



August 25, 2014

15-42113

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 18 2015

RECEIVED

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

Attn: David Cook

Re: **Snapping 2 State 13H**

Please find enclosed a copy of the survey from 0.00' to 3940.00' 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

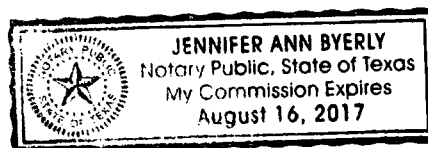
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 25 day of August A.D., 2014, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas





Company: Devon Energy
Lease/Well: Snapping 2 State/13-H

Rig Name: Cactus 105
State/County: New Mexico/Eddy
Latitude: 32.07, Longitude: -103.75
GRID North is 0.31 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 28 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 8/25/2014 / 09:18

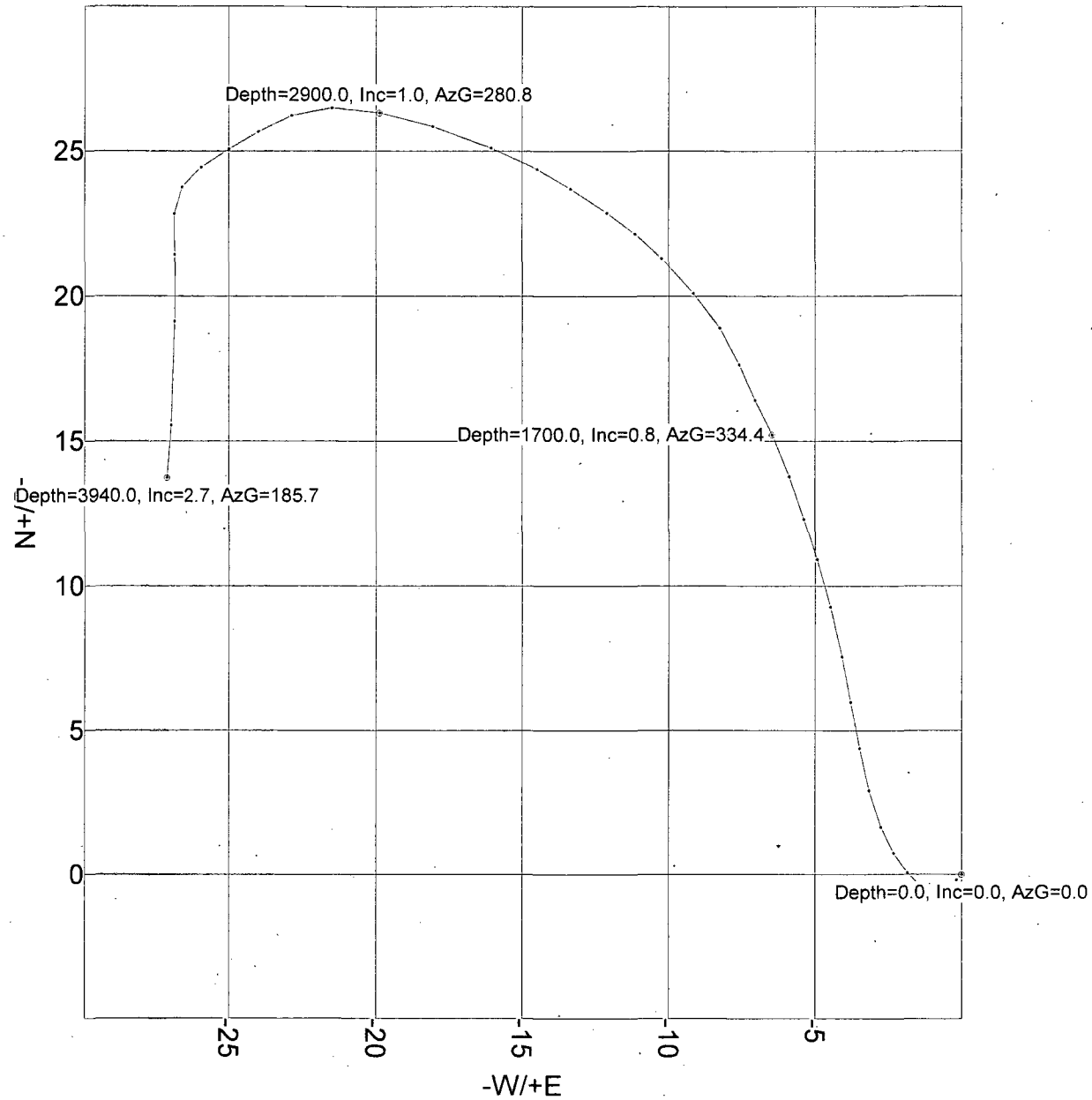
VES Survey International
West Texas
(432) 563-5444
Surveyor: Evan Goetz
Snapping 2 State 13H / API 30-015-42113

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	0.30	223.90	100.00	-0.19	-0.18	-0.19	0.26	223.90	0.30
200.00	0.22	230.81	200.00	-0.49	-0.51	-0.49	0.71	225.78	0.08
300.00	0.11	249.20	300.00	-0.65	-0.75	-0.65	0.99	229.01	0.12
400.00	0.26	293.82	400.00	-0.60	-1.05	-0.60	1.20	240.32	0.19
500.00	0.21	302.33	500.00	-0.41	-1.41	-0.41	1.47	253.94	0.05
600.00	0.52	322.25	599.99	0.06	-1.85	0.06	1.85	271.73	0.33
700.00	0.43	329.88	699.99	0.74	-2.31	0.74	2.43	287.71	0.12
800.00	0.74	336.30	799.99	1.65	-2.76	1.65	3.22	300.89	0.32
900.00	0.80	347.65	899.98	2.92	-3.17	2.92	4.31	312.68	0.16
1000.00	0.92	348.06	999.97	4.39	-3.48	4.39	5.60	321.56	0.13
1100.00	0.93	349.81	1099.95	5.97	-3.79	5.97	7.08	327.59	0.03
1200.00	0.91	349.06	1199.94	7.55	-4.09	7.55	8.59	331.58	0.02
1300.00	1.10	345.51	1299.92	9.27	-4.48	9.27	10.30	334.20	0.20
1400.00	0.86	342.83	1399.91	10.92	-4.94	10.92	11.98	335.64	0.25
1500.00	0.81	341.81	1499.90	12.30	-5.38	12.30	13.43	336.36	0.05
1600.00	0.97	340.79	1599.89	13.77	-5.88	13.77	14.98	336.87	0.16
1700.00	0.82	334.43	1699.87	15.22	-6.47	15.22	16.54	336.97	0.18
1800.00	0.69	332.83	1799.87	16.41	-7.06	16.41	17.86	336.73	0.13
1900.00	0.84	338.82	1899.86	17.63	-7.60	17.63	19.20	336.68	0.17

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
2000.00	0.80	325.19	1999.85	18.89	-8.27	18.89	20.62	336.37	0.20
2100.00	0.93	321.19	2099.84	20.10	-9.17	20.10	22.09	335.47	0.14
2200.00	0.92	315.38	2199.82	21.30	-10.24	21.30	23.63	334.32	0.09
2300.00	0.51	309.84	2299.81	22.15	-11.15	22.15	24.80	333.30	0.41
2400.00	0.85	305.62	2399.81	22.87	-12.09	22.87	25.87	332.14	0.35
2500.00	0.87	301.10	2499.80	23.70	-13.35	23.70	27.20	330.61	0.07
2600.00	0.66	300.93	2599.79	24.38	-14.49	24.38	28.36	329.28	0.21
2700.00	1.33	291.76	2699.77	25.11	-16.06	25.11	29.81	327.40	0.69
2800.00	1.12	288.49	2799.75	25.85	-18.06	25.85	31.54	325.06	0.23
2900.00	1.04	280.84	2899.73	26.33	-19.88	26.33	32.99	322.95	0.16
3000.00	0.83	269.83	2999.72	26.50	-21.50	26.50	34.12	320.95	0.27
3100.00	0.80	247.43	3099.71	26.23	-22.87	26.23	34.80	318.92	0.32
3200.00	0.64	239.13	3199.70	25.67	-23.99	25.67	35.14	316.94	0.19
3300.00	0.70	238.61	3299.69	25.07	-24.99	25.07	35.40	315.09	0.06
3400.00	0.61	234.54	3399.69	24.44	-25.94	24.44	35.65	313.30	0.10
3500.00	0.53	214.54	3499.68	23.76	-26.64	23.76	35.69	311.73	0.21
3600.00	0.61	179.79	3599.68	22.84	-26.90	22.84	35.29	310.34	0.35
3700.00	0.99	179.13	3699.67	21.44	-26.88	21.44	34.39	308.58	0.38
3800.00	1.66	180.92	3799.64	19.13	-26.89	19.13	33.00	305.43	0.67
3900.00	2.45	182.62	3899.57	15.55	-27.01	15.55	31.17	299.92	0.79
3940.00	2.74	185.74	3939.53	13.74	-27.15	13.74	30.43	296.85	0.82



VES Survey International
West Texas
(432) 563-5444
Surveyor: Evan Goetz
Snapping 2 State 13H / API 30-015-42113



VES Survey Date: 08/12/2014



SNAPPING 2 STATE 13H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG			State/Province NM	
Surface Legal Location Sec. 2 T26S R31E	API/UWI 3001542113	Latitude (°) 32° 3' 55.43" N	Longitude (°) 103° 44' 59.181" W	Ground Elev... 3,237.10	KB - GL (ft) 28.00	Orig KB Elev (ft) 3,265.10	Tubing Head Elevation (ft)

Wellbores

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

Deviation Survey

Date 8/12/2014		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
8/12/2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	100.00	0.30	223.90	100.00	-0.17	-0.19	-0.18	0.30	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	200.00	0.22	230.81	200.00	-0.45	-0.50	-0.51	0.09	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	300.00	0.11	249.20	300.00	-0.59	-0.65	-0.75	0.12	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	400.00	0.26	293.82	400.00	-0.50	-0.60	-1.05	0.20	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	500.00	0.21	302.33	500.00	-0.28	-0.41	-1.41	0.06	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	600.00	0.52	322.25	599.99	0.21	0.05	-1.84	0.33	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	700.00	0.43	329.88	699.99	0.93	0.73	-2.31	0.11	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	800.00	0.74	336.30	799.99	1.89	1.65	-2.76	0.32	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	900.00	0.80	347.65	899.98	3.19	2.92	-3.17	0.16	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,000.00	0.92	348.06	999.97	4.68	4.39	-3.48	0.12	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,100.00	0.93	349.81	1,099.95	6.29	5.97	-3.79	0.03	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,200.00	0.91	349.06	1,199.94	7.88	7.55	-4.08	0.02	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,300.00	1.10	345.51	1,299.92	9.62	9.26	-4.48	0.20	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,400.00	0.86	342.83	1,399.91	11.30	10.91	-4.94	0.24	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,500.00	0.81	341.81	1,499.90	12.72	12.30	-5.38	0.05	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,600.00	0.97	340.79	1,599.89	14.23	13.77	-5.88	0.16	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,700.00	0.82	334.43	1,699.87	15.72	15.21	-6.47	0.18	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,800.00	0.69	332.83	1,799.87	16.95	16.39	-7.05	0.13	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	1,900.00	0.84	338.82	1,899.86	18.21	17.61	-7.59	0.17	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,000.00	0.80	325.19	1,999.85	19.53	18.87	-8.25	0.20	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,100.00	0.93	321.19	2,099.84	20.81	20.07	-9.16	0.14	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,200.00	0.92	315.38	2,199.82	22.10	21.28	-10.23	0.09	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,300.00	0.51	309.84	2,299.81	23.03	22.13	-11.14	0.42	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,400.00	0.85	305.62	2,399.81	23.83	22.85	-12.08	0.34	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,500.00	0.87	301.10	2,499.80	24.76	23.68	-13.34	0.07	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,600.00	0.66	300.93	2,599.79	25.55	24.36	-14.48	0.21	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,700.00	1.33	291.76	2,699.77	26.41	25.09	-16.05	0.69	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,800.00	1.12	288.49	2,799.75	27.33	25.83	-18.06	0.22	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	2,900.00	1.04	280.84	2,899.73	27.97	26.31	-19.88	0.16	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,000.00	0.83	269.83	2,999.72	28.28	26.48	-21.49	0.28	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,100.00	0.80	247.43	3,099.71	28.13	26.21	-22.86	0.32	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,200.00	0.64	239.13	3,199.70	27.68	25.66	-23.98	0.19	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,300.00	0.70	238.61	3,299.69	27.16	25.05	-24.98	0.06	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,400.00	0.61	234.54	3,399.69	26.62	24.42	-25.94	0.10	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,500.00	0.53	214.54	3,499.68	26.00	23.73	-26.64	0.21	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,600.00	0.61	179.79	3,599.68	25.11	22.82	-26.90	0.35	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,700.00	0.99	179.13	3,699.67	23.72	21.42	-26.88	0.38	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,800.00	1.66	180.92	3,799.64	21.42	19.11	-26.89	0.67	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,900.00	2.45	182.62	3,899.57	17.86	15.53	-27.01	0.79	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	3,940.00	2.74	185.74	3,939.53	16.07	13.72	-27.15	0.81	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	4,120.00	2.40	187.70	4,119.35	8.17	5.71	-28.08	0.20	GYRO	VAUHG N ENERGY SERVICES
8/12/2014	4,246.00	1.20	190.10	4,245.29	4.32	1.79	-28.67	0.95	GYRO	VAUHG N ENERGY SERVICES
8/16/2014	4,340.00	1.60	182.90	4,339.26	2.07	-0.49	-28.91	0.46	MWD	LEAM DRILLING SYSTEMS
8/16/2014	4,435.00	1.00	168.50	4,434.23	-0.06	-2.62	-28.81	0.71	MWD	LEAM DRILLING SYSTEMS
8/16/2014	4,530.00	0.80	161.30	4,529.22	-1.53	-4.06	-28.43	0.24	MWD	LEAM DRILLING SYSTEMS
8/16/2014	4,624.00	1.00	158.50	4,623.21	-2.96	-5.45	-27.92	0.22	MWD	LEAM DRILLING SYSTEMS



SNAPPING 2 STATE 13H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 2 T26S R31E	API/UWI 3001542113	Latitude (°) 32° 3' 55.43" N	Longitude (°) 103° 44' 59.181" W	Ground Elev... 3,237.10
			KB - GL (ft) 28.00	Orig KB Elev (ft) 3,265.10
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD _s (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
8/16/2014	4,719.00	1.10	169.20	4,718.20	-4.66	-7.11	-27.44	0.23	MWD	LEAM DRILLING SYSTEMS
8/16/2014	4,813.00	0.30	296.60	4,812.19	-5.43	-7.89	-27.49	1.39	MWD	LEAM DRILLING SYSTEMS
8/16/2014	4,907.00	0.20	237.80	4,906.19	-5.37	-7.87	-27.85	0.28	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,001.00	0.40	263.90	5,000.19	-5.45	-7.99	-28.32	0.25	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,096.00	0.50	258.50	5,095.19	-5.51	-8.11	-29.05	0.11	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,190.00	0.40	252.90	5,189.18	-5.62	-8.29	-29.77	0.12	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,284.00	0.30	240.90	5,283.18	-5.79	-8.50	-30.30	0.13	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,379.00	0.40	253.90	5,378.18	-5.95	-8.72	-30.83	0.13	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,474.00	0.60	250.80	5,473.18	-6.14	-8.97	-31.62	0.21	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,568.00	1.10	253.40	5,567.16	-6.44	-9.39	-32.95	0.53	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,663.00	1.60	285.60	5,662.14	-6.15	-9.29	-35.10	0.94	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,758.00	2.70	279.90	5,757.07	-5.11	-8.55	-38.59	1.18	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,853.00	2.50	281.20	5,851.97	-3.95	-7.77	-42.82	0.22	MWD	LEAM DRILLING SYSTEMS
8/16/2014	5,948.00	2.60	268.00	5,946.88	-3.25	-7.44	-47.01	0.63	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,043.00	2.90	267.30	6,041.77	-3.04	-7.63	-51.56	0.32	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,138.00	2.90	267.80	6,136.65	-2.81	-7.83	-56.36	0.03	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,230.00	2.80	267.10	6,228.54	-2.61	-8.04	-60.93	0.12	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,325.00	3.20	265.90	6,323.40	-2.48	-8.34	-65.90	0.43	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,419.00	2.90	262.90	6,417.27	-2.52	-8.82	-70.87	0.36	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,514.00	2.80	258.00	6,512.15	-2.88	-9.60	-75.53	0.28	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,610.00	2.60	257.80	6,608.05	-3.44	-10.55	-79.95	0.21	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,705.00	3.20	257.10	6,702.93	-4.06	-11.60	-84.64	0.63	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,799.00	3.30	259.20	6,796.77	-4.69	-12.69	-89.85	0.17	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,894.00	3.30	257.10	6,891.62	-5.34	-13.81	-95.21	0.13	MWD	LEAM DRILLING SYSTEMS
8/16/2014	6,989.00	3.30	257.40	6,986.46	-6.07	-15.02	-100.54	0.02	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,084.00	3.40	257.40	7,081.30	-6.79	-16.23	-105.96	0.11	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,179.00	3.30	256.70	7,176.13	-7.55	-17.48	-111.37	0.11	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,274.00	3.20	255.30	7,270.98	-8.39	-18.78	-116.59	0.13	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,368.00	2.60	253.20	7,364.86	-9.26	-20.06	-121.17	0.65	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,462.00	2.90	251.80	7,458.75	-10.23	-21.42	-125.47	0.33	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,557.00	2.70	243.60	7,553.64	-11.59	-23.16	-129.76	0.47	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,652.00	2.60	244.30	7,648.54	-13.16	-25.09	-133.70	0.11	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,747.00	2.10	242.30	7,743.46	-14.59	-26.84	-137.19	0.53	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,842.00	1.90	243.90	7,838.40	-15.83	-28.34	-140.14	0.22	MWD	LEAM DRILLING SYSTEMS
8/18/2014	7,937.00	1.10	245.50	7,933.37	-16.70	-29.41	-142.39	0.84	MWD	LEAM DRILLING SYSTEMS
8/19/2014	8,030.00	1.60	224.40	8,026.34	-17.84	-30.71	-144.11	0.75	MWD	LEAM DRILLING SYSTEMS
8/19/2014	8,125.00	0.70	287.00	8,121.32	-18.48	-31.49	-145.59	1.50	MWD	LEAM DRILLING SYSTEMS
8/19/2014	8,220.00	0.50	247.80	8,216.32	-18.38	-31.47	-146.53	0.47	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,311.00	0.70	252.30	8,307.31	-18.62	-31.79	-147.43	0.23	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,406.00	1.00	262.20	8,402.30	-18.79	-32.08	-148.80	0.35	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,501.00	0.50	236.90	8,497.30	-19.02	-32.42	-149.97	0.62	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,596.00	0.30	257.10	8,592.29	-19.25	-32.70	-150.56	0.25	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,691.00	0.10	329.30	8,687.29	-19.21	-32.69	-150.84	0.30	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,785.00	0.40	106.10	8,781.29	-19.26	-32.71	-150.57	0.51	MWD	LEAM DRILLING SYSTEMS
8/20/2014	8,881.00	0.60	126.70	8,877.29	-19.71	-33.10	-149.85	0.28	MWD	LEAM DRILLING SYSTEMS
8/22/2014	8,974.00	0.50	135.10	8,970.28	-20.35	-33.68	-149.17	0.14	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,070.00	0.60	88.90	9,066.28	-20.70	-33.96	-148.37	0.46	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,165.00	0.60	81.50	9,161.27	-20.71	-33.88	-147.38	0.08	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,259.00	1.00	110.00	9,255.27	-21.03	-34.09	-146.12	0.59	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,355.00	0.20	37.00	9,351.26	-21.26	-34.24	-145.24	1.00	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,450.00	0.10	250.20	9,446.26	-21.16	-34.14	-145.21	0.30	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,545.00	0.90	147.40	9,541.26	-21.84	-34.79	-144.89	0.98	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,641.00	1.60	154.40	9,637.23	-23.76	-36.64	-143.90	0.74	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,735.00	0.80	180.50	9,731.21	-25.64	-38.48	-143.34	1.01	MWD	LEAM DRILLING SYSTEMS
8/22/2014	9,831.00	0.90	192.90	9,827.20	-27.03	-39.88	-143.52	0.22	MWD	LEAM DRILLING SYSTEMS



SNAPPING 2 STATE 13H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name PADUCA	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location Sec. 2 T26S R31E	API/UWI 3001542113	Latitude (°) 32° 3' 55.43" N	Longitude (°) 103° 44' 59.181" W	Ground Elev... 3,237.10	KB - GL (ft) 28.00	Orig KB Elev (ft) 3,265.10	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
8/22/2014	9,925.00	0.90	208.00	9,921.19	-28.35	-41.25	-144.03	0.25	MWD	LEAM DRILLING SYSTEMS
8/22/2014	10,020.00	0.80	222.60	10,016.18	-29.42	-42.40	-144.83	0.25	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,115.00	0.70	244.10	10,111.17	-30.07	-43.14	-145.80	0.31	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,210.00	0.50	238.30	10,206.17	-30.47	-43.61	-146.67	0.22	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,304.00	0.80	186.40	10,300.16	-31.29	-44.48	-147.10	0.67	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,399.00	1.10	183.30	10,395.15	-32.85	-46.05	-147.22	0.32	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,494.00	1.40	179.60	10,490.13	-34.90	-48.12	-147.27	0.33	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,588.00	0.80	231.30	10,584.11	-36.41	-49.68	-147.77	1.17	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,683.00	0.80	225.30	10,679.10	-37.20	-50.56	-148.76	0.09	MWD	LEAM DRILLING SYSTEMS
8/23/2014	10,759.00	1.10	227.60	10,755.09	-37.98	-51.43	-149.68	0.40	MWD	LEAM DRILLING SYSTEMS
8/24/2014	10,814.00	0.90	263.40	10,810.08	-38.31	-51.83	-150.49	1.17	MWD	LEAM DRILLING SYSTEMS
8/24/2014	10,845.00	3.90	343.20	10,841.06	-37.29	-50.85	-151.04	12.40	MWD	LEAM DRILLING SYSTEMS
8/24/2014	10,877.00	7.80	1.70	10,872.89	-34.06	-47.64	-151.29	13.38	MWD	LEAM DRILLING SYSTEMS
8/24/2014	10,909.00	12.30	11.00	10,904.39	-28.63	-42.12	-150.58	14.90	MWD	LEAM DRILLING SYSTEMS
8/24/2014	10,940.00	16.10	17.90	10,934.44	-21.50	-34.78	-148.62	13.40	MWD	LEAM DRILLING SYSTEMS
8/25/2014	10,972.00	20.70	19.10	10,964.79	-12.25	-25.21	-145.41	14.42	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,004.00	24.40	22.20	10,994.34	-1.21	-13.74	-141.06	12.14	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,035.00	29.00	22.20	11,022.03	11.17	-0.85	-135.80	14.84	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,066.00	33.70	23.00	11,048.50	25.44	14.03	-129.59	15.22	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,098.00	36.40	23.80	11,074.69	41.59	30.89	-122.29	8.56	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,129.00	38.40	24.70	11,099.32	58.01	48.06	-114.56	6.69	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,161.00	40.10	24.20	11,124.10	75.62	66.49	-106.18	5.40	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,192.00	41.40	20.10	11,147.59	93.61	85.23	-98.56	9.60	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,224.00	43.80	14.00	11,171.15	113.67	105.92	-92.24	14.92	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,255.00	47.30	8.90	11,192.86	134.87	127.60	-87.88	16.28	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,287.00	50.20	6.80	11,213.96	158.32	151.43	-84.61	10.32	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,318.00	53.10	5.70	11,233.19	182.16	175.59	-81.96	9.76	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,350.00	55.70	4.50	11,251.82	207.76	201.51	-79.66	8.68	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,382.00	57.80	3.10	11,269.36	234.20	228.21	-77.89	7.51	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,414.00	59.90	1.90	11,285.92	261.35	255.56	-76.69	7.31	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,445.00	61.60	1.00	11,301.06	288.22	282.60	-76.01	6.04	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,477.00	63.20	0.10	11,315.89	316.44	310.96	-75.74	5.59	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,509.00	65.50	359.20	11,329.74	345.18	339.80	-75.92	7.62	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,540.00	67.60	358.90	11,342.08	373.55	368.23	-76.39	6.83	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,572.00	70.30	358.50	11,353.57	403.35	398.09	-77.07	8.52	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,610.00	72.50	357.30	11,365.69	439.31	434.08	-78.39	6.52	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,686.00	74.20	355.40	11,387.47	512.09	506.74	-83.03	3.28	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,717.00	75.20	353.30	11,395.65	541.99	536.49	-85.98	7.29	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,749.00	76.50	350.80	11,403.47	572.98	567.22	-90.27	8.60	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,781.00	78.10	350.50	11,410.51	604.11	598.02	-95.34	5.08	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,812.00	81.70	350.50	11,415.94	634.53	628.11	-100.38	11.61	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,844.00	84.80	351.00	11,419.70	666.22	659.47	-105.49	9.81	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,876.00	88.20	351.50	11,421.65	698.09	691.04	-110.34	10.74	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,907.00	89.40	351.70	11,422.30	729.03	721.70	-114.87	3.92	MWD	LEAM DRILLING SYSTEMS
8/25/2014	11,971.00	90.70	351.50	11,422.25	792.92	785.01	-124.22	2.06	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,002.00	91.10	351.70	11,421.76	823.87	815.67	-128.75	1.44	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,097.00	90.70	352.20	11,420.27	918.73	909.73	-142.05	0.67	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,192.00	90.20	352.40	11,419.52	1,013.62	1,003.87	-154.78	0.57	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,287.00	90.40	355.00	11,419.03	1,108.59	1,098.28	-165.20	2.74	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,382.00	88.50	354.30	11,419.94	1,203.58	1,192.86	-174.06	2.13	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,477.00	89.30	354.20	11,421.76	1,298.56	1,287.36	-183.58	0.85	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,572.00	90.80	354.70	11,421.68	1,393.55	1,381.92	-192.76	1.66	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,666.00	89.40	355.40	11,421.51	1,487.55	1,475.56	-200.87	1.67	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,761.00	89.90	355.60	11,422.09	1,582.54	1,570.27	-208.33	0.57	MWD	LEAM DRILLING SYSTEMS
8/25/2014	12,856.00	90.90	355.40	11,421.43	1,677.53	1,664.97	-215.78	1.07	MWD	LEAM DRILLING SYSTEMS



SNAPPING 2 STATE 13H

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)
Sec. 2 T26S R31E	3001542113	32° 3' 55.43" N	103° 44' 59.181" W	3,237.10	28.00	3,265.10	

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
8/25/2014	12,951.00	90.90	355.70	11,419.94	1,772.51	1,759.67	-223.15	0.32	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,046.00	88.80	355.00	11,420.19	1,867.51	1,854.35	-230.85	2.33	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,141.00	90.70	354.20	11,420.60	1,962.50	1,948.93	-239.79	2.17	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,236.00	90.00	355.00	11,420.02	2,057.49	2,043.50	-248.73	1.12	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,331.00	88.70	356.30	11,421.10	2,152.48	2,138.22	-255.94	1.94	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,426.00	90.20	356.80	11,422.01	2,247.43	2,233.04	-261.65	1.66	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,520.00	90.70	358.70	11,421.27	2,341.31	2,326.96	-265.34	2.09	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,615.00	89.50	359.10	11,421.11	2,436.08	2,421.94	-267.17	1.33	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,710.00	88.30	359.10	11,422.93	2,530.81	2,516.91	-268.66	1.26	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,805.00	89.30	359.40	11,424.92	2,625.51	2,611.88	-269.90	1.10	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,900.00	86.60	357.00	11,428.32	2,720.28	2,706.75	-272.88	3.80	MWD	LEAM DRILLING SYSTEMS
8/25/2014	13,994.00	87.80	356.80	11,432.91	2,814.11	2,800.50	-277.96	1.29	MWD	LEAM DRILLING SYSTEMS
8/25/2014	14,089.00	89.30	355.90	11,435.31	2,909.05	2,895.28	-284.00	1.84	MWD	LEAM DRILLING SYSTEMS
8/25/2014	14,184.00	90.40	357.50	11,435.56	3,004.00	2,990.11	-289.47	2.04	MWD	LEAM DRILLING SYSTEMS
8/25/2014	14,279.00	91.10	357.10	11,434.32	3,098.91	3,085.00	-293.95	0.85	MWD	LEAM DRILLING SYSTEMS
8/25/2014	14,374.00	90.70	357.30	11,432.83	3,193.82	3,179.87	-298.59	0.47	MWD	LEAM DRILLING SYSTEMS
8/25/2014	14,469.00	89.30	357.70	11,432.83	3,288.72	3,274.78	-302.73	1.53	MWD	LEAM DRILLING SYSTEMS
9/10/2014	14,564.00	89.60	356.80	11,433.74	3,383.64	3,369.67	-307.29	1.00	MWD	LEAM DRILLING SYSTEMS
9/10/2014	14,659.00	90.70	356.40	11,433.49	3,478.60	3,464.50	-312.92	1.23	MWD	LEAM DRILLING SYSTEMS
9/10/2014	14,753.00	89.80	356.30	11,433.08	3,572.56	3,558.30	-318.91	0.96	MWD	LEAM DRILLING SYSTEMS
9/11/2014	14,848.00	90.80	356.60	11,432.58	3,667.53	3,653.12	-324.79	1.10	MWD	LEAM DRILLING SYSTEMS
9/11/2014	14,943.00	89.20	355.20	11,432.58	3,762.51	3,747.87	-331.58	2.24	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,038.00	90.10	354.90	11,433.16	3,857.51	3,842.51	-339.78	1.00	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,133.00	89.60	355.70	11,433.41	3,952.50	3,937.19	-347.56	0.99	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,228.00	90.00	356.40	11,433.74	4,047.48	4,031.97	-354.11	0.85	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,323.00	89.60	356.60	11,434.08	4,142.45	4,126.79	-359.91	0.47	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,418.00	89.30	356.60	11,434.99	4,237.40	4,221.62	-365.54	0.32	MWD	LEAM DRILLING SYSTEMS
9/11/2014	15,513.00	89.40	357.00	11,436.07	4,332.34	4,316.46	-370.84	0.43	MWD	LEAM DRILLING SYSTEMS
9/12/2014	15,608.00	89.80	352.40	11,436.73	4,427.32	4,411.03	-379.61	4.86	MWD	LEAM DRILLING SYSTEMS
9/12/2014	15,703.00	90.40	352.70	11,436.56	4,522.23	4,505.22	-391.93	0.71	MWD	LEAM DRILLING SYSTEMS
9/12/2014	15,797.00	91.30	353.40	11,435.17	4,616.17	4,598.52	-403.31	1.21	MWD	LEAM DRILLING SYSTEMS
9/12/2014	15,990.00	91.30	353.40	11,430.79	4,809.05	4,790.19	-425.48	0.00	BIT	LEAM DRILLING SYSTEMS