

Well Name: COTTON DRAW UNIT 99

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST	Field Name PADUCA NORTHWEST		County EDDY	State/Province NM	
Surface Legal Location SEC36 T24S R31E		APN/MI 3001542770	Latitude (°) 32° 10' 48.204" N	Longitude (°) 103° 43' 47.825" W	Orig KB Elevation (ft) 3,533.30	Ground Elev MSL (ft) 3,508.30	KB - GL (ft) 25.00
Wellbores							
Wellbore Name OH	Parent Wellbore OH		SAP Well ID 37623		Vertical Section Direction (°)		
Kick Offs & Key Depths					NM OIL CONSERVATION		
Date			Type	Top Depth (ftKB)			
Actual Deviation Survey GYRO AND MWD, Proposed? No			Definitive? Yes	Proposed? No	Proposed Deviation Survey		
Deviation Survey			JUN 23 20				
Date 1/4/2015		Description GYRO AND MWD					
MD Tie In (ftKB)		TVD Tie In (ftKB)	Inclination Tie In (°)		Azimuth Tie In (°)		NS Tie In (ft)
							EW Tie In (ft)
Survey Data							
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)
1/4/2015	51.55	0.40	161.48	51.55	0.18	-0.17	0.06
1/4/2015	145.96	0.54	199.95	145.96	0.84	-0.90	0.01
1/4/2015	240.37	0.57	255.25	240.36	1.10	-1.44	-0.60
1/4/2015	334.78	0.99	277.03	334.76	0.64	-1.46	-1.86
1/4/2015	429.19	1.02	233.30	429.18	0.44	-1.86	-3.34
1/4/2015	523.60	1.28	195.92	523.55	1.48	-3.38	-4.31
1/4/2015	618.01	1.06	224.35	617.94	2.65	-5.02	-5.21
1/4/2015	712.42	1.38	202.36	712.33	3.80	-6.89	-6.25
1/4/2015	800.11	1.35	204.41	800.00	5.25	-8.61	-7.08
1/4/2015	806.83	1.35	204.57	806.72	5.36	-8.75	-7.14
1/4/2015	901.24	0.94	242.29	901.11	6.19	-10.12	-8.29
1/4/2015	995.65	0.89	204.13	995.51	6.76	-11.15	-9.28
1/4/2015	1,090.06	0.89	247.58	1,089.91	7.27	-12.10	-10.25
1/4/2015	1,184.47	0.77	196.42	1,184.31	7.76	-12.99	-11.11
1/4/2015	1,278.88	0.69	188.69	1,278.71	8.74	-14.16	-11.38
1/4/2015	1,373.29	0.61	179.69	1,373.11	9.69	-15.23	-11.46
1/4/2015	1,467.70	0.67	260.26	1,467.52	10.04	-15.82	-12.00
1/4/2015	1,562.11	0.67	249.64	1,561.92	9.89	-16.11	-13.06
1/4/2015	1,656.52	0.66	258.28	1,656.33	9.77	-16.41	-14.11
1/4/2015	1,750.93	0.59	276.37	1,750.73	9.44	-16.47	-15.13
1/4/2015	1,845.34	0.38	220.16	1,845.14	9.35	-16.65	-15.81
1/4/2015	1,939.75	0.37	231.80	1,939.55	9.57	-17.08	-16.25
1/4/2015	2,034.16	0.45	238.66	2,033.95	9.71	-17.46	-16.81
1/4/2015	2,128.57	0.39	234.93	2,128.36	9.84	-17.84	-17.39
1/4/2015	2,222.98	0.85	271.79	2,222.77	9.62	-18.00	-18.35
1/4/2015	2,317.39	0.96	270.94	2,317.16	9.02	-17.97	-19.84
1/4/2015	2,411.80	0.88	269.01	2,411.56	8.44	-17.97	-21.36
1/4/2015	2,506.21	0.48	210.84	2,505.97	8.41	-18.32	-22.29
1/4/2015	2,600.62	0.51	217.27	2,600.37	8.86	-18.99	-22.74
1/4/2015	2,695.03	0.67	257.96	2,694.78	8.97	-19.44	-23.54
1/4/2015	2,789.44	0.78	177.88	2,789.18	9.48	-20.20	-24.05
1/4/2015	2,883.85	0.90	164.97	2,883.58	10.81	-21.56	-23.84
1/4/2015	2,978.26	1.06	170.28	2,977.98	12.40	-23.14	-23.50
1/4/2015	3,072.67	0.89	213.48	3,072.38	13.86	-24.61	-23.75
1/4/2015	3,167.08	0.68	217.57	3,166.78	14.35	-25.66	-24.50
1/4/2015	3,261.49	0.85	189.48	3,261.18	15.23	-26.80	-24.96
1/4/2015	3,355.90	0.63	263.63	3,355.58	15.68	-27.55	-25.59
1/4/2015	3,450.31	0.68	318.37	3,449.99	15.00	-27.19	-26.48
1/4/2015	3,544.72	0.21	294.63	3,544.40	14.35	-26.69	-27.01
1/4/2015	3,639.13	1.03	306.38	3,638.80	13.50	-28.12	-27.85
1/4/2015	3,733.54	1.22	303.11	3,733.19	11.94	-25.07	-26.37
1/4/2015	3,827.95	0.97	299.89	3,827.58	10.48	-24.12	-30.91
1/4/2015	3,922.36	0.93	96.85	3,921.99	10.22	-23.81	-30.84
1/4/2015	4,016.77	2.45	83.80	4,016.36	11.16	-23.69	-28.07
1/4/2015	4,111.18	3.23	74.72	4,110.65	12.06	-22.77	-23.50
1/4/2015	4,205.59	3.61	91.53	4,204.89	13.60	-22.15	-17.96
1/4/2015	4,239.98	3.95	93.95	4,239.21	14.57	-22.26	-15.70
1/4/2015	4,310.00	3.40	99.68	4,309.08	16.75	-22.77	-11.25
1/4/2015	4,430.00	2.59	114.81	4,428.92	20.63	-24.51	-5.28
1/4/2015	4,525.00	3.08	106.55	4,523.81	23.81	-26.14	-0.88
1/4/2015	4,619.00	3.92	87.28	4,617.63	26.49	-26.70	4.75
1/4/2015	4,714.00	3.53	93.52	4,712.43	28.87	-26.73	10.91
1/4/2015	4,808.00	1.97	104.48	4,806.32	31.11	-27.31	15.36
1/4/2015	4,903.00	1.11	100.22	4,901.29	32.59	-27.88	17.85
1/4/2015	4,997.00	0.58	97.07	4,995.28	33.31	-28.10	19.22
1/4/2015	5,092.00	0.58	81.09	5,090.27	33.66	-28.09	20.16
1/4/2015	5,186.00	0.51	85.83	5,184.27	33.90	-27.99	21.03
1/4/2015	5,281.00	0.66	75.17	5,279.26	34.10	-27.82	21.98
1/4/2015	5,375.00	0.58	99.26	5,373.26	34.43	-27.75	22.97
1/4/2015	5,470.00	0.60	94.68	5,468.25	34.90	-27.87	23.94
1/4/2015	5,565.00	0.31	102.08	5,563.25	35.28	-27.97	24.69
1/4/2015	5,659.00	0.50	102.10	5,657.25	35.65	-28.11	25.34
1/4/2015	5,754.00	0.36	82.14	5,752.24	35.96	-28.15	26.04
1/4/2015	5,848.00	0.29	80.20	5,846.24	36.08	-28.08	26.53
1/4/2015	5,943.00	0.45	84.94	5,941.24	36.24	-28.01	27.11
1/4/2015	6,037.00	0.55	86.25	6,035.24	36.50	-27.95	27.93

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Directional Survey

DELAWARE BASIN WEST UNRESTRICTED

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Sub-Division DELAWARE BASIN WEST	Region BASIN WEST	Field Name PADUCA NORTHWEST	County EDDY	State/Province NM
Surface Legal Location SEC36 T24S R31E	API/AMI 3001542770	Latitude (°) 32° 10' 48.204" N	Longitude (°) 103° 43' 47.825" W	Orig KB Elevation (ft) 3,533.30
				Ground Elev MSL (ft) 3,508.30
				KB - GL (ft) 25.00

Survey Data										
Date	MO (ft/KB)	Ind (°)	Azm (°)	TVD (ft/KB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (ft/100ft)	Survey Tool	Survey Company
1/4/2015	6,132.00	0.30	68.80	6,130.23	36.65	-27.83	-28.61	0.29	MWD	WEATHERFORD
1/4/2015	6,226.00	0.50	71.81	6,224.23	36.88	-27.61	-29.23	0.21	MWD	WEATHERFORD
1/4/2015	6,321.00	0.29	102.78	6,319.23	36.85	-27.53	-29.86	0.31	MWD	WEATHERFORD
1/4/2015	6,415.00	0.30	90.02	6,413.23	37.09	-27.59	-30.34	0.07	MWD	WEATHERFORD
1/4/2015	6,510.00	0.49	121.25	6,508.23	37.51	-27.80	-30.93	0.30	MWD	WEATHERFORD
1/4/2015	6,604.00	0.45	108.56	6,602.22	38.07	-28.12	-31.63	0.12	MWD	WEATHERFORD
1/4/2015	6,699.00	0.35	84.06	6,697.22	38.40	-28.21	-32.27	0.21	MWD	WEATHERFORD
1/4/2015	6,794.00	0.22	129.36	6,792.22	38.64	-28.30	-32.70	0.26	MWD	WEATHERFORD
1/4/2015	6,888.00	0.60	136.31	6,886.22	39.26	-28.77	-33.18	0.41	MWD	WEATHERFORD
1/4/2015	6,983.00	0.49	126.45	6,981.21	40.07	-29.37	-33.85	0.15	MWD	WEATHERFORD
1/4/2015	7,078.00	0.45	121.47	7,076.21	40.72	-29.80	-34.49	0.06	MWD	WEATHERFORD
1/4/2015	7,172.00	0.50	135.57	7,170.21	41.40	-30.29	-35.10	0.13	MWD	WEATHERFORD
1/4/2015	7,267.00	0.47	175.03	7,265.20	42.16	-30.97	-35.42	0.35	MWD	WEATHERFORD
1/4/2015	7,361.00	0.45	166.00	7,359.20	42.89	-31.72	-35.54	0.06	MWD	WEATHERFORD
1/4/2015	7,456.00	0.49	171.13	7,454.20	43.66	-32.48	-35.70	0.06	MWD	WEATHERFORD
1/4/2015	7,551.00	0.58	169.26	7,549.19	44.52	-33.35	-35.85	0.10	MWD	WEATHERFORD
1/4/2015	7,645.00	0.84	176.23	7,643.19	45.64	-34.51	-35.98	0.29	MWD	WEATHERFORD
1/4/2015	7,739.00	0.92	157.45	7,737.17	47.05	-35.89	-36.32	0.32	MWD	WEATHERFORD
1/4/2015	7,834.00	0.88	157.00	7,832.16	48.54	-37.27	-36.89	0.04	MWD	WEATHERFORD
1/4/2015	7,928.00	0.72	168.75	7,926.15	49.84	-38.51	-37.29	0.24	MWD	WEATHERFORD
1/4/2015	8,022.00	1.04	175.31	8,020.14	51.23	-39.94	-37.48	0.36	MWD	WEATHERFORD
1/4/2015	8,117.00	0.38	243.51	8,115.14	52.07	-40.94	-37.27	1.02	MWD	WEATHERFORD
1/4/2015	8,211.00	0.35	243.79	8,209.13	52.12	-41.21	-36.73	0.03	MWD	WEATHERFORD
1/4/2015	8,306.00	0.22	230.11	8,304.13	52.19	-41.45	-36.33	0.15	MWD	WEATHERFORD
1/4/2015	8,400.00	0.41	190.98	8,398.13	52.52	-41.90	-36.13	0.29	MWD	WEATHERFORD
1/4/2015	8,494.00	0.59	215.21	8,492.13	53.06	-42.62	-35.78	0.29	MWD	WEATHERFORD
1/4/2015	8,589.00	0.25	240.60	8,587.13	53.35	-43.13	-35.32	0.40	MWD	WEATHERFORD
1/4/2015	8,684.00	0.55	277.05	8,682.12	53.15	-43.17	-34.69	0.40	MWD	WEATHERFORD
1/4/2015	8,778.00	0.45	243.89	8,776.12	52.95	-43.28	-33.91	0.32	MWD	WEATHERFORD
1/4/2015	8,873.00	0.80	244.57	8,871.11	53.01	-43.73	-32.97	0.37	MWD	WEATHERFORD
1/4/2015	8,967.00	0.87	258.51	8,965.10	52.91	-44.15	-31.68	0.23	MWD	WEATHERFORD
1/4/2015	9,062.00	0.65	276.38	9,060.10	52.55	-44.24	-30.52	0.41	MWD	WEATHERFORD
1/4/2015	9,157.00	0.91	295.48	9,155.09	51.77	-43.87	-29.39	0.45	MWD	WEATHERFORD
1/4/2015	9,252.00	0.56	341.88	9,250.08	50.75	-43.10	-28.56	0.70	MWD	WEATHERFORD
1/4/2015	9,346.00	1.24	304.09	9,344.07	49.44	-42.10	-27.58	0.92	MWD	WEATHERFORD
1/4/2015	9,441.00	0.51	226.46	9,439.06	48.73	-41.81	-26.42	1.30	MWD	WEATHERFORD
1/4/2015	9,535.00	0.44	207.92	9,533.06	48.11	-42.42	-25.95	0.18	MWD	WEATHERFORD
1/4/2015	9,630.00	0.25	263.98	9,628.06	49.29	-42.76	-25.57	0.38	MWD	WEATHERFORD
1/4/2015	9,724.00	0.56	235.47	9,722.05	49.33	-43.04	-24.99	0.38	MWD	WEATHERFORD
1/4/2015	9,819.00	0.25	223.82	9,817.05	49.51	-43.46	-24.46	0.34	MWD	WEATHERFORD
1/4/2015	9,913.00	0.71	192.61	9,911.05	50.07	-44.17	-24.19	0.55	MWD	WEATHERFORD
1/4/2015	10,008.00	0.47	320.62	10,006.05	50.18	-44.45	-23.82	1.12	MWD	WEATHERFORD
1/4/2015	10,039.00	0.58	321.35	10,037.04	49.90	-44.23	-23.64	0.36	MWD	WEATHERFORD
1/4/2015	10,071.00	0.21	286.68	10,069.04	49.71	-44.08	-23.48	1.33	MWD	WEATHERFORD
1/4/2015	10,102.00	0.16	283.54	10,100.04	49.65	-44.06	-23.38	0.16	MWD	WEATHERFORD
1/4/2015	10,124.00	0.18	218.31	10,122.04	49.65	-44.07	-23.34	0.78	MWD	WEATHERFORD
1/4/2015	10,288.00	0.36	231.22	10,286.04	49.90	-44.58	-22.79	0.13	MWD	WEATHERFORD
1/4/2015	10,382.00	0.56	229.88	10,380.04	50.12	-45.06	-22.21	0.21	MWD	WEATHERFORD
1/4/2015	10,477.00	0.77	229.74	10,475.03	50.46	-45.77	-21.37	0.22	MWD	WEATHERFORD
1/4/2015	10,572.00	0.59	226.62	10,570.02	50.83	-46.52	-20.53	0.19	MWD	WEATHERFORD
1/4/2015	10,667.00	0.30	203.35	10,665.02	51.18	-47.08	-20.07	0.35	MWD	WEATHERFORD
1/4/2015	10,682.00	0.50	212.86	10,680.02	51.24	-47.17	-20.02	1.40	MWD	WEATHERFORD
1/4/2015	10,750.00	0.50	212.86	10,748.02	51.58	-47.67	-19.70	0.00	BIT	WEATHERFORD