

NM OIL CONSERVATION

ARTESIA DISTRICT

MAY 27 2015

RECEIVED



February 5, 2015

15-42513

Devon Energy Production Co., L. P.
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 1 2015

RECEIVED

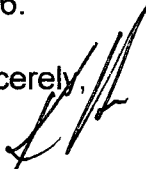
Attn: David Cook

Re: Cotton Draw Unit 222H

Please find enclosed a copy of the survey from 0' to 4345' ran on the above referenced well.

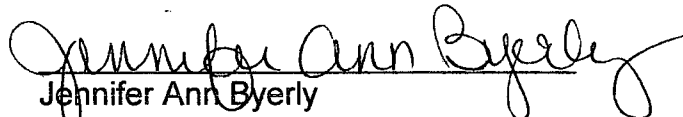
If I can be of any further service please do not hesitate to call me at 800-606-4976.

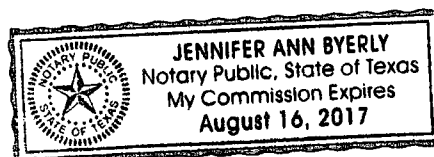
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 5 day of Feb,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Devon
 Lease/Well: Cotton Draw Unit/222H
 Location: Sec1 T25S R31E
 Rig Name: HP 223
 State/County: New Mexico/Eddy
 Latitude: 32.15, Longitude: -103.74
 GRID North is 0.32 Degrees East of True North
 VS-Azi: 0.00 Degrees



NM OIL CONSERVATION
 ARTESIA DISTRICT
 MAY 2015
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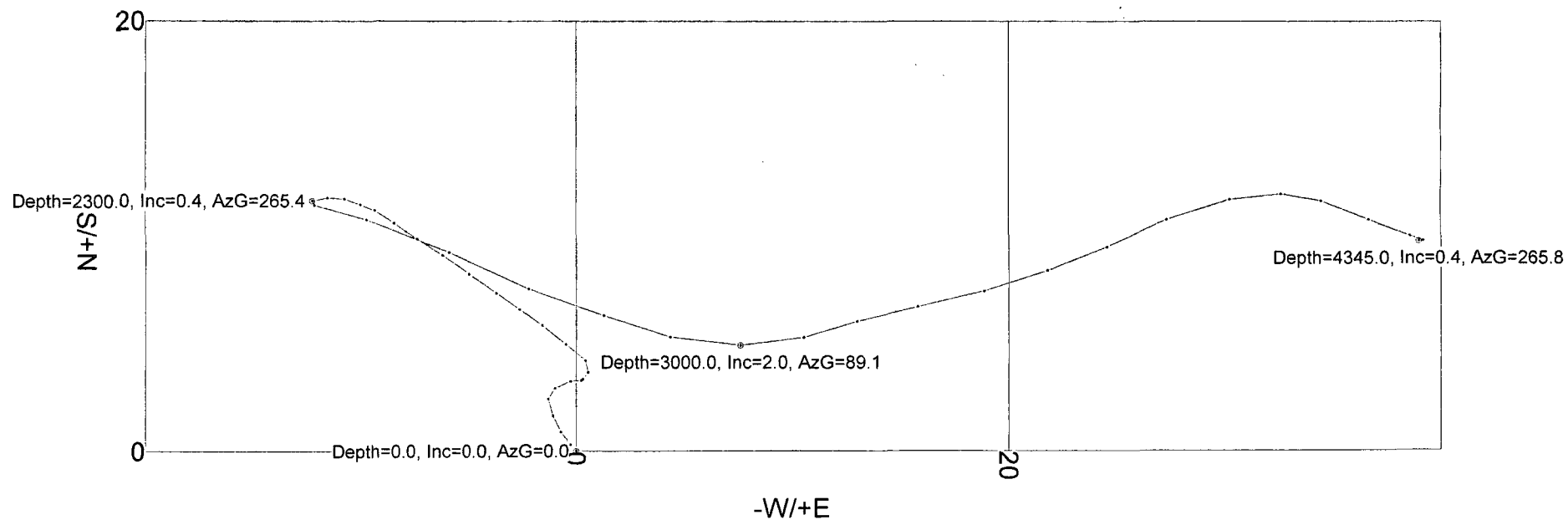
Depth Reference : RKB = 26 Feet
 DRILLOG HA GYRO SURVEY CALCULATIONS
 Filename: Cotton Draw Unit #222H.ut
 Minimum Curvature Method
 Report Date/Time: 2/5/2015 / 11:38
 VES Survey International
 West Texas
 (432) 563-5444
 Surveyor: Noe Garza
 Cotton Draw Unit 222H /API 30-015-42513

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.48	318.34	100.00	0.31	-0.28	0.31	0.42	318.34	0.48
200.00	0.36	329.70	200.00	0.89	-0.71	0.89	1.14	321.44	0.14
300.00	0.60	337.03	299.99	1.64	-1.07	1.64	1.96	326.87	0.25
400.00	0.34	357.92	399.99	2.42	-1.29	2.42	2.74	331.99	0.31
500.00	0.45	56.94	499.99	2.93	-0.97	2.93	3.08	341.69	0.40
600.00	0.45	73.52	599.98	3.25	-0.26	3.25	3.26	355.39	0.13
700.00	0.16	119.94	699.98	3.30	0.24	3.30	3.30	4.11	0.36
800.00	0.14	335.72	799.98	3.34	0.31	3.34	3.35	5.25	0.29
900.00	0.42	54.06	899.98	3.67	0.55	3.67	3.71	8.56	0.41
1000.00	0.62	308.54	999.98	4.22	0.42	4.22	4.24	5.72	0.84
1100.00	0.72	310.95	1099.97	4.97	-0.48	4.97	4.99	354.51	0.10
1200.00	0.87	306.88	1199.96	5.84	-1.57	5.84	6.05	345.00	0.16
1300.00	0.61	302.96	1299.95	6.59	-2.62	6.59	7.09	338.31	0.27
1400.00	0.90	305.23	1399.95	7.33	-3.71	7.33	8.22	333.17	0.30
1500.00	0.85	305.25	1499.93	8.22	-4.96	8.22	9.60	328.87	0.05
1600.00	0.89	304.11	1599.92	9.08	-6.21	9.08	11.00	325.63	0.04
1700.00	0.73	301.97	1699.91	9.85	-7.39	9.85	12.32	323.12	0.16
1800.00	0.78	307.26	1799.90	10.60	-8.47	10.60	13.57	321.37	0.09

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.47	295.61	1899.90	11.19	-9.38	11.19	14.60	320.01	0.33
2000.00	0.38	287.94	1999.89	11.47	-10.07	11.47	15.27	318.71	0.11
2100.00	0.53	289.88	2099.89	11.73	-10.83	11.73	15.96	317.29	0.15
2200.00	0.43	252.71	2199.89	11.78	-11.62	11.78	16.54	315.39	0.32
2300.00	0.41	265.41	2299.89	11.64	-12.33	11.64	16.95	313.35	0.09
2400.00	0.55	110.46	2399.88	11.44	-12.23	11.44	16.75	313.09	0.94
2500.00	2.37	104.18	2499.85	10.77	-9.77	10.77	14.54	317.76	1.82
2600.00	2.44	119.11	2599.76	9.23	-5.91	9.23	10.96	327.35	0.63
2700.00	2.26	109.55	2699.68	7.53	-2.20	7.53	7.85	343.71	0.43
2800.00	1.96	109.65	2799.61	6.30	1.27	6.30	6.42	11.36	0.29
2900.00	1.77	105.53	2899.56	5.31	4.37	5.31	6.87	39.42	0.23
3000.00	2.02	89.12	2999.50	4.92	7.61	4.92	9.07	57.11	0.59
3100.00	1.39	73.93	3099.46	5.29	10.54	5.29	11.79	63.37	0.77
3200.00	1.53	72.15	3199.43	6.03	12.98	6.03	14.31	65.07	0.15
3300.00	1.78	80.18	3299.38	6.71	15.79	6.71	17.15	66.98	0.34
3400.00	1.84	73.32	3399.33	7.43	18.86	7.43	20.27	68.49	0.23
3500.00	1.69	71.46	3499.29	8.36	21.80	8.36	23.35	69.01	0.17
3600.00	1.72	65.14	3599.24	9.46	24.55	9.46	26.31	68.92	0.19
3700.00	1.78	65.12	3699.20	10.75	27.32	10.75	29.36	68.53	0.07
3800.00	1.76	79.51	3799.15	11.68	30.25	11.68	32.42	68.88	0.44
3900.00	0.97	91.37	3899.12	11.94	32.60	11.94	34.72	69.88	0.84
4000.00	1.23	106.56	3999.10	11.61	34.47	11.61	36.37	71.38	0.39
4100.00	1.49	116.03	4099.07	10.74	36.67	10.74	38.21	73.68	0.34
4200.00	0.87	104.98	4199.05	9.97	38.57	9.97	39.84	75.50	0.66
4300.00	0.16	259.93	4299.05	9.75	39.17	9.75	40.36	76.02	1.01
4345.00	0.35	265.79	4344.05	9.73	38.97	9.73	40.17	75.98	0.44



VES Survey International
West Texas
(432) 563-5444
Surveyor: Noe Garza
Cotton Draw Unit 222H /API 30-015-42513



VES Survey Date: 1/23/2015



Directional Survey

Sub-Division DELAWARE BASIN	County EDDY	Field Name PADUCA	Region DELAWARE BASIN WEST	State/Province NM
Surface Legal Location SEC1 T25S R31E	API/ULI 3001542513	Latitude (°) 32° 9' 8.427" N	Longitude (°) 103° 44' 5.19" W	Ground Elev M... 3,451.50
				Orig KB Elev (ft) 3,476.50
				Tubing Head Elevation (ft)

Wellbores	Wellbore Name OH	Parent Wellbore OH	SAP Well ID 37726	Vertical Section Direction (°)
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Kick Offs & Key Depths	Date 1/23/2015	Type Kick Off	Top Depth (ftKB) 9,629.0
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Actual Deviation Survey GYRO, Proposed? No	Definitive? Yes	Proposed? No	Proposed Deviation Survey
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Deviation Survey					
Date 1/23/2015		Description GYRO			
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EW Tie In (ft)

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
1/23/2015	100.00	0.48	318.34	100.00	0.28	0.31	0.28	0.48	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	200.00	0.36	329.70	200.00	0.82	0.90	0.72	0.15	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	300.00	0.60	337.03	299.99	1.54	1.65	1.08	0.25	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	400.00	0.34	357.92	399.99	2.29	2.43	1.29	0.31	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	500.00	0.45	56.94	499.99	2.83	2.94	0.97	0.40	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	600.00	0.45	73.52	599.98	3.22	3.27	0.27	0.13	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	700.00	0.16	119.94	699.98	3.31	3.31	0.23	0.36	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	800.00	0.14	335.72	799.98	3.36	3.35	0.30	0.29	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	900.00	0.42	54.06	899.98	3.71	3.68	0.55	0.42	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,000.00	0.62	308.54	999.98	4.25	4.23	0.42	0.84	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,100.00	0.72	310.95	1,099.97	4.91	4.98	0.48	0.10	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,200.00	0.87	306.88	1,199.96	5.66	5.84	1.56	0.16	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,300.00	0.61	302.96	1,299.95	6.30	6.59	2.61	0.26	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,400.00	0.90	305.23	1,399.95	6.94	7.33	3.70	0.29	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,500.00	0.85	305.25	1,499.93	7.69	8.21	4.95	0.05	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,600.00	0.89	304.11	1,599.92	8.43	9.08	6.20	0.04	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,700.00	0.73	301.97	1,699.91	9.09	9.85	7.38	0.16	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,800.00	0.78	307.26	1,799.90	9.73	10.60	8.46	0.09	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	1,900.00	0.47	295.61	1,899.90	10.22	11.19	9.38	0.33	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,000.00	0.38	287.94	1,999.89	10.44	11.47	10.06	0.11	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,100.00	0.53	289.88	2,099.89	10.62	11.73	10.81	0.15	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,200.00	0.43	252.71	2,199.89	10.59	11.77	11.60	0.32	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,300.00	0.41	265.41	2,299.89	10.38	11.63	12.32	0.10	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,400.00	0.55	110.46	2,399.88	10.19	11.44	12.23	0.94	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,500.00	2.37	104.18	2,499.85	9.76	10.76	9.77	1.82	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,600.00	2.44	119.11	2,599.76	8.60	9.22	5.91	0.63	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,700.00	2.26	109.55	2,699.68	7.28	7.52	2.19	0.43	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,800.00	1.96	109.65	2,799.61	6.38	6.29	1.28	0.30	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	2,900.00	1.77	105.53	2,899.56	5.70	5.30	4.38	0.23	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,000.00	2.02	89.12	2,999.50	5.63	4.91	7.63	0.59	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,100.00	1.39	73.93	3,099.46	6.28	5.28	10.56	0.77	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,200.00	1.53	72.15	3,199.43	7.26	6.02	12.99	0.15	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,300.00	1.78	80.18	3,299.38	8.20	6.70	15.79	0.34	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,400.00	1.84	73.31	3,399.33	9.22	7.42	18.86	0.22	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,500.00	1.69	71.46	3,499.29	10.43	8.35	21.80	0.16	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,600.00	1.72	65.14	3,599.24	11.79	9.45	24.56	0.19	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,700.00	1.78	65.12	3,699.20	13.34	10.74	27.33	0.06	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,800.00	1.76	79.51	3,799.15	14.55	11.67	30.25	0.44	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	3,900.00	0.97	91.37	3,899.12	15.04	11.93	32.60	0.83	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	4,000.00	1.23	106.56	3,999.10	14.90	11.60	34.48	0.39	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	4,100.00	1.49	116.03	4,099.07	14.24	10.73	36.67	0.34	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	4,200.00	0.87	104.98	4,199.05	13.66	9.96	38.58	0.66	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	4,300.00	0.16	232.93	4,299.05	13.44	9.68	39.20	0.98	GYRO	VAUHG N ENERGY SERVICES
1/23/2015	4,345.00	0.35	265.79	4,344.05	13.37	9.63	39.01	0.52	GYRO	VAUHG N ENERGY SERVICES
1/25/2015	4,469.00	0.70	249.80	4,468.04	12.98	9.34	37.92	0.30	MWD	LEAM
1/25/2015	4,563.00	1.10	86.40	4,562.04	12.88	9.20	38.28	1.90	MWD	LEAM
1/25/2015	4,658.00	1.80	81.60	4,657.01	13.38	9.48	40.67	0.75	MWD	LEAM

COTTON DRAW UNIT 222H

DELAWARE BASIN UNRESTRICTED



Directional Survey

Sub-Division DELAWARE BASIN	County EDDY	Field Name PADUCA	Region DELAWARE BASIN WEST	State/Province NM
Surface Legal Location SEC1 T25S R31E	API/ULWI 3001542513	Latitude (°) 32° 9' 8.427" N	Longitude (°) 103° 44' 5.19" W	Ground Elev M. 3,451.50
				Orig KB Elev (ft) 3,476.50
				Tubing Head Elevation (ft)

Survey Data										
Date	MD (ft)	Incl (°)	Azm (°)	TVD (ft)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
1/25/2015	4,752.00	3.10	85.80	4,750.92	14.17	9.88	44.67	1.40	MWD	LEAM
1/25/2015	4,847.00	3.80	99.00	4,845.75	14.42	9.57	50.34	1.11	MWD	LEAM
1/25/2015	4,942.00	5.10	83.90	4,940.46	15.08	9.53	57.64	1.83	MWD	LEAM
1/25/2015	5,036.00	5.50	84.80	5,034.06	16.77	10.38	66.29	0.43	MWD	LEAM
1/25/2015	5,131.00	5.50	84.60	5,128.62	18.49	11.22	75.35	0.02	MWD	LEAM
1/25/2015	5,225.00	5.60	80.40	5,222.18	20.55	12.41	84.36	0.44	MWD	LEAM
1/25/2015	5,320.00	5.40	83.00	5,316.74	22.73	13.73	93.37	0.34	MWD	LEAM
1/25/2015	5,415.00	4.90	82.70	5,411.36	24.61	14.79	101.83	0.53	MWD	LEAM
1/25/2015	5,510.00	5.00	97.30	5,506.01	25.39	14.78	109.96	1.33	MWD	LEAM
1/25/2015	5,604.00	4.80	99.70	5,599.67	24.98	13.60	117.90	0.30	MWD	LEAM
1/25/2015	5,699.00	4.90	99.70	5,694.33	24.41	12.24	125.82	0.11	MWD	LEAM
1/25/2015	5,794.00	5.20	95.50	5,788.96	24.12	11.15	134.10	0.50	MWD	LEAM
1/25/2015	5,888.00	4.90	97.30	5,882.59	24.00	10.23	142.32	0.36	MWD	LEAM
1/25/2015	5,983.00	4.50	94.80	5,977.27	23.93	9.40	150.06	0.47	MWD	LEAM
1/26/2015	6,077.00	4.00	100.10	6,071.02	23.72	8.52	156.96	0.68	MWD	LEAM
1/26/2015	6,172.00	4.50	95.70	6,165.75	23.45	7.57	163.93	0.63	MWD	LEAM
1/26/2015	6,267.00	4.60	99.50	6,260.46	23.18	6.57	171.40	0.33	MWD	LEAM
1/26/2015	6,361.00	4.30	98.70	6,354.17	22.73	5.41	178.60	0.33	MWD	LEAM
1/26/2015	6,456.00	4.50	98.80	6,448.89	22.33	4.30	185.80	0.21	MWD	LEAM
1/26/2015	6,550.00	4.70	88.80	6,542.59	22.58	3.82	193.30	0.88	MWD	LEAM
1/26/2015	6,645.00	4.70	85.30	6,637.27	23.73	4.22	201.07	0.30	MWD	LEAM
1/26/2015	6,739.00	4.60	84.80	6,730.96	25.12	4.88	208.66	0.11	MWD	LEAM
1/26/2015	6,834.00	3.90	86.70	6,825.70	26.33	5.41	215.68	0.75	MWD	LEAM
1/26/2015	6,928.00	4.90	80.20	6,919.42	27.89	6.28	222.83	1.19	MWD	LEAM
1/26/2015	7,023.00	4.50	87.10	7,014.10	29.51	7.15	230.55	0.73	MWD	LEAM
1/26/2015	7,117.00	4.10	86.70	7,107.84	30.58	7.53	237.59	0.43	MWD	LEAM
1/26/2015	7,212.00	4.50	89.20	7,202.57	31.51	7.78	244.70	0.46	MWD	LEAM
1/26/2015	7,306.00	3.80	95.10	7,296.32	31.95	7.56	251.49	0.87	MWD	LEAM
1/26/2015	7,401.00	4.20	96.20	7,391.09	31.94	6.90	258.09	0.43	MWD	LEAM
1/26/2015	7,495.00	4.40	96.00	7,484.83	31.87	6.15	265.09	0.21	MWD	LEAM
1/26/2015	7,590.00	3.90	100.10	7,579.58	31.59	5.20	271.90	0.61	MWD	LEAM
1/26/2015	7,685.00	5.50	96.40	7,674.26	31.27	4.13	279.60	1.71	MWD	LEAM
1/26/2015	7,779.00	5.30	93.60	7,767.84	31.36	3.36	288.41	0.35	MWD	LEAM
1/26/2015	7,874.00	4.40	101.10	7,862.50	31.16	2.38	296.37	1.16	MWD	LEAM
1/26/2015	7,968.00	4.10	104.10	7,956.24	30.31	0.87	303.17	0.40	MWD	LEAM
1/26/2015	8,063.00	3.80	104.80	8,051.02	29.30	0.77	309.50	0.32	MWD	LEAM
1/26/2015	8,157.00	3.30	107.60	8,144.83	28.24	2.38	315.09	0.56	MWD	LEAM
1/26/2015	8,252.00	2.90	110.10	8,239.70	27.07	4.03	319.96	0.44	MWD	LEAM
1/26/2015	8,347.00	2.20	111.10	8,334.60	25.98	5.51	323.92	0.74	MWD	LEAM
1/27/2015	8,441.00	0.80	125.60	8,428.57	25.16	6.55	326.13	1.53	MWD	LEAM
1/27/2015	8,535.00	0.80	54.40	8,522.56	25.27	6.55	327.20	0.99	MWD	LEAM
1/27/2015	8,630.00	1.10	49.30	8,617.55	26.36	5.57	328.43	0.33	MWD	LEAM
1/27/2015	8,724.00	0.10	171.40	8,711.54	26.94	5.06	329.13	1.23	MWD	LEAM
1/27/2015	8,819.00	1.10	273.00	8,806.53	26.81	5.09	328.23	1.18	MWD	LEAM
1/27/2015	8,914.00	1.60	315.40	8,901.51	27.62	4.10	326.39	1.14	MWD	LEAM
1/27/2015	9,031.00	0.40	325.40	9,018.49	28.98	2.60	325.01	1.03	MWD	LEAM
1/27/2015	9,126.00	0.60	281.80	9,113.49	29.29	2.23	324.33	0.44	MWD	LEAM
1/27/2015	9,220.00	0.70	257.00	9,207.48	29.16	2.25	323.29	0.31	MWD	LEAM
1/27/2015	9,315.00	1.30	255.60	9,302.47	28.61	2.65	321.68	0.63	MWD	LEAM
1/27/2015	9,410.00	1.80	269.30	9,397.43	28.07	2.94	319.15	0.65	MWD	LEAM
1/27/2015	9,504.00	0.50	277.30	9,491.41	27.93	2.91	317.26	1.39	MWD	LEAM
1/27/2015	9,599.00	0.80	287.50	9,586.40	28.08	2.65	316.22	0.34	MWD	LEAM
1/27/2015	9,694.00	4.80	353.50	9,681.28	32.10	1.50	315.14	4.77	MWD	LEAM
1/29/2015	9,725.00	6.30	353.50	9,712.14	35.03	4.48	314.80	4.84	MWD	LEAM
1/29/2015	9,757.00	7.90	356.90	9,743.89	38.92	8.42	314.48	5.17	MWD	LEAM
1/29/2015	9,789.00	10.10	355.70	9,775.49	43.86	13.41	314.15	6.90	MWD	LEAM
1/29/2015	9,820.00	11.80	357.40	9,805.93	49.68	19.29	313.80	5.58	MWD	LEAM
1/29/2015	9,852.00	14.20	355.80	9,837.11	56.79	26.47	313.37	7.58	MWD	LEAM



COTTON DRAW UNIT 222H

DELAWARE BASIN UNRESTRICTED

Directional Survey

Sub-Division DELAWARE BASIN	County EDDY	Field Name PADUCA	Region DELAWARE BASIN WEST	State/Province NM
Surface Legal Location SEC1 T25S R31E	API/UWI 3001542513	Latitude (") 32° 9' 8.427" N	Longitude (") 103° 44' 5.19" W	Ground Elev M. 3,451.50
				Orig KB Elev (ft) 3,476.50
				Tubing Head Elevation (ft)

Survey Data										
Date	MD (ftKB)	Incl. (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (")/100ft	Survey Tool	Survey Company
1/29/2015	9,883.00	16.30	357.90	9,867.01	64.85	34.61	312.93	7.00	MWD	LEAM
1/29/2015	9,915.00	17.70	359.00	9,897.61	74.13	43.97	312.68	4.49	MWD	LEAM
1/30/2015	9,946.00	20.00	0.20	9,926.95	84.09	53.98	312.62	7.52	MWD	LEAM
1/30/2015	9,978.00	22.20	2.00	9,956.80	95.57	65.50	312.85	7.17	MWD	LEAM
1/30/2015	10,009.00	24.60	359.50	9,985.25	107.84	77.80	312.99	8.38	MWD	LEAM
1/30/2015	10,041.00	27.10	359.30	10,014.05	121.71	91.75	312.85	7.82	MWD	LEAM
1/30/2015	10,073.00	29.80	359.90	10,042.18	136.87	107.00	312.74	8.48	MWD	LEAM
1/30/2015	10,104.00	32.50	1.60	10,068.71	152.84	123.03	312.96	9.16	MWD	LEAM
1/30/2015	10,136.00	34.50	1.80	10,095.39	170.47	140.68	313.49	6.26	MWD	LEAM
1/30/2015	10,167.00	37.40	1.80	10,120.49	188.62	158.87	314.06	9.35	MWD	LEAM
1/30/2015	10,262.00	43.70	3.40	10,192.64	250.27	220.53	316.91	6.72	MWD	LEAM
1/30/2015	10,293.00	47.10	4.10	10,214.40	272.33	242.55	318.36	11.08	MWD	LEAM
1/30/2015	10,356.00	52.60	4.60	10,255.01	320.45	290.55	322.02	8.75	MWD	LEAM
1/30/2015	10,451.00	61.90	3.60	10,306.34	400.23	370.15	327.69	9.83	MWD	LEAM
1/30/2015	10,482.00	66.50	2.90	10,319.83	428.11	398.01	329.27	14.98	MWD	LEAM
1/30/2015	10,514.00	69.90	2.70	10,331.71	457.79	427.68	330.72	10.64	MWD	LEAM
1/30/2015	10,546.00	72.50	2.00	10,342.02	488.03	457.95	331.96	8.38	MWD	LEAM
1/30/2015	10,577.00	76.50	2.20	10,350.31	517.84	487.79	333.06	12.92	MWD	LEAM
1/30/2015	10,609.00	80.20	2.20	10,356.77	549.12	519.11	334.26	11.56	MWD	LEAM
1/30/2015	10,640.00	84.80	2.70	10,360.81	579.80	549.80	335.57	14.92	MWD	LEAM
1/30/2015	10,672.00	88.50	3.40	10,362.68	611.71	581.70	337.27	11.77	MWD	LEAM
1/30/2015	10,703.00	89.60	3.40	10,363.20	642.68	612.64	339.11	3.55	MWD	LEAM
1/30/2015	10,735.00	90.20	3.70	10,363.25	674.66	644.58	341.09	2.10	MWD	LEAM
1/30/2015	10,830.00	90.60	5.10	10,362.59	769.64	739.29	348.38	1.53	MWD	LEAM
1/31/2015	10,924.00	91.10	5.80	10,361.20	863.63	832.86	357.31	0.92	MWD	LEAM
1/31/2015	11,018.00	89.70	5.50	10,360.54	957.62	926.40	366.56	1.52	MWD	LEAM
1/31/2015	11,113.00	89.00	4.30	10,361.62	1,052.61	1,021.04	374.67	1.46	MWD	LEAM
1/31/2015	11,208.00	90.80	3.60	10,361.78	1,147.56	1,115.81	381.22	2.03	MWD	LEAM
1/31/2015	11,302.00	91.00	3.20	10,360.31	1,241.48	1,209.63	386.79	0.48	MWD	LEAM
1/31/2015	11,396.00	88.50	0.90	10,360.72	1,335.29	1,303.56	390.15	3.61	MWD	LEAM
1/31/2015	11,491.00	88.50	0.80	10,363.20	1,429.94	1,398.51	391.56	0.11	MWD	LEAM
1/31/2015	11,680.00	87.40	0.40	10,369.96	1,618.10	1,587.38	393.54	0.62	MWD	LEAM
1/31/2015	11,774.00	88.30	0.60	10,373.49	1,711.67	1,681.31	394.36	0.98	MWD	LEAM
1/31/2015	11,869.00	90.00	359.50	10,374.90	1,806.21	1,776.29	394.44	2.13	MWD	LEAM
1/31/2015	11,963.00	87.60	357.60	10,376.87	1,899.47	1,870.23	392.07	3.26	MWD	LEAM
1/31/2015	12,058.00	89.20	358.80	10,379.52	1,993.64	1,965.14	389.08	2.10	MWD	LEAM
1/31/2015	12,153.00	89.30	358.50	10,380.76	2,087.94	2,060.11	386.85	0.33	MWD	LEAM
1/31/2015	12,247.00	90.00	0.60	10,381.34	2,181.42	2,154.10	386.11	2.35	MWD	LEAM
1/31/2015	12,342.00	90.80	2.20	10,380.68	2,276.16	2,249.06	388.43	1.88	MWD	LEAM
1/31/2015	12,437.00	90.30	2.00	10,379.76	2,370.98	2,344.00	391.91	0.57	MWD	LEAM
1/31/2015	12,531.00	86.70	2.30	10,382.22	2,464.76	2,437.88	395.43	3.84	MWD	LEAM
2/1/2015	12,626.00	85.50	2.90	10,388.69	2,559.41	2,532.56	399.73	1.41	MWD	LEAM
2/1/2015	12,720.00	86.70	3.20	10,395.08	2,653.10	2,626.21	404.72	1.32	MWD	LEAM
2/1/2015	12,815.00	89.70	6.40	10,398.06	2,748.02	2,720.81	412.67	4.62	MWD	LEAM
2/2/2015	12,906.00	90.40	6.40	10,397.98	2,839.01	2,811.24	422.81	0.77	MWD	LEAM
2/2/2015	13,000.00	90.60	5.00	10,397.16	2,933.01	2,904.77	432.15	1.50	MWD	LEAM
2/2/2015	13,095.00	89.20	0.80	10,397.33	3,027.88	2,999.62	436.95	4.66	MWD	LEAM
2/2/2015	13,189.00	89.20	1.50	10,398.64	3,121.59	3,093.59	438.84	0.74	MWD	LEAM
2/2/2015	13,284.00	89.80	1.30	10,399.47	3,216.34	3,188.56	441.16	0.67	MWD	LEAM
2/2/2015	13,378.00	90.00	1.50	10,399.63	3,310.09	3,282.53	443.46	0.30	MWD	LEAM
2/2/2015	13,473.00	90.80	2.50	10,398.97	3,404.90	3,377.47	446.77	1.35	MWD	LEAM
2/2/2015	13,567.00	90.70	0.90	10,397.74	3,498.67	3,471.42	449.56	1.71	MWD	LEAM
2/2/2015	13,662.00	91.50	1.30	10,395.92	3,593.36	3,566.38	451.38	0.94	MWD	LEAM
2/2/2015	13,757.00	90.40	359.90	10,394.34	3,687.99	3,661.36	452.38	1.87	MWD	LEAM
2/2/2015	13,851.00	91.00	359.50	10,393.19	3,781.49	3,755.35	451.89	0.77	MWD	LEAM
2/2/2015	13,946.00	90.60	0.20	10,391.87	3,876.00	3,850.34	451.64	0.85	MWD	LEAM
2/3/2015	14,040.00	90.50	0.20	10,390.96	3,969.59	3,944.34	451.97	0.11	MWD	LEAM
2/3/2015	14,135.00	91.50	1.50	10,389.31	4,064.25	4,039.31	453.38	1.73	MWD	LEAM



Directional Survey

Sub-Division DELAWARE BASIN	County EDDY	Field Name PADUCA	Region DELAWARE BASIN WEST	State/Province NM
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				Orig KB Elev (ft) 3,476.50
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Survey Data											
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company	
2/3/2015	14,229.00	91.50	1.10	10,386.85	4,157.95	4,133.25	455.51	0.43	MWD	LEAM	
2/3/2015	14,323.00	90.50	1.60	10,385.21	4,251.68	4,227.21	457.72	1.19	MWD	LEAM	
2/3/2015	14,417.00	90.20	2.20	10,384.63	4,345.48	4,321.16	460.84	0.71	MWD	LEAM	
2/3/2015	14,512.00	90.60	0.90	10,383.97	4,440.25	4,416.12	463.41	1.43	MWD	LEAM	
2/3/2015	14,606.00	89.30	0.40	10,384.05	4,533.90	4,510.11	464.47	1.48	MWD	LEAM	
2/3/2015	14,700.00	89.50	0.80	10,385.03	4,627.54	4,604.10	465.46	0.48	MWD	LEAM	
2/3/2015	14,795.00	90.50	1.80	10,385.03	4,722.27	4,699.07	467.61	1.49	MWD	LEAM	
2/3/2015	14,862.00	89.20	1.10	10,385.21	4,789.10	4,766.05	469.31	2.20	MWD	LEAM	
2/3/2015	14,919.00	89.20	1.10	10,386.01	4,845.92	4,823.03	470.40	0.00	BIT	LEAM	