



Well Name: COTTON DRAW UNIT 252H

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST		Field Name PADUCA		County LEA		State/Province NM					
Surface Legal Location SEC7 T25S R32E		API/UWI 3002542619		Latitude (°) 32° 9' 6.501" N		Longitude (°) 103° 42' 41.512" W		Orig KB Elevation (ft) 3,474.70		Ground Elev MSL (ft) 3,447.70		KB - GL (ft) 27.00	
Wellbores													
Wellbore Name OH		Parent Wellbore OH				SAP Well ID 38527				Vertical Section Direction (°) 182.20			
Kick Offs & Key Depths													
Date 6/16/2015				Type CURVE				Top Depth (ftKB) 7,762.0					
Actual Deviation Survey EXTREME, Proposed? No				Definitive? No		Proposed? No		Proposed Deviation Survey					
Deviation Survey													
Date 6/7/2015		Description EXTREME											
MD Tie In (ftKB) 0.00		TVD Tie In (ftKB) 0.00		Inclination Tie In (°) 0.00		Azimuth Tie In (°) 0.00		NSTie In (ft) 0.00		EWTie In (ft) 0.00			

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Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
6/12/2015	135.00	0.70	246.50	135.00	0.36	-0.33	-0.76	0.52	MWD	EXTREME
6/12/2015	235.00	0.88	247.29	234.99	0.95	-0.87	-2.02	0.18	MWD	EXTREME
6/12/2015	358.00	0.70	257.49	357.98	1.53	-1.40	-3.63	0.19	MWD	EXTREME
6/12/2015	547.00	1.32	246.37	546.95	2.78	-2.52	-6.75	0.34	MWD	EXTREME
6/12/2015	643.00	1.00	249.97	642.93	3.57	-3.25	-8.55	0.34	MWD	EXTREME
6/12/2015	770.00	0.70	249.10	769.91	4.30	-3.91	-10.32	0.24	MWD	EXTREME
6/12/2015	966.00	0.21	214.50	965.90	5.07	-4.63	-11.64	0.28	MWD	EXTREME
6/12/2015	1,140.00	0.22	195.60	1,139.90	5.67	-5.21	-11.91	0.04	MWD	EXTREME
6/12/2015	1,330.00	0.31	179.97	1,329.90	6.53	-6.08	-12.01	0.06	MWD	EXTREME
6/12/2015	1,520.00	0.09	150.00	1,519.90	7.17	-6.72	-11.93	0.12	MWD	EXTREME
6/12/2015	1,710.00	0.09	88.48	1,709.90	7.29	-6.85	-11.71	0.05	MWD	EXTREME
6/12/2015	1,900.00	0.79	40.88	1,899.89	6.26	-5.85	-10.70	0.39	MWD	EXTREME
6/12/2015	2,091.00	0.48	36.71	2,090.88	4.57	-4.22	-9.36	0.16	MWD	EXTREME
6/12/2015	2,281.00	1.32	39.30	2,280.86	2.17	-1.88	-7.50	0.44	MWD	EXTREME
6/12/2015	2,471.00	3.21	52.31	2,470.70	-2.99	3.06	-1.90	1.02	MWD	EXTREME
6/12/2015	2,661.00	4.79	53.67	2,660.23	-11.34	11.01	8.70	0.83	MWD	EXTREME
6/12/2015	2,851.00	5.10	57.68	2,849.52	-21.07	20.23	22.22	0.24	MWD	EXTREME
6/12/2015	3,041.00	5.41	56.16	3,038.73	-31.12	29.73	36.80	0.18	MWD	EXTREME
6/12/2015	3,136.00	5.32	60.88	3,133.31	-36.05	34.37	44.37	0.47	MWD	EXTREME
6/12/2015	3,326.00	6.02	56.88	3,322.38	-46.39	44.10	60.41	0.42	MWD	EXTREME
6/12/2015	3,517.00	6.42	53.98	3,512.26	-58.78	55.85	77.43	0.27	MWD	EXTREME
6/12/2015	3,707.00	6.90	49.19	3,700.97	-73.14	69.56	94.66	0.39	MWD	EXTREME
6/12/2015	3,896.00	6.59	48.09	3,888.67	-88.43	84.22	111.33	0.18	MWD	EXTREME
6/12/2015	4,005.00	6.00	48.98	3,997.01	-96.69	92.14	120.28	0.55	MWD	EXTREME
6/12/2015	4,182.00	5.71	49.88	4,173.09	-108.95	103.88	133.99	0.17	MWD	EXTREME
6/12/2015	4,277.00	4.31	57.41	4,267.72	-114.17	108.85	140.61	1.63	MWD	EXTREME
6/12/2015	4,461.00	3.21	52.40	4,451.32	-121.41	115.72	150.52	0.62	MWD	EXTREME
6/12/2015	4,569.00	2.50	54.90	4,559.19	-124.78	118.92	154.84	0.67	MWD	EXTREME
6/12/2015	4,759.00	2.50	56.40	4,749.01	-129.71	123.60	161.69	0.03	MWD	EXTREME
6/12/2015	4,949.00	2.29	56.40	4,938.84	-134.36	127.99	168.30	0.11	MWD	EXTREME
6/12/2015	5,139.00	2.11	57.49	5,128.70	-138.57	131.97	174.41	0.10	MWD	EXTREME
6/12/2015	5,330.00	1.71	55.91	5,319.59	-142.26	135.46	179.74	0.21	MWD	EXTREME
6/12/2015	5,520.00	1.41	56.09	5,509.52	-145.31	138.35	184.02	0.16	MWD	EXTREME
6/12/2015	5,615.00	1.41	58.11	5,604.50	-146.66	139.62	185.99	0.05	MWD	EXTREME
6/12/2015	5,710.00	1.41	53.10	5,699.47	-148.05	140.94	187.91	0.13	MWD	EXTREME
6/12/2015	5,805.00	1.41	49.28	5,794.44	-149.58	142.40	189.73	0.10	MWD	EXTREME
6/12/2015	5,900.00	1.41	48.97	5,889.41	-151.18	143.93	191.50	0.01	MWD	EXTREME
6/12/2015	5,995.00	1.49	48.88	5,984.38	-152.83	145.51	193.31	0.08	MWD	EXTREME
6/12/2015	6,090.00	1.41	56.70	6,079.35	-154.35	146.97	195.22	0.22	MWD	EXTREME
6/12/2015	6,185.00	1.49	56.40	6,174.32	-155.75	148.29	197.23	0.08	MWD	EXTREME
6/12/2015	6,280.00	1.41	49.19	6,269.29	-157.27	149.74	199.14	0.21	MWD	EXTREME
6/12/2015	6,375.00	1.41	67.07	6,364.26	-158.57	150.96	201.10	0.46	MWD	EXTREME
6/12/2015	6,470.00	1.32	75.29	6,459.23	-159.38	151.69	203.24	0.23	MWD	EXTREME
6/12/2015	6,565.00	1.58	78.50	6,554.20	-160.01	152.23	205.58	0.29	MWD	EXTREME
6/12/2015	6,659.00	1.71	80.08	6,648.16	-160.61	152.73	208.23	0.15	MWD	EXTREME
6/12/2015	6,755.00	1.19	84.30	6,744.13	-161.05	153.08	210.63	0.55	MWD	EXTREME
6/12/2015	6,850.00	1.41	85.46	6,839.11	-161.32	153.27	212.78	0.23	MWD	EXTREME
6/12/2015	7,040.00	1.01	167.58	7,029.08	-159.98	151.82	215.47	0.85	MWD	EXTREME
6/12/2015	7,230.00	1.01	130.79	7,219.05	-157.31	149.09	217.10	0.34	MWD	EXTREME
6/12/2015	7,421.00	1.01	136.07	7,410.02	-155.09	146.77	219.54	0.05	MWD	EXTREME
6/12/2015	7,516.00	1.19	147.98	7,505.00	-153.70	145.34	220.64	0.31	MWD	EXTREME
6/12/2015	7,665.00	1.19	160.59	7,653.97	-150.98	142.56	221.98	0.18	MWD	EXTREME
6/12/2015	7,719.00	1.09	175.50	7,707.96	-149.95	141.52	222.21	0.58	MWD	EXTREME
6/12/2015	7,751.00	1.58	180.57	7,739.95	-149.21	140.78	222.22	1.57	MWD	EXTREME
6/12/2015	7,782.00	4.45	191.29	7,770.90	-147.59	139.17	221.98	9.39	MWD	EXTREME
6/12/2015	7,814.00	8.24	196.40	7,802.70	-144.14	135.75	221.09	11.96	MWD	EXTREME
6/12/2015	7,846.00	12.43	197.84	7,834.18	-138.60	130.27	219.39	13.12	MWD	EXTREME
6/12/2015	7,877.00	16.80	197.52	7,864.17	-131.06	122.82	217.02	14.10	MWD	EXTREME
6/12/2015	7,909.00	20.41	196.55	7,894.49	-121.19	113.06	214.04	11.32	MWD	EXTREME
6/12/2015	7,941.00	24.80	195.04	7,924.02	-109.24	101.22	210.70	13.84	MWD	EXTREME
6/12/2015	7,972.00	28.72	193.81	7,951.70	-95.60	87.71	207.24	12.77	MWD	EXTREME
6/12/2015	8,004.00	32.12	192.70	7,979.29	-79.70	71.94	203.53	10.77	MWD	EXTREME
6/12/2015	8,036.00	36.95	192.40	8,005.64	-61.86	54.23	199.59	15.10	MWD	EXTREME
6/12/2015	8,067.00	41.57	191.92	8,029.64	-42.54	35.06	195.47	14.94	MWD	EXTREME
6/12/2015	8,099.00	45.69	191.91	8,052.80	-20.78	13.46	190.91	12.88	MWD	EXTREME
6/12/2015	8,131.00	48.67	191.92	8,074.54	-2.35	-9.50	186.06	9.31	MWD	EXTREME

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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
6/12/2015	8,163.00	51.03	192.09	8,095.18	26.45	-33.43	180.97	7.39	MWD	EXTREME
6/12/2015	8,194.00	53.50	191.40	8,114.15	50.63	-57.43	175.99	8.16	MWD	EXTREME
6/12/2015	8,226.00	55.33	192.24	8,132.77	76.29	-82.90	170.65	6.10	MWD	EXTREME
6/12/2015	8,258.00	57.35	194.34	8,150.50	102.42	-108.81	164.53	8.35	MWD	EXTREME
6/12/2015	8,289.00	59.41	196.41	8,166.76	128.12	-134.26	157.52	8.75	MWD	EXTREME
6/12/2015	8,321.00	63.01	198.11	8,182.17	155.19	-161.04	149.20	12.17	MWD	EXTREME
6/12/2015	8,353.00	66.03	199.02	8,195.93	182.90	-188.42	140.00	9.78	MWD	EXTREME
6/12/2015	8,384.00	68.67	199.84	8,207.87	210.22	-215.39	130.48	8.86	MWD	EXTREME
6/12/2015	8,416.00	72.75	199.63	8,218.44	239.02	-243.82	120.29	12.77	MWD	EXTREME
6/12/2015	8,448.00	76.95	199.57	8,226.80	268.49	-272.91	109.93	13.13	MWD	EXTREME
6/12/2015	8,480.00	81.72	199.12	8,232.72	298.53	-302.57	99.51	14.97	MWD	EXTREME
6/12/2015	8,511.00	86.29	197.04	8,235.96	328.17	-331.87	89.95	16.18	MWD	EXTREME
6/12/2015	8,543.00	89.37	193.82	8,237.17	359.29	-362.69	81.45	13.92	MWD	EXTREME
6/12/2015	8,575.00	90.77	190.83	8,237.13	390.79	-393.95	74.62	10.32	MWD	EXTREME
6/12/2015	8,614.00	91.82	187.43	8,236.25	429.49	-432.44	68.43	9.12	MWD	EXTREME
6/12/2015	8,646.00	92.94	186.65	8,234.92	461.35	-464.17	64.51	4.26	MWD	EXTREME
6/12/2015	8,677.00	93.85	186.50	8,233.08	492.20	-494.91	60.97	2.97	MWD	EXTREME
6/12/2015	8,709.00	94.19	185.93	8,230.84	524.05	-526.64	57.51	2.07	MWD	EXTREME
6/12/2015	8,741.00	94.68	185.28	8,228.37	555.89	-558.39	54.40	2.54	MWD	EXTREME
6/12/2015	8,772.00	94.68	184.28	8,225.84	586.76	-589.18	51.82	3.22	MWD	EXTREME
6/12/2015	8,804.00	94.55	183.13	8,223.26	618.64	-621.01	49.76	3.61	MWD	EXTREME
6/12/2015	8,836.00	93.92	181.28	8,220.90	650.55	-652.90	48.53	6.09	MWD	EXTREME
6/12/2015	8,868.00	93.36	179.79	8,218.87	682.47	-684.83	48.23	4.97	MWD	EXTREME
6/12/2015	8,899.00	93.22	179.20	8,217.09	713.39	-715.78	48.51	1.95	MWD	EXTREME
6/12/2015	8,931.00	92.24	178.29	8,215.56	745.29	-747.73	49.21	4.18	MWD	EXTREME
6/12/2015	8,963.00	90.77	177.13	8,214.72	777.18	-779.70	50.49	5.85	MWD	EXTREME
6/12/2015	8,994.00	89.23	176.66	8,214.72	808.05	-810.65	52.16	5.19	MWD	EXTREME
6/12/2015	9,026.00	87.41	176.07	8,215.66	839.87	-842.57	54.19	5.98	MWD	EXTREME
6/12/2015	9,058.00	85.94	176.89	8,217.52	871.65	-874.45	56.15	5.26	MWD	EXTREME
6/12/2015	9,090.00	84.88	177.38	8,220.08	903.43	-906.31	57.75	3.65	MWD	EXTREME
6/12/2015	9,121.00	85.73	178.96	8,222.62	934.24	-937.19	58.73	5.77	MWD	EXTREME
6/12/2015	9,153.00	86.57	181.26	8,224.76	966.15	-969.12	58.67	7.64	MWD	EXTREME
6/12/2015	9,185.00	86.99	182.02	8,226.56	998.10	-1,001.05	57.76	2.71	MWD	EXTREME
6/12/2015	9,216.00	87.83	182.71	8,227.96	1,029.06	-1,031.99	56.48	3.51	MWD	EXTREME
6/12/2015	9,248.00	89.09	182.61	8,228.82	1,061.05	-1,063.95	55.00	3.95	MWD	EXTREME
6/12/2015	9,280.00	90.28	183.44	8,229.00	1,093.05	-1,095.90	53.31	4.53	MWD	EXTREME
6/12/2015	9,343.00	90.63	184.29	8,228.50	1,156.02	-1,158.75	49.06	1.46	MWD	EXTREME
6/12/2015	9,438.00	90.56	184.63	8,227.51	1,250.94	-1,253.46	41.67	0.37	MWD	EXTREME
6/12/2015	9,533.00	90.91	184.91	8,226.29	1,345.83	-1,348.12	33.78	0.47	MWD	EXTREME
6/12/2015	9,628.00	90.91	184.27	8,224.78	1,440.74	-1,442.81	26.17	0.67	MWD	EXTREME
6/12/2015	9,723.00	90.56	184.08	8,223.57	1,535.67	-1,537.55	19.26	0.42	MWD	EXTREME
6/12/2015	9,818.00	90.49	184.15	8,222.69	1,630.62	-1,632.30	12.44	0.10	MWD	EXTREME
6/12/2015	9,913.00	89.51	184.40	8,222.69	1,725.55	-1,727.03	5.36	1.06	MWD	EXTREME
6/12/2015	10,008.00	90.77	185.02	8,222.46	1,820.46	-1,821.71	-2.44	1.48	MWD	EXTREME
6/12/2015	10,103.00	90.21	185.76	8,221.65	1,915.31	-1,916.28	-11.36	0.98	MWD	EXTREME
6/12/2015	10,199.00	89.72	185.95	8,221.71	2,011.11	-2,011.78	-21.16	0.55	MWD	EXTREME
6/12/2015	10,294.00	89.93	186.87	8,222.00	2,105.86	-2,106.19	-31.76	0.99	MWD	EXTREME
6/12/2015	10,389.00	89.86	185.66	8,222.17	2,200.61	-2,200.62	-42.13	1.28	MWD	EXTREME
6/12/2015	10,484.00	90.56	186.48	8,221.83	2,295.40	-2,295.08	-52.18	1.13	MWD	EXTREME
6/12/2015	10,579.00	90.14	185.41	8,221.24	2,390.19	-2,389.57	-62.01	1.21	MWD	EXTREME
6/12/2015	10,674.00	89.86	184.85	8,221.24	2,485.06	-2,484.19	-70.51	0.66	MWD	EXTREME
6/12/2015	10,769.00	90.42	183.74	8,221.01	2,580.00	-2,578.92	-77.62	1.31	MWD	EXTREME
6/12/2015	10,864.00	91.19	183.69	8,219.68	2,674.96	-2,673.71	-83.78	0.81	MWD	EXTREME
6/12/2015	10,959.00	89.30	182.45	8,219.27	2,769.94	-2,768.57	-88.87	2.38	MWD	EXTREME
6/12/2015	11,054.00	89.86	182.93	8,219.97	2,864.93	-2,863.46	-93.32	0.78	MWD	EXTREME
6/12/2015	11,149.00	89.86	183.49	8,220.20	2,959.92	-2,958.31	-98.64	0.59	MWD	EXTREME
6/12/2015	11,244.00	90.42	183.41	8,219.97	3,054.89	-3,053.14	-104.36	0.60	MWD	EXTREME
6/12/2015	11,339.00	91.33	183.79	8,218.52	3,149.85	-3,147.94	-110.32	1.04	MWD	EXTREME
6/12/2015	11,434.00	91.68	183.19	8,216.02	3,244.79	-3,242.73	-116.11	0.73	MWD	EXTREME
6/12/2015	11,529.00	91.26	182.28	8,213.59	3,339.76	-3,337.59	-120.64	1.05	MWD	EXTREME
6/12/2015	11,624.00	89.23	179.99	8,213.18	3,434.73	-3,432.56	-122.52	3.22	MWD	EXTREME
6/12/2015	11,719.00	89.93	180.08	8,213.88	3,529.66	-3,527.55	-122.58	0.74	MWD	EXTREME
6/12/2015	11,814.00	90.91	180.74	8,213.18	3,624.61	-3,622.55	-123.26	1.24	MWD	EXTREME
6/12/2015	11,909.00	90.91	181.15	8,211.67	3,719.57	-3,717.52	-124.82	0.43	MWD	EXTREME
6/12/2015	12,004.00	89.93	180.71	8,210.97	3,814.55	-3,812.50	-126.36	1.13	MWD	EXTREME
6/12/2015	12,099.00	89.93	179.74	8,211.09	3,909.49	-3,907.50	-126.74	1.02	MWD	EXTREME
6/12/2015	12,194.00	88.88	181.12	8,212.08	4,004.43	-4,002.49	-127.45	1.83	MWD	EXTREME
6/12/2015	12,290.00	90.28	182.38	8,212.78	4,100.42	-4,098.44	-130.38	1.96	MWD	EXTREME
6/12/2015	12,385.00	90.14	182.29	8,212.43	4,195.42	-4,193.36	-134.25	0.18	MWD	EXTREME
6/12/2015	12,480.00	91.40	183.71	8,211.16	4,290.40	-4,288.22	-139.22	2.00	MWD	EXTREME
6/12/2015	12,575.00	91.68	182.86	8,208.60	4,385.35	-4,383.03	-144.67	0.94	MWD	EXTREME
6/12/2015	12,670.00	91.68	183.04	8,205.82	4,480.30	-4,477.86	-149.55	0.19	MWD	EXTREME
6/12/2015	12,765.00	92.31	182.96	8,202.51	4,575.23	-4,572.67	-154.52	0.67	MWD	EXTREME
6/12/2015	12,860.00	90.91	183.14	8,199.84	4,670.18	-4,667.50	-159.57	1.49	MWD	EXTREME
6/12/2015	12,954.00	89.79	181.82	8,199.27	4,764.18	-4,761.40	-163.64	1.84	MWD	EXTREME
6/12/2015	13,024.00	89.79	181.82	8,199.52	4,834.17	-4,831.37	-165.86	0.00	BIT	EXTREME