

Pathfinder

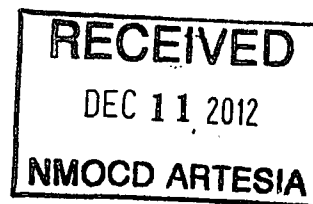
6213 WCR. 112
Midland, Texas. 79706-3725, USA
Tel. (432) 687-1647
Fax (432) 687-1544

PATHFINDER
A Schlumberger Company

October 3, 2012

Devon Energy
20 N. Broadway
Oklahoma City, OK

RE: Devon Energy
Bellatrix '28' Federal Com #2H
API: 30-015-40332
Eddy County, NM
RIG: H&P 300
FIELD: Hackberry; Bone Spring
PES FILE NO.: 12MLD0415



To whom it may concern:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
1 – Original survey report
2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647.

Sincerely,

A handwritten signature in black ink, appearing to read "MARCUS MITCHAM".

MARCUS MITCHAM
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

DEVON ENERGY

BELLATRIX '28' FEDERAL COM #2H

EDDY COUNTY, NEW MEXICO

RECEIVED

DEC 11 2012

NMOCD ARTESIA

PREPARED BY: MARCUS MITCHAM

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) NABIL MERIDJI
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 8/26/12 TO 9/07/12
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: GAMMA-RAY
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY
BELLATRIX '28' FEDERAL COM #2H
EDDY COUNTY, NM
RIG: H&P 300
9. SURVEY CERTIFIED FROM: 4,281 TO 15,071 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 5,850.81 FEET ON A BEARING OF 102.55 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 15,150 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



MARCUS MITCHAM
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.
BHL Report

Page 01/01
Tie-in Date: 08/24/2012
Date Completed: 09/07/2012

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
EDDY COUNTY, NM
Rig:H&P 300
PathFinder Office Supervisor: MARCUS MITCHAM
PathFinder Field Engineers:NABIL MERIDJI
KOLEY THURMAN
ROLDAN DIAZ

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.38.9.5533 N LON:103.53.7.3463 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 679233.0900 Y: 595393.6700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.37° EAST TO GRID
Vertical Section Plane: 102.51
Survey Vert. Reference: 26.00' Rotary Table To Ground
Altitude:3514.50' Ground To MSL

Measured Depth	15150.00	(feet)
Inclination	93.21	(deg)
Azimuth	92.05	(deg)
True Vertical Depth	9037.11	(feet)
Vertical Section	5850.81	(feet)
Survey X cord	684944.05	(feet)
Survey Y cord	594122.09	(feet)
Survey Lat	32.63242436 N	(deg)
Survey Lon	103.86684034 W	(deg)
Rectangular Corr. N/S	1271.58 S	(feet)
Rectangular Corr. E/W	5710.96 E	(feet)
Closure Distance	5850.81	(feet)
Direction of Closure	102.55	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
EDDY COUNTY, NM
Rig:H&P 300
PathFinder Office Supervisor: MARCUS MITCHAM
PathFinder Field Engineers: NABIL MERIDJI
KOLEY THURMAN
ROLDAN DIAZ

Survey Calculations by RX5 V6.04A using Minimum Curvature

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.38.9.5533 N LON:103.53.7.3463 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 679233.0900 Y: 595393.6700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.37° EAST TO GRID
Vertical Section Plane: 102.51
Survey Vert. Reference: 26.00' Rotary Table To Ground
Altitude:3514.50' Ground To MSL

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
TIED-IN TO TELEDRIFT GYRO SURVEY AT 4220'MD.								
4220.00	4.80	347.70	4205.70	0.00	-61.84	293.73 N 1.83 E	293.74@ 0.36	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.								
4281.00	3.52	354.02	4266.54	61.00	-63.50	298.09 N 1.09 E	298.09@ 0.21	2.23
4383.00	3.17	27.23	4368.37	102.00	-63.78	303.71 N 2.06 E	303.72@ 0.39	1.90
4477.00	3.25	50.95	4462.23	94.00	-61.46	307.70 N 5.31 E	307.74@ 0.99	1.41
4572.00	3.34	52.47	4557.07	95.00	-58.01	311.08 N 9.60 E	311.23@ 1.77	0.13
4666.00	4.13	68.45	4650.88	94.00	-53.45	313.99 N 14.92 E	314.35@ 2.72	1.38
4761.00	5.10	85.95	4745.57	95.00	-46.57	315.55 N 22.31 E	316.34@ 4.05	1.79
4855.00	6.51	103.31	4839.09	94.00	-37.23	314.62 N 31.67 E	316.21@ 5.75	2.38
4950.00	7.56	116.86	4933.38	95.00	-25.79	310.55 N 42.49 E	313.44@ 7.79	2.06
5044.00	8.53	126.40	5026.46	94.00	-13.43	303.62 N 53.61 E	308.32@ 10.01	1.75
5139.00	7.47	134.21	5120.54	95.00	-1.73	295.13 N 63.71 E	301.93@ 12.18	1.60
5232.00	8.27	157.85	5212.69	93.00	7.22	284.72 N 70.57 E	293.34@ 13.92	3.56
5328.00	8.71	181.24	5307.66	96.00	12.57	271.05 N 73.02 E	280.72@ 15.08	3.60
5423.00	8.09	196.83	5401.66	95.00	13.47	257.46 N 70.92 E	267.05@ 15.40	2.48
5517.00	8.53	198.48	5494.67	94.00	12.25	244.52 N 66.80 E	253.48@ 15.28	0.53
5612.00	6.86	202.37	5588.81	95.00	10.54	232.59 N 62.41 E	240.82@ 15.02	1.84
5706.00	7.03	203.75	5682.12	94.00	8.46	222.13 N 57.95 E	229.57@ 14.62	0.25
5801.00	7.74	203.39	5776.33	95.00	6.12	210.94 N 53.07 E	217.51@ 14.12	0.75
5896.00	6.24	193.73	5870.63	95.00	4.80	200.05 N 49.31 E	206.04@ 13.85	2.00
5990.00	5.98	193.62	5964.09	94.00	4.60	190.33 N 46.94 E	196.03@ 13.85	0.28
6084.00	6.60	195.79	6057.53	94.00	4.20	180.37 N 44.32 E	185.74@ 13.80	0.71
6179.00	6.95	195.55	6151.86	95.00	3.58	169.58 N 41.29 E	174.54@ 13.68	0.37
6273.00	5.10	196.81	6245.34	94.00	2.96	160.10 N 38.56 E	164.68@ 13.54	1.97
6368.00	4.75	198.41	6339.99	95.00	2.24	152.33 N 36.10 E	156.55@ 13.33	0.40

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332-
Eddy COUNTY, NM
RIG:H&P 300

Page 02/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
6462.00	5.63	183.35	6433.61	94.00	2.58	144.03 N	34.60 E	148.13@	13.51	1.72
6557.00	5.80	181.07	6528.13	95.00	4.27	134.58 N	34.23 E	138.87@	14.27	0.30
6651.00	5.89	191.07	6621.65	94.00	5.33	125.10 N	33.22 E	129.44@	14.87	1.09
6746.00	5.98	192.13	6716.14	95.00	5.49	115.48 N	31.24 E	119.63@	15.14	0.15
6840.00	5.89	189.86	6809.64	94.00	5.74	105.94 N	29.39 E	109.94@	15.50	0.27
6935.00	6.16	187.37	6904.11	95.00	6.43	96.08 N	27.90 E	100.05@	16.19	0.39
7029.00	6.16	199.53	6997.57	94.00	6.26	86.33 N	25.57 E	90.03@	16.50	1.38
7124.00	5.89	203.83	7092.05	95.00	4.68	77.06 N	21.89 E	80.11@	15.86	0.55
7218.00	5.54	199.58	7185.58	94.00	3.18	68.38 N	18.43 E	70.82@	15.08	0.58
7313.00	5.89	198.01	7280.11	95.00	2.14	59.42 N	15.38 E	61.38@	14.51	0.40
7407.00	6.16	188.60	7373.59	94.00	2.03	49.85 N	13.14 E	51.55@	14.76	1.09
7502.00	5.72	183.91	7468.08	95.00	3.08	40.08 N	12.05 E	41.86@	16.73	0.69
7596.00	5.36	181.49	7561.64	94.00	4.62	31.02 N	11.62 E	33.13@	20.53	0.46
7691.00	5.10	172.60	7656.25	95.00	6.91	22.40 N	12.05 E	25.43@	28.27	0.89
7785.00	5.01	187.43	7749.89	94.00	8.69	14.18 N	12.05 E	18.61@	40.36	1.39
7880.00	5.54	202.81	7844.49	95.00	8.24	5.84 N	9.74 E	11.36@	59.03	1.58
7974.00	3.34	208.22	7938.20	94.00	6.69	0.75 S	6.68 E	6.73@	96.42	2.38
8069.00	0.88	242.73	8033.13	95.00	5.38	3.53 S	4.73 E	5.90@	126.72	2.80
8164.00	0.53	286.66	8128.13	95.00	4.38	3.73 S	3.66 E	5.23@	135.59	0.65
8258.00	0.62	282.53	8222.12	94.00	3.44	3.50 S	2.74 E	4.45@	141.89	0.10
8352.00	0.62	297.36	8316.12	94.00	2.44	3.16 S	1.80 E	3.63@	150.34	0.17
8447.00	1.14	287.99	8411.10	95.00	1.00	2.63 S	0.44 E	2.66@	170.47	0.57
8455.00	1.23	286.57	8419.10	8.00	0.83	2.58 S	0.28 E	2.59@	173.73	1.18
8487.00	0.97	274.21	8451.10	32.00	0.22	2.46 S	0.32 W	2.48@	187.32	1.09
8518.00	2.02	164.30	8482.09	31.00	0.22	2.97 S	0.43 W	3.00@	188.25	8.13
8550.00	5.45	151.42	8514.02	32.00	1.49	4.84 S	0.45 E	4.87@	174.70	10.97
8581.00	8.71	149.37	8544.78	31.00	4.06	8.16 S	2.35 E	8.49@	163.93	10.55
8613.00	12.49	148.40	8576.23	32.00	8.13	13.19 S	5.40 E	14.25@	157.74	11.82

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
Eddy COUNTY, NM
RIG:H&P 300

Page 03/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8644.00	16.27	148.73	8606.25	31.00	13.47	19.76 S	9.41 E	21.89@	154.53	12.20
8676.00	19.52	148.92	8636.70	32.00	20.26	28.17 S	14.50 E	31.69@	152.77	10.16
8707.00	22.42	149.13	8665.64	31.00	27.89	37.69 S	20.21 E	42.76@	151.80	9.36
8739.00	24.36	148.27	8695.01	32.00	36.69	48.54 S	26.81 E	55.45@	151.09	6.16
8770.00	26.20	148.44	8723.04	31.00	45.91	59.81 S	33.75 E	68.68@	150.56	5.94
8802.00	29.19	148.47	8751.37	32.00	56.25	72.48 S	41.53 E	83.54@	150.19	9.34
8833.00	32.62	148.21	8777.96	31.00	67.34	86.03 S	49.89 E	99.45@	149.89	11.07
8865.00	35.26	148.47	8804.51	32.00	79.79	101.24 S	59.27 E	117.31@	149.65	8.26
8896.00	38.43	148.78	8829.31	31.00	92.67	117.11 S	68.94 E	135.89@	149.51	10.24
8928.00	39.75	148.89	8854.15	32.00	106.61	134.37 S	79.38 E	156.07@	149.43	4.13
8960.00	42.21	149.33	8878.31	32.00	121.02	152.38 S	90.16 E	177.05@	149.39	7.74
8991.00	44.85	150.42	8900.78	31.00	135.48	170.85 S	100.87 E	198.40@	149.44	8.85
9023.00	48.10	150.62	8922.82	32.00	151.00	191.04 S	112.28 E	221.60@	149.56	10.17
9054.00	51.27	151.04	8942.87	31.00	166.71	211.68 S	123.80 E	245.23@	149.68	10.28
9086.00	54.69	151.22	8962.13	32.00	183.60	234.05 S	136.13 E	270.76@	149.82	10.70
9117.00	58.39	150.85	8979.22	31.00	200.73	256.68 S	148.66 E	296.62@	149.92	11.98
9149.00	62.17	150.61	8995.08	32.00	219.24	280.91 S	162.24 E	324.40@	149.99	11.83
9180.00	66.65	151.22	9008.47	31.00	237.79	305.34 S	175.83 E	352.35@	150.07	14.56
9212.00	69.64	151.40	9020.38	32.00	257.35	331.39 S	190.08 E	382.04@	150.16	9.36
9243.00	72.72	151.59	9030.38	31.00	276.61	357.18 S	204.08 E	411.37@	150.26	9.95
9275.00	74.92	151.21	9039.30	32.00	296.81	384.16 S	218.80 E	442.09@	150.34	6.97
9306.00	77.12	151.97	9046.79	31.00	316.51	410.61 S	233.11 E	472.17@	150.42	7.48
9338.00	80.11	152.22	9053.10	32.00	336.85	438.33 S	247.79 E	503.52@	150.52	9.37
9369.00	84.06	152.74	9057.37	31.00	356.59	465.56 S	261.97 E	534.20@	150.63	12.85
9457.00	88.20	152.00	9063.31	88.00	413.18	543.33 S	302.68 E	621.95@	150.88	4.78
9551.00	88.64	148.89	9065.90	94.00	476.13	625.05 S	349.02 E	715.90@	150.82	3.34
9646.00	89.25	146.93	9067.65	95.00	542.82	705.52 S	399.48 E	810.77@	150.48	2.16
9740.00	88.29	142.92	9069.67	94.00	612.19	782.42 S	453.47 E	904.33@	149.90	4.39

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
Eddy COUNTY, NM
RIG:H&P 300

Page 04/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
9835.00	86.53	137.57	9073.96	95.00	687.21	855.35 S	514.14 E	997.98@	148.99	5.92
9930.00	87.67	130.95	9078.78	95.00	767.84	921.53 S	582.05 E	1089.95@	147.72	7.06
10024.00	89.52	126.90	9081.08	94.00	851.98	980.55 S	655.14 E	1179.28@	146.25	4.74
10119.00	90.04	124.75	9081.45	95.00	939.22	1036.15 S	732.16 E	1268.73@	144.75	2.33
10213.00	88.29	120.02	9082.82	94.00	1027.58	1086.48 S	811.51 E	1356.09@	143.24	5.36
10308.00	86.35	116.70	9087.26	95.00	1118.85	1131.55 S	895.00 E	1442.71@	141.66	4.04
10402.00	86.70	112.23	9092.96	94.00	1210.62	1170.40 S	980.38 E	1526.75@	140.05	4.76
10497.00	89.08	108.26	9096.46	95.00	1304.67	1203.24 S	1069.42 E	1609.80@	138.37	4.87
10592.00	90.22	104.90	9097.04	95.00	1399.41	1230.34 S	1160.46 E	1691.27@	136.67	3.74
10686.00	90.48	101.94	9096.47	94.00	1493.39	1252.15 S	1251.88 E	1770.62@	135.01	3.16
10781.00	90.13	98.59	9095.96	95.00	1588.30	1269.08 S	1345.34 E	1849.46@	133.33	3.55
10875.00	90.04	96.12	9095.82	94.00	1681.91	1281.11 S	1438.56 E	1926.32@	131.69	2.63
10970.00	89.78	92.07	9095.97	95.00	1775.87	1287.90 S	1533.30 E	2002.42@	130.03	4.27
11065.00	90.40	90.48	9095.82	95.00	1869.04	1290.01 S	1628.27 E	2077.35@	128.39	1.80
11159.00	90.75	89.99	9094.88	94.00	1960.89	1290.40 S	1722.27 E	2152.05@	126.84	0.64
11254.00	89.16	89.07	9094.95	95.00	2053.46	1289.62 S	1817.26 E	2228.35@	125.36	1.93
11348.00	89.52	88.24	9096.04	94.00	2144.72	1287.41 S	1911.23 E	2304.39@	123.96	0.96
11443.00	88.72	89.50	9097.49	95.00	2237.02	1285.54 S	2006.20 E	2382.73@	122.65	1.57
11538.00	88.55	90.01	9099.76	95.00	2329.65	1285.13 S	2101.17 E	2463.02@	121.45	0.57
11632.00	89.16	89.67	9101.64	94.00	2421.35	1284.87 S	2195.15 E	2543.53@	120.34	0.74
11727.00	89.43	89.41	9102.80	95.00	2513.92	1284.11 S	2290.14 E	2625.58@	119.28	0.39
11821.00	89.78	88.96	9103.45	94.00	2605.38	1282.77 S	2384.12 E	2707.31@	118.28	0.61
11916.00	91.45	88.57	9102.43	95.00	2697.65	1280.72 S	2479.09 E	2790.37@	117.32	1.81
12010.00	92.95	88.34	9098.83	94.00	2788.77	1278.19 S	2572.99 E	2872.98@	116.42	1.61
12105.00	94.00	89.43	9093.07	95.00	2880.92	1276.34 S	2667.79 E	2957.39@	115.57	1.59
12199.00	93.03	90.42	9087.30	94.00	2972.49	1276.22 S	2761.61 E	3042.24@	114.80	1.47
12294.00	88.90	89.59	9085.70	95.00	3065.20	1276.23 S	2856.58 E	3128.71@	114.07	4.43
12388.00	88.55	88.89	9087.80	94.00	3156.67	1274.98 S	2950.55 E	3214.23@	113.37	0.83

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
Eddy COUNTY, NM
RIG:H&P 300

Page 05/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
12483.00	88.81	88.64	9089.98	95.00	3248.92	1272.93 S	3045.50 E	3300.82@	112.68	0.38
12577.00	89.08	88.85	9091.71	94.00	3340.21	1270.88 S	3139.46 E	3386.94@	112.04	0.36
12672.00	89.16	88.34	9093.17	95.00	3432.41	1268.55 S	3234.42 E	3474.29@	111.42	0.54
12767.00	88.90	89.47	9094.78	95.00	3524.73	1266.73 S	3329.39 E	3562.22@	110.83	1.22
12861.00	89.96	89.77	9095.72	94.00	3616.35	1266.11 S	3423.38 E	3650.01@	110.30	1.17
12956.00	90.66	89.77	9095.20	95.00	3709.01	1265.73 S	3518.38 E	3739.12@	109.79	0.74
13051.00	90.66	89.89	9094.11	95.00	3801.69	1265.45 S	3613.37 E	3828.55@	109.30	0.13
13145.00	90.48	89.61	9093.17	94.00	3893.36	1265.04 S	3707.36 E	3917.25@	108.84	0.35
13240.00	90.48	90.07	9092.38	95.00	3986.05	1264.77 S	3802.36 E	4007.19@	108.40	0.48
13335.00	90.13	90.11	9091.87	95.00	4078.82	1264.92 S	3897.36 E	4097.49@	107.98	0.37
13429.00	89.60	89.66	9092.09	94.00	4170.55	1264.73 S	3991.36 E	4186.94@	107.58	0.74
13524.00	89.87	89.81	9092.53	95.00	4263.20	1264.29 S	4086.36 E	4277.47@	107.19	0.32
13619.00	91.10	89.49	9091.73	95.00	4355.81	1263.71 S	4181.35 E	4368.14@	106.82	1.34
13713.00	91.28	89.78	9089.78	94.00	4447.42	1263.11 S	4275.33 E	4458.01@	106.46	0.36
13808.00	91.10	89.41	9087.80	95.00	4540.00	1262.44 S	4370.30 E	4548.99@	106.11	0.43
13902.00	90.75	89.67	9086.29	94.00	4631.59	1261.69 S	4464.29 E	4639.15@	105.78	0.46
14061.00	90.57	89.54	9084.45	159.00	4786.56	1260.59 S	4623.27 E	4792.05@	105.25	0.14
14156.00	91.63	89.96	9082.63	95.00	4879.20	1260.18 S	4718.25 E	4883.64@	104.95	1.20
14251.00	92.33	90.12	9079.35	95.00	4971.90	1260.24 S	4813.19 E	4975.44@	104.67	0.76
14345.00	93.30	90.00	9074.73	94.00	5063.58	1260.34 S	4907.08 E	5066.35@	104.40	1.04
14440.00	94.26	90.65	9068.47	95.00	5156.24	1260.88 S	5001.87 E	5158.35@	104.15	1.22
14534.00	93.12	89.75	9062.42	94.00	5247.88	1261.20 S	5095.67 E	5249.43@	103.90	1.54
14629.00	92.77	89.62	9057.54	95.00	5340.39	1260.68 S	5190.54 E	5341.45@	103.65	0.39
14724.00	91.80	90.56	9053.75	95.00	5433.09	1260.83 S	5285.47 E	5433.77@	103.42	1.42
14818.00	91.28	91.39	9051.22	94.00	5525.16	1262.43 S	5379.42 E	5525.57@	103.21	1.04
14913.00	91.98	90.94	9048.52	95.00	5618.26	1264.36 S	5474.36 E	5618.47@	103.01	0.88
15007.00	92.59	91.80	9044.77	94.00	5710.42	1266.61 S	5568.26 E	5710.50@	102.81	1.12
15071.00	93.21	92.05	9041.54	64.00	5773.25	1268.75 S	5632.14 E	5773.28@	102.70	1.04

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
Eddy COUNTY, NM
RIG:H&P 300

Page 06/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
STRAIGHT LINE PROJECTION TO BIT @ 15150'MD.								
15150.00	93.21	92.05	9037.11	79.00	5850.81	1271.58 S 5710.96 E	5850.81@ 102.55	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	Devon Energy Production Co.		
LEASE / WELL No.:	BELLATRIX 28 FED COM	#2H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	USA
RIG:	H&P 300		
API WELL No:	30-015-40332		
JOB No:	12MLD0415		
P.O. / AFE No.	98-50817-01		
DIRECTIONAL COMPANY:	P.E.S		

WELL SITE INFORMATION

MAGNETIC DECLINATION:			
On Wall Plat:	7.43 IGRF200510	LWD Calculated:	7.374423
		Agreed Upon:	7.37
X =	679233.090000	Feet	Y = 595393.670000
			Feet
SITE LATITUDE:	32.635987 N	SITE LONGITUDE:	103.885374 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	102.51		
KELLY BUSHING ELEVATION:	26		
ALTITUDE:	3514.5	Feet	WATER DEPTH: NA
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	4220		
DRIFT ANGLE:	4.8		
DRIFT DIRECTION:	347.7		
TRUE VERTICAL DEPTH:	4205.7		
VERTICAL SECTION:	-61.84		
RECTANGULAR COORDINATE (N / S):	293.73		
RECTANGULAR COORDINATE (E / W):	1.83		
CLOSURE DISTANCE / DIRECTION:	293.74	0.36	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):			
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	8164.4	TOTAL DEPTH:	15190.9
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers: NABIL MERIDJI
KOLEY THURMAN

**Signature of both field engineers required if applicable

Directional Driller: JORDAN WILLIAMS

DATE: 24-Aug-2012

devon

Directional Survey

District	County	Field Name	Project Group	State/Province
PERMIAN BASIN	EDDY	HACKBERRY	PB NEW MEXICO	NM
Surface Legal Location	AP/VUM	Latitude (DMS)	Longitude (DMS)	Ground Elev
SEC29 T19S R31E	3001540332	32° 38' 9.553" N	103° 53' 7.346" W	3,488.50
				26.20
				3,514.70

Wellbores	Parent Wellbore	Property Number	Kick Off Depth (ftKB)	Vertical Section Direction (*)
Wellbore Name	OH	039164-020		102.51

Deviation Survey	Definitive?	Proposed?	Proposed Deviation Survey
TELEDRIFT SURVEY	No	No	

Deviation Survey	Description
Date	TELEDRIFT SURVEY

MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NS Tie In (ft)	EW Tie In (ft)
0.00	0.00	0.00	0.00	0.00	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	
8/10/2012	195.00	0.10	8.70	195.00	-0.01	0.17	0.03	0.05	SS	RIG CREW	
8/10/2012	395.00	0.40	311.00	395.00	-0.64	0.80	-0.47	0.18	SS	RIG CREW	
8/10/2012	458.00	0.80	342.70	457.99	-1.05	1.36	-0.77	0.80	SS	RIG CREW	
8/10/2012	668.00	1.50	337.00	667.95	-3.37	5.29	-2.28	0.34	SS	RIG CREW	
8/10/2012	850.00	2.20	328.00	849.86	-7.29	10.38	-5.17	0.43	SS	RIG CREW	
8/10/2012	1,050.00	2.30	345.00	1,049.70	-11.93	17.44	-8.35	0.37	SS	RIG CREW	
8/10/2012	1,250.00	2.50	336.00	1,249.53	-16.38	25.30	-11.16	0.21	SS	RIG CREW	
8/10/2012	1,450.00	3.80	344.00	1,449.22	-22.14	35.66	-14.76	0.68	SS	RIG CREW	
8/10/2012	1,633.00	5.50	6.70	1,631.63	-25.92	50.20	-15.41	1.35	SS	RIG CREW	
8/10/2012	1,823.00	6.90	12.00	1,820.52	-26.94	70.41	-11.98	0.80	SS	RIG CREW	
8/10/2012	1,971.00	7.40	14.70	1,967.36	-26.66	88.32	-7.71	0.41	SS	RIG CREW	
8/10/2012	2,069.00	7.60	11.70	2,064.53	-26.51	100.77	-4.80	0.45	SS	RIG CREW	
8/10/2012	2,105.00	8.00	13.70	2,100.19	-26.49	105.54	-3.72	1.34	SS	RIG CREW	
8/10/2012	2,134.00	7.80	11.70	2,128.92	-26.48	109.43	-2.84	1.17	SS	RIG CREW	
8/10/2012	2,161.00	7.70	12.70	2,155.67	-26.50	112.98	-2.07	0.62	SS	RIG CREW	
8/10/2012	2,197.00	7.90	13.70	2,191.34	-26.44	117.74	-0.96	0.67	SS	RIG CREW	
8/10/2012	2,254.00	8.30	13.00	2,247.77	-26.32	125.55	0.90	0.72	SS	RIG CREW	
8/10/2012	2,294.00	8.00	14.00	2,287.37	-26.22	131.07	2.22	0.83	SS	RIG CREW	
8/10/2012	2,335.00	8.20	13.00	2,327.96	-26.13	136.69	3.57	0.60	SS	RIG CREW	
8/19/2012	2,505.00	7.30	9.00	2,496.40	-26.68	159.17	7.98	0.62	SS	RIG CREW	
8/19/2012	2,650.00	5.80	15.70	2,640.46	-26.84	175.32	11.41	1.16	SS	RIG CREW	
8/19/2012	2,967.00	5.20	360.00	2,966.01	-29.06	205.11	15.74	0.51	SS	RIG CREW	
8/19/2012	3,020.00	4.90	354.00	3,008.81	-30.30	209.76	15.51	1.15	SS	RIG CREW	
8/19/2012	3,141.00	3.80	2.70	3,129.46	-32.62	218.90	15.15	1.06	SS	RIG CREW	
8/19/2012	3,335.00	4.00	2.70	3,323.01	-34.87	232.09	15.78	0.10	SS	RIG CREW	
8/19/2012	3,524.00	3.80	347.70	3,511.58	-38.62	244.79	14.75	0.55	SS	RIG CREW	
8/19/2012	3,713.00	3.80	349.70	3,700.16	-43.68	257.07	12.30	0.07	SS	RIG CREW	
8/19/2012	3,834.00	3.60	345.70	3,820.91	-46.95	264.70	10.64	0.27	SS	RIG CREW	
8/19/2012	3,902.00	4.00	341.70	3,888.76	-49.12	269.02	9.37	0.71	SS	RIG CREW	
8/19/2012	3,965.00	4.40	340.70	3,951.59	-51.52	273.38	7.88	0.65	SS	RIG CREW	
8/19/2012	4,025.00	4.60	341.70	4,011.40	-53.97	277.84	6.37	0.36	SS	RIG CREW	
8/19/2012	4,092.00	4.80	341.70	4,078.18	-56.78	283.05	4.64	0.30	SS	RIG CREW	
8/19/2012	4,155.00	5.10	345.70	4,140.94	-59.39	288.27	3.12	0.73	SS	RIG CREW	
8/19/2012	4,220.00	4.80	347.70	4,205.70	-61.84	293.73	1.83	0.53	SS	RIG CREW	

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Devon Energy
Bellatrix 28 Fed Com #2H
Eddy County, New Mexico
Rig:HP 300

OFFICE CALL

Mon Aug 20 16:13:39 2012

Coordinates

Latitude: 32.635987 N (32 deg. 38 min. 9.5533 sec.)
Longitude: 103.885374 W (-103 deg. 53 min. 7.3463 sec.)
Elevation: 3514.50 feet.
Calculation Date: Aug/20/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4850 degrees
Total Magnetic Field: 0.48711 gauss
Magnetic Declination: 7.616684 degrees
Horizontal Intensity: 0.239976 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.616684 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 679233.0900 feet
Y: 595393.6700 feet
True to Grid: (convergence) -0.241588 degrees
Magnetic to Grid: 7.375096 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.375096 Degr.

PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

DEVON ENERGY
BELLATRIX 28 FED COM #2H / API # 30-015-40332
EDDY COUNTY
Rig:HP 300

Field Calc

Fri Aug 24 08:49:40 2012

Coordinates

Latitude: 32.635987 N (32 deg. 38 min. 9.5533 sec.)
Longitude: 103.885374 W (-103 deg. 53 min. 7.3463 sec.)
Elevation: 3540.50 feet.
Calculation Date: Aug/24/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4848 degrees
Total Magnetic Field: 0.48710 gauss
Magnetic Declination: 7.615323 degrees
Horizontal Intensity: 0.239971 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.615323 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 679233.0900 feet
Y: 595393.6700 feet
True to Grid: (convergence) -0.241588 degrees
Magnetic to Grid: 7.373735 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.373735 Degr.