

30-015-42414

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 11 T25S R31E	API/UWI 3001542414	Latitude (°) 32° 9' 5.946" N	Longitude (°) 103° 45' 13.02" W	Ground Elev... 3,416.90
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,441.90
				Tubing Head Elevation (ft)

Wellbores				
Wellbore Name OH	Parent Wellbore OH	SAP Well ID	Kick Off Depth (ftKB)	Vertical Section Direction (°) 182.56
Actual Deviation Survey EXTREME, Proposed? No		Definitive? Yes	Proposed? No	Proposed Deviation Survey

Deviation Survey				
Date 9/20/2014	Description EXTREME			
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)	DLS (°/100ft)	Survey Tool	Survey Company
9/20/2014	169.00	0.48	25.65	169.00	-0.65	0.64	0.31	0.28	MWD	EXTREME
9/20/2014	265.00	0.62	353.75	264.99	-1.53	1.52	0.42	0.34	MWD	EXTREME
9/20/2014	329.00	0.70	19.54	328.99	-2.25	2.23	0.52	0.48	MWD	EXTREME
9/20/2014	391.00	1.01	357.13	390.98	-3.16	3.13	0.62	0.73	MWD	EXTREME
9/20/2014	452.00	0.88	357.53	451.97	-4.16	4.14	0.57	0.21	MWD	EXTREME
9/20/2014	513.00	1.19	19.76	512.96	-5.23	5.20	0.76	0.82	MWD	EXTREME
9/20/2014	574.00	1.10	19.54	573.95	-6.40	6.35	1.17	0.15	MWD	EXTREME
9/20/2014	710.00	0.70	28.16	709.94	-8.39	8.31	2.00	0.31	MWD	EXTREME
9/20/2014	832.00	0.62	31.54	831.93	-9.64	9.53	2.70	0.07	MWD	EXTREME
9/20/2014	924.00	0.48	43.45	923.92	-10.37	10.24	3.22	0.20	MWD	EXTREME
9/20/2014	1,016.00	0.70	12.16	1,015.92	-11.21	11.06	3.61	0.42	MWD	EXTREME
9/20/2014	1,106.00	0.48	43.76	1,105.91	-12.04	11.87	3.98	0.43	MWD	EXTREME
9/20/2014	1,199.00	0.62	28.86	1,198.91	-12.78	12.60	4.50	0.21	MWD	EXTREME
9/20/2014	1,387.00	0.40	61.73	1,386.90	-14.03	13.80	5.57	0.19	MWD	EXTREME
9/20/2014	1,576.00	0.62	44.64	1,575.90	-15.13	14.84	6.86	0.14	MWD	EXTREME
9/20/2014	1,670.00	0.40	48.85	1,669.89	-15.73	15.42	7.47	0.24	MWD	EXTREME
9/20/2014	1,764.00	0.70	44.55	1,763.89	-16.39	16.04	8.12	0.32	MWD	EXTREME
9/20/2014	1,856.00	0.40	45.73	1,855.88	-17.04	16.67	8.74	0.33	MWD	EXTREME
9/20/2014	1,949.00	0.70	50.52	1,948.88	-17.66	17.25	9.41	0.33	MWD	EXTREME
9/20/2014	2,044.00	0.70	52.15	2,043.87	-18.42	17.98	10.32	0.02	MWD	EXTREME
9/20/2014	2,173.00	0.62	80.36	2,172.86	-19.08	18.58	11.63	0.26	MWD	EXTREME
9/20/2014	2,515.00	0.62	103.35	2,514.84	-19.13	18.46	15.26	0.07	MWD	EXTREME
9/20/2014	2,804.00	0.40	76.23	2,803.83	-19.12	18.34	17.76	0.11	MWD	EXTREME
9/20/2014	3,089.00	0.40	36.24	3,088.83	-20.22	19.38	19.31	0.10	MWD	EXTREME
9/20/2014	3,277.00	1.01	70.12	3,276.81	-21.40	20.47	21.26	0.38	MWD	EXTREME
9/20/2014	3,484.00	0.79	66.56	3,483.79	-22.72	21.66	24.28	0.11	MWD	EXTREME
9/20/2014	3,767.00	1.80	67.14	3,766.71	-25.49	24.16	30.17	0.36	MWD	EXTREME
9/20/2014	4,047.00	2.20	102.86	4,046.55	-26.42	24.68	39.46	0.46	MWD	EXTREME
9/20/2014	4,403.00	1.41	97.72	4,402.37	-24.80	22.57	50.46	0.23	MWD	EXTREME
9/20/2014	4,499.00	1.41	98.25	4,498.34	-24.58	22.24	52.80	0.01	MWD	EXTREME
9/20/2014	4,592.00	1.49	97.15	4,591.31	-24.37	21.92	55.13	0.09	MWD	EXTREME
10/1/2014	4,687.00	1.58	100.84	4,686.28	-24.08	21.52	57.65	0.14	MWD	EXTREME
10/1/2014	4,783.00	1.32	104.83	4,782.25	-23.65	20.99	60.01	0.29	MWD	EXTREME
10/1/2014	4,877.00	1.19	107.83	4,876.22	-23.17	20.42	61.99	0.15	MWD	EXTREME
10/1/2014	4,972.00	1.19	103.96	4,971.20	-22.71	19.88	63.89	0.08	MWD	EXTREME
10/1/2014	5,066.00	1.10	105.24	5,065.18	-22.32	19.40	65.70	0.10	MWD	EXTREME
10/1/2014	5,160.00	1.10	103.04	5,159.17	-21.96	18.96	67.45	0.04	MWD	EXTREME
10/1/2014	5,254.00	1.10	105.06	5,253.15	-21.60	18.52	69.20	0.04	MWD	EXTREME
10/1/2014	5,348.00	0.88	102.73	5,347.14	-21.28	18.13	70.78	0.24	MWD	EXTREME
10/1/2014	5,442.00	1.01	104.05	5,441.12	-20.99	17.77	72.29	0.14	MWD	EXTREME
10/1/2014	5,536.00	1.01	99.26	5,535.11	-20.72	17.44	73.91	0.09	MWD	EXTREME
10/1/2014	5,630.00	0.88	90.34	5,629.10	-20.65	17.30	75.45	0.21	MWD	EXTREME
10/1/2014	5,725.00	0.79	91.74	5,724.09	-20.69	17.27	76.83	0.10	MWD	EXTREME
10/1/2014	5,819.00	0.88	93.55	5,818.08	-20.69	17.21	78.20	0.10	MWD	EXTREME
10/1/2014	5,913.00	0.79	89.55	5,912.07	-20.71	17.17	79.57	0.11	MWD	EXTREME
10/1/2014	6,007.00	0.79	78.83	6,006.06	-20.90	17.30	80.85	0.16	MWD	EXTREME
10/1/2014	6,101.00	0.62	85.45	6,100.05	-21.12	17.47	81.99	0.20	MWD	EXTREME

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COTTON DRAW UNIT 225H

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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
10/1/2014	6,195.00	0.48	88.62	6,194.04	-21.21	17.52	82.90	0.15	MWD	EXTREME
10/1/2014	6,288.00	0.48	106.73	6,287.04	-21.14	17.41	83.66	0.16	MWD	EXTREME
10/1/2014	6,381.00	0.62	104.05	6,380.04	-20.94	17.18	84.52	0.15	MWD	EXTREME
10/1/2014	6,476.00	1.41	85.94	6,475.02	-20.97	17.14	86.18	0.89	MWD	EXTREME
10/1/2014	6,575.00	0.48	97.94	6,574.01	-21.08	17.17	87.81	0.96	MWD	EXTREME
10/1/2014	6,669.00	0.70	117.45	6,668.00	-20.80	16.85	88.71	0.31	MWD	EXTREME
10/1/2014	6,763.00	0.79	121.36	6,761.99	-20.24	16.25	89.77	0.11	MWD	EXTREME
10/1/2014	6,857.00	0.48	113.54	6,855.99	-19.79	15.75	90.69	0.34	MWD	EXTREME
10/1/2014	6,952.00	0.48	109.32	6,950.99	-19.53	15.46	91.43	0.04	MWD	EXTREME
10/1/2014	7,046.00	0.48	112.05	7,044.98	-19.29	15.18	92.16	0.02	MWD	EXTREME
10/1/2014	7,140.00	0.48	106.55	7,138.98	-19.06	14.92	92.91	0.05	MWD	EXTREME
10/1/2014	7,231.00	0.48	106.73	7,229.98	-18.88	14.70	93.64	0.00	MWD	EXTREME
10/1/2014	7,325.00	0.48	114.73	7,323.97	-18.63	14.43	94.37	0.07	MWD	EXTREME
10/1/2014	7,419.00	0.62	114.73	7,417.97	-18.29	14.05	95.19	0.15	MWD	EXTREME
10/1/2014	7,608.00	0.40	133.55	7,606.96	-17.47	13.17	96.60	0.14	MWD	EXTREME
10/1/2014	7,795.00	0.62	108.66	7,793.95	-16.76	12.39	98.03	0.16	MWD	EXTREME
10/1/2014	7,987.00	0.62	110.73	7,985.94	-16.15	11.69	99.98	0.01	MWD	EXTREME
10/1/2014	8,081.00	0.48	112.53	8,079.94	-15.86	11.36	100.82	0.15	MWD	EXTREME
10/1/2014	8,176.00	0.40	126.86	8,174.93	-15.54	11.01	101.46	0.14	MWD	EXTREME
10/1/2014	8,267.00	0.31	118.33	8,265.93	-15.25	10.70	101.93	0.11	MWD	EXTREME
10/1/2014	8,361.00	0.31	85.02	8,359.93	-15.17	10.60	102.40	0.19	MWD	EXTREME
10/1/2014	8,467.00	0.22	137.62	8,465.93	-15.07	10.48	102.83	0.23	MWD	EXTREME
10/1/2014	8,561.00	0.62	177.44	8,559.93	-14.43	9.84	102.97	0.50	MWD	EXTREME
10/1/2014	8,938.00	0.70	282.03	8,936.91	-12.78	8.28	100.81	0.28	MWD	EXTREME
10/1/2014	9,032.00	0.79	282.34	9,030.91	-12.98	8.54	99.62	0.10	MWD	EXTREME
10/1/2014	9,127.00	0.79	281.54	9,125.90	-13.20	8.81	98.33	0.01	MWD	EXTREME
10/1/2014	9,221.00	0.62	281.15	9,219.89	-13.37	9.04	97.20	0.18	MWD	EXTREME
10/1/2014	9,309.00	0.62	284.45	9,307.88	-13.54	9.25	96.27	0.04	MWD	EXTREME
10/1/2014	9,394.00	0.31	303.96	9,392.88	-13.76	9.49	95.64	0.40	MWD	EXTREME
10/1/2014	9,488.00	0.48	301.60	9,486.88	-14.08	9.84	95.09	0.18	MWD	EXTREME
10/9/2014	9,582.00	0.31	219.50	9,580.88	-14.07	9.85	94.59	0.57	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,613.00	2.69	198.73	9,611.86	-13.30	9.10	94.31	7.75	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,645.00	5.58	199.44	9,643.78	-11.09	6.92	93.55	9.03	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,677.00	8.75	203.99	9,675.52	-7.34	3.23	92.04	10.06	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,708.00	11.69	205.47	9,706.03	-2.25	-1.77	89.73	9.52	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,740.00	14.71	203.73	9,737.18	4.53	-8.41	86.70	9.52	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,771.00	17.52	206.00	9,766.96	12.48	-16.21	83.07	9.29	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,803.00	19.74	207.08	9,797.28	21.82	-25.35	78.50	7.02	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,834.00	22.99	207.30	9,826.15	32.08	-35.40	73.34	10.49	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,865.00	27.11	209.10	9,854.23	43.91	-46.95	67.12	13.51	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,928.00	33.58	208.99	9,908.57	72.38	-74.77	51.68	10.27	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,960.00	35.83	208.25	9,934.87	88.75	-90.76	42.96	7.15	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	9,991.00	37.26	208.76	9,959.78	105.35	-106.98	34.15	4.72	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,023.00	38.85	210.51	9,984.97	122.90	-124.12	24.39	6.00	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,054.00	39.41	210.76	10,009.02	140.17	-140.95	14.42	1.88	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,086.00	40.95	210.43	10,033.47	158.39	-158.72	3.91	4.86	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,117.00	42.60	210.35	10,056.59	176.65	-176.54	-6.53	5.33	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,149.00	45.37	209.17	10,079.61	196.42	-195.83	-17.56	9.03	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,180.00	47.90	208.91	10,100.89	216.59	-215.53	-28.50	8.18	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,212.00	50.02	207.76	10,121.90	238.33	-236.78	-39.95	7.16	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,275.00	53.35	207.68	10,160.96	283.06	-280.53	-62.94	5.29	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,306.00	55.62	209.50	10,178.96	305.73	-302.68	-75.01	8.74	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,369.00	59.61	211.00	10,212.70	352.82	-348.62	-101.82	6.64	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,401.00	62.20	210.29	10,228.26	377.49	-372.67	-116.07	8.32	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,432.00	63.46	209.97	10,242.42	401.94	-396.53	-129.92	4.17	MWD	SPERRY-SUN DRILLING SE...



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			KB - GL (ft) 25.00	Ong KB Elev (ft) 3,441.90
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ft)	Incl (°)	Azm (°)	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	DLS (ft/100)	Survey Tool	Survey Company
10/9/2014	10,463.00	64.69	207.98	10,255.97	426.91	-420.92	-143.42	7.01	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,495.00	65.35	207.29	10,269.48	453.18	-446.61	-156.87	2.84	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,526.00	66.29	205.69	10,282.18	479.03	-471.92	-169.48	5.60	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,558.00	66.51	204.03	10,294.99	506.16	-498.53	-181.81	4.80	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,589.00	67.21	202.04	10,307.18	532.86	-524.76	-192.96	6.32	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,621.00	68.79	198.68	10,319.17	561.11	-552.57	-203.28	10.92	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,652.00	71.22	195.49	10,329.77	589.31	-580.41	-211.83	12.45	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,684.00	73.50	193.75	10,339.47	619.13	-609.92	-219.52	8.81	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,715.00	75.26	192.37	10,347.81	648.48	-639.00	-226.27	7.11	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,747.00	76.59	190.00	10,355.60	679.17	-669.45	-232.29	8.30	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,778.00	78.33	187.63	10,362.33	709.24	-699.35	-236.92	9.34	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,810.00	80.82	185.45	10,368.12	740.63	-730.61	-240.50	10.27	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,841.00	83.29	184.60	10,372.40	771.31	-761.19	-243.19	8.42	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,873.00	84.79	184.60	10,375.73	803.11	-792.92	-245.74	4.69	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,904.00	86.90	184.52	10,377.97	834.01	-823.73	-248.20	6.81	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,937.00	88.42	182.72	10,379.32	866.97	-856.64	-250.28	7.14	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,967.00	89.94	182.26	10,379.75	896.97	-886.61	-251.59	5.29	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	10,998.00	90.40	182.24	10,379.66	927.97	-917.58	-252.80	1.49	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,093.00	90.00	183.88	10,379.32	1,022.96	-1,012.44	-257.87	1.78	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,187.00	88.54	185.15	10,380.52	1,116.90	-1,106.14	-265.27	2.06	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,282.00	88.61	186.73	10,382.89	1,211.70	-1,200.60	-275.10	1.66	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,376.00	89.44	186.93	10,384.48	1,305.42	-1,293.92	-286.28	0.91	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,470.00	89.29	183.59	10,385.53	1,399.30	-1,387.50	-294.89	3.56	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,565.00	89.66	182.59	10,386.40	1,494.29	-1,482.36	-300.01	1.12	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,659.00	90.74	184.38	10,386.07	1,588.27	-1,576.18	-305.73	2.22	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,754.00	87.40	183.05	10,387.61	1,683.23	-1,670.95	-311.88	3.78	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,848.00	87.82	183.95	10,391.53	1,777.13	-1,764.69	-317.61	1.06	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	11,942.00	88.73	186.76	10,394.36	1,870.97	-1,858.23	-326.38	3.14	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,037.00	88.83	185.93	10,396.38	1,965.74	-1,952.62	-336.88	0.88	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,131.00	88.24	183.44	10,398.79	2,059.63	-2,046.27	-344.55	2.72	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,225.00	88.61	181.29	10,401.37	2,153.59	-2,140.15	-348.43	2.32	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,320.00	88.52	181.54	10,403.75	2,248.54	-2,235.09	-350.78	0.28	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,414.00	87.80	181.17	10,406.77	2,342.47	-2,329.02	-353.00	0.86	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,509.00	88.19	181.37	10,410.09	2,437.39	-2,423.93	-355.10	0.46	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,603.00	88.80	182.38	10,412.56	2,531.35	-2,517.85	-358.18	1.25	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,697.00	89.45	182.18	10,414.00	2,625.34	-2,611.76	-361.92	0.72	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,792.00	89.26	182.59	10,415.07	2,720.33	-2,706.68	-365.87	0.48	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,886.00	88.02	181.30	10,417.30	2,814.29	-2,800.59	-369.06	1.90	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	12,981.00	88.06	181.60	10,420.55	2,909.22	-2,895.51	-371.46	0.32	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,075.00	88.58	180.75	10,423.30	3,003.15	-2,989.44	-373.39	1.06	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,170.00	89.69	181.20	10,424.74	3,098.10	-3,084.42	-375.00	1.26	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,264.00	91.18	181.60	10,424.02	3,192.08	-3,178.38	-377.30	1.64	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,359.00	91.76	182.34	10,421.59	3,287.04	-3,273.30	-380.57	0.99	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,453.00	89.88	182.88	10,420.24	3,381.03	-3,367.18	-384.85	2.08	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,547.00	90.06	181.35	10,420.29	3,475.02	-3,461.12	-388.31	1.64	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,642.00	90.00	179.42	10,420.24	3,569.95	-3,556.11	-388.95	2.03	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,736.00	89.66	180.15	10,420.52	3,663.83	-3,650.11	-388.60	0.86	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,830.00	89.78	179.68	10,420.98	3,757.73	-3,744.11	-388.46	0.52	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	13,925.00	90.28	179.86	10,420.93	3,852.62	-3,839.11	-388.08	0.56	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,019.00	90.06	182.14	10,420.65	3,946.58	-3,933.09	-389.72	2.44	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,114.00	89.45	182.38	10,421.06	4,041.58	-4,028.01	-393.47	0.69	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,209.00	89.08	182.05	10,422.27	4,136.57	-4,122.93	-397.14	0.52	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,303.00	89.48	180.94	10,423.46	4,230.54	-4,216.89	-399.59	1.26	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,397.00	90.25	180.54	10,423.68	4,324.49	-4,310.88	-400.80	0.92	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,492.00	91.05	182.24	10,422.60	4,419.46	-4,405.84	-403.11	1.98	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 225H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location Sec. 11 T25S R31E	API/UWI 3001542414	Latitude (°) 32° 9' 5.946" N	Longitude (°) 103° 45' 13.02" W	Ground Elev... 3,416.90	KB - GL (ft) 25.00	Orig KB Elev (ft) 3,441.90	Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Inc (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("/100ft)	Survey Tool	Survey Company
10/9/2014	14,586.00	90.46	182.31	10,421.36	4,513.45	-4,499.76	-406.84	0.63	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,680.00	90.46	181.67	10,420.61	4,607.44	-4,593.70	-410.10	0.68	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,787.00	89.75	179.38	10,420.41	4,714.37	-4,700.69	-411.08	2.24	MWD	SPERRY-SUN DRILLING SE...
10/9/2014	14,848.00	89.75	179.38	10,420.68	4,775.27	-4,761.68	-410.42	0.00	BIT	SPERRY-SUN DRILLING SE...