



A Schlumberger Company

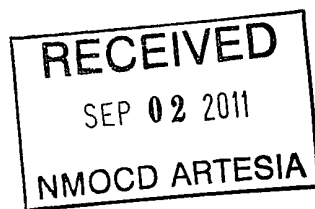
30-015-39104

DIRECTIONAL SURVEY REPORT

DEVON ENERGY

SNAPPING #2 STATE #1H-Y

EDDY COUNTY, NEW MEXICO



PREPARED BY: FRANCISCO SINISTERRA

Pathfinder

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



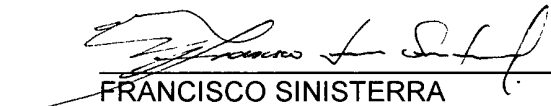
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JUAN ALCOCER
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 06-17-11 TO 06-28-11
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 #1H-Y
EDDY COUNTY, NM
RIG: H&P 416

9. SURVEY CERTIFIED FROM: 7919 TO 12958 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4650.32 FEET ON A BEARING OF 358.95 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13007 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 06/17/2011
Date Completed: 06/28/2011

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
Rig:H&P 416
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:JUAN ALCOCER
TODD PISCIOTTA

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.56.8304 N LON:103.45.6.8294 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 721448.3600 Y: 388155.7700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.35°EAST TO GRID
Vertical Section Plane: 359.00
Survey Vert. Reference: 26.00' Kelly Bushing To Ground
Altitude:3240.40' Ground To MSL

Measured Depth	13007.00	(feet)
Inclination	91.36	(deg)
Azimuth	359.88	(deg)
True Vertical Depth	8574.77	(feet)
Vertical Section	4650.32	(feet)
Survey X cord	721363.14	(feet)
Survey Y cord	392805.31	(feet)
Survey Lat	32.07856829 N	(deg)
Survey Lon	103.75209129 W	(deg)
Rectangular Corr. N/S	4649.54 N	(feet)
Rectangular Corr. E/W	85.22 W	(feet)
Closure Distance	4650.32	(feet)
Direction of Closure	358.95	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION

SNAPPING 2 STATE #1H-Y

EDDY COUNTY, NM

Rig:H&P 416

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: JUAN ALCOCER

TODD PISCIOтта

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.3.56.8304 N LON:103.45.6.8294 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 721448.3600 Y: 388155.7700

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.35° EAST TO GRID

Vertical Section Plane: 359.00

Survey Vert. Reference: 26.00' Kelly Bushing To Ground

Altitude:3240.40' Ground To MSL

Survey Calculations by RX5 V6.03E using Minimum Curvature

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)
THE FOLLOWING ARE SCIENTIFIC DRILLING GYRO SURVEYS.										
0.00	0.00	0.00	-0.00	0.00	0.03	0.03 N	0.03 E	0.05@	46.53	0.00
100.00	0.68	140.45	100.00	100.00	-0.43	0.43 S	0.41 E	0.59@	135.97	0.68
200.00	0.59	129.70	199.99	100.00	-1.23	1.21 S	1.19 E	1.70@	135.64	0.15
300.00	0.44	154.94	299.99	100.00	-1.92	1.89 S	1.74 E	2.57@	137.28	0.27
400.00	0.57	166.68	399.98	100.00	-2.76	2.72 S	2.02 E	3.39@	143.39	0.17
500.00	0.69	157.35	499.98	100.00	-3.80	3.76 S	2.37 E	4.44@	147.80	0.16
600.00	0.52	185.69	599.97	100.00	-4.81	4.77 S	2.55 E	5.41@	151.81	0.34
700.00	0.22	353.96	699.97	100.00	-5.07	5.03 S	2.49 E	5.61@	153.66	0.74
800.00	0.27	350.86	799.97	100.00	-4.65	4.60 S	2.43 E	5.21@	152.16	0.05
900.00	0.15	18.27	899.97	100.00	-4.29	4.25 S	2.44 E	4.90@	150.17	0.15
1000.00	0.41	57.44	999.97	100.00	-3.98	3.93 S	2.78 E	4.81@	144.75	0.31
1100.00	0.49	77.71	1099.96	100.00	-3.71	3.65 S	3.50 E	5.05@	136.20	0.18
1200.00	0.64	127.30	1199.96	100.00	-3.97	3.89 S	4.36 E	5.85@	131.78	0.49
1300.00	0.74	128.69	1299.95	100.00	-4.73	4.64 S	5.31 E	7.05@	131.14	0.10
1400.00	0.47	167.41	1399.95	100.00	-5.54	5.44 S	5.90 E	8.03@	132.67	0.48
1500.00	0.53	186.16	1499.94	100.00	-6.40	6.30 S	5.94 E	8.66@	136.68	0.17
1600.00	0.71	187.59	1599.94	100.00	-7.48	7.37 S	5.81 E	9.39@	141.77	0.18
1700.00	0.49	168.60	1699.93	100.00	-8.51	8.41 S	5.81 E	10.22@	145.34	0.29
1800.00	0.39	197.38	1799.93	100.00	-9.25	9.15 S	5.80 E	10.83@	147.66	0.24
1900.00	0.51	183.51	1899.93	100.00	-10.02	9.92 S	5.67 E	11.43@	150.27	0.16
2000.00	0.52	154.23	1999.92	100.00	-10.87	10.77 S	5.84 E	12.25@	151.56	0.26
2100.00	0.46	151.58	2099.92	100.00	-11.64	11.54 S	6.22 E	13.11@	151.65	0.06
2200.00	0.46	144.05	2199.92	100.00	-12.33	12.21 S	6.65 E	13.91@	151.43	0.06
2300.00	0.43	146.61	2299.91	100.00	-12.97	12.85 S	7.09 E	14.68@	151.10	0.04
2400.00	0.87	167.24	2399.91	100.00	-14.03	13.91 S	7.47 E	15.78@	151.76	0.49

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
RIG:H&P 416

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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)
2500.00	1.01	178.24	2499.89	100.00	-15.66	15.53 S	7.66 E	17.31@	153.73	0.23
2600.00	0.77	199.77	2599.88	100.00	-17.17	17.04 S	7.46 E	18.60@	156.35	0.41
2700.00	0.98	212.16	2699.87	100.00	-18.51	18.40 S	6.78 E	19.61@	159.77	0.28
2800.00	0.93	202.26	2799.86	100.00	-19.97	19.87 S	6.02 E	20.76@	163.15	0.17
2900.00	0.60	202.20	2899.85	100.00	-21.20	21.11 S	5.51 E	21.82@	165.36	0.33
3000.00	0.48	205.53	2999.84	100.00	-22.06	21.97 S	5.13 E	22.56@	166.85	0.12
3100.00	0.46	181.14	3099.84	100.00	-22.83	22.75 S	4.95 E	23.28@	167.74	0.20
3200.00	0.25	166.04	3199.84	100.00	-23.45	23.36 S	4.99 E	23.89@	167.94	0.23
3300.00	0.12	58.67	3299.84	100.00	-23.61	23.52 S	5.13 E	24.07@	167.69	0.31
3400.00	0.15	52.44	3399.84	100.00	-23.48	23.39 S	5.33 E	23.98@	167.17	0.03
3500.00	0.64	100.84	3499.83	100.00	-23.51	23.41 S	5.98 E	24.16@	165.68	0.55
3600.00	1.95	104.83	3599.81	100.00	-24.09	23.95 S	8.17 E	25.31@	161.16	1.31
3700.00	2.02	103.42	3699.75	100.00	-24.99	24.80 S	11.53 E	27.35@	155.06	0.09
3800.00	3.37	112.88	3799.63	100.00	-26.62	26.35 S	15.95 E	30.80@	148.81	1.42
3900.00	3.97	122.17	3899.43	100.00	-29.71	29.33 S	21.59 E	36.42@	143.65	0.84
4000.00	3.44	123.65	3999.22	100.00	-33.31	32.84 S	27.02 E	42.53@	140.55	0.54
4100.00	2.77	126.81	4099.07	100.00	-36.49	35.95 S	31.45 E	47.76@	138.82	0.69
4200.00	1.65	125.76	4199.00	100.00	-38.84	38.24 S	34.55 E	51.54@	137.90	1.12
4300.00	1.28	125.59	4298.96	100.00	-40.36	39.73 S	36.63 E	54.04@	137.33	0.37
4400.00	1.16	132.73	4398.94	100.00	-41.73	41.07 S	38.28 E	56.14@	137.01	0.19
4500.00	1.03	122.55	4498.92	100.00	-42.93	42.24 S	39.78 E	58.02@	136.71	0.23
4600.00	0.83	124.82	4598.91	100.00	-43.85	43.13 S	41.13 E	59.60@	136.36	0.20
4700.00	0.99	135.08	4698.90	100.00	-44.89	44.16 S	42.34 E	61.18@	136.21	0.23
4800.00	1.20	131.68	4798.88	100.00	-46.22	45.47 S	43.73 E	63.09@	136.12	0.22
4900.00	1.00	122.26	4898.86	100.00	-47.41	46.63 S	45.25 E	64.98@	135.86	0.27
5000.00	0.96	129.16	4998.85	100.00	-48.43	47.62 S	46.64 E	66.66@	135.60	0.12
5100.00	0.87	120.32	5098.83	100.00	-49.37	48.54 S	47.94 E	68.22@	135.35	0.17
5200.00	0.38	121.06	5198.83	100.00	-49.94	49.09 S	48.88 E	69.28@	135.12	0.49

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
RIG:H&P 416

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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)
5300.00	0.36	98.50	5298.82	100.00	-50.17	49.31 S	49.48 E	69.85@	134.90	0.15
5400.00	0.22	87.47	5398.82	100.00	-50.21	49.35 S	49.98 E	70.24@	134.63	0.15
5500.00	0.24	27.58	5498.82	100.00	-50.02	49.15 S	50.27 E	70.31@	134.36	0.23
5600.00	0.40	53.72	5598.82	100.00	-49.64	48.76 S	50.65 E	70.31@	133.91	0.21
5700.00	0.21	79.56	5698.82	100.00	-49.41	48.52 S	51.11 E	70.47@	133.51	0.23
5800.00	0.42	55.39	5798.82	100.00	-49.17	48.28 S	51.59 E	70.66@	133.10	0.24
5900.00	0.26	129.14	5898.82	100.00	-49.12	48.21 S	52.07 E	70.96@	132.80	0.43
6000.00	0.31	69.83	5998.81	100.00	-49.17	48.26 S	52.50 E	71.31@	132.59	0.28
6100.00	0.27	76.72	6098.81	100.00	-49.03	48.12 S	52.98 E	71.57@	132.24	0.05
6200.00	0.50	179.04	6198.81	100.00	-49.42	48.50 S	53.22 E	72.00@	132.34	0.62
6300.00	0.45	171.36	6298.81	100.00	-50.25	49.32 S	53.29 E	72.61@	132.79	0.08
6400.00	0.45	181.16	6398.81	100.00	-51.03	50.10 S	53.34 E	73.18@	133.21	0.08
6500.00	0.58	197.27	6498.80	100.00	-51.90	50.98 S	53.18 E	73.67@	133.79	0.19
6600.00	0.90	194.28	6598.79	100.00	-53.14	52.22 S	52.83 E	74.29@	134.67	0.32
6700.00	1.12	194.27	6698.78	100.00	-54.84	53.93 S	52.40 E	75.20@	135.83	0.22
6800.00	0.49	186.80	6798.77	100.00	-56.21	55.30 S	52.11 E	75.99@	136.70	0.64
6900.00	0.38	205.49	6898.76	100.00	-56.93	56.03 S	51.91 E	76.38@	137.18	0.18
7000.00	0.53	188.63	6998.76	100.00	-57.68	56.79 S	51.70 E	76.80@	137.68	0.20
7100.00	0.86	212.53	7098.75	100.00	-58.76	57.88 S	51.23 E	77.29@	138.49	0.43
7200.00	1.14	231.02	7198.74	100.00	-60.00	59.13 S	50.05 E	77.47@	139.75	0.42
7300.00	1.41	220.42	7298.71	100.00	-61.53	60.70 S	48.48 E	77.68@	141.38	0.36
7400.00	1.78	220.11	7398.68	100.00	-63.63	62.82 S	46.68 E	78.27@	143.38	0.37
7500.00	0.78	169.67	7498.65	100.00	-65.47	64.68 S	45.80 E	79.26@	144.69	1.42
7600.00	1.16	106.86	7598.64	100.00	-66.45	65.64 S	46.90 E	80.67@	144.46	1.06
7700.00	0.95	109.51	7698.62	100.00	-67.05	66.21 S	48.65 E	82.16@	143.70	0.21
7800.00	0.92	152.13	7798.61	100.00	-68.06	67.20 S	49.80 E	83.64@	143.46	0.68
** TIE IN TO SCIENTIFIC DRILLING GYRO SURVEYS.										
7875.00	1.01	149.41	7873.60	75.00	-69.17	68.30 S	50.42 E	84.89@	143.56	0.13

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
RIG:H&P 416

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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)
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
7919.00	1.32	357.51	7917.60	44.00	-69.00	68.13 S	50.60 E	84.86@	143.40	5.14
7950.00	4.75	3.57	7948.55	31.00	-67.36	66.49 S	50.66 E	83.59@	142.70	11.10
7982.00	8.35	5.77	7980.33	32.00	-63.73	62.85 S	50.98 E	80.93@	140.96	11.27
8014.00	11.96	6.91	8011.83	32.00	-58.14	57.25 S	51.61 E	77.08@	137.97	11.30
8045.00	15.04	7.61	8041.97	31.00	-50.98	50.07 S	52.53 E	72.57@	133.63	9.95
8077.00	17.59	5.59	8072.68	32.00	-42.07	41.14 S	53.55 E	67.53@	127.54	8.16
8108.00	20.49	4.36	8101.98	31.00	-32.01	31.07 S	54.42 E	62.66@	119.72	9.44
8139.00	23.48	3.66	8130.72	31.00	-20.45	19.49 S	55.22 E	58.56@	109.44	9.68
8171.00	24.97	2.69	8159.90	32.00	-7.36	6.38 S	55.95 E	56.31@	96.51	4.82
8202.00	27.26	1.90	8187.74	31.00	6.26	7.25 N	56.49 E	56.95@	82.69	7.47
8234.00	29.63	1.37	8215.87	32.00	21.49	22.48 N	56.92 E	61.20@	68.45	7.45
8265.00	30.78	0.23	8242.66	31.00	37.08	38.08 N	57.14 E	68.66@	56.32	4.15
8296.00	32.80	359.53	8269.01	31.00	53.40	54.41 N	57.10 E	78.87@	46.38	6.62
8328.00	34.91	358.56	8295.58	32.00	71.23	72.23 N	56.80 E	91.89@	38.18	6.81
8359.00	37.46	357.77	8320.60	31.00	89.53	90.52 N	56.21 E	106.55@	31.84	8.36
8391.00	39.83	356.71	8345.59	32.00	109.50	110.48 N	55.24 E	123.52@	26.57	7.69
8422.00	42.91	355.92	8368.85	31.00	129.96	130.92 N	53.92 E	141.59@	22.38	10.08
8453.00	45.90	355.66	8391.00	31.00	151.62	152.55 N	52.33 E	161.28@	18.93	9.66
8485.00	49.15	355.57	8412.60	32.00	175.18	176.08 N	50.52 E	183.19@	16.01	10.16
8516.00	52.58	355.66	8432.17	31.00	199.18	200.06 N	48.69 E	205.89@	13.68	11.07
8548.00	55.49	354.77	8450.96	32.00	225.02	225.86 N	46.52 E	230.60@	11.64	9.37
8579.00	57.51	353.07	8468.07	31.00	250.76	251.56 N	43.78 E	255.34@	9.87	7.96
8610.00	60.76	353.56	8483.97	31.00	277.24	277.99 N	40.69 E	280.95@	8.33	10.57
8642.00	64.19	353.45	8498.76	32.00	305.48	306.18 N	37.48 E	308.47@	6.98	10.72
8673.00	68.85	352.97	8511.10	31.00	333.76	334.41 N	34.11 E	336.14@	5.82	15.10
8704.00	73.07	350.47	8521.22	31.00	362.82	363.39 N	29.89 E	364.62@	4.70	15.60
8736.00	76.85	348.28	8529.52	32.00	393.28	393.76 N	24.18 E	394.50@	3.51	13.54

PathFinder Energy Services, Inc.

Survey Report

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SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
RIG:H&P 416

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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)
8767.00	80.11	346.70	8535.71	31.00	423.04	423.41 N	17.60 E	423.77@	2.38	11.64
8799.00	82.39	346.43	8540.58	32.00	453.92	454.17 N	10.25 E	454.28@	1.29	7.17
8830.00	83.98	347.22	8544.26	31.00	484.01	484.14 N	3.24 E	484.15@	0.38	5.72
8862.00	85.21	347.93	8547.27	32.00	515.23	515.25 N	3.61 W	515.26@	359.60	4.43
8893.00	88.20	348.89	8549.05	31.00	545.65	545.56 N	9.83 W	545.65@	358.97	10.13
8924.00	89.52	349.60	8549.67	31.00	576.20	576.01 N	15.61 W	576.22@	358.45	4.83
9019.00	90.57	348.80	8549.59	95.00	669.81	669.33 N	33.42 W	670.16@	357.14	1.39
9113.00	91.71	348.89	8547.72	94.00	762.32	761.53 N	51.60 W	763.28@	356.12	1.22
9208.00	91.19	350.74	8545.32	95.00	856.06	855.00 N	68.39 W	857.73@	355.43	2.02
9302.00	88.72	352.67	8545.39	94.00	949.29	948.00 N	81.95 W	951.54@	355.06	3.33
9396.00	89.96	355.57	8546.48	94.00	1042.93	1041.49 N	91.58 W	1045.51@	354.97	3.35
9490.00	89.25	358.39	8547.12	94.00	1136.86	1135.35 N	96.53 W	1139.45@	355.14	3.09
9585.00	89.78	357.24	8547.93	95.00	1231.84	1230.27 N	100.15 W	1234.34@	355.35	1.33
9680.00	89.08	0.41	8548.87	95.00	1326.82	1325.24 N	102.10 W	1329.16@	355.59	3.42
9774.00	89.60	359.53	8549.96	94.00	1420.80	1419.23 N	102.15 W	1422.90@	355.88	1.09
9869.00	88.46	0.58	8551.57	95.00	1515.76	1514.21 N	102.06 W	1517.65@	356.14	1.63
9963.00	89.43	359.97	8553.30	94.00	1609.72	1608.19 N	101.61 W	1611.40@	356.38	1.22
10058.00	89.69	2.16	8554.03	95.00	1704.65	1703.17 N	99.84 W	1706.09@	356.65	2.32
10152.00	91.10	2.43	8553.38	94.00	1798.49	1797.09 N	96.08 W	1799.66@	356.94	1.53
10247.00	92.68	2.60	8550.24	95.00	1893.26	1891.94 N	91.91 W	1894.17@	357.22	1.67
10342.00	93.91	3.04	8544.78	95.00	1987.89	1986.67 N	87.24 W	1988.58@	357.49	1.37
10436.00	93.83	1.90	8538.44	94.00	2081.50	2080.37 N	83.20 W	2082.03@	357.71	1.21
10530.00	93.56	1.02	8532.38	94.00	2175.22	2174.14 N	80.81 W	2175.64@	357.87	0.98
10624.00	92.51	1.37	8527.41	94.00	2269.02	2267.99 N	78.85 W	2269.36@	358.01	1.18
10718.00	90.22	1.99	8525.17	94.00	2362.88	2361.91 N	76.10 W	2363.14@	358.15	2.52
10813.00	90.22	1.90	8524.80	95.00	2457.75	2456.86 N	72.88 W	2457.94@	358.30	0.09
10907.00	90.04	1.46	8524.59	94.00	2551.65	2550.82 N	70.12 W	2551.78@	358.43	0.51
11001.00	89.96	0.93	8524.59	94.00	2645.58	2644.79 N	68.16 W	2645.67@	358.52	0.57

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NM
RIG:H&P 416

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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)
11095.00	89.25	0.85	8525.24	94.00	2739.53	2738.78 N	66.70 W	2739.59@	358.60	0.76
11190.00	90.22	1.46	8525.68	95.00	2834.46	2833.76 N	64.78 W	2834.50@	358.69	1.21
11284.00	89.16	0.93	8526.18	94.00	2928.39	2927.74 N	62.82 W	2928.41@	358.77	1.26
11379.00	88.20	0.32	8528.37	95.00	3023.32	3022.70 N	61.79 W	3023.33@	358.83	1.20
11473.00	88.64	359.62	8530.96	94.00	3117.27	3116.67 N	61.84 W	3117.28@	358.86	0.88
11568.00	89.08	359.35	8532.85	95.00	3212.25	3211.64 N	62.69 W	3212.25@	358.88	0.54
11662.00	89.87	359.70	8533.72	94.00	3306.24	3305.64 N	63.47 W	3306.24@	358.90	0.92
11757.00	88.20	358.47	8535.32	95.00	3401.22	3400.60 N	64.99 W	3401.23@	358.91	2.18
11851.00	88.81	358.12	8537.77	94.00	3495.18	3494.53 N	67.78 W	3495.19@	358.89	0.75
11946.00	86.79	358.12	8541.41	95.00	3590.10	3589.40 N	70.90 W	3590.10@	358.87	2.13
12040.00	87.05	358.83	8546.47	94.00	3683.95	3683.23 N	73.39 W	3683.97@	358.86	0.80
12135.00	88.29	359.00	8550.33	95.00	3778.87	3778.14 N	75.19 W	3778.89@	358.86	1.32
12230.00	86.97	358.47	8554.26	95.00	3873.79	3873.03 N	77.29 W	3873.80@	358.86	1.50
12324.00	87.41	358.83	8558.86	94.00	3967.67	3966.89 N	79.50 W	3967.69@	358.85	0.60
12419.00	88.90	359.26	8561.92	95.00	4062.62	4061.83 N	81.08 W	4062.63@	358.86	1.63
12514.00	87.67	359.18	8564.77	95.00	4157.58	4156.77 N	82.37 W	4157.59@	358.86	1.30
12608.00	88.46	359.44	8567.94	94.00	4251.52	4250.71 N	83.51 W	4251.53@	358.87	0.89
12703.00	87.14	359.53	8571.59	95.00	4346.44	4345.63 N	84.36 W	4346.45@	358.89	1.39
12797.00	88.72	0.14	8574.98	94.00	4440.37	4439.57 N	84.63 W	4440.38@	358.91	1.80
12892.00	89.52	359.62	8576.44	95.00	4535.35	4534.56 N	84.83 W	4535.35@	358.93	1.00
12958.00	91.36	359.88	8575.93	66.00	4601.34	4600.55 N	85.12 W	4601.34@	358.94	2.82
STRAIGHT LINE PROJECTION TO BIT @ 13007' MD.										
13007.00	91.36	359.88	8574.77	49.00	4650.32	4649.54 N	85.22 W	4650.32@	358.95	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	DEVON ENERGY CORPORATION		
LEASE / WELL No.:	SNAPPING #2 STATE	#1H-Y	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	H&P 416		
API WELL No:	30-015-39104		
JOB No:	700002805-WT-WT		
P.O. / AFE No.	161184		
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.34	LWD Calculated:	7.35
		Agreed Upon:	7.35
X =	721448.360000	Feet	Y = 388155.770000
			Feet
SITE LATITUDE:	32.065786 N	SITE LONGITUDE:	103.751897 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	359		
KELLY BUSHING ELEVATION:	26		
ALTITUDE:	3240.4	Feet	WATER DEPTH: NA
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7875'		
DRIFT ANGLE:	1.01		
DRIFT DIRECTION:	149.41		
TRUE VERTICAL DEPTH:	7873.6		
VERTICAL SECTION:	-69.17		
RECTANGULAR COORDINATE (N / S) :	-68.3		
RECTANGULAR COORDINATE (E / W) :	50.42		
CLOSURE DISTANCE / DIRECTION:	84.9	143.57	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	SCIENTIFIC DRILLING GYRO		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	7977.05	TOTAL DEPTH:	12954.21
KICKOFF ANGLE:	0	MAX ANGLE:	89.72

PES Engineers: JUAN ALCOCER
TODD PISCIOLLA

**Signature of both field engineers required if applicable

Directional Driller: MANUEL CERVANTES

DATE: 16-Jun-2011



A Schlumberger Company **PathFinder Energy Services, Inc.**

Magnetic & Grid Calculations

DEVON ENERGY
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NEW MEXICO
Rig:HP 416

Tue Jun 14 16:41:56 2011

Coordinates

Latitude: 32.065786 N (32 deg. 3 min. 56.8304 sec.)
Longitude: 103.751897 W (-103 deg. 45 min. 6.8294 sec.)
Elevation: 3265.00 feet.
Calculation Date: Jun/14/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0084 degrees
Total Magnetic Field: 0.48502 gauss
Magnetic Declination: 7.656806 degrees
Horizontal Intensity: 0.242448 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.656806 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 721448.3600 feet
Y: 388155.7700 feet
True to Grid: (convergence) -0.308688 degrees
Magnetic to Grid: 7.348119 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.348119 Degr.

FIELD CALCULATIONS
PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

DEVON ENERGY PRODUCTIONS
SNAPPING 2 STATE #1H-Y
EDDY COUNTY, NEW MEXICO
Rig: H_P 416

Wed Jun 15 17:31:25 2011

Coordinates

Latitude: 32.065786 N (32 deg. 3 min. 56.8304 sec.)
Longitude: 103.751897 W (-103 deg. 45 min. 6.8294 sec.)
Elevation: 3266.40 feet.
Calculation Date: Jun/15/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0083 degrees
Total Magnetic Field: 0.48502 gauss
Magnetic Declination: 7.656472 degrees
Horizontal Intensity: 0.242447 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.656472 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 721448.3600 feet
Y: 388155.7700 feet
True to Grid: (convergence) -0.308688 degrees
Magnetic to Grid: 7.347784 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.347784 Degr.