PATHFINDER®

A Schlumberger Company

DIRECTIONAL SURVEY REPORT

30-015-39035

DEVON ENERGY

SNAPPING 2 STATE #2H

EDDY COUNTY, NEW MEXICO

PREPARED BY: *FRANCISCO SINISTERRA*

PathFinder Energy Services, Inc.
Survey Report

Tie-in Date: 07/17/2011
Date Completed: 07/30/2011

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #2H
EDDY COUNTY, NM
Rig:H&P 416
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: C. SANDIFER
J. HORRALL

Survey Calculations by RX5 V6.03E using Minimum Curvature

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.56.8498 N LON:103.45.18.8017 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coor: X: 720418.1500 Y: 388152.1900
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.34° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 25.00' Rotary Table To Ground
Altitude:3243.00' 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 (ft)	Dir (deg)	DLS (dg/100ft)
TIE-IN TO SCIENTIFIC GYRO @ 7660' MD.										
7660.00	1.32	153.55	7658.50	0.00	-92.06	92.06 S	5.91 W	92.25@	183.67	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
7860.00	1.49	160.63	7858.44	200.00	-96.58	96.58 S	4.02 W	96.66@	182.38	0.12
8060.00	1.32	169.60	8058.38	200.00	-101.29	101.29 S	2.74 W	101.33@	181.55	0.14
8260.00	1.06	181.36	8258.34	200.00	-105.41	105.41 S	2.37 W	105.44@	181.29	0.18
8311.00	0.70	38.16	8309.33	51.00	-105.64	105.64 S	2.19 W	105.66@	181.19	3.28
8342.00	2.55	38.35	8340.32	31.00	-104.95	104.95 S	1.65 W	104.96@	180.90	5.97
8374.00	4.31	43.44	8372.26	32.00	-103.52	103.52 S	0.38 W	103.52@	180.21	5.58
8405.00	6.42	41.61	8403.12	31.00	-101.37	101.37 S	1.58 E	101.39@	179.11	6.83
8437.00	8.71	38.97	8434.84	32.00	-98.15	98.15 S	4.29 E	98.24@	177.50	7.24
8468.00	10.82	36.38	8465.39	31.00	-93.98	93.98 S	7.49 E	94.28@	175.44	6.95
8500.00	13.19	36.36	8496.69	32.00	-88.62	88.62 S	11.44 E	89.36@	172.65	7.41
8531.00	15.56	37.99	8526.72	31.00	-82.50	82.50 S	16.09 E	84.05@	168.96	7.76
8563.00	18.03	39.06	8557.35	32.00	-75.27	75.27 S	21.86 E	78.38@	163.81	7.78
8594.00	21.10	39.27	8586.56	31.00	-67.22	67.22 S	28.41 E	72.98@	157.09	9.91
8626.00	23.83	39.67	8616.13	32.00	-57.79	57.79 S	36.19 E	68.18@	147.94	8.55
8657.00	26.47	40.29	8644.19	31.00	-47.69	47.69 S	44.65 E	65.33@	136.88	8.56
8689.00	29.55	40.41	8672.43	32.00	-36.24	36.24 S	54.38 E	65.35@	123.68	9.63
8720.00	31.48	39.57	8699.14	31.00	-24.18	24.18 S	64.50 E	68.88@	110.55	6.38
8752.00	33.59	38.65	8726.12	32.00	-10.83	10.83 S	75.35 E	76.12@	98.18	6.77
8783.00	36.40	38.10	8751.51	31.00	3.11	3.11 N	86.38 E	86.44@	87.94	9.12
8815.00	40.01	37.66	8776.65	32.00	18.73	18.73 N	98.53 E	100.29@	79.24	11.31
8846.00	43.44	38.01	8799.78	31.00	35.02	35.02 N	111.18 E	116.57@	72.52	11.09
8878.00	47.22	40.39	8822.28	32.00	52.64	52.64 N	125.58 E	136.16@	67.26	12.94
8909.00	51.35	42.32	8842.50	31.00	70.27	70.27 N	141.10 E	157.63@	63.53	14.13

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8941.00	54.87	47.55	8861.71	32.00	88.35	88.35 N	159.19 E	182.06@	60.97	17.08
8972.00	57.68	51.34	8878.92	31.00	105.10	105.10 N	178.78 E	207.38@	59.55	13.62
9004.00	60.76	48.63	8895.30	32.00	122.78	122.78 N	199.82 E	234.53@	58.43	12.06
9035.00	64.10	46.73	8909.65	31.00	141.28	141.28 N	220.13 E	261.57@	57.31	12.07
9067.00	68.59	43.86	8922.49	32.00	161.90	161.90 N	240.95 E	290.29@	56.10	16.26
9098.00	72.63	41.58	8932.78	31.00	183.38	183.38 N	260.77 E	318.80@	54.88	14.76
9130.00	75.45	37.87	8941.58	32.00	207.05	207.05 N	280.43 E	348.58@	53.56	14.21
9161.00	78.00	32.56	8948.70	31.00	231.69	231.69 N	297.81 E	377.32@	52.12	18.59
9193.00	79.84	27.32	8954.85	32.00	258.89	258.89 N	313.47 E	406.56@	50.45	17.07
9224.00	79.84	22.31	8960.32	31.00	286.58	286.58 N	326.27 E	434.26@	48.71	15.91
9256.00	81.07	16.57	8965.64	32.00	316.32	316.32 N	336.77 E	462.03@	46.79	18.10
9287.00	83.98	12.04	8969.67	31.00	346.10	346.10 N	344.36 E	488.23@	44.86	17.26
9319.00	88.20	9.26	8971.85	32.00	377.46	377.46 N	350.25 E	514.93@	42.86	15.78
9350.00	90.40	8.11	8972.23	31.00	408.10	408.10 N	354.93 E	540.86@	41.01	8.01
9413.00	92.86	7.18	8970.44	63.00	470.51	470.51 N	363.31 E	594.45@	37.67	4.17
9508.00	95.67	2.52	8963.37	95.00	564.87	564.87 N	371.32 E	675.99@	33.32	5.72
9602.00	95.06	359.36	8954.58	94.00	658.44	658.44 N	372.86 E	756.68@	29.52	3.41
9697.00	99.10	359.09	8942.87	95.00	752.68	752.68 N	371.58 E	839.41@	26.27	4.26
9792.00	89.78	0.13	8935.53	95.00	847.29	847.29 N	370.95 E	924.93@	23.64	9.87
9886.00	85.03	0.43	8939.78	94.00	941.17	941.17 N	371.40 E	1011.80@	21.54	5.06
9981.00	80.11	359.27	8952.06	95.00	1035.34	1035.34 N	371.16 E	1099.86@	19.72	5.32
10075.00	83.10	356.88	8965.79	94.00	1128.26	1128.26 N	368.03 E	1186.77@	18.07	4.06
10170.00	84.42	356.34	8976.11	95.00	1222.53	1222.53 N	362.45 E	1275.13@	16.51	1.50
10264.00	86.70	356.70	8983.39	94.00	1316.07	1316.07 N	356.76 E	1363.57@	15.17	2.46
10358.00	92.77	355.38	8983.82	94.00	1409.80	1409.80 N	350.27 E	1452.66@	13.95	6.61
10453.00	94.18	355.55	8978.07	95.00	1504.32	1504.32 N	342.77 E	1542.88@	12.84	1.49
10548.00	91.45	357.03	8973.40	95.00	1599.00	1599.00 N	336.64 E	1634.05@	11.89	3.27
10643.00	92.42	357.72	8970.19	95.00	1693.84	1693.84 N	332.29 E	1726.13@	11.10	1.25

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10738.00	90.31	359.43	8967.93	95.00	1788.78	1788.78 N	329.93 E	1818.95@	10.45	2.86
10832.00	87.67	359.16	8969.59	94.00	1882.75	1882.75 N	328.77 E	1911.24@	9.91	2.82
10927.00	87.41	359.60	8973.66	95.00	1977.65	1977.65 N	327.74 E	2004.63@	9.41	0.54
11022.00	89.08	357.99	8976.57	95.00	2072.58	2072.58 N	325.75 E	2098.02@	8.93	2.44
11116.00	90.04	358.27	8977.29	94.00	2166.53	2166.53 N	322.68 E	2190.43@	8.47	1.06
11211.00	93.12	356.45	8974.68	95.00	2261.38	2261.38 N	318.31 E	2283.67@	8.01	3.77
11305.00	94.18	356.02	8968.69	94.00	2354.98	2354.98 N	312.15 E	2375.58@	7.55	1.22
11400.00	93.21	356.71	8962.57	95.00	2449.59	2449.59 N	306.14 E	2468.65@	7.12	1.25
11494.00	90.66	357.82	8959.39	94.00	2543.42	2543.42 N	301.66 E	2561.25@	6.76	2.96
11589.00	91.28	357.80	8957.79	95.00	2638.34	2638.34 N	298.03 E	2655.12@	6.44	0.65
11683.00	88.29	358.44	8958.14	94.00	2732.27	2732.27 N	294.94 E	2748.15@	6.16	3.25
11778.00	89.25	359.48	8960.18	95.00	2827.24	2827.24 N	293.22 E	2842.40@	5.92	1.49
11873.00	89.34	359.69	8961.35	95.00	2922.23	2922.23 N	292.53 E	2936.83@	5.72	0.24
11967.00	87.85	359.53	8963.65	94.00	3016.19	3016.19 N	291.89 E	3030.28@	5.53	1.59
12062.00	89.43	0.05	8965.91	95.00	3111.16	3111.16 N	291.54 E	3124.79@	5.35	1.75
12157.00	88.81	0.77	8967.37	95.00	3206.15	3206.15 N	292.22 E	3219.44@	5.21	1.00
12251.00	88.99	0.70	8969.17	94.00	3300.12	3300.12 N	293.43 E	3313.14@	5.08	0.21
12346.00	87.76	0.57	8971.86	95.00	3395.08	3395.08 N	294.48 E	3407.82@	4.96	1.30
12440.00	89.25	0.06	8974.32	94.00	3489.04	3489.04 N	295.00 E	3501.49@	4.83	1.67
12535.00	89.34	0.00	8975.49	95.00	3584.03	3584.03 N	295.05 E	3596.16@	4.71	0.11
12630.00	88.37	358.84	8977.38	95.00	3679.01	3679.01 N	294.09 E	3690.74@	4.57	1.59
12724.00	88.20	358.95	8980.20	94.00	3772.95	3772.95 N	292.27 E	3784.25@	4.43	0.21
12819.00	89.34	358.89	8982.24	95.00	3867.91	3867.91 N	290.48 E	3878.80@	4.29	1.20
12913.00	91.45	0.74	8981.59	94.00	3961.89	3961.89 N	290.18 E	3972.51@	4.19	2.98
13008.00	91.01	0.02	8979.55	95.00	4056.87	4056.87 N	290.81 E	4067.28@	4.10	0.89
13102.00	91.01	0.68	8977.89	94.00	4150.85	4150.85 N	291.38 E	4161.07@	4.02	0.70
13197.00	91.01	359.57	8976.22	95.00	4245.84	4245.84 N	291.59 E	4255.84@	3.93	1.17
13292.00	92.15	0.07	8973.60	95.00	4340.80	4340.80 N	291.29 E	4350.56@	3.84	1.31

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13386.00	90.75	0.14	8971.22	94.00	4434.76	4434.76 N	291.46 E	4444.33@	3.76	1.49
13481.00	91.36	0.27	8969.47	95.00	4529.75	4529.75 N	291.80 E	4539.14@	3.69	0.66
13551.00	91.80	1.30	8967.54	70.00	4599.71	4599.71 N	292.76 E	4609.02@	3.64	1.60
STRAIGHT-LINE PROJECTION TO BIT @ 13600'										
13600.00	91.80	1.30	8966.00	49.00	4648.68	4648.68 N	293.87 E	4657.96@	3.62	0.00

PATHFINDER®

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TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	Devon Energy Production.Co.		
LEASE / WELL No.:	Snapping 2 State #2H	Original Wellbore	
WELL LOCATION:	Eddy County		
COUNTY / STATE / COUNTRY:	Eddy	New Mexico	USA
RIG:	H & P 416		
API WELL No:	30-015-39035		
JOB No:	700003093-WT-WT		
P.O. / AFE No.	160475		
DIRECTIONAL COMPANY:	Pathfinder Energy Services		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):					
On Wall Plat:	7.34	*LWD Calculated:*	7.34	**Agreed Upon:**	7 34
X =	720418.056100 Feet		Y =	388152.332200	Feet
SITE LATITUDE:	32.065792 N	SITE LONGITUDE:		103.755223 W	
GRID SYSTEM:	TRUE ☐ UTM ☑ LAMBERT ☐	ZONE:		New Mexico East	
PROPOSED DRIFT DIRECTION:		0			
KELLY BUSHING ELEVATION:		25'			
ALTITUDE:	3243 Feet	WATER DEPTH:			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7660			
DRIFT ANGLE:	1.32			
DRIFT DIRECTION:	153.55			
TRUE VERTICAL DEPTH:	7658.5			
VERTICAL SECTION:	-92.06			
RECTANGULAR COORDINATE (N / S) :	-92.06			
RECTANGULAR COORDINATE (E / W) :	-5.91			
CLOSURE DISTANCE / DIRECTION:	92.2	5.91 W		
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:	7818	TOTAL DEPTH:	12969.18
KICKOFF ANGLE:	0.91	MAX ANGLE:	90

PES Engineers: Charlie Sandifer

Manuel Cervantes

**Signature of both field engineers required if applicable

Directional Driller: Manuel Cervantes DATE: _____

A Gyrodata Directional Survey

for

DEVON ENERGY

Lease: SNAPPING 2 STATE Well: 2H, 5 INCH DRILLPIPE
Location: H&P 416, EDDY COUNTY , NEW MEXICO

Job Number: MD0711GVC330

Run Date: 7/18/2011 12:45:42 AM

Surveyor: Che Garcia

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Hand Held GPS
Survey Latitude: 32.065778 deg. N Longitude: 103.755444 deg. W

Azimuth Correction:
Gyro: -0.31000 deg to Grid North

Depth Reference: Rotary Table

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Local Horizontal Reference

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Lease: SNAPPING 2 STATE Well: 2H, 5 INCH DRILLPIPE
Location: H&P 416, EDDY COUNTY , NEW MEXICO
Job Number: MD0711GVC330

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet	
0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00 N	0.00 E
0 TO 7660 FT RATE VERTICUAL CONTINOUS SURVEY TO RUN INSIDE 5 INCH DRILLPIPE								
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO H&P 416 R.K.B 26.2								
100.00	0.30	156.71	0.30	100.00	0.3	156.7	0.24 S	0.10 E
190.00	0.38	208.34	0.34	190.00	0.7	175.9	0.72 S	0.05 E
280.00	0.48	213.25	0.12	280.00	1.3	193.0	1.30 S	0.30 W
370.00	0.46	222.74	0.09	369.99	2.0	201.8	1.88 S	0.75 W
460.00	0.51	228.64	0.08	459.99	2.7	208.3	2.41 S	1.30 W
550.00	0.29	227.08	0.25	549.99	3.3	211.9	2.83 S	1.76 W
640.00	0.36	120.72	0.58	639.99	3.6	208.3	3.13 S	1.69 W
730.00	1.04	139.72	0.79	729.98	4.0	193.3	3.89 S	0.92 W
820.00	1.87	153.16	0.99	819.95	5.8	177.3	5.82 S	0.27 E
910.00	1.84	156.36	0.12	909.90	8.6	169.9	8.46 S	1.51 E
1000.00	2.02	168.01	0.48	999.85	11.6	167.9	11.34 S	2.42 E
1090.00	2.44	175.27	0.55	1089.78	15.1	168.9	14.80 S	2.91 E
1180.00	2.55	178.81	0.21	1179.70	19.0	170.6	18.71 S	3.11 E
1270.00	2.51	185.76	0.34	1269.61	22.9	172.6	22.67 S	2.96 E
1360.00	2.23	191.47	0.41	1359.53	26.5	174.8	26.35 S	2.41 E
1450.00	1.92	195.01	0.36	1449.47	29.6	176.8	29.52 S	1.67 E
1540.00	1.66	197.08	0.31	1539.43	32.2	178.4	32.23 S	0.90 E
1630.00	1.44	197.16	0.24	1629.40	34.5	179.7	34.55 S	0.18 E
1720.00	1.37	196.24	0.08	1719.37	36.7	180.7	36.66 S	0.45 W

A Gyrodata Directional Survey

DEVON ENERGY
Lease: SNAPPING 2 STATE Well: 2H, 5 INCH DRILLPIPE
Location: H&P 416, EDDY COUNTY , NEW MEXICO
Job Number: MD0711GVC330

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1810.00	1.41	197.92	0.06	1809.34	38.8	181.6	38.75 S	1.09 W
1900.00	1.31	194.58	0.14	1899.32	40.8	182.4	40.80 S	1.69 W
1990.00	1.20	199.93	0.18	1989.30	42.7	183.0	42.68 S	2.27 W
2080.00	0.94	203.36	0.29	2079.28	44.3	183.7	44.24 S	2.89 W
2170.00	0.91	207.79	0.09	2169.27	45.7	184.4	45.56 S	3.52 W
2260.00	0.93	207.71	0.02	2259.26	47.0	185.1	46.84 S	4.19 W
2350.00	1.11	207.50	0.20	2349.24	48.5	185.8	48.26 S	4.93 W
2440.00	1.30	212.55	0.25	2439.22	50.2	186.7	49.89 S	5.89 W
2530.00	1.25	221.14	0.22	2529.20	52.0	187.8	51.50 S	7.08 W
2620.00	0.97	227.60	0.34	2619.18	53.4	188.9	52.75 S	8.29 W
2710.00	0.79	234.82	0.24	2709.17	54.4	189.9	53.62 S	9.36 W
2800.00	1.00	250.69	0.36	2799.16	55.3	191.1	54.24 S	10.62 W
2890.00	1.05	258.66	0.17	2889.15	56.0	192.5	54.66 S	12.16 W
2980.00	0.95	261.27	0.12	2979.13	56.6	194.0	54.94 S	13.71 W
3070.00	0.76	253.32	0.24	3069.12	57.2	195.2	55.22 S	15.02 W
3160.00	0.39	238.29	0.44	3159.12	57.8	195.9	55.56 S	15.85 W
3250.00	0.37	180.91	0.40	3249.12	58.3	196.1	56.01 S	16.11 W
3340.00	0.53	156.04	0.28	3339.12	58.9	195.7	56.68 S	15.95 W
3430.00	0.51	166.12	0.10	3429.11	59.6	195.3	57.45 S	15.68 W
3520.00	1.61	183.32	1.26	3519.10	61.1	194.8	59.10 S	15.66 W
3610.00	1.63	197.11	0.43	3609.06	63.7	194.7	61.59 S	16.11 W

A Gyrodata Directional Survey

DEVON ENERGY
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Location: H&P 416, EDDY COUNTY , NEW MEXICO
Job Number: MD0711GVC330

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3700.00	1.80	201.29	0.23	3699.02	66.3	194.8	64.13 S	17.00 W
3790.00	2.98	228.86	1.79	3788.94	69.7	196.1	66.98 S	19.27 W
3880.00	2.44	247.10	1.12	3878.84	72.9	198.2	69.27 S	22.80 W
3970.00	0.90	263.77	1.78	3968.80	74.5	199.8	70.09 S	25.27 W
4060.00	0.49	293.72	0.60	4058.80	74.8	200.6	70.01 S	26.32 W
4150.00	0.30	290.52	0.20	4148.79	74.8	201.1	69.77 S	26.89 W
4240.00	0.27	306.54	0.10	4238.79	74.7	201.4	69.57 S	27.28 W
4330.00	0.10	327.70	0.19	4328.79	74.6	201.6	69.37 S	27.50 W
4420.00	0.13	288.94	0.09	4418.79	74.6	201.7	69.27 S	27.64 W
4510.00	0.16	269.40	0.07	4508.79	74.6	201.9	69.24 S	27.86 W
4600.00	0.15	258.61	0.04	4598.79	74.7	202.1	69.26 S	28.11 W
4690.00	0.08	90.51	0.26	4688.79	74.8	202.1	69.29 S	28.15 W
4780.00	0.19	112.18	0.13	4778.79	74.8	202.0	69.35 S	27.95 W
4870.00	0.24	119.47	0.07	4868.79	74.8	201.7	69.50 S	27.64 W
4960.00	0.46	117.53	0.24	4958.79	74.9	201.3	69.76 S	27.16 W
5050.00	0.49	110.86	0.07	5048.79	74.9	200.7	70.06 S	26.48 W
5140.00	0.47	120.38	0.09	5138.78	75.0	200.1	70.39 S	25.79 W
5230.00	0.57	129.84	0.15	5228.78	75.2	199.5	70.86 S	25.13 W
5320.00	0.52	145.72	0.18	5318.77	75.6	199.0	71.48 S	24.56 W
5410.00	0.44	149.66	0.09	5408.77	76.1	198.5	72.12 S	24.15 W
5500.00	0.37	156.48	0.10	5498.77	76.5	198.2	72.69 S	23.86 W
5590.00	0.52	159.09	0.17	5588.77	77.0	197.8	73.33 S	23.60 W

A Gyrodata Directional Survey

DEVON ENERGY
Lease: SNAPPING 2 STATE Well: 2H, 5 INCH DRILLPIPE
Location: H&P 416, EDDY COUNTY , NEW MEXICO
Job Number: MD0711GVC330

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5680.00	0.48	172.62	0.14	5678.76	77.7	197.5	74.09 S	23.41 W
5770.00	0.50	175.46	0.03	5768.76	78.4	197.3	74.85 S	23.33 W
5860.00	0.54	151.09	0.25	5858.76	79.1	197.0	75.61 S	23.09 W
5950.00	0.62	153.59	0.09	5948.75	79.7	196.5	76.42 S	22.67 W
6040.00	0.49	160.48	0.16	6038.75	80.4	196.1	77.22 S	22.32 W
6130.00	0.30	151.11	0.22	6128.75	80.9	195.8	77.79 S	22.08 W
6220.00	0.38	165.59	0.13	6218.74	81.3	195.6	78.29 S	21.89 W
6310.00	0.18	356.39	0.62	6308.74	81.4	195.5	78.44 S	21.83 W
6400.00	0.30	43.79	0.25	6398.74	81.1	195.5	78.13 S	21.67 W
6490.00	0.43	57.85	0.17	6488.74	80.6	195.3	77.78 S	21.22 W
6580.00	0.92	85.57	0.64	6578.73	80.1	194.6	77.54 S	20.21 W
6670.00	1.04	85.66	0.14	6668.72	79.6	193.6	77.42 S	18.68 W
6760.00	1.20	100.40	0.36	6758.70	79.4	192.3	77.53 S	16.94 W
6850.00	1.24	123.34	0.54	6848.68	79.7	191.0	78.23 S	15.20 W
6940.00	1.44	129.27	0.27	6938.66	80.6	189.6	79.48 S	13.51 W
7030.00	1.41	135.15	0.17	7028.63	81.8	188.3	80.98 S	11.86 W
7120.00	1.12	149.46	0.47	7118.61	83.2	187.3	82.52 S	10.63 W
7210.00	0.93	161.34	0.32	7208.60	84.6	186.8	83.97 S	9.95 W
7300.00	0.96	160.99	0.03	7298.58	85.9	186.3	85.37 S	9.47 W
7390.00	1.10	148.97	0.29	7388.57	87.3	185.8	86.82 S	8.79 W
7480.00	1.30	150.72	0.23	7478.55	88.8	185.1	88.45 S	7.84 W
7570.00	1.29	151.49	0.02	7568.53	90.5	184.3	90.24 S	6.85 W

A Gyrodata Directional Survey

DEVON ENERGY
Lease: SNAPPING 2 STATE Well: 2H, 5 INCH DRILLPIPE
Location: H&P 416, EDDY COUNTY , NEW MEXICO
Job Number: MD0711GVC330

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7660.00	1.32	153.55	0.06	7658.50	92.2	183.7	92.06 S	5.91 W

Final Station Closure: Distance: 92.25 ft Az: 183.67 deg.

PATHFINDER®
A Schlumberger Company

PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

DEVON ENERGY
SNAPPING 2 STATE #2H
EDDY COUNTY, NEW MEXICO
Rig:HP 416

Fri Jul 15 16:43:14 2011

Coordinates

Latitude:	32.065792 N (32 deg. 3 min. 56.8498 sec.)
Longitude:	103.755223 W (-103 deg. 45 min. 18.8017 sec.)
Elevation:	3268.00 feet.
Calculation Date:	Jul/15/2011

Magnetic Calculations

Model:	IGRF2010
Dip Angle:	60.0057 degrees
Total Magnetic Field:	0.48517 gauss
Magnetic Declination:	7.649604 degrees
Horizontal Intensity:	0.242546 gauss

To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.649604 Degs

Transverse Mercator Grid Calculations NAD83

Grid System:	Transverse Mercator: new mexico east
Ellipsoid:	GRS80
X:	720418.1500 feet
Y:	388152.1900 feet
True to Grid: (convergence)	-0.306922 degrees
Magnetic to Grid:	7.342682 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.342682 Degs.

OFFICE CALCULATION

PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

DEVON ENERGY
SNAPING 2 STATE #2H
BONE SPRING

Sun Jul 17 18:06:58 2011 Field Calc.

Coordinates

Latitude:	**32.065792 N (32 deg. 3 min. 56.8512 sec.)**
Longitude:	**103.755223 W (-103 deg. 45 min. 18.8028 sec.)**
Elevation:	**3268.00 feet.**
Calculation Date:	**Jul/17/2011**

Magnetic Calculations

Model:	**IGRF2010**
Dip Angle:	**60.0056 degrees**
Total Magnetic Field:	**0.48493 gauss**
Magnetic Declination:	**7.647302 degrees**
Horizontal Intensity:	**0.242421 gauss**

To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.647302 Degs

Transverse Mercator Grid Calculations NAD83

Grid System:	**Transverse Mercator: new mexico east**
Ellipsoid:	**GRS80**
X:	**720418.0561 feet**
Y:	**388152.3322 feet**
True to Grid: (convergence)	**-0.306922 degrees**
Magnetic to Grid:	**7.340380 degrees**

To Convert a Magnetic Dir. to a GRID dir. Add 7.340380 Degs.

PathFinder Energy Services, Inc.
BHL Report

Tie-in Date: 07/17/2011
Date Completed: 07/30/2011

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #2H
EDDY COUNTY, NM
Rig:H&P 416
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:C. SANDIFER
J. HORRALL

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.56.8498 N LON:103.45.18.8017 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coor: X: 720418.1500 Y: 388152.1900
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.34° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 25.00' Rotary Table To Ground
Altitude:3243.00' Ground To MSL

Measured Depth	13600.00	(feet)
Inclination	91.80	(deg)
Azimuth	1.30	(deg)
True Vertical Depth	8966.00	(feet)
Vertical Section	4648.68	(feet)
Survey X cord	720711.93	(feet)
Survey Y cord	392801.01	(feet)
Survey Lat	32.07856610 N	(deg)
Survey Lon	103.75419381 W	(deg)
Rectangular Corr. N/S	4648.68 N	(feet)
Rectangular Corr. E/W	293.87 E	(feet)
Closure Distance	4657.96	(feet)
Direction of Closure	3.62	(deg)
Dogleg Severity	0.00	(deg/100ft)

Pathfinder

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

PATHFINDER
A Schlumberger Company

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES

2. NAME OF PERSON(S) PERFORMING SURVEY:
   A) CHARLIE SANDIFER

3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)

4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 07-17-11 TO 07-30-11

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
   SNAPPING 2 STATE #2H
   EDDY COUNTY, NM
   RIG: H&P 416

9. SURVEY CERTIFIED FROM: 7860 TO 13551 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4657.96 FEET ON A BEARING OF 3.62 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13600 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

Pathfinder

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

PATHFINDER
A Schlumberger Company

August 15, 2011

Devon Energy
20 N. Broadway
Oklahoma City, OK

RE: Devon Energy
Snapping 2 State #2H
API: 30-015-39035
Eddy County, NM
RIG: H & P 416
FIELD: Wildcat; Bone Spring
PES FILE NO.: 700003093-WT-WT

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,

FRANCISCO SINISTERRA
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh