	-1614.37	556.33	915.98	852.07	14.33	
9700.00	8237.05	12117.89	8980.02	36.96	61.50	211.30	-1714.26	556.68	912.99	849.41	14.36	
9800.00	8237.83	12017.99	8980.02	38.57	59.79	211.08	-1814.16	557.02	910.02	846.73	14.38	
9900.00	8238.62	11918.10	8980.02	40.20	58.08	210.87	-1914.06	557.37	907.06	844.05	14.40	
10000.00	8239.41	11818.20	8980.02	41.85	56.38	210.65	-2013.96	557.72	904.11	841.37	14.41	
10100.00	8240.19	11718.30	8980.02	43.51	54.68	210.44	-2113.85	558.06	901.18	838.68	14.42	
10200.00	8240.98	11618.40	8980.02	45.19	52.99	210.22	-2213.75	558.41	898.26	835.99	14.43	
10300.00	8241.77	11518.50	8980.02	46.88	51.32	210.00	-2313.65	558.75	895.35	833.30	14.43	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 6

Db: Sybase

Site: Cotton Draw Unit #135H
Well: Cotton Draw Unit #135H
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				
10400.00	8242.55	11418.60	8980.02	48.58	49.65	209.78	-2413.55	559.10	892.45	830.61	14.43
10500.00	8243.34	11318.70	8980.02	50.30	48.00	209.56	-2513.45	559.44	889.57	827.92	14.43
10600.00	8244.13	11218.81	8980.01	52.02	46.36	209.33	-2613.34	559.79	886.70	825.23	14.42
10700.00	8244.91	11118.91	8980.01	53.75	44.73	209.11	-2713.24	560.13	883.85	822.54	14.42
10800.00	8245.70	11019.01	8980.01	55.48	43.12	208.88	-2813.14	560.48	881.01	819.85	14.41
10900.00	8246.49	10919.11	8980.01	57.23	41.52	208.65	-2913.04	560.82	878.18	817.16	14.39
11000.00	8247.28	10819.21	8980.01	58.97	39.95	208.42	-3012.94	561.17	875.37	814.47	14.37
11100.00	8248.06	10719.31	8980.01	60.73	38.39	208.19	-3112.83	561.52	872.57	811.78	14.35
11200.00	8248.85	10619.42	8980.01	62.49	36.87	207.96	-3212.73	561.86	869.79	809.08	14.33
11300.00	8249.64	10519.52	8980.01	64.25	35.37	207.72	-3312.63	562.21	867.02	806.39	14.30
11400.00	8250.42	10419.62	8980.01	66.02	33.90	207.49	-3412.53	562.55	864.26	803.68	14.27
11500.00	8251.21	10319.72	8980.01	67.80	32.47	207.25	-3512.42	562.90	861.52	800.98	14.23
11600.00	8252.00	10219.82	8980.01	69.57	31.08	207.01	-3612.32	563.24	858.80	798.26	14.19
11700.00	8252.78	10119.92	8980.01	71.35	29.74	206.77	-3712.22	563.59	856.09	795.54	14.14
11800.00	8253.57	10020.02	8980.00	73.13	28.45	206.53	-3812.12	563.93	853.39	792.80	14.08
11900.00	8254.36	9920.13	8980.00	74.92	27.22	206.28	-3912.02	564.28	850.71	790.05	14.02
12000.00	8255.14	9820.23	8980.00	76.71	26.06	206.04	-4011.91	564.62	848.05	787.28	13.95
12100.00	8255.93	9720.33	8980.00	78.50	24.98	205.79	-4111.81	564.97	845.40	784.49	13.88
12200.00	8256.72	9620.43	8980.00	80.29	23.99	205.54	-4211.71	565.31	842.77	781.68	13.80
12300.00	8257.51	9489.09	8978.02	82.09	23.11	205.38	-4342.97	567.43	839.67	778.53	13.73
12400.00	8258.29	9281.60	8938.45	83.89	22.33	208.18	-4542.84	601.45	826.74	762.69	12.91
12500.00	8259.08	9117.33	8873.48	85.69	21.67	213.61	-4682.72	656.64	804.62	734.24	11.43
12600.00	8259.87	8998.92	8810.71	87.49	21.19	219.36	-4767.66	709.79	780.23	702.98	10.10
12700.00	8260.65	8914.92	8759.39	89.29	20.85	224.31	-4817.96	753.19	759.29	675.99	9.11
12800.00	8261.44	8854.18	8719.35	91.10	20.60	228.27	-4848.59	787.02	745.73	657.32	8.43
12871.12	8262.00	8820.77	8696.42	92.38	20.47	230.56	-4863.27	806.38	741.97	650.41	8.10

Site: Cotton Draw Unit #151H
Well: Cotton Draw Unit #151H
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				
0.00	0.00	43.00	43.00	0.00	0.04	2.30	5216.80	209.79	5221.02		No Data
100.00	100.00	143.00	143.00	0.08	0.18	2.30	5216.80	209.79	5221.02	5220.75	
200.00	200.00	243.00	243.00	0.31	0.41	2.30	5216.80	209.79	5221.02	5220.30	
300.00	300.00	343.00	343.00	0.53	0.63	2.30	5216.80	209.79	5221.02	5219.85	
400.00	400.00	443.00	443.00	0.76	0.86	2.30	5216.80	209.79	5221.02	5219.40	
500.00	500.00	543.00	543.00	0.98	1.08	2.30	5216.80	209.79	5221.02	5218.95	
600.00	600.00	643.00	643.00	1.21	1.30	2.30	5216.80	209.79	5221.02	5218.50	
700.00	700.00	743.00	743.00	1.43	1.53	2.30	5216.80	209.79	5221.02	5218.05	
800.00	800.00	843.00	843.00	1.66	1.75	2.30	5216.80	209.79	5221.02	5217.60	
900.00	900.00	943.00	943.00	1.88	1.98	2.30	5216.80	209.79	5221.02	5217.16	
1000.00	1000.00	1043.00	1043.00	2.11	2.20	2.30	5216.80	209.79	5221.02	5216.71	
1100.00	1100.00	1143.00	1143.00	2.33	2.43	2.30	5216.80	209.79	5221.02	5216.26	
1200.00	1200.00	1243.00	1243.00	2.56	2.65	2.30	5216.80	209.79	5221.02	5215.81	
1300.00	1300.00	1343.00	1343.00	2.78	2.88	2.30	5216.80	209.79	5221.02	5215.36	
1400.00	1400.00	1443.00	1443.00	3.01	3.10	2.30	5216.80	209.79	5221.02	5214.91	
1500.00	1500.00	1543.00	1543.00	3.23	3.33	2.30	5216.80	209.79	5221.02	5214.46	
1600.00	1600.00	1643.00	1643.00	3.46	3.55	2.30	5216.80	209.79	5221.02	5214.01	
1700.00	1700.00	1743.00	1743.00	3.68	3.78	2.30	5216.80	209.79	5221.02	5213.56	
1800.00	1800.00	1843.00	1843.00	3.91	4.00	2.30	5216.80	209.79	5221.02	5213.11	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 7

Db: Sybase

Site: Cotton Draw Unit #151H
Well: Cotton Draw Unit #151H
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		
1900.00	1900.00	1943.00	1943.00	4.13	4.23	2.30	5216.80	209.79	5221.02	5212.66	624.76	
2000.00	2000.00	2043.00	2043.00	4.35	4.45	2.30	5216.80	209.79	5221.02	5212.21	592.87	
2100.00	2100.00	2143.00	2143.00	4.58	4.68	2.30	5216.80	209.79	5221.02	5211.76	564.08	
2200.00	2200.00	2243.00	2243.00	4.80	4.90	2.30	5216.80	209.79	5221.02	5211.31	537.95	
2300.00	2300.00	2343.00	2343.00	5.03	5.13	2.30	5216.80	209.79	5221.02	5210.86	514.14	
2400.00	2400.00	2443.00	2443.00	5.25	5.35	2.30	5216.80	209.79	5221.02	5210.41	492.34	
2500.00	2500.00	2543.00	2543.00	5.48	5.58	2.30	5216.80	209.79	5221.02	5209.96	472.32	
2600.00	2600.00	2643.00	2643.00	5.70	5.80	2.30	5216.80	209.79	5221.02	5209.51	453.86	
2700.00	2700.00	2743.00	2743.00	5.93	6.02	2.30	5216.80	209.79	5221.02	5209.06	436.79	
2800.00	2800.00	2843.00	2843.00	6.15	6.25	2.30	5216.80	209.79	5221.02	5208.61	420.96	
2900.00	2900.00	2943.00	2943.00	6.38	6.47	2.30	5216.80	209.79	5221.02	5208.16	406.24	
3000.00	3000.00	3043.00	3043.00	6.60	6.70	2.30	5216.80	209.79	5221.02	5207.71	392.51	
3100.00	3100.00	12821.03	8259.00	6.83	89.32	28.59	399.92	217.96	5136.23	5093.44	120.02	
3200.00	3200.00	12821.03	8259.00	7.05	89.32	28.59	399.92	217.96	5036.64	4993.61	117.06	
3300.00	3300.00	12821.03	8259.00	7.28	89.32	28.59	399.92	217.96	4937.05	4893.79	114.13	
3400.00	3400.00	12821.03	8259.00	7.50	89.32	28.59	399.92	217.96	4837.49	4794.00	111.23	
3500.00	3500.00	12821.03	8259.00	7.73	89.32	28.59	399.92	217.96	4737.94	4694.22	108.36	
3600.00	3600.00	12821.03	8259.00	7.95	89.32	28.59	399.92	217.96	4638.42	4594.46	105.52	
3700.00	3700.00	12821.03	8259.00	8.18	89.32	28.59	399.92	217.96	4538.91	4494.72	102.71	
3800.00	3800.00	12821.03	8259.00	8.40	89.32	28.59	399.92	217.96	4439.43	4395.00	99.93	
3900.00	3900.00	12821.03	8259.00	8.63	89.32	28.59	399.92	217.96	4339.97	4295.30	97.17	
4000.00	4000.00	12821.03	8259.00	8.85	89.32	28.59	399.92	217.96	4240.53	4195.63	94.45	
4100.00	4100.00	12821.03	8259.00	9.07	89.32	28.59	399.92	217.96	4141.12	4095.99	91.75	
4200.00	4200.00	12821.03	8259.00	9.30	89.32	28.59	399.92	217.96	4041.74	3996.37	89.08	
4300.00	4300.00	12821.03	8259.00	9.52	89.32	28.59	399.92	217.96	3942.40	3896.79	86.43	
4400.00	4400.00	12821.03	8259.00	9.75	89.32	28.59	399.92	217.96	3843.08	3797.23	83.82	
4500.00	4500.00	12821.03	8259.00	9.97	89.32	28.59	399.92	217.96	3743.81	3697.72	81.22	
4600.00	4600.00	12821.03	8259.00	10.20	89.32	28.59	399.92	217.96	3644.57	3598.24	78.66	
4700.00	4700.00	12821.03	8259.00	10.42	89.32	28.59	399.92	217.96	3545.38	3498.80	76.12	
4800.00	4800.00	12821.03	8259.00	10.65	89.32	28.59	399.92	217.96	3446.23	3399.41	73.60	
4900.00	4900.00	12821.03	8259.00	10.87	89.32	28.59	399.92	217.96	3347.13	3300.06	71.11	
5000.00	5000.00	12821.03	8259.00	11.10	89.32	28.59	399.92	217.96	3248.09	3200.77	68.64	
5100.00	5100.00	12821.03	8259.00	11.32	89.32	28.59	399.92	217.96	3149.11	3101.54	66.19	
5200.00	5200.00	12821.03	8259.00	11.55	89.32	28.59	399.92	217.96	3050.20	3002.37	63.77	
5300.00	5300.00	12821.03	8259.00	11.77	89.32	28.59	399.92	217.96	2951.36	2903.27	61.38	
5400.00	5400.00	12821.03	8259.00	12.00	89.32	28.59	399.92	217.96	2852.60	2804.25	59.00	
5500.00	5500.00	12821.03	8259.00	12.22	89.32	28.59	399.92	217.96	2753.92	2705.31	56.65	
5600.00	5600.00	12821.03	8259.00	12.45	89.32	28.59	399.92	217.96	2655.35	2606.47	54.32	
5700.00	5700.00	12821.03	8259.00	12.67	89.32	28.59	399.92	217.96	2556.89	2507.73	52.01	
5800.00	5800.00	12821.03	8259.00	12.90	89.32	28.59	399.92	217.96	2458.56	2409.11	49.73	
5900.00	5900.00	12821.03	8259.00	13.12	89.32	28.59	399.92	217.96	2360.36	2310.63	47.46	
6000.00	6000.00	12821.03	8259.00	13.35	89.32	28.59	399.92	217.96	2262.32	2212.29	45.22	
6100.00	6100.00	12821.03	8259.00	13.57	89.32	28.59	399.92	217.96	2164.46	2114.13	43.00	
6200.00	6200.00	12821.03	8259.00	13.80	89.32	28.59	399.92	217.96	2066.81	2016.15	40.80	
6300.00	6300.00	12821.03	8259.00	14.02	89.32	28.59	399.92	217.96	1969.39	1918.40	38.62	
6400.00	6400.00	12821.03	8259.00	14.24	89.32	28.59	399.92	217.96	1872.24	1820.90	36.46	
6500.00	6500.00	12821.03	8259.00	14.47	89.32	28.59	399.92	217.96	1775.42	1723.69	34.32	
6600.00	6600.00	12821.03	8259.00	14.69	89.32	28.59	399.92	217.96	1678.96	1626.83	32.21	
6700.00	6700.00	12821.03	8259.00	14.92	89.32	28.59	399.92	217.96	1582.94	1530.38	30.11	
6800.00	6800.00	12821.03	8259.00	15.14	89.32	28.59	399.92	217.96	1487.45	1434.40	28.04	
6900.00	6900.00	12821.03	8259.00	15.37	89.32	28.59	399.92	217.96	1392.59	1339.00	25.99	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011 Time: 13:13:50
Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0

Page: 8

Db: Sybase

Site: Cotton Draw Unit #151H
Well: Cotton Draw Unit #151H
Wellpath: 1 VO 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				
7000.00	7000.00	12821.03	8259.00	15.59	89.32	28.59	399.92	217.96	1298.50	1244.30	23.96	
7100.00	7100.00	12821.03	8259.00	15.82	89.32	28.59	399.92	217.96	1205.36	1150.46	21.95	
7200.00	7200.00	12821.03	8259.00	16.04	89.32	28.59	399.92	217.96	1113.42	1057.67	19.97	
7300.00	7300.00	12821.03	8259.00	16.27	89.32	28.59	399.92	217.96	1022.99	966.21	18.02	
7400.00	7400.00	12821.03	8259.00	16.49	89.32	28.59	399.92	217.96	934.50	876.44	16.10	
7500.00	7500.00	12821.03	8259.00	16.72	89.32	28.59	399.92	217.96	848.59	788.86	14.21	
7600.00	7600.00	12821.03	8259.00	16.94	89.32	28.59	399.92	217.96	766.09	704.13	12.36	
7700.00	7699.95	12821.03	8259.00	17.17	89.32	208.84	399.92	217.96	689.29	624.25	10.60	
7800.00	7798.46	12821.03	8259.00	17.40	89.32	205.40	399.92	217.96	629.53	560.44	9.11	
7900.00	7892.61	12821.03	8259.00	17.65	89.32	203.88	399.92	217.96	595.65	521.20	8.00	
8000.00	7979.54	12821.03	8259.00	17.94	89.32	203.78	399.92	217.96	593.20	511.76	7.28	
8100.00	8056.61	12821.03	8259.00	18.30	89.32	205.07	399.92	217.96	622.60	533.04	6.95	
8200.00	8121.48	12821.03	8259.00	18.75	89.32	208.16	399.92	217.96	678.94	581.83	6.99	
8300.00	8172.18	12821.03	8259.00	19.33	89.32	214.27	399.92	217.96	754.74	652.50	7.38	
8400.00	8207.16	12821.03	8259.00	20.04	89.32	226.50	399.92	217.96	842.83	737.24	7.98	
8500.00	8225.37	12821.03	8259.00	20.88	89.32	251.84	399.92	217.96	937.48	828.11	8.57	
8600.00	8228.39	12821.03	8259.00	21.82	89.32	271.08	399.92	217.96	1034.49	923.46	9.32	
8700.00	8229.18	12821.03	8259.00	22.87	89.32	271.08	399.92	217.96	1132.06	1020.00	10.10	
8800.00	8229.96	12821.03	8259.00	24.01	89.32	271.08	399.92	217.96	1230.03	1116.84	10.87	
8900.00	8230.75	12821.03	8259.00	25.24	89.32	271.08	399.92	217.96	1328.29	1213.90	11.61	
9000.00	8231.54	12821.03	8259.00	26.54	89.32	271.08	399.92	217.96	1426.80	1311.14	12.34	
9100.00	8232.32	12821.03	8259.00	27.90	89.32	271.08	399.92	217.96	1525.51	1408.51	13.04	
9200.00	8233.11	12821.03	8259.00	29.32	89.32	271.08	399.92	217.96	1624.37	1505.99	13.72	
9300.00	8233.90	12821.03	8259.00	30.78	89.32	271.08	399.92	217.96	1723.36	1603.56	14.39	
9400.00	8234.68	12821.03	8259.00	32.28	89.32	271.08	399.92	217.96	1822.46	1701.21	15.03	
9500.00	8235.47	12821.03	8259.00	33.81	89.32	271.08	399.92	217.96	1921.66	1798.93	15.66	
9600.00	8236.26	12821.03	8259.00	35.37	89.32	271.08	399.92	217.96	2020.93	1896.70	16.27	
9700.00	8237.05	12821.03	8259.00	36.96	89.32	271.08	399.92	217.96	2120.28	1994.52	16.86	
9800.00	8237.83	12821.03	8259.00	38.57	89.32	271.08	399.92	217.96	2219.68	2092.38	17.44	
9900.00	8238.62	12821.03	8259.00	40.20	89.32	271.08	399.92	217.96	2319.13	2190.29	18.00	
10000.00	8239.41	12821.03	8259.00	41.85	89.32	271.08	399.92	217.96	2418.63	2288.24	18.55	
10100.00	8240.19	12821.03	8259.00	43.51	89.32	271.08	399.92	217.96	2518.17	2386.23	19.09	
10200.00	8240.98	12821.03	8259.00	45.19	89.32	271.08	399.92	217.96	2617.74	2484.25	19.61	
10300.00	8241.77	12821.03	8259.00	46.88	89.32	271.08	399.92	217.96	2717.35	2582.31	20.12	
10400.00	8242.55	12821.03	8259.00	48.58	89.32	271.08	399.92	217.96	2816.98	2680.42	20.63	
10500.00	8243.34	12821.03	8259.00	50.30	89.32	271.08	399.92	217.96	2916.64	2778.56	21.12	
10600.00	8244.13	12821.03	8259.00	52.02	89.32	271.08	399.92	217.96	3016.32	2876.76	21.61	
10700.00	8244.91	12821.03	8259.00	53.75	89.32	271.08	399.92	217.96	3116.02	2975.00	22.10	
10800.00	8245.70	12821.03	8259.00	55.48	89.32	271.08	399.92	217.96	3215.74	3073.30	22.58	
10900.00	8246.49	12821.03	8259.00	57.23	89.32	271.08	399.92	217.96	3315.48	3171.68	23.06	
11000.00	8247.28	12821.03	8259.00	58.97	89.32	271.08	399.92	217.96	3415.23	3270.13	23.54	
11100.00	8248.06	12821.03	8259.00	60.73	89.32	271.08	399.92	217.96	3514.99	3368.67	24.02	
11200.00	8248.85	12821.03	8259.00	62.49	89.32	271.08	399.92	217.96	3614.77	3467.34	24.52	
11300.00	8249.64	12821.03	8259.00	64.25	89.32	271.08	399.92	217.96	3714.56	3566.14	25.03	
11400.00	8250.42	12821.03	8259.00	66.02	89.32	271.08	399.92	217.96	3814.36	3665.11	25.56	
11500.00	8251.21	12821.03	8259.00	67.80	89.32	271.08	399.92	217.96	3914.18	3764.30	26.12	
11600.00	8252.00	12821.03	8259.00	69.57	89.32	271.08	399.92	217.96	4014.00	3863.76	26.72	
11700.00	8252.78	12821.03	8259.00	71.35	89.32	271.08	399.92	217.96	4113.83	3963.55	27.38	
11800.00	8253.57	12821.03	8259.00	73.13	89.32	271.08	399.92	217.96	4213.67	4063.77	28.11	
11900.00	8254.36	12821.03	8259.00	74.92	89.32	271.08	399.92	217.96	4313.51	4164.51	28.95	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit 161H
Reference Well: 161H
Reference Wellpath: 1

Date: 1/20/2011
Time: 13:13:50
Page: 9

Co-ordinate(NE) Reference: Well: 161H, Grid North
Vertical (TVD) Reference: SITE 3483.0
Db: Sybase

Site: Cotton Draw Unit #151H
Well: Cotton Draw Unit #151H
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		
12000.00	8255.14	12821.03	8259.00	76.71	89.32	271.08	399.92	217.96	4413.36	4265.90	29.93	
12100.00	8255.93	12821.03	8259.00	78.50	89.32	271.08	399.92	217.96	4513.22	4368.05	31.09	
12200.00	8256.72	12821.03	8259.00	80.29	89.32	271.08	399.92	217.96	4613.09	4471.04	32.48	
12300.00	8257.51	12821.03	8259.00	82.09	89.32	271.08	399.92	217.96	4712.96	4574.86	34.13	
12400.00	8258.29	12821.03	8259.00	83.89	89.32	271.08	399.92	217.96	4812.84	4679.26	36.03	
12500.00	8259.08	12821.03	8259.00	85.69	89.32	271.08	399.92	217.96	4912.72	4783.61	38.05	
12600.00	8259.87	12821.03	8259.00	87.49	89.32	271.08	399.92	217.96	5012.60	4886.77	39.83	
12700.00	8260.65	12821.03	8259.00	89.29	89.32	271.08	399.92	217.96	5112.49	4987.32	40.84	
12800.00	8261.44	12821.03	8259.00	91.10	89.32	271.08	399.92	217.96	5212.39	5084.53	40.77	
12871.12	8262.00	12821.03	8259.00	92.38	89.32	271.08	399.92	217.96	5283.43	5151.94	40.18	

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

GeoDec v5.03

Report Date: January 20, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #161H
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 424624.190 USFT	Latitude 32.1660516 DEG
East/West 720062.930 USFT	Longitude -103.7557384 DEG
Grid Convergence: .31°	
Total Correction: +7.31°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.16605° N	32° 9 min 57.786 sec
Longitude =	103.75574° W	103° 45 min 20.658 sec

Magnetic Declination =	7.62°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6570
Local Field Strength =	48541 nT	Magnetic Vector X = 23990 nT
Magnetic Dip =	60.09°	Magnetic Vector Y = 3208 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42076 nT
Spud Date =	Nov 15, 2011	Magnetic Vector H = 24203 nT

Signed: _____

Date: _____

