



August 4, 2014

30-015-41869

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

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 16 2014

RECEIVED

Attn: David Cook

Re: Cotton Draw Unit No. 213H

Please find enclosed a copy of the survey from 0.00' to 9648.39' 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.

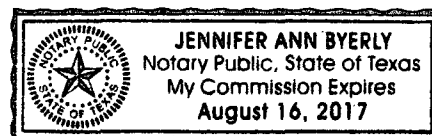
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 4 day of August, A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: DEVON ENERGY
Lease/Well: COTTON DRAW UNIT/NO. 213H

Rig Name: H & P #223
State/County: NEW MEXICO /EDDY
Latitude: 32.18, Longitude: -103.74
GRID North is 0.32 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB: 25 FEET

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 8/4/2014 / 12:02

VES Survey Calculations
Midland, TX
(432)-563-5444

Surveyor: Jordan Shelleby
Cotton Draw Unit No. 213H / API 30-015-41869

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 16 2014
RECEIVED

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	****
185.39	1.37	321.68	185.37	1.74	-1.38	1.74	2.22	321.68	0.74
280.02	1.19	307.61	279.98	3.24	-2.86	3.24	4.32	318.50	0.38
374.65	1.03	328.34	374.59	4.56	-4.09	4.56	6.13	318.12	0.46
469.28	0.95	333.86	469.21	6.00	-4.89	6.00	7.74	320.82	0.13
563.91	0.35	334.92	563.83	6.97	-5.36	6.97	8.79	322.45	0.63
658.54	0.27	317.78	658.46	7.40	-5.63	7.40	9.30	322.72	0.13
753.17	0.92	324.19	753.08	8.19	-6.23	8.19	10.29	322.72	0.69
847.80	0.87	322.39	847.70	9.38	-7.12	9.38	11.77	322.80	0.06
942.43	0.27	333.12	942.33	10.15	-7.66	10.15	12.71	322.96	0.64
1037.06	0.25	313.75	1036.96	10.49	-7.91	10.49	13.14	322.98	0.10
1131.69	0.51	310.77	1131.58	10.91	-8.38	10.91	13.76	322.47	0.27
1226.32	0.52	319.78	1226.21	11.52	-8.98	11.52	14.60	322.06	0.09
1320.95	0.96	299.92	1320.83	12.24	-9.94	12.24	15.77	320.91	0.53
1415.58	0.70	329.45	1415.45	13.13	-10.92	13.13	17.07	320.25	0.52
1510.21	0.69	331.78	1510.08	14.12	-11.48	14.12	18.20	320.90	0.03
1604.84	1.29	299.44	1604.69	15.15	-12.68	15.15	19.75	320.08	0.85
1699.47	1.22	301.92	1699.30	16.21	-14.46	16.21	21.72	318.26	0.09
1794.10	1.13	327.80	1793.91	17.53	-15.81	17.53	23.61	317.94	0.56

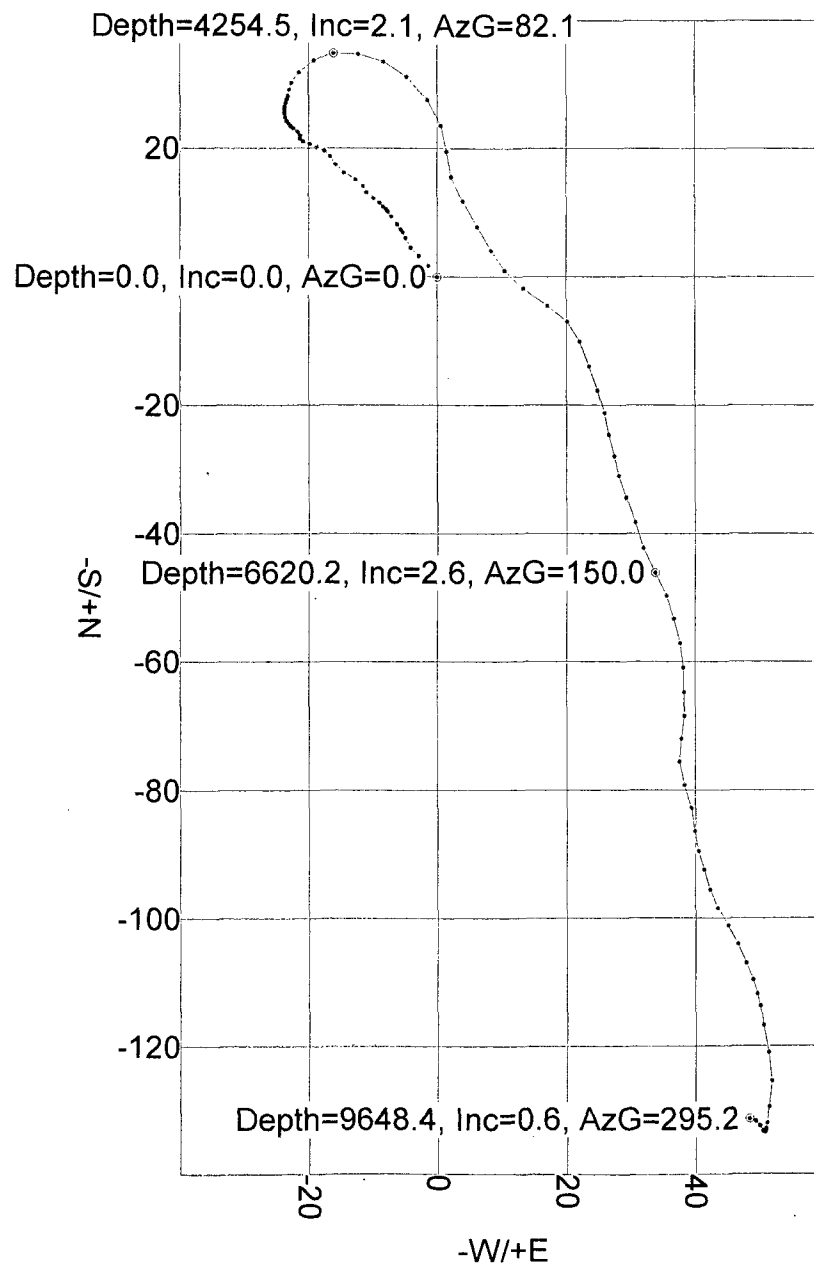
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1888.73	0.71	325.47	1888.53	18.80	-16.64	18.80	25.11	318.48	0.44
1983.36	0.80	299.85	1983.15	19.61	-17.55	19.61	26.31	318.18	0.36
2077.99	0.80	294.82	2077.77	20.21	-18.71	20.21	27.55	317.21	0.07
2172.62	0.66	294.18	2172.39	20.71	-19.81	20.71	28.66	316.28	0.15
2267.25	0.68	285.12	2267.02	21.08	-20.85	21.08	29.65	315.32	0.11
2361.88	0.34	6.43	2361.64	21.51	-21.37	21.51	30.32	315.19	0.76
2456.51	0.27	7.24	2456.27	22.01	-21.31	22.01	30.63	315.93	0.08
2551.14	0.64	308.23	2550.90	22.56	-21.70	22.56	31.30	316.12	0.59
2645.77	0.44	309.23	2645.52	23.11	-22.39	23.11	32.18	315.91	0.22
2740.40	0.23	311.11	2740.15	23.47	-22.81	23.47	32.73	315.81	0.22
2835.03	0.40	324.02	2834.78	23.86	-23.15	23.86	33.25	315.87	0.20
2929.66	0.19	318.24	2929.41	24.25	-23.45	24.25	33.74	315.96	0.22
3024.29	0.50	347.95	3024.04	24.77	-23.64	24.77	34.24	316.33	0.36
3118.92	0.24	352.27	3118.67	25.37	-23.76	25.37	34.76	316.88	0.27
3213.55	0.25	355.55	3213.30	25.77	-23.80	25.77	35.08	317.28	0.02
3308.18	0.19	4.87	3307.92	26.14	-23.80	26.14	35.35	317.68	0.08
3402.81	0.17	8.83	3402.55	26.43	-23.77	26.43	35.55	318.03	0.02
3497.44	0.59	11.13	3497.18	27.04	-23.65	27.04	35.93	318.83	0.44
3592.07	0.05	37.44	3591.81	27.55	-23.54	27.55	36.24	319.49	0.57
3686.70	0.09	30.94	3686.44	27.65	-23.47	27.65	36.27	319.67	0.04
3781.33	0.60	21.21	3781.07	28.17	-23.26	28.17	36.53	320.46	0.54
3875.96	0.62	12.82	3875.69	29.13	-22.96	29.13	37.09	321.75	0.10
3970.59	0.73	20.57	3970.32	30.20	-22.64	30.20	37.74	323.14	0.15
4065.22	1.75	42.94	4064.92	31.82	-21.44	31.82	38.37	326.03	1.17
4159.85	1.90	57.07	4159.51	33.73	-19.14	33.73	38.78	330.43	0.50
4254.48	2.08	82.11	4254.08	34.82	-16.12	34.82	38.37	335.15	0.93
4349.11	2.66	99.80	4348.63	34.68	-12.25	34.68	36.78	340.54	0.98
4443.74	2.37	113.73	4443.17	33.52	-8.29	33.52	34.53	346.10	0.72
4538.37	2.88	130.18	4537.70	31.20	-4.69	31.20	31.55	351.45	0.96
4633.00	2.99	147.42	4632.21	27.58	-1.54	27.58	27.62	356.81	0.94
4727.63	2.48	157.95	4726.73	23.60	0.56	23.60	23.61	1.36	0.75
4822.26	2.60	178.22	4821.27	19.56	1.40	19.56	19.61	4.09	0.95
4916.89	2.36	160.51	4915.81	15.57	2.12	15.57	15.72	7.74	0.84
5011.52	2.72	150.96	5010.35	11.77	3.86	11.77	12.39	18.14	0.58
5106.15	2.85	149.64	5104.87	7.78	6.14	7.78	9.91	38.27	0.15
5200.78	2.29	150.48	5199.40	4.10	8.26	4.10	9.22	63.58	0.59
5295.41	2.28	139.90	5293.96	1.02	10.40	1.02	10.45	84.41	0.45
5390.04	2.74	129.63	5388.50	-1.86	13.35	-1.86	13.48	97.94	0.68
5484.67	2.73	121.95	5483.02	-4.50	17.00	-4.50	17.59	104.81	0.39

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 *
5579.30	2.06	137.36	5577.57	-6.94	20.07	-6.94	21.24	109.08	0.98
5673.93	2.50	156.03	5672.12	-10.08	22.06	-10.08	24.26	114.55	0.91
5768.56	2.42	162.24	5766.67	-13.87	23.51	-13.87	27.30	120.54	0.29
5863.19	2.50	159.47	5861.21	-17.71	24.84	-17.71	30.51	125.48	0.15
5957.82	1.90	170.42	5955.77	-21.18	25.83	-21.18	33.40	129.36	0.77
6052.45	2.33	167.35	6050.33	-24.60	26.51	-24.60	36.17	132.86	0.47
6147.08	1.88	162.50	6144.90	-27.95	27.40	-27.95	39.14	135.58	0.51
6241.71	1.96	171.26	6239.48	-31.03	28.11	-31.03	41.87	137.83	0.32
6336.34	2.41	154.19	6334.04	-34.42	29.22	-34.42	45.15	139.67	0.83
6430.97	2.52	166.21	6428.58	-38.23	30.58	-38.23	48.96	141.34	0.56
6525.60	2.57	158.89	6523.12	-42.23	31.84	-42.23	52.88	142.98	0.35
6620.23	2.63	150.00	6617.65	-46.09	33.69	-46.09	57.09	143.83	0.43
6714.86	2.21	158.53	6712.20	-49.67	35.45	-49.67	61.02	144.49	0.59
6809.49	2.39	165.38	6806.75	-53.28	36.61	-53.28	64.64	145.50	0.34
6904.12	2.37	165.22	6901.30	-57.07	37.61	-57.07	68.35	146.62	0.02
6998.75	2.37	180.00	6995.85	-60.92	38.11	-60.92	71.85	147.97	0.64
7093.38	2.22	177.04	7090.41	-64.71	38.20	-64.71	75.14	149.44	0.20
7188.01	2.29	182.31	7184.96	-68.43	38.22	-68.43	78.38	150.81	0.23
7282.64	2.09	193.96	7279.52	-71.99	37.73	-71.99	81.28	152.34	0.51
7377.27	2.25	175.26	7374.09	-75.52	37.46	-75.52	84.30	153.62	0.76
7471.90	2.27	160.52	7468.64	-79.14	38.24	-79.14	87.90	154.21	0.61
7566.53	2.28	166.19	7563.20	-82.73	39.31	-82.73	91.60	154.58	0.24
7661.16	2.19	177.79	7657.76	-86.37	39.83	-86.37	95.11	155.24	0.49
7755.79	1.70	156.32	7752.33	-89.46	40.47	-89.46	98.19	155.66	0.92
7850.42	2.04	169.87	7846.91	-92.41	41.33	-92.41	101.23	155.90	0.58
7945.05	1.97	155.88	7941.49	-95.54	42.29	-95.54	104.48	156.13	0.52
8039.68	1.84	158.14	8036.07	-98.43	43.52	-98.43	107.62	156.15	0.16
8134.31	1.94	144.13	8130.64	-101.14	45.02	-101.14	110.71	156.00	0.50
8228.94	2.02	158.78	8225.22	-104.00	46.56	-104.00	113.95	155.88	0.54
8323.57	1.96	153.12	8319.79	-107.00	47.90	-107.00	117.24	155.88	0.22
8418.20	1.52	164.35	8414.38	-109.66	48.98	-109.66	120.10	155.93	0.59
8512.83	1.20	161.65	8508.98	-111.81	49.63	-111.81	122.33	156.07	0.35
8607.46	1.23	170.36	8603.59	-113.75	50.11	-113.75	124.30	156.23	0.20
8702.09	2.43	171.63	8698.17	-116.73	50.57	-116.73	127.22	156.58	1.27
8796.72	2.82	167.73	8792.70	-120.99	51.36	-120.99	131.44	157.00	0.45
8891.35	2.63	180.23	8887.22	-125.44	51.84	-125.44	135.73	157.55	0.66
8985.98	2.33	191.62	8981.77	-129.49	51.45	-129.49	139.33	158.33	0.61
9080.61	0.71	184.44	9076.36	-131.95	51.01	-131.95	141.47	158.86	1.72
9175.24	0.44	189.34	9170.98	-132.90	50.91	-132.90	142.32	159.04	0.28

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
9269.87	0.13	205.88	9265.61	-133.36	50.80	-133.36	142.71	159.15	0.34
9364.50	0.51	301.61	9360.24	-133.24	50.40	-133.24	142.45	159.28	0.57
9459.13	0.74	349.52	9454.87	-132.41	49.93	-132.41	141.52	159.34	0.58
9553.76	0.64	281.96	9549.49	-131.70	49.30	-131.70	140.63	159.48	0.82
9648.39	0.62	295.20	9644.12	-131.38	48.33	-131.38	139.98	159.80	0.15



VES Survey Calculations
Midland, TX
(432)-563-5444
Surveyor: Jordan Shelleby
Cotton Draw Unit No. 213H / API 30-015-41869



VES Survey Date: 07/21/2014



COTTON DRAW UNIT 213H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 35 T24S R31E	API/UWI 3001541869	Latitude (") 32° 10' 49.92" N	Longitude (") 103° 44' 30.069" W	Ground Elev... 3,499.90
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,524.90
				Tubing Head Elevation (ft)

Wellbores

Wellbore Name OH	Parent Wellbore	SAP Well ID 36019	Kick Off Depth (ftKB)	Vertical Section Direction (")
Actual Deviation Survey GYRO, Proposed? No	Definitive? Yes	Proposed? No	Proposed Deviation Survey	

Deviation Survey

Date 7/22/2014		Description GYRO				
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	EW Tie In (ft) 0.00	

Survey Data

Date	MD (ftKB)	Incl (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("/100ft)	Survey Tool	Survey Company
7/22/2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	185.39	1.37	321.68	185.37	-1.69	1.74	-1.37	0.74	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	280.02	1.19	307.61	279.98	-3.13	3.23	-2.85	0.38	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	374.65	1.03	328.34	374.59	-4.41	4.55	-4.08	0.45	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	469.28	0.95	333.86	469.21	-5.81	5.98	-4.87	0.13	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	563.91	0.35	334.92	563.83	-6.75	6.94	-5.34	0.63	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	658.54	0.27	317.78	658.46	-7.17	7.37	-5.61	0.13	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	753.17	0.92	324.19	753.08	-7.93	8.15	-6.21	0.69	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	847.80	0.87	322.39	847.70	-9.09	9.34	-7.09	0.06	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	942.43	0.27	333.12	942.33	-9.84	10.11	-7.63	0.64	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,037.06	0.25	313.75	1,036.96	-10.17	10.45	-7.88	0.09	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,131.69	0.51	310.77	1,131.58	-10.57	10.86	-8.35	0.28	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,226.32	0.52	319.78	1,226.21	-11.15	11.47	-8.94	0.09	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,320.95	0.96	299.92	1,320.83	-11.84	12.19	-9.91	0.53	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,415.58	0.70	329.45	1,415.45	-12.70	13.08	-10.89	0.52	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,510.21	0.69	331.78	1,510.08	-13.68	14.08	-11.45	0.03	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,604.84	1.29	299.44	1,604.69	-14.66	15.11	-12.65	0.84	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,699.47	1.22	301.92	1,699.30	-15.66	16.17	-14.43	0.09	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,794.10	1.13	327.80	1,793.91	-16.93	17.49	-15.78	0.56	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,888.73	0.71	325.47	1,888.53	-18.17	18.76	-16.61	0.45	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	1,983.36	0.80	299.85	1,983.15	-18.95	19.57	-17.52	0.37	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,077.99	0.80	294.82	2,077.77	-19.52	20.18	-18.69	0.07	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,172.62	0.66	294.18	2,172.39	-19.98	20.68	-19.79	0.15	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,267.25	0.68	285.12	2,267.02	-20.32	21.05	-20.83	0.11	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,361.88	0.34	6.43	2,361.64	-20.72	21.47	-21.34	0.75	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,456.51	0.27	7.24	2,456.27	-21.22	21.97	-21.28	0.07	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,551.14	0.64	308.23	2,550.90	-21.76	22.52	-21.66	0.58	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,645.77	0.44	309.23	2,645.52	-22.29	23.08	-22.36	0.21	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,740.40	0.23	311.11	2,740.15	-22.63	23.43	-22.79	0.22	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,835.03	0.40	324.02	2,834.78	-23.01	23.83	-23.12	0.19	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	2,929.66	0.19	318.24	2,929.41	-23.39	24.21	-23.42	0.22	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,024.29	0.50	347.95	3,024.04	-23.90	24.73	-23.61	0.37	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,118.92	0.24	352.27	3,118.67	-24.50	25.33	-23.73	0.28	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,213.55	0.25	355.55	3,213.30	-24.90	25.73	-23.77	0.02	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,308.18	0.19	4.87	3,307.93	-25.26	26.10	-23.77	0.07	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,402.81	0.17	8.83	3,402.55	-25.55	26.39	-23.74	0.02	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,497.44	0.59	11.13	3,497.18	-26.17	27.01	-23.62	0.44	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,592.07	0.05	37.44	3,591.81	-26.69	27.52	-23.50	0.58	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,686.70	0.09	30.94	3,686.44	-26.79	27.62	-23.44	0.04	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,781.33	0.60	21.21	3,781.07	-27.32	28.14	-23.22	0.54	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,875.96	0.62	12.82	3,875.69	-28.29	29.10	-22.93	0.10	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	3,970.59	0.73	20.57	3,970.32	-29.37	30.17	-22.60	0.15	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	4,065.22	1.75	42.94	4,064.92	-31.03	31.79	-21.41	1.17	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	4,159.85	1.90	57.07	4,159.51	-33.02	33.70	-19.10	0.50	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	4,254.48	2.08	82.11	4,254.08	-34.21	34.79	-16.09	0.93	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	4,349.11	2.66	99.80	4,348.63	-34.21	34.65	-12.22	0.98	GYRO	VAUHG N ENERGY SERVICES
7/22/2014	4,443.74	2.37	113.73	4,443.17	-33.18	33.49	-8.27	0.71	GYRO	VAUHG N ENERGY SERVICES



COTTON DRAW UNIT 213H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 35 T24S R31E	API/UWI 3001541869	Latitude (°) 32° 10' 49.92" N	Longitude (°) 103° 44' 30.069" W	Ground Elev... 3,499.90
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,524.90
				Tubing Head Elevation (ft)

Survey Data

Date	MDI (ftKB)	Incl. (°)	Azm. (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
7/22/2014	4,538.37	2.88	130.18	4,537.70	-30.99	31.17	-4.66	0.96	GYRO	VAUHG ENERGY SERVICES
7/22/2014	4,633.00	2.99	147.42	4,632.21	-27.48	27.55	-1.51	0.94	GYRO	VAUHG ENERGY SERVICES
7/22/2014	4,727.63	2.48	157.95	4,726.73	-23.58	23.58	0.58	0.75	GYRO	VAUHG ENERGY SERVICES
7/22/2014	4,822.26	2.60	178.22	4,821.27	-19.57	19.53	1.42	0.95	GYRO	VAUHG ENERGY SERVICES
7/22/2014	4,916.89	2.36	160.51	4,915.81	-15.62	15.55	2.14	0.84	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,011.52	2.72	150.96	5,010.35	-11.88	11.75	3.88	0.59	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,106.15	2.85	149.64	5,104.87	-7.97	7.76	6.15	0.15	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,200.78	2.29	150.48	5,199.40	-4.37	4.08	8.28	0.59	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,295.41	2.28	139.90	5,293.96	-1.36	1.00	10.42	0.45	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,390.04	2.74	129.63	5,388.50	1.42	-1.88	13.37	0.68	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,484.67	2.73	121.95	5,483.02	3.93	-4.52	17.03	0.39	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,579.30	2.06	137.36	5,577.57	6.26	-6.96	20.09	0.98	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,673.93	2.50	156.03	5,672.12	9.33	-10.10	22.08	0.91	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,768.56	2.42	162.24	5,766.67	13.07	-13.89	23.53	0.29	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,863.19	2.50	159.47	5,861.21	16.85	-17.72	24.86	0.15	GYRO	VAUHG ENERGY SERVICES
7/22/2014	5,957.82	1.90	170.42	5,955.77	20.30	-21.20	25.85	0.77	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,052.45	2.33	167.35	6,050.34	23.69	-24.63	26.53	0.47	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,147.08	1.88	162.50	6,144.90	27.02	-27.99	27.42	0.51	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,241.71	1.96	171.26	6,239.48	30.07	-31.07	28.13	0.32	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,336.34	2.41	154.19	6,334.04	33.42	-34.46	29.24	0.83	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,430.97	2.52	166.21	6,428.58	37.19	-38.27	30.61	0.56	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,525.60	2.57	158.89	6,523.12	41.14	-42.27	31.87	0.35	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,620.23	2.63	150.00	6,617.65	44.93	-46.13	33.72	0.43	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,714.86	2.21	158.53	6,712.20	48.45	-49.70	35.47	0.58	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,809.49	2.39	165.38	6,806.75	52.01	-53.31	36.64	0.35	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,904.12	2.37	165.22	6,901.30	55.78	-57.11	37.63	0.02	GYRO	VAUHG ENERGY SERVICES
7/22/2014	6,998.75	2.37	180.00	6,995.85	59.60	-60.96	38.13	0.64	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,093.38	2.22	177.04	7,090.41	63.39	-64.75	38.23	0.20	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,188.01	2.29	182.31	7,184.96	67.10	-68.47	38.24	0.23	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,282.64	2.09	193.96	7,279.52	70.68	-72.03	37.75	0.51	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,377.27	2.25	175.26	7,374.09	74.21	-75.56	37.49	0.76	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,471.90	2.27	160.52	7,468.64	77.80	-79.18	38.27	0.61	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,566.53	2.28	166.19	7,563.20	81.36	-82.77	39.34	0.24	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,661.16	2.19	177.79	7,657.76	84.97	-86.40	39.86	0.49	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,755.79	1.70	156.32	7,752.34	88.04	-89.50	40.49	0.92	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,850.42	2.04	169.87	7,846.92	90.95	-92.44	41.35	0.59	GYRO	VAUHG ENERGY SERVICES
7/22/2014	7,945.05	1.97	155.88	7,941.49	94.06	-95.58	42.32	0.52	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,039.68	1.84	158.14	8,036.07	96.91	-98.48	43.55	0.16	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,134.31	1.94	144.13	8,130.64	99.57	-101.19	45.05	0.50	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,228.94	2.02	158.78	8,225.22	102.36	-104.04	46.59	0.54	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,323.57	1.96	153.12	8,319.79	105.31	-107.04	47.93	0.22	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,418.20	1.52	164.35	8,414.38	107.93	-109.69	49.00	0.59	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,512.83	1.20	161.65	8,508.98	110.05	-111.84	49.65	0.34	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,607.46	1.23	170.36	8,603.59	111.98	-113.78	50.13	0.20	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,702.09	2.43	171.63	8,698.17	114.94	-116.77	50.59	1.27	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,796.72	2.82	167.73	8,792.70	119.17	-121.02	51.38	0.45	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,891.35	2.63	180.23	8,887.22	123.60	-125.47	51.87	0.66	GYRO	VAUHG ENERGY SERVICES
7/22/2014	8,985.98	2.33	191.62	8,981.77	127.67	-129.53	51.47	0.61	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,080.61	0.71	184.44	9,076.36	130.15	-131.99	51.04	1.72	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,175.24	0.44	189.34	9,170.99	131.10	-132.94	50.93	0.29	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,269.87	0.13	205.88	9,265.61	131.55	-133.39	50.83	0.34	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,364.50	0.51	301.61	9,360.24	131.44	-133.27	50.42	0.57	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,459.13	0.74	349.52	9,454.87	130.64	-132.45	49.95	0.58	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,553.76	0.64	281.96	9,549.49	129.95	-131.74	49.32	0.82	GYRO	VAUHG ENERGY SERVICES
7/22/2014	9,648.39	0.62	295.20	9,644.12	129.66	-131.41	48.34	0.15	GYRO	VAUHG ENERGY SERVICES



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District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 35 T24S R31E	API/UWI 3001541869	Latitude (°) 32° 10' 49.92" N	Longitude (°) 103° 44' 30.069" W	Ground Elev. 3,499.90
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,524.90
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ft/KB)	Incl (°)	Azm (°)	TVD (ft/KB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
7/28/2014	9,742.00	0.80	287.81	9,737.72	129.28	-130.99	47.26	0.22	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,774.00	1.00	261.08	9,769.72	129.27	-130.97	46.77	1.44	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,806.00	1.73	207.84	9,801.71	129.76	-131.44	46.27	4.33	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,838.00	3.90	188.38	9,833.67	131.27	-132.94	45.89	7.31	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,870.00	6.55	189.29	9,865.53	134.17	-135.82	45.43	8.29	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,902.00	9.35	187.69	9,897.22	138.56	-140.20	44.79	8.78	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,933.00	12.32	183.78	9,927.67	144.38	-146.00	44.24	9.86	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,965.00	14.69	181.50	9,958.78	151.85	-153.46	43.91	7.59	MWD	SPERRY-SUN DRILLING SE...
7/29/2014	9,997.00	16.02	181.96	9,989.64	160.32	-161.93	43.65	4.17	MWD	SPERRY-SUN DRILLING SE...
7/30/2014	10,028.00	17.66	182.41	10,019.30	169.30	-170.90	43.30	5.31	MWD	SPERRY-SUN DRILLING SE...
7/30/2014	10,060.00	20.46	181.66	10,049.55	179.75	-181.35	42.94	8.78	MWD	SPERRY-SUN DRILLING SE...
7/30/2014	10,092.00	26.33	179.14	10,078.90	192.44	-194.04	42.88	18.60	MWD	SPERRY-SUN DRILLING SE...
7/30/2014	10,124.00	32.63	180.20	10,106.75	208.17	-209.78	42.96	19.75	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,155.00	36.96	182.47	10,132.20	225.85	-227.46	42.53	14.58	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,187.00	39.60	183.40	10,157.32	245.67	-247.26	41.51	8.44	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,218.00	40.82	183.80	10,180.99	265.68	-267.23	40.25	4.02	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,250.00	43.42	183.28	10,204.73	287.13	-288.65	38.93	8.20	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,282.00	46.62	181.33	10,227.34	309.76	-311.26	38.03	10.89	MWD	SPERRY-SUN DRILLING SE...
7/31/2014	10,314.00	49.98	181.17	10,248.63	333.64	-335.14	37.51	10.51	MWD	SPERRY-SUN DRILLING SE...
8/1/2014	10,346.00	52.53	181.11	10,268.65	358.60	-360.09	37.01	7.97	MWD	SPERRY-SUN DRILLING SE...
8/1/2014	10,378.00	55.02	181.91	10,287.56	384.41	-385.90	36.33	8.04	MWD	SPERRY-SUN DRILLING SE...
8/1/2014	10,410.00	57.71	180.82	10,305.29	411.05	-412.53	35.70	8.87	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,441.00	60.51	183.76	10,321.20	437.64	-439.10	34.63	12.16	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,473.00	62.22	184.63	10,336.54	465.71	-467.11	32.57	5.85	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,505.00	64.98	184.73	10,350.76	494.33	-495.68	30.23	8.63	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,537.00	66.82	184.75	10,363.83	523.51	-524.79	27.82	5.75	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,572.00	68.83	184.81	10,377.04	555.88	-557.08	25.12	5.75	MWD	SPERRY-SUN DRILLING SE...
8/2/2014	10,604.00	73.35	184.58	10,387.41	586.11	-587.25	22.64	14.14	MWD	SPERRY-SUN DRILLING SE...
8/3/2014	10,636.00	78.09	186.69	10,395.30	617.05	-618.10	19.59	16.13	MWD	SPERRY-SUN DRILLING SE...
8/3/2014	10,668.00	82.17	186.97	10,400.78	648.46	-649.39	15.84	12.78	MWD	SPERRY-SUN DRILLING SE...
8/3/2014	10,700.00	85.11	185.74	10,404.33	680.16	-681.00	12.32	9.95	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,729.00	87.44	185.59	10,406.21	709.04	-709.79	9.47	8.05	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,760.00	90.25	184.53	10,406.84	739.99	-740.66	6.73	9.69	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,793.00	90.83	183.92	10,406.53	772.96	-773.57	4.30	2.55	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,824.00	90.74	183.79	10,406.10	803.94	-804.50	2.22	0.51	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,856.00	90.62	183.27	10,405.72	835.92	-836.43	0.25	1.67	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,888.00	89.38	183.29	10,405.72	867.92	-868.38	-1.58	3.88	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	10,983.00	91.05	182.97	10,405.36	962.89	-963.24	-6.77	1.79	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	11,079.00	89.97	182.49	10,404.51	1,058.88	-1,059.12	-11.34	1.23	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	11,175.00	90.28	181.64	10,404.30	1,154.88	-1,155.06	-14.80	0.94	MWD	SPERRY-SUN DRILLING SE...
8/4/2014	11,270.00	87.47	180.64	10,406.17	1,249.84	-1,250.01	-16.69	3.14	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,366.00	87.47	181.04	10,410.40	1,345.73	-1,345.91	-18.10	0.42	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,461.00	90.56	181.02	10,412.04	1,440.69	-1,440.86	-19.81	3.25	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,556.00	90.99	181.44	10,410.75	1,535.67	-1,535.83	-21.84	0.63	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,651.00	88.98	178.28	10,410.78	1,630.59	-1,630.82	-21.61	3.94	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,747.00	90.80	181.38	10,410.96	1,726.50	-1,726.80	-21.33	3.74	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,842.00	90.99	182.03	10,409.48	1,821.49	-1,821.75	-24.15	0.71	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	11,939.00	90.34	181.68	10,408.35	1,918.48	-1,918.69	-27.29	0.76	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	12,034.00	91.76	181.35	10,406.61	2,013.46	-2,013.64	-29.80	1.53	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	12,129.00	90.74	181.09	10,404.54	2,108.43	-2,108.59	-31.83	1.11	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	12,224.00	91.14	180.96	10,402.98	2,203.40	-2,203.56	-33.53	0.44	MWD	SPERRY-SUN DRILLING SE...
8/5/2014	12,320.00	88.95	180.45	10,402.90	2,299.37	-2,299.55	-34.71	2.34	MWD	SPERRY-SUN DRILLING SE...
8/6/2014	12,445.00	87.96	181.04	10,406.27	2,424.30	-2,424.49	-36.33	0.92	MWD	SPERRY-SUN DRILLING SE...
8/6/2014	12,541.00	91.74	180.77	10,406.53	2,520.26	-2,520.46	-37.85	3.95	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	12,635.00	89.91	181.66	10,405.17	2,614.24	-2,614.43	-39.84	2.16	MWD	SPERRY-SUN DRILLING SE...



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 35 T24S R31E	API/UWI 3001541869	Latitude (") 32° 10' 49.92" N	Longitude (") 103° 44' 30.069" W	Ground Elev... 3,499.90
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,524.90
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS ("/100ft)	Survey Tool	Survey Company
8/7/2014	12,731.00	92.41	182.05	10,403.23	2,710.21	-2,710.35	-42.95	2.64	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	12,827.00	89.26	181.80	10,401.83	2,806.19	-2,806.27	-46.17	3.29	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	12,922.00	92.28	182.12	10,400.55	2,901.17	-2,901.20	-49.42	3.20	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	13,113.00	91.08	182.21	10,394.95	3,092.08	-3,091.97	-56.63	0.63	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	13,208.00	90.68	182.31	10,393.49	3,187.07	-3,186.89	-60.38	0.43	MWD	SPERRY-SUN DRILLING SE...
8/7/2014	13,304.00	87.75	182.16	10,394.81	3,283.05	-3,282.80	-64.12	3.06	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,400.00	88.26	182.30	10,398.15	3,378.99	-3,378.67	-67.85	0.55	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,495.00	89.88	183.02	10,399.69	3,473.97	-3,473.55	-72.26	1.87	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,591.00	91.12	182.60	10,398.86	3,569.95	-3,569.43	-76.97	1.36	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,686.00	90.65	182.60	10,397.39	3,664.93	-3,664.32	-81.28	0.49	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,781.00	91.45	184.98	10,395.65	3,759.86	-3,759.08	-87.55	2.64	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,876.00	90.93	185.14	10,393.67	3,854.70	-3,853.69	-95.93	0.57	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	13,972.00	90.81	188.75	10,392.22	3,950.32	-3,948.96	-107.54	3.76	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	14,068.00	90.46	189.76	10,391.15	4,045.54	-4,043.71	-122.97	1.11	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	14,164.00	90.15	186.79	10,390.64	4,140.95	-4,138.69	-136.79	3.11	MWD	SPERRY-SUN DRILLING SE...
8/8/2014	14,259.00	89.65	186.63	10,390.81	4,235.63	-4,233.04	-147.89	0.55	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,355.00	89.63	184.54	10,391.41	4,331.43	-4,328.58	-157.23	2.18	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,451.00	89.26	179.55	10,392.34	4,427.39	-4,424.48	-160.66	5.21	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,547.00	90.58	181.70	10,392.48	4,523.36	-4,520.47	-161.70	2.63	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,643.00	91.64	179.91	10,390.62	4,619.32	-4,616.44	-163.05	2.17	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,678.00	91.79	179.74	10,389.57	4,654.27	-4,651.42	-162.95	0.65	MWD	SPERRY-SUN DRILLING SE...
8/9/2014	14,725.00	91.79	179.74	10,388.10	4,701.22	-4,698.40	-162.73	0.00	MWD	SPERRY-SUN DRILLING SE...