

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 27 2014



RECEIVED

June 30, 2014

30-015-41941

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

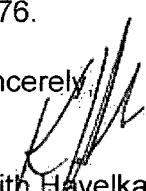
Attn: David Cook

Re: Cotton Draw Unit 211H

Please find enclosed a copy of the survey from 0.00' to 9665.00' ran on the above referenced well.

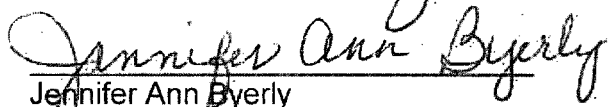
If I can be of any further service please do not hesitate to call me at 800-606-4976.

Sincerely,

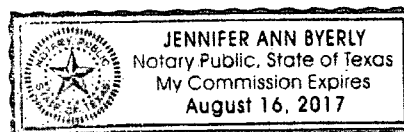

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 30 day of June, A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas

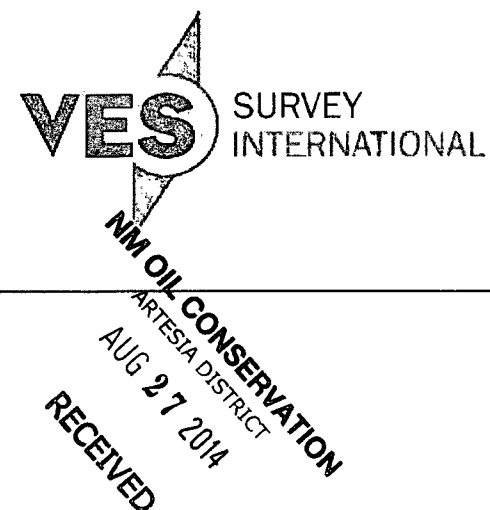
VES Survey International
P.O. Box 261021 Corpus Christi, TX 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com





Company: Devon Energy
Lease/Well: Cotton Draw Unit/211H

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



Depth Reference : 25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...raw unit #211h gyro survey.ut

Minimum Curvature Method

Report Date/Time: 6/25/2014 / 09:55

VES Survey International

Fort Worth, Texas

817-741-3610

Surveyor: Logan Henry

Cotton Draw Unit 211H / API 30-015-41941

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	0.16	290.50	100.00	0.05	-0.13	0.05	0.14	290.50	0.16
200.00	0.21	260.23	200.00	0.07	-0.45	0.07	0.45	278.95	0.10
300.00	0.06	236.98	300.00	0.01	-0.67	0.01	0.67	270.92	0.15
400.00	0.60	224.70	400.00	-0.39	-1.08	-0.39	1.15	250.09	0.54
500.00	0.84	234.19	499.99	-1.19	-2.05	-1.19	2.37	239.71	0.27
600.00	0.76	241.02	599.98	-1.95	-3.22	-1.95	3.77	238.87	0.13
700.00	0.54	255.53	699.97	-2.39	-4.27	-2.39	4.89	240.76	0.27
800.00	0.59	281.28	799.97	-2.41	-5.23	-2.41	5.76	245.28	0.26
900.00	0.70	277.16	899.96	-2.23	-6.34	-2.23	6.72	250.62	0.12
1000.00	0.52	274.76	999.96	-2.12	-7.40	-2.12	7.70	254.05	0.18
1100.00	0.57	274.60	1099.95	-2.04	-8.35	-2.04	8.60	256.29	0.05
1200.00	0.69	260.77	1199.95	-2.09	-9.45	-2.09	9.68	257.50	0.19
1300.00	0.65	263.08	1299.94	-2.26	-10.61	-2.26	10.85	257.98	0.05
1400.00	0.60	259.57	1399.93	-2.42	-11.70	-2.42	11.94	258.29	0.06
1500.00	0.53	263.49	1499.93	-2.57	-12.67	-2.57	12.93	258.53	0.08
1600.00	0.75	265.66	1599.92	-2.67	-13.79	-2.67	14.04	259.02	0.22
1700.00	0.58	278.24	1699.91	-2.65	-14.94	-2.65	15.17	259.94	0.22
1800.00	0.32	287.08	1799.91	-2.49	-15.71	-2.49	15.91	260.98	0.27

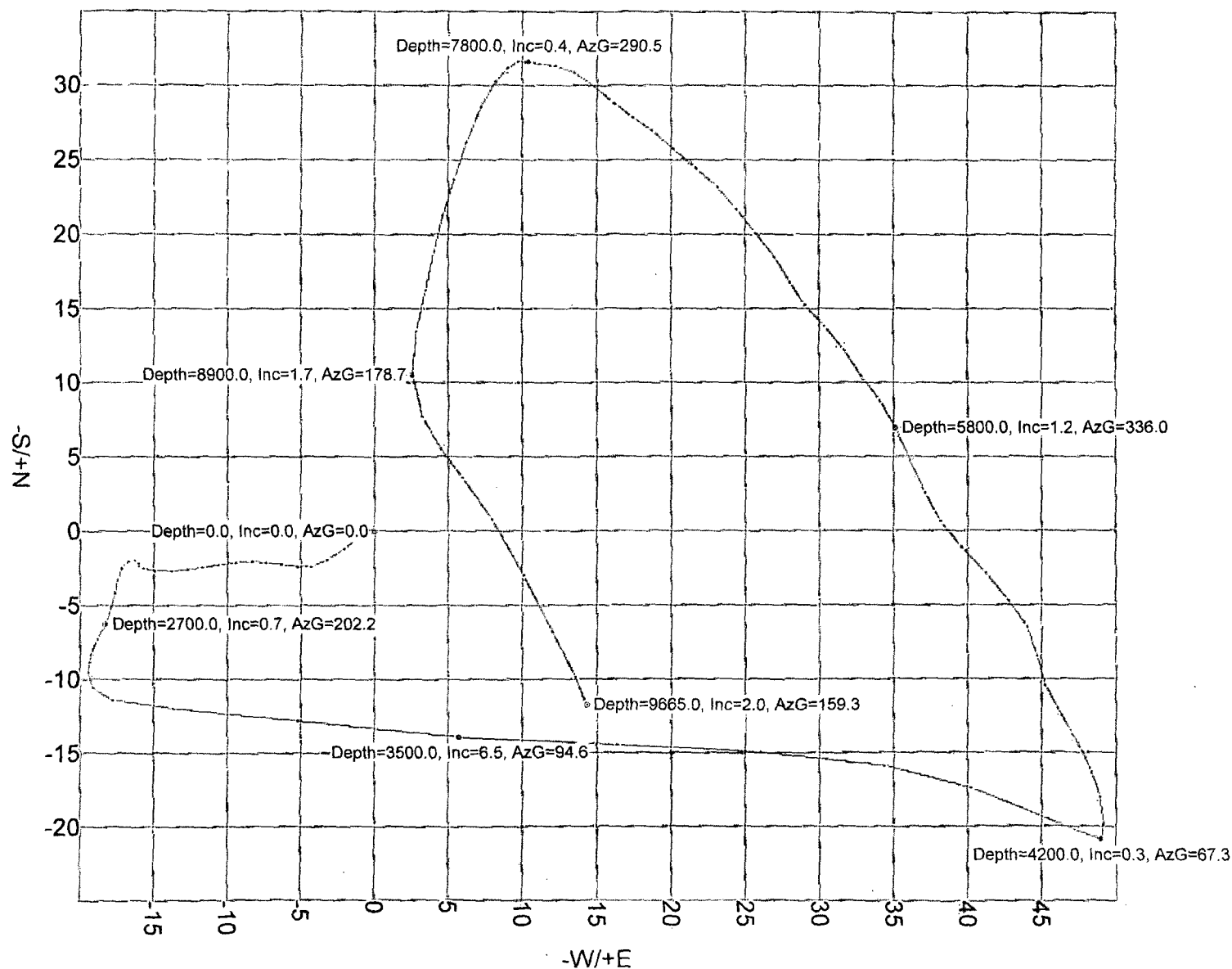
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.05	329.28	1899.91	-2.38	-16.00	-2.38	16.18	261.55	0.29
2000.00	0.19	350.86	1999.91	-2.18	-16.05	-2.18	16.20	262.27	0.15
2100.00	0.26	285.87	2099.91	-1.95	-16.30	-1.95	16.41	263.16	0.25
2200.00	0.33	237.88	2199.91	-2.05	-16.76	-2.05	16.89	263.04	0.25
2300.00	0.42	213.06	2299.91	-2.51	-17.21	-2.51	17.39	261.72	0.18
2400.00	0.54	191.10	2399.90	-3.27	-17.50	-3.27	17.80	259.40	0.22
2500.00	0.49	191.19	2499.90	-4.16	-17.67	-4.16	18.15	256.75	0.05
2600.00	0.68	196.27	2599.89	-5.15	-17.92	-5.15	18.65	253.95	0.19
2700.00	0.65	202.20	2699.89	-6.25	-18.30	-6.25	19.34	251.14	0.08
2800.00	0.69	212.02	2799.88	-7.29	-18.84	-7.29	20.20	248.84	0.12
2900.00	0.63	194.78	2899.87	-8.33	-19.30	-8.33	21.02	246.64	0.21
3000.00	0.74	179.01	2999.87	-9.51	-19.43	-9.51	21.63	243.91	0.22
3100.00	0.60	145.61	3099.86	-10.59	-19.12	-10.59	21.86	241.02	0.41
3200.00	1.23	111.05	3199.85	-11.40	-17.83	-11.40	21.16	237.39	0.81
3300.00	3.65	93.71	3299.75	-12.00	-13.64	-12.00	18.17	228.68	2.51
3400.00	6.09	96.74	3399.38	-12.83	-5.19	-12.83	13.84	202.04	2.45
3500.00	6.53	94.59	3498.78	-13.90	5.74	-13.90	15.04	157.55	0.50
3600.00	5.67	91.34	3598.21	-14.47	16.36	-14.47	21.84	131.51	0.92
3700.00	5.44	94.52	3697.74	-14.96	26.02	-14.96	30.02	119.90	0.39
3800.00	4.19	98.75	3797.38	-15.89	34.36	-15.89	37.86	114.82	1.30
3900.00	2.80	113.09	3897.20	-17.41	40.22	-17.41	43.83	113.40	1.63
4000.00	2.27	110.20	3997.10	-19.05	44.33	-19.05	48.25	113.25	0.55
4100.00	1.65	114.82	4097.04	-20.33	47.49	-20.33	51.66	113.18	0.64
4200.00	0.26	67.26	4197.02	-20.85	49.00	-20.85	53.26	113.05	1.48
4300.00	1.05	358.31	4297.02	-19.84	49.19	-19.84	53.04	111.97	0.99
4400.00	1.07	345.13	4397.00	-18.03	48.92	-18.03	52.14	110.23	0.24
4500.00	0.96	339.04	4496.99	-16.34	48.39	-16.34	51.07	108.67	0.16
4600.00	0.85	332.33	4596.97	-14.91	47.74	-14.91	50.02	107.34	0.15
4700.00	1.00	329.91	4696.96	-13.50	46.96	-13.50	48.86	106.03	0.16
4800.00	0.95	330.12	4796.95	-12.02	46.11	-12.02	47.65	104.61	0.05
4900.00	1.11	333.44	4896.93	-10.44	45.27	-10.44	46.46	102.99	0.17
5000.00	1.28	353.75	4996.91	-8.47	44.71	-8.47	45.51	100.73	0.45
5100.00	1.20	327.36	5096.89	-6.48	44.03	-6.48	44.50	98.37	0.57
5200.00	1.32	322.04	5196.86	-4.69	42.76	-4.69	43.01	96.26	0.17
5300.00	1.41	319.07	5296.83	-2.86	41.24	-2.86	41.34	93.96	0.11
5400.00	1.37	313.95	5396.80	-1.10	39.58	-1.10	39.59	91.59	0.13
5500.00	1.20	328.94	5496.78	0.63	38.18	0.63	38.18	89.06	0.38
5600.00	1.35	333.87	5596.75	2.58	37.12	2.58	37.21	86.03	0.18
5700.00	1.49	335.67	5696.72	4.82	36.07	4.82	36.39	82.39	0.15

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
5800.00	1.21	335.96	5796.70	6.97	35.10	6.97	35.79	78.77	0.28
5900.00	1.21	323.95	5896.67	8.79	34.05	8.79	35.16	75.52	0.25
6000.00	1.17	323.08	5996.65	10.46	32.81	10.46	34.44	72.32	0.04
6100.00	1.20	330.92	6096.63	12.19	31.69	12.19	33.95	68.96	0.16
6200.00	1.27	311.50	6196.61	13.84	30.35	13.84	33.36	65.49	0.42
6300.00	0.96	322.97	6296.59	15.24	29.02	15.24	32.78	62.29	0.38
6400.00	1.17	331.45	6396.57	16.81	28.03	16.81	32.68	59.05	0.26
6500.00	1.11	324.03	6496.55	18.49	26.97	18.49	32.70	55.57	0.16
6600.00	1.20	318.98	6596.53	20.06	25.71	20.06	32.61	52.04	0.14
6700.00	1.18	322.96	6696.51	21.67	24.41	21.67	32.64	48.39	0.09
6800.00	1.10	315.28	6796.49	23.17	23.11	23.17	32.73	44.92	0.17
6900.00	1.09	307.43	6896.47	24.43	21.69	24.43	32.67	41.59	0.15
7000.00	1.23	313.44	6996.45	25.75	20.15	25.75	32.70	38.05	0.19
7100.00	0.95	306.39	7096.43	26.98	18.70	26.98	32.83	34.73	0.31
7200.00	0.78	301.09	7196.42	27.83	17.45	27.83	32.84	32.09	0.19
7300.00	1.03	313.18	7296.41	28.79	16.21	28.79	33.04	29.38	0.32
7400.00	1.01	306.96	7396.39	29.94	14.85	29.94	33.42	26.38	0.11
7500.00	0.88	301.29	7496.38	30.87	13.49	30.87	33.69	23.61	0.16
7600.00	0.72	276.29	7596.37	31.33	12.21	31.33	33.63	21.30	0.38
7700.00	0.49	273.93	7696.37	31.43	11.17	31.43	33.36	19.56	0.23
7800.00	0.43	290.53	7796.36	31.59	10.39	31.59	33.26	18.21	0.14
7900.00	0.41	248.65	7896.36	31.59	9.71	31.59	33.05	17.08	0.30
8000.00	0.56	230.93	7996.36	31.15	9.00	31.15	32.43	16.11	0.21
8100.00	0.82	215.38	8096.35	30.27	8.21	30.27	31.36	15.17	0.32
8200.00	1.50	207.04	8196.33	28.52	7.20	28.52	29.42	14.17	0.70
8300.00	1.46	197.45	8296.29	26.14	6.22	26.14	26.87	13.39	0.25
8400.00	1.51	198.55	8396.26	23.67	5.42	23.67	24.28	12.89	0.05
8500.00	1.38	197.22	8496.23	21.26	4.64	21.26	21.76	12.31	0.13
8600.00	1.42	190.57	8596.20	18.89	4.06	18.89	19.32	12.12	0.17
8700.00	1.66	193.86	8696.16	16.26	3.48	16.26	16.63	12.08	0.26
8800.00	1.64	191.48	8796.12	13.45	2.85	13.45	13.75	11.96	0.07
8900.00	1.72	178.70	8896.08	10.54	2.60	10.54	10.86	13.84	0.38
9000.00	1.66	154.77	8996.04	7.73	3.25	7.73	8.38	22.81	0.70
9100.00	1.27	143.74	9096.00	5.52	4.52	5.52	7.14	39.29	0.48
9200.00	1.49	142.67	9195.97	3.60	5.96	3.60	6.96	58.85	0.22
9300.00	2.45	145.39	9295.91	0.81	7.96	0.81	8.00	84.20	0.97
9400.00	2.54	155.45	9395.82	-2.97	10.10	-2.97	10.53	106.40	0.45
9500.00	2.37	150.70	9495.73	-6.79	12.03	-6.79	13.82	119.44	0.27
9600.00	1.57	157.33	9595.67	-9.86	13.57	-9.86	16.77	125.99	0.83

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	Log Severity Deg/100
9665.00	2.02	159.31	9660.64	-11.75	14.32	-11.75	18.52	129.36	0.70



VES Survey International
Fort Worth, Texas
817-741-3610
Surveyor: Logan Henry
Cotton Draw Unit 211H / API 30-015-41941



-W/+E
VES Survey Date: 06/16/2014



COTTON DRAW UNIT 211H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location SEC34 T24S R31E	API/UWI 3001541941	Latitude (°) 32° 10' 1.73" N	Longitude (°) 103° 45' 35.614" W	Ground Elev... 3,457.00	KB - GL (ft) 25.00	Orig KB Elev (ft) 3,482.00	Tubing Head Elevation (ft)

Wellbores

Wellbore Name OH	Parent Wellbore	SAP Well ID 35049	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 (7/100ft)	Survey Tool	Survey Company
Wellbore Name ST01	Parent Wellbore OH	SAP Well ID	Kick Off Depth (ftKB) 3,225.0	Vertical Section Direction (°)						
Actual Deviation Survey	Definitive? Yes	Proposed? No	Proposed Deviation Survey							
MWD SPERRY, Proposed? No										

Deviation Survey

Date 6/17/2014		Description MWD SPERRY			
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 (7/100ft)	Survey Tool	Survey Company
6/17/2014	100.00	0.16	290.50	100.00	0.04	0.05	-0.13	0.16	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	200.00	0.21	260.23	200.00	0.04	0.07	-0.44	0.11	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	300.00	0.06	236.98	300.00	-0.04	0.01	-0.67	0.16	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	400.00	0.60	224.70	400.00	-0.47	-0.39	-1.08	0.54	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	500.00	0.84	234.19	499.99	-1.33	-1.19	-2.04	0.27	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	600.00	0.76	241.02	599.98	-2.16	-1.94	-3.22	0.12	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	700.00	0.54	255.53	699.97	-2.67	-2.38	-4.25	0.27	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	800.00	0.59	281.28	799.97	-2.76	-2.40	-5.21	0.26	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	900.00	0.70	277.16	899.96	-2.66	-2.22	-6.32	0.12	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,000.00	0.52	274.76	999.96	-2.62	-2.11	-7.38	0.18	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,100.00	0.57	274.60	1,099.95	-2.60	-2.03	-8.33	0.05	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,200.00	0.69	260.77	1,199.95	-2.74	-2.09	-9.42	0.19	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,300.00	0.65	263.08	1,299.94	-2.98	-2.25	-10.58	0.05	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,400.00	0.60	259.57	1,399.93	-3.22	-2.42	-11.66	0.06	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,500.00	0.53	263.49	1,499.93	-3.43	-2.56	-12.63	0.08	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,600.00	0.75	265.66	1,599.92	-3.61	-2.67	-13.74	0.22	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,700.00	0.58	278.24	1,699.91	-3.67	-2.64	-14.90	0.22	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,800.00	0.32	287.08	1,799.91	-3.57	-2.49	-15.66	0.27	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	1,900.00	0.05	329.28	1,899.91	-3.47	-2.37	-15.95	0.28	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,000.00	0.19	350.86	1,999.91	-3.27	-2.17	-16.00	0.14	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,100.00	0.26	285.87	2,099.91	-3.06	-1.94	-16.25	0.25	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,200.00	0.33	237.88	2,199.91	-3.19	-2.03	-16.71	0.25	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,300.00	0.42	213.06	2,299.91	-3.68	-2.49	-17.15	0.18	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,400.00	0.54	191.10	2,399.90	-4.46	-3.26	-17.44	0.22	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,500.00	0.49	191.19	2,499.90	-5.36	-4.15	-17.62	0.05	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,600.00	0.68	196.27	2,599.89	-6.36	-5.13	-17.87	0.20	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,700.00	0.65	202.20	2,699.89	-7.48	-6.23	-18.25	0.08	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,800.00	0.69	212.02	2,799.88	-8.55	-7.27	-18.78	0.12	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	2,900.00	0.63	194.78	2,899.87	-9.62	-8.31	-19.24	0.21	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,000.00	0.74	179.01	2,999.87	-10.80	-9.48	-19.37	0.22	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,100.00	0.60	145.61	3,099.86	-11.86	-10.56	-19.06	0.41	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,200.00	1.23	111.05	3,199.85	-12.58	-11.38	-17.77	0.81	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,300.00	3.65	93.71	3,299.75	-12.88	-11.97	-13.59	2.50	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,400.00	6.09	96.74	3,399.38	-13.13	-12.80	-5.14	2.45	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,500.00	6.53	94.59	3,498.78	-13.44	-13.88	5.79	0.50	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,600.00	5.67	91.34	3,598.21	-13.28	-14.45	16.40	0.93	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 211H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location SEC34 T24S R31E	API/UWI 3001541941	Latitude (°) 32° 10' 1.73" N	Longitude (°) 103° 45' 35.614" W	Ground Elev. (ft) 3,457.00
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,482.00
				Tubing Head Elevation (ft)

Survey Data

Date	MDI (ft/KB)	Incl (°)	Azm (°)	TVD (ft/KB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
6/17/2014	3,700.00	5.44	94.52	3,697.74	-13.10	-14.94	26.07	0.38	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,800.00	4.19	98.75	3,797.39	-13.45	-15.87	34.40	1.30	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	3,900.00	2.80	113.09	3,897.20	-14.55	-17.38	40.26	1.63	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,000.00	2.27	110.20	3,997.10	-15.90	-19.02	44.37	0.55	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,100.00	1.65	114.82	4,097.04	-16.97	-20.31	47.53	0.64	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,200.00	0.26	67.26	4,197.03	-17.38	-20.83	49.05	1.49	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,300.00	1.05	358.31	4,297.02	-16.37	-19.82	49.23	0.99	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,400.00	1.07	345.13	4,397.00	-14.57	-18.01	48.96	0.24	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,500.00	0.96	339.04	4,496.99	-12.93	-16.32	48.42	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,600.00	0.85	332.33	4,596.98	-11.54	-14.88	47.78	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,700.00	1.00	329.91	4,696.96	-10.18	-13.47	47.00	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,800.00	0.95	330.12	4,796.95	-8.77	-12.00	46.15	0.05	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	4,900.00	1.11	333.44	4,896.93	-7.25	-10.41	45.30	0.17	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,000.00	1.28	353.75	4,996.91	-5.31	-8.43	44.75	0.45	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,100.00	1.20	327.36	5,096.89	-3.37	-6.44	44.06	0.57	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,200.00	1.32	322.04	5,196.86	-1.68	-4.65	42.79	0.17	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,300.00	1.41	319.07	5,296.83	0.05	-2.81	41.27	0.11	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,400.00	1.37	313.95	5,396.81	1.69	-1.05	39.61	0.13	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,500.00	1.20	328.94	5,496.78	3.32	0.67	38.20	0.38	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,600.00	1.35	333.87	5,596.76	5.19	2.63	37.15	0.19	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,700.00	1.49	335.67	5,696.73	7.36	4.87	36.09	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,800.00	1.21	335.96	5,796.70	9.43	7.02	35.13	0.28	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	5,900.00	1.21	323.95	5,896.68	11.17	8.84	34.07	0.25	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,000.00	1.17	323.08	5,996.65	12.75	10.51	32.84	0.04	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,100.00	1.20	330.92	6,096.63	14.40	12.24	31.72	0.16	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,200.00	1.27	311.50	6,196.61	15.96	13.89	30.38	0.42	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,300.00	0.96	322.97	6,296.59	17.26	15.29	29.04	0.38	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,400.00	1.17	331.45	6,396.57	18.76	16.85	28.05	0.26	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,500.00	1.11	324.03	6,496.55	20.36	18.54	26.99	0.16	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,600.00	1.20	318.98	6,596.53	21.84	20.11	25.74	0.14	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,700.00	1.18	322.96	6,696.51	23.36	21.72	24.43	0.09	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,800.00	1.10	315.28	6,796.49	24.77	23.23	23.13	0.17	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	6,900.00	1.09	307.43	6,896.47	25.93	24.49	21.70	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,000.00	1.23	313.44	6,996.45	27.14	25.80	20.17	0.19	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,100.00	0.95	306.39	7,096.43	28.26	27.03	18.72	0.31	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,200.00	0.78	301.09	7,196.42	29.02	27.87	17.47	0.19	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,300.00	1.03	313.18	7,296.41	29.90	28.84	16.23	0.31	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,400.00	1.01	306.96	7,396.40	30.94	29.99	14.87	0.11	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,500.00	0.88	301.29	7,496.38	31.78	30.92	13.51	0.16	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,600.00	0.72	276.29	7,596.37	32.15	31.38	12.23	0.38	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,700.00	0.49	273.93	7,696.37	32.18	31.48	11.18	0.23	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,800.00	0.43	290.53	7,796.36	32.29	31.64	10.40	0.15	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	7,900.00	0.41	248.65	7,896.36	32.24	31.64	9.72	0.30	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,000.00	0.56	230.93	7,996.36	31.75	31.20	9.01	0.21	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,100.00	0.82	215.38	8,096.35	30.81	30.31	8.21	0.32	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,200.00	1.50	207.04	8,196.33	28.99	28.56	7.20	0.70	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,300.00	1.46	197.45	8,296.30	26.55	26.18	6.23	0.25	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,400.00	1.51	198.55	8,396.26	24.04	23.72	5.43	0.06	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,500.00	1.38	197.22	8,496.23	21.59	21.32	4.65	0.13	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,600.00	1.42	190.57	8,596.20	19.19	18.95	4.07	0.17	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,700.00	1.66	193.86	8,696.16	16.53	16.33	3.49	0.26	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,800.00	1.64	191.48	8,796.12	13.68	13.52	2.86	0.07	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	8,900.00	1.72	178.70	8,896.08	10.77	10.62	2.61	0.38	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,000.00	1.66	154.77	8,996.04	8.01	7.80	3.26	0.70	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,100.00	1.27	143.74	9,096.01	5.90	5.60	4.53	0.48	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 211H

WEST UNRESTRICTED

Directional Survey

District	County	Field Name		Project Group	State/Province		
DELAWARE BASIN	EDDY	PADUCA		DELAWARE BASIN REG	NM		
Surface Legal Location	API/UWI	Latitude (°)	Longitude (°)	Ground Elev.:	KB - GL (ft)	Orig KB Elev (ft)	Tubing Head Elevation (ft)
SEC34 T24S R31E	3001541941	32° 10' 1.73" N	103° 45' 35.614" W	3,457.00	25.00	3,482.00	

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EAW (ft)	DLS (ft/100ft)	Survey Tool	Survey Company
6/17/2014	9,200.00	1.49	142.67	9,195.98	4.08	3.67	5.98	0.22	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,300.00	2.45	145.39	9,295.92	1.43	0.88	7.98	0.96	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,400.00	2.54	155.45	9,395.82	-2.19	-2.89	10.11	0.45	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,500.00	2.37	150.70	9,495.73	-5.86	-6.71	12.05	0.26	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,600.00	1.57	157.33	9,595.67	-8.82	-9.78	13.59	0.83	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,665.00	2.02	159.31	9,660.64	-10.65	-11.67	14.34	0.70	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,700.00	2.52	163.03	9,695.61	-11.93	-12.99	14.78	1.49	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,732.00	2.90	160.90	9,727.57	-13.33	-14.42	15.25	1.23	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,763.00	2.70	140.66	9,758.54	-14.59	-15.73	15.97	3.24	MWD	SPERRY-SUN DRILLING SE...
6/17/2014	9,795.00	3.36	137.91	9,790.49	-15.79	-17.01	17.07	2.11	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,827.00	3.21	140.48	9,822.44	-17.09	-18.40	18.27	0.66	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,858.00	2.32	80.91	9,853.41	-17.57	-18.97	19.44	9.20	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,889.00	6.55	34.53	9,884.32	-15.91	-17.41	21.07	16.86	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,920.00	11.85	25.91	9,914.91	-11.43	-13.09	23.46	17.62	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,952.00	15.10	21.29	9,946.03	-4.40	-6.25	26.41	10.69	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	9,984.00	16.12	23.69	9,976.85	3.76	1.71	29.71	3.77	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	10,015.00	19.73	24.10	10,006.34	12.73	10.43	33.58	11.65	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	10,047.00	24.04	22.02	10,036.02	24.00	21.41	38.23	13.68	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	10,079.00	27.30	19.06	10,064.86	37.29	34.39	43.07	10.94	MWD	SPERRY-SUN DRILLING SE...
6/18/2014	10,110.00	29.77	17.11	10,092.09	51.65	48.47	47.66	8.51	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,142.00	33.57	17.63	10,119.32	67.99	64.50	52.68	11.91	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,173.00	37.74	17.46	10,144.51	85.55	81.72	58.12	13.46	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,205.00	40.16	17.24	10,169.39	105.12	100.92	64.12	7.57	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,236.00	43.18	18.60	10,192.55	125.12	120.53	70.47	10.17	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,268.00	47.78	19.54	10,214.98	147.14	142.08	77.93	14.53	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,299.00	52.10	17.85	10,234.93	170.08	164.55	85.52	14.55	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,331.00	55.93	16.23	10,253.72	195.30	189.31	93.09	12.65	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,363.00	59.49	16.75	10,270.82	221.70	215.24	100.77	11.21	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,394.00	62.98	17.35	10,285.73	248.17	241.22	108.74	11.39	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,426.00	67.78	18.68	10,299.06	276.38	268.87	117.74	15.47	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,460.00	70.66	18.55	10,311.12	307.13	298.99	127.89	8.48	MWD	SPERRY-SUN DRILLING SE...
6/19/2014	10,491.00	73.84	18.53	10,320.57	335.70	326.98	137.28	10.26	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,523.00	74.72	19.45	10,329.24	365.45	356.11	147.30	3.90	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,554.00	78.40	19.79	10,336.45	394.48	384.50	157.42	11.92	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,586.00	80.74	19.63	10,342.24	424.77	414.13	168.04	7.33	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,618.00	83.42	20.30	10,346.65	455.24	443.91	178.86	8.63	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,649.00	86.27	21.21	10,349.43	484.79	472.78	189.80	9.65	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,681.00	90.18	19.95	10,350.42	515.43	502.72	201.04	12.84	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,776.00	91.45	19.26	10,349.07	606.91	592.20	232.91	1.52	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,871.00	89.69	19.08	10,348.13	698.58	681.92	264.10	1.86	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	10,966.00	89.85	17.99	10,348.51	790.52	771.99	294.30	1.16	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	11,061.00	90.25	17.09	10,348.43	882.87	862.58	322.93	1.04	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	11,155.00	89.14	15.46	10,348.93	974.71	952.80	349.27	2.10	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	11,250.00	88.85	13.32	10,350.59	1,068.12	1,044.80	372.88	2.27	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	11,345.00	89.69	10.73	10,351.80	1,162.17	1,137.70	392.66	2.87	MWD	SPERRY-SUN DRILLING SE...
6/20/2014	11,440.00	90.65	7.79	10,351.52	1,256.75	1,231.45	407.95	3.26	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	11,534.00	92.59	5.63	10,348.86	1,350.60	1,324.76	418.93	3.09	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	11,628.00	91.83	1.26	10,345.24	1,444.50	1,418.50	424.57	4.72	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	11,723.00	91.45	356.79	10,342.52	1,539.08	1,513.42	422.95	4.72	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	11,818.00	91.75	358.78	10,339.86	1,633.49	1,608.31	419.28	2.12	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	11,914.00	89.91	357.00	10,338.47	1,728.93	1,704.22	415.75	2.67	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,009.00	89.75	354.79	10,338.75	1,822.98	1,798.97	408.95	2.33	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,103.00	90.25	354.94	10,338.75	1,915.79	1,892.60	400.54	0.56	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,198.00	91.88	354.86	10,336.99	2,009.59	1,987.20	392.09	1.72	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,292.00	91.79	354.15	10,333.98	2,102.26	2,080.72	383.10	0.76	MWD	SPERRY-SUN DRILLING SE...



COTTON DRAW UNIT 211H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location SEC34 T24S R31E	API/UWI 3001541941	Latitude (°) 32° 10' 1.73" N	Longitude (°) 103° 45' 35.614" W	Ground Elev. (ft) 3,457.00
			KB - GL (ft) 25.00	Orig KB Elev (ft) 3,482.00
				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
6/22/2014	12,388.00	92.31	354.81	10,330.54	2,196.88	2,176.21	373.87	0.87	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,482.00	91.11	355.46	10,327.74	2,289.72	2,269.83	365.90	1.45	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	12,578.00	92.05	356.76	10,325.09	2,384.78	2,365.57	359.39	1.67	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	12,673.00	90.06	356.47	10,323.34	2,478.98	2,460.38	353.78	2.12	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	12,768.00	90.15	356.14	10,323.17	2,573.13	2,555.19	347.66	0.36	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	12,863.00	89.54	353.89	10,323.43	2,666.96	2,649.82	339.41	2.45	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	12,958.00	88.40	353.45	10,325.13	2,760.42	2,744.22	328.93	1.29	MWD	SPERRY-SUN DRILLING SE...
6/22/2014	13,052.00	90.00	354.18	10,326.45	2,852.93	2,837.66	318.81	1.87	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	13,147.00	92.28	356.23	10,324.56	2,946.79	2,932.30	310.87	3.23	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	13,242.00	94.04	359.12	10,319.32	3,041.06	3,027.06	307.02	3.56	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	13,337.00	93.62	359.19	10,312.97	3,135.51	3,121.84	305.62	0.45	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	13,432.00	93.97	359.22	10,306.69	3,229.98	3,216.62	304.30	0.37	MWD	SPERRY-SUN DRILLING SE...
6/23/2014	13,527.00	93.47	359.63	10,300.52	3,324.48	3,311.42	303.35	0.68	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	13,621.00	90.31	0.95	10,297.42	3,418.22	3,405.35	303.83	3.64	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	13,716.00	89.57	0.21	10,297.52	3,513.05	3,500.35	304.79	1.10	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	13,811.00	89.69	1.28	10,298.13	3,607.90	3,595.33	306.03	1.13	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	13,906.00	90.31	0.57	10,298.13	3,702.76	3,690.32	307.56	0.99	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	14,001.00	89.17	0.41	10,298.57	3,797.58	3,785.32	308.37	1.21	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	14,096.00	88.15	0.21	10,300.79	3,892.36	3,880.29	308.89	1.09	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	14,190.00	89.91	2.37	10,302.38	3,986.24	3,974.24	311.00	2.96	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	14,286.00	89.57	0.86	10,302.81	4,082.15	4,070.20	313.71	1.61	MWD	SPERRY-SUN DRILLING SE...
6/24/2014	14,381.00	89.75	0.99	10,303.38	4,177.02	4,165.18	315.24	0.23	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,476.00	89.17	1.01	10,304.27	4,271.88	4,260.16	316.90	0.61	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,570.00	88.21	1.45	10,306.42	4,365.75	4,354.12	318.92	1.12	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,665.00	88.58	1.04	10,309.08	4,460.60	4,449.06	320.98	0.58	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,760.00	88.80	0.92	10,311.26	4,555.45	4,544.02	322.60	0.26	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,861.00	89.17	1.24	10,313.04	4,656.31	4,644.98	324.51	0.48	MWD	SPERRY-SUN DRILLING SE...
6/25/2014	14,906.00	89.17	1.24	10,313.70	4,701.25	4,689.97	325.48	0.00	BIT	SPERRY-SUN DRILLING SE...