

Results of Directional Survey

API number:	30-025-40428		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	RED BULL 31 STATE # 4H

surface	ULSTR:	A	31	T 23S	R 35E
				375 FNL	375 FEL

BH Loc	ULSTR:	P	31	T 23S	R 35E
12951	MD	8633.5	TVD	373 FSL	433 FEL
				4907 FNL	

Top Perf/OH	ULSTR:	A	31	T 23S	R 35E
8780	MD	8632.8	TVD	755 FNL	328 FEL

Bot Perf/OH	ULSTR:	P	31	T 23S	R 35E
12892	MD	8635.5	TVD	432 FSL	319 FEL
				4848 FNL	

	MD	N/S	E/W	VD
	8766.1	-367.20	48.40	8626.6
TOP PERFS/OH	8780	-379.57	47.31	8632.79
	8798	-395.60	45.90	8640.80
	12815	-4396.20	52.70	8637.80
BOT PERFS/OH	12892	-4473.10	55.55	8635.52
	12896	-4477.10	55.70	8635.40

NEXT TO LAST	12896	-4477.10	55.70	8635.40
LAST READING	12951	-4532.10	-57.70	8633.50
TD	12951	-4532.10	-57.70	8633.50

Surface Location	375	FN	375	FE
Projected BHL	4907	FN	433	FE
Location of				
Top Perfs/OH	755	FN	328	FE
Bottom Perfs/OH	4848	FN	319	FE

SUMMARY of Subsurface Locations

Surface Location	A-31-23S-35E	375	FN	375	FE	Vert. Depth
Top Perfs/OH	A-31-23S-35E	755	FN	328	FE	8632.79
Bottom Perfs/OH	P-31-23S-35E	4848	FN	319	FE	8635.52
Projected TD	P-31-23S-35E	4907	FN	433	FE	8633.50

SEP 10 2012

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

HOBBS OCD**AUG 29 2012**

Well Name and Num: Red Bull 31 State 4H
Location: Sec. 31, T23S, R35E
Operator: Devon
Drilling Contractor: McVay Drilling Company

RECEIVED

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

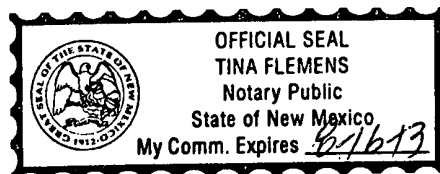
<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.79	250	1.30	8269	90.75	9811
1.37	501	1.10	8769	91.19	10159
1.37	745	1.20	9076	91.36	10349
1.51	957	11.96	8196	92.15	10729
1.30	1536	20.58	8291	90.84	10919
0.84	2430	33.15	8415	91.28	11109
3.34	3434	39.04	8481	91.54	11204
3.47	3930	46.69	8576	92.15	11229
1.63	4163	54.43	8671	90.84	11394
1.93	4670	62.78	8766	90.75	11489
1.84	4923	69.73	8861	91.63	11679
1.02	5332	74.66	8952	92.15	11964
0.40	5768	81.16	9020	91.45	12153
0.30	6239	86.61	9083	91.45	12435
0.20	6768	94.26	9210	90.13	12625
0.60	7269	91.10	9494	91.98	12896
0.60	7766	88.46	9684		

SUR: A-31-23s-35e, 375/N & 375/E
BHL: P-31-23s-35e, 4907/N & 433/E
API # 30-025-40428

By: [Signature]

Subscribed and sworn to before me this 6th day of June, 2012

[Signature]
Notary Public, Lea County, New Mexico



Devon - Red Bull 31 State #4H TXT EOW (2).txt

HEADER INFORMATION

COMPANY : Devon Energy, Inc.
FIELD : Lea County (NAD83)
SITE : Red Bull 31 State
WELL : #4H
WELLPATH: OH
DEPTHUNT: usft

WELL INFORMATION

WELL EW MAP : 830015.67
WELL NS MAP : 462234.90
DATUM ELEVN : 3454.90
VSECT ANGLE : 179.44
VSECT NORTH : 0.00
VSECT EAST : 0.00

SURVEY TYPE INFORMATION

H 100.00 - 8081.00 GYRO #1 : NS-GYRO-MS
H 8101.00 - 12951.00 MWD #1 : MWD

SURVEY LIST

MD	INC	AZI	TVD	VSEC	N/S	E/W
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.40	48.79	100.00	-0.23	0.23	0.26
200.00	0.80	97.58	199.99	-0.36	0.37	1.22
300.00	0.72	140.14	299.99	0.23	-0.21	2.31
400.00	0.64	182.69	399.98	1.27	-1.25	2.69
500.00	0.88	191.27	499.97	2.58	-2.56	2.51
600.00	1.12	199.86	599.96	4.25	-4.23	2.03
700.00	1.08	204.52	699.94	6.02	-6.01	1.31
800.00	1.03	209.18	799.92	7.65	-7.65	0.48
900.00	0.92	211.99	899.91	9.11	-9.11	-0.39
1000.00	0.81	214.80	999.89	10.36	-10.38	-1.21
1100.00	1.04	228.45	1099.88	11.54	-11.56	-2.30
1200.00	0.92	226.41	1199.87	12.68	-12.71	-3.56
1300.00	0.58	249.33	1299.86	13.40	-13.45	-4.61
1400.00	0.81	243.49	1399.85	13.88	-13.94	-5.72
1500.00	0.50	247.35	1499.84	14.36	-14.42	-6.75
1600.00	0.95	239.85	1599.84	14.93	-15.01	-7.87
1700.00	0.40	213.67	1699.83	15.63	-15.71	-8.78
1800.00	0.38	272.17	1799.83	15.90	-15.99	-9.31
1900.00	0.25	206.17	1899.83	16.08	-16.18	-9.74
2000.00	0.11	208.20	1999.82	16.36	-16.46	-9.88
2100.00	0.05	80.38	2099.82	16.44	-16.53	-9.88
2200.00	0.09	48.28	2199.82	16.38	-16.47	-9.78
2300.00	0.17	108.82	2299.82	16.38	-16.47	-9.58
2400.00	0.50	129.02	2399.82	16.70	-16.79	-9.10
2500.00	0.56	118.27	2499.82	17.22	-17.30	-8.33
2600.00	0.93	111.85	2599.81	17.76	-17.83	-7.15
2700.00	1.88	103.23	2699.78	18.46	-18.51	-4.80
2800.00	2.17	104.38	2799.72	19.34	-19.35	-1.37
2900.00	2.67	102.36	2899.63	20.35	-20.32	2.74
3000.00	2.52	91.67	2999.52	20.96	-20.89	7.22
3100.00	2.83	85.34	3099.42	20.86	-20.75	11.87
3200.00	2.93	81.99	3199.29	20.36	-20.19	16.86
3300.00	2.94	83.31	3299.16	19.75	-19.54	21.94
3400.00	2.85	83.73	3399.03	19.23	-18.97	26.96
3500.00	2.51	99.07	3498.92	19.35	-19.04	31.59
3600.00	3.11	109.71	3598.80	20.65	-20.30	36.31
3700.00	3.15	108.50	3698.65	22.49	-22.09	41.47
3800.00	3.19	98.12	3798.50	23.81	-23.35	46.83
3900.00	3.10	94.42	3898.35	24.46	-23.95	52.28
4000.00	2.44	97.93	3998.23	25.01	-24.46	57.08

SUR: A-31-23s-35e, 375/N & 375/E
BHL: P-31-23s-35e, 4907/N & 433/E
API # 30-025-40428

		Devon - Red Bull 31	State #4H	TXT EOW (2).txt	
4100.00	1.77	85.80	4098.17	25.23	-24.64 60.73
4200.00	1.66	69.15	4198.12	24.62	-24.01 63.63
4300.00	1.79	65.88	4298.08	23.50	-22.85 66.41
4400.00	1.49	56.58	4398.04	22.17	-21.50 68.92
4500.00	1.30	68.19	4498.01	21.05	-20.36 71.05
4600.00	1.45	68.00	4597.98	20.18	-19.47 73.28
4700.00	1.58	64.67	4697.94	19.14	-18.40 75.70
4800.00	1.51	65.97	4797.91	18.03	-17.28 78.15
4900.00	1.47	67.75	4897.87	17.04	-16.26 80.54
5000.00	1.72	51.27	4997.83	15.63	-14.83 82.90
5100.00	1.34	61.85	5097.80	14.16	-13.34 85.10
5200.00	1.29	63.63	5197.77	13.13	-12.29 87.14
5300.00	0.85	62.01	5297.75	12.30	-11.44 88.80
5400.00	0.94	56.29	5397.74	11.51	-10.64 90.14
5500.00	1.04	79.99	5497.73	10.91	-10.02 91.72
5600.00	1.05	73.21	5597.71	10.51	-9.60 93.49
5700.00	0.68	54.70	5697.70	9.91	-8.99 94.85
5800.00	0.25	98.24	5797.70	9.61	-8.68 95.55
5900.00	0.33	100.89	5897.69	9.70	-8.77 96.05
6000.00	0.38	70.10	5997.69	9.65	-8.71 96.64
6100.00	0.34	88.44	6097.69	9.53	-8.59 97.25
6200.00	0.36	60.42	6197.69	9.37	-8.43 97.82
6300.00	0.29	64.84	6297.69	9.12	-8.16 98.32
6400.00	0.25	83.62	6397.69	8.99	-8.03 98.77
6500.00	0.20	83.56	6497.69	8.95	-7.99 99.16
6600.00	0.12	17.63	6597.69	8.83	-7.87 99.36
6700.00	0.07	1.69	6697.69	8.67	-7.71 99.40
6800.00	0.28	153.85	6797.69	8.83	-7.87 99.51
6900.00	0.16	144.41	6897.68	9.16	-8.20 99.70
7000.00	0.20	148.45	6997.68	9.43	-8.46 99.87
7100.00	0.42	128.03	7097.68	9.81	-8.83 100.25
7200.00	0.33	157.99	7197.68	10.30	-9.33 100.65
7300.00	0.46	187.40	7297.68	10.97	-9.99 100.70
7400.00	0.42	211.64	7397.68	11.68	-10.70 100.46
7500.00	0.62	207.97	7497.67	12.46	-11.49 100.01
7600.00	0.45	211.92	7597.67	13.27	-12.30 99.55
7700.00	0.58	215.52	7697.66	14.01	-13.05 99.05
7800.00	0.59	203.37	7797.66	14.89	-13.93 98.55
7900.00	0.71	176.92	7897.65	15.98	-15.03 98.38
8000.00	0.58	183.05	7997.64	17.10	-16.15 98.39
8081.00	0.80	196.16	8078.64	18.05	-17.10 98.21
8133.00	6.95	197.54	8130.50	21.39	-20.45 97.16
8165.00	9.23	197.10	8162.17	25.68	-24.75 95.82
8196.00	11.96	195.17	8192.64	31.14	-30.23 94.25
8228.00	15.48	193.85	8223.73	38.47	-37.58 92.36
8260.00	18.03	192.89	8254.36	47.43	-46.55 90.23
8291.00	20.58	192.27	8283.62	57.41	-56.56 88.00
8323.00	23.13	192.01	8313.32	69.03	-68.20 85.50
8355.00	26.38	190.16	8342.37	82.15	-81.35 82.93
8386.00	29.63	188.23	8369.74	96.50	-95.72 80.62
8418.00	33.15	187.53	8397.05	112.98	-112.23 78.34
8450.00	36.32	187.44	8423.35	131.03	-130.30 75.97
8481.00	39.04	187.00	8447.88	149.81	-149.10 73.59
8513.00	41.86	186.12	8472.23	170.40	-169.72 71.22
8545.00	44.32	186.12	8495.59	192.12	-191.46 68.89
8576.00	46.69	186.47	8517.32	214.07	-213.43 66.46
8608.00	50.03	187.53	8538.58	237.77	-237.17 63.55
8640.00	52.23	187.44	8558.66	262.44	-261.87 60.30
8671.00	54.43	187.00	8577.17	287.07	-286.53 57.18
8703.00	56.98	186.82	8595.20	313.28	-312.77 54.00
8734.00	60.32	185.85	8611.33	339.56	-339.08 51.08
8766.00	62.78	185.15	8626.57	367.54	-367.09 48.39
8798.00	64.46	184.80	8640.79	396.07	-395.65 45.90

		Devon -	Red Bull 31	State #4H	TXT EOW (2).txt	
8830.00	67.44	184.80	8653.83	425.16	-424.76	43.46
8861.00	69.73	185.50	8665.15	453.88	-453.50	40.86
8893.00	72.37	186.03	8675.54	483.96	-483.61	37.82
8925.00	74.66	186.65	8684.62	514.42	-514.11	34.43
8956.00	75.80	187.00	8692.52	544.14	-543.87	30.87
8988.00	78.26	187.00	8699.70	575.05	-574.82	27.07
9020.00	81.16	187.44	8705.42	606.25	-606.05	23.11
9051.00	84.15	187.79	8709.38	636.68	-636.52	19.04
9083.00	86.61	187.44	8711.96	668.25	-668.13	14.81
9115.00	89.69	187.79	8712.99	699.90	-699.83	10.58
9146.00	92.86	188.40	8712.30	730.54	-730.51	6.21
9178.00	94.00	187.88	8710.39	762.11	-762.13	1.69
9210.00	94.26	187.09	8708.08	793.71	-793.78	-2.47
9273.00	93.39	184.98	8703.88	856.15	-856.28	-9.08
9304.00	92.33	183.83	8702.33	887.00	-887.15	-11.45
9336.00	91.36	183.13	8701.30	918.90	-919.08	-13.40
9368.00	91.63	182.25	8700.47	950.84	-951.03	-14.90
9399.00	91.80	180.93	8699.54	981.80	-982.00	-15.76
9494.00	91.10	178.56	8697.13	1076.76	-1076.96	-15.33
9589.00	89.16	177.51	8696.92	1171.73	-1171.90	-12.08
9684.00	88.46	178.03	8698.89	1266.67	-1266.81	-8.38
9716.00	88.20	178.39	8699.82	1298.65	-1298.78	-7.38
9748.00	88.90	178.82	8700.63	1330.63	-1330.76	-6.60
9780.00	89.69	179.88	8701.03	1362.63	-1362.75	-6.24
9811.00	90.75	180.49	8700.91	1393.63	-1393.75	-6.34
9843.00	91.54	179.70	8700.27	1425.62	-1425.75	-6.39
9874.00	91.63	179.70	8699.41	1456.61	-1456.73	-6.23
9938.00	90.40	179.26	8698.28	1520.59	-1520.72	-5.65
9970.00	90.22	179.53	8698.10	1552.59	-1552.72	-5.31
10033.00	91.54	180.41	8697.14	1615.58	-1615.71	-5.28
10065.00	91.45	180.93	8696.30	1647.56	-1647.70	-5.65
10159.00	91.19	179.44	8694.14	1741.53	-1741.67	-5.96
10254.00	91.63	177.68	8691.80	1836.48	-1836.60	-3.57
10349.00	91.36	178.30	8689.32	1931.42	-1931.51	-0.24
10444.00	91.28	178.12	8687.13	2026.37	-2026.44	2.73
10539.00	90.22	178.21	8685.89	2121.34	-2121.38	5.77
10634.00	91.28	178.21	8684.64	2216.31	-2216.33	8.74
10729.00	92.15	179.44	8681.80	2311.26	-2311.26	10.68
10824.00	90.31	179.53	8679.76	2406.23	-2406.23	11.54
10919.00	90.84	179.79	8678.81	2501.23	-2501.23	12.10
11014.00	91.10	179.00	8677.20	2596.21	-2596.21	13.10
11109.00	91.28	178.56	8675.23	2691.18	-2691.16	15.13
11204.00	91.54	179.33	8672.89	2786.15	-2786.12	16.88
11299.00	92.15	179.41	8669.83	2881.10	-2881.06	17.92
11394.00	90.84	179.04	8667.35	2976.07	-2976.02	19.20
11489.00	90.75	178.54	8666.03	3071.05	-3070.99	21.21
11584.00	91.28	178.58	8664.35	3166.02	-3165.94	23.60
11679.00	91.63	178.24	8661.94	3260.98	-3260.88	26.23
11774.00	91.19	178.34	8659.60	3355.93	-3355.80	29.07
11869.00	92.15	179.76	8656.83	3450.88	-3450.75	30.64
11964.00	91.19	178.51	8654.06	3545.84	-3545.69	32.07
12059.00	91.45	179.08	8651.88	3640.81	-3640.65	34.07
12153.00	91.45	178.69	8649.50	3734.77	-3734.60	35.90
12247.00	90.48	178.25	8647.91	3828.74	-3828.55	38.41
12342.00	91.45	178.71	8646.31	3923.71	-3923.50	40.93
12435.00	91.45	179.70	8643.96	4016.68	-4016.46	42.22
12530.00	90.92	179.07	8642.00	4111.66	-4111.44	43.24
12625.00	90.13	178.01	8641.13	4206.64	-4206.40	45.66
12720.00	91.28	177.79	8639.96	4301.60	-4301.33	49.14
12815.00	91.36	177.93	8637.77	4396.54	-4396.23	52.69
12896.00	91.98	177.84	8635.41	4477.47	-4477.14	55.67
12951.00	91.98	177.84	8633.51	4532.42	-4532.07	57.75



Devon Energy, Inc.

Lea County (NAD83)

Red Bull 31 State

#4H

OH

Design: OH

PathfinderX & Y Report

05 June, 2012

SUR: A-31-23s-35e, 375/N & 375/E
BHL: P-31-23s-35e, 4907/N & 433/E
API # 30-025-40428

HOBBS OCD

AUG 29 2012

RECEIVED

PATHFINDER[®]

A Schlumberger Company



Pathfinder
PathfinderX & Y Report



Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Red Bull 31 State		
Site Position:		Northing:	462,234 900 usft
From:	Map	Easting:	830,015 670 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.267
		Longitude:	-103.399
		Grid Convergence:	0 50 °

Well	#4H		
Well Position	+N/-S	0 0 usft	Northing:
	+E/-W	0 0 usft	Easting:
Position Uncertainty	0 0 usft	Wellhead Elevation:	usft
		Latitude:	32.267
		Longitude:	-103.399
		Ground Level:	3,435.9 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/11/2012	7.41	60.24	48,579

Design	OH			
Audit Notes:				
Version:	1 0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 0	0 0	0 0	179.44



Pathfinder
PathfinderX & Y Report



Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

Survey Program		Date	6/5/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100 0	8,081 0	Gyro #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
8,101.0	12,951 0	MWD #1 (OH)	MWD	MWD - Standard	

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0 0	0 00	0 00	0 0	-3,454.9	0 0	0 0	0.0	0 00	462,234.90	830,015.67
100.0	0 40	48.79	100 0	-3,354.9	0.2	0.3	-0.2	0.40	462,235.13	830,015.93
200 0	0 80	97.58	200 0	-3,254.9	0.4	1.2	-0.4	0.62	462,235.27	830,016.89
300 0	0.72	140.14	300.0	-3,154.9	-0.2	2.3	0.2	0.56	462,234.69	830,017.98
400.0	0.64	182.69	400.0	-3,054.9	-1.2	2.7	1.3	0.50	462,233.65	830,018.36
500 0	0.88	191.27	500.0	-2,954.9	-2.6	2.5	2.6	0.26	462,232.34	830,018.18
600.0	1.12	199.86	600.0	-2,854.9	-4.2	2.0	4.2	0.28	462,230.67	830,017.70
700 0	1 08	204.52	699.9	-2,755.0	-6.0	1.3	6.0	0 10	462,228.89	830,016.98
800.0	1.03	209.18	799.9	-2,655.0	-7.6	0.5	7.7	0 10	462,227.25	830,016.15
900.0	0 92	211.99	899.9	-2,555.0	-9.1	-0.4	9.1	0 12	462,225.79	830,015.28
1,000 0	0.81	214.80	999.9	-2,455.0	-10.4	-1.2	10.4	0 12	462,224.52	830,014.46
1,100.0	1 04	228.45	1,099.9	-2,355.0	-11.6	-2.3	11.5	0 32	462,223.34	830,013.37
1,200 0	0 92	226.41	1,199.9	-2,255.0	-12.7	-3.6	12.7	0.12	462,222.19	830,012.11
1,300 0	0 58	249.33	1,299.9	-2,155.0	-13.4	-4.6	13.4	0.45	462,221.45	830,011.06
1,400 0	0 81	243.49	1,399.9	-2,055.0	-13.9	-5.7	13.9	0 24	462,220.96	830,009.95
1,500 0	0.50	247.35	1,499.8	-1,955.1	-14.4	-6.8	14.4	0 31	462,220.48	830,008.92
1,600 0	0 95	239.85	1,599.8	-1,855.1	-15.0	-7.9	14.9	0 46	462,219.89	830,007.80
1,700.0	0 40	213.67	1,699.8	-1,755.1	-15.7	-8.8	15.6	0 62	462,219.19	830,006.89
1,800 0	0 38	272.17	1,799.8	-1,655.1	-16.0	-9.3	15.9	0 38	462,218.91	830,006.36
1,900 0	0.25	206.17	1,899.8	-1,555.1	-16.2	-9.7	16.1	0.36	462,218.72	830,005.93
2,000 0	0 11	208.20	1,999.8	-1,455.1	-16.5	-9.9	16.4	0.14	462,218.44	830,005.79



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454.9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
2,100.0	0.05	80.38	2,099.8	-1,355.1	-16.5	-9.9	16.4	0.15	462,218.37	830,005.79		
2,200.0	0.09	48.28	2,199.8	-1,255.1	-16.5	-9.8	16.4	0.05	462,218.43	830,005.89		
2,300.0	0.17	108.82	2,299.8	-1,155.1	-16.5	-9.6	16.4	0.15	462,218.43	830,006.09		
2,400.0	0.50	129.02	2,399.8	-1,055.1	-16.8	-9.1	16.7	0.35	462,218.11	830,006.57		
2,500.0	0.56	118.27	2,499.8	-955.1	-17.3	-8.3	17.2	0.12	462,217.60	830,007.34		
2,600.0	0.93	111.85	2,599.8	-855.1	-17.8	-7.1	17.8	0.38	462,217.07	830,008.52		
2,700.0	1.88	103.23	2,699.8	-755.1	-18.5	-4.8	18.5	0.97	462,216.39	830,010.87		
2,800.0	2.17	104.38	2,799.7	-655.2	-19.4	-1.4	19.3	0.29	462,215.55	830,014.30		
2,900.0	2.67	102.36	2,899.6	-555.3	-20.3	2.7	20.3	0.51	462,214.58	830,018.41		
3,000.0	2.52	91.67	2,999.5	-455.4	-20.9	7.2	21.0	0.51	462,214.01	830,022.89		
3,100.0	2.83	85.34	3,099.4	-355.5	-20.7	11.9	20.9	0.43	462,214.15	830,027.54		
3,200.0	2.93	81.99	3,199.3	-255.6	-20.2	16.9	20.4	0.20	462,214.71	830,032.53		
3,300.0	2.94	83.31	3,299.2	-155.7	-19.5	21.9	19.8	0.07	462,215.36	830,037.61		
3,400.0	2.85	83.73	3,399.0	-55.9	-19.0	27.0	19.2	0.09	462,215.93	830,042.63		
3,500.0	2.51	99.07	3,498.9	44.0	-19.0	31.6	19.3	0.79	462,215.86	830,047.26		
3,600.0	3.11	109.71	3,598.8	143.9	-20.3	36.3	20.7	0.79	462,214.60	830,051.98		
3,700.0	3.15	108.50	3,698.7	243.8	-22.1	41.5	22.5	0.08	462,212.81	830,057.14		
3,800.0	3.19	98.12	3,798.5	343.6	-23.4	46.8	23.8	0.57	462,211.55	830,062.50		
3,900.0	3.10	94.42	3,898.4	443.5	-24.0	52.3	24.5	0.22	462,210.95	830,067.95		
4,000.0	2.44	97.93	3,998.2	543.3	-24.5	57.1	25.0	0.68	462,210.44	830,072.75		
4,100.0	1.77	85.80	4,098.2	643.3	-24.6	60.7	25.2	0.80	462,210.26	830,076.40		
4,200.0	1.66	69.15	4,198.1	743.2	-24.0	63.6	24.6	0.51	462,210.89	830,079.30		
4,300.0	1.79	65.88	4,298.1	843.2	-22.9	66.4	23.5	0.16	462,212.05	830,082.08		
4,400.0	1.49	56.58	4,398.0	943.1	-21.5	68.9	22.2	0.40	462,213.40	830,084.59		
4,500.0	1.30	68.19	4,498.0	1,043.1	-20.4	71.1	21.1	0.34	462,214.54	830,086.72		
4,600.0	1.45	68.00	4,598.0	1,143.1	-19.5	73.3	20.2	0.15	462,215.43	830,088.95		
4,700.0	1.58	64.67	4,697.9	1,243.0	-18.4	75.7	19.1	0.16	462,216.50	830,091.37		



Pathfinder
PathfinderX & Y Report



Company: Devon Energy, Inc
Project: Lea County (NAD83)
Site: Red Bull 31 State
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: KB = 19 @ 3454 9usft (McVay 8)
MD Reference: KB = 19 @ 3454 9usft (McVay 8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,800.0	1 51	65 97	4,797.9	1,343.0	-17.3	78.1	18.0	0.08	462,217.62	830,093.82
4,900.0	1 47	67.75	4,897.9	1,443.0	-16.3	80.5	17.0	0.06	462,218.64	830,096.21
5,000.0	1.72	51 27	4,997.8	1,542.9	-14.8	82.9	15.6	0.52	462,220.07	830,098.57
5,100.0	1 34	61 85	5,097.8	1,642.9	-13.3	85.1	14.2	0.47	462,221.56	830,100.77
5,200.0	1 29	63 63	5,197.8	1,742.9	-12.3	87.1	13.1	0.06	462,222.61	830,102.81
5,300.0	0 85	62 01	5,297.8	1,842.9	-11.4	88.8	12.3	0.44	462,223.46	830,104.47
5,400.0	0 94	56.29	5,397.7	1,942.8	-10.6	90.1	11.5	0.13	462,224.26	830,105.81
5,500.0	1 04	79 99	5,497.7	2,042.8	-10.0	91.7	10.9	0.42	462,224.88	830,107.39
5,600.0	1 05	73 21	5,597.7	2,142.8	-9.6	93.5	10.5	0.12	462,225.30	830,109.16
5,700.0	0 68	54 70	5,697.7	2,242.8	-9.0	94.8	9.9	0.46	462,225.91	830,110.52
5,800.0	0.25	98 24	5,797.7	2,342.8	-8.7	95.5	9.6	0.53	462,226.22	830,111.22
5,900.0	0.33	100 89	5,897.7	2,442.8	-8.8	96.0	9.7	0.08	462,226.13	830,111.72
6,000.0	0 38	70.10	5,997.7	2,542.8	-8.7	96.6	9.6	0.19	462,226.19	830,112.31
6,100.0	0 34	88 44	6,097.7	2,642.8	-8.6	97.3	9.5	0.12	462,226.31	830,112.92
6,200.0	0.36	60 42	6,197.7	2,742.8	-8.4	97.8	9.4	0.17	462,226.47	830,113.49
6,300.0	0.29	64 84	6,297.7	2,842.8	-8.2	98.3	9.1	0.07	462,226.74	830,113.99
6,400.0	0 25	83 62	6,397.7	2,942.8	-8.0	98.8	9.0	0.10	462,226.87	830,114.44
6,500.0	0.20	83 56	6,497.7	3,042.8	-8.0	99.2	8.9	0.05	462,226.91	830,114.83
6,600.0	0 12	17 63	6,597.7	3,142.8	-7.9	99.4	8.8	0.19	462,227.03	830,115.03
6,700.0	0 07	1 69	6,697.7	3,242.8	-7.7	99.4	8.7	0.06	462,227.19	830,115.07
6,800.0	0 28	153 85	6,797.7	3,342.8	-7.9	99.5	8.8	0.34	462,227.03	830,115.18
6,900.0	0.16	144 41	6,897.7	3,442.8	-8.2	99.7	9.2	0.12	462,226.70	830,115.37
7,000.0	0 20	148.45	6,997.7	3,542.8	-8.5	99.9	9.4	0.04	462,226.44	830,115.54
7,100.0	0.42	128.03	7,097.7	3,642.8	-8.8	100.2	9.8	0.24	462,226.07	830,115.92
7,200.0	0.33	157.99	7,197.7	3,742.8	-9.3	100.6	10.3	0.21	462,225.57	830,116.32
7,300.0	0.46	187 40	7,297.7	3,842.8	-10.0	100.7	11.0	0.24	462,224.91	830,116.37
7,400.0	0 42	211.64	7,397.7	3,942.8	-10.7	100.5	11.7	0.19	462,224.20	830,116.13



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
7,500.0	0.62	207.97	7,497.7	4,042.8	-11.5	100.0	12.5	0.20	462,223.41	830,115.68	
7,600.0	0.45	211.92	7,597.7	4,142.8	-12.3	99.5	13.3	0.17	462,222.60	830,115.22	
7,700.0	0.58	215.52	7,697.7	4,242.8	-13.0	99.0	14.0	0.13	462,221.85	830,114.72	
7,800.0	0.59	203.37	7,797.7	4,342.8	-13.9	98.5	14.9	0.12	462,220.97	830,114.22	
7,900.0	0.71	176.92	7,897.7	4,442.8	-15.0	98.4	16.0	0.32	462,219.87	830,114.05	
8,000.0	0.58	183.05	7,997.6	4,542.7	-16.1	98.4	17.1	0.15	462,218.75	830,114.06	
8,081.0	0.80	196.16	8,078.6	4,623.7	-17.1	98.2	18.1	0.33	462,217.80	830,113.88	
8,133.0	6.95	197.54	8,130.5	4,675.6	-20.5	97.2	21.4	11.83	462,214.45	830,112.83	
8,155.0	8.52	197.21	8,152.3	4,697.4	-23.3	96.3	24.2	7.13	462,211.62	830,111.94	
KOP - 8155.0 'MD, 8152.3 'TVD, -23.3 'N, 96.3 'E											
8,165.0	9.23	197.10	8,162.2	4,707.3	-24.8	95.8	25.7	7.13	462,210.15	830,111.49	
8,196.0	11.96	195.17	8,192.6	4,737.7	-30.2	94.2	31.1	8.88	462,204.67	830,109.92	
8,228.0	15.48	193.85	8,223.7	4,768.8	-37.6	92.4	38.5	11.04	462,197.32	830,108.03	
8,260.0	18.03	192.89	8,254.4	4,799.5	-46.6	90.2	47.4	8.02	462,188.35	830,105.90	
8,291.0	20.58	192.27	8,283.6	4,828.7	-56.6	88.0	57.4	8.25	462,178.34	830,103.67	
8,323.0	23.13	192.01	8,313.3	4,858.4	-68.2	85.5	69.0	7.97	462,166.70	830,101.17	
8,355.0	26.38	190.16	8,342.4	4,887.5	-81.4	82.9	82.2	10.44	462,153.55	830,098.60	
8,386.0	29.63	188.23	8,369.7	4,914.8	-95.7	80.6	96.5	10.88	462,139.18	830,096.29	
8,418.0	33.15	187.53	8,397.1	4,942.2	-112.2	78.3	113.0	11.06	462,122.67	830,094.01	
8,450.0	36.32	187.44	8,423.3	4,968.4	-130.3	76.0	131.0	9.91	462,104.60	830,091.64	
8,481.0	39.04	187.00	8,447.9	4,993.0	-149.1	73.6	149.8	8.82	462,085.80	830,089.26	
8,513.0	41.86	186.12	8,472.2	5,017.3	-169.7	71.2	170.4	8.99	462,065.18	830,086.89	
8,545.0	44.32	186.12	8,495.6	5,040.7	-191.5	68.9	192.1	7.69	462,043.44	830,084.56	
8,576.0	46.69	186.47	8,517.3	5,062.4	-213.4	66.5	214.1	7.69	462,021.47	830,082.13	
8,608.0	50.03	187.53	8,538.6	5,083.7	-237.2	63.5	237.8	10.73	461,997.73	830,079.22	
8,640.0	52.23	187.44	8,558.7	5,103.8	-261.9	60.3	262.4	6.88	461,973.03	830,075.97	
8,671.0	54.43	187.00	8,577.2	5,122.3	-286.5	57.2	287.1	7.19	461,948.37	830,072.85	



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454 9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi,(azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,703.0	56.98	186.82	8,595.2	5,140.3	-312.8	54.0	313.3	7.98	461,922.13	830,069.67
8,734.0	60.32	185.85	8,611.3	5,156.4	-339.1	51.1	339.6	11.10	461,895.82	830,066.75
8,766.0	62.78	185.15	8,626.6	5,171.7	-367.1	48.4	367.5	7.92	461,867.81	830,064.06
8,766.1	62.78	185.15	8,626.6	5,171.7	-367.2	48.4	367.6	0.00	461,867.72	830,064.05
Hardline Crossing - 8766.1 'MD, 62.78 °INC, 8626.6 'TVD, -367.2 'N, 48.4 'E										
8,798.0	64.46	184.80	8,640.8	5,185.9	-395.6	45.9	396.1	5.36	461,839.25	830,061.57
8,830.0	67.44	184.80	8,653.8	5,198.9	-424.8	43.5	425.2	9.31	461,810.14	830,059.13
8,861.0	69.73	185.50	8,665.1	5,210.2	-453.5	40.9	453.9	7.68	461,781.40	830,056.53
8,893.0	72.37	186.03	8,675.5	5,220.6	-483.6	37.8	484.0	8.40	461,751.29	830,053.49
8,925.0	74.66	186.65	8,684.6	5,229.7	-514.1	34.4	514.4	7.39	461,720.79	830,050.10
8,956.0	75.80	187.00	8,692.5	5,237.6	-543.9	30.9	544.1	3.84	461,691.03	830,046.54
8,988.0	78.26	187.00	8,699.7	5,244.8	-574.8	27.1	575.1	7.69	461,660.08	830,042.74
9,020.0	81.16	187.44	8,705.4	5,250.5	-606.1	23.1	606.2	9.16	461,628.85	830,038.78
9,051.0	84.15	187.79	8,709.4	5,254.5	-636.5	19.0	636.7	9.71	461,598.38	830,034.71
9,083.0	86.61	187.44	8,712.0	5,257.1	-668.1	14.8	668.2	7.76	461,566.77	830,030.48
9,115.0	89.69	187.79	8,713.0	5,258.1	-699.8	10.6	699.9	9.69	461,535.07	830,026.25
LP - 9115.0 'MD, 8713.0 'TVD, -699.8 'N, 10.6 'E										
9,146.0	92.86	188.40	8,712.3	5,257.4	-730.5	6.2	730.5	10.41	461,504.39	830,021.88
9,178.0	94.00	187.88	8,710.4	5,255.5	-762.1	1.7	762.1	3.91	461,472.77	830,017.36
9,210.0	94.26	187.09	8,708.1	5,253.2	-793.8	-2.5	793.7	2.59	461,441.12	830,013.20
9,273.0	93.39	184.98	8,703.9	5,249.0	-856.3	-9.1	856.2	3.62	461,378.62	830,006.59
9,304.0	92.33	183.83	8,702.3	5,247.4	-887.2	-11.5	887.0	5.04	461,347.75	830,004.22
9,336.0	91.36	183.13	8,701.3	5,246.4	-919.1	-13.4	918.9	3.74	461,315.82	830,002.27
9,368.0	91.63	182.25	8,700.5	5,245.6	-951.0	-14.9	950.8	2.88	461,283.87	830,000.77
9,399.0	91.80	180.93	8,699.5	5,244.6	-982.0	-15.8	981.8	4.29	461,252.90	829,999.91
9,494.0	91.10	178.56	8,697.1	5,242.2	-1,077.0	-15.3	1,076.8	2.60	461,157.94	830,000.34
9,589.0	89.16	177.51	8,696.9	5,242.0	-1,171.9	-12.1	1,171.7	2.32	461,063.00	830,003.59



Pathfinder
PathfinderX & Y Report



Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3454.9usft (McVay 8)
Site:	Red Bull 31 State	MD Reference:	KB = 19 @ 3454.9usft (McVay 8)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
9,684.0	88.46	178.03	8,698.9	5,244.0	-1,266.8	-8.4	1,266.7	0.92	460,968.09	830,007.29	
9,716.0	88.20	178.39	8,699.8	5,244.9	-1,298.8	-7.4	1,298.6	1.39	460,936.12	830,008.29	
9,748.0	88.90	178.82	8,700.6	5,245.7	-1,330.8	-6.6	1,330.6	2.57	460,904.14	830,009.07	
9,780.0	89.69	179.88	8,701.0	5,246.1	-1,362.8	-6.2	1,362.6	4.13	460,872.15	830,009.43	
9,811.0	90.75	180.49	8,700.9	5,246.0	-1,393.8	-6.3	1,393.6	3.95	460,841.15	830,009.33	
9,843.0	91.54	179.70	8,700.3	5,245.4	-1,425.7	-6.4	1,425.6	3.49	460,809.15	830,009.28	
9,874.0	91.63	179.70	8,699.4	5,244.5	-1,456.7	-6.2	1,456.6	0.29	460,778.17	830,009.44	
9,938.0	90.40	179.26	8,698.3	5,243.4	-1,520.7	-5.6	1,520.6	2.04	460,714.18	830,010.02	
9,970.0	90.22	179.53	8,698.1	5,243.2	-1,552.7	-5.3	1,552.6	1.01	460,682.18	830,010.36	
10,033.0	91.54	180.41	8,697.1	5,242.2	-1,615.7	-5.3	1,615.6	2.52	460,619.19	830,010.39	
10,065.0	91.45	180.93	8,696.3	5,241.4	-1,647.7	-5.7	1,647.6	1.65	460,587.20	830,010.02	
10,159.0	91.19	179.44	8,694.1	5,239.2	-1,741.7	-6.0	1,741.5	1.61	460,493.23	830,009.71	
10,254.0	91.63	177.68	8,691.8	5,236.9	-1,836.6	-3.6	1,836.5	1.91	460,398.30	830,012.10	
10,349.0	91.36	178.30	8,689.3	5,234.4	-1,931.5	-0.2	1,931.4	0.71	460,303.39	830,015.43	
10,444.0	91.28	178.12	8,687.1	5,232.2	-2,026.4	2.7	2,026.4	0.21	460,208.46	830,018.40	
10,539.0	90.22	178.21	8,685.9	5,231.0	-2,121.4	5.8	2,121.3	1.12	460,113.52	830,021.44	
10,634.0	91.28	178.21	8,684.6	5,229.7	-2,216.3	8.7	2,216.3	1.12	460,018.57	830,024.41	
10,729.0	92.15	179.44	8,681.8	5,226.9	-2,311.3	10.7	2,311.3	1.59	459,923.64	830,026.35	
10,824.0	90.31	179.53	8,679.8	5,224.9	-2,406.2	11.5	2,406.2	1.94	459,828.67	830,027.21	
10,919.0	90.84	179.79	8,678.8	5,223.9	-2,501.2	12.1	2,501.2	0.62	459,733.67	830,027.77	
11,014.0	91.10	179.00	8,677.2	5,222.3	-2,596.2	13.1	2,596.2	0.88	459,638.69	830,028.77	
11,109.0	91.28	178.56	8,675.2	5,220.3	-2,691.2	15.1	2,691.2	0.50	459,543.74	830,030.80	
11,204.0	91.54	179.33	8,672.9	5,218.0	-2,786.1	16.9	2,786.2	0.86	459,448.78	830,032.55	
11,299.0	92.15	179.41	8,669.8	5,214.9	-2,881.1	17.9	2,881.1	0.65	459,353.84	830,033.59	
11,394.0	90.84	179.04	8,667.4	5,212.5	-2,976.0	19.2	2,976.1	1.43	459,258.88	830,034.87	
11,489.0	90.75	178.54	8,666.0	5,211.1	-3,071.0	21.2	3,071.0	0.53	459,163.91	830,036.88	
11,584.0	91.28	178.58	8,664.4	5,209.5	-3,165.9	23.6	3,166.0	0.56	459,068.96	830,039.27	



Pathfinder
PathfinderX & Y Report



Company: Devon Energy, Inc
Project: Lea County (NAD83)
Site: Red Bull 31 State
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: KB = 19 @ 3454 9usft (McVay 8)
MD Reference: KB = 19 @ 3454 9usft (McVay 8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,679.0	91.63	178.24	8,661.9	5,207.0	-3,260.9	26.2	3,261.0	0.51	458,974.02	830,041.90
11,774.0	91.19	178.34	8,659.6	5,204.7	-3,355.8	29.1	3,355.9	0.47	458,879.10	830,044.74
11,869.0	92.15	179.76	8,656.8	5,201.9	-3,450.7	30.6	3,450.9	1.80	458,784.15	830,046.31
11,964.0	91.19	178.51	8,654.1	5,199.2	-3,545.7	32.1	3,545.8	1.66	458,689.21	830,047.74
12,059.0	91.45	179.08	8,651.9	5,197.0	-3,640.6	34.1	3,640.8	0.66	458,594.25	830,049.74
12,153.0	91.45	178.69	8,649.5	5,194.6	-3,734.6	35.9	3,734.8	0.41	458,500.30	830,051.57
12,247.0	90.48	178.25	8,647.9	5,193.0	-3,828.6	38.4	3,828.7	1.13	458,406.35	830,054.08
12,342.0	91.45	178.71	8,646.3	5,191.4	-3,923.5	40.9	3,923.7	1.13	458,311.40	830,056.60
12,435.0	91.45	179.70	8,644.0	5,189.1	-4,016.5	42.2	4,016.7	1.06	458,218.44	830,057.89
12,530.0	90.92	179.07	8,642.0	5,187.1	-4,111.4	43.2	4,111.7	0.87	458,123.46	830,058.91
12,625.0	90.13	178.01	8,641.1	5,186.2	-4,206.4	45.7	4,206.6	1.39	458,028.50	830,061.33
12,720.0	91.28	177.79	8,640.0	5,185.1	-4,301.3	49.1	4,301.6	1.23	457,933.57	830,064.81
12,815.0	91.36	177.93	8,637.8	5,182.9	-4,396.2	52.7	4,396.5	0.17	457,838.67	830,068.36
12,896.0	91.98	177.84	8,635.4	5,180.5	-4,477.1	55.7	4,477.5	0.77	457,757.76	830,071.34
12,951.0	91.98	177.84	8,633.5	5,178.6	-4,532.1	57.7	4,532.4	0.00	457,702.83	830,073.42

BHL - 12951.0 'MD, 8633.5 'TVD, -4532.1 'N, 57.7 'E

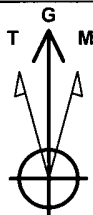
Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,155.0	8,152.3	-23.3	96.3	KOP - 8155.0 'MD, 8152.3 'TVD, -23.3 'N, 96.3 'E
8,766.1	8,626.6	-367.2	48.4	Hardline Crossing - 8766.1 'MD, 62.78 'INC, 8626.6 'TVD, -367.2 'N, 48.4 'E
9,115.0	8,713.0	-699.8	10.6	LP - 9115.0 'MD, 8713.0 'TVD, -699.8 'N, 10.6 'E
12,951.0	8,633.5	-4,532.1	57.7	BHL - 12951.0 'MD, 8633.5 'TVD, -4532.1 'N, 57.7 'E

Checked By: _____ Approved By: _____ Date: _____



PROJECT DETAILS Lea County (NAD83)
Geodetic System US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North Grid



Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.91°

Magnetic Field
Strength: 48578.9snT
Dip Angle: 60.24°
Date: 4/11/2012
Model: IGRF2010

PATHFINDER
A Schlumberger Company

Project: Lea County (NAD83)
Site: Red Bull 31 State
Well: #4H
Wellbore: OH
Plan: Post Gyro Plan #5 (#4H/OH)

WELL DETAILS #4H

Ground Elevation 3435.9
RKB Elevation KB = 19 @ 3454.9usft (McVay 8)
Rig Name McVay 8

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	462234.900	830015.670	32.267	-103.399	

EOW

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

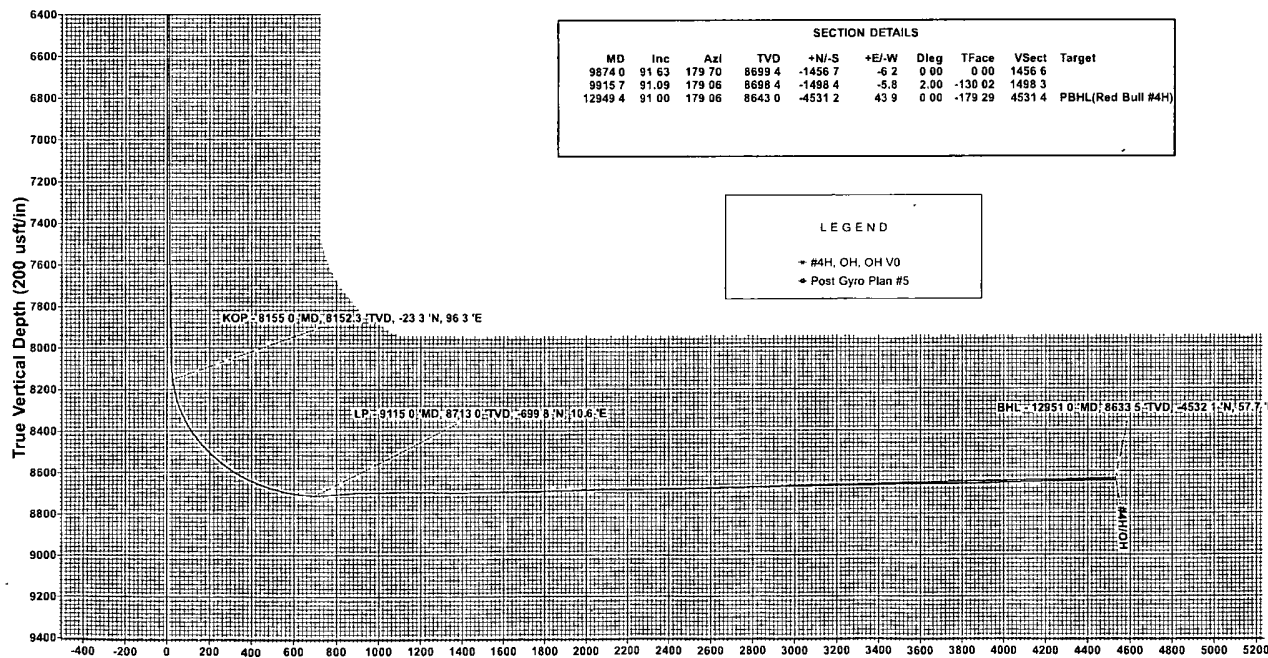
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(Red Bull #4H)	8643.0	-4531.2	43.9	457703.700	830059.620	Point

SECTION DETAILS

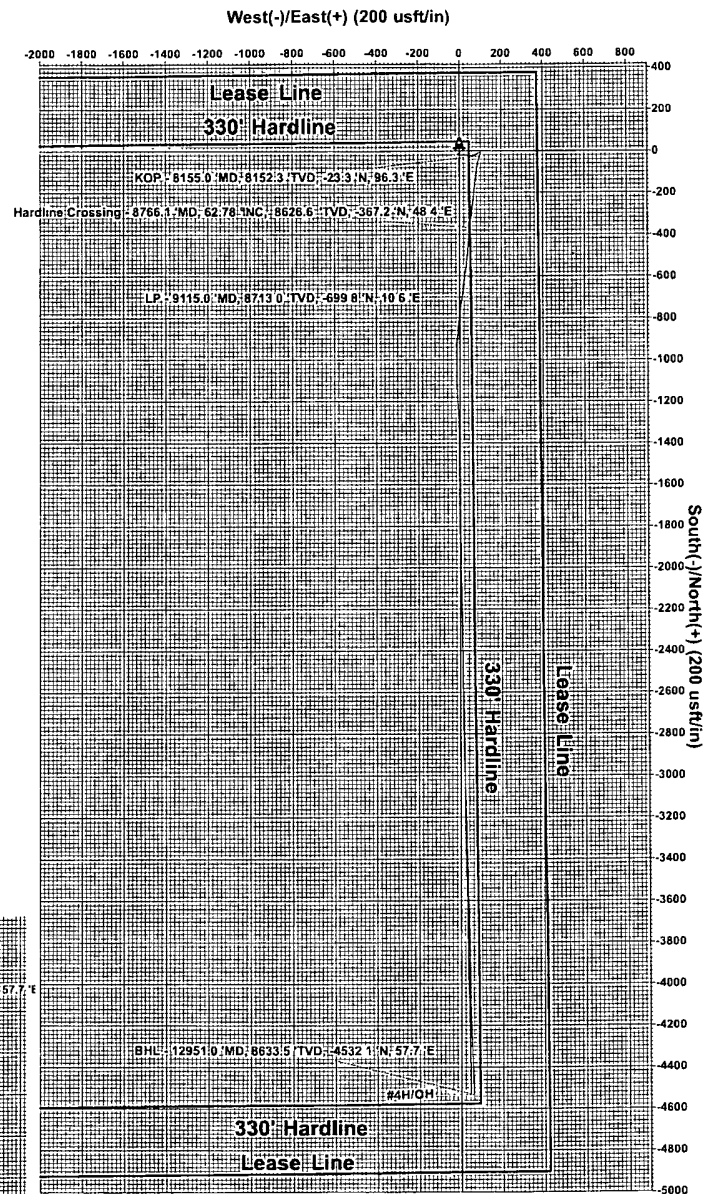
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
9874.0	91.63	179.70	8699.4	-1456.7	-6.2	0.00	0.00	1456.6	
9915.7	91.09	179.06	8698.4	-1498.4	-5.8	2.00	-130.02	1498.3	
12949.4	91.00	179.06	8643.0	-4531.2	43.9	0.00	-179.29	4531.4	PBHL(Red Bull #4H)

LEGEND

+ #4H, OH, OH V0
+ Post Gyro Plan #5



Vertical Section at 179.44° (200 usft/in)



Plan Post Gyro Plan #5 (#4H/OH)

Created By Sam Bille Date 8/42, June 05 2012

Checked Date

Lea County, NM
Lea County, NM
Red Bull 31 State
Map Scale: 1 inch = 100 feet



Company: Devon Energy Production Co.

Lease/Well: Red Bull 31 State/No. 004H

Location: S31, T23s, R35e

Rig Name: McVay Drilling #8

State/County: New Mexico/Lea

Latitude: 32.27

GRID North is 0.50 Degrees East of True North

VS-Azi: 179.44 Degrees



Depth Reference : RKB= 18'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro_run_final_run.ut

Minimum Curvature Method

Report Date/Time: 5/24/2012 / 11:41

Vaughn Energy Services

Gardendale, Texas

432-563-5444

Surveyor: Seth Hardin

Red Bull 31 State No. 004H / API 30-025-40428

SUR: A-31-23s-35e, 375/N & 375/E
BHL: P-31-23s-35e, 4907/N & 433/E
API # 30-025-40428

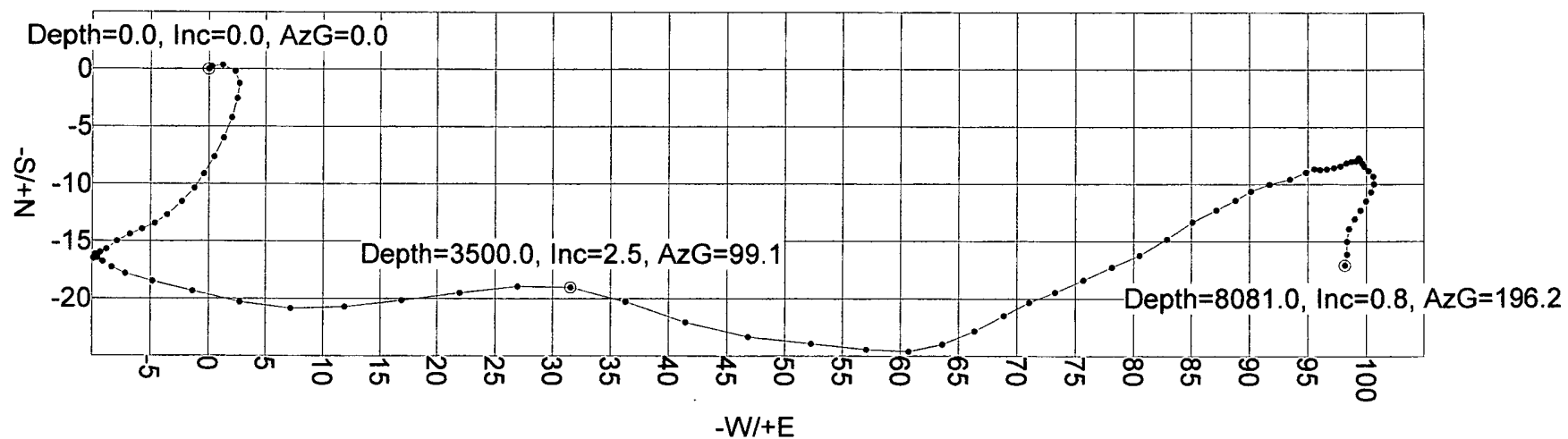
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.40	48.79	100.00	0.23	0.26	-0.23	0.35	48.79	0.40
200.00	0.80	97.58	199.99	0.37	1.21	-0.35	1.27	73.19	0.61
300.00	0.72	140.14	299.99	-0.21	2.30	0.23	2.31	95.12	0.55
400.00	0.64	182.69	399.98	-1.24	2.68	1.27	2.95	114.92	0.50
500.00	0.88	191.27	499.97	-2.55	2.50	2.58	3.58	135.60	0.27
600.00	1.12	199.86	599.96	-4.23	2.02	4.25	4.68	154.47	0.28
700.00	1.08	204.52	699.94	-6.00	1.30	6.01	6.14	167.80	0.10
800.00	1.03	209.18	799.92	-7.64	0.47	7.65	7.66	176.49	0.10
900.00	0.92	211.99	899.91	-9.11	-0.40	9.10	9.12	182.48	0.12
1000.00	0.81	214.80	999.89	-10.37	-1.22	10.35	10.44	186.72	0.12
1100.00	1.04	228.45	1099.88	-11.54	-2.30	11.52	11.77	191.27	0.32
1200.00	0.92	226.41	1199.87	-12.70	-3.56	12.66	13.19	195.66	0.12
1300.00	0.58	249.33	1299.86	-13.43	-4.62	13.39	14.20	198.97	0.45
1400.00	0.81	243.49	1399.85	-13.93	-5.72	13.87	15.06	202.34	0.24
1500.00	0.50	247.35	1499.84	-14.41	-6.76	14.34	15.91	205.12	0.31
1600.00	0.95	239.85	1599.84	-14.99	-7.88	14.91	16.94	207.71	0.46
1700.00	0.40	213.67	1699.83	-15.70	-8.78	15.61	17.99	209.23	0.62
1800.00	0.38	272.17	1799.83	-15.98	-9.31	15.88	18.49	210.23	0.38

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	0.25	206.17	1899.83	-16.16	-9.74	16.06	18.86	211.07	0.36
2000.00	0.11	208.20	1999.83	-16.44	-9.88	16.34	19.18	211.00	0.13
2100.00	0.05	80.38	2099.83	-16.52	-9.88	16.42	19.25	210.89	0.15
2200.00	0.09	48.28	2199.83	-16.45	-9.78	16.36	19.14	210.72	0.06
2300.00	0.17	108.82	2299.83	-16.45	-9.58	16.35	19.03	210.22	0.14
2400.00	0.50	129.02	2399.82	-16.77	-9.10	16.68	19.08	208.50	0.35
2500.00	0.56	118.27	2499.82	-17.28	-8.33	17.19	19.18	205.75	0.12
2600.00	0.93	111.85	2599.81	-17.81	-7.15	17.74	19.19	201.86	0.37
2700.00	1.88	103.23	2699.78	-18.49	-4.80	18.44	19.10	194.55	0.97
2800.00	2.17	104.38	2799.72	-19.33	-1.37	19.32	19.38	184.05	0.29
2900.00	2.67	102.36	2899.63	-20.30	2.73	20.33	20.48	172.33	0.51
3000.00	2.52	91.67	2999.53	-20.86	7.20	20.93	22.07	160.95	0.50
3100.00	2.83	85.34	3099.42	-20.72	11.86	20.84	23.88	150.22	0.43
3200.00	2.93	81.99	3199.29	-20.17	16.85	20.33	26.28	140.12	0.20
3300.00	2.94	83.31	3299.16	-19.51	21.93	19.73	29.35	131.67	0.07
3400.00	2.85	83.73	3399.03	-18.94	26.94	19.21	32.93	125.12	0.09
3500.00	2.51	99.07	3498.92	-19.02	31.57	19.32	36.85	121.07	0.79
3600.00	3.11	109.71	3598.80	-20.28	36.28	20.63	41.56	119.20	0.80
3700.00	3.15	108.50	3698.66	-22.07	41.44	22.47	46.95	118.03	0.08
3800.00	3.19	98.12	3798.50	-23.33	46.81	23.79	52.30	116.49	0.58
3900.00	3.10	94.42	3898.35	-23.93	52.26	24.44	57.48	114.60	0.22
4000.00	2.44	97.93	3998.23	-24.43	57.07	24.99	62.08	113.18	0.68
4100.00	1.77	85.80	4098.17	-24.61	60.71	25.21	65.51	112.07	0.80
4200.00	1.66	69.15	4198.12	-23.99	63.61	24.61	67.98	110.66	0.51
4300.00	1.79	65.88	4298.08	-22.83	66.39	23.48	70.20	108.98	0.16
4400.00	1.49	56.58	4398.04	-21.48	68.90	22.15	72.17	107.31	0.40
4500.00	1.30	68.19	4498.01	-20.34	71.04	21.03	73.89	105.98	0.34
4600.00	1.45	68.00	4597.98	-19.44	73.26	20.16	75.80	104.86	0.14
4700.00	1.58	64.67	4697.94	-18.38	75.68	19.12	77.88	103.65	0.16
4800.00	1.51	65.97	4797.91	-17.25	78.13	18.02	80.02	102.45	0.08
4900.00	1.47	67.75	4897.87	-16.23	80.53	17.02	82.15	101.40	0.06
5000.00	1.72	51.27	4997.83	-14.80	82.89	15.61	84.20	100.13	0.52
5100.00	1.34	61.85	5097.80	-13.31	85.09	14.14	86.13	98.89	0.48
5200.00	1.29	63.63	5197.77	-12.26	87.13	13.11	87.98	98.01	0.07
5300.00	0.85	62.01	5297.76	-11.41	88.79	12.28	89.52	97.33	0.43
5400.00	0.94	56.29	5397.74	-10.61	90.13	11.49	90.75	96.71	0.12
5500.00	1.04	79.99	5497.73	-10.00	91.70	10.90	92.24	96.22	0.42
5600.00	1.05	73.21	5597.71	-9.58	93.47	10.49	93.95	95.85	0.12
5700.00	0.68	54.70	5697.70	-8.97	94.83	9.90	95.25	95.41	0.46

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	0.25	98.24	5797.70	-8.66	95.53	9.59	95.92	95.18	0.53
5900.00	0.33	100.89	5897.70	-8.75	96.03	9.68	96.42	95.20	0.08
6000.00	0.38	70.10	5997.69	-8.69	96.62	9.63	97.01	95.14	0.19
6100.00	0.34	88.44	6097.69	-8.57	97.22	9.52	97.59	95.04	0.12
6200.00	0.36	60.42	6197.69	-8.41	97.78	9.36	98.14	94.91	0.17
6300.00	0.29	64.84	6297.69	-8.15	98.28	9.11	98.62	94.74	0.07
6400.00	0.25	83.62	6397.69	-8.01	98.73	8.98	99.05	94.64	0.10
6500.00	0.20	83.56	6497.69	-7.97	99.12	8.94	99.44	94.60	0.06
6600.00	0.12	17.63	6597.69	-7.85	99.32	8.82	99.63	94.52	0.18
6700.00	0.07	1.69	6697.69	-7.69	99.35	8.66	99.65	94.43	0.05
6800.00	0.28	153.85	6797.69	-7.84	99.46	8.82	99.77	94.51	0.34
6900.00	0.16	144.41	6897.69	-8.18	99.65	9.15	99.98	94.69	0.12
7000.00	0.20	148.45	6997.69	-8.44	99.82	9.41	100.18	94.83	0.04
7100.00	0.42	128.03	7097.68	-8.81	100.20	9.79	100.59	95.03	0.24
7200.00	0.33	157.99	7197.68	-9.30	100.59	10.28	101.02	95.28	0.21
7300.00	0.46	187.40	7297.68	-9.96	100.65	10.95	101.14	95.65	0.24
7400.00	0.42	211.64	7397.68	-10.67	100.41	11.65	100.97	96.07	0.19
7500.00	0.62	207.97	7497.67	-11.46	99.96	12.44	100.62	96.54	0.20
7600.00	0.45	211.92	7597.67	-12.27	99.50	13.24	100.26	97.03	0.17
7700.00	0.58	215.52	7697.66	-13.01	99.00	13.98	99.85	97.49	0.14
7800.00	0.59	203.37	7797.66	-13.90	98.50	14.86	99.48	98.03	0.12
7900.00	0.71	176.92	7897.65	-14.99	98.33	15.95	99.47	98.67	0.32
8000.00	0.58	183.05	7997.65	-16.11	98.34	17.07	99.65	99.30	0.15
8081.00	0.80	196.16	8078.64	-17.06	98.16	18.02	99.63	99.86	0.33



Vaughn Energy Services
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Red Bull 31 State No. 004H / API 30-025-40428



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