

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMLC061863A
2. Name of Operator DEVON ENERGY PRODUCTION CO Contact: TRINA C COUCH Email: trina.couch@devn.com		6. If Indian, Allottee or Tribe Name
3a. Address 333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-228-7203	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 32 T24S R32E NESW 2310FSL 1930FWL 32.172995 N Lat, 103.698951 W Lon		8. Well Name and No. COTTON DRAW 32 STATE FED COM 4H
		9. API Well No. 30-025-41172-00-X1
		10. Field and Pool, or Exploratory PADUCA
		11. County or Parish, and State LEA COUNTY, NM

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 APD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recompleat 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 recompleat 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 SHL on the Cotton Draw 32 State Fed Com

FROM
2310 FSL & 1930 FWL Unit K Sec 32 24S-32E

TO
2310 FSL & 1330 FWL Unit K Sec 32 24S-32E

Surface! All approved COAs applies. hohadahal
HOBBS OCD 5/2/14

MAY 19 2014

*Please see the revised C-102 attachment

Eng OK 4/9/14 CRW

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14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #238222 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs Committed to AFMSS for processing by CHRISTOPHER WALLS on 04/04/2014 (14CRW0135SE)	
Name (Printed/Typed) TRINA C COUCH	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 03/10/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>Stephen J Coffey</u>	For FIELD MANAGER	Date <u>5/12/14</u>
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 CARLSBAD FIELD OFFICE

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 ****

MAY 28 2014

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-9720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 745-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87416
Phone: (505) 334-6178 Fax: (505) 334-6179
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3463

State of New Mexico

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

RECEIVED
MAY 19 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

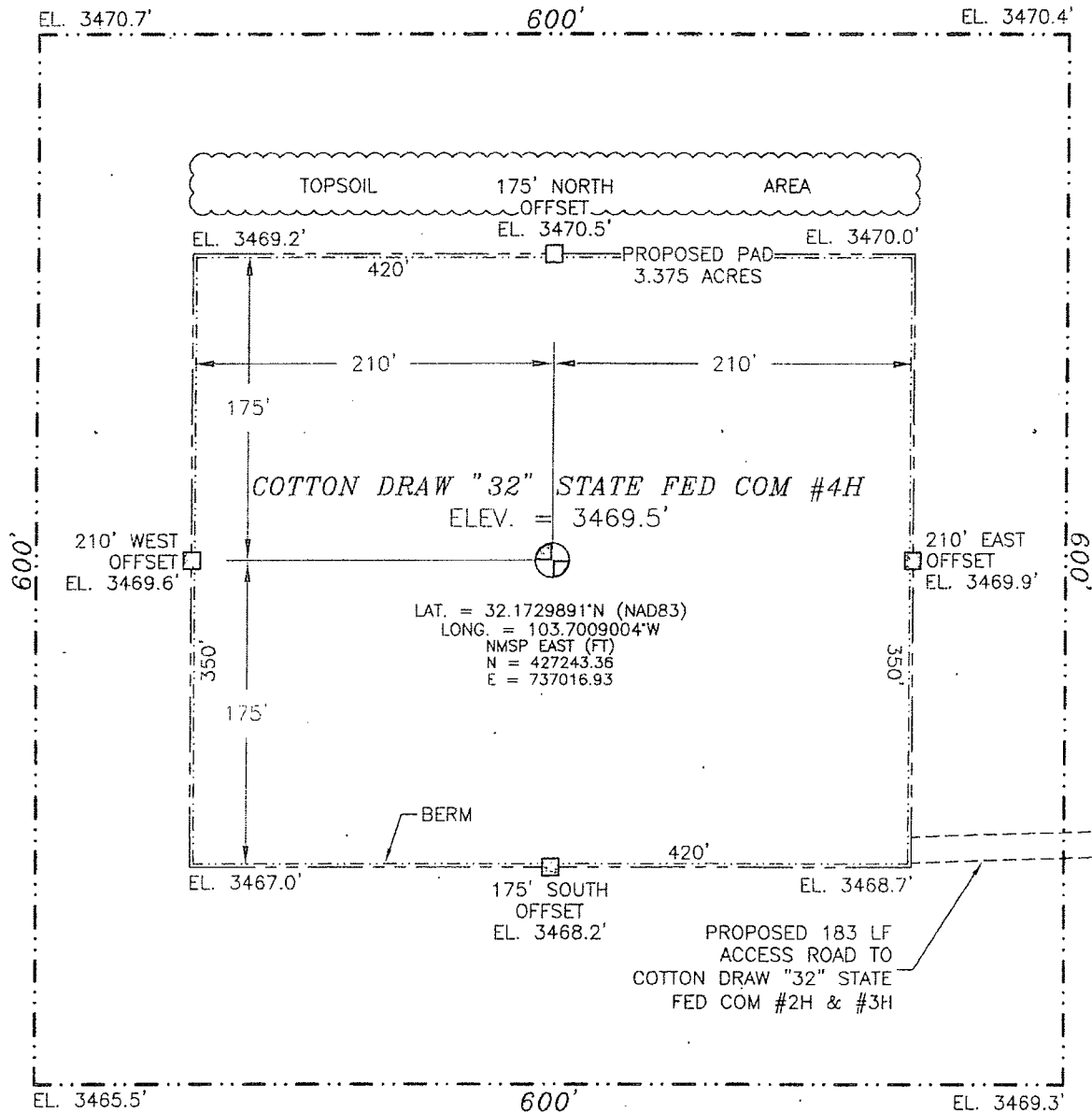
¹ API Number 30-025-41172		² Pool Code 49490		³ Pool Name Paduca; Delaware, North					
⁴ Property Code 39237		⁵ Property Name COTTON DRAW 32 STATE FED COM			⁶ Well Number 4H				
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			⁹ Elevation 3469.5				
¹⁰ Surface Location									
UL or lot no. K	Section 32	Township 24 S	Range 32 E	Lot Idn	Feet from the 2310	North/South line SOUTH	Feet from the 1330	East/West line WEST	County LEA
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. M	Section 5	Township 25 S	Range 32 E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 660	East/West line WEST	County LEA
¹² Dedicated Acres 240		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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

		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 _____ Trina C. Couch, Regulatory Analyst Printed Name _____ trina.couch@dvn.com 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. OCTOBER 22 2013 Date of Survey _____ Signature and Seal of Professional Surveyor _____ Certificate Number: ELLIOT F. JARAMILLO, PLS 12797 SURVEY NO. 1583B		

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

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM STATE HIGHWAY 128 AND PAVED CR 1 (ORLA ROAD) GO SOUTH ON CR 1 2.4 MILES, TURN RIGHT AND GO WEST 1.0 MILES, TURN LEFT AND GO SOUTH 0.55 MILES, BEND RIGHT AND GO WEST 200' TO THE COTTON DRAW "32" STATE FED COM #1H PAD AND FROM THE SOUTHWEST CORNER OF THIS PAD GO WEST ON CALICHE ROAD 0.45 MILES TO PAD FOR COTTON DRAW "32" STATE FED COM #2H & #3H AND FROM THE SOUTHWEST CORNER OF THIS PAD FOLLOW PROPOSED ROAD SURVEY FLAGS WEST 183' TO THE SOUTHEAST CORNER OF PROPOSED PAD FOR THIS LOCATION.

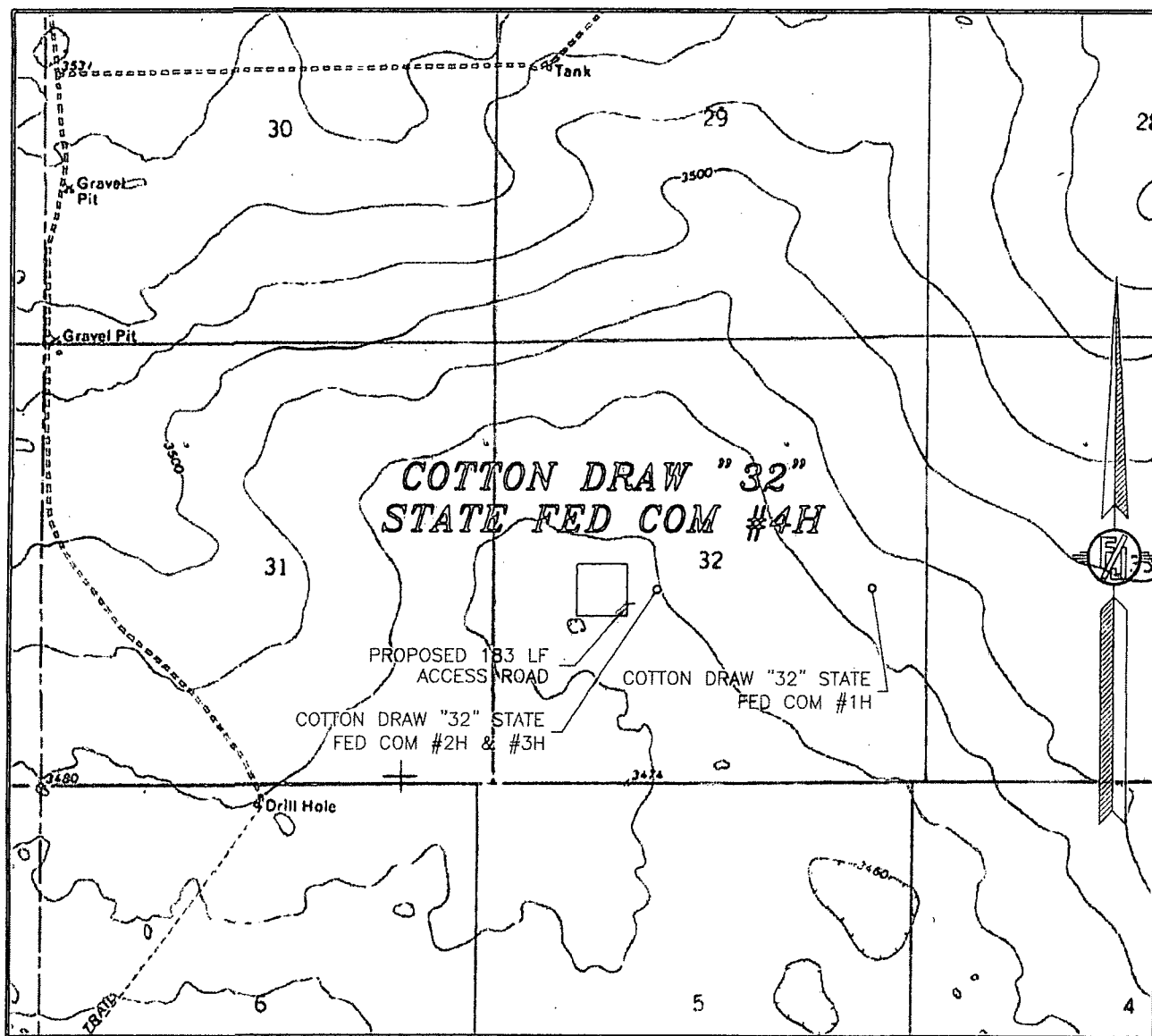
DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW "32" STATE FED COM #4H
LOCATED 2310 FT. FROM THE SOUTH LINE
AND 1330 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

OCTOBER 22, 2013

SURVEY NO. 1583B

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

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



USGS QUAD MAP:
PADUCA BREAKS NW

NOT TO SCALE

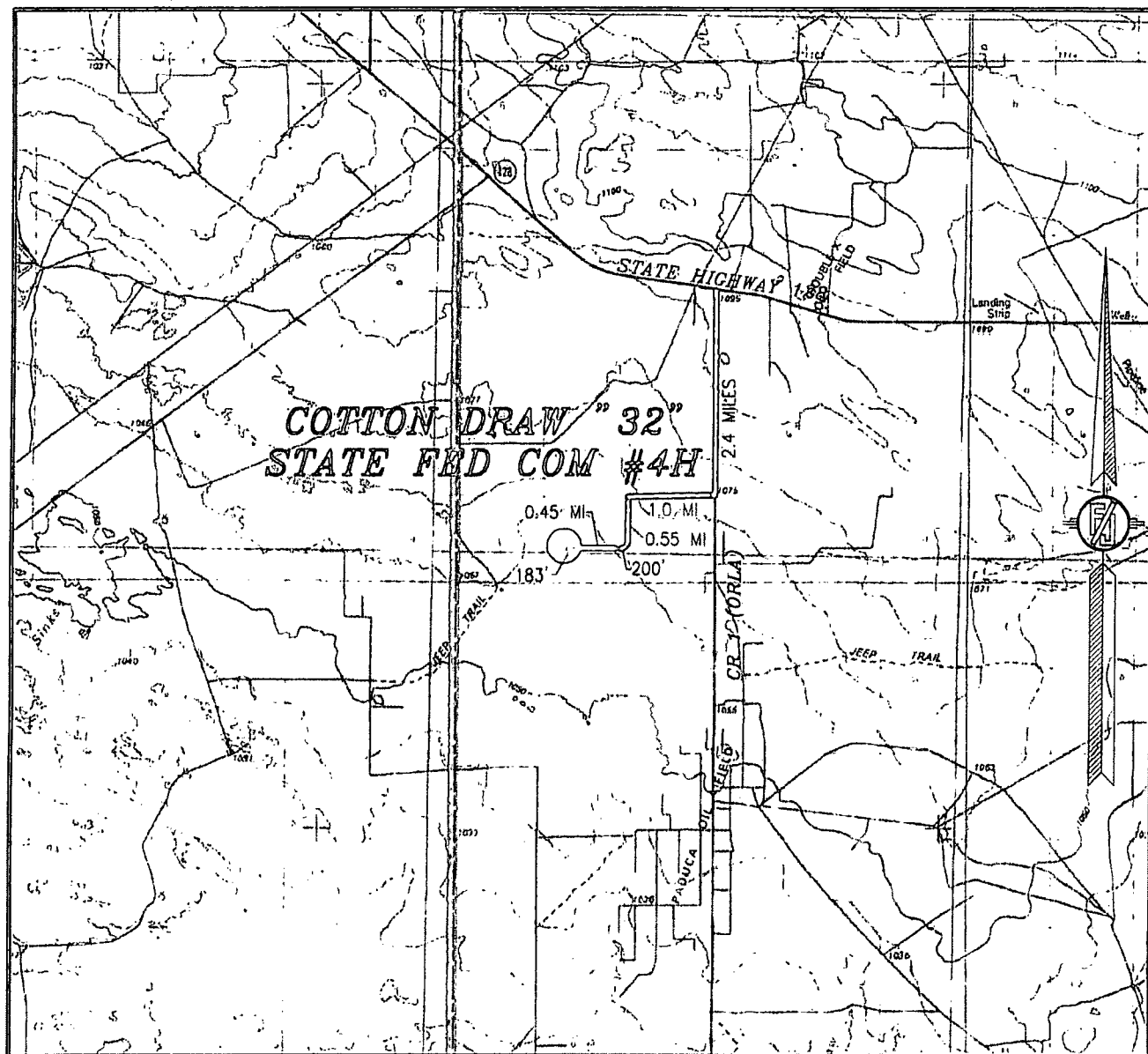
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LEA COUNTY, STATE OF NEW MEXICO

OCTOBER 22, 2013

SURVEY NO. 1583B

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

SECTION 32, 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 "32" STATE FED COM #4H
LOCATED 2310 FT. FROM THE SOUTH LINE
AND 1330 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

OCTOBER 22, 2013

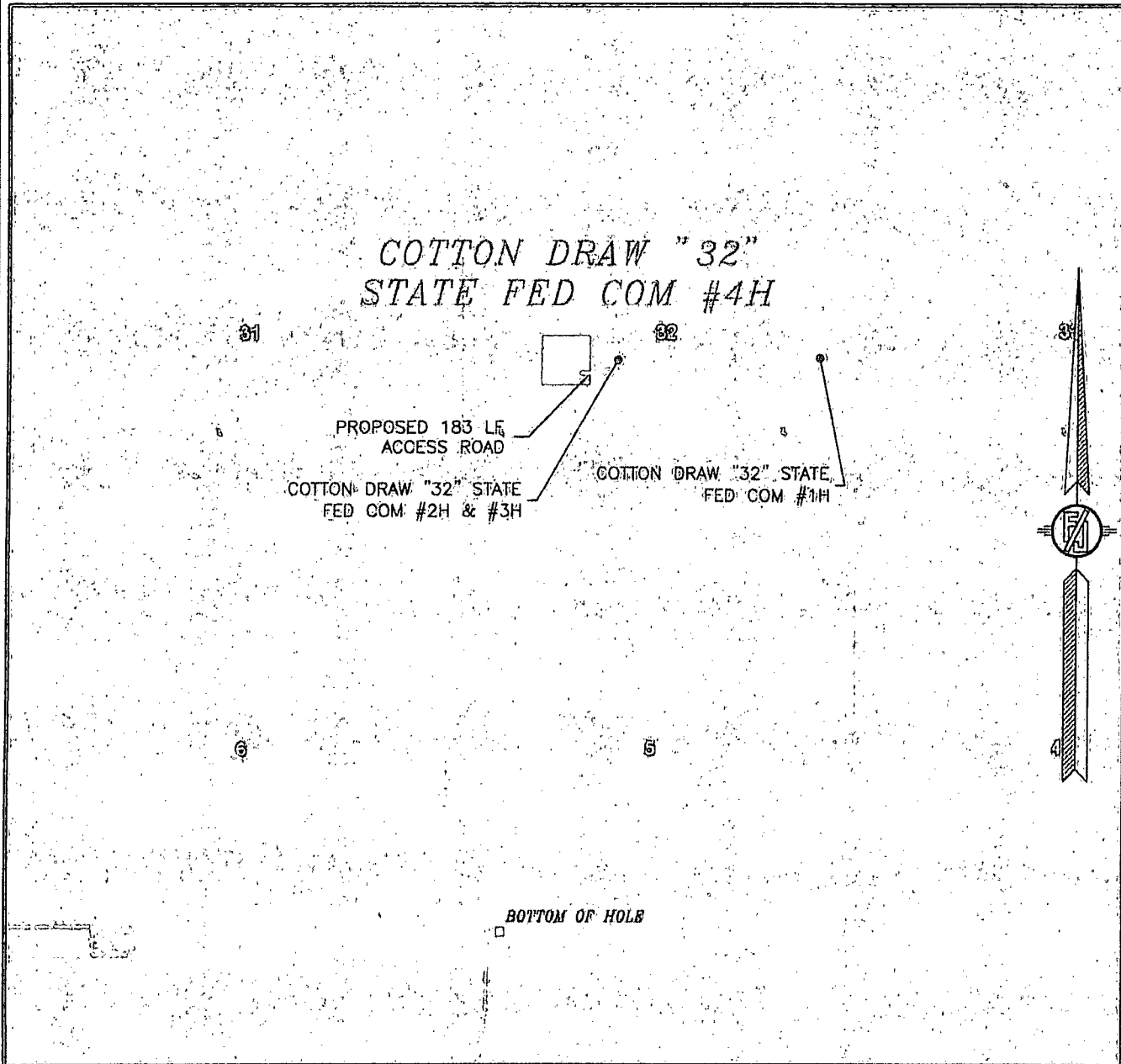
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FROM STATE HIGHWAY 128 AND PAVED CR 1 (ORLA ROAD) GO SOUTH ON CR 1 2.4 MILES, TURN RIGHT AND GO WEST 1.0 MILES, TURN LEFT AND GO SOUTH 0.55 MILES, BEND RIGHT AND GO WEST 200' TO THE COTTON DRAW "32" STATE FED COM #1H PAD AND FROM THE SOUTHWEST CORNER OF THIS PAD GO WEST ON CALICHE ROAD 0.45 MILES TO PAD FOR COTTON DRAW "32" STATE FED COM #2H & #3H AND FROM THE SOUTHWEST CORNER OF THIS PAD FOLLOW PROPOSED ROAD SURVEY FLAGS WEST 183' TO THE SOUTHEAST CORNER OF PROPOSED PAD FOR THIS LOCATION.

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

SURVEY NO. 1583B

SECTION 32, 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
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW "32" STATE FED COM #4H
LOCATED 2310 FT. FROM THE SOUTH LINE
AND 1330 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 24 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

OCTOBER 22, 2013

SURVEY NO. 1583B

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

Cotton Draw 32 State Fed Com 4H – APD DRILLING PLAN

JSL 03-11-2013

AAA - 11-27-2013: revised plat for surface change; included new directional well plans and updated depths; updated cement volumes for depth change on directional well plans.

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0 – 810	13-3/8"	0 – 810	48#	STC	H-40
12-1/4"	810 – 4,500	9-5/8"	0 – 4,500	40#	BTC	HCK-55
8-3/4"	4,500 – 5,600	5-1/2"	0 – 5,600	17#	LTC	HCP-110
8-3/4"	5,600 – 15,492	5-1/2"	5,600 – 15,492	17#	BTC	HCP-110

Note: only new casing will be utilized

MAXIMUM LATERAL TVD **8,400**

Design Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13-3/8", 48#, H-40, ST&C	2.03	4.56	8.28
9-5/8", 40#, HCK-55 BTC	1.81	1.69	21.94
5-1/2" 17# HCP-110 LTC	2.13	3.03	4.28
5-1/2" 17# HCP-110 BTC	1.90	2.71	1.76

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 – 810	8.4 – 9.0	30 – 34	N/C	FW
810 – 4,500	9.8 – 10.0	28 – 32	N/C	Brine
4,500 – 15,428	8.6 – 9.0	28 – 32	N/C-12	FW

Pressure Control Equipment:

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

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

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 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 (cement volumes based on 100 % excess Surface, 50 % excess Intermediate and at least 25% excess Production)

13-3/8" Surface	Lead: 335 sacks Class C Cement + 0.25 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.8% Fresh Water, 13.5 ppg Yield: 1.72 cf/sk Water Requirement: 9.07 gal/sk Mix Water Volume: 73bbls TOC @ surface Tail: 445 sacks Class C Cement + 1% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 63.1% Fresh Water, 14.8 ppg Yield: 1.34 cf/sk Water Requirement: 6.34 gal/sk Mix Water Volume: 67bbls
9-5/8" Intermediate	Lead: 850 sacks (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water, 12.9 ppg Yield: 1.85 cf/sk Water Requirement: 9.81 gal/sk Mix Water Volume: 199bbls TOC @ surface Tail: 370 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.9% Fresh Water, 14.8 ppg Yield: 1.33 cf/sk Water Requirement: 6.32 gal/sk Mix Water Volume: 56 bbls
5-1/2" Production	Lead #1: 180 sacks (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 + 76.4% Fresh Water, 11.9 ppg Yield: 2.26 cf/sk Water Requirement: 12.89 gal/sk Mix Water Volume: 56 bbls TOC @ 4000ft Lead #2: 330 sacks (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, 12.5 ppg Yield: 1.95 cf/sk Water Requirement: 10.79 gal/sk Mix Water Volume: 85bbls TOC @ 5335ft

Tail: 2110 sacks (50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg

Yield: 1.22 cf/sk

Water Requirement: 5.38 gal/sk

Mix Water Volume: 271 bbls

TOC for All Strings:

Surface: 810ft	0ft (410ft of Lead and 400ft of fill of Tail)
Intermediate: 4500ft	0ft (3500ft of fill of Lead & 1000 ft of fill of Tail)
Production: 15492ft	4000ft (1335ft of fill of Lead #1& 2000ft of fill of Lead #2 & 8157ft of fill of Tail)

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



Weatherford®

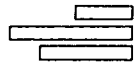
HOBBS OCD

MAY 19 2014

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Drilling Services

Proposal



devon

COTTON DRAW 32 STATE FED COM 4H

LEA COUNTY, NM

WELL FILE: **PLAN 3**

NOVEMBER 27, 2013

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com



Created By: Russell W. Joyner Date: 11/27/2013

MAY 19 2014

Weatherford
Wft Plan Report X Y's.

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Company: Devon Energy		Date: 11/27/2013	Time: 14:37:45	Page: 1
Field: Lea County, New Mexico (NAD 83)		Co-ordinate(NE) Reference: Well: CD 32 State Fed Com 4H, Grid North		
Site: Cotton Draw 32 State Fed Com 4H		Vertical (TVD) Reference: SITE 3495.0		
Well: CD 32 State Fed Com 4H		Section (VS) Reference: Well (0.00N,0.00E,181.79Azi)		
Wellpath: 1		Survey Calculation Method: Minimum Curvature Db: Sybase		

Plan: Plan #3	Date Composed: 11/27/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Site: Cotton Draw 32 State Fed Com 4H	
Site Position:	Northing: 427243.36 ft Latitude: 32 10 22.752 N
From: Map	Easting: 737016.93 ft Longitude: 103 42 3.259 W
Position Uncertainty: 0.00 ft	North Reference: Grid
Ground Level: 3470.00 ft	Grid Convergence: 0.34 deg

Well: CD 32 State Fed Com 4H		Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 427243.36 ft	Latitude: 32 10 22.752 N	
+E/-W 0.00 ft	Easting: 737016.93 ft	Longitude: 103 42 3.259 W	
Position Uncertainty: 0.00 ft			

Wellpath: 1		Drilled From: Surface	
Current Datum: SITE	Height 3495.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 7/30/2013		Above System Datum: Mean Sea Level	
Field Strength: 48384 nT		Declination: 7.38 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.06 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	181.79

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5597.30	9.97	270.00	5592.27	0.00	-86.58	1.00	1.00	0.00	0.00	
7885.34	9.97	270.00	7845.74	0.02	-482.83	0.00	0.00	0.00	0.00	
8782.25	90.00	181.79	8407.00	-569.56	-599.32	10.00	8.92	-9.84	-88.24	
15492.65	90.00	181.79	8407.00	-7276.69	-808.93	0.00	0.00	0.00	0.00	

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
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	427243.36	737016.93	9 5/8"
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	427243.36	737016.93	Nudge
4700.00	1.00	270.00	4699.99	0.00	-0.87	0.03	1.00	427243.36	737016.06	
4800.00	2.00	270.00	4799.96	0.00	-3.49	0.11	1.00	427243.36	737013.44	
4900.00	3.00	270.00	4899.86	0.00	-7.85	0.24	1.00	427243.36	737009.08	
5000.00	4.00	270.00	4999.68	0.00	-13.96	0.44	1.00	427243.36	737002.97	
5100.00	5.00	270.00	5099.37	0.00	-21.80	0.68	1.00	427243.36	736995.13	
5200.00	6.00	270.00	5198.90	0.00	-31.39	0.98	1.00	427243.36	736985.54	
5300.00	7.00	270.00	5298.26	0.00	-42.71	1.33	1.00	427243.36	736974.22	
5400.00	8.00	270.00	5397.40	0.00	-55.76	1.74	1.00	427243.36	736961.17	
5500.00	9.00	270.00	5496.30	0.00	-70.54	2.20	1.00	427243.36	736946.39	
5597.30	9.97	270.00	5592.27	0.00	-86.58	2.70	1.00	427243.36	736930.35	Hold
5600.00	9.97	270.00	5594.93	0.00	-87.04	2.71	0.00	427243.36	736929.89	
5700.00	9.97	270.00	5693.42	0.01	-104.36	3.25	0.00	427243.37	736912.57	
5800.00	9.97	270.00	5791.91	0.01	-121.68	3.79	0.00	427243.37	736895.25	
5900.00	9.97	270.00	5890.40	0.01	-139.00	4.33	0.00	427243.37	736877.93	
6000.00	9.97	270.00	5988.89	0.01	-156.32	4.88	0.00	427243.37	736860.61	
6100.00	9.97	270.00	6087.38	0.01	-173.64	5.42	0.00	427243.37	736843.29	
6200.00	9.97	270.00	6185.86	0.01	-190.95	5.96	0.00	427243.37	736825.98	
6300.00	9.97	270.00	6284.35	0.01	-208.27	6.50	0.00	427243.37	736808.66	
6400.00	9.97	270.00	6382.84	0.01	-225.59	7.04	0.00	427243.37	736791.34	



Weatherford

Wft Plan Report X Y's.



Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 State Fed Com 4H
Well: CD 32 State Fed Com 4H
Wellpath: 1

Date: 11/27/2013 Time: 14:37:45 Page: 2
Co-ordinate(NE) Reference: Well: CD 32 State Fed Com 4H, Grid North
Vertical (TVD) Reference: SITE 3495.0
Section (VS) Reference: Well (0.00N,0.00E,181.79Azi)
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
6500.00	9.97	270.00	6481.33	0.01	-242.91	7.58	0.00	427243.37	736774.02	
6600.00	9.97	270.00	6579.82	0.01	-260.23	8.12	0.00	427243.37	736756.70	
6700.00	9.97	270.00	6678.31	0.01	-277.55	8.66	0.00	427243.37	736739.38	
6800.00	9.97	270.00	6776.80	0.01	-294.87	9.20	0.00	427243.37	736722.06	
6900.00	9.97	270.00	6875.29	0.02	-312.18	9.74	0.00	427243.38	736704.75	
7000.00	9.97	270.00	6973.78	0.02	-329.50	10.28	0.00	427243.38	736687.43	
7100.00	9.97	270.00	7072.27	0.02	-346.82	10.82	0.00	427243.38	736670.11	
7200.00	9.97	270.00	7170.75	0.02	-364.14	11.36	0.00	427243.38	736652.79	
7300.00	9.97	270.00	7269.24	0.02	-381.46	11.90	0.00	427243.38	736635.47	
7400.00	9.97	270.00	7367.73	0.02	-398.78	12.44	0.00	427243.38	736618.15	
7500.00	9.97	270.00	7466.22	0.02	-416.09	12.98	0.00	427243.38	736600.84	
7600.00	9.97	270.00	7564.71	0.02	-433.41	13.52	0.00	427243.38	736583.52	
7700.00	9.97	270.00	7663.20	0.02	-450.73	14.06	0.00	427243.38	736566.20	
7800.00	9.97	270.00	7761.69	0.02	-468.05	14.60	0.00	427243.38	736548.88	
7885.34	9.97	270.00	7845.74	0.02	-482.83	15.06	0.00	427243.38	736534.10	KOP
7900.00	10.12	261.64	7860.17	-0.16	-485.37	15.32	10.00	427243.20	736531.56	
8000.00	15.38	221.50	7957.85	-11.40	-502.90	27.11	10.00	427231.96	736514.03	
8100.00	23.85	205.22	8052.03	-39.70	-520.34	55.93	10.00	427203.66	736496.59	
8200.00	33.15	197.40	8139.85	-84.19	-537.18	100.92	10.00	427159.17	736479.75	
8300.00	42.73	192.76	8218.64	-143.52	-552.89	160.72	10.00	427099.84	736464.04	
8400.00	52.45	189.55	8286.01	-215.89	-566.99	233.49	10.00	427027.47	736449.94	
8500.00	62.24	187.10	8339.90	-299.10	-579.07	317.04	10.00	426944.26	736437.86	
8600.00	72.06	185.05	8378.69	-390.62	-588.75	408.82	10.00	426852.74	736428.18	
8700.00	81.90	183.22	8401.20	-487.67	-595.74	506.04	10.00	426755.69	736421.19	
8782.25	90.00	181.79	8407.00	-569.56	-599.32	588.01	10.00	426673.80	736417.61	LP
8800.00	90.00	181.79	8407.00	-587.31	-599.88	605.76	0.00	426656.05	736417.05	
8900.00	90.00	181.79	8407.00	-687.26	-603.00	705.76	0.00	426556.10	736413.93	
9000.00	90.00	181.79	8407.00	-787.21	-606.12	805.76	0.00	426456.15	736410.81	
9100.00	90.00	181.79	8407.00	-887.16	-609.25	905.76	0.00	426356.20	736407.68	
9200.00	90.00	181.79	8407.00	-987.11	-612.37	1005.76	0.00	426256.25	736404.56	
9300.00	90.00	181.79	8407.00	-1087.07	-615.49	1105.76	0.00	426156.29	736401.44	
9400.00	90.00	181.79	8407.00	-1187.02	-618.62	1205.76	0.00	426056.34	736398.31	
9500.00	90.00	181.79	8407.00	-1286.97	-621.74	1305.76	0.00	425956.39	736395.19	
9600.00	90.00	181.79	8407.00	-1386.92	-624.87	1405.76	0.00	425856.44	736392.06	
9700.00	90.00	181.79	8407.00	-1486.87	-627.99	1505.76	0.00	425756.49	736388.94	
9800.00	90.00	181.79	8407.00	-1586.82	-631.11	1605.76	0.00	425656.54	736385.82	
9900.00	90.00	181.79	8407.00	-1686.77	-634.24	1705.76	0.00	425556.59	736382.69	
10000.00	90.00	181.79	8407.00	-1786.72	-637.36	1805.76	0.00	425456.64	736379.57	
10100.00	90.00	181.79	8407.00	-1886.67	-640.48	1905.76	0.00	425356.69	736376.45	
10200.00	90.00	181.79	8407.00	-1986.63	-643.61	2005.76	0.00	425256.73	736373.32	
10300.00	90.00	181.79	8407.00	-2086.58	-646.73	2105.76	0.00	425156.78	736370.20	
10400.00	90.00	181.79	8407.00	-2186.53	-649.85	2205.76	0.00	425056.83	736367.08	
10500.00	90.00	181.79	8407.00	-2286.48	-652.98	2305.76	0.00	424956.88	736363.95	
10600.00	90.00	181.79	8407.00	-2386.43	-656.10	2405.76	0.00	424856.93	736360.83	
10700.00	90.00	181.79	8407.00	-2486.38	-659.23	2505.76	0.00	424756.98	736357.70	
10800.00	90.00	181.79	8407.00	-2586.33	-662.35	2605.76	0.00	424657.03	736354.58	
10900.00	90.00	181.79	8407.00	-2686.28	-665.47	2705.76	0.00	424557.08	736351.46	
11000.00	90.00	181.79	8407.00	-2786.24	-668.60	2805.76	0.00	424457.12	736348.33	
11100.00	90.00	181.79	8407.00	-2886.19	-671.72	2905.76	0.00	424357.17	736345.21	
11200.00	90.00	181.79	8407.00	-2986.14	-674.84	3005.76	0.00	424257.22	736342.09	
11300.00	90.00	181.79	8407.00	-3086.09	-677.97	3105.76	0.00	424157.27	736338.96	
11400.00	90.00	181.79	8407.00	-3186.04	-681.09	3205.76	0.00	424057.32	736335.84	
11500.00	90.00	181.79	8407.00	-3285.99	-684.21	3305.76	0.00	423957.37	736332.72	



Weatherford

Wft Plan Report X Y's.



Weatherford

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 State Fed Com 4H
Well: CD 32 State Fed Com 4H
Wellpath: 1

Date: 11/27/2013 Time: 14:37:45 Page: 3
Co-ordinate(NE) Reference: Well: CD 32 State Fed Com 4H, Grid North
Vertical (TVD) Reference: SITE 3495.0
Section (VS) Reference: Well (0.00N,0.00E,181.79Azi)
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
11600.00	90.00	181.79	8407.00	-3385.94	-687.34	3405.76	0.00	423857.42	736329.59	
11700.00	90.00	181.79	8407.00	-3485.89	-690.46	3505.76	0.00	423757.47	736326.47	
11800.00	90.00	181.79	8407.00	-3585.85	-693.59	3605.76	0.00	423657.51	736323.34	
11900.00	90.00	181.79	8407.00	-3685.80	-696.71	3705.76	0.00	423557.56	736320.22	
12000.00	90.00	181.79	8407.00	-3785.75	-699.83	3805.76	0.00	423457.61	736317.10	
12100.00	90.00	181.79	8407.00	-3885.70	-702.96	3905.76	0.00	423357.66	736313.97	
12200.00	90.00	181.79	8407.00	-3985.65	-706.08	4005.76	0.00	423257.71	736310.85	
12300.00	90.00	181.79	8407.00	-4085.60	-709.20	4105.76	0.00	423157.76	736307.73	
12400.00	90.00	181.79	8407.00	-4185.55	-712.33	4205.76	0.00	423057.81	736304.60	
12500.00	90.00	181.79	8407.00	-4285.50	-715.45	4305.76	0.00	422957.86	736301.48	
12600.00	90.00	181.79	8407.00	-4385.46	-718.57	4405.76	0.00	422857.90	736298.36	
12700.00	90.00	181.79	8407.00	-4485.41	-721.70	4505.76	0.00	422757.95	736295.23	
12800.00	90.00	181.79	8407.00	-4585.36	-724.82	4605.76	0.00	422658.00	736292.11	
12900.00	90.00	181.79	8407.00	-4685.31	-727.95	4705.76	0.00	422558.05	736288.98	
13000.00	90.00	181.79	8407.00	-4785.26	-731.07	4805.76	0.00	422458.10	736285.86	
13100.00	90.00	181.79	8407.00	-4885.21	-734.19	4905.76	0.00	422358.15	736282.74	
13200.00	90.00	181.79	8407.00	-4985.16	-737.32	5005.76	0.00	422258.20	736279.61	
13300.00	90.00	181.79	8407.00	-5085.11	-740.44	5105.76	0.00	422158.25	736276.49	
13400.00	90.00	181.79	8407.00	-5185.06	-743.56	5205.76	0.00	422058.30	736273.37	
13500.00	90.00	181.79	8407.00	-5285.02	-746.69	5305.76	0.00	421958.34	736270.24	
13600.00	90.00	181.79	8407.00	-5384.97	-749.81	5405.76	0.00	421858.39	736267.12	
13700.00	90.00	181.79	8407.00	-5484.92	-752.93	5505.76	0.00	421758.44	736264.00	
13800.00	90.00	181.79	8407.00	-5584.87	-756.06	5605.76	0.00	421658.49	736260.87	
13900.00	90.00	181.79	8407.00	-5684.82	-759.18	5705.76	0.00	421558.54	736257.75	
14000.00	90.00	181.79	8407.00	-5784.77	-762.31	5805.76	0.00	421458.59	736254.62	
14100.00	90.00	181.79	8407.00	-5884.72	-765.43	5905.76	0.00	421358.64	736251.50	
14200.00	90.00	181.79	8407.00	-5984.67	-768.55	6005.76	0.00	421258.69	736248.38	
14300.00	90.00	181.79	8407.00	-6084.63	-771.68	6105.76	0.00	421158.73	736245.25	
14400.00	90.00	181.79	8407.00	-6184.58	-774.80	6205.76	0.00	421058.78	736242.13	
14500.00	90.00	181.79	8407.00	-6284.53	-777.92	6305.76	0.00	420958.83	736239.01	
14600.00	90.00	181.79	8407.00	-6384.48	-781.05	6405.76	0.00	420858.88	736235.88	
14700.00	90.00	181.79	8407.00	-6484.43	-784.17	6505.76	0.00	420758.93	736232.76	
14800.00	90.00	181.79	8407.00	-6584.38	-787.29	6605.76	0.00	420658.98	736229.64	
14900.00	90.00	181.79	8407.00	-6684.33	-790.42	6705.76	0.00	420559.03	736226.51	
15000.00	90.00	181.79	8407.00	-6784.28	-793.54	6805.76	0.00	420459.08	736223.39	
15100.00	90.00	181.79	8407.00	-6884.24	-796.67	6905.76	0.00	420359.12	736220.26	
15200.00	90.00	181.79	8407.00	-6984.19	-799.79	7005.76	0.00	420259.17	736217.14	
15300.00	90.00	181.79	8407.00	-7084.14	-802.91	7105.76	0.00	420159.22	736214.02	
15400.00	90.00	181.79	8407.00	-7184.09	-806.04	7205.76	0.00	420059.27	736210.89	
15492.65	90.00	181.79	8407.00	-7276.69	-808.93	7298.41	0.00	419966.67	736208.00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec	<--- Longitude ---> Deg Min Sec
PBHL -Rectangle (6709x50)			8407.00	-7276.69	-808.93	419966.67	736208.00	32 9 10.792 N	103 42 13.165 W



Weatherford

Wft Plan Report X Y's.



Weatherford

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 State Fed Com 4H
Well: CD 32 State Fed Com 4H
Wellpath: 1

Date: 11/27/2013 Time: 14:37:45 Page: 4
Co-ordinate(NE) Reference: Well: CD 32 State Fed Com 4H, Grid North
Vertical (TVD) Reference: SITE 3495.0
Section (VS) Reference: Well (0.00N,0.00E,181.79Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
4500.00	4500.00	0.000	0.000	9 5/8"

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Annotation

MD ft	TVD ft	
4600.00	4600.00	Nudge
5597.30	5592.27	Hold
7885.34	7845.74	KOP
8782.25	8407.00	LP
15492.64	8407.00	PBHL

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

GeoDec v5.03

Report Date: October 04, 2013
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw 32 State Fed Com 4H
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 427249.320 USFT	Latitude 32.1729957 DEG
East/West 737616.800 USFT	Longitude -103.6989616 DEG
Grid Convergence: .34°	
Total Correction: +7.12°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.17300° N	32° 10 min 22.785 sec
Longitude =	103.69896° W	103° 41 min 56.262 sec

Magnetic Declination =	7.46°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6486
Local Field Strength =	48343 nT	Magnetic Vector X = 23935 nT
Magnetic Dip =	60.04°	Magnetic Vector Y = 3133 nT
Magnetic Model =	bggm2013	Magnetic Vector Z = 41885 nT
Spud Date =	Nov 05, 2013	Magnetic Vector H = 24139 nT

Signed: _____

Date: _____