

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NML0061863A NM113964

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

COTTON DRAW 33 FED 2H

2. Name of Operator

DEVON ENERGY PRODUCTION CO

Contact: TRINA C COUCH

Email: trina.couch@dvn.com

9. API Well No.

30-025-41264-00-X1

3a. Address

333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)

Ph: 405-228-7203

10. Field and Pool, or Exploratory

PADUCA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 33 T24S R32E NENW 330FNL 1345FWL
32.180323 N Lat, 103.683605 W Lon

JUN 20 2014

11. County or Parish, and State

LEA COUNTY, NM

RECEIVED

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Devon Energy Production Company, L.P. respectfully requests to change the name on the approved subject well:

FROM: Cotton Draw 33-4 Fed Com 2H
TO: Cotton Draw 33 Fed 2H

**SUBJECT TO LIKE
APPROVAL BY STATE**

Devon Energy Production Company, L.P. would also like to change the BHL on the subject well:

FROM: 330 FSL & 1980 FWL Sec. 4 T25S 32E

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #245682 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs
Committed to AFMSS for processing by JERRY BLAKLEY on 05/21/2014 (14JB0140SE)

Name (Printed/Typed) TRINA C COUCH

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 05/14/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ

Title PETROLEUM ENGINEER

Date 06/13/2014

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Hobbs

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ******SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

JUN 24 2014

Additional data for EC transaction #245682 that would not fit on the form

32. Additional remarks, continued

TO: 330 FSL & 1980 FWL Sec. 33 T24S 32E

Attachments:
Revised Directional Plans
Cement Table
C-102

JUN 20 2014

CONDITIONS OF APPROVAL

SUNDRY dated 5/14/2014

OPERATOR'S NAME:	DEVON ENERGY	RECEIVED
LEASE NO.:	NM113964	
WELL NAME & NO.:	2H-COTTON DRAW 33 FED 30-025-41264	
SURFACE HOLE FOOTAGE:	330' FNL & 1345' FWL	
BOTTOM HOLE FOOTAGE:	330' FSL & 1980' FWL	
LOCATION:	Section 33, T. 24 S., R 32 E., NMPM	
COUNTY:	Lea County, New Mexico	

The Original COA still stand with the following drill modifications:

Possibility of water and brine flows in the Salado, Castile, Delaware and Bone Springs Formations.

Possibility of lost circulation in the Delaware and Bone Springs.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

1. The minimum required fill of cement behind the 5-1/2 inch production casing is:

Operator has proposed DV tool at depth of 5,000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

- b. Second stage above DV tool:

☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification. **Additional cement will be required as excess calculates to 23%.**

EGF 061314

HOBBS OCD
Energy
JUN 20 2014
RECEIVED

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

☐ AMENDED REPORT

¹ API Number		² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name COTTON DRAW 33 FED		⁶ Well Number 2H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.		⁹ Elevation 3515.3

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	33	24 S	32 E		330	NORTH	1345	WEST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	33	24 S	32 E		330	SOUTH	1980	WEST	LEA

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

S89°19'09"W 2641.84 FT

N Q CORNER SEC. 33
LAT. = 32.1812504"N
LONG. = 103.6796139"W
NMSP EAST (FT)
N = 430288.12
E = 743585.00

NE CORNER SEC. 33
LAT. = 32.1812767"N
LONG. = 103.6710828"W
NMSP EAST (FT)
N = 430313.82
E = 746224.32

HW CORNER SEC. 33
LAT. = 32.1812080"N
LONG. = 103.6881525"W
NMSP EAST (FT)
N = 430258.73
E = 740943.35

COTTON DRAW "33" FED #2H
ELEV. = 3515.3'
LAT. = 32.1803227"N (NAD83)
LONG. = 103.6838047"W
NMSP EAST (FT)
N = 429942.75
E = 742290.44

W Q CORNER SEC. 33
LAT. = 32.1739477"N
LONG. = 103.6881392"W
NMSP EAST (FT)
N = 427615.56
E = 740963.30

BOTTOM OF HOLE
LAT. = 32.1676185"N
LONG. = 103.6817267"W
NMSP EAST (FT)
N = 425325.02
E = 742961.36

SW CORNER SEC. 33
LAT. = 32.1666862"N
LONG. = 103.6881233"W
NMSP EAST (FT)
N = 424973.90
E = 740984.06

S Q CORNER SEC. 33
LAT. = 32.1667198"N
LONG. = 103.6795858"W
NMSP EAST (FT)
N = 425002.09
E = 743625.78

SE CORNER SEC. 33
LAT. = 32.1667547"N
LONG. = 103.6710512"W
NMSP EAST (FT)
N = 425030.95
E = 746266.61

S89°24'02"E 2500.22 FT

S89°10'43"E 141.65 FT

S89°21'25"E 2519.60 FT

N89°43'45"E 121.40 FT

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 _____ Date _____

Printed Name _____

E-mail Address _____

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MAY 5, 2014

Date of Survey _____

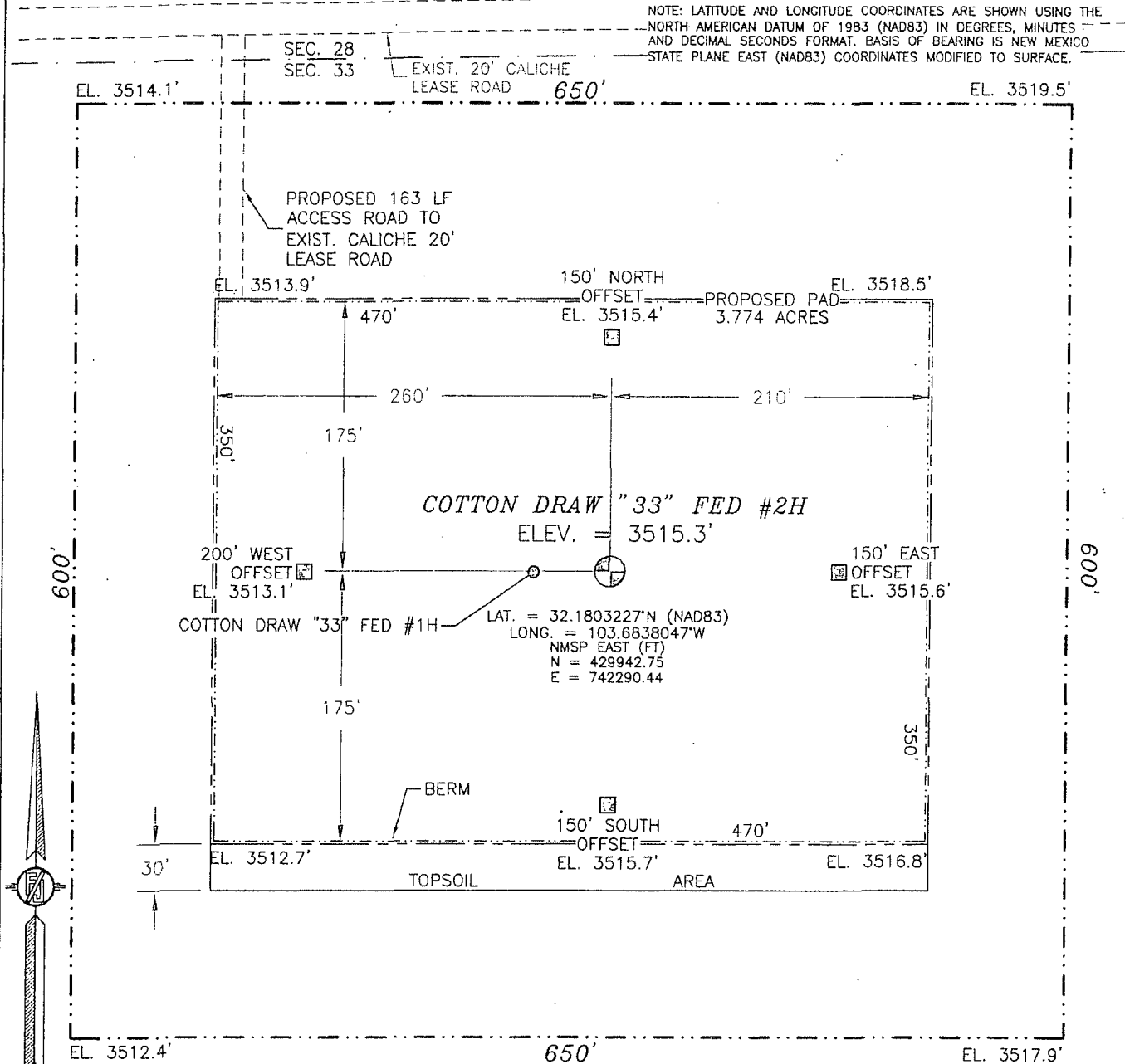
Signature and Seal of Professional Surveyor _____

Certificate Number _____

SURVEY NO. 1585C

SECTION 33, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) IN DEGREES, MINUTES AND DECIMAL SECONDS FORMAT. BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST (NAD83) COORDINATES MODIFIED TO SURFACE.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 AND CR 1 (ORLA)
GO SOUTH ON CR 1 FOR 2.4 MILES. GO WEST ON CALICHE LEASE
ROAD FOR APPROX. 0.75 MILES. LOCATION IS APPROX. 350 FT
SOUTH.

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW "33" FED #2H
LOCATED 330 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 33, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

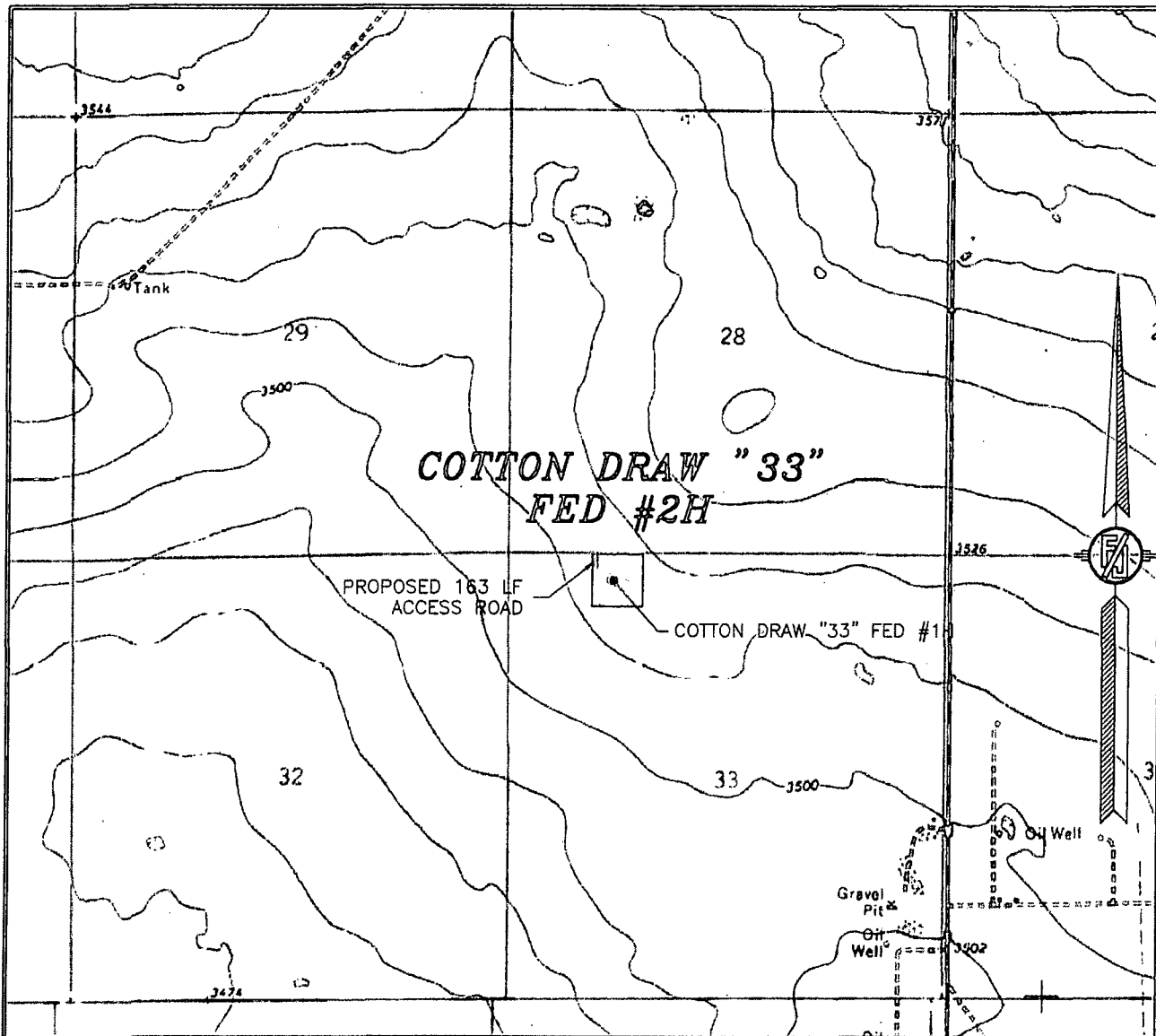
MAY 5, 2014

SURVEY NO. 1585C

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

301 SOUTH CANAL
(575) 234-3341

SECTION 33, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
PADUCA BREAKS

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW "33" FED #2H

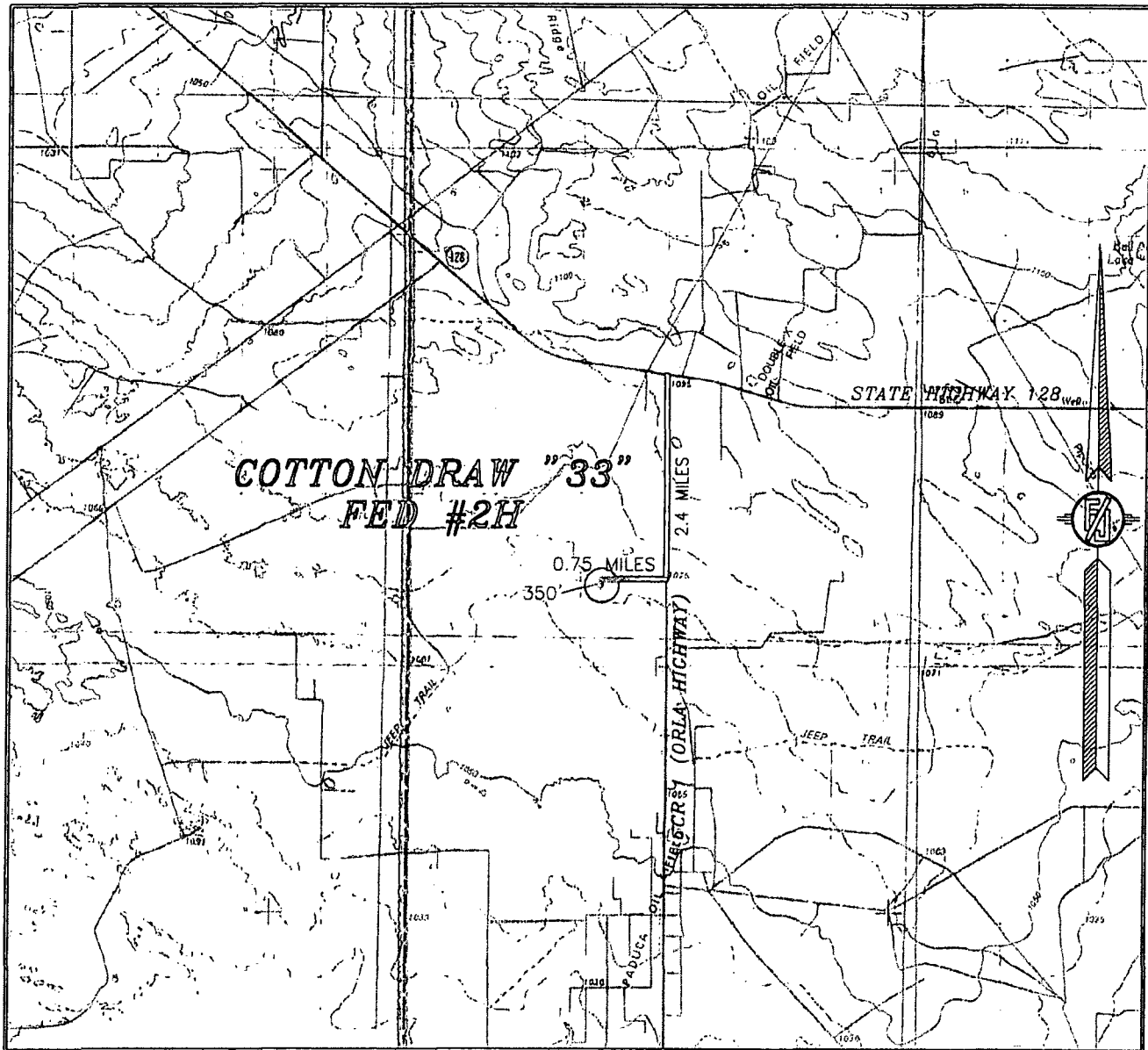
LOCATED 330 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 33, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 5, 2014

SURVEY NO. 1585C

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

SECTION 33, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW "33" FED #2H

LOCATED 330 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 33, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

DIRECTIONS TO LOCATION

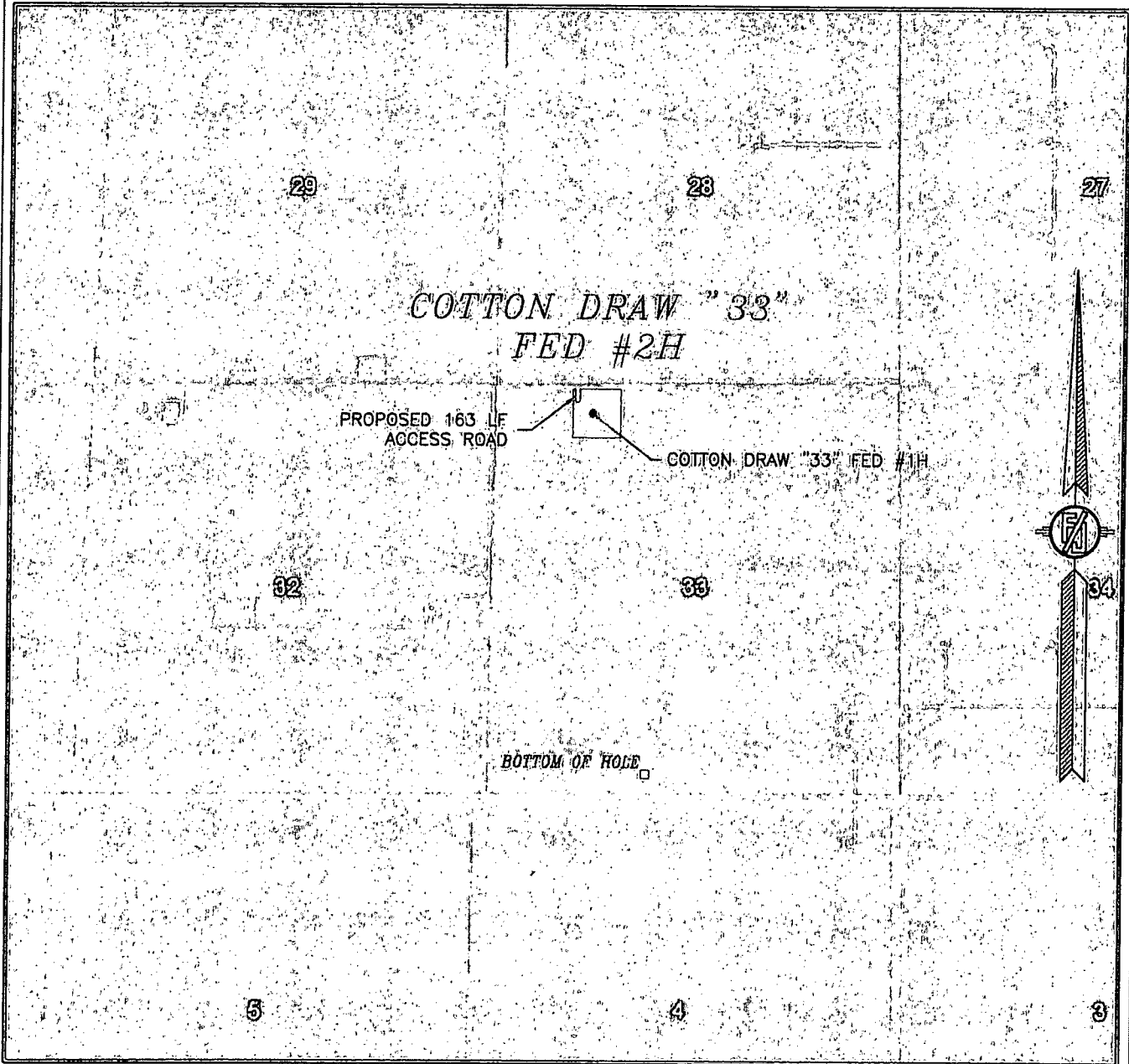
FROM THE INTERSECTION OF STATE HIGHWAY 128 AND CR 1 (ORLA)
GO SOUTH ON CR 1 FOR 2.4 MILES. GO WEST ON CALICHE LEASE
ROAD FOR APPROX. 0.75 MILES. LOCATION IS APPROX. 350 FT
SOUTH.

MAY 5, 2014

SURVEY NO. 1585C

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

SECTION 33, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEBRUARY 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW "33" FED #2H

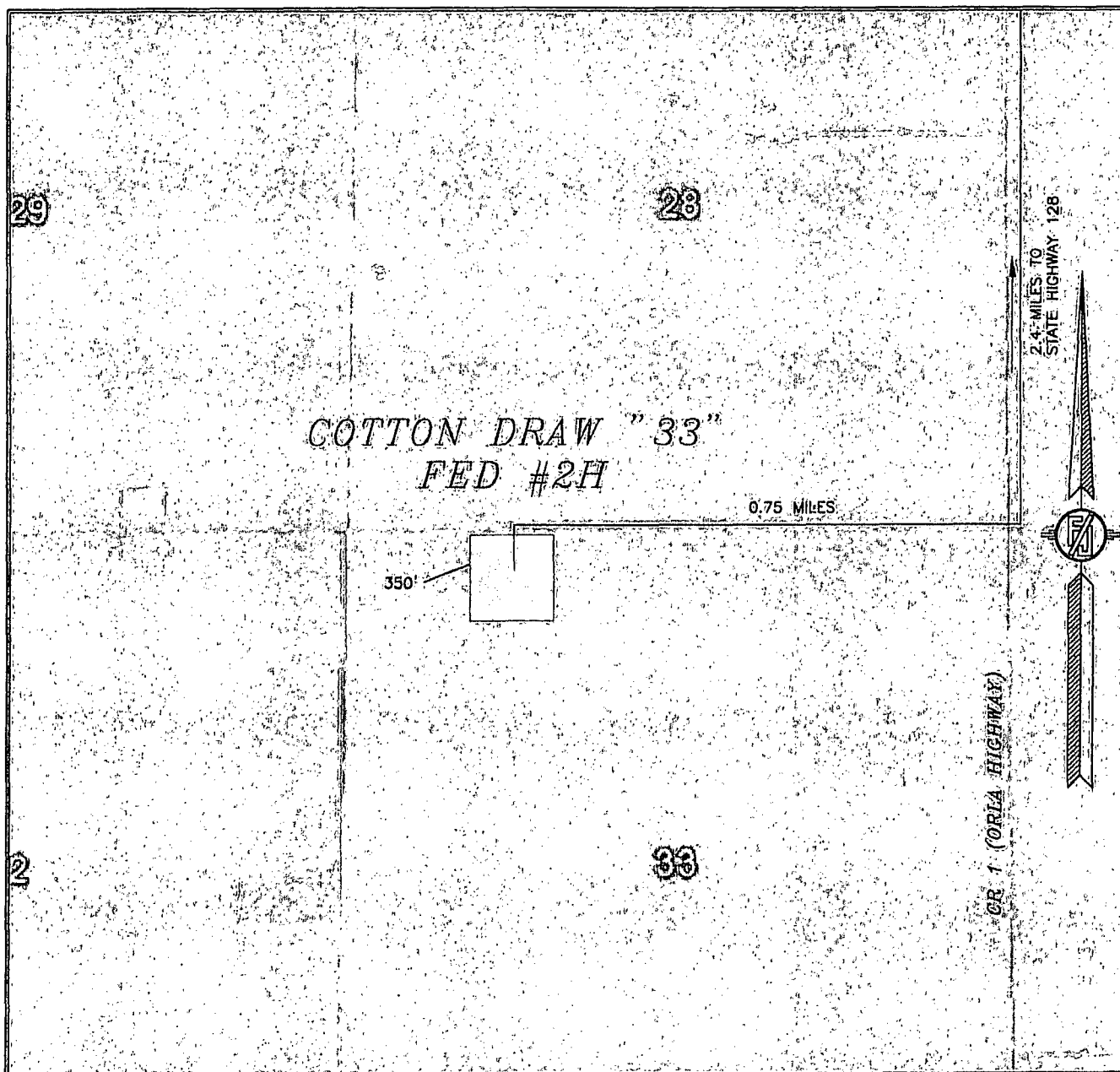
LOCATED 330 FT. FROM THE NORTH LINE
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SECTION 33, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 5, 2014

SURVEY NO. 1585C

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

SECTION 33, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEBRUARY 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW "33" FED #2H

LOCATED 330 FT. FROM THE NORTH LINE
AND 1345 FT. FROM THE WEST LINE OF
SECTION 33, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 5, 2014

SURVEY NO. 1585C

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

5D Plan Report

Devon Energy

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *Cotton Draw 33 Fed 1, 2H Pad*
Well Name: *Cotton Draw 33 Fed 2H*
Plan: *P1:V1*

09 May 2014

HOBBS OCD

JUN 20 2014

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Weatherford®

Cotton Draw 33 Fed 2H

Field Name Lea Co, NM Nad 83 NMEZ	Map Units : US ft			Company Name : Devon Energy		
	Vertical Reference Datum (VRD) : Mean Sea Level					
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)					
	Comment :					
Site Name Cotton Draw 33 Fed 1, 2H Pad	Units : US ft		North Reference : Grid		Convergence Angle : 0.35	
	Position	Northing : 429942.17 US ft		Latitude : 32° 10' 49.16"		
		Easting : 742240.58 US ft		Longitude : -103° 41' 2.28"		
	Elevation above Mean Sea Level: 3315.00 US ft					
Comment :						
Slot Name Cotton Draw 33 Fed 2H	Position (Offsets relative to Site Centre)					
	+N / -S : 0.58 US ft		Northing : 429942.75 US ft		Latitude : 32° 10' 49.16"	
	+E / -W : 49.86 US ft		Easting : 742290.44 US ft		Longitude : -103° 41' 1.70"	
	Slot TVD Reference : Ground Elevation					
Elevation above Mean Sea Level : 3315.00 US ft						
Comment :						
Well Name Cotton Draw 33 Fed 2H	Type : Main well		UWI :		Plan : P1:V1	
	Rig Height		Drill Floor : 25.00 US ft		Comment :	
	Relative to Mean Sea Level: 3340.00 US ft					
	Closure Distance : 4666.22 US ft		Closure Azimuth : 171.733°			
	Vertical Section (Position of Origin Relative to Slot)					
	+N / -S : 0.00 US ft		+E / -W : 0.00 US ft		Az : 179.15°	
	Magnetic Parameters					
	Model : BGGM		Field Strength :		Dec : 7.37°	
			48263.7nT		Dip : 60.03°	
					Date : 30/Jul/2014	

Target Set

Name : Cotton Draw 33 Fed 2H **Number of Targets :** 1

2H

Comment :

Target Name: PBHL Shape: Cuboid	Position (Relative to Slot centre)					
	+N / -S : -4617.73US ft		Northing : 425325.02 US ft		Latitude : 32° 10' 3.43"	
	+E / -W : 670.92 US ft		Easting : 742961.36US ft		Longitude : -103° 40' 54.22"	
	TVD (Drill Floor) : 8525.00 US ft					
Orientation		Azimuth : 179.15°		Inclination : 0.00°		
Dimensions		Length : 8714.00 US ft		Breadth : 50.00 US ft		
				Height : 20.00 US ft		

Well path created using minimum curvature

5D Plan Report

Salient Points (Relative to Slot centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	DLS (°/100 US ft)	VS (US ft)	B Rate (°/100 US ft)	T Rate (°/100 US ft)	W Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	Nudge
5100.00	10.00	67.52	5097.47	16.64	40.22	2.00	-16.04	2.00	0.00	67.52	Hold
8071.34	10.00	67.52	8023.66	213.93	516.98	0.00	-206.23	0.00	0.00	0.00	KOP
8851.92	90.00	179.15	8525.00	-261.29	606.22	12.00	270.25	10.25	14.30	111.33	LP
13208.8	90.00	179.15	8525.00	-4617.73	670.92	0.00	4627.17	0.00	0.00	0.00	PBHL 2H

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment	
4600.00	0.00	0.00	4600.00	0.00	0.00	-0.00	0.00	429942.75	742290.44	Nudge	
4700.00	2.00	67.52	4699.98	0.67	1.61	-0.64	2.00	429943.42	742292.05		
4800.00	4.00	67.52	4799.84	2.67	6.45	-2.57	2.00	429945.42	742296.89		
4900.00	6.00	67.52	4899.45	6.00	14.50	-5.78	2.00	429948.75	742304.94		
5000.00	8.00	67.52	4998.70	10.66	25.76	-10.28	2.00	429953.41	742316.20		
5100.00	10.00	67.52	5097.47	16.64	40.22	-16.04	2.00	429959.39	742330.66	Hold	
5200.00	10.00	67.52	5195.95	23.28	56.26	-22.44	0.00	429966.03	742346.70		
5300.00	10.00	67.52	5294.43	29.92	72.31	-28.84	0.00	429972.67	742362.75		
5400.00	10.00	67.52	5392.91	36.56	88.35	-35.25	0.00	429979.31	742378.79		
5500.00	10.00	67.52	5491.39	43.20	104.40	-41.65	0.00	429985.95	742394.84		
5600.00	10.00	67.52	5589.87	49.84	120.44	-48.05	0.00	429992.59	742410.88		
5700.00	10.00	67.52	5688.35	56.48	136.49	-54.45	0.00	429999.23	742426.93		
5800.00	10.00	67.52	5786.83	63.12	152.53	-60.85	0.00	430005.87	742442.97		
5900.00	10.00	67.52	5885.31	69.76	168.58	-67.25	0.00	430012.51	742459.02		
6000.00	10.00	67.52	5983.79	76.40	184.62	-73.65	0.00	430019.15	742475.06		
6100.00	10.00	67.52	6082.27	83.04	200.67	-80.05	0.00	430025.79	742491.11		
6200.00	10.00	67.52	6180.75	89.68	216.71	-86.45	0.00	430032.43	742507.15		
6300.00	10.00	67.52	6279.23	96.32	232.76	-92.85	0.00	430039.07	742523.20		
6400.00	10.00	67.52	6377.72	102.96	248.80	-99.25	0.00	430045.71	742539.24		
6500.00	10.00	67.52	6476.20	109.60	264.85	-105.66	0.00	430052.35	742555.29		
6600.00	10.00	67.52	6574.68	116.24	280.90	-112.06	0.00	430058.99	742571.34		
6700.00	10.00	67.52	6673.16	122.88	296.94	-118.46	0.00	430065.63	742587.38		
6800.00	10.00	67.52	6771.64	129.52	312.99	-124.86	0.00	430072.27	742603.43		
6900.00	10.00	67.52	6870.12	136.15	329.03	-131.26	0.00	430078.90	742619.47		
7000.00	10.00	67.52	6968.60	142.79	345.08	-137.66	0.00	430085.54	742635.52		
7100.00	10.00	67.52	7067.08	149.43	361.12	-144.06	0.00	430092.18	742651.56		
7200.00	10.00	67.52	7165.56	156.07	377.17	-150.46	0.00	430098.82	742667.61		
7300.00	10.00	67.52	7264.04	162.71	393.21	-156.86	0.00	430105.46	742683.65		
7400.00	10.00	67.52	7362.52	169.35	409.26	-163.26	0.00	430112.10	742699.70		
7500.00	10.00	67.52	7461.00	175.99	425.30	-169.66	0.00	430118.74	742715.74		
7600.00	10.00	67.52	7559.48	182.63	441.35	-176.06	0.00	430125.38	742731.79		
7700.00	10.00	67.52	7657.97	189.27	457.39	-182.47	0.00	430132.02	742747.83		
7800.00	10.00	67.52	7756.45	195.91	473.44	-188.87	0.00	430138.66	742763.88		
7900.00	10.00	67.52	7854.93	202.55	489.48	-195.27	0.00	430145.30	742779.92		
8000.00	10.00	67.52	7953.41	209.19	505.53	-201.67	0.00	430151.94	742795.97		
8071.34	10.00	67.52	8023.66	213.93	516.98	-206.23	0.00	430156.68	742807.42	KOP	
8100.00	9.31	87.73	8051.93	214.97	521.59	-207.21	12.00	430157.72	742812.03		
8200.00	14.97	141.33	8149.93	205.18	537.81	-197.17	12.00	430147.93	742828.25		
8300.00	25.43	158.98	8243.73	174.94	553.63	-166.71	12.00	430117.69	742844.07		
8400.00	36.80	166.49	8329.24	125.60	568.38	-117.15	12.00	430068.35	742858.82		
8500.00	48.45	170.80	8402.70	59.29	581.41	-50.66	12.00	430002.04	742871.85		
8600.00	60.21	173.76	8460.92	-21.08	592.15	29.86	12.00	429921.67	742882.59		
8700.00	72.02	176.10	8501.35	-111.99	600.12	120.88	12.00	429830.76	742890.56		
8800.00	83.85	178.14	8522.21	-209.48	604.99	218.44	12.00	429733.27	742895.43		
8851.92	90.00	179.15	8525.00	-261.29	606.22	270.25	12.00	429681.46	742896.66	LP	
8900.00	90.00	179.15	8525.00	-309.36	606.93	318.33	0.00	429633.39	742897.37		
9000.00	90.00	179.15	8525.00	-409.35	608.42	418.33	0.00	429533.40	742898.86		
9100.00	90.00	179.15	8525.00	-509.34	609.90	518.33	0.00	429433.41	742900.34		

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
ID (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
9200.00	90.00	179.15	8525.00	-609.33	611.39	618.33	0.00	429333.42	742901.83	
9300.00	90.00	179.15	8525.00	-709.32	612.87	718.33	0.00	429233.43	742903.31	
9400.00	90.00	179.15	8525.00	-809.31	614.36	818.33	0.00	429133.44	742904.80	
9500.00	90.00	179.15	8525.00	-909.30	615.84	918.33	0.00	429033.45	742906.28	
9600.00	90.00	179.15	8525.00	-1009.29	617.33	1018.33	0.00	428933.46	742907.77	
9700.00	90.00	179.15	8525.00	-1109.27	618.81	1118.33	0.00	428833.48	742909.25	
9800.00	90.00	179.15	8525.00	-1209.26	620.30	1218.33	0.00	428733.49	742910.74	
9900.00	90.00	179.15	8525.00	-1309.25	621.78	1318.33	0.00	428633.50	742912.22	
10000.00	90.00	179.15	8525.00	-1409.24	623.27	1418.33	0.00	428533.51	742913.71	
10100.00	90.00	179.15	8525.00	-1509.23	624.75	1518.33	0.00	428433.52	742915.19	
10200.00	90.00	179.15	8525.00	-1609.22	626.24	1618.33	0.00	428333.53	742916.68	
10300.00	90.00	179.15	8525.00	-1709.21	627.72	1718.33	0.00	428233.54	742918.16	
10400.00	90.00	179.15	8525.00	-1809.20	629.21	1818.33	0.00	428133.55	742919.65	
10500.00	90.00	179.15	8525.00	-1909.19	630.69	1918.33	0.00	428033.56	742921.13	
10600.00	90.00	179.15	8525.00	-2009.18	632.18	2018.33	0.00	427933.57	742922.62	
10700.00	90.00	179.15	8525.00	-2109.16	633.66	2118.33	0.00	427833.59	742924.10	
10800.00	90.00	179.15	8525.00	-2209.15	635.15	2218.33	0.00	427733.60	742925.59	
10900.00	90.00	179.15	8525.00	-2309.14	636.63	2318.33	0.00	427633.61	742927.07	
11000.00	90.00	179.15	8525.00	-2409.13	638.12	2418.33	0.00	427533.62	742928.56	
11100.00	90.00	179.15	8525.00	-2509.12	639.60	2518.33	0.00	427433.63	742930.04	
11200.00	90.00	179.15	8525.00	-2609.11	641.09	2618.33	0.00	427333.64	742931.53	
11300.00	90.00	179.15	8525.00	-2709.10	642.57	2718.33	0.00	427233.65	742933.01	
11400.00	90.00	179.15	8525.00	-2809.09	644.06	2818.33	0.00	427133.66	742934.50	
11500.00	90.00	179.15	8525.00	-2909.08	645.54	2918.33	0.00	427033.67	742935.98	
11600.00	90.00	179.15	8525.00	-3009.07	647.03	3018.33	0.00	426933.68	742937.47	
11700.00	90.00	179.15	8525.00	-3109.05	648.51	3118.33	0.00	426833.70	742938.95	
11800.00	90.00	179.15	8525.00	-3209.04	650.00	3218.33	0.00	426733.71	742940.44	
11900.00	90.00	179.15	8525.00	-3309.03	651.48	3318.33	0.00	426633.72	742941.92	
12000.00	90.00	179.15	8525.00	-3409.02	652.97	3418.33	0.00	426533.73	742943.41	
12100.00	90.00	179.15	8525.00	-3509.01	654.45	3518.33	0.00	426433.74	742944.89	
12200.00	90.00	179.15	8525.00	-3609.00	655.94	3618.33	0.00	426333.75	742946.38	
12300.00	90.00	179.15	8525.00	-3708.99	657.42	3718.33	0.00	426233.76	742947.86	
12400.00	90.00	179.15	8525.00	-3808.98	658.91	3818.33	0.00	426133.77	742949.35	
12500.00	90.00	179.15	8525.00	-3908.97	660.39	3918.33	0.00	426033.78	742950.83	
12600.00	90.00	179.15	8525.00	-4008.96	661.88	4018.33	0.00	425933.79	742952.32	
12700.00	90.00	179.15	8525.00	-4108.94	663.36	4118.33	0.00	425833.81	742953.80	
12800.00	90.00	179.15	8525.00	-4208.93	664.85	4218.33	0.00	425733.82	742955.29	
12900.00	90.00	179.15	8525.00	-4308.92	666.33	4318.33	0.00	425633.83	742956.77	
13000.00	90.00	179.15	8525.00	-4408.91	667.82	4418.33	0.00	425533.84	742958.26	
13100.00	90.00	179.15	8525.00	-4508.90	669.30	4518.33	0.00	425433.85	742959.74	
13200.00	90.00	179.15	8525.00	-4608.89	670.79	4618.33	0.00	425333.86	742961.23	
13208.84	90.00	179.15	8525.00	-4617.73	670.92	4627.17	0.00	425325.02	742961.36	PBHL 2H

5D Anti-Collision Report

Devon Energy**Field Name:** *Lea Co, NM Nad 83 NMEZ***Site Name:** *Cotton Draw 33 Fed 1, 2H Pad***Well Name:** *Cotton Draw 33 Fed 2H*

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Cotton Draw 33 Fed 2H

Field Name Lea Co, NM Nad 83 NMEZ	Map Units : US ft		Company Name : Devon Energy	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
Comment :				
Site Name Cotton Draw 33 Fed 1, 2H Pad	Units : US ft	North Reference : Grid	Convergence Angle : 0.35	
	Position	Northing : 429942.17 US ft	Latitude : 32° 10' 49.16"	
		Easting : 742240.58 US ft	Longitude : -103° 41' 2.28"	
Elevation above Mean Sea Level: 3315.00 US ft				
Comment :				
Slot Name Cotton Draw 33 Fed 2H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.58 US ft	Northing : 429942.75 US ft	Latitude : 32° 10' 49.16"	
	+E / -W : 49.86 US ft	Easting : 742290.44 US ft	Longitude : -103° 41' 1.70"	
Slot TVD Reference : Ground Elevation				
Elevation above Mean Sea Level : 3315.00 US ft				
Comment :				
Well Name Cotton Draw 33 Fed 2H	Type : Main well		UWI :	Plan : Working Plan
	Rig Height Drill Floor : 25.00 US ft		Comment :	
	Relative to Mean Sea Level: 3340.00 US ft			
	Closure Distance : 4666.22 US ft		Closure Azimuth : 171.733°	
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft		+E / -W : 0.00 US ft	Az : 179.15°
	Magnetic Parameters			
Model : BGGM	Field Strength : 48263.7nT	Dec : 7.37°	Dip : 60.03°	Date : 30/Jul/2014

Collision / Uncertainty Analysis

Primary Well	Start MD (US ft)	End MD (US ft)	Collision Risk Interval	No. of Std Deviations in Error Computation
Cotton Draw 33 Fed 2H (p)	0.00	13208.84	100.00	2

Secondary Well Names

Cotton Draw 33 Fed 1H (p)

Anti-Collision Report Terminology

S.Minor, S.Major : Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.

PHI : Angle between high-side vector and semi-minor axis

TVD Spread : Total TVD range of the ellipsoid of uncertainty at the current location

ES : Distance between the extremities of the primary and secondary uncertainty ellipsoids in the direction Cr-Cr

T.Face to Sec : Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells

Separation factors calculated using Pedal Curve (Independent Uncertainty) Well path created using minimum curvature

5D Anti-Collision Report

Anti Collision Proximity Summary (TVD relative to)

Secondary Well Name	Pri MD (US ft)	Sec MD (US ft)	TVD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
Cotton Draw 33 Fed 1H (p)	4600.00	4600.00	4600.00	49.86	28.70	2.36	

Secondary Well : Cotton Draw 33 Fed 1H (p) (TVD Relative to Drill Floor (Primary)) ; All Azimuth Relative to GRID NORTH								
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	1 Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF
0.00	0.00	0.00	269.33	0.00	0.00	49.86	49.15	69.99
100.00	100.00	100.00	269.33	0.12	0.12	49.86	48.92	52.86
200.00	200.00	200.00	269.33	0.34	0.34	49.86	48.47	35.86
300.00	300.00	300.00	269.33	0.57	0.57	49.86	48.02	27.10
400.00	400.00	400.00	269.33	0.79	0.79	49.86	47.57	21.78
500.00	500.00	500.00	269.33	1.02	1.02	49.86	47.13	18.21
600.00	600.00	600.00	269.33	1.24	1.24	49.86	46.68	15.64
700.00	700.00	700.00	269.33	1.46	1.46	49.86	46.23	13.71
800.00	800.00	800.00	269.33	1.69	1.69	49.86	45.78	12.20
900.00	900.00	900.00	269.33	1.91	1.91	49.86	45.33	10.99
1000.00	1000.00	1000.00	269.33	2.14	2.14	49.86	44.88	10.00
1100.00	1100.00	1100.00	269.33	2.36	2.36	49.86	44.43	9.17
1200.00	1200.00	1200.00	269.33	2.59	2.59	49.86	43.98	8.47
1300.00	1300.00	1300.00	269.33	2.81	2.81	49.86	43.53	7.87
1400.00	1400.00	1400.00	269.33	3.04	3.04	49.86	43.08	7.35
1500.00	1500.00	1500.00	269.33	3.26	3.26	49.86	42.63	6.89
1600.00	1600.00	1600.00	269.33	3.49	3.49	49.86	42.18	6.49
1700.00	1700.00	1700.00	269.33	3.71	3.71	49.86	41.73	6.13
1800.00	1800.00	1800.00	269.33	3.94	3.94	49.86	41.28	5.81
1900.00	1900.00	1900.00	269.33	4.16	4.16	49.86	40.83	5.52
2000.00	2000.00	2000.00	269.33	4.39	4.39	49.86	40.38	5.26
2100.00	2100.00	2100.00	269.33	4.61	4.61	49.86	39.93	5.02
2200.00	2200.00	2200.00	269.33	4.84	4.84	49.86	39.48	4.80
2300.00	2300.00	2300.00	269.33	5.06	5.06	49.86	39.03	4.60
2400.00	2400.00	2400.00	269.33	5.29	5.29	49.86	38.59	4.42
2500.00	2500.00	2500.00	269.33	5.51	5.51	49.86	38.14	4.25
2600.00	2600.00	2600.00	269.33	5.73	5.73	49.86	37.69	4.09
2700.00	2700.00	2700.00	269.33	5.96	5.96	49.86	37.24	3.95
2800.00	2800.00	2800.00	269.33	6.18	6.18	49.86	36.79	3.81
2900.00	2900.00	2900.00	269.33	6.41	6.41	49.86	36.34	3.69
3000.00	3000.00	3000.00	269.33	6.63	6.63	49.86	35.89	3.57
3100.00	3100.00	3100.00	269.33	6.86	6.86	49.86	35.44	3.46
3200.00	3200.00	3200.00	269.33	7.08	7.08	49.86	34.99	3.35
3300.00	3300.00	3300.00	269.33	7.31	7.31	49.86	34.54	3.25
3400.00	3400.00	3400.00	269.33	7.53	7.53	49.86	34.09	3.16
3500.00	3500.00	3500.00	269.33	7.76	7.76	49.86	33.64	3.07
3600.00	3600.00	3600.00	269.33	7.98	7.98	49.86	33.19	2.99
3700.00	3700.00	3700.00	269.33	8.21	8.21	49.86	32.74	2.91
3800.00	3800.00	3800.00	269.33	8.43	8.43	49.86	32.29	2.84
3900.00	3900.00	3900.00	269.33	8.66	8.66	49.86	31.84	2.77
4000.00	4000.00	4000.00	269.33	8.88	8.88	49.86	31.39	2.70
4100.00	4100.00	4100.00	269.33	9.11	9.11	49.86	30.94	2.64
4200.00	4200.00	4200.00	269.33	9.33	9.33	49.86	30.49	2.57
4300.00	4300.00	4300.00	269.33	9.56	9.56	49.86	30.04	2.52
4400.00	4400.00	4400.00	269.33	9.78	9.78	49.86	29.60	2.46
4500.00	4500.00	4500.00	269.33	10.01	10.01	49.86	29.15	2.41
4600.00	4600.00	4600.00	269.33	10.23	10.23	49.86	28.70	2.36
4700.00	4698.29	4698.31	201.83	10.44	10.43	53.07	31.52	2.46
4800.00	4795.87	4796.02	201.89	10.64	10.61	62.68	40.77	2.86
4900.00	4892.03	4892.54	201.97	10.84	10.78	78.62	56.33	3.53
5000.00	4986.12	4987.30	202.07	11.04	10.93	100.77	78.19	4.46
5100.00	5077.57	5079.81	202.20	11.24	11.08	128.98	106.07	5.63

5D Anti-Collision Report

Secondary Well : Cotton Draw 33 Fed 11 (p) (TVD Relative to Drill Floor (Primary)) ; All Azimuth Relative to GRID NORTH									Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Acc (US ft)	ES (US ft)	SP	
5200.00	5170.13	5173.78	202.19	11.46	11.28	160.70	137.39	6.89	
5300.00	5263.50	5268.59	202.20	11.68	11.47	192.50	168.78	8.12	
5400.00	5356.87	5363.40	202.20	11.90	11.67	224.29	200.17	9.30	
5500.00	5450.24	5458.21	202.21	12.13	11.87	256.09	231.56	10.44	
5600.00	5543.61	5553.02	202.21	12.37	12.08	287.88	262.95	11.55	
5700.00	5636.98	5647.83	202.21	12.61	12.28	319.67	294.30	12.60	
5800.00	5730.35	5742.65	202.21	12.86	12.49	351.47	325.66	13.62	
5900.00	5823.72	5837.46	202.22	13.11	12.69	383.26	357.01	14.60	
6000.00	5917.09	5932.27	202.22	13.36	12.90	415.06	388.36	15.55	
6100.00	6010.46	6027.08	202.22	13.62	13.12	446.85	419.71	16.47	
6200.00	6103.83	6121.89	202.22	13.88	13.33	478.65	451.06	17.35	
6300.00	6197.21	6216.70	202.22	14.15	13.54	510.44	482.41	18.21	
6400.00	6290.58	6311.51	202.22	14.42	13.76	542.24	513.75	19.03	
6500.00	6383.95	6406.32	202.22	14.69	13.97	574.03	545.09	19.83	
6600.00	6477.32	6501.13	202.22	14.96	14.19	605.83	576.43	20.61	
6700.00	6570.69	6595.94	202.22	15.24	14.41	637.62	607.76	21.35	
6800.00	6664.06	6690.75	202.22	15.52	14.63	669.41	639.09	22.08	
6900.00	6757.43	6785.57	202.22	15.81	14.85	701.21	670.43	22.78	
7000.00	6850.80	6880.38	202.22	16.09	15.07	733.00	701.75	23.46	
7100.00	6944.17	6975.19	202.22	16.38	15.29	764.80	733.08	24.11	
7200.00	7037.54	7070.00	202.22	16.67	15.51	796.59	764.41	24.75	
7300.00	7130.91	7164.81	202.22	16.96	15.73	828.39	795.73	25.37	
7400.00	7224.29	7259.62	202.22	17.25	15.95	860.18	827.05	25.97	
7500.00	7317.66	7354.43	202.22	17.55	16.18	891.98	858.38	26.55	
7600.00	7411.03	7449.24	202.22	17.85	16.40	923.77	889.69	27.11	
7700.00	7504.40	7544.05	202.22	18.14	16.62	955.57	921.01	27.65	
7800.00	7597.77	7638.86	202.22	18.44	16.85	987.36	952.33	28.18	
7900.00	7691.14	7733.67	202.22	18.75	17.07	1019.15	983.64	28.70	
8000.00	7784.51	7828.49	202.22	19.05	17.30	1050.95	1014.96	29.20	
8100.00	7877.86	7923.28	181.19	19.35	17.52	1082.75	1046.29	29.70	
8200.00	7969.72	8016.55	125.43	19.65	17.75	1114.43	1077.55	30.21	
8300.00	8059.94	8108.08	106.50	19.75	18.02	1145.55	1108.34	30.79	
8400.00	8155.48	8206.48	98.13	19.43	18.23	1175.27	1137.86	31.42	
8500.00	8254.35	8314.84	93.50	18.56	18.16	1202.32	1164.64	31.91	
8600.00	8351.06	8436.11	90.81	18.60	16.60	1225.31	1187.43	32.34	
8700.00	8434.82	8572.40	89.40	18.78	14.25	1242.76	1204.46	32.45	
8800.00	8488.95	8722.93	88.87	19.14	12.36	1253.19	1214.15	32.10	
8900.00	8500.00	8861.11	88.86	19.57	12.13	1256.19	1216.24	31.44	
9000.00	8500.00	8961.10	88.86	20.08	12.35	1257.67	1216.59	30.61	
9100.00	8500.00	9061.09	88.86	20.67	12.62	1259.16	1216.72	29.67	
9200.00	8500.00	9161.08	88.86	21.33	12.92	1260.64	1216.74	28.71	
9300.00	8500.00	9261.07	88.87	22.17	13.27	1262.13	1216.30	27.54	
9400.00	8500.00	9361.06	88.87	23.03	13.64	1263.61	1215.89	26.48	
9500.00	8500.00	9461.04	88.87	23.95	14.04	1265.10	1215.22	25.36	
9600.00	8500.00	9561.03	88.87	25.02	14.48	1266.58	1214.35	24.25	
9700.00	8500.00	9661.02	88.87	26.10	14.93	1268.07	1213.45	23.22	
9800.00	8500.00	9761.01	88.87	27.20	15.41	1269.55	1212.52	22.26	
9900.00	8500.00	9861.00	88.87	28.31	15.91	1271.04	1211.42	21.32	
10000.00	8500.00	9960.99	88.87	29.56	16.43	1272.52	1210.14	20.40	
10100.00	8500.00	10060.98	88.88	30.85	16.96	1274.01	1208.81	19.54	
10200.00	8500.00	10160.97	88.88	32.15	17.49	1275.49	1207.43	18.74	
10300.00	8500.00	10260.96	88.88	33.46	18.06	1276.98	1206.02	18.00	
10400.00	8500.00	10360.95	88.88	34.75	18.66	1278.46	1204.59	17.31	
10500.00	8500.00	10460.93	88.88	36.10	19.23	1279.95	1203.35	16.71	
10600.00	8500.00	10560.92	88.88	37.50	19.84	1281.43	1201.96	16.12	
10700.00	8500.00	10660.91	88.88	38.88	20.41	1282.91	1200.33	15.53	
10800.00	8500.00	10760.90	88.88	40.27	20.99	1284.40	1198.76	15.00	
10900.00	8500.00	10860.89	88.89	41.67	21.60	1285.88	1197.18	14.50	

5D Anti-Collision Report

Secondary Well: Cotton Draw 28 Fed 1H (p) (TVD Relative to Drill Floor (Primary)); All Azimuth Relative to GRID NORTH								
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T-Face to Sec (°)	S-Major (US ft)	S-Minor (US ft)	GC (US ft)	ES (US ft)	SF Risk
11000.00	8500.00	10960.88	88.89	43.09	22.25	1287.37	1195.56	14.02
11100.00	8500.00	11060.87	88.89	44.51	22.89	1288.85	1193.91	13.57
11200.00	8500.00	11160.86	88.89	45.94	23.54	1290.34	1192.24	13.15
11300.00	8500.00	11260.85	88.89	47.40	24.19	1291.82	1190.53	12.75
11400.00	8500.00	11360.83	88.89	48.90	24.84	1293.31	1188.79	12.37
11500.00	8500.00	11460.82	88.89	50.39	25.50	1294.79	1187.04	12.02
11600.00	8500.00	11560.81	88.89	51.90	26.16	1296.28	1185.27	11.68
11700.00	8500.00	11660.80	88.90	53.41	26.82	1297.76	1183.50	11.36
11800.00	8500.00	11760.79	88.90	54.92	27.49	1299.25	1181.72	11.05
11900.00	8500.00	11860.78	88.90	56.44	28.16	1300.73	1179.93	10.77
12000.00	8500.00	11960.77	88.90	57.97	28.84	1302.22	1178.13	10.49
12100.00	8500.00	12060.76	88.90	59.50	29.51	1303.70	1176.33	10.24
12200.00	8500.00	12160.75	88.90	61.03	30.19	1305.19	1174.51	9.99
12300.00	8500.00	12260.74	88.90	62.56	30.87	1306.67	1172.70	9.75
12400.00	8500.00	12360.72	88.90	64.10	31.56	1308.16	1170.87	9.53
12500.00	8500.00	12460.71	88.91	65.64	32.24	1309.64	1169.04	9.31
12600.00	8500.00	12560.70	88.91	67.19	32.93	1311.13	1167.20	9.11
12700.00	8500.00	12660.69	88.91	68.73	33.62	1312.61	1165.36	8.91
12800.00	8500.00	12760.68	88.91	70.28	34.31	1314.09	1163.51	8.73
12900.00	8500.00	12860.67	88.91	71.83	35.01	1315.58	1161.66	8.55
13000.00	8500.00	12960.66	88.91	73.39	35.70	1317.06	1159.81	8.38
13100.00	8500.00	13060.65	88.91	74.94	36.40	1318.55	1157.95	8.21
13200.00	8500.00	13160.64	88.91	76.50	37.10	1320.03	1156.09	8.05
13208.84	8500.00	13169.48	88.91	76.64	37.16	1320.17	1155.93	8.04

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

GeoDec v5.03

Report Date: May 08, 2014
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw 33 Fed 2H
API Number: _____
Rig Name: _____
Location: Lea County, 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 429942.750 USFT	Latitude 32.1803227 DEG
East/West 742290.440 USFT	Longitude -103.6838047 DEG
Grid Convergence: .35°	
Total Correction: +7.02°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.18032° N	32° 10 min 49.162 sec
Longitude =	103.68380° W	103° 41 min 1.697 sec

Magnetic Declination =	7.37°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6471
Local Field Strength =	48264 nT	Magnetic Vector X = 23909 nT
Magnetic Dip =	60.03°	Magnetic Vector Y = 3092 nT
Magnetic Model =	bggm2013	Magnetic Vector Z = 41811 nT
Spud Date =	Jul 30, 2014	Magnetic Vector H = 24109 nT

Signed: _____

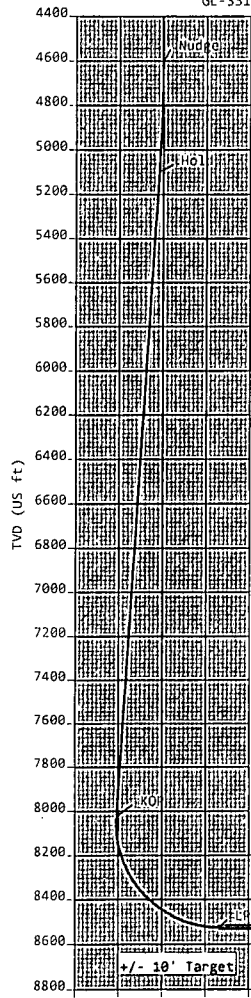
Date: _____



Cotton Draw 33 Fed 2H
Lea Co, NM



K8-3340
GL-3315



Plan Data for Cotton Draw 33 Fed 2H

Plan Point Information:

DogLeg Severity Unit: $^{\circ}/100.00\text{ft}$ Position offsets from Slot centre

MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	VSec	DLS
(USft)	($^{\circ}$)	($^{\circ}$)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)
0.00	0.00	0.00	0.00	0.00	0.00	429542.75	742290.44	0.00	0.00
4600.00	0.00	0.00	4600.00	0.00	0.00	429942.75	742290.44	0.00	0.00
5100.00	10.00	67.52	5097.47	16.64	40.22	429959.39	742330.66	-16.04	2.00
8071.34	10.00	67.52	8023.66	213.93	516.98	430156.68	742807.42	-206.23	0.00
8851.92	90.00	179.15	8525.00	-261.29	606.22	429681.46	742896.66	-270.25	12.00
13208.84	90.00	179.15	8525.00	-4617.73	670.92	425325.02	742961.36	4627.17	0.00

Plan Data for Cotton Draw 33 Fed 2H

Slot: Cotton Draw 33 Fed 2H

Position:

Offset is from Site centre

+N/-S: 0.58USft Northing: 429642.75USft Latitude: $32^{\circ}10'49.2''$

+E/-W: 49.86USft Easting: 742290.44USft Longitude: $-103^{\circ}41'1.7''$

Elevation Above VRD: 3315.00USft

Plan Data for Cotton Draw 33 Fed 2H

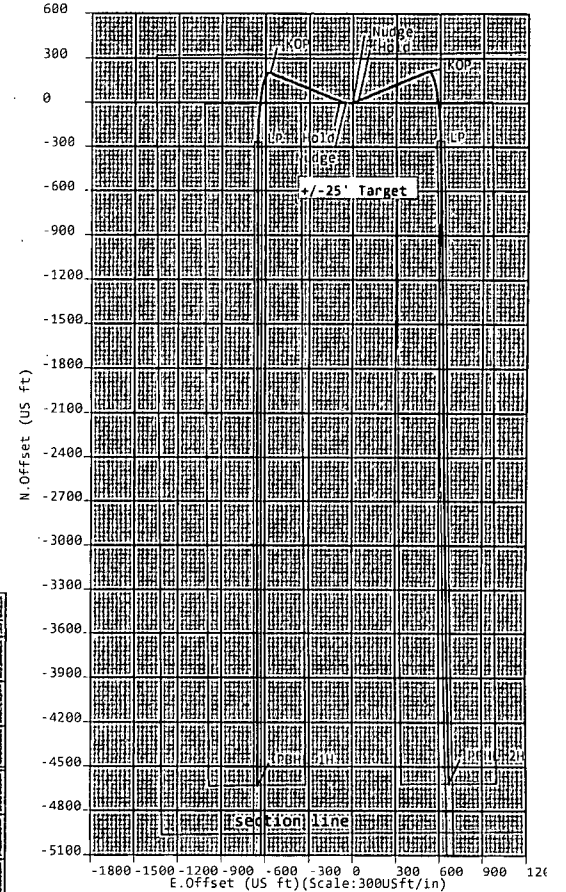
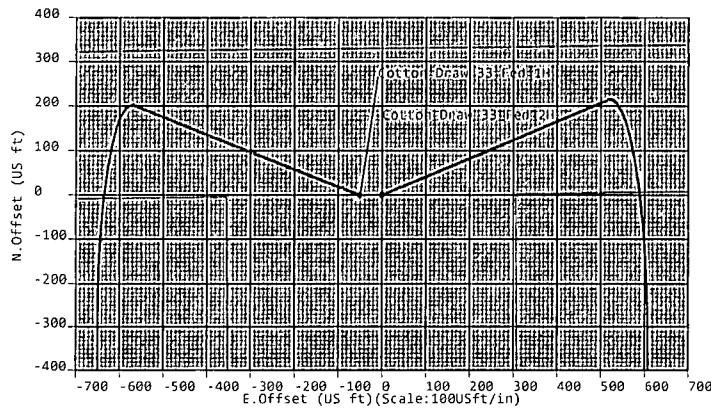
Target Set Information:

Name: Cotton Draw 33 Fed 2H

Position offsets from Slot centre

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	Comment
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)		
PBHL	8525.00	-4617.73	670.92	425325.02	742961.36	Cuboid	

Cotton Draw 33 Fed 2H
Cotton Draw 33 Fed 1H



Weatherford

Sign Off: Russell Joyner

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
5-1/2" Production Casing Two Stage	420	12.5	10.86	1.96	Lead	(65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake + 74.1 % Fresh Water
	1360	14.5	5.31	1.21	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
	DV Tool @ 5,500ft					
	100	11	14.94	2.66	Lead	Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake + 76.5% Fresh Water
	120	14.8	6.32	1.33	Tail	Class C Cement + 0.2% HR-800 + 63.5% Fresh Water

TOC

5-1/2" Production

4150ft

Notes:

- Production Cement volumes based on at least 25% excess.
- Actual cement volumes will be adjusted based on fluid caliper and/or caliper log data.
- If severe lost circulation is encountered while drilling the production wellbore, a DV tool will be installed a minimum of 50' below the previous casing shoe and of 200' above the current shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately.

CONDITIONS OF APPROVAL

SUNDRY dated 5/14/2014

OPERATOR'S NAME:	DEVON ENERGY
LEASE NO.:	NM113964
WELL NAME & NO.:	2H-COTTON DRAW 33 FED 30-025-41264
SURFACE HOLE FOOTAGE:	330' FNL & 1345' FWL
BOTTOM HOLE FOOTAGE:	330' FSL & 1980' FWL
LOCATION:	Section 33, T. 24 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico

The Original COA still stand with the following drill modifications:

Possibility of water and brine flows in the Salado, Castile, Delaware and Bone Springs Formations.

Possibility of lost circulation in the Delaware and Bone Springs.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

1. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Operator has proposed DV tool at depth of 5,000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

- b. Second stage above DV tool:

☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification. **Additional cement will be required as excess calculates to 23%.**

EGF 061314