

New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John H. Bemis
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

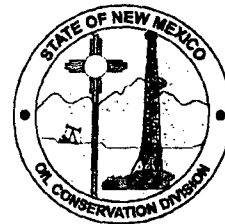
November 14, 2012

RECEIVED

NOV 26 2012

NMOCD ARTESIA

Jami Bailey
Division Director
Oil Conservation Division



BUREAU OF LAND MANAGEMENT
ATT: Potash
620 E Greene Street
Carlsbad, NM 88220

STATE LAND OFFICE
ATT: Joe Mraz
PO BOX 1148
Santa Fe, NM 87505

RE: APPLICATION FOR PERMIT TO DRILL IN POTASH AREA

OPERATOR: Devon Energy Production Company, LP

LEASE NAME: Cotton Draw Unit #168H

PROPOSED LOCATION: SHL Lot B Sec 2 T25S R31E; 330' FNL 1345' FEL
BHL Lot O Sec 2 T25S R31E; 330' FSL 1980' FEL

PROPOSED DEPTH: TVD 7,400' MD 12,813'

Gentleman:

The application for permit to drill identified above has been filed with this office of the New Mexico Oil Conservation Division. Pursuant to the provisions of Oil Conservation Division Order R - 111 - P, please advise this office whether the location is within an established Life-of-Mine-Reserve are filed with and approved by your office. If not, please advise whether it is within the buffer zone established by the order.

Thank you for your assistance. Please Return as soon as possible.

Very truly yours,

OIL CONSERVATION DIVISION

Randy Dade
Randy Dade
Supervisor, District II

RESONSE:

The above referenced location is in LMR (2012 year) ----- Yes _____ No ☒

The above referenced location is within the Buffer Zone ----- Yes _____ No ☒

Signed _____

Printed Signature JAMES RUTTA

Representing BUM - CPO

2012-11-21



New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John H. Bemis
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

2012 NOV 9 AM 8 08

Jami Bailey
Division Director
Oil Conservation Division



November 7, 2012

BUREAU OF LAND MANAGEMENT
ATT: Potash
620 E Greene Street
Carlsbad, NM 88220

STATE LAND OFFICE
ATT: Joe Mraz
PO BOX 1148
Santa Fe, NM 87505

RE: APPLICATION FOR PERMIT TO DRILL IN POTASH AREA

OPERATOR: Devon Energy Production Company, LP

LEASE NAME: Cotton Draw Unit #168H

PROPOSED LOCATION: SHL Lot B Sec 2 T25S R31E; 330' FNL 1345' FEL
BHL Lot O Sec 2 T25S R31E; 330' FSL 1980' FEL

PROPOSED DEPTH: TVD 7,400' MD 12,813'

RECEIVED

NOV 14 2012

NMOCD ARTESIA

Gentleman:

The application for permit to drill identified above has been filed with this office of the New Mexico Oil Conservation Division. Pursuant to the provisions of Oil Conservation Division Order R - 111 - P, please advise this office whether the location is within an established Life-of-Mine-Reserve are filed with and approved by your office. If not, please advise whether it is within the buffer zone established by the order.

Thank you for your assistance. Please Return as soon as possible.

Very truly yours,

OIL CONSERVATION DIVISION

Randy Dade
Supervisor, District II

RESONSE:

The above referenced location is in LMR (~~2011~~ ²⁰¹² year) outside KPLA Yes _____ No X

The above referenced location is within the Buffer Zone Outside KPLA Yes _____ No X

Signed Lanny J. Raybal

Printed Signature Lanny J. Raybal

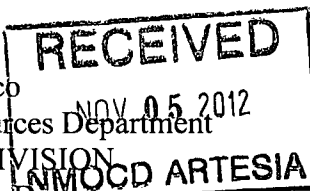
Representing State Land Office

Fed. Reservation Potash



DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Huerfano Rd., Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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



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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-40850	Pool Code 96641	Pool Name Paduca; Bone Spring (O)
Property Code 300635	Property Name COTTON DRAW UNIT	Well Number 168H
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY, LP.	Elevation 3476.8'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	2	25 S	31 E		330	NORTH	1345	EAST	EDDY

Bottom Hole Location If Different From Surface

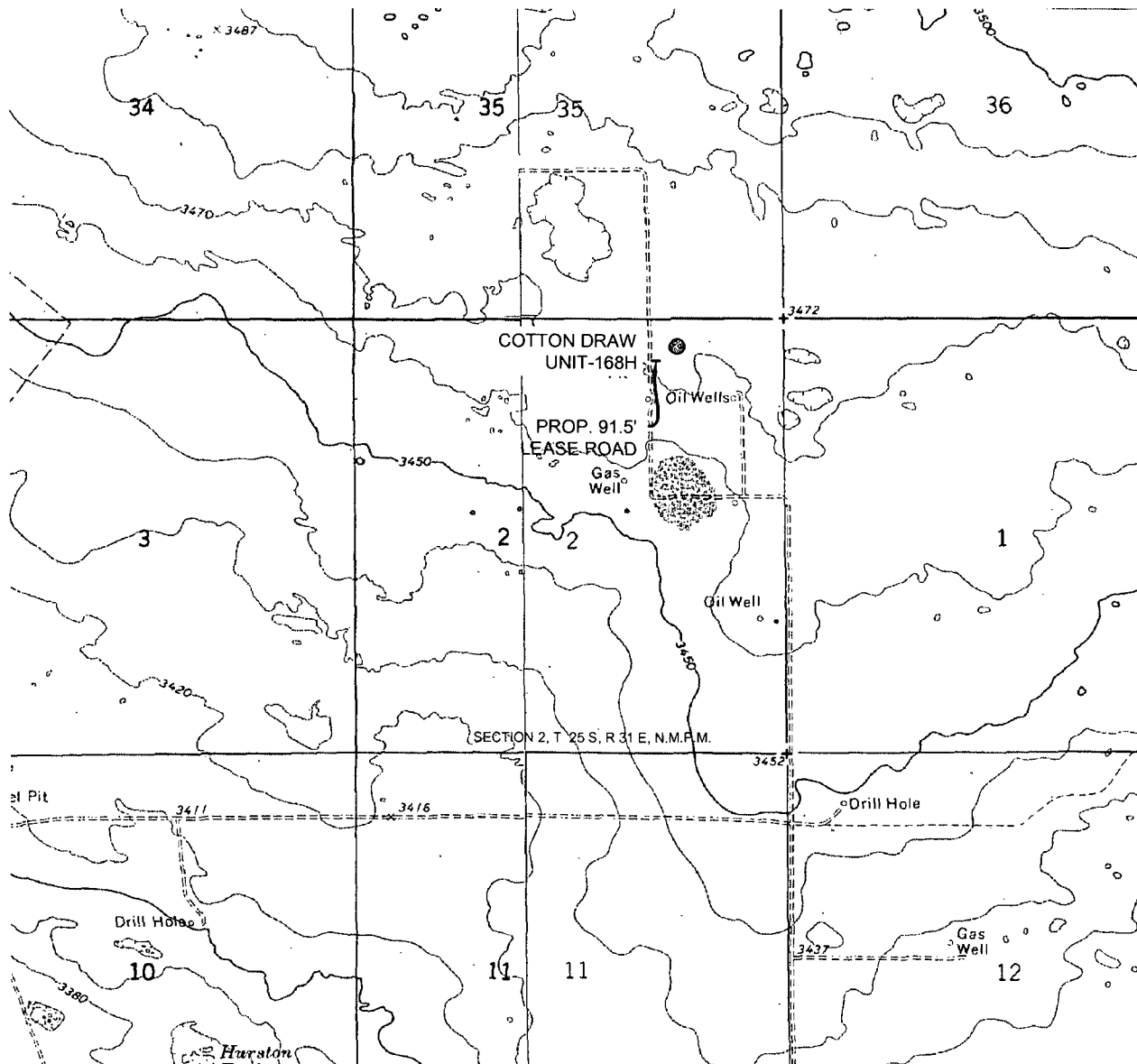
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	2	25 S	31 E		330	SOUTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
160			

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

NW COR SEC 2 NMSP-E (NAD 83) Y = 424875.7' N X = 719616.0' E LAT. = N32° 10' 00.30" LONG. = W103° 45' 25.84"	COTTON DRAW UNIT 168H SHL NMSP-E (NAD 83) Y = 424543.4' N X = 723560.9' E LAT. = N32° 09' 56.80" LONG. = W103° 44' 39.97"	NE COR SEC 2 NMSP-E (NAD 83) Y = 424872.7' N X = 724904.5' E LAT. = N32° 09' 59.98" LONG. = W103° 44' 24.32"	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>Patti Riechers</i> 10/31/12 Signature Date Patti Riechers Print Name Patti.Riechers@dv.com E-mail Address
SW COR SEC 2 NMSP-E (NAD 83) Y = 419598.0' N X = 719631.2' E LAT. = N32° 09' 08.07" LONG. = W103° 45' 25.99"	COTTON DRAW UNIT 168H BHL NMSP-E (NAD 83) Y = 419907.0' N X = 722946.8' E LAT. = N32° 09' 10.95" LONG. = W103° 44' 47.41"	SE COR SEC 2 NMSP-E (NAD 83) Y = 419571.7' N X = 724928.4' E LAT. = N32° 09' 07.53" LONG. = W103° 44' 24.38"	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. Sept. 2012 Date of Survey Signature and Seal of Professional Surveyor <i>James E. Tompkins</i> James E. Tompkins Job No. WTC48670 JAMES E. TOMPKINS 14729 Certificate Number

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

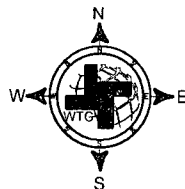
SECTION 2, T. 25 S., R. 31 E., N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 330' FNL & 1345' FEL

OPERATOR: DEVON ENERGY

WELL NAME: COTTON DRAW UNIT-168H



DRIVING DIRECTIONS:

From the intersection of Buck Jackson Road and NM State Highway 128. Go southwesterly on Buck Jackson Road 4.8 miles to lease road left. Go 0.8 miles and take a right at the "Y". Go 0.3 miles to lease road left. Go 2.6 miles to lease road right. Go 0.8 miles and turn right. Go 0.7 miles and turn left and the location is on the left.

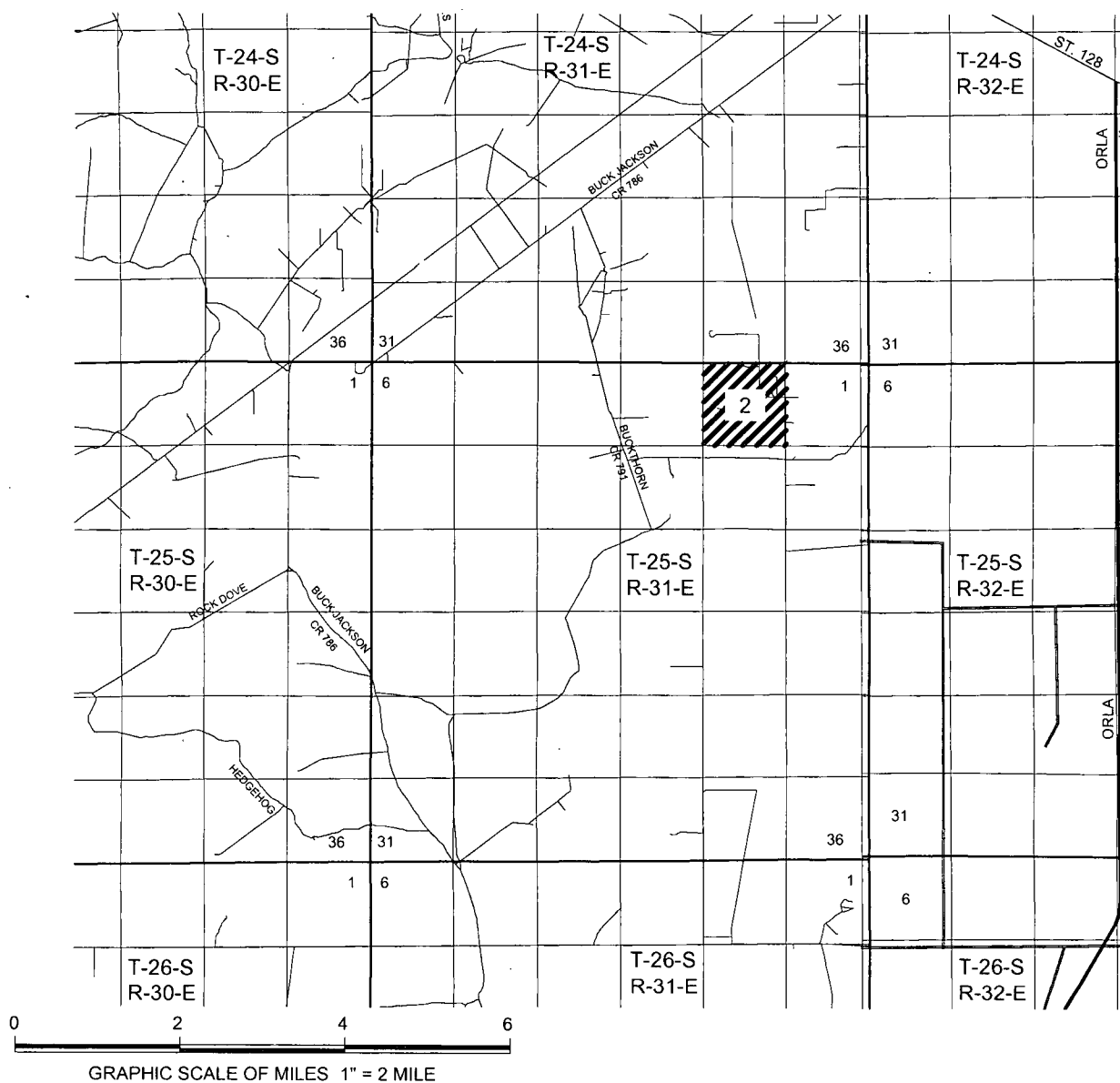


WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181



JOB No.: WTC48670

VICINITY MAP



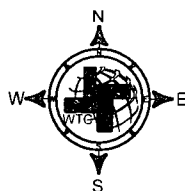
SECTION 2,T 25 S, R 31 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 330' FNL & 1345' FEL

OPERATOR: DEVON ENERGY

WELL NAME: COTTON DRAW UNIT-168H



DRIVING DIRECTIONS:

From the intersection of Buck Jackson Road and NM State Highway 128. Go southwesterly on Buck Jackson Road 4.8 miles to lease road left. Go 0.8 miles and take a right at the "Y". Go 0.3 miles to lease road left. Go 2.6 miles to lease road right. Go 0.8 miles and turn right. Go 0.7 miles and turn left and the location is on the left.

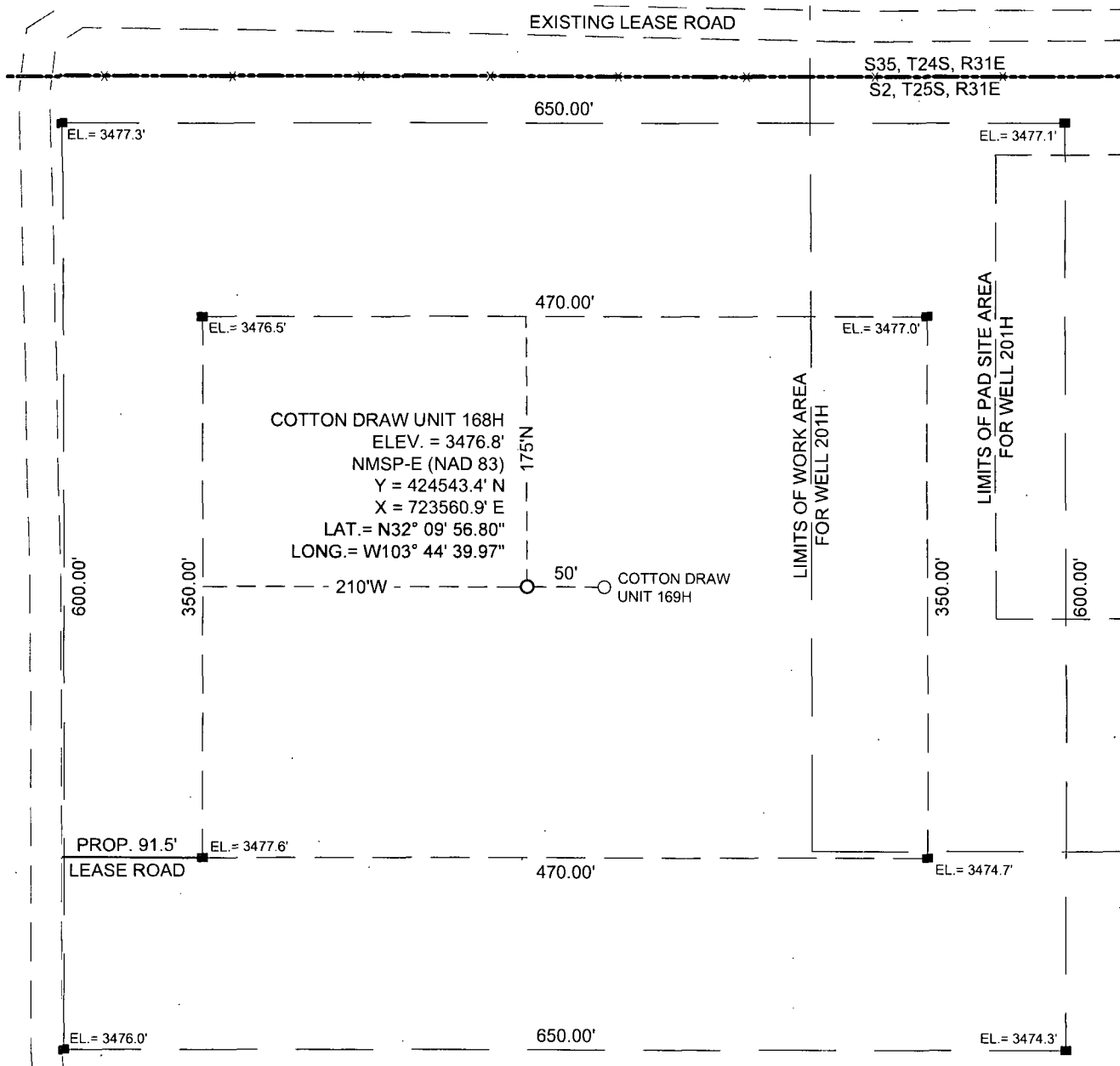


WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181



JOB No.: WTC48670

SITE LOCATION



SCALE: 1" = 100'

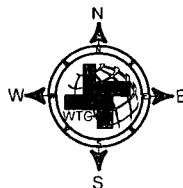
SECTION 2, T. 25 S., R. 31 E., N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 330' FNL & 1345' FEL

OPERATOR: DEVON ENERGY

WELL NAME: COTTON DRAW UNIT-168H



DRIVING DIRECTIONS:

From the intersection of Buck Jackson Road and NM State Highway 128. Go southwesterly on Buck Jackson Road 4.8 miles to lease road left. Go 0.8 miles and take a right at the "Y". Go 0.3 miles to lease road left. Go 2.6 miles to lease road right. Go 0.8 miles and turn right. Go 0.7 miles and turn left and the location is on the left.



WEST TEXAS CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181



JOB No.: WTC48670



Weatherford[®]

Drilling Services

Proposal



devon

COTTON DRAW UNIT 168H

EDDY COUNTY, NM

WELL FILE: **PLAN 1**

NOVEMBER 1, 2012

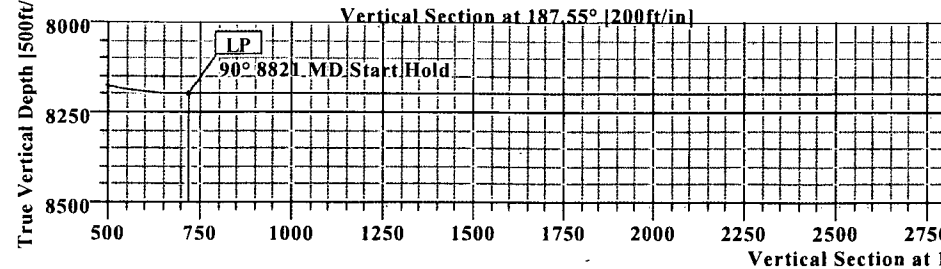
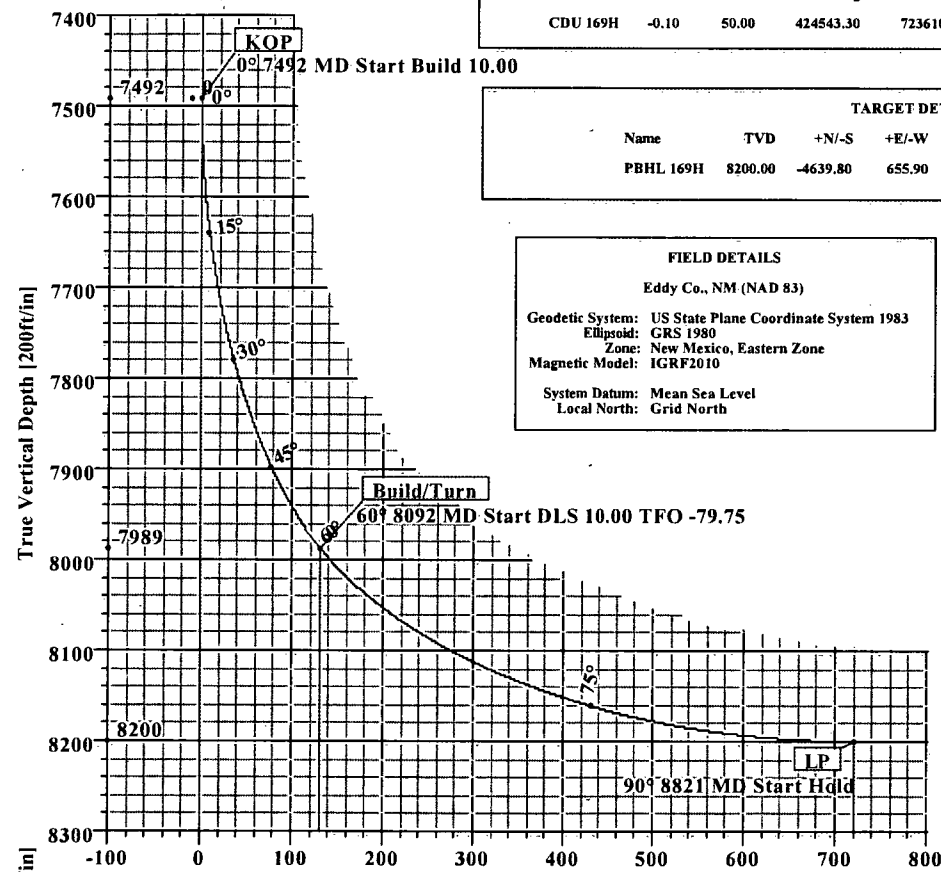
Weatherford International, Ltd.

P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com



Cotton Draw #168H
Eddy Co., New Mexico

KB ELEV: 3502
GL ELEV: 3477



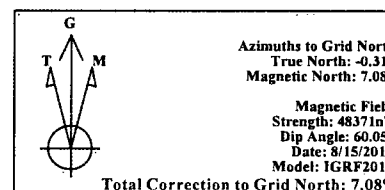
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7492.32	0.00	0.00	7492.32	0.00	0.00	0.00	0.00	0.00	
3	8092.32	60.00	250.12	7988.52	-97.42	-269.41	10.00	250.12	131.97	
4	8821.02	90.00	180.00	8200.00	-644.94	-613.90	10.00	-79.75	720.01	
5	12812.48	90.00	180.00	8200.00	-4636.40	-614.10	0.00	0.00	4676.89	PBHL 168H

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
CDU 169H	-0.10	50.00	424543.30	723610.90	32°09'56.787N	103°44'39.404W	N/A

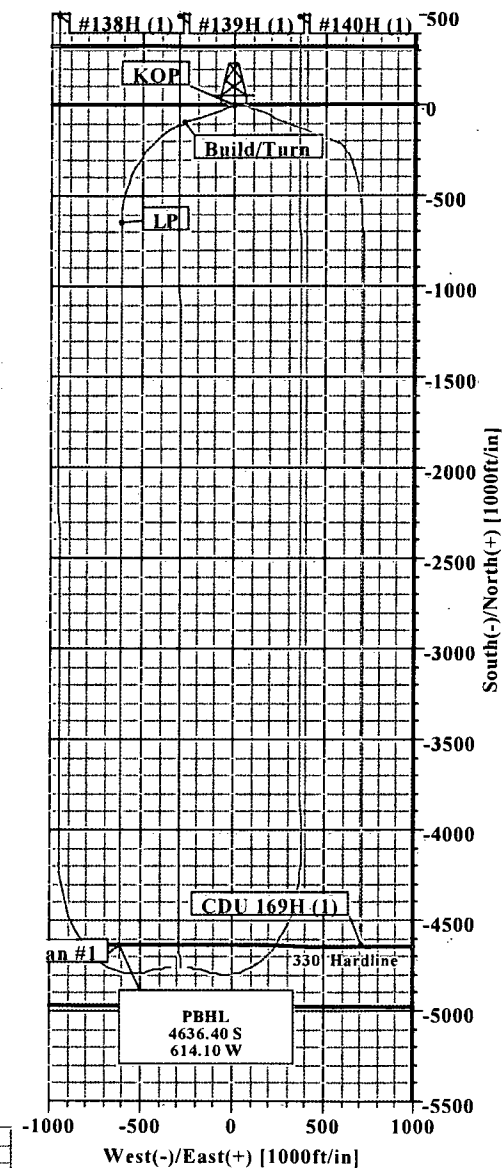
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL 169H	8200.00	-4639.80	655.90	419903.50	724266.80	Point

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 Unit 168,169 Pad
Site Centre Northing: 424543.40
Easting: 723560.90
Ground Level: 3477.00
Positional Uncertainty: 0.00
Convergence: 0.31



LEGEND	
■	#138H (1)
■	#139H (1)
■	#140H (1)
■	CDU 169H (1)
■	1
■	Plan #1



Wellpath: (CDU 169H(1))
Created By: Russell W. Joyner
Date: 11/1/2012



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy		Date: 11/1/2012	Time: 10:11:54	Page: 1						
Field: Eddy Co., NM (NAD 83)		Co-ordinate(NE) Reference: Well: CDU 168H, Grid North								
Site: Cotton Draw Unit 168,169 Pad		Vertical (TVD) Reference: SITE 3502.0								
Well: CDU 168H		Section (VS) Reference: Well (0.00N,0.00E,187.55Azi)								
Wellpath: 1		Survey Calculation Method: Minimum Curvature Db: Sybase								
Plan: Plan #1		Date Composed: 11/1/2012								
Principal: Yes		Version: 1								
		Tied-to: From Surface								
Field: Eddy Co., NM (NAD 83)										
Map System: US 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 Unit 168,169 Pad										
Site Position:		Northing: 424543.40 ft	Latitude: 32 9 56.790 N							
From: Map		Easting: 723560.90 ft	Longitude: 103 44 39.986 W							
Position Uncertainty: 0.00 ft			North Reference: Grid							
Ground Level: 3477.00 ft			Grid Convergence: 0.31 deg							
Well: CDU 168H										
Slot Name:										
Well Position: +N/-S 0.00 ft		Northing: 424543.40 ft	Latitude: 32 9 56.790 N							
+E/-W 0.00 ft		Easting: 723560.90 ft	Longitude: 103 44 39.986 W							
Position Uncertainty: 0.00 ft										
Wellpath: 1										
Current Datum: SITE		Height: 3502.00 ft	Drilled From: Surface							
Magnetic Data: 7/15/2013			Tie-on Depth: 0.00 ft							
Field Strength: 48379 nT			Above System Datum: Mean Sea Level							
Vertical Section: Depth From (TVD)		+N/-S	Declination: 7.41 deg							
ft		ft	Mag Dip Angle: 60.05 deg							
			+E/-W	Direction						
			ft	deg						
0.00		0.00	0.00	187.55						
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	
7492.32	0.00	0.00	7492.32	0.00	0.00	0.00	0.00	0.00	0.00	
8092.32	60.00	250.12	7988.52	-97.42	-269.41	10.00	10.00	0.00	250.12	
8821.02	90.00	180.00	8200.00	-644.94	-613.90	10.00	4.12	-9.62	-79.75	
12812.48	90.00	180.00	8200.00	-4636.40	-614.10	0.00	0.00	0.00	0.00	PBHL 168H
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
7400.00	0.00	0.00	7400.00	0.00	0.00	0.00	0.00	424543.40	723560.90	
7492.32	0.00	0.00	7492.32	0.00	0.00	0.00	0.00	424543.40	723560.90	KOP
7500.00	0.77	250.12	7500.00	-0.02	-0.05	0.02	10.00	424543.38	723560.85	
7550.00	5.77	250.12	7549.90	-0.99	-2.73	1.34	10.00	424542.41	723558.17	
7600.00	10.77	250.12	7599.37	-3.43	-9.49	4.65	10.00	424539.97	723551.41	
7650.00	15.77	250.12	7648.02	-7.33	-20.28	9.93	10.00	424536.07	723540.62	
7700.00	20.77	250.12	7695.48	-12.66	-35.01	17.15	10.00	424530.74	723525.89	
7750.00	25.77	250.12	7741.40	-19.37	-53.58	26.25	10.00	424524.03	723507.32	
7800.00	30.77	250.12	7785.42	-27.42	-75.84	37.15	10.00	424515.98	723485.06	
7850.00	35.77	250.12	7827.22	-36.75	-101.63	49.78	10.00	424506.65	723459.27	
7900.00	40.77	250.12	7866.46	-47.27	-130.74	64.04	10.00	424496.13	723430.16	
7950.00	45.77	250.12	7902.86	-58.92	-162.96	79.83	10.00	424484.48	723397.94	
8000.00	50.77	250.12	7936.13	-71.61	-198.03	97.01	10.00	424471.79	723362.87	
8050.00	55.77	250.12	7966.02	-85.23	-235.71	115.46	10.00	424458.17	723325.19	
8092.32	60.00	250.12	7988.52	-97.42	-269.41	131.97	10.00	424445.98	723291.49	Build/Turn
8100.00	60.14	249.25	7992.35	-99.73	-275.65	135.08	10.00	424443.67	723285.25	



Weatherford

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit 168,169 Pad
Well: CDU 168H
Wellpath: 1

Date: 11/1/2012 Time: 10:11:54 Page: 2
Co-ordinate(NE) Reference: Well: CDU 168H, Grid North
Vertical (TVD) Reference: SITE 3502.0
Section (VS) Reference: Well (0.00N,0.00E,187.55Azi)
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
8150.00	61.19	243.64	8016.86	-117.15	-315.57	157.60	10.00	424426.25	723245.33	
8200.00	62.46	238.15	8040.48	-138.58	-354.06	183.90	10.00	424404.82	723206.84	
8250.00	63.94	232.80	8063.04	-163.87	-390.80	213.80	10.00	424379.53	723170.10	
8300.00	65.61	227.59	8084.36	-192.83	-425.52	247.06	10.00	424350.57	723135.38	
8350.00	67.46	222.53	8104.28	-225.22	-457.96	283.44	10.00	424318.18	723102.94	
8400.00	69.46	217.60	8122.64	-260.80	-487.88	322.65	10.00	424282.60	723073.02	
8450.00	71.60	212.81	8139.31	-299.32	-515.03	364.39	10.00	424244.08	723045.87	
8500.00	73.86	208.13	8154.16	-340.46	-539.22	408.35	10.00	424202.94	723021.68	
8550.00	76.21	203.57	8167.08	-383.92	-560.27	454.20	10.00	424159.48	723000.63	
8600.00	78.65	199.09	8177.97	-429.36	-578.00	501.58	10.00	424114.04	722982.90	
8650.00	81.15	194.70	8186.74	-476.45	-592.30	550.14	10.00	424066.95	722968.60	
8700.00	83.70	190.36	8193.34	-524.82	-603.04	599.50	10.00	424018.58	722957.86	
8750.00	86.29	186.06	8197.70	-574.10	-610.15	649.29	10.00	423969.30	722950.75	
8800.00	88.90	181.79	8199.80	-623.92	-613.57	699.13	10.00	423919.48	722947.33	
8821.02	90.00	180.00	8200.00	-644.94	-613.90	720.01	10.00	423898.46	722947.00	LP
8900.00	90.00	180.00	8200.00	-723.92	-613.90	798.30	0.00	423819.48	722947.00	
9000.00	90.00	180.00	8200.00	-823.92	-613.91	897.44	0.00	423719.48	722946.99	
9100.00	90.00	180.00	8200.00	-923.92	-613.91	996.57	0.00	423619.48	722946.99	
9200.00	90.00	180.00	8200.00	-1023.92	-613.92	1095.70	0.00	423519.48	722946.98	
9300.00	90.00	180.00	8200.00	-1123.92	-613.92	1194.84	0.00	423419.48	722946.98	
9400.00	90.00	180.00	8200.00	-1223.92	-613.93	1293.97	0.00	423319.48	722946.97	
9500.00	90.00	180.00	8200.00	-1323.92	-613.93	1393.11	0.00	423219.48	722946.97	
9600.00	90.00	180.00	8200.00	-1423.92	-613.94	1492.24	0.00	423119.48	722946.96	
9700.00	90.00	180.00	8200.00	-1523.92	-613.94	1591.37	0.00	423019.48	722946.96	
9800.00	90.00	180.00	8200.00	-1623.92	-613.95	1690.51	0.00	422919.48	722946.95	
9900.00	90.00	180.00	8200.00	-1723.92	-613.95	1789.64	0.00	422819.48	722946.95	
10000.00	90.00	180.00	8200.00	-1823.92	-613.96	1888.77	0.00	422719.48	722946.94	
10100.00	90.00	180.00	8200.00	-1923.92	-613.96	1987.91	0.00	422619.48	722946.94	
10200.00	90.00	180.00	8200.00	-2023.92	-613.97	2087.04	0.00	422519.48	722946.93	
10300.00	90.00	180.00	8200.00	-2123.92	-613.97	2186.18	0.00	422419.48	722946.93	
10400.00	90.00	180.00	8200.00	-2223.92	-613.98	2285.31	0.00	422319.48	722946.92	
10500.00	90.00	180.00	8200.00	-2323.92	-613.98	2384.44	0.00	422219.48	722946.92	
10600.00	90.00	180.00	8200.00	-2423.92	-613.99	2483.58	0.00	422119.48	722946.91	
10700.00	90.00	180.00	8200.00	-2523.92	-613.99	2582.71	0.00	422019.48	722946.91	
10800.00	90.00	180.00	8200.00	-2623.92	-614.00	2681.84	0.00	421919.48	722946.90	
10900.00	90.00	180.00	8200.00	-2723.92	-614.00	2780.98	0.00	421819.48	722946.90	
11000.00	90.00	180.00	8200.00	-2823.92	-614.01	2880.11	0.00	421719.48	722946.89	
11100.00	90.00	180.00	8200.00	-2923.92	-614.01	2979.25	0.00	421619.48	722946.89	
11200.00	90.00	180.00	8200.00	-3023.92	-614.02	3078.38	0.00	421519.48	722946.88	
11300.00	90.00	180.00	8200.00	-3123.92	-614.02	3177.51	0.00	421419.48	722946.88	
11400.00	90.00	180.00	8200.00	-3223.92	-614.03	3276.65	0.00	421319.48	722946.87	
11500.00	90.00	180.00	8200.00	-3323.92	-614.03	3375.78	0.00	421219.48	722946.87	
11600.00	90.00	180.00	8200.00	-3423.92	-614.04	3474.91	0.00	421119.48	722946.86	
11700.00	90.00	180.00	8200.00	-3523.92	-614.04	3574.05	0.00	421019.48	722946.86	
11800.00	90.00	180.00	8200.00	-3623.92	-614.05	3673.18	0.00	420919.48	722946.85	
11900.00	90.00	180.00	8200.00	-3723.92	-614.05	3772.32	0.00	420819.48	722946.85	
12000.00	90.00	180.00	8200.00	-3823.92	-614.06	3871.45	0.00	420719.48	722946.84	
12100.00	90.00	180.00	8200.00	-3923.92	-614.06	3970.58	0.00	420619.48	722946.84	
12200.00	90.00	180.00	8200.00	-4023.92	-614.07	4069.72	0.00	420519.48	722946.83	
12300.00	90.00	180.00	8200.00	-4123.92	-614.07	4168.85	0.00	420419.48	722946.83	
12400.00	90.00	180.00	8200.00	-4223.92	-614.08	4267.98	0.00	420319.48	722946.82	
12500.00	90.00	180.00	8200.00	-4323.92	-614.08	4367.12	0.00	420219.48	722946.82	
12600.00	90.00	180.00	8200.00	-4423.92	-614.09	4466.25	0.00	420119.48	722946.81	



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit 168,169 Pad
Well: CDU 168H
Wellpath: 1

Date: 11/1/2012 Time: 10:11:54 Page: 3
Co-ordinate(NE) Reference: Well: CDU 168H, Grid North
Vertical (TVD) Reference: SITE 3502.0
Section (VS) Reference: Well (0.00N,0.00E,187.55Azi)
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
12700.00	90.00	180.00	8200.00	-4523.92	-614.09	4565.39	0.00	420019.48	722946.81	
12800.00	90.00	180.00	8200.00	-4623.92	-614.10	4664.52	0.00	419919.48	722946.80	
12812.48	90.00	180.00	8200.00	-4636.40	-614.10	4676.89	0.00	419907.00	722946.80	PBHL 168H

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----><---- Longitude ---->		
PBHL 168H			8200.00	-4636.40	-614.10	419907.00	722946.80	32	9 10.943 N	103 44 47.424 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
7492.32	7492.32	KOP
8092.32	7988.52	Build/Turn
8821.02	8200.00	LP
12812.48	8200.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle Dip Direction

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

GeoDec v5.03

Report Date: November 01, 2012
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit 168H
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 424543.400 USFT	Latitude 32.1657774 DEG
East/West 723560.900 USFT	Longitude -103.7444358 DEG
Grid Convergence: .31°	
Total Correction: +7.22°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.16578° N	32° 9 min 56.799 sec
Longitude =	103.74444° W	103° 44 min 39.969 sec

Magnetic Declination =	7.53°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6584
Local Field Strength =	48475 nT	Magnetic Vector X = 23973 nT
Magnetic Dip =	60.08°	Magnetic Vector Y = 3169 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42013 nT
Spud Date =	Jul 15, 2012	Magnetic Vector H = 24182 nT

Signed: _____

Date: _____