



A GYRO TECHNOLOGIES INC. COMPANY

P.O. Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

March 3, 2014

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

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 31 2014

RECEIVED

Attn: David Cook

30-015-41499

Re: Cotton Draw Unit No. 218H

Please find enclosed a copy of the survey from 0.00' to 4206.00' 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,

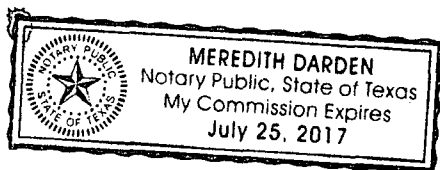

Keith Havelka
Operations

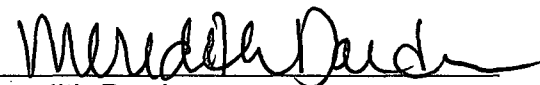
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 3rd day of March,
A.D., 2014, by Keith Havelka.




Meredith Darden
Notary Public, State of Texas



Company: Devon Energy
Lease/Well: Cotton Draw Unit /No. 218H
Location: Sec 2 T25S R31E
Rig Name: H&P 223
State/County: New Mexico/Eddy
Latitude: 32.15, Longitude: -103.75
GRID North is 0.31 Degrees East of True North
VS-Azi: 0.00 Degrees



ANM OIL CONSERVATION
ARTESIA DISTRICT
JUL 31 2014
RECEIVED

Depth Reference : RKB = 25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: cotton draw unit #218h-de_01.ut

Minimum Curvature Method

Report Date/Time: 3/3/2014 / 08:36

Vaughn Energy Services

West, Texas

432-563-5444

Surveyor: Chris Bankson

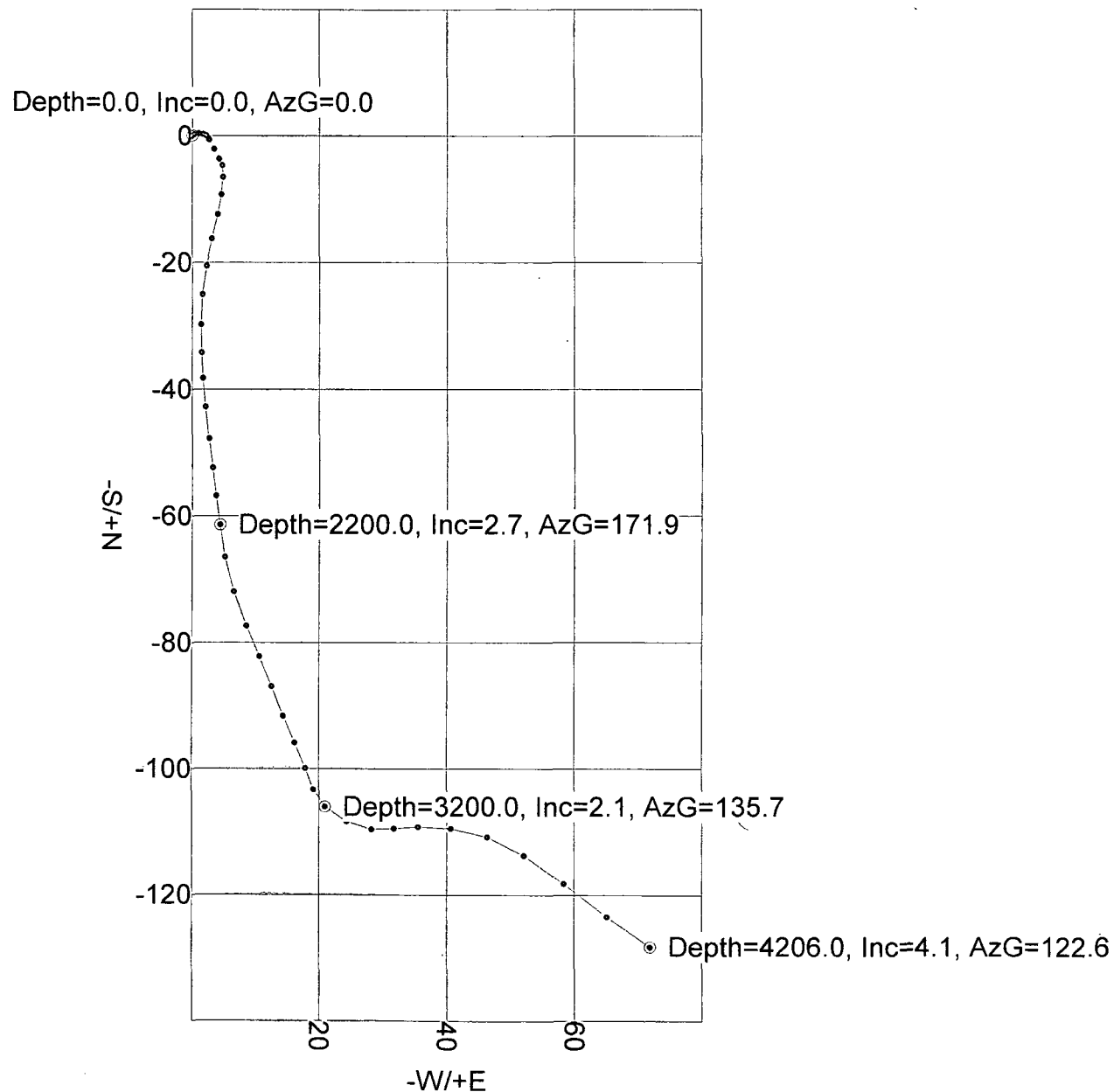
Cotton Draw Unit No. 218H / API 30-015-41499

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	0.36	51.88	100.00	0.19	0.25	0.19	0.32	51.88	0.36
200.00	0.54	92.75	200.00	0.37	0.96	0.37	1.03	69.18	0.35
300.00	0.32	100.93	299.99	0.29	1.71	0.29	1.73	80.34	0.22
400.00	0.29	131.39	399.99	0.07	2.17	0.07	2.17	88.11	0.16
500.00	0.66	149.42	499.99	-0.59	2.65	-0.59	2.72	102.48	0.39
600.00	1.28	154.29	599.97	-2.09	3.43	-2.09	4.01	121.35	0.63
700.00	0.73	149.00	699.96	-3.65	4.24	-3.65	5.59	130.67	0.56
800.00	0.59	162.28	799.95	-4.68	4.73	-4.68	6.66	134.72	0.21
900.00	1.52	181.42	899.93	-6.50	4.85	-6.50	8.11	143.24	0.98
1000.00	1.66	187.94	999.90	-9.25	4.62	-9.25	10.34	153.46	0.23
1100.00	1.99	192.16	1099.84	-12.38	4.05	-12.38	13.03	161.87	0.36
1200.00	2.53	194.54	1199.77	-16.22	3.14	-16.22	16.52	169.06	0.54
1300.00	2.48	188.83	1299.67	-20.49	2.25	-20.49	20.61	173.74	0.25
1400.00	2.72	187.36	1399.57	-24.99	1.61	-24.99	25.04	176.31	0.25
1500.00	2.75	178.32	1499.45	-29.74	1.38	-29.74	29.77	177.35	0.43
1600.00	2.34	179.16	1599.36	-34.17	1.48	-34.17	34.20	177.52	0.41
1700.00	2.29	174.20	1699.27	-38.20	1.71	-38.20	38.24	177.44	0.20
1800.00	2.91	175.55	1799.17	-42.72	2.11	-42.72	42.77	177.17	0.62

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	2.88	172.48	1899.04	-47.74	2.63	-47.74	47.81	176.84	0.16
2000.00	2.47	173.33	1998.93	-52.36	3.21	-52.36	52.46	176.49	0.41
2100.00	2.62	172.55	2098.84	-56.77	3.76	-56.77	56.89	176.21	0.15
2200.00	2.72	171.93	2198.73	-61.38	4.39	-61.38	61.54	175.91	0.10
2300.00	3.19	170.91	2298.59	-66.47	5.16	-66.47	66.67	175.56	0.47
2400.00	3.34	160.48	2398.43	-71.96	6.57	-71.96	72.26	174.78	0.61
2500.00	3.23	158.91	2498.27	-77.34	8.56	-77.34	77.81	173.68	0.14
2600.00	2.80	154.94	2598.13	-82.18	10.61	-82.18	82.86	172.64	0.49
2700.00	3.08	159.73	2698.00	-86.91	12.57	-86.91	87.81	171.77	0.38
2800.00	2.68	157.42	2797.87	-91.59	14.40	-91.59	92.71	171.06	0.42
2900.00	2.63	156.91	2897.77	-95.85	16.20	-95.85	97.21	170.41	0.06
3000.00	2.42	157.84	2997.67	-99.92	17.89	-99.92	101.50	169.85	0.21
3100.00	1.71	162.39	3097.60	-103.29	19.14	-103.29	105.05	169.50	0.73
3200.00	2.14	135.66	3197.55	-106.05	20.90	-106.05	108.09	168.85	0.98
3300.00	2.67	115.91	3297.46	-108.41	24.30	-108.41	111.10	167.36	0.98
3400.00	2.12	95.88	3397.37	-109.62	28.24	-109.62	113.20	165.55	0.99
3500.00	1.93	78.65	3497.31	-109.47	31.74	-109.47	113.98	163.83	0.64
3600.00	2.44	90.77	3597.24	-109.17	35.52	-109.17	114.80	161.98	0.69
3700.00	3.40	95.05	3697.11	-109.46	40.61	-109.46	116.75	159.65	0.99
3800.00	3.43	111.36	3796.93	-110.81	46.35	-110.81	120.11	157.30	0.97
3900.00	4.01	121.74	3896.72	-113.74	52.10	-113.74	125.10	155.39	0.89
4000.00	4.80	128.62	3996.43	-118.19	58.34	-118.19	131.80	153.73	0.95
4100.00	5.00	127.03	4096.06	-123.42	65.08	-123.42	139.53	152.20	0.24
4206.00	4.07	122.55	4201.73	-128.22	71.94	-128.22	147.03	150.71	0.94



Vaughn Energy Services
West, Texas
432-563-5444
Surveyor: Chris Bankson
Cotton Draw Unit No. 218H / API 30-015-41499



VES Survey Date: 02/14/2014



COTTON DRAW UNIT 218H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location SEC2 T2S R31E	API/UWI 3001541499	Latitude (°) 32° 9' 9.904" N	Longitude (°) 103° 45' 12.945" W	Ground Elev... 3,420.20	KB - GL (ft) 25.00	Orig KB Elev (ft) 3,445.20	Tubing Head Elevation (ft)
Wellbores							
Wellbore Name OH	Parent Wellbore	SAP Well ID 34554	Kick Off Depth (ftKB)	Vertical Section Direction (°)			
Actual Deviation Survey		Definitive?	Proposed?	Proposed Deviation Survey			

Deviation Survey

Date	Description				
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EW Tie In (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
Wellbore Name ST01	Parent Wellbore OH	SAP Well ID 34554	Kick Off Depth (ftKB) 9,863.0	Vertical Section Direction (°)						
Actual Deviation Survey ST01 - MWD, Proposed? No		Definitive? Yes	Proposed? No	Proposed Deviation Survey						

Deviation Survey

Date 3/24/2014	Description ST01 - MWD				
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EW Tie In (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/27/2014	0.00	0.36	51.88	0.00	0.00	0.00	0.00	0.00	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	200.00	0.54	92.75	199.99	0.21	0.34	1.44	0.18	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	300.00	0.32	100.93	299.99	0.07	0.27	2.18	0.23	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	400.00	0.29	131.39	399.99	-0.20	0.05	2.64	0.16	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	500.00	0.66	149.42	499.99	-0.90	-0.62	3.13	0.39	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	600.00	1.28	154.29	599.97	-2.47	-2.12	3.91	0.62	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	700.00	0.73	149.00	699.96	-4.09	-3.67	4.72	0.56	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	800.00	0.59	162.28	799.95	-5.17	-4.71	5.20	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	900.00	1.52	181.42	899.93	-6.99	-6.52	5.33	0.98	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,000.00	1.66	187.94	999.89	-9.71	-9.28	5.09	0.23	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,100.00	1.99	192.16	1,099.84	-12.78	-12.42	4.53	0.36	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,200.00	2.53	194.54	1,199.76	-16.51	-16.25	3.61	0.55	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,300.00	2.48	188.83	1,299.67	-20.69	-20.52	2.72	0.25	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,400.00	2.72	187.36	1,399.57	-25.10	-25.02	2.09	0.25	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,500.00	2.75	178.32	1,499.45	-29.81	-29.77	1.85	0.43	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,600.00	2.34	179.16	1,599.35	-34.24	-34.21	1.95	0.41	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,700.00	2.29	174.20	1,699.27	-38.27	-38.23	2.18	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,800.00	2.91	175.55	1,799.17	-42.81	-42.75	2.58	0.62	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	1,900.00	2.88	172.48	1,899.04	-47.86	-47.77	3.11	0.16	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,000.00	2.47	173.33	1,998.93	-52.52	-52.40	3.69	0.41	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,100.00	2.62	172.55	2,098.83	-56.96	-56.81	4.23	0.15	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,200.00	2.72	171.93	2,198.72	-61.61	-61.43	4.86	0.10	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,300.00	3.19	170.91	2,298.59	-66.76	-66.52	5.64	0.47	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,400.00	3.34	160.48	2,398.43	-72.36	-72.02	7.05	0.61	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,500.00	3.23	158.91	2,498.27	-77.89	-77.39	9.04	0.14	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,600.00	2.80	154.94	2,598.13	-82.90	-82.23	11.08	0.48	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,700.00	3.08	159.73	2,698.00	-87.80	-86.96	13.05	0.37	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,800.00	2.68	157.42	2,797.87	-92.62	-91.64	14.88	0.42	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	2,900.00	2.63	156.91	2,897.76	-97.04	-95.91	16.68	0.06	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,000.00	2.42	157.84	2,997.66	-101.24	-99.98	18.37	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,100.00	1.71	162.39	3,097.60	-104.72	-103.36	19.62	0.73	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,200.00	2.14	135.66	3,197.54	-107.63	-106.11	21.38	0.98	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,300.00	2.67	115.91	3,297.46	-110.29	-108.47	24.78	0.98	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,400.00	2.12	95.88	3,397.37	-111.85	-109.67	28.71	0.99	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,500.00	1.93	78.65	3,497.31	-112.03	-109.53	32.20	0.63	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,600.00	2.44	90.77	3,597.24	-112.08	-109.23	35.98	0.69	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 218H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location SEC2 T25S R31E	API/UWI 3001541499	Latitude (") 32° 9' 9.904" N	Longitude (") 103° 45' 12.945" W	Ground Elev... 3,420.20
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,445.20
				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
3/27/2014	3,700.00	3.40	95.05	3,697.11	-112.83	-109.52	41.06	0.98	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,800.00	3.43	111.36	3,796.93	-114.71	-110.87	46.80	0.97	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	3,900.00	4.01	121.74	3,896.72	-118.15	-113.80	52.56	0.89	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,000.00	4.80	128.62	3,996.43	-123.16	-118.25	58.81	0.95	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,100.00	5.00	127.03	4,096.06	-128.99	-123.49	65.55	0.24	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,206.00	4.07	122.55	4,201.73	-134.41	-128.29	72.41	0.94	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,465.00	2.47	129.40	4,460.30	-143.97	-136.78	84.47	0.63	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,549.00	2.31	127.74	4,544.23	-146.40	-138.96	87.21	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,643.00	1.93	122.37	4,638.16	-148.66	-140.97	90.05	0.46	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,738.00	1.85	117.29	4,733.11	-150.46	-142.53	92.76	0.20	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,832.00	1.83	119.29	4,827.06	-152.13	-143.96	95.42	0.07	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	4,927.00	1.64	125.15	4,922.02	-153.87	-145.49	97.85	0.27	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,021.00	1.49	122.02	5,015.98	-155.48	-146.91	99.99	0.18	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,115.00	1.48	125.29	5,109.95	-157.01	-148.26	102.01	0.09	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,210.00	1.16	136.08	5,204.93	-158.56	-149.66	103.68	0.43	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,399.00	1.22	123.37	5,393.89	-161.31	-152.14	106.69	0.14	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,588.00	1.04	122.47	5,582.85	-163.62	-154.17	109.82	0.10	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,777.00	1.16	139.78	5,771.81	-166.24	-156.55	112.50	0.19	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	5,965.00	0.44	140.90	5,959.79	-168.40	-158.57	114.18	0.38	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	6,154.00	0.35	157.42	6,148.79	-169.55	-159.66	114.86	0.08	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	6,344.00	0.47	159.39	6,338.79	-170.86	-160.93	115.36	0.06	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	6,533.00	0.81	157.97	6,527.77	-172.89	-162.89	116.13	0.18	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	6,722.00	0.48	184.75	6,716.76	-174.94	-164.92	116.57	0.23	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	6,911.00	0.49	234.15	6,905.76	-176.13	-166.18	115.85	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	7,100.00	0.53	207.72	7,094.75	-177.28	-167.43	114.79	0.13	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	7,289.00	0.59	189.44	7,283.74	-178.95	-169.16	114.22	0.10	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	7,478.00	0.95	167.45	7,472.72	-181.45	-171.65	114.40	0.24	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	7,667.00	0.95	159.68	7,661.70	-184.52	-174.65	115.29	0.07	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	7,857.00	0.77	129.37	7,851.68	-186.93	-176.94	116.82	0.25	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,046.00	0.43	146.43	8,040.67	-188.45	-178.33	118.20	0.20	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,236.00	0.44	182.79	8,230.66	-189.80	-179.66	118.55	0.14	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,425.00	0.15	272.88	8,419.66	-190.48	-180.37	118.27	0.25	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,615.00	0.31	166.02	8,609.66	-190.96	-180.85	118.15	0.20	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,804.00	0.26	244.92	8,798.66	-191.61	-181.53	117.88	0.19	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	8,993.00	1.19	342.22	8,987.64	-189.84	-179.85	116.89	0.66	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,182.00	0.80	345.69	9,176.61	-186.62	-176.70	115.97	0.21	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,371.00	0.46	211.78	9,365.61	-185.92	-176.06	115.24	0.62	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,560.00	0.55	137.31	9,554.60	-187.25	-177.38	115.46	0.33	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,749.00	1.08	116.45	9,743.58	-188.90	-178.84	117.67	0.32	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,835.00	2.34	118.85	9,829.54	-190.32	-180.04	119.93	1.47	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,968.00	14.75	330.67	9,961.24	-176.28	-166.50	113.97	12.62	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	9,999.00	19.10	329.45	9,990.89	-168.08	-158.68	109.46	14.08	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	10,031.00	23.30	325.86	10,020.72	-157.80	-148.93	103.25	13.73	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	10,062.00	27.35	322.60	10,048.73	-146.39	-138.20	95.48	13.81	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	10,094.00	30.59	322.39	10,076.73	-133.29	-125.90	86.04	10.13	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	10,126.00	32.69	324.65	10,103.97	-118.93	-112.40	76.07	7.54	MWD	SPERRY-SUN DRILLING SE...
3/27/2014	10,157.00	36.04	325.66	10,129.55	-103.70	-98.04	66.08	10.96	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,189.00	40.57	326.16	10,154.66	-86.33	-81.62	54.97	14.19	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,220.00	44.20	326.18	10,177.55	-67.97	-64.26	43.34	11.71	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,252.00	46.78	326.93	10,199.98	-47.86	-45.22	30.76	8.23	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,283.00	49.40	328.72	10,220.69	-27.28	-25.69	18.49	9.48	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,315.00	52.03	331.48	10,240.95	-4.77	-4.22	6.15	10.59	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,346.00	53.78	333.77	10,259.65	18.14	17.74	-5.21	8.16	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,378.00	56.20	336.62	10,278.01	42.84	41.53	-16.20	10.51	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,410.00	59.37	339.59	10,295.07	68.78	66.65	-26.28	12.64	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 218H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location SEC2 T25S R31E	API/UWI 3001541499	Latitude (°) 32° 9' 9.904" N	Longitude (°) 103° 45' 12.945" W	Ground Elev. 3,420.20
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,445.20
				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
3/28/2014	10,441.00	62.89	341.97	10,310.04	95.12	92.28	-35.20	13.19	MWD	SPERRY-SUN DRILLING SE...
3/28/2014	10,473.00	65.57	343.26	10,323.95	123.30	119.77	-43.81	9.13	MWD	SPERRY-SUN DRILLING SE...
3/29/2014	10,504.00	69.08	342.92	10,335.90	151.31	147.14	-52.13	11.37	MWD	SPERRY-SUN DRILLING SE...
3/29/2014	10,536.00	72.67	342.18	10,346.38	180.86	175.97	-61.19	11.43	MWD	SPERRY-SUN DRILLING SE...
3/29/2014	10,568.00	76.69	341.65	10,354.83	210.95	205.31	-70.77	12.66	MWD	SPERRY-SUN DRILLING SE...
3/29/2014	10,599.00	80.56	342.38	10,360.95	240.59	234.21	-80.16	12.70	MWD	SPERRY-SUN DRILLING SE...
3/29/2014	10,631.00	84.66	343.14	10,365.06	271.63	264.51	-89.56	13.03	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	10,728.00	90.31	344.47	10,369.32	366.74	357.53	-116.57	5.98	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	10,823.00	90.55	345.45	10,368.60	460.36	449.27	-141.22	1.06	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	10,917.00	90.28	346.35	10,367.92	553.24	540.44	-164.12	1.00	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,013.00	89.54	343.88	10,368.07	647.89	633.21	-188.78	2.69	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,108.00	88.86	343.18	10,369.40	741.07	724.30	-215.71	1.03	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,203.00	88.64	342.96	10,371.47	834.09	815.16	-243.37	0.33	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,298.00	89.72	345.75	10,372.83	927.52	906.62	-268.98	3.15	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,392.00	90.65	347.86	10,372.53	1,020.62	998.13	-290.44	2.45	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,487.00	91.45	349.02	10,370.79	1,115.03	1,091.19	-309.47	1.48	MWD	SPERRY-SUN DRILLING SE...
3/31/2014	11,582.00	89.82	351.33	10,369.73	1,209.72	1,184.78	-325.68	2.98	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	11,677.00	90.65	351.70	10,369.34	1,304.57	1,278.74	-339.70	0.96	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	11,771.00	91.02	355.05	10,367.97	1,398.52	1,372.09	-350.54	3.59	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	11,866.00	91.60	355.47	10,365.80	1,493.49	1,466.74	-358.39	0.75	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	11,961.00	91.14	358.13	10,363.53	1,588.39	1,561.55	-363.69	2.84	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,056.00	92.10	358.39	10,360.85	1,683.17	1,656.47	-366.57	1.05	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,150.00	91.14	359.67	10,358.19	1,776.86	1,750.42	-368.16	1.70	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,245.00	91.75	0.21	10,355.79	1,871.44	1,845.38	-368.26	0.86	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,340.00	89.85	359.34	10,354.47	1,966.06	1,940.37	-368.63	2.20	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,435.00	90.06	358.90	10,354.54	2,060.77	2,035.36	-370.09	0.51	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,530.00	90.80	359.62	10,353.83	2,155.47	2,130.35	-371.32	1.09	MWD	SPERRY-SUN DRILLING SE...
4/1/2014	12,625.00	91.39	358.20	10,352.01	2,250.20	2,225.31	-373.13	1.62	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	12,720.00	91.79	359.08	10,349.38	2,344.94	2,320.24	-375.38	1.02	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	12,814.00	91.91	0.89	10,346.34	2,438.49	2,414.19	-375.40	1.93	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	12,909.00	91.02	359.71	10,343.91	2,533.01	2,509.16	-374.91	1.56	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	13,004.00	92.55	358.27	10,340.95	2,627.69	2,604.09	-376.58	2.21	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	13,099.00	90.65	357.72	10,338.30	2,722.50	2,698.99	-379.90	2.08	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	13,194.00	90.31	358.46	10,337.50	2,817.33	2,793.93	-383.07	0.86	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	13,289.00	90.09	357.68	10,337.17	2,912.16	2,888.88	-386.27	0.85	MWD	SPERRY-SUN DRILLING SE...
4/2/2014	13,384.00	90.83	357.79	10,336.41	3,007.03	2,983.80	-390.02	0.79	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,478.00	91.20	357.22	10,334.75	3,100.90	3,077.70	-394.11	0.72	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,574.00	90.65	355.13	10,333.20	3,196.85	3,173.46	-400.52	2.25	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,668.00	88.43	356.16	10,333.95	3,290.83	3,267.18	-407.65	2.60	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,763.00	88.71	356.30	10,336.32	3,385.77	3,361.95	-413.90	0.33	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,858.00	89.01	357.03	10,338.21	3,480.69	3,456.77	-419.42	0.83	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	13,953.00	88.12	357.59	10,340.59	3,575.57	3,551.63	-423.88	1.11	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	14,048.00	90.99	358.74	10,341.33	3,670.38	3,646.57	-426.92	3.25	MWD	SPERRY-SUN DRILLING SE...
4/3/2014	14,143.00	91.14	357.77	10,339.56	3,765.18	3,741.51	-429.82	1.03	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,238.00	89.23	356.67	10,339.25	3,860.08	3,836.39	-434.42	2.32	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,333.00	89.47	357.89	10,340.33	3,954.98	3,931.27	-438.93	1.31	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,427.00	88.67	358.51	10,341.86	4,048.80	4,025.21	-441.88	1.08	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,522.00	88.06	357.47	10,344.57	4,143.60	4,120.11	-445.21	1.27	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,617.00	90.12	357.56	10,346.08	4,238.47	4,215.01	-449.33	2.17	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,712.00	91.45	0.13	10,344.78	4,333.21	4,309.97	-451.25	3.05	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,807.00	90.83	359.96	10,342.89	4,427.78	4,404.95	-451.17	0.68	MWD	SPERRY-SUN DRILLING SE...
4/4/2014	14,902.00	91.26	0.20	10,341.15	4,522.34	4,499.93	-451.04	0.52	MWD	SPERRY-SUN DRILLING SE...
4/5/2014	14,997.00	91.70	0.38	10,338.70	4,616.86	4,594.90	-450.56	0.50	MWD	SPERRY-SUN DRILLING SE...
4/5/2014	15,092.00	90.56	0.95	10,336.83	4,711.33	4,689.87	-449.46	1.34	MWD	SPERRY-SUN DRILLING SE...
4/5/2014	15,240.00	90.28	0.95	10,335.74	4,858.46	4,837.85	-447.00	0.19	BIT	SPERRY-SUN DRILLING SE...