

ATS-12-996

EA-12-1249

Form 3160-3
(March 2012)

OCD Artesia

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
BHL-NM-000503
6. If Indian, Allottee or Tribe Name *TES 9/25/2012*

1a. Type of work. ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY, L.P. *<6137>*

7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No.
COTTON DRAW 15 FED 2H *<37469>*
9. API Well No.
30-015-40748
10. Field and Pool, or Exploratory *Cotton Draw; Del., South*
~~UNDESIGNATED DELAWARE~~
11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 15, T. 25 S., R. 31 E. *<96757>*

3a. Address 333 W. SHERIDAN
OKLAHOMA CITY, OK 73102
3b. Phone No. (include area code)
(405) 552-4524
4. Location of Well (Report location clearly and in accordance with any State requirements *)
At surface 330 FNL & 2030 FEL
At proposed prod. zone 330 FSL & 1650 FWL

14. Distance in miles and direction from nearest town or post office*
19 MILES SOUTHEAST OF MALAGA, NM
12. County or Parish
EDDY
13. State
NM
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 330'
16. No. of acres in lease 1880
17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 710' @ SURFACE 2100' @ BOTTOM
19. Proposed Depth MD: 12884' TVD: 8202'
20. BLM/BIA Bond No. on file NMB-000801 CO-1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3383.5' GL
22. Approximate date work will start*
23. Estimated duration 30 DAYS

24. Attachments

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

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

25. Signature *Barry W. Hunt* Name (Printed/Typed) BARRY W. HUNT Date 7/23/12

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

Approved by (Signature) */s/ Don Peterson* Name (Printed/Typed) */s/ Don Peterson* Date SEP 21 2012

Title *FA* FIELD MANAGER Office CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

RECEIVED
SEP 25 2012
NMOCD ARTESIA

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-4161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Grande Rd., Alamogordo, NM 88310
Phone: (505) 324-6178 Fax: (505) 324-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		UNDESIGNATED DELAWARE
Property Code	Property Name	Well Number
	COTTON DRAW 15 FED	2H
OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, LP.	3383.5'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	25 S	31 E		330	NORTH	2030	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	25 S	31 E		330	SOUTH	1650	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
160			

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

NW COR SEC 15 NMSP-E (NAD 83) Y = 414275.2' N X = 714348.9' E LAT = N32° 08' 15.87" LONG = W103° 48' 27.78"	COTTON DRAW 15 FED 2H SHL NMSP-E (NAD 83) Y = 413962.6' N X = 717633.6' E LAT = N32° 08' 12.41" LONG = W103° 45' 49.58"	330' 2030' NE COR SEC 15 NMSP-E (NAD 83) Y = 414306.2' N X = 719664.5' E LAT = N32° 08' 15.70" LONG = W103° 45' 25.94"	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Barry W. Hunt</i> 7/23/12 Signature Date Barry W. Hunt Print Name E-mail Address
SW COR SEC 15 NMSP-E (NAD 83) Y = 408972.9' N X = 714348.8' E LAT = N32° 07' 23.20" LONG = W103° 48' 28.08"	COTTON DRAW 15 FED 2H BHL NMSP-E (NAD 83) Y = 409313.7' N X = 715998.8' E LAT = N32° 07' 26.49" LONG = W103° 46' 08.87"	SE COR SEC 15 NMSP-E (NAD 83) Y = 409007.5' N X = 719660.8' E LAT = N32° 07' 23.27" LONG = W103° 45' 26.31"	SURVEYORS CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. MAY 31, 2012 Date of Survey Signature and Seal of Professional Surveyor <i>James E. Tompkins</i> Job No. WTC48539 JAMES E. TOMPKINS 14729 Certificate Number

DISTRICT I
1625 W. French Dr., Hobbs, NM 88240
Phone: (505) 393-4661 Fax: (505) 393-4220

DISTRICT II
511 S. First St., Artesia, NM 88210
Phone: (505) 748-1211 Fax: (505) 748-0720

DISTRICT III
1800 Rio Grande Rd., Abo, NM 87410
Phone: (505) 334-6176 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3400 Fax: (505) 476-3462

State of New Mexico
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OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-40748	Pool Code 96757	Pool Name UNDESIGNATED DELAWARE, South
Property Code 39469	Property Name COTTON DRAW 15 FED	Well Number 2H
GRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY, LP.	Elevation 3383.5'

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	25 S	31 E		330	NORTH	2030	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	25 S	31 E		330	SOUTH	1650	WEST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidated Code	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.

NW COR SEC 15 NMSP-E (NAD 83) Y = 414275.2' N X = 714348.9' E LAT. = N32° 08' 15.67" LONG. = W103° 46' 27.76" COTTON DRAW 15 FED 2H SHL NMSP-E (NAD 83) Y = 413962.6' N X = 717633.6' E LAT. = N32° 08' 12.41" LONG. = W103° 45' 49.58" NE COR SEC 15 NMSP-E (NAD 83) Y = 414306.2' N X = 719664.5' E LAT. = N32° 08' 15.70" LONG. = W103° 45' 25.94" SW COR SEC 15 NMSP-E (NAD 83) Y = 408972.9' N X = 714348.8' E LAT. = N32° 07' 23.20" LONG. = W103° 46' 28.08" COTTON DRAW 15 FED 2H BHL NMSP-E (NAD 83) Y = 409313.7' N X = 715998.8' E LAT. = N32° 07' 26.49" LONG. = W103° 46' 08.87" SE COR SEC 15 NMSP-E (NAD 83) Y = 409007.5' N X = 719680.8' E LAT. = N32° 07' 23.27" LONG. = W103° 45' 26.31" S 19° 22' 28" W 5877.8' UWMM 000503	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Barry W. Hunt</i> 7/23/12 Signature Date Barry W. Hunt Print Name E-mail Address SURVEYORS CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. MAY 31, 2012 Date of Survey Signature and Seal of Professional Surveyor <i>James E. Tompkins</i> Job No. WTC48539 JAMES E. TOMPKINS 14729 Certificate Number
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OPERATOR: Please do not report production under this pool id code until OCD confirms perms and appropriate pool designation on completion and C104 approvals.

DEVON ENERGY PRODUCTION, L. P.
DRILLING PLAN

COTTON DRAW 15 FED 2H
SHL: 330 FNL & 2030 FEL
BHL: 330 FSL & 1650 FWL
Section 15-25S-31E
Eddy County, NM

The elevation of the unprepared ground is 3383.5' feet above sea level.

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

A rotary rig will be utilized to drill the well.

Proposed total depth is: MD: 12884'. TVD: 8202'.

Estimated tops of important geologic markers:

Quaternary – Alluvium	Surface*
Rustler	495'
Salado	875'
Top of Salt	972'
Base of Salt	4125'
Delaware	4342'
Bell Canyon Sand	4380'
Cherry Canyon Sand	5319'
Brushy Canyon Sand	6629'
TVD	8202' (140 degree F)

*Water anticipated at 200 feet.

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

Delaware	Oil (1910 psi)
Bell Canyon	Oil (1927 psi)
Cherry Canyon	Oil (2340 psi)
Brushy Canyon	Oil (2917 psi)
TVD	Oil BHP 3608 psi

Cotton Draw 15 Fed #2H – APD DRILLING PLAN

7.21.2012 ETC

Casing Program (All new casing)

see COA

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0' – 650'	13.375"	0' – 650'	48.0#	STC	H-40
12-1/4"	650' – 4,200'	9.625"	0' – 4,200'	40#	LT&C	J-55
8-3/4"	4,200' – 7,000'	5.5"	0 – 7,000'	17#	LTC	P-110HC
8-3/4"	7,000' – 12,884'	5.5"	7,000 – 12,884'	17#	BTC	P-110HC

Max TVD: 8,202 ft

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13.375"	2.53	5.69	10.32
9.625"	1.18	1.81	3.10
5.5"	2.40	2.98	2.03
5.5"	2.24	2.77	6.36

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' – 650'	9.8 – 10.0	28 – 32	N/C	Brine
650' – 4,200'	8.4 – 9.0	28 – 30	N/C	FW
4,200' – 12,884'	8.6 – 9.0	28 – 32	N/C-12	FW

Pressure Control Equipment:

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

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

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

13-3/8" Surface

FLUID SPECIFICATIONS

Spacer

10.0 bbls Fresh Water @ 8.34 ppg

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

9-5/8" Intermediate

FLUID SPECIFICATIONS

Spacer

10.0 bbls Fresh Water @ 8.34 ppg

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

5-1/2" Production

FLUID SPECIFICATIONS

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

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
1st Lead Slurry	1053	/ 2.3	= 460 sacks (50:50) Poz (Fly Ash):Class H Cement + 0.5% bwoc FL-52 + 0.15% bwoc ASA-301 + 10% bwoc Bentonite + 0.3% bwoc R-21 + 130.5% Fresh Water
Lead Slurry	808	/ 2	= 405 sacks (35:65) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.7% bwoc FL-52 + 6% bwoc Bentonite + 105.4% Fresh Water
Tail Slurry	1740	/ 1.28	= 1360 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 0.5% bwoc FL-52 + 0.45% bwoc Sodium Metasilicate + 57.2% Fresh Water
Displacement			298.6 bbls Displacement Fluid

TOC for All Strings:

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

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

AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

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

LOGGING, CORING, AND TESTING PROGRAM:

See COA

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

POTENTIAL HAZARDS:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area; therefore, no H₂S is anticipated. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. **Estimated BHP 3608 and estimated BHT 140.**

ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

- a. Road and location construction will begin after BLM has approved the APD. Anticipated spud date will be soon after BLM approval and as soon as a rig is available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW 15 FED #2H

EDDY COUNTY, NM

WELL FILE: PLAN 2

AUGUST 7, 2012

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

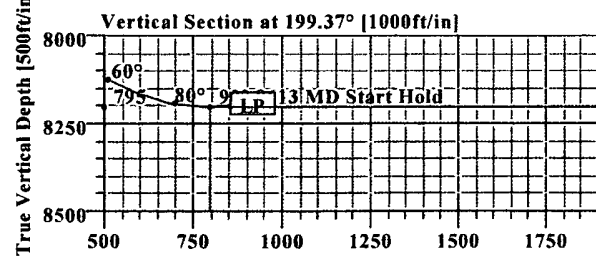
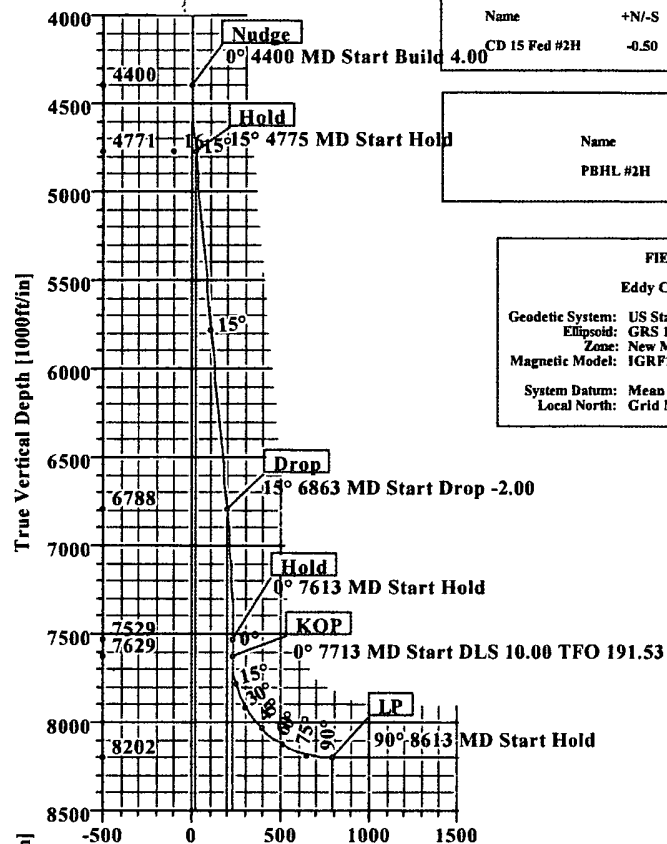
+1.432.561.8895 Fax

www.weatherford.com



Cotton Draw 15 Fed #2H
Eddy Co., New Mexico

KB ELEV: 3408
GL ELEV: 3383



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4400.00	0.00	270.00	4400.00	0.00	0.00	0.00	270.00	0.00	
3	4775.00	15.00	270.00	4770.73	0.00	-48.81	4.00	-90.00	16.19	
4	6863.00	15.00	270.00	6787.58	0.00	-589.22	0.00	0.00	195.43	
5	7613.00	0.00	270.00	7529.05	0.00	-686.84	2.00	180.00	227.80	
6	7713.00	0.00	270.00	7629.05	0.00	-686.84	0.00	270.00	227.80	
7	8613.00	90.00	191.53	8202.00	-561.41	-801.31	10.00	191.53	795.40	
8	12784.61	90.00	191.53	8202.00	-4648.90	-1634.80	0.00	0.00	4927.97	PBHL #2H

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
CD 15 Fed #2H	-0.50	-50.10	413962.60	717633.60	32°08'12.402N	103°45'49.593W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL #2H	8202.00	-4648.90	-1634.80	409313.70	715998.80	Point

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

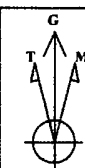
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

Cotton Draw 15 Fed Pad

Site Centre Northing: 413963.10
Easting: 717683.70

Ground Level: 3383.00
Positional Uncertainty: 0.00
Convergence: 0.30



Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.18°

Magnetic Field
Strength: 48418nT
Dip Angle: 60.04°
Date: 12/15/2012
Model: IGRF2010

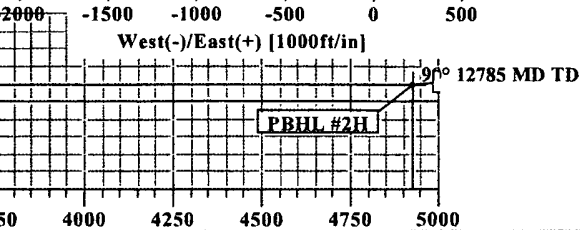
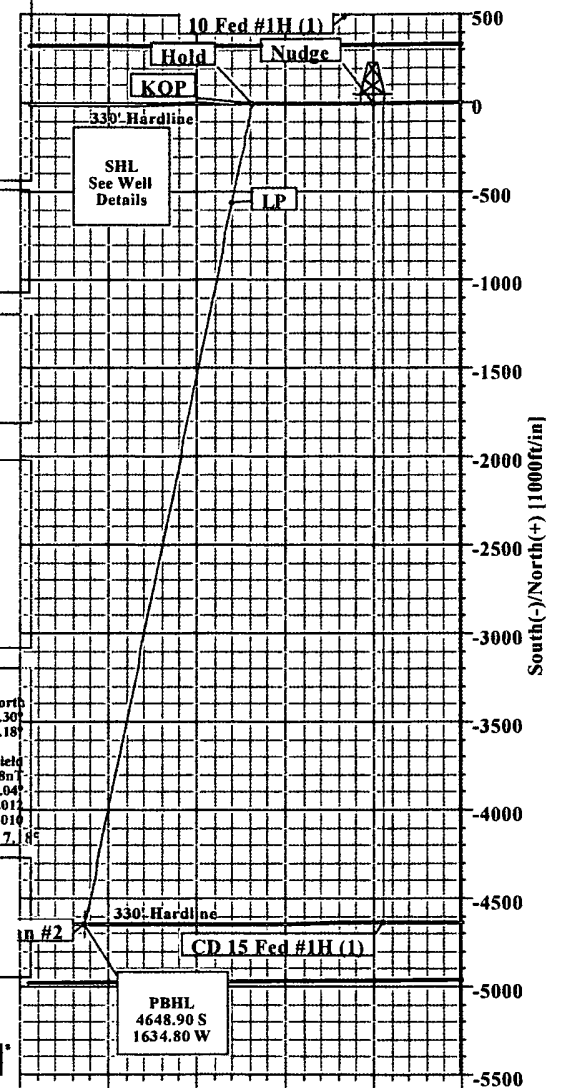
Total Correction to Grid North: 7.18°

LEGEND

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



Weatherford



Plan: Plan #2 (CD 15 Fed #2H/1)

Created By: Russell W. Joyner

Date: 8/7/2012



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy Date: 8/7/2012 Time: 13:00:43 Page: 1
Field: Eddy Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Site: Cotton Draw 15 Fed Pad Vertical (TVD) Reference: SITE 3408.0
Well: CD 15 Fed #2H Section (VS) Reference: Well (0.00N,0.00E,199.37Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #2 Date Composed: 8/7/2012
Principal: Yes Version: 1
Tied-to: From Surface

Field: Eddy Co., NM (NAD 83)
Map System: S State Plane Coordinate System 1983 Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980 Coordinate System: Well Centre
Sys Datum: Mean Sea Level Geomagnetic Model: IGRF2010

Site: Cotton Draw 15 Fed Pad
Site Position: Northing: 413963.10 ft Latitude: 32 8 12.404 N
From: Map Easting: 717683.70 ft Longitude: 103 45 49.011 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3383.00 ft Grid Convergence: 0.30 deg

Well: CD 15 Fed #2H Slot Name:
Well Position: +N/-S -0.50 ft Northing: 413962.60 ft Latitude: 32 8 12.402 N
+E/-W -50.10 ft Easting: 717633.60 ft Longitude: 103 45 49.593 W
Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
Current Datum: SITE Height 3408.00 ft Tie-on Depth: 0.00 ft
Magnetic Data: 12/15/2012 Above System Datum: Mean Sea Level
Field Strength: 48418 nT Declination: 7.49 deg
Vertical Section: Depth From (TVD) +N/-S Mag Dip Angle: 60.04 deg
ft ft +E/-W Direction
deg
0.00 0.00 0.00 199.37

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	270.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4400.00	0.00	270.00	4400.00	0.00	0.00	0.00	0.00	0.00	270.00	
4775.00	15.00	270.00	4770.73	0.00	-48.81	4.00	4.00	0.00	-90.00	
6863.00	15.00	270.00	6787.58	0.00	-589.22	0.00	0.00	0.00	0.00	
7613.00	0.00	270.00	7529.05	0.00	-686.84	2.00	-2.00	0.00	180.00	
7713.00	0.00	270.00	7629.05	0.00	-686.84	0.00	0.00	0.00	270.00	
8613.00	90.00	191.53	8202.00	-561.41	-801.31	10.00	10.00	-8.72	191.53	
12784.61	90.00	191.53	8202.00	-4648.90	-1634.80	0.00	0.00	0.00	0.00	PBHL #2H

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
4400.00	0.00	270.00	4400.00	0.00	0.00	0.00	0.00	413962.60	717633.60	Nudge
4500.00	4.00	270.00	4499.92	0.00	-3.49	1.16	4.00	413962.60	717630.11	
4600.00	8.00	270.00	4599.35	0.00	-13.94	4.62	4.00	413962.60	717619.66	
4700.00	12.00	270.00	4697.81	0.00	-31.30	10.38	4.00	413962.60	717602.30	
4775.00	15.00	270.00	4770.73	0.00	-48.81	16.19	4.00	413962.60	717584.79	Hold
4800.00	15.00	270.00	4794.88	0.00	-55.28	18.33	0.00	413962.60	717578.32	
4900.00	15.00	270.00	4891.47	0.00	-81.16	26.92	0.00	413962.60	717552.44	
5000.00	15.00	270.00	4988.06	0.00	-107.04	35.50	0.00	413962.60	717526.56	
5100.00	15.00	270.00	5084.66	0.00	-132.92	44.09	0.00	413962.60	717500.68	
5200.00	15.00	270.00	5181.25	0.00	-158.81	52.67	0.00	413962.60	717474.79	
5300.00	15.00	270.00	5277.84	0.00	-184.69	61.25	0.00	413962.60	717448.91	
5400.00	15.00	270.00	5374.43	0.00	-210.57	69.84	0.00	413962.60	717423.03	
5500.00	15.00	270.00	5471.03	0.00	-236.45	78.42	0.00	413962.60	717397.15	
5600.00	15.00	270.00	5567.62	0.00	-262.33	87.01	0.00	413962.60	717371.27	



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
Wellpath: 1

Date: 8/7/2012
Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Section (VS) Reference: Well (0.00N,0.00E,199.37Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Time: 13:00:43
Page: 2

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comments
5700.00	15.00	270.00	5664.21	0.00	-288.22	95.59	0.00	413962.60	717345.38	
5800.00	15.00	270.00	5760.80	0.00	-314.10	104.18	0.00	413962.60	717319.50	
5900.00	15.00	270.00	5857.40	0.00	-339.98	112.76	0.00	413962.60	717293.62	
6000.00	15.00	270.00	5953.99	0.00	-365.86	121.34	0.00	413962.60	717267.74	
6100.00	15.00	270.00	6050.58	0.00	-391.74	129.93	0.00	413962.60	717241.86	
6200.00	15.00	270.00	6147.18	0.00	-417.62	138.51	0.00	413962.60	717215.98	
6300.00	15.00	270.00	6243.77	0.00	-443.51	147.10	0.00	413962.60	717190.09	
6400.00	15.00	270.00	6340.36	0.00	-469.39	155.68	0.00	413962.60	717164.21	
6500.00	15.00	270.00	6436.95	0.00	-495.27	164.26	0.00	413962.60	717138.33	
6600.00	15.00	270.00	6533.55	0.00	-521.15	172.85	0.00	413962.60	717112.45	
6700.00	15.00	270.00	6630.14	0.00	-547.03	181.43	0.00	413962.60	717086.57	
6800.00	15.00	270.00	6726.73	0.00	-572.92	190.02	0.00	413962.60	717060.68	
6863.00	15.00	270.00	6787.58	0.00	-589.22	195.43	0.00	413962.60	717044.38	Drop
6900.00	14.26	270.00	6823.38	0.00	-598.57	198.53	2.00	413962.60	717035.03	
7000.00	12.26	270.00	6920.71	0.00	-621.50	206.13	2.00	413962.60	717012.10	
7100.00	10.26	270.00	7018.78	0.00	-641.03	212.61	2.00	413962.60	716992.57	
7200.00	8.26	270.00	7117.48	0.00	-657.12	217.94	2.00	413962.60	716976.48	
7300.00	6.26	270.00	7216.67	0.00	-669.76	222.14	2.00	413962.60	716963.84	
7400.00	4.26	270.00	7316.24	0.00	-678.92	225.18	2.00	413962.60	716954.68	
7500.00	2.26	270.00	7416.08	0.00	-684.61	227.06	2.00	413962.60	716948.99	
7600.00	0.26	270.00	7516.05	0.00	-686.81	227.79	2.00	413962.60	716946.79	
7613.00	0.00	270.00	7529.05	0.00	-686.84	227.80	2.00	413962.60	716946.76	Hold
7700.00	0.00	270.00	7616.05	0.00	-686.84	227.80	0.00	413962.60	716946.76	
7712.95	0.00	270.00	7629.00	0.00	-686.84	227.80	0.00	413962.60	716946.76	Vertical Tgt #2H
7713.00	0.00	270.00	7629.05	0.00	-686.84	227.80	0.00	413962.60	716946.76	KOP
7750.00	3.70	191.53	7666.02	-1.17	-687.08	228.98	10.00	413961.43	716946.52	
7800.00	8.70	191.53	7715.71	-6.46	-688.15	234.33	10.00	413956.14	716945.45	
7850.00	13.70	191.53	7764.74	-15.97	-690.09	243.95	10.00	413946.63	716943.51	
7900.00	18.70	191.53	7812.74	-29.64	-692.88	257.76	10.00	413932.96	716940.72	
7950.00	23.70	191.53	7859.35	-47.35	-696.49	275.67	10.00	413915.25	716937.11	
8000.00	28.70	191.53	7904.19	-68.97	-700.90	297.53	10.00	413893.63	716932.70	
8050.00	33.70	191.53	7946.95	-94.34	-706.07	323.18	10.00	413868.26	716927.53	
8100.00	38.70	191.53	7987.28	-123.27	-711.97	352.43	10.00	413839.33	716921.63	
8150.00	43.70	191.53	8024.89	-155.53	-718.55	385.04	10.00	413807.07	716915.05	
8200.00	48.70	191.53	8059.49	-190.88	-725.76	420.78	10.00	413771.72	716907.84	
8250.00	53.70	191.53	8090.81	-229.05	-733.54	459.37	10.00	413733.55	716900.06	
8300.00	58.70	191.53	8118.61	-269.74	-741.84	500.52	10.00	413692.86	716891.76	
8350.00	63.70	191.53	8142.69	-312.66	-750.59	543.91	10.00	413649.94	716883.01	
8400.00	68.70	191.53	8162.87	-357.47	-759.73	589.22	10.00	413605.13	716873.87	
8450.00	73.70	191.53	8178.97	-403.84	-769.18	636.09	10.00	413558.76	716864.42	
8500.00	78.70	191.53	8190.90	-451.40	-778.88	684.18	10.00	413511.20	716854.72	
8550.00	83.70	191.53	8198.54	-499.80	-788.75	733.11	10.00	413462.80	716844.85	
8600.00	88.70	191.53	8201.86	-548.67	-798.72	782.52	10.00	413413.93	716834.88	
8613.00	90.00	191.53	8202.00	-561.41	-801.31	795.40	10.00	413401.19	716832.29	LP
8700.00	90.00	191.53	8202.00	-646.65	-818.70	881.58	0.00	413315.95	716814.90	
8800.00	90.00	191.53	8202.00	-744.63	-838.68	980.65	0.00	413217.97	716794.92	
8900.00	90.00	191.53	8202.00	-842.62	-858.66	1079.71	0.00	413119.98	716774.94	
9000.00	90.00	191.53	8202.00	-940.60	-878.64	1178.78	0.00	413022.00	716754.96	
9100.00	90.00	191.53	8202.00	-1038.59	-898.62	1277.84	0.00	412924.01	716734.98	
9200.00	90.00	191.53	8202.00	-1136.57	-918.60	1376.90	0.00	412826.03	716715.00	
9300.00	90.00	191.53	8202.00	-1234.55	-938.58	1475.97	0.00	412728.05	716695.02	
9400.00	90.00	191.53	8202.00	-1332.54	-958.56	1575.03	0.00	412630.06	716675.04	



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
Wellpath: 1

Date: 8/7/2012
Time: 13:00:43
Page: 3
Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Section (VS) Reference: Well (0.00N,0.00E,199.37Azi)
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
9500.00	90.00	191.53	8202.00	-1430.52	-978.54	1674.10	0.00	412532.08	716655.06	
9600.00	90.00	191.53	8202.00	-1528.50	-998.52	1773.16	0.00	412434.10	716635.08	
9700.00	90.00	191.53	8202.00	-1626.49	-1018.50	1872.22	0.00	412336.11	716615.10	
9800.00	90.00	191.53	8202.00	-1724.47	-1038.48	1971.29	0.00	412238.13	716595.12	
9900.00	90.00	191.53	8202.00	-1822.46	-1058.46	2070.35	0.00	412140.14	716575.14	
10000.00	90.00	191.53	8202.00	-1920.44	-1078.44	2169.42	0.00	412042.16	716555.16	
10100.00	90.00	191.53	8202.00	-2018.42	-1098.42	2268.48	0.00	411944.18	716535.18	
10200.00	90.00	191.53	8202.00	-2116.41	-1118.40	2367.55	0.00	411846.19	716515.20	
10300.00	90.00	191.53	8202.00	-2214.39	-1138.38	2466.61	0.00	411748.21	716495.22	
10400.00	90.00	191.53	8202.00	-2312.37	-1158.36	2565.67	0.00	411650.23	716475.24	
10500.00	90.00	191.53	8202.00	-2410.36	-1178.34	2664.74	0.00	411552.24	716455.26	
10600.00	90.00	191.53	8202.00	-2508.34	-1198.32	2763.80	0.00	411454.26	716435.28	
10700.00	90.00	191.53	8202.00	-2606.32	-1218.30	2862.87	0.00	411356.28	716415.30	
10800.00	90.00	191.53	8202.00	-2704.31	-1238.28	2961.93	0.00	411258.29	716395.32	
10900.00	90.00	191.53	8202.00	-2802.29	-1258.26	3060.99	0.00	411160.31	716375.34	
11000.00	90.00	191.53	8202.00	-2900.28	-1278.24	3160.06	0.00	411062.32	716355.36	
11100.00	90.00	191.53	8202.00	-2998.26	-1298.22	3259.12	0.00	410964.34	716335.38	
11200.00	90.00	191.53	8202.00	-3096.24	-1318.20	3358.19	0.00	410866.36	716315.40	
11300.00	90.00	191.53	8202.00	-3194.23	-1338.18	3457.25	0.00	410768.37	716295.42	
11400.00	90.00	191.53	8202.00	-3292.21	-1358.16	3556.32	0.00	410670.39	716275.44	
11500.00	90.00	191.53	8202.00	-3390.19	-1378.14	3655.38	0.00	410572.41	716255.46	
11600.00	90.00	191.53	8202.00	-3488.18	-1398.12	3754.44	0.00	410474.42	716235.48	
11700.00	90.00	191.53	8202.00	-3586.16	-1418.10	3853.51	0.00	410376.44	716215.50	
11800.00	90.00	191.53	8202.00	-3684.14	-1438.08	3952.57	0.00	410278.46	716195.52	
11900.00	90.00	191.53	8202.00	-3782.13	-1458.06	4051.64	0.00	410180.47	716175.54	
12000.00	90.00	191.53	8202.00	-3880.11	-1478.04	4150.70	0.00	410082.49	716155.56	
12100.00	90.00	191.53	8202.00	-3978.10	-1498.02	4249.76	0.00	409984.50	716135.58	
12200.00	90.00	191.53	8202.00	-4076.08	-1518.00	4348.83	0.00	409886.52	716115.60	
12300.00	90.00	191.53	8202.00	-4174.06	-1537.98	4447.89	0.00	409788.54	716095.62	
12400.00	90.00	191.53	8202.00	-4272.05	-1557.96	4546.96	0.00	409690.55	716075.64	
12500.00	90.00	191.53	8202.00	-4370.03	-1577.94	4646.02	0.00	409592.57	716055.66	
12600.00	90.00	191.53	8202.00	-4468.01	-1597.92	4745.08	0.00	409494.59	716035.68	
12700.00	90.00	191.53	8202.00	-4566.00	-1617.90	4844.15	0.00	409396.60	716015.70	
12784.61	90.00	191.53	8202.00	-4648.90	-1634.80	4927.97	0.00	409313.70	715998.80	PBHL #2H

Targets

Name	Description Dip.	TVD Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Vertical Tgt #2H			7629.00	100.00	-1126.75	414062.60	716506.85	32 8 13.450 N	103 46 2.691 W
PBHL #2H			8202.00	-4648.90	-1634.80	409313.70	715998.80	32 7 26.483 N	103 46 8.889 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy	Date: 8/7/2012	Time: 13:00:43	Page: 4
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North		
Site: Cotton Draw 15 Fed Pad	Vertical (TVD) Reference: SITE 3408.0		
Well: CD 15 Fed #2H	Section (VS) Reference: Well (0.00N,0.00E,199.37Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature Db: Sybase		

Annotation

MD ft	TVD ft	
4400.00	4400.00	Nudge
4775.00	4770.73	Hold
6863.00	6787.58	Drop
7613.00	7529.05	Hold
7713.00	7629.05	KOP
8613.00	8202.00	LP
12784.60	8202.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford Anticollision Report



Company: Devon Energy Date: 8/7/2012 Time: 13:06:56 Page: 1
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath: Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria

Interpolation Method: MD Interval: 100.00 ft
Depth Range: 0.00 to 12784.61 ft
Maximum Radius: 0000.00 ft

Reference: Plan: Plan #2
Error Model: ISCWSA Ellipse
Scan Method: Closest Approach 3D
Error Surface: Ellipse

Plan: Plan #2

Date Composed: 8/7/2012

Principal: Yes

Version: 1

Tied-to: From Surface

Summary

Site	Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Edge Distance ft	Separation Distance ft	Factor	Warning
Cotton Draw 15 Fed #2H	CD 15 Fed #1H	1 V0 Plan: Plan #1 V1	4400.00	4400.00	50.10	30.60	2.57	
Cotton Draw 15 Fed #2H	CD 15 Fed #3H	1 V0 Plan: Plan #2 V1	4400.00	4400.00	100.10	80.60	5.13	

Site: Cotton Draw 15 Fed Pad

Well: CD 15 Fed #1H

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 Edge Distance ft	Separation Distance ft	Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.43	0.50	50.10	50.10			No Data
100.00	100.00	100.00	100.00	0.08	0.08	89.43	0.50	50.10	50.10	49.93	297.21	
200.00	200.00	200.00	200.00	0.31	0.31	89.43	0.50	50.10	50.10	49.48	81.06	
300.00	300.00	300.00	300.00	0.53	0.53	89.43	0.50	50.10	50.10	49.03	46.93	
400.00	400.00	400.00	400.00	0.76	0.76	89.43	0.50	50.10	50.10	48.59	33.02	
500.00	500.00	500.00	500.00	0.98	0.98	89.43	0.50	50.10	50.10	48.14	25.48	
600.00	600.00	600.00	600.00	1.21	1.21	89.43	0.50	50.10	50.10	47.69	20.74	
700.00	700.00	700.00	700.00	1.43	1.43	89.43	0.50	50.10	50.10	47.24	17.48	
800.00	800.00	800.00	800.00	1.66	1.66	89.43	0.50	50.10	50.10	46.79	15.11	
900.00	900.00	900.00	900.00	1.88	1.88	89.43	0.50	50.10	50.10	46.34	13.31	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	89.43	0.50	50.10	50.10	45.89	11.89	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	89.43	0.50	50.10	50.10	45.44	10.74	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	89.43	0.50	50.10	50.10	44.99	9.80	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	89.43	0.50	50.10	50.10	44.54	9.01	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	89.43	0.50	50.10	50.10	44.09	8.33	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	89.43	0.50	50.10	50.10	43.64	7.75	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	89.43	0.50	50.10	50.10	43.19	7.25	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	89.43	0.50	50.10	50.10	42.74	6.81	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	89.43	0.50	50.10	50.10	42.29	6.41	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	89.43	0.50	50.10	50.10	41.84	6.07	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	89.43	0.50	50.10	50.10	41.39	5.75	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	89.43	0.50	50.10	50.10	40.94	5.47	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	89.43	0.50	50.10	50.10	40.49	5.21	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	89.43	0.50	50.10	50.10	40.04	4.98	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	89.43	0.50	50.10	50.10	39.59	4.77	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	89.43	0.50	50.10	50.10	39.15	4.57	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	89.43	0.50	50.10	50.10	38.70	4.39	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	89.43	0.50	50.10	50.10	38.25	4.23	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	89.43	0.50	50.10	50.10	37.80	4.07	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	89.43	0.50	50.10	50.10	37.35	3.93	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	89.43	0.50	50.10	50.10	36.90	3.79	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	89.43	0.50	50.10	50.10	36.45	3.67	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	89.43	0.50	50.10	50.10	36.00	3.55	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	89.43	0.50	50.10	50.10	35.55	3.44	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	89.43	0.50	50.10	50.10	35.10	3.34	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	89.43	0.50	50.10	50.10	34.65	3.24	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath:
Date: 8/7/2012
Time: 13:06:56
Page: 2
Co-ordinate(N/E) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #1H
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		
3600.00	3600.00	3600.00	3600.00	7.95	7.95	89.43	0.50	50.10	50.10	34.20	3.15	
3700.00	3700.00	3700.00	3700.00	8.18	8.18	89.43	0.50	50.10	50.10	33.75	3.06	
3800.00	3800.00	3800.00	3800.00	8.40	8.40	89.43	0.50	50.10	50.10	33.30	2.98	
3900.00	3900.00	3900.00	3900.00	8.63	8.63	89.43	0.50	50.10	50.10	32.85	2.90	
4000.00	4000.00	4000.00	4000.00	8.85	8.85	89.43	0.50	50.10	50.10	32.40	2.83	
4100.00	4100.00	4100.00	4100.00	9.07	9.07	89.43	0.50	50.10	50.10	31.95	2.76	
4200.00	4200.00	4200.00	4200.00	9.30	9.30	89.43	0.50	50.10	50.10	31.50	2.69	
4300.00	4300.00	4300.00	4300.00	9.52	9.52	89.43	0.50	50.10	50.10	31.05	2.63	
4400.00	4400.00	4400.00	4400.00	9.75	9.75	89.43	0.50	50.10	50.10	30.60	2.57	
4500.00	4499.92	4499.92	4499.92	9.97	9.97	179.46	0.50	50.10	53.59	33.66	2.69	
4600.00	4599.35	4599.35	4599.35	10.20	10.20	179.55	0.50	50.10	64.04	43.73	3.15	
4700.00	4697.81	4697.81	4697.81	10.44	10.42	179.64	0.50	50.10	81.40	60.75	3.94	
4800.00	4794.88	4794.88	4794.88	10.69	10.64	179.72	0.50	50.10	105.38	84.40	5.02	
4900.00	4891.47	4891.47	4891.47	10.97	10.85	179.77	0.50	50.10	131.26	109.83	6.13	
5000.00	4988.06	4988.06	4988.06	11.26	11.07	179.81	0.50	50.10	157.14	135.27	7.18	
5100.00	5084.66	5084.66	5084.66	11.57	11.29	179.84	0.50	50.10	183.02	160.70	8.20	
5200.00	5181.25	5181.25	5181.25	11.90	11.51	179.86	0.50	50.10	208.91	186.13	9.17	
5300.00	5277.84	5277.84	5277.84	12.24	11.72	179.87	0.50	50.10	234.79	211.56	10.11	
5400.00	5374.43	5374.43	5374.43	12.60	11.94	179.89	0.50	50.10	260.67	236.99	11.01	
5500.00	5471.03	5471.03	5471.03	12.97	12.16	179.90	0.50	50.10	286.55	262.41	11.87	
5600.00	5567.62	5567.62	5567.62	13.35	12.37	179.91	0.50	50.10	312.43	287.83	12.70	
5700.00	5664.21	5664.21	5664.21	13.74	12.59	179.91	0.50	50.10	338.32	313.25	13.50	
5800.00	5760.80	5760.80	5760.80	14.14	12.81	179.92	0.50	50.10	364.20	338.67	14.27	
5900.00	5857.40	5857.40	5857.40	14.55	13.02	179.92	0.50	50.10	390.08	364.09	15.01	
6000.00	5953.99	5953.99	5953.99	14.97	13.24	179.93	0.50	50.10	415.96	389.50	15.72	
6100.00	6050.58	6050.58	6050.58	15.39	13.46	179.93	0.50	50.10	441.84	414.91	16.41	
6200.00	6147.18	6147.18	6147.18	15.82	13.68	179.94	0.50	50.10	467.73	440.32	17.07	
6300.00	6243.77	6243.77	6243.77	16.26	13.89	179.94	0.50	50.10	493.61	465.73	17.71	
6400.00	6340.36	6340.36	6340.36	16.70	14.11	179.94	0.50	50.10	519.49	491.14	18.32	
6500.00	6436.95	6436.95	6436.95	17.15	14.33	179.95	0.50	50.10	545.37	516.55	18.92	
6600.00	6533.55	6533.55	6533.55	17.61	14.54	179.95	0.50	50.10	571.25	541.95	19.50	
6700.00	6630.14	6630.14	6630.14	18.07	14.76	179.95	0.50	50.10	597.13	567.36	20.05	
6800.00	6726.73	6726.73	6726.73	18.53	14.98	179.95	0.50	50.10	623.02	592.76	20.59	
6900.00	6823.38	6823.38	6823.38	18.98	15.20	179.95	0.50	50.10	648.67	617.92	21.09	
7000.00	6920.71	6920.71	6920.71	19.31	15.41	179.96	0.50	50.10	671.60	640.37	21.50	
7100.00	7018.78	7018.78	7018.78	19.63	15.64	179.96	0.50	50.10	691.13	659.43	21.80	
7200.00	7117.48	7117.48	7117.48	19.91	15.86	179.96	0.50	50.10	707.22	675.07	22.00	
7300.00	7216.67	7216.67	7216.67	20.16	16.08	179.96	3.00	50.10	719.86	687.29	22.10	
7400.00	7316.24	7316.66	7315.33	20.38	16.30	179.18	10.40	50.10	729.10	696.12	22.11	
7500.00	7416.08	7415.11	7414.41	20.56	16.52	178.51	19.07	50.10	734.96	701.60	22.03	
7600.00	7516.05	7514.70	7513.62	20.72	16.74	177.84	27.75	50.10	737.43	703.72	21.87	
7700.00	7616.05	7616.29	7614.87	20.88	16.96	87.22	35.77	50.10	737.81	699.98	19.50	
7800.00	7715.71	7723.11	7721.35	20.86	17.13	255.79	29.40	50.09	739.14	704.61	21.41	
7900.00	7812.74	7829.74	7824.62	20.40	17.28	256.35	3.47	50.07	743.78	708.88	21.31	
8000.00	7904.19	7935.75	7920.78	19.60	17.45	257.36	-40.82	50.04	751.65	716.33	21.28	
8100.00	7987.28	8040.81	8006.41	19.01	17.66	258.76	-101.41	49.99	762.52	726.64	21.25	
8200.00	8059.49	8144.68	8078.82	19.18	17.95	260.50	-175.69	49.94	776.09	739.41	21.15	
8300.00	8118.61	8247.26	8136.03	19.69	18.36	262.52	-260.67	49.89	791.97	754.18	20.95	
8400.00	8162.87	8348.57	8176.79	20.39	18.90	264.72	-353.28	49.83	809.69	770.49	20.65	
8500.00	8190.90	8448.72	8200.45	21.27	19.59	267.04	-450.46	49.77	828.71	787.86	20.29	
8600.00	8201.86	8547.78	8207.00	22.31	20.39	269.38	-549.19	49.71	848.44	805.79	19.89	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath:
Date: 8/7/2012
Time: 13:06:56
Page: 3
Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grd North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

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

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
8700.00	8202.00	8645.78	8207.00	23.39	21.31	269.66	-647.18	49.65	868.36	823.73	19.46	
8800.00	8202.00	8743.77	8207.00	24.55	22.32	269.67	-745.18	49.59	888.28	841.48	18.98	
8900.00	8202.00	8841.77	8207.00	25.78	23.43	269.68	-843.18	49.53	908.20	859.06	18.48	
9000.00	8202.00	8939.77	8207.00	27.08	24.62	269.69	-941.17	49.47	928.12	876.50	17.98	
9100.00	8202.00	9037.76	8207.00	28.44	25.87	269.69	-1039.17	49.41	948.04	893.80	17.48	
9200.00	8202.00	9135.76	8207.00	29.84	27.19	269.70	-1137.16	49.35	967.96	911.00	17.00	
9300.00	8202.00	9233.75	8207.00	31.28	28.55	269.70	-1235.16	49.29	987.88	928.11	16.53	
9400.00	8202.00	9331.75	8207.00	32.76	29.97	269.71	-1333.16	49.23	1007.80	945.14	16.08	
9500.00	8202.00	9429.74	8207.00	34.27	31.42	269.72	-1431.15	49.17	1027.72	962.09	15.66	
9600.00	8202.00	9527.74	8207.00	35.81	32.90	269.72	-1529.15	49.11	1047.64	978.99	15.26	
9700.00	8202.00	9625.74	8207.00	37.38	34.41	269.73	-1627.14	49.05	1067.56	995.83	14.88	
9800.00	8202.00	9723.73	8207.00	38.96	35.95	269.73	-1725.14	48.99	1087.48	1012.62	14.53	
9900.00	8202.00	9821.73	8207.00	40.57	37.51	269.74	-1823.13	48.93	1107.39	1029.37	14.19	
10000.00	8202.00	9919.72	8207.00	42.19	39.09	269.74	-1921.13	48.87	1127.31	1046.09	13.88	
10100.00	8202.00	10017.72	8207.00	43.83	40.69	269.75	-2019.13	48.81	1147.23	1062.77	13.58	
10200.00	8202.00	10115.72	8207.00	45.48	42.30	269.75	-2117.12	48.75	1167.15	1079.43	13.30	
10300.00	8202.00	10213.71	8207.00	47.14	43.93	269.75	-2215.12	48.69	1187.07	1096.06	13.04	
10400.00	8202.00	10311.71	8207.00	48.81	45.56	269.76	-2313.11	48.63	1206.99	1112.66	12.80	
10500.00	8202.00	10409.70	8207.00	50.49	47.21	269.76	-2411.11	48.57	1226.91	1129.25	12.56	
10600.00	8202.00	10507.70	8207.00	52.18	48.87	269.77	-2509.11	48.51	1246.83	1145.82	12.34	
10700.00	8202.00	10605.70	8207.00	53.88	50.54	269.77	-2607.10	48.45	1266.75	1162.37	12.14	
10800.00	8202.00	10703.69	8207.00	55.59	52.22	269.77	-2705.10	48.39	1286.67	1178.91	11.94	
10900.00	8202.00	10801.69	8207.00	57.30	53.90	269.78	-2803.09	48.33	1306.59	1195.43	11.75	
11000.00	8202.00	10899.68	8207.00	59.02	55.59	269.78	-2901.09	48.27	1326.51	1211.94	11.58	
11100.00	8202.00	10997.68	8207.00	60.74	57.29	269.78	-2999.09	48.21	1346.43	1228.44	11.41	
11200.00	8202.00	11095.68	8207.00	62.47	58.99	269.79	-3097.08	48.15	1366.35	1244.93	11.25	
11300.00	8202.00	11193.67	8207.00	64.21	60.69	269.79	-3195.08	48.09	1386.27	1261.41	11.10	
11400.00	8202.00	11291.67	8207.00	65.94	62.40	269.79	-3293.07	48.03	1406.19	1277.87	10.96	
11500.00	8202.00	11389.66	8207.00	67.69	64.12	269.80	-3391.07	47.97	1426.11	1294.34	10.82	
11600.00	8202.00	11487.66	8207.00	69.43	65.84	269.80	-3489.06	47.90	1446.03	1310.79	10.69	
11700.00	8202.00	11585.65	8207.00	71.18	67.56	269.80	-3587.06	47.84	1465.95	1327.24	10.57	
11800.00	8202.00	11683.65	8207.00	72.93	69.29	269.80	-3685.06	47.78	1485.87	1343.68	10.45	
11900.00	8202.00	11781.65	8207.00	74.69	71.02	269.81	-3783.05	47.72	1505.79	1360.11	10.34	
12000.00	8202.00	11879.64	8207.00	76.44	72.75	269.81	-3881.05	47.66	1525.71	1376.54	10.23	
12100.00	8202.00	11977.64	8207.00	78.21	74.48	269.81	-3979.04	47.60	1545.63	1392.97	10.12	
12200.00	8202.00	12075.63	8207.00	79.97	76.22	269.81	-4077.04	47.54	1565.55	1409.39	10.03	
12300.00	8202.00	12173.63	8207.00	81.73	77.96	269.82	-4175.04	47.48	1585.47	1425.80	9.93	
12400.00	8202.00	12271.63	8207.00	83.50	79.70	269.82	-4273.03	47.42	1605.39	1442.21	9.84	
12500.00	8202.00	12369.62	8207.00	85.27	81.45	269.82	-4371.03	47.36	1625.31	1458.62	9.75	
12600.00	8202.00	12467.62	8207.00	87.04	83.19	269.82	-4469.02	47.30	1645.23	1475.02	9.67	
12700.00	8202.00	12565.61	8207.00	88.81	84.94	269.82	-4567.02	47.24	1665.15	1491.42	9.58	
12784.61	8202.00	12636.59	8207.00	90.31	86.21	269.83	-4638.00	47.20	1682.04	1505.55	9.53	

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #2 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
0.00	0.00	0.00	0.00	0.00	0.00	89.54	0.80	100.10	100.10			No Data
100.00	100.00	100.00	100.00	0.08	0.08	89.54	0.80	100.10	100.10	99.93	593.82	
200.00	200.00	200.00	200.00	0.31	0.31	89.54	0.80	100.10	100.10	99.49	161.95	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath:
Date: 8/7/2012
Time: 13:06:56
Page: 4
Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #2 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		
300.00	300.00	300.00	300.00	0.53	0.53	89.54	0.80	100.10	100.10	99.04	93.76		
400.00	400.00	400.00	400.00	0.76	0.76	89.54	0.80	100.10	100.10	98.59	65.98		
500.00	500.00	500.00	500.00	0.98	0.98	89.54	0.80	100.10	100.10	98.14	50.90		
600.00	600.00	600.00	600.00	1.21	1.21	89.54	0.80	100.10	100.10	97.69	41.43		
700.00	700.00	700.00	700.00	1.43	1.43	89.54	0.80	100.10	100.10	97.24	34.93		
800.00	800.00	800.00	800.00	1.66	1.66	89.54	0.80	100.10	100.10	96.79	30.19		
900.00	900.00	900.00	900.00	1.88	1.88	89.54	0.80	100.10	100.10	96.34	26.59		
1000.00	1000.00	1000.00	1000.00	2.11	2.11	89.54	0.80	100.10	100.10	95.89	23.75		
1100.00	1100.00	1100.00	1100.00	2.33	2.33	89.54	0.80	100.10	100.10	95.44	21.46		
1200.00	1200.00	1200.00	1200.00	2.56	2.56	89.54	0.80	100.10	100.10	94.99	19.58		
1300.00	1300.00	1300.00	1300.00	2.78	2.78	89.54	0.80	100.10	100.10	94.54	17.99		
1400.00	1400.00	1400.00	1400.00	3.01	3.01	89.54	0.80	100.10	100.10	94.09	16.65		
1500.00	1500.00	1500.00	1500.00	3.23	3.23	89.54	0.80	100.10	100.10	93.64	15.49		
1600.00	1600.00	1600.00	1600.00	3.46	3.46	89.54	0.80	100.10	100.10	93.19	14.48		
1700.00	1700.00	1700.00	1700.00	3.68	3.68	89.54	0.80	100.10	100.10	92.74	13.60		
1800.00	1800.00	1800.00	1800.00	3.91	3.91	89.54	0.80	100.10	100.10	92.29	12.82		
1900.00	1900.00	1900.00	1900.00	4.13	4.13	89.54	0.80	100.10	100.10	91.84	12.12		
2000.00	2000.00	2000.00	2000.00	4.35	4.35	89.54	0.80	100.10	100.10	91.39	11.49		
2100.00	2100.00	2100.00	2100.00	4.58	4.58	89.54	0.80	100.10	100.10	90.94	10.93		
2200.00	2200.00	2200.00	2200.00	4.80	4.80	89.54	0.80	100.10	100.10	90.49	10.42		
2300.00	2300.00	2300.00	2300.00	5.03	5.03	89.54	0.80	100.10	100.10	90.04	9.95		
2400.00	2400.00	2400.00	2400.00	5.25	5.25	89.54	0.80	100.10	100.10	89.60	9.53		
2500.00	2500.00	2500.00	2500.00	5.48	5.48	89.54	0.80	100.10	100.10	89.15	9.14		
2600.00	2600.00	2600.00	2600.00	5.70	5.70	89.54	0.80	100.10	100.10	88.70	8.78		
2700.00	2700.00	2700.00	2700.00	5.93	5.93	89.54	0.80	100.10	100.10	88.25	8.44		
2800.00	2800.00	2800.00	2800.00	6.15	6.15	89.54	0.80	100.10	100.10	87.80	8.13		
2900.00	2900.00	2900.00	2900.00	6.38	6.38	89.54	0.80	100.10	100.10	87.35	7.85		
3000.00	3000.00	3000.00	3000.00	6.60	6.60	89.54	0.80	100.10	100.10	86.90	7.58		
3100.00	3100.00	3100.00	3100.00	6.83	6.83	89.54	0.80	100.10	100.10	86.45	7.33		
3200.00	3200.00	3200.00	3200.00	7.05	7.05	89.54	0.80	100.10	100.10	86.00	7.10		
3300.00	3300.00	3300.00	3300.00	7.28	7.28	89.54	0.80	100.10	100.10	85.55	6.88		
3400.00	3400.00	3400.00	3400.00	7.50	7.50	89.54	0.80	100.10	100.10	85.10	6.67		
3500.00	3500.00	3500.00	3500.00	7.73	7.73	89.54	0.80	100.10	100.10	84.65	6.48		
3600.00	3600.00	3600.00	3600.00	7.95	7.95	89.54	0.80	100.10	100.10	84.20	6.29		
3700.00	3700.00	3700.00	3700.00	8.18	8.18	89.54	0.80	100.10	100.10	83.75	6.12		
3800.00	3800.00	3800.00	3800.00	8.40	8.40	89.54	0.80	100.10	100.10	83.30	5.96		
3900.00	3900.00	3900.00	3900.00	8.63	8.63	89.54	0.80	100.10	100.10	82.85	5.80		
4000.00	4000.00	4000.00	4000.00	8.85	8.85	89.54	0.80	100.10	100.10	82.40	5.66		
4100.00	4100.00	4100.00	4100.00	9.07	9.07	89.54	0.80	100.10	100.10	81.95	5.52		
4200.00	4200.00	4200.00	4200.00	9.30	9.30	89.54	0.80	100.10	100.10	81.50	5.38		
4300.00	4300.00	4300.00	4300.00	9.52	9.52	89.54	0.80	100.10	100.10	81.05	5.26		
4400.00	4400.00	4400.00	4400.00	9.75	9.75	89.54	0.80	100.10	100.10	80.60	5.13		
4500.00	4499.92	4493.05	4492.98	9.97	9.96	179.57	0.80	103.12	106.84	86.95	5.37		
4600.00	4599.35	4583.64	4583.13	10.20	10.16	179.63	0.80	111.86	126.84	106.64	6.28		
4700.00	4697.81	4669.56	4667.97	10.44	10.36	179.69	0.80	125.39	159.51	139.08	7.81		
4800.00	4794.88	4749.15	4745.71	10.69	10.55	179.74	0.80	142.44	203.75	183.13	9.88		
4900.00	4891.47	4832.08	4825.87	10.97	10.77	179.79	0.80	163.68	253.48	232.49	12.07		
5000.00	4988.06	4918.68	4909.52	11.26	11.01	179.83	0.80	186.10	303.48	282.06	14.17		
5100.00	5084.66	5005.29	4993.17	11.57	11.26	179.85	0.80	208.51	353.48	331.63	16.18		
5200.00	5181.25	5091.89	5076.82	11.90	11.53	179.87	0.80	230.92	403.48	381.20	18.11		
5300.00	5277.84	5178.49	5160.47	12.24	11.81	179.88	0.80	253.34	453.48	430.76	19.96		



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath:
Date: 8/7/2012
Time: 13:06:56
Page: 5
Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #2 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		
5400.00	5374.43	5265.09	5244.12	12.60	12.10	179.89	0.80	275.75	503.48	480.32	21.74	
5500.00	5471.03	5351.70	5327.78	12.97	12.40	179.90	0.80	298.17	553.48	529.87	23.44	
5600.00	5567.62	5438.30	5411.43	13.35	12.71	179.91	0.80	320.58	603.48	579.42	25.08	
5700.00	5664.21	5524.90	5495.08	13.74	13.03	179.92	0.80	343.00	653.48	628.96	26.65	
5800.00	5760.80	5611.50	5578.73	14.14	13.36	179.92	0.80	365.41	703.48	678.50	28.17	
5900.00	5857.40	5698.11	5662.38	14.55	13.69	179.93	0.80	387.83	753.48	728.04	29.62	
6000.00	5953.99	5784.71	5746.03	14.97	14.04	179.93	0.80	410.24	803.48	777.58	31.02	
6100.00	6050.58	5871.31	5829.69	15.39	14.39	179.94	0.80	432.65	853.48	827.11	32.37	
6200.00	6147.18	5957.91	5913.34	15.82	14.74	179.94	0.80	455.07	903.48	876.64	33.66	
6300.00	6243.77	6044.52	5996.99	16.26	15.10	179.94	0.80	477.48	953.48	926.16	34.91	
6400.00	6340.36	6131.12	6080.64	16.70	15.47	179.95	0.80	499.90	1003.48	975.69	36.11	
6500.00	6436.95	6217.72	6164.29	17.15	15.84	179.95	0.80	522.31	1053.48	1025.21	37.27	
6600.00	6533.55	6304.32	6247.94	17.61	16.22	179.95	0.80	544.73	1103.48	1074.73	38.38	
6700.00	6630.14	6390.93	6331.60	18.07	16.60	179.95	0.80	567.14	1153.48	1124.25	39.46	
6800.00	6726.73	6477.53	6415.25	18.53	16.99	179.96	0.80	589.55	1203.48	1173.76	40.50	
6900.00	6823.38	6564.25	6499.01	18.98	17.38	179.96	0.80	612.00	1253.27	1223.05	41.47	
7000.00	6920.71	6652.33	6584.09	19.31	17.78	179.96	0.80	634.80	1300.62	1269.90	42.35	
7100.00	7018.78	6742.00	6670.71	19.63	18.19	179.96	0.80	658.01	1344.86	1313.67	43.11	
7200.00	7117.48	6833.17	6758.77	19.91	18.61	179.96	0.80	681.60	1385.94	1354.29	43.78	
7300.00	7216.67	6927.40	6898.55	20.16	19.17	179.97	0.80	717.10	1422.87	1390.62	44.11	
7400.00	7316.24	7170.03	7087.62	20.38	19.77	179.97	0.80	753.83	1450.87	1417.97	44.09	
7500.00	7416.08	7370.67	7286.69	20.56	20.27	179.97	0.80	778.48	1468.80	1435.33	43.88	
7600.00	7516.05	7575.90	7491.60	20.72	20.65	179.97	0.80	789.22	1476.23	1442.30	43.50	
7700.00	7616.05	7700.35	7616.05	20.88	20.84	89.97	0.80	789.62	1476.45	1434.74	35.40	
7800.00	7715.71	7774.87	7690.49	20.86	20.89	258.56	-1.47	790.06	1478.44	1443.70	42.56	
7900.00	7812.74	7841.76	7756.61	20.40	20.74	259.07	-11.16	791.96	1486.02	1450.88	42.29	
8000.00	7904.19	7908.57	7821.05	19.60	20.39	259.99	-28.32	795.33	1499.09	1463.51	42.13	
8100.00	7987.28	7975.27	7882.93	19.01	19.88	261.30	-52.68	800.11	1517.32	1481.17	41.97	
8200.00	8059.49	8041.92	7941.45	19.18	19.34	262.97	-83.89	806.23	1540.25	1503.34	41.73	
8300.00	8118.61	8108.62	7995.93	19.69	19.04	264.95	-121.59	813.63	1567.32	1529.45	41.39	
8400.00	8162.87	8175.63	8045.79	20.39	19.11	267.19	-165.46	822.24	1597.87	1558.81	40.91	
8500.00	8190.90	8243.32	8090.52	21.27	19.38	269.63	-215.27	832.01	1631.20	1590.79	40.37	
8600.00	8201.86	8312.31	8129.63	22.31	19.78	272.16	-270.99	842.94	1666.54	1624.70	39.83	
8700.00	8202.00	8386.23	8163.63	23.39	20.31	271.39	-335.34	855.57	1703.39	1659.85	39.12	
8800.00	8202.00	8469.45	8191.46	24.55	21.04	270.38	-412.23	870.65	1741.38	1695.89	38.28	
8900.00	8202.00	8559.85	8208.49	25.78	21.97	269.77	-499.25	887.72	1779.83	1732.19	37.36	
9000.00	8202.00	8653.00	8212.00	27.08	23.05	269.66	-590.53	905.63	1818.31	1768.35	36.39	
9100.00	8202.00	8745.30	8212.00	28.44	24.15	269.67	-681.11	923.40	1856.78	1804.37	35.42	
9200.00	8202.00	8837.61	8212.00	29.84	25.32	269.67	-771.69	941.18	1895.25	1840.26	34.46	
9300.00	8202.00	8929.91	8212.00	31.28	26.56	269.68	-862.27	958.95	1933.72	1876.04	33.53	
9400.00	8202.00	9022.22	8212.00	32.76	27.85	269.69	-952.84	976.72	1972.19	1911.73	32.62	
9500.00	8202.00	9114.52	8212.00	34.27	29.20	269.69	-1043.42	994.49	2010.66	1947.34	31.75	
9600.00	8202.00	9206.82	8212.00	35.81	30.59	269.70	-1134.00	1012.26	2049.13	1982.88	30.93	
9700.00	8202.00	9299.13	8212.00	37.38	32.02	269.70	-1224.57	1030.03	2087.60	2018.35	30.14	
9800.00	8202.00	9391.43	8212.00	38.96	33.48	269.71	-1315.15	1047.80	2126.07	2053.76	29.40	
9900.00	8202.00	9483.74	8212.00	40.57	34.98	269.71	-1405.73	1065.57	2164.54	2089.13	28.70	
10000.00	8202.00	9576.04	8212.00	42.19	36.49	269.72	-1496.31	1083.34	2203.02	2124.46	28.04	
10100.00	8202.00	9668.34	8212.00	43.83	38.03	269.72	-1586.88	1101.11	2241.49	2159.75	27.42	
10200.00	8202.00	9760.65	8212.00	45.48	39.59	269.73	-1677.46	1118.88	2279.96	2195.00	26.84	
10300.00	8202.00	9852.95	8212.00	47.14	41.17	269.73	-1768.04	1136.66	2318.43	2230.23	26.29	
10400.00	8202.00	9945.26	8212.00	48.81	42.77	269.74	-1858.61	1154.43	2356.90	2265.43	25.77	



Weatherford Anticollision Report



Company: Devon Energy Date: 8/7/2012 Time: 13:06:56 Page: 6
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #2H
Reference Wellpath: Co-ordinate(NE) Reference: Well: CD 15 Fed #2H, Grid North.
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #2 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	
10500.00	8202.00	10037.56	8212.00	50.49	44.37	269.74	-1949.19	1172.20	2395.37	2300.61	25.28	
10600.00	8202.00	10129.86	8212.00	52.18	45.99	269.75	-2039.77	1189.97	2433.84	2335.76	24.82	
10700.00	8202.00	10222.17	8212.00	53.88	47.62	269.75	-2130.35	1207.74	2472.31	2370.90	24.38	
10800.00	8202.00	10314.47	8212.00	55.59	49.26	269.75	-2220.92	1225.51	2510.78	2406.02	23.97	
10900.00	8202.00	10406.78	8212.00	57.30	50.91	269.76	-2311.50	1243.28	2549.25	2441.13	23.58	
11000.00	8202.00	10499.08	8212.00	59.02	52.57	269.76	-2402.08	1261.05	2587.72	2476.22	23.21	
11100.00	8202.00	10591.38	8212.00	60.74	54.24	269.76	-2492.65	1278.82	2626.19	2511.29	22.86	
11200.00	8202.00	10683.69	8212.00	62.47	55.91	269.77	-2583.23	1296.59	2664.66	2546.36	22.52	
11300.00	8202.00	10775.99	8212.00	64.21	57.59	269.77	-2673.81	1314.36	2703.13	2581.41	22.21	
11400.00	8202.00	10868.30	8212.00	65.94	59.28	269.77	-2764.39	1332.13	2741.60	2616.46	21.91	
11500.00	8202.00	10960.60	8212.00	67.69	60.97	269.78	-2854.96	1349.91	2780.07	2651.49	21.62	
11600.00	8202.00	11052.90	8212.00	69.43	62.66	269.78	-2945.54	1367.68	2818.54	2686.52	21.35	
11700.00	8202.00	11145.21	8212.00	71.18	64.36	269.78	-3036.12	1385.45	2857.01	2721.54	21.09	
11800.00	8202.00	11237.51	8212.00	72.93	66.07	269.79	-3126.69	1403.22	2895.48	2756.55	20.84	
11900.00	8202.00	11329.81	8212.00	74.69	67.77	269.79	-3217.27	1420.99	2933.95	2791.56	20.60	
12000.00	8202.00	11422.12	8212.00	76.44	69.48	269.79	-3307.85	1438.76	2972.42	2826.56	20.38	
12100.00	8202.00	11514.42	8212.00	78.21	71.20	269.79	-3398.43	1456.53	3010.89	2861.55	20.16	
12200.00	8202.00	11606.73	8212.00	79.97	72.92	269.80	-3489.00	1474.30	3049.36	2896.54	19.95	
12300.00	8202.00	11699.03	8212.00	81.73	74.64	269.80	-3579.58	1492.07	3087.83	2931.53	19.76	
12400.00	8202.00	11791.33	8212.00	83.50	76.36	269.80	-3670.16	1509.84	3126.30	2966.51	19.56	
12500.00	8202.00	11883.64	8212.00	85.27	78.09	269.80	-3760.73	1527.61	3164.77	3001.48	19.38	
12600.00	8202.00	11975.94	8212.00	87.04	79.81	269.81	-3851.31	1545.39	3203.24	3036.45	19.20	
12700.00	8202.00	12068.25	8212.00	88.81	81.54	269.81	-3941.89	1563.16	3241.71	3071.42	19.04	
12784.61	8202.00	12146.34	8212.00	90.31	83.01	269.81	-4018.52	1578.19	3274.26	3101.00	18.90	

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

GeoDec v5.03

Report Date: June 14, 2012
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw 15 Fed #2H
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 413962.600 USFT	Latitude 32.1367806 DEG
East/West 717633.600 USFT	Longitude -103.7637713 DEG
Grid Convergence: .30°	
Total Correction: +7.19°	

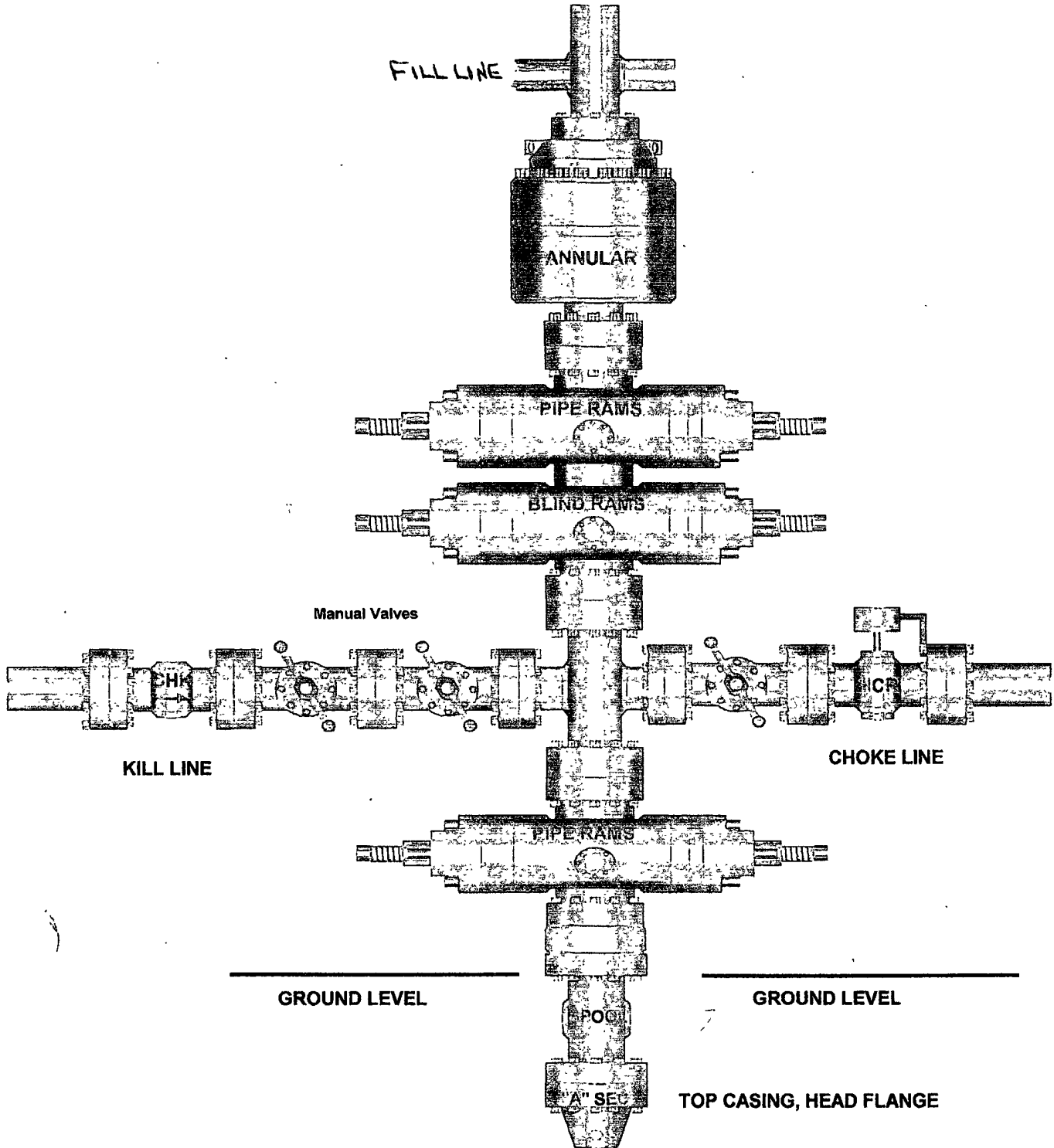
Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.13678° N	32° 8 min 12.410 sec
Longitude =	103.76377° W	103° 45 min 49.577 sec

Magnetic Declination =	7.49°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6552
Local Field Strength =	48414 nT	Magnetic Vector X = 23975 nT
Magnetic Dip =	60.04°	Magnetic Vector Y = 3150 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 41943 nT
Spud Date =	Dec 15, 2012	Magnetic Vector H = 24181 nT

Signed: _____

Date: _____

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

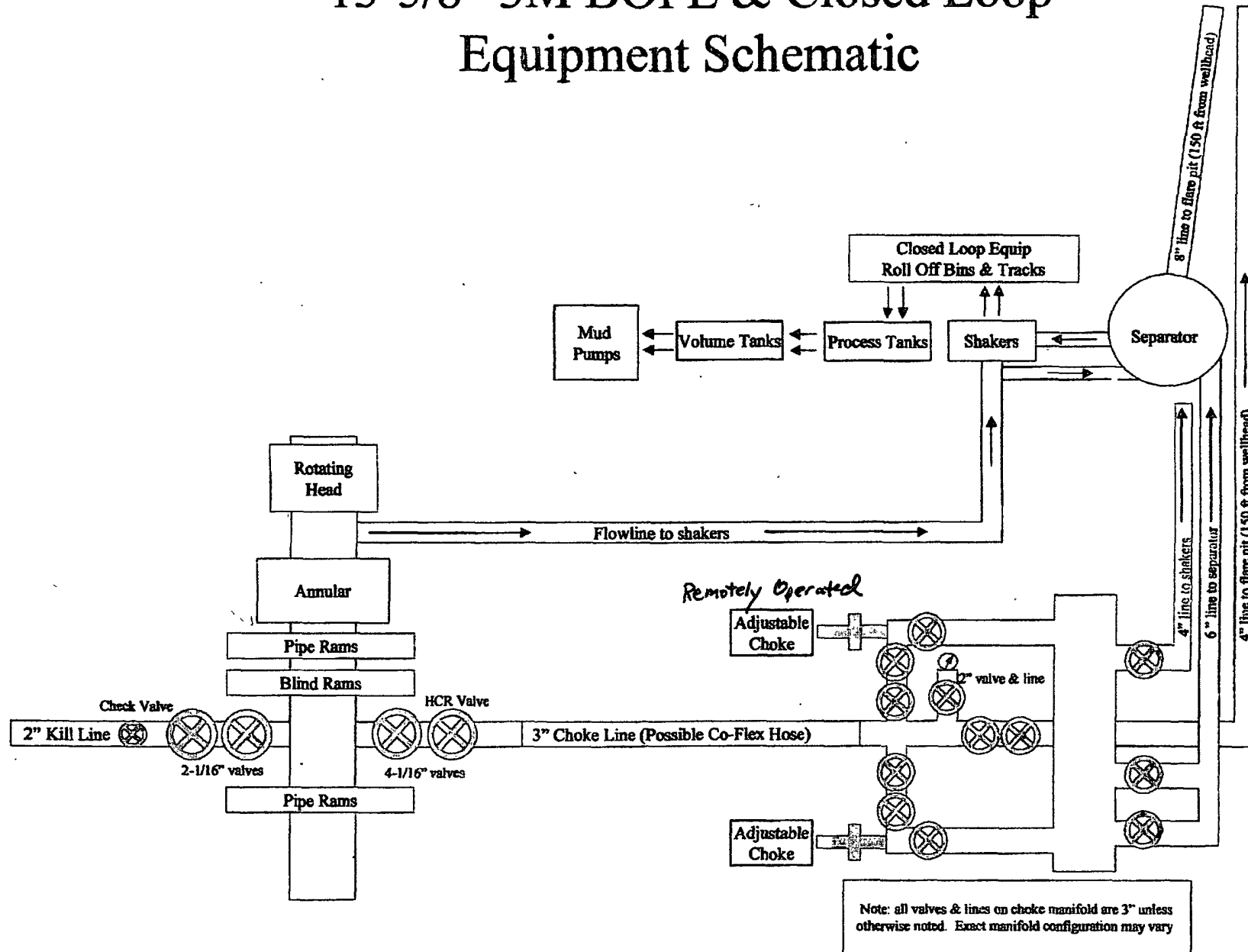


Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Cotton Draw 15 Fed #2H

Surface Location 330' FNL and 2030' FEL, Unit B, Section 15-T25S-R31E, Eddy, NM
Bottom Hole Location: 330' FSL and 1650' FEL, Unit N, Section 15-T25S-R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 5000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

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





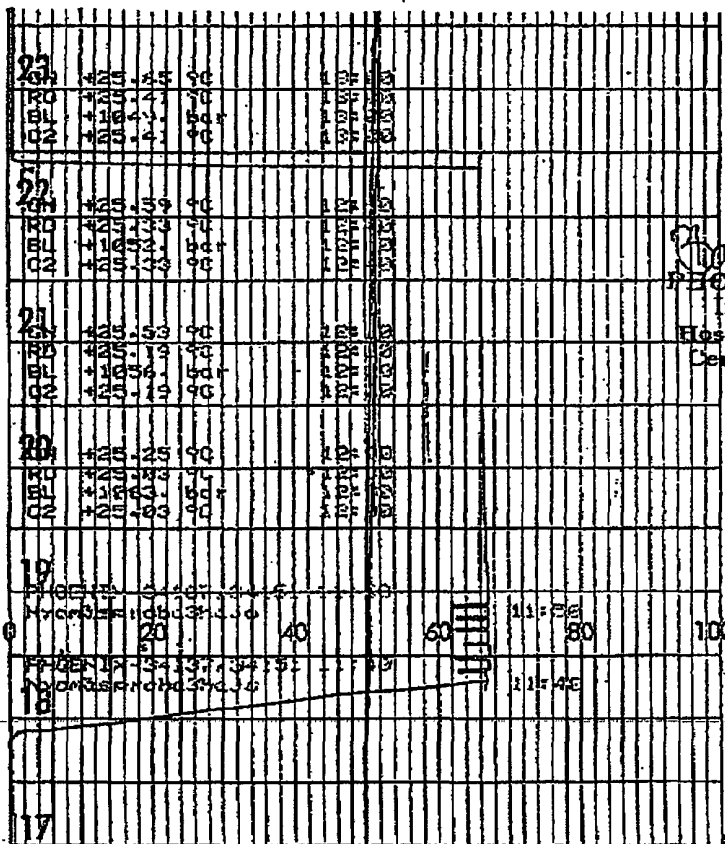
QUALITY DOCUMENT

**PHOENIX RUBBER
INDUSTRIAL LTD.**

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

SALES & MARKETING: H-1082 Budapest, Rákóczi út, 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 458-4200 • Fax: (361) 217-2972, 456-4273 • www.turkusemargaz.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 555	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34137		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 16 MPa					
COUPLINGS					
Type	Serial N°	Quality	Heat N°		
3" coupling with 4 1/16" Flange end	714 715	AISI 4130	C7626		
		AISI 4130	47357		
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date: 30. April. 2002.		Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and Testing Department PHOENIX RUBBER LTD.	



[Signature]
PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER C.S.

ud:

H&P Flex Rig Location Layout

3 Well Pad

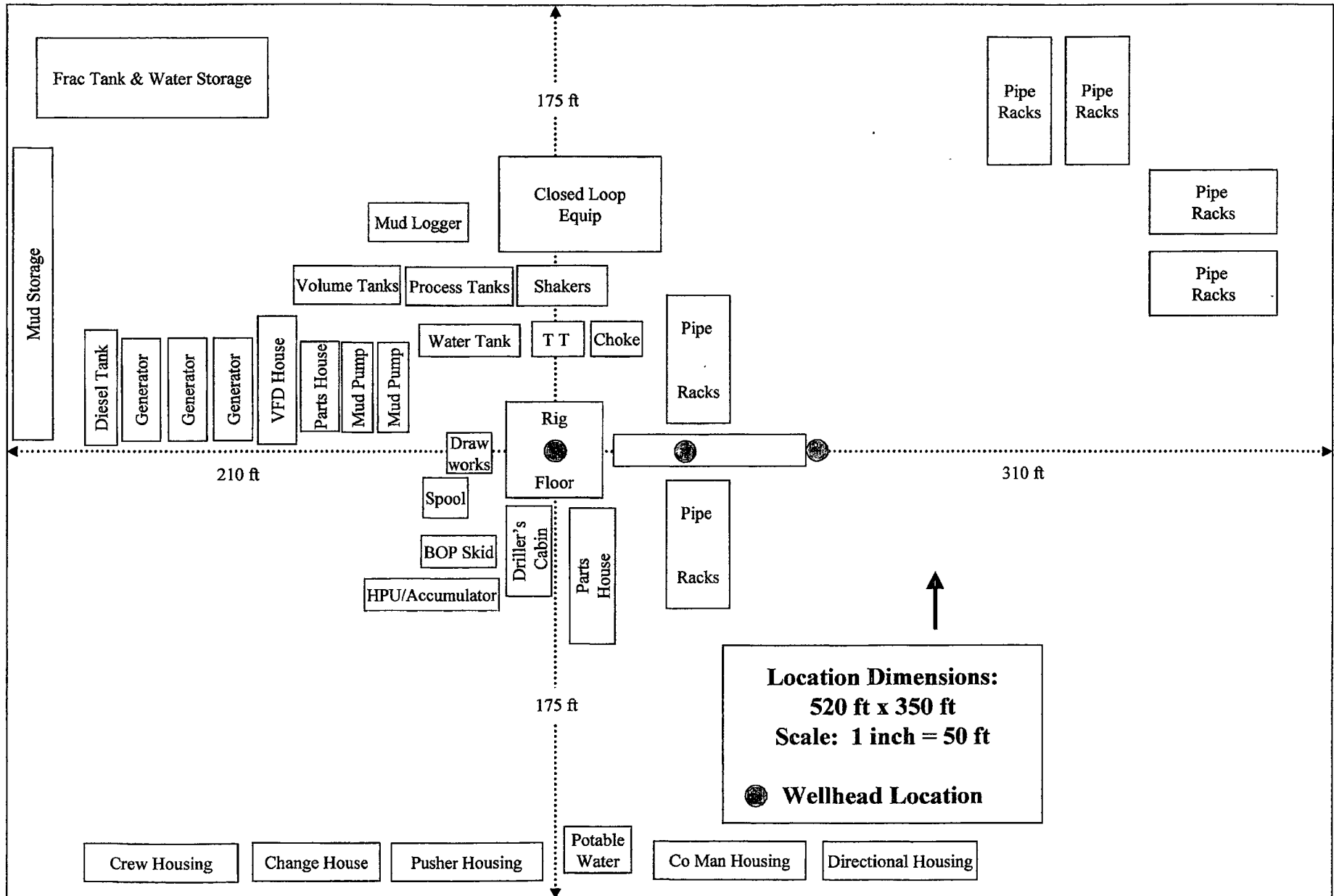
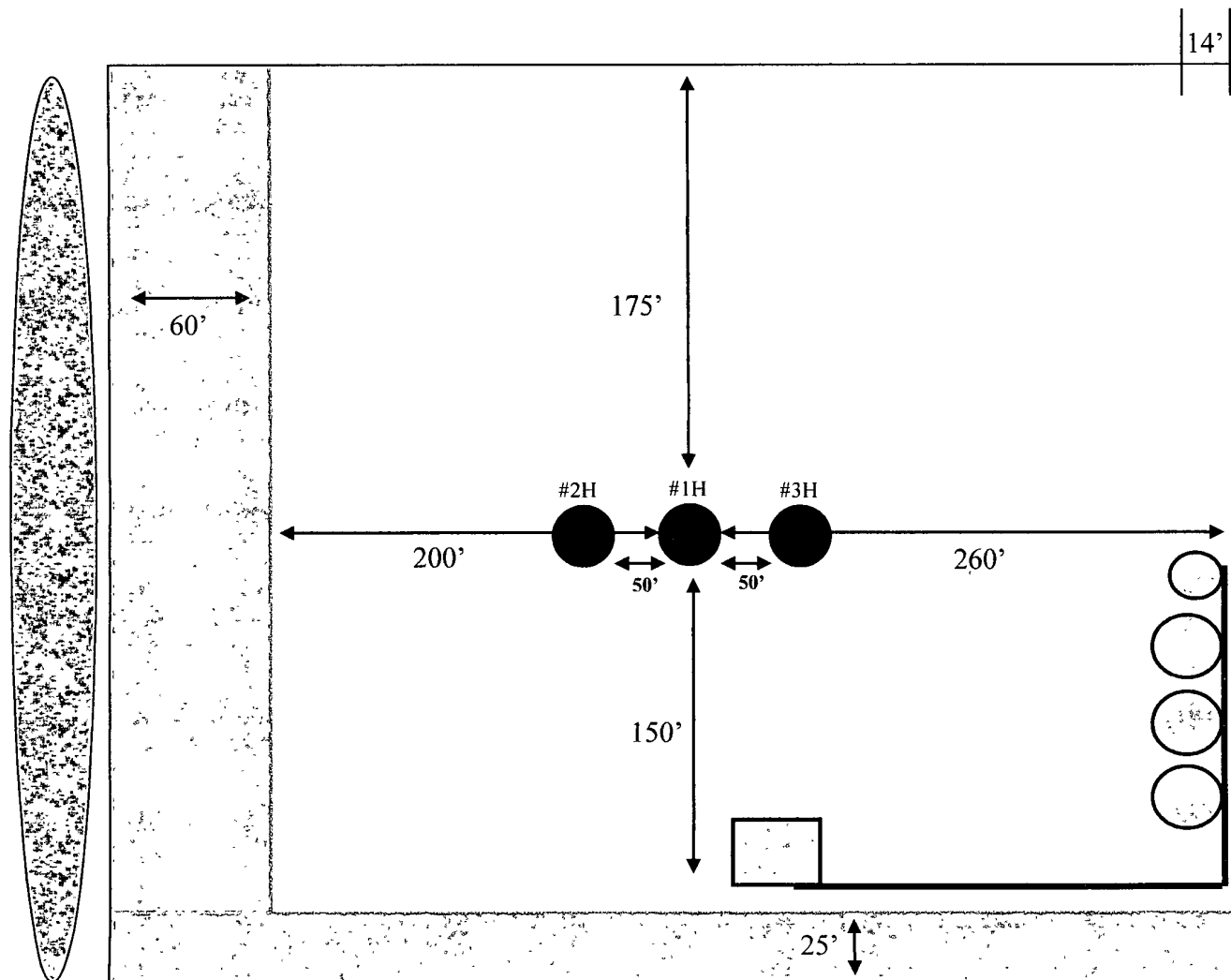


EXHIBIT C

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



LEGEND



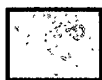
Well Bore



Topsoil



Interim Reclamation



Production Facilities



NORTH

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY
LEASE NO.:	NM0503
WELL NAME & NO.:	2H-COTTON DRAW 15 FED COM
SURFACE HOLE FOOTAGE:	330'/N. & 2030'/E.
BOTTOM HOLE FOOTAGE:	330'/S. & 1650'/W.
LOCATION:	Section 15, T. 25 S., R. 31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

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