



15-42370

October 9, 2014

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

Attn: David Cook

Re: **Bellatrix 28 Fed Com 7H**

Please find enclosed a copy of the survey from 0' to 4,219' ran on the above referenced well.

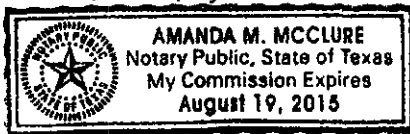
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

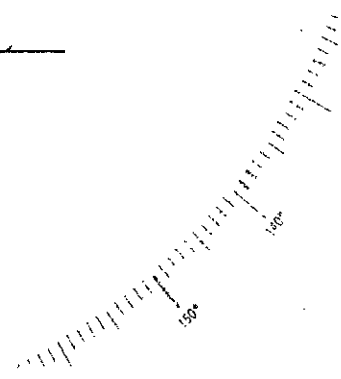
Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 9 day of October
A.D., 2014, by Keith Havelka.



Amanda McClure
Notary Public, State of Texas





Company: DEVON ENERGY
Lease/Well: BELLATRIX 28 FED COM/7H



Rig Name: SCAN TEXAS
State/County: TEXAS/EDDY
Latitude: 32.63, Longitude: -103.88
GRID North is 0.24 Degrees East of True North
VS-Azi: 0.00 Degrees

Depth Reference : RKB: 26 FEET

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 10/9/2014 / 13:02

VES Survey International
West Texas
(432) 563-5444

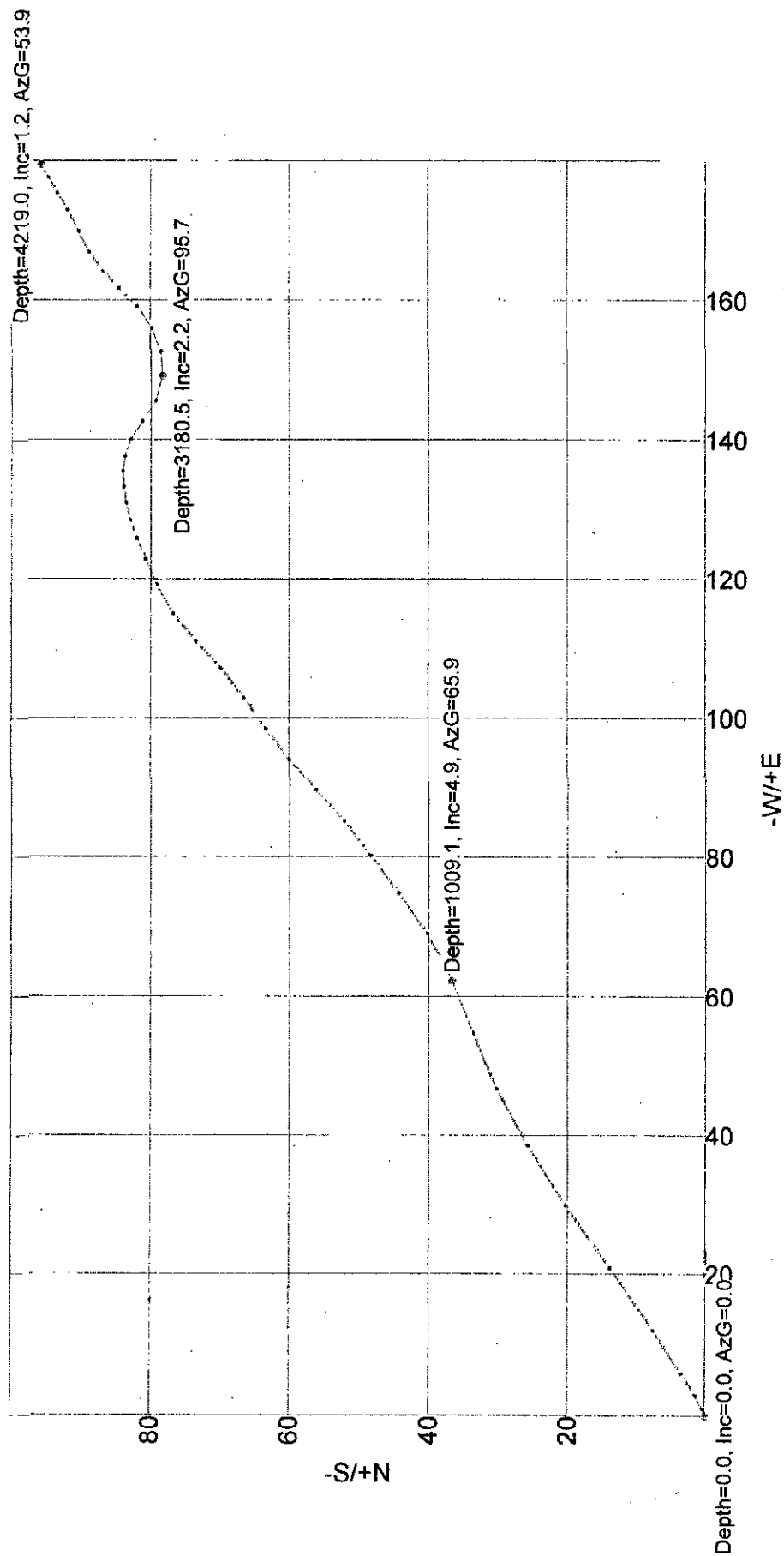
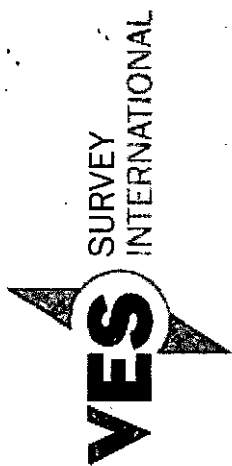
Surveyor: Jordan Shelleby
Bellatrix 28 Fed Com 7H / API 30-015-42370

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	***
159.37	0.76	66.01	159.37	0.43	0.97	0.43	1.06	66.01	0.48
253.78	1.73	60.55	253.75	1.38	2.78	1.38	3.10	63.51	1.03
348.19	2.77	53.64	348.09	3.44	5.86	3.44	6.79	59.58	1.14
442.60	6.20	55.96	442.19	7.65	11.92	7.65	14.17	57.32	3.64
537.01	7.01	53.88	535.98	13.90	20.80	13.90	25.02	56.25	0.89
631.42	6.49	55.55	629.73	20.31	29.86	20.31	36.11	55.77	0.58
725.83	5.89	59.76	723.59	25.78	38.45	25.78	46.29	56.16	0.79
820.24	5.54	64.16	817.53	30.21	46.74	30.21	55.65	57.13	0.59
914.65	5.00	70.11	911.54	33.60	54.72	33.60	64.21	58.45	0.81
1009.06	4.87	65.87	1005.60	35.63	62.25	35.63	72.23	59.52	0.41
1103.47	4.40	58.74	1099.70	40.15	68.99	40.15	79.83	59.80	0.78
1197.88	4.31	49.91	1193.84	44.31	74.80	44.31	86.94	59.36	0.72
1292.29	3.95	56.93	1288.01	48.37	80.23	48.37	93.68	58.92	0.65
1386.70	3.65	47.86	1382.21	52.16	85.19	52.16	99.89	58.52	0.71
1481.11	3.72	47.45	1476.43	56.24	89.67	56.24	105.85	57.90	0.07
1575.52	3.32	51.57	1570.66	60.01	94.07	60.01	111.58	57.46	0.49
1669.93	3.33	53.79	1664.91	63.33	98.43	63.33	117.04	57.24	0.14
1764.34	3.30	55.55	1759.16	66.49	102.88	66.49	122.49	57.13	0.11

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
1858.75	3.29	48.58	1853.42	69.82	107.15	69.82	127.88	56.91	0.42
1953.16	3.16	44.38	1947.68	73.47	110.99	73.47	133.11	56.50	0.29
2047.57	3.15	56.86	2041.95	76.74	114.99	76.74	138.24	56.28	0.73
2141.98	2.68	65.99	2136.23	79.06	119.18	79.06	143.02	56.44	0.70
2236.39	2.23	66.21	2230.56	80.70	122.88	80.70	147.01	56.70	0.47
2330.80	1.72	67.54	2324.91	81.99	125.87	81.99	150.22	56.92	0.54
2425.21	1.68	73.29	2419.28	82.93	128.51	82.93	152.94	57.17	0.19
2519.62	1.40	79.79	2513.65	83.53	130.97	83.53	155.34	57.47	0.34
2614.03	1.44	82.98	2608.04	83.88	133.29	83.88	157.48	57.82	0.09
2708.44	1.14	91.50	2702.42	84.00	135.40	84.00	159.34	58.19	0.37
2802.85	1.54	102.22	2796.81	83.71	137.58	83.71	161.04	58.68	0.49
2897.26	1.61	113.17	2891.18	82.92	140.04	82.92	162.74	59.37	0.33
2991.67	2.21	130.92	2985.54	81.20	142.63	81.20	164.13	60.35	0.89
3086.08	2.20	114.25	3079.88	79.26	145.66	79.26	165.83	61.45	0.68
3180.49	2.24	95.66	3174.22	78.34	149.15	78.34	168.47	62.29	0.76
3274.90	2.02	76.38	3268.57	78.55	152.80	78.55	171.63	62.76	0.79
3369.31	2.36	64.53	3362.91	79.78	155.98	79.78	175.19	62.91	0.60
3463.72	2.33	45.05	3457.24	81.97	159.09	81.97	178.96	62.74	0.84
3558.13	2.13	43.06	3551.58	84.60	161.64	84.60	182.44	62.37	0.23
3652.54	2.04	52.31	3645.93	86.91	164.17	86.91	185.75	62.10	0.37
3746.95	2.06	55.81	3740.28	88.89	166.90	88.89	189.10	61.96	0.13
3841.36	2.08	68.10	3834.62	90.48	169.89	90.48	192.49	61.96	0.47
3935.77	2.01	60.82	3928.97	91.93	172.93	91.93	195.85	62.00	0.28
4030.18	1.52	53.79	4023.34	93.48	175.39	93.48	198.75	61.94	0.57
4124.59	1.49	67.57	4117.72	94.69	177.54	94.69	201.21	61.93	0.38
4219.00	1.25	53.87	4212.10	95.77	179.51	95.77	203.45	61.92	0.43



VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Bellatrix 28 Fed Com 7H / API 30-015-42370



VES Survey Date: 09/28/2014



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 29 T19S R31E	API/UWI 3001542370	Latitude (°) 32° 37' 43.842" N	Longitude (°) 103° 52' 59.896" W	Ground Elev... 3,482.80
			KB - GL (ft) 26.00	Orig KB Elev (ft) 3,508.80
				Tubing Head Elevation (ft)

Wellbores				
Wellbore Name OH	Parent Wellbore OH	SAP Well ID	Kick Off Depth (ftKB)	Vertical Section Direction (°) 89.66
Actual Deviation Survey VES GYRO SURVEYS, Proposed? No	Definitive? Yes	Proposed? No	Proposed Deviation Survey	

Deviation Survey				
Date 9/29/2014	Description VES GYRO SURVEYS			
MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00	NS Tie In (ft) 0.00
				EW Tie In (ft) 0.00

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Survey Tool	Survey Company
9/29/2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	159.37	0.76	66.01	159.37	0.97	0.43	0.97	0.48	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	253.78	1.73	60.55	253.75	2.79	1.39	2.78	1.03	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	348.19	2.77	53.64	348.09	5.88	3.44	5.86	1.14	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	442.60	6.20	55.96	442.19	11.97	7.65	11.92	3.64	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	537.01	7.01	53.88	535.98	20.88	13.90	20.80	0.89	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	631.42	6.49	55.55	629.73	29.97	20.31	29.85	0.59	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	725.83	5.89	59.76	723.59	38.59	25.77	38.44	0.80	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	820.24	5.54	64.16	817.53	46.90	30.19	46.72	0.59	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	914.65	5.00	70.11	911.54	54.89	33.58	54.69	0.81	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,009.06	4.87	65.87	1,005.61	62.44	36.62	62.22	0.41	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,103.47	4.40	58.74	1,099.71	69.21	40.14	68.97	0.79	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,197.88	4.31	49.91	1,193.85	75.04	44.30	74.78	0.72	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,292.29	3.95	56.93	1,288.01	80.51	48.36	80.22	0.66	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,386.70	3.65	47.86	1,382.21	85.48	52.15	85.18	0.71	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,481.11	3.72	47.45	1,476.43	89.99	56.24	89.66	0.08	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,575.52	3.32	51.57	1,570.66	94.41	60.01	94.06	0.50	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,669.93	3.33	53.79	1,664.91	98.79	63.33	98.41	0.14	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,764.34	3.30	55.55	1,759.16	103.26	66.48	102.87	0.11	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,858.75	3.29	48.58	1,853.42	107.55	69.81	107.14	0.42	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	1,953.16	3.16	44.38	1,947.68	111.42	73.46	110.99	0.29	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,047.57	3.15	56.86	2,041.95	115.43	76.74	114.98	0.73	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,141.98	2.68	65.99	2,136.23	119.64	79.06	119.17	0.70	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,236.39	2.23	66.21	2,230.56	123.34	80.70	122.87	0.48	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,330.80	1.72	67.54	2,324.91	126.34	81.98	125.86	0.54	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,425.21	1.68	73.29	2,419.28	128.98	82.92	128.49	0.19	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,519.62	1.40	79.79	2,513.66	131.44	83.52	130.95	0.35	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,614.03	1.44	82.98	2,608.04	133.76	83.87	133.26	0.09	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,708.44	1.14	91.50	2,702.42	135.88	83.99	135.38	0.38	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,802.85	1.54	102.22	2,796.81	138.05	83.70	137.56	0.50	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,897.26	1.61	113.17	2,891.18	140.51	82.91	140.02	0.33	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	2,991.67	2.21	130.92	2,985.54	143.09	81.19	142.61	0.89	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,086.08	2.20	114.25	3,079.88	146.11	79.26	145.64	0.68	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,180.49	2.24	95.66	3,174.22	149.59	78.33	149.13	0.76	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,274.90	2.02	76.38	3,268.57	153.05	78.54	152.58	0.79	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,369.31	2.36	64.53	3,362.91	156.42	79.77	155.95	0.60	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,463.72	2.33	45.05	3,457.24	159.55	81.96	159.07	0.84	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,558.13	2.13	43.06	3,551.58	162.12	84.60	161.62	0.23	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,652.54	2.04	52.31	3,645.93	164.66	86.91	164.15	0.37	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,746.95	2.06	55.81	3,740.28	167.41	88.89	166.88	0.13	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,841.36	2.08	68.10	3,834.63	170.41	90.48	169.88	0.47	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	3,935.77	2.01	60.82	3,928.98	173.46	91.93	172.91	0.28	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	4,030.18	1.52	53.79	4,023.34	175.92	93.47	175.37	0.57	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	4,124.59	1.49	67.57	4,117.72	178.07	94.68	177.51	0.38	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	4,219.00	1.25	53.87	4,212.10	180.05	95.76	179.48	0.43	GYRO	VAUHGN ENERGY SERVICES
9/29/2014	4,264.00	1.41	52.39	4,257.09	180.88	96.38	180.32	0.36	MWD	WEATHERFORD
9/29/2014	4,373.00	1.77	3.46	4,366.05	182.06	98.88	181.48	1.24	MWD	WEATHERFORD

BELLATRIX 28 FED COM 7H

WEST UNRESTRICTED



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 29 T19S R31E	API/UMI 3001542370	Latitude (°) 32° 37' 43.842" N	Longitude (°) 103° 52' 59.896" W	Ground Elev... 3,482.80
				KB - GL (ft) 26.00
				Orig KB Elev (ft) 3,508.80
				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	
9/29/2014	4,467.00	2.73	334.06	4,459.98	181.19	102.35	180.59	1.57	MWD	WEATHERFORD	
9/29/2014	4,562.00	4.08	319.70	4,554.81	178.04	106.96	177.41	1.67	MWD	WEATHERFORD	
9/29/2014	4,656.00	4.11	315.09	4,648.57	173.53	111.89	172.87	0.35	MWD	WEATHERFORD	
9/29/2014	4,750.00	5.56	314.11	4,742.24	167.92	117.45	167.22	1.54	MWD	WEATHERFORD	
9/29/2014	4,845.00	6.12	315.27	4,836.74	161.09	124.25	160.35	0.60	MWD	WEATHERFORD	
9/29/2014	4,939.00	6.53	320.46	4,930.17	154.21	131.93	153.43	0.75	MWD	WEATHERFORD	
9/29/2014	5,032.00	7.04	321.51	5,022.52	147.34	140.47	146.51	0.56	MWD	WEATHERFORD	
9/29/2014	5,126.00	7.92	321.51	5,115.72	139.78	150.05	138.90	0.94	MWD	WEATHERFORD	
9/29/2014	5,221.00	7.75	319.85	5,209.83	131.64	160.07	130.69	0.30	MWD	WEATHERFORD	
9/29/2014	5,315.00	8.57	321.13	5,302.88	123.22	170.37	122.21	0.89	MWD	WEATHERFORD	
9/29/2014	5,409.00	8.48	320.89	5,395.84	114.52	181.20	113.44	0.10	MWD	WEATHERFORD	
9/29/2014	5,503.00	9.16	325.20	5,488.73	105.94	192.72	104.80	1.01	MWD	WEATHERFORD	
9/29/2014	5,597.00	9.25	326.11	5,581.52	97.53	205.13	96.32	0.18	MWD	WEATHERFORD	
9/29/2014	5,692.00	9.11	325.95	5,675.30	89.14	217.70	87.85	0.15	MWD	WEATHERFORD	
9/29/2014	5,786.00	9.11	326.06	5,768.12	80.89	230.04	79.53	0.02	MWD	WEATHERFORD	
9/29/2014	5,880.00	9.18	326.27	5,860.92	72.65	242.45	71.21	0.08	MWD	WEATHERFORD	
9/29/2014	5,974.00	9.14	325.90	5,953.72	64.37	254.87	62.86	0.08	MWD	WEATHERFORD	
9/29/2014	6,069.00	9.10	326.08	6,047.52	56.02	267.35	54.44	0.05	MWD	WEATHERFORD	
9/29/2014	6,163.00	9.10	326.23	6,140.34	47.82	279.70	46.16	0.03	MWD	WEATHERFORD	
9/29/2014	6,258.00	9.00	326.48	6,234.16	39.61	292.14	37.88	0.11	MWD	WEATHERFORD	
9/29/2014	6,352.00	9.09	326.65	6,326.99	31.54	304.47	29.74	0.10	MWD	WEATHERFORD	
9/29/2014	6,446.00	9.03	326.22	6,419.82	23.43	316.81	21.55	0.10	MWD	WEATHERFORD	
9/29/2014	6,540.00	8.90	326.48	6,512.67	15.39	329.00	13.44	0.14	MWD	WEATHERFORD	
9/29/2014	6,634.00	8.49	326.48	6,605.59	7.61	340.85	5.59	0.44	MWD	WEATHERFORD	
9/29/2014	6,729.00	9.26	323.31	6,699.45	-0.76	352.82	-2.85	0.96	MWD	WEATHERFORD	
9/29/2014	6,823.00	9.21	327.63	6,792.23	-9.23	365.24	-11.40	0.74	MWD	WEATHERFORD	
9/29/2014	6,917.00	9.20	327.67	6,885.02	-17.20	377.94	-19.44	0.01	MWD	WEATHERFORD	
9/29/2014	7,011.00	9.15	327.24	6,977.82	-25.19	390.58	-27.51	0.09	MWD	WEATHERFORD	
9/29/2014	7,106.00	8.87	326.85	7,071.65	-33.21	403.06	-35.60	0.30	MWD	WEATHERFORD	
9/29/2014	7,200.00	9.07	327.67	7,164.50	-41.06	415.39	-43.52	0.25	MWD	WEATHERFORD	
10/1/2014	7,295.00	8.72	327.69	7,258.35	-48.84	427.80	-51.38	0.37	MWD	WEATHERFORD	
10/1/2014	7,389.00	8.78	328.51	7,351.26	-56.32	439.94	-58.93	0.15	MWD	WEATHERFORD	
10/1/2014	7,485.00	9.56	327.64	7,446.03	-64.34	452.93	-67.03	0.83	MWD	WEATHERFORD	
10/1/2014	7,538.00	9.45	327.23	7,498.30	-69.01	460.30	-71.74	0.24	MWD	WEATHERFORD	
10/1/2014	7,578.00	9.43	327.18	7,537.76	-72.53	465.82	-75.29	0.05	MWD	WEATHERFORD	
10/2/2014	7,641.00	9.96	4.57	7,599.92	-74.83	475.59	-77.66	9.86	MWD	WEATHERFORD	
10/2/2014	7,672.00	11.48	24.03	7,630.39	-73.33	481.09	-76.19	12.59	MWD	WEATHERFORD	
10/2/2014	7,704.00	14.27	37.47	7,661.59	-69.60	487.13	-72.49	12.74	MWD	WEATHERFORD	
10/2/2014	7,735.00	15.12	43.31	7,691.58	-64.47	493.10	-67.39	5.51	MWD	WEATHERFORD	
10/2/2014	7,766.00	17.56	47.84	7,721.33	-58.19	499.18	-61.15	8.87	MWD	WEATHERFORD	
10/2/2014	7,798.00	19.93	52.96	7,751.63	-50.22	505.71	-53.22	9.01	MWD	WEATHERFORD	
10/2/2014	7,829.00	22.91	56.34	7,780.48	-40.94	512.24	-43.98	10.40	MWD	WEATHERFORD	
10/2/2014	7,860.00	25.76	59.84	7,808.73	-30.05	518.97	-33.13	10.30	MWD	WEATHERFORD	
10/2/2014	7,892.00	29.01	65.37	7,837.14	-16.94	525.70	-20.05	12.89	MWD	WEATHERFORD	
10/2/2014	7,923.00	32.22	69.90	7,863.82	-2.30	531.68	-5.46	12.75	MWD	WEATHERFORD	
10/2/2014	7,955.00	34.38	74.38	7,890.57	14.45	537.04	11.26	10.23	MWD	WEATHERFORD	
10/2/2014	7,986.00	37.13	77.35	7,915.73	32.04	541.45	28.82	10.49	MWD	WEATHERFORD	
10/2/2014	8,018.00	39.40	80.20	7,940.85	51.49	545.29	48.26	8.98	MWD	WEATHERFORD	
10/2/2014	8,049.00	41.55	81.02	7,964.43	71.37	548.57	68.11	7.14	MWD	WEATHERFORD	
10/2/2014	8,080.00	44.44	82.22	7,987.10	92.30	551.65	89.02	9.69	MWD	WEATHERFORD	
10/2/2014	8,112.00	47.12	83.67	8,009.42	115.07	554.46	111.78	8.98	MWD	WEATHERFORD	
10/2/2014	8,143.00	49.00	85.56	8,030.14	138.04	556.62	134.74	7.57	MWD	WEATHERFORD	
10/2/2014	8,175.00	51.21	86.80	8,050.66	162.54	558.25	159.23	7.52	MWD	WEATHERFORD	
10/2/2014	8,206.00	53.17	87.03	8,069.67	187.00	559.56	183.69	6.35	MWD	WEATHERFORD	
10/2/2014	8,238.00	55.55	88.14	8,088.31	212.99	560.66	209.67	7.95	MWD	WEATHERFORD	



BELLATRIX 28 FED COM 7H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 29 T19S R31E	API/UWI 3001542370	Latitude (°) 32° 37' 43.842" N	Longitude (°) 103° 52' 59.896" W	Ground Elev... 3,482.80
				KB - GL (ft) 26.00
				Orig KB Elev (ft) 3,508.80
				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
10/2/2014	8,270.00	57.50	88.03	8,105.96	239.67	561.55	236.34	6.10	MWD	WEATHERFORD
10/2/2014	8,301.00	59.68	87.93	8,122.12	266.11	562.48	262.78	7.04	MWD	WEATHERFORD
10/2/2014	8,333.00	62.30	87.27	8,137.63	294.08	563.65	290.74	8.38	MWD	WEATHERFORD
10/2/2014	8,364.00	65.39	87.34	8,151.30	321.88	564.96	318.53	9.97	MWD	WEATHERFORD
10/2/2014	8,396.00	68.08	87.33	8,163.94	351.25	566.33	347.89	8.41	MWD	WEATHERFORD
10/2/2014	8,427.00	70.28	87.97	8,174.95	380.20	567.52	376.84	7.35	MWD	WEATHERFORD
10/3/2014	8,459.00	72.67	88.36	8,185.12	410.53	568.49	407.17	7.56	MWD	WEATHERFORD
10/3/2014	8,491.00	76.01	89.34	8,193.76	441.34	569.10	437.97	10.85	MWD	WEATHERFORD
10/3/2014	8,522.00	78.67	89.60	8,200.55	471.58	569.38	468.21	8.62	MWD	WEATHERFORD
10/3/2014	8,553.00	81.43	90.06	8,205.91	502.11	569.47	498.74	9.02	MWD	WEATHERFORD
10/5/2014	8,642.00	88.11	89.26	8,214.01	590.69	570.00	587.32	7.56	MWD	WEATHERFORD
10/5/2014	8,737.00	88.95	89.37	8,216.45	685.66	571.14	682.28	0.89	MWD	WEATHERFORD
10/5/2014	8,831.00	88.46	89.63	8,218.58	779.63	571.96	776.25	0.59	MWD	WEATHERFORD
10/5/2014	8,925.00	89.72	89.71	8,220.07	873.62	572.50	870.24	1.34	MWD	WEATHERFORD
10/5/2014	9,020.00	89.65	89.50	8,220.59	968.62	573.15	965.23	0.23	MWD	WEATHERFORD
10/5/2014	9,114.00	89.58	89.79	8,221.22	1,062.61	573.74	1,059.23	0.32	MWD	WEATHERFORD
10/5/2014	9,209.00	89.37	90.01	8,222.09	1,157.61	573.90	1,154.22	0.32	MWD	WEATHERFORD
10/5/2014	9,303.00	89.23	90.19	8,223.24	1,251.60	573.74	1,248.22	0.24	MWD	WEATHERFORD
10/5/2014	9,397.00	89.30	89.25	8,224.45	1,345.59	574.20	1,342.21	1.00	MWD	WEATHERFORD
10/5/2014	9,492.00	88.74	88.99	8,226.07	1,440.57	575.66	1,437.18	0.65	MWD	WEATHERFORD
10/5/2014	9,586.00	88.46	88.31	8,228.37	1,534.53	577.87	1,531.13	0.78	MWD	WEATHERFORD
10/5/2014	9,680.00	89.16	88.33	8,230.32	1,628.48	580.62	1,625.07	0.74	MWD	WEATHERFORD
10/5/2014	9,775.00	89.93	89.81	8,231.07	1,723.47	582.17	1,720.05	1.76	MWD	WEATHERFORD
10/5/2014	9,869.00	89.30	90.49	8,231.71	1,817.46	581.92	1,814.04	0.99	MWD	WEATHERFORD
10/5/2014	9,963.00	88.95	90.69	8,233.14	1,911.44	580.95	1,908.03	0.43	MWD	WEATHERFORD
10/5/2014	10,058.00	90.00	91.20	8,234.01	2,006.41	579.39	2,003.01	1.23	MWD	WEATHERFORD
10/5/2014	10,152.00	90.21	91.81	8,233.84	2,100.36	576.92	2,096.98	0.69	MWD	WEATHERFORD
10/5/2014	10,247.00	89.44	91.08	8,234.13	2,195.31	574.52	2,191.94	1.12	MWD	WEATHERFORD
10/5/2014	10,341.00	90.14	90.15	8,234.47	2,289.30	573.51	2,285.94	1.24	MWD	WEATHERFORD
10/5/2014	10,435.00	90.00	88.51	8,234.36	2,383.29	574.61	2,379.93	1.75	MWD	WEATHERFORD
10/5/2014	10,530.00	89.93	88.34	8,234.42	2,478.27	577.22	2,474.89	0.19	MWD	WEATHERFORD
10/6/2014	10,624.00	89.23	88.94	8,235.11	2,572.25	579.45	2,568.86	0.98	MWD	WEATHERFORD
10/6/2014	10,718.00	89.16	90.17	8,236.43	2,666.24	580.18	2,662.85	1.31	MWD	WEATHERFORD
10/6/2014	10,813.00	89.02	90.78	8,237.94	2,761.22	579.40	2,757.83	0.66	MWD	WEATHERFORD
10/6/2014	10,907.00	89.02	90.77	8,239.54	2,855.19	578.13	2,851.81	0.01	MWD	WEATHERFORD
10/6/2014	11,002.00	89.09	90.98	8,241.11	2,950.15	576.67	2,946.78	0.23	MWD	WEATHERFORD
10/6/2014	11,096.00	89.51	90.05	8,242.26	3,044.14	575.83	3,040.77	1.09	MWD	WEATHERFORD
10/6/2014	11,190.00	89.65	89.87	8,242.95	3,138.13	575.90	3,134.77	0.24	MWD	WEATHERFORD
10/6/2014	11,284.00	89.65	89.97	8,243.52	3,232.13	576.03	3,228.77	0.11	MWD	WEATHERFORD
10/6/2014	11,379.00	89.37	90.38	8,244.34	3,327.12	575.74	3,323.76	0.52	MWD	WEATHERFORD
10/6/2014	11,473.00	89.23	89.19	8,245.48	3,421.11	576.09	3,417.75	1.27	MWD	WEATHERFORD
10/6/2014	11,568.00	88.81	87.66	8,247.11	3,516.07	578.70	3,512.70	1.67	MWD	WEATHERFORD
10/6/2014	11,662.00	88.60	87.30	8,249.23	3,609.98	582.83	3,606.59	0.44	MWD	WEATHERFORD
10/6/2014	11,757.00	88.25	88.24	8,251.84	3,704.89	586.53	3,701.48	1.06	MWD	WEATHERFORD
10/7/2014	11,851.00	88.88	89.18	8,254.20	3,798.85	588.64	3,795.42	1.20	MWD	WEATHERFORD
10/7/2014	11,946.00	88.88	89.67	8,256.06	3,893.83	589.60	3,890.40	0.52	MWD	WEATHERFORD
10/7/2014	12,040.00	88.60	89.71	8,258.12	3,987.81	590.10	3,984.37	0.30	MWD	WEATHERFORD
10/7/2014	12,134.00	89.72	89.68	8,259.50	4,081.79	590.60	4,078.36	1.19	MWD	WEATHERFORD
10/7/2014	12,229.00	89.93	89.47	8,259.79	4,176.79	591.31	4,173.36	0.31	MWD	WEATHERFORD
10/7/2014	12,323.00	90.07	89.37	8,259.79	4,270.79	592.26	4,267.35	0.18	MWD	WEATHERFORD
10/7/2014	12,417.00	89.93	89.77	8,259.79	4,364.79	592.97	4,361.35	0.45	MWD	WEATHERFORD
10/7/2014	12,512.00	89.72	90.53	8,260.08	4,459.79	592.72	4,456.35	0.83	MWD	WEATHERFORD
10/7/2014	12,606.00	89.02	90.15	8,261.11	4,553.78	592.16	4,550.34	0.85	MWD	WEATHERFORD
10/7/2014	12,701.00	89.72	90.34	8,262.16	4,648.76	591.75	4,645.33	0.76	MWD	WEATHERFORD
10/7/2014	12,796.00	88.60	90.13	8,263.55	4,743.75	591.36	4,740.32	1.20	MWD	WEATHERFORD



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 29 T19S R31E	API/UWI 3001542370	Latitude (°) 32° 37' 43.842" N	Longitude (°) 103° 52' 59.896" W	Ground Elev... 3,482.80
			KB - GL (ft) 26.00	Orig KB Elev (ft) 3,508.80
				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
10/7/2014	12,890.00	87.13	89.75	8,267.05	4,837.68	591.46	4,834.25	1.62	MWD	WEATHERFORD
10/7/2014	12,984.00	88.60	89.82	8,270.56	4,931.61	591.81	4,928.19	1.57	MWD	WEATHERFORD
10/7/2014	13,074.00	89.65	89.65	8,271.93	5,021.60	592.23	5,018.17	1.18	MWD	WEATHERFORD
10/7/2014	13,160.00	89.65	89.65	8,272.45	5,107.60	592.76	5,104.17	0.00	BIT	WEATHERFORD