



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

30-015-38992

XTO ENERGY

NASH UNIT #56H

EDDY COUNTY, NEW MEXICO

Extern Rpts (2) in log File

PREPARED BY: STEVE BIBB

Pathfinder

6213 WCR 112
Midland Texas 79706
Tel: (432) 687-1344
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DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) DEVIN MELUSO
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 03-01-12 TO 03-16-12
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:

XTO ENERGY INC.
NASH UNIT #56H
EDDY COUNTY, NM
RIG: PIONEER 33

9. SURVEY CERTIFIED FROM: 6016 TO 10950 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4617.14 FEET ON A BEARING OF 269.03 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 11010 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



STEVE BIBB
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

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Tie-in Date: 03/01/2012
Date Completed: 03/16/2012

XTO ENERGY / API # 30-015-38992
NASH UNIT #56H
EDDY COUNTY, NM
Rig:PIONEER 33
PathFinder Office Supervisor: STEVE BIBB
PathFinder Field Engineers:DEVIN MELUSO
DAVID BAKER

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.18.25.1964 N LON:103.56.51.0949 W
GRID Reference:NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 619198.3000 Y: 475617.4000
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.47° EAST TO GRID
Vertical Section Plane: 269.22
Survey Vert. Reference: 19.00' Kelly Bushing To Ground
Altitude:2984.00' Ground To MSL

Measured Depth	11010.00	(feet)
Inclination	93.56	(deg)
Azimuth	268.15	(deg)
True Vertical Depth	6716.46	(feet)
Vertical Section	4617.12	(feet)
Survey X cord	614581.82	(feet)
Survey Y cord	475539.09	(feet)
Survey Lat	32.30682853 N	(deg)
Survey Lon	103.96246905 W	(deg)
Rectangular Corr. N/S	78.31 S	(feet)
Rectangular Corr. E/W	4616.48 W	(feet)
Closure Distance	4617.14	(feet)
Direction of Closure	269.03	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

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NASH UNIT #56H

EDDY COUNTY, NM

Rig: PIONEER 33

PathFinder Office Supervisor: STEVE BIBB

PathFinder Field Engineers: DEVIN MELUSO

DAVID BAKER

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.18.25.1964 N LON: 103.56.51.0949 W

GRID Reference: NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 619198.3000 Y: 475617.4000

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.47° EAST TO GRID

Vertical Section Plane: 269.22

Survey Vert. Reference: 19.00' Kelly Bushing To Ground

Altitude: 2984.00' Ground To MSL

Survey Calculations by RX5 V6.04 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	-0.02	0.03 S	0.02 E	0.03@	144.59	0.00
100.00	0.51	252.61	100.00	100.00	0.41	0.16 S	0.41 W	0.44@	248.73	0.51
200.00	0.60	262.21	200.00	100.00	1.35	0.36 S	1.35 W	1.40@	254.98	0.13
300.00	0.72	251.66	299.99	100.00	2.47	0.63 S	2.47 W	2.54@	255.64	0.17
400.00	0.79	245.40	399.98	100.00	3.70	1.12 S	3.69 W	3.85@	253.17	0.11
500.00	0.98	251.92	499.97	100.00	5.15	1.67 S	5.13 W	5.39@	251.98	0.21
600.00	1.04	246.65	599.96	100.00	6.80	2.29 S	6.77 W	7.15@	251.30	0.11
700.00	1.06	245.48	699.94	100.00	8.49	3.04 S	8.45 W	8.98@	250.23	0.03
800.00	1.46	248.41	799.91	100.00	10.53	3.89 S	10.48 W	11.17@	249.63	0.41
900.00	1.82	249.72	899.87	100.00	13.21	4.91 S	13.15 W	14.04@	249.53	0.36
1000.00	2.51	248.60	999.80	100.00	16.76	6.26 S	16.68 W	17.81@	249.43	0.69
1100.00	3.21	253.08	1099.68	100.00	21.50	7.87 S	21.40 W	22.80@	249.80	0.73
1200.00	3.81	251.58	1199.49	100.00	27.36	9.74 S	27.23 W	28.91@	250.32	0.61
1300.00	4.43	255.33	1299.23	100.00	34.27	11.76 S	34.11 W	36.09@	250.97	0.68
1400.00	4.31	259.12	1398.94	100.00	41.72	13.45 S	41.54 W	43.66@	252.06	0.31
1500.00	3.10	263.34	1498.73	100.00	48.11	14.47 S	47.92 W	50.06@	253.19	1.24
1600.00	2.61	268.93	1598.60	100.00	53.08	14.83 S	52.88 W	54.92@	254.33	0.56
1700.00	1.50	270.52	1698.54	100.00	56.66	14.86 S	56.46 W	58.39@	255.25	1.11
1800.00	1.01	270.83	1798.51	100.00	58.85	14.84 S	58.65 W	60.50@	255.80	0.49
1900.00	0.84	279.14	1898.50	100.00	60.45	14.71 S	60.26 W	62.03@	256.28	0.22
2000.00	0.38	292.77	1998.49	100.00	61.48	14.46 S	61.29 W	62.97@	256.72	0.48
2100.00	0.28	263.14	2098.49	100.00	62.03	14.36 S	61.84 W	63.48@	256.92	0.19
2200.00	0.05	188.27	2198.49	100.00	62.28	14.44 S	62.09 W	63.74@	256.91	0.27
2300.00	1.02	106.23	2298.49	100.00	61.43	14.73 S	61.24 W	62.98@	256.48	1.01
2400.00	1.88	118.16	2398.45	100.00	59.15	15.75 S	58.94 W	61.01@	255.04	0.91

PathFinder Energy Services, Inc.

Survey Report

XTO ENERGY / API # 30-015-38992
 NASH UNIT #56H
 EDDY COUNTY, NM
 RIG: PIONEER 33

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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	1.77	116.30	2498.40	100.00	56.34	17.21 S	56.11 W	58.69@	252.95	0.13
2600.00	1.43	125.78	2598.37	100.00	53.96	18.62 S	53.71 W	56.85@	250.88	0.43
2700.00	1.55	130.26	2698.33	100.00	51.94	20.23 S	51.66 W	55.48@	248.62	0.17
2800.00	1.48	134.92	2798.30	100.00	50.01	22.01 S	49.72 W	54.37@	246.12	0.14
2900.00	0.77	123.27	2898.28	100.00	48.55	23.29 S	48.24 W	53.57@	244.23	0.74
3000.00	0.64	121.22	2998.27	100.00	47.52	23.95 S	47.20 W	52.93@	243.10	0.13
3100.00	0.26	47.27	3098.27	100.00	46.88	24.09 S	46.56 W	52.42@	242.65	0.62
3200.00	0.21	43.38	3198.27	100.00	46.59	23.80 S	46.27 W	52.03@	242.78	0.05
3300.00	0.17	62.04	3298.26	100.00	46.33	23.60 S	46.01 W	51.71@	242.85	0.07
3400.00	0.22	42.71	3398.26	100.00	46.06	23.39 S	45.75 W	51.38@	242.92	0.08
3500.00	0.10	48.43	3498.26	100.00	45.86	23.19 S	45.55 W	51.11@	243.02	0.12
3600.00	0.21	42.85	3598.26	100.00	45.67	22.99 S	45.36 W	50.86@	243.12	0.11
3700.00	0.25	345.21	3698.26	100.00	45.60	22.65 S	45.29 W	50.64@	243.43	0.23
3800.00	0.22	359.18	3798.26	100.00	45.65	22.25 S	45.35 W	50.51@	243.87	0.06
3900.00	0.37	272.10	3898.26	100.00	45.97	22.04 S	45.68 W	50.72@	244.24	0.42
4000.00	0.40	296.08	3998.26	100.00	46.61	21.88 S	46.31 W	51.22@	244.71	0.16
4100.00	0.34	279.86	4098.26	100.00	47.21	21.67 S	46.92 W	51.68@	245.21	0.12
4200.00	0.38	300.55	4198.26	100.00	47.78	21.45 S	47.50 W	52.12@	245.69	0.13
4300.00	0.40	303.17	4298.25	100.00	48.36	21.09 S	48.07 W	52.50@	246.31	0.03
4400.00	0.34	323.60	4398.25	100.00	48.82	20.66 S	48.54 W	52.76@	246.94	0.14
4500.00	0.23	312.91	4498.25	100.00	49.14	20.29 S	48.87 W	52.91@	247.45	0.12
4600.00	0.31	283.61	4598.25	100.00	49.55	20.09 S	49.28 W	53.21@	247.82	0.16
4700.00	0.36	298.33	4698.25	100.00	50.08	19.88 S	49.82 W	53.63@	248.25	0.10
4800.00	0.27	248.88	4798.25	100.00	50.58	19.81 S	50.31 W	54.07@	248.51	0.28
4900.00	0.46	243.77	4898.24	100.00	51.16	20.07 S	50.89 W	54.71@	248.47	0.19
5000.00	0.60	218.88	4998.24	100.00	51.86	20.66 S	51.58 W	55.56@	248.17	0.27
5100.00	0.62	213.95	5098.23	100.00	52.50	21.52 S	52.21 W	56.47@	247.60	0.06
5200.00	0.84	221.14	5198.23	100.00	53.30	22.52 S	53.00 W	57.58@	246.98	0.24

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Survey Report

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 EDDY COUNTY, NM
 RIG: PIONEER 33

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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	0.99	216.03	5298.21	100.00	54.30	23.77 S	53.99 W	58.99@	246.24	0.17
5400.00	1.11	218.74	5398.20	100.00	55.44	25.22 S	55.10 W	60.60@	245.40	0.13
5500.00	1.31	226.42	5498.17	100.00	56.89	26.76 S	56.53 W	62.55@	244.67	0.26
5600.00	1.20	222.85	5598.15	100.00	58.46	28.32 S	58.07 W	64.61@	244.00	0.13
5700.00	1.20	231.69	5698.13	100.00	60.01	29.74 S	59.61 W	66.61@	243.49	0.19
5800.00	1.13	223.60	5798.11	100.00	61.53	31.10 S	61.11 W	68.57@	243.03	0.18
5900.00	1.10	224.65	5898.09	100.00	62.90	32.50 S	62.46 W	70.41@	242.51	0.04
** TIED INTO SCIENTIFIC DRILLING GYRO SURVEY AT 5989' MD.										
5989.00	1.23	200.51	5987.07	89.00	63.86	34.00 S	63.40 W	71.94@	241.80	0.57
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
6016.00	0.79	210.06	6014.07	27.00	64.06	34.43 S	63.59 W	72.32@	241.57	1.74
6047.00	1.58	232.65	6045.06	31.00	64.51	34.88 S	64.04 W	72.92@	241.43	2.91
6078.00	3.25	243.63	6076.03	31.00	65.65	35.53 S	65.17 W	74.22@	241.40	5.57
6109.00	5.36	249.26	6106.94	31.00	67.80	36.43 S	67.31 W	76.54@	241.58	6.93
6140.00	7.65	251.72	6137.74	31.00	71.13	37.59 S	70.62 W	80.00@	241.98	7.44
6171.00	9.94	253.04	6168.37	31.00	75.67	39.02 S	75.14 W	84.67@	242.56	7.42
6202.00	12.05	253.04	6198.80	31.00	81.35	40.74 S	80.80 W	90.49@	243.24	6.81
6233.00	14.25	253.21	6228.99	31.00	88.12	42.79 S	87.55 W	97.44@	243.95	7.10
6264.00	16.44	253.39	6258.88	31.00	96.01	45.14 S	95.40 W	105.55@	244.68	7.07
6295.00	18.73	254.18	6288.43	31.00	105.04	47.76 S	104.40 W	114.80@	245.42	7.43
6326.00	21.28	255.06	6317.56	31.00	115.30	50.56 S	114.62 W	125.28@	246.20	8.28
6357.00	23.92	256.73	6346.18	31.00	126.89	53.46 S	126.18 W	137.03@	247.04	8.76
6388.00	27.00	257.43	6374.16	31.00	139.92	56.43 S	139.17 W	150.17@	247.93	9.98
6419.00	29.81	258.84	6401.43	31.00	154.39	59.46 S	153.60 W	164.70@	248.84	9.32
6450.00	32.89	260.68	6427.90	31.00	170.30	62.31 S	169.47 W	180.56@	249.81	10.40
6482.00	35.26	263.14	6454.40	32.00	188.08	64.82 S	187.21 W	198.12@	250.90	8.57
6513.00	38.08	265.69	6479.27	31.00	206.52	66.61 S	205.64 W	216.15@	252.05	10.34
6544.00	40.98	267.71	6503.18	31.00	226.23	67.73 S	225.33 W	235.29@	253.27	10.23
6575.00	44.23	268.59	6525.99	31.00	247.21	68.41 S	246.30 W	255.62@	254.48	10.66

PathFinder Energy Services, Inc.

Survey Report

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 EDDY COUNTY, NM
 RIG: PIONEER 33

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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)
6606.00	47.92	268.68	6547.49	31.00	269.53	68.94 S	268.62 W	277.32@	255.61	11.91
6637.00	50.39	268.77	6567.76	31.00	292.98	69.46 S	292.06 W	300.21@	256.62	7.97
6672.00	52.67	269.56	6589.54	35.00	320.38	69.86 S	319.46 W	327.01@	257.67	6.75
6704.00	54.61	270.35	6608.51	32.00	346.15	69.87 S	345.23 W	352.23@	258.56	6.38
6735.00	56.45	270.88	6626.05	31.00	371.69	69.60 S	370.78 W	377.26@	259.37	6.10
6766.00	59.88	270.79	6642.40	31.00	398.02	69.21 S	397.11 W	403.10@	260.11	11.07
6797.00	62.87	270.26	6657.25	31.00	425.22	68.97 S	424.32 W	429.89@	260.77	9.76
6828.00	65.07	270.26	6670.85	31.00	453.07	68.84 S	452.17 W	457.38@	261.34	7.10
6859.00	67.18	270.70	6683.40	31.00	481.41	68.60 S	480.52 W	485.39@	261.87	6.93
6890.00	69.38	270.88	6694.87	31.00	510.19	68.20 S	509.31 W	513.86@	262.37	7.12
6921.00	71.14	271.41	6705.34	31.00	539.35	67.62 S	538.48 W	542.71@	262.84	5.90
6952.00	71.93	271.32	6715.16	31.00	568.74	66.92 S	567.88 W	571.81@	263.28	2.56
6983.00	72.63	271.41	6724.60	31.00	598.25	66.22 S	597.40 W	601.06@	263.68	2.28
7014.00	74.30	271.32	6733.42	31.00	627.94	65.51 S	627.11 W	630.52@	264.04	5.39
7045.00	75.97	270.79	6741.37	31.00	657.89	64.96 S	657.06 W	660.27@	264.35	5.64
7076.00	77.56	270.61	6748.47	31.00	688.05	64.59 S	687.24 W	690.27@	264.63	5.16
7107.00	78.26	270.61	6754.96	31.00	718.36	64.27 S	717.55 W	720.42@	264.88	2.26
7138.00	81.16	270.17	6760.50	31.00	748.85	64.06 S	748.04 W	750.78@	265.11	9.46
7148.00	82.13	270.09	6761.95	10.00	758.74	64.04 S	757.94 W	760.64@	265.17	9.73
7254.00	89.34	271.14	6769.83	106.00	864.34	62.90 S	863.57 W	865.86@	265.83	6.87
7286.00	90.48	270.44	6769.88	32.00	896.33	62.46 S	895.56 W	897.74@	266.01	4.18
7318.00	90.40	270.17	6769.63	32.00	928.32	62.29 S	927.56 W	929.65@	266.16	0.88
7350.00	89.25	270.35	6769.73	32.00	960.32	62.14 S	959.56 W	961.57@	266.29	3.64
7381.00	88.99	270.26	6770.21	31.00	991.31	61.98 S	990.56 W	992.49@	266.42	0.89
7413.00	89.43	270.70	6770.65	32.00	1023.30	61.71 S	1022.55 W	1024.41@	266.55	1.94
7444.00	90.66	272.20	6770.62	31.00	1054.27	60.92 S	1053.54 W	1055.30@	266.69	6.26
7476.00	90.92	272.46	6770.18	32.00	1086.22	59.62 S	1085.51 W	1087.15@	266.86	1.15
7507.00	90.31	271.49	6769.85	31.00	1117.18	58.56 S	1116.49 W	1118.03@	267.00	3.70

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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)
7539.00	89.87	272.28	6769.80	32.00	1149.15	57.50 S	1148.47 W	1149.91@	267.13	2.83
7571.00	90.22	273.34	6769.77	32.00	1181.09	55.93 S	1180.43 W	1181.76@	267.29	3.49
7602.00	90.40	273.69	6769.61	31.00	1212.00	54.03 S	1211.38 W	1212.58@	267.45	1.27
7633.00	90.31	274.04	6769.42	31.00	1242.90	51.94 S	1242.30 W	1243.39@	267.61	1.17
7665.00	91.10	274.92	6769.02	32.00	1274.76	49.44 S	1274.20 W	1275.16@	267.78	3.70
7697.00	90.75	274.31	6768.50	32.00	1306.61	46.87 S	1306.10 W	1306.94@	267.94	2.20
7728.00	89.52	271.41	6768.43	31.00	1337.55	45.32 S	1337.05 W	1337.82@	268.06	10.16
7760.00	90.22	271.14	6768.50	32.00	1369.53	44.61 S	1369.05 W	1369.77@	268.13	2.35
7792.00	91.19	272.72	6768.11	32.00	1401.49	43.53 S	1401.02 W	1401.70@	268.22	5.79
7823.00	91.45	271.93	6767.40	31.00	1432.43	42.28 S	1431.99 W	1432.61@	268.31	2.68
7855.00	90.57	270.00	6766.83	32.00	1464.41	41.74 S	1463.98 W	1464.57@	268.37	6.63
7886.00	89.96	269.91	6766.69	31.00	1495.41	41.76 S	1494.98 W	1495.56@	268.40	1.99
7918.00	88.81	269.38	6767.03	32.00	1527.40	41.96 S	1526.97 W	1527.55@	268.43	3.96
7950.00	88.46	269.47	6767.79	32.00	1559.39	42.28 S	1558.96 W	1559.54@	268.45	1.13
7981.00	89.16	269.30	6768.44	31.00	1590.39	42.61 S	1589.95 W	1590.53@	268.46	2.32
8013.00	88.99	268.24	6768.96	32.00	1622.38	43.30 S	1621.94 W	1622.52@	268.47	3.35
8044.00	89.60	268.33	6769.34	31.00	1653.38	44.23 S	1652.93 W	1653.52@	268.47	1.99
8076.00	90.22	268.33	6769.39	32.00	1685.37	45.16 S	1684.91 W	1685.52@	268.46	1.94
8107.00	89.08	267.63	6769.58	31.00	1716.36	46.25 S	1715.89 W	1716.52@	268.46	4.32
8139.00	87.93	267.19	6770.41	32.00	1748.33	47.70 S	1747.85 W	1748.50@	268.44	3.85
8171.00	87.58	267.71	6771.66	32.00	1780.30	49.12 S	1779.79 W	1780.47@	268.42	1.96
8203.00	87.85	267.54	6772.94	32.00	1812.26	50.45 S	1811.74 W	1812.44@	268.41	1.00
8234.00	89.43	269.21	6773.68	31.00	1843.24	51.33 S	1842.71 W	1843.43@	268.40	7.42
8266.00	89.78	269.47	6773.90	32.00	1875.24	51.69 S	1874.71 W	1875.42@	268.42	1.36
8298.00	90.40	269.21	6773.85	32.00	1907.24	52.06 S	1906.71 W	1907.42@	268.44	2.10
8330.00	90.92	268.68	6773.48	32.00	1939.24	52.65 S	1938.70 W	1939.42@	268.44	2.32
8361.00	91.71	269.91	6772.77	31.00	1970.23	53.03 S	1969.69 W	1970.40@	268.46	4.72
8393.00	91.80	270.09	6771.79	32.00	2002.21	53.03 S	2001.68 W	2002.38@	268.48	0.63

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8424.00	90.92	270.17	6771.05	31.00	2033.20	52.96 S	2032.67 W	2033.36@	268.51	2.85
8455.00	90.57	270.26	6770.65	31.00	2064.19	52.85 S	2063.66 W	2064.34@	268.53	1.17
8487.00	89.16	270.09	6770.72	32.00	2096.19	52.75 S	2095.66 W	2096.33@	268.56	4.44
8519.00	90.57	271.23	6770.80	32.00	2128.17	52.38 S	2127.66 W	2128.30@	268.59	5.67
8550.00	92.24	271.32	6770.04	31.00	2159.14	51.69 S	2158.64 W	2159.26@	268.63	5.39
8582.00	91.63	270.79	6768.96	32.00	2191.11	51.10 S	2190.62 W	2191.21@	268.66	2.53
8614.00	90.66	269.91	6768.32	32.00	2223.10	50.91 S	2222.61 W	2223.19@	268.69	4.09
8645.00	90.66	270.53	6767.96	31.00	2254.09	50.79 S	2253.61 W	2254.18@	268.71	2.00
8677.00	90.40	269.74	6767.66	32.00	2286.08	50.71 S	2285.60 W	2286.17@	268.73	2.60
8709.00	90.40	270.09	6767.44	32.00	2318.08	50.76 S	2317.60 W	2318.16@	268.75	1.09
8740.00	91.45	270.26	6766.94	31.00	2349.07	50.67 S	2348.60 W	2349.15@	268.76	3.43
8772.00	91.10	269.74	6766.23	32.00	2381.06	50.67 S	2380.59 W	2381.13@	268.78	1.96
8804.00	90.57	269.82	6765.76	32.00	2413.06	50.79 S	2412.59 W	2413.12@	268.79	1.67
8835.00	91.10	270.00	6765.31	31.00	2444.05	50.84 S	2443.58 W	2444.11@	268.81	1.81
8867.00	90.75	270.09	6764.79	32.00	2476.04	50.81 S	2475.58 W	2476.10@	268.82	1.13
8898.00	90.57	269.74	6764.44	31.00	2507.04	50.86 S	2506.58 W	2507.09@	268.84	1.27
8930.00	90.92	270.00	6764.02	32.00	2539.03	50.93 S	2538.58 W	2539.09@	268.85	1.36
8962.00	91.10	270.09	6763.46	32.00	2571.03	50.91 S	2570.57 W	2571.07@	268.87	0.63
8993.00	91.01	270.00	6762.89	31.00	2602.02	50.88 S	2601.56 W	2602.06@	268.88	0.41
9025.00	91.45	270.00	6762.20	32.00	2634.01	50.88 S	2633.56 W	2634.05@	268.89	1.37
9056.00	90.57	269.56	6761.65	31.00	2665.00	51.00 S	2664.55 W	2665.04@	268.90	3.17
9088.00	90.40	269.47	6761.38	32.00	2697.00	51.27 S	2696.55 W	2697.04@	268.91	0.60
9119.00	91.19	270.35	6760.95	31.00	2727.99	51.32 S	2727.55 W	2728.03@	268.92	3.81
9151.00	91.71	270.53	6760.14	32.00	2759.97	51.07 S	2759.54 W	2760.01@	268.94	1.72
9183.00	91.98	270.26	6759.11	32.00	2791.95	50.85 S	2791.52 W	2791.98@	268.96	1.19
9214.00	92.07	269.91	6758.02	31.00	2822.93	50.81 S	2822.50 W	2822.96@	268.97	1.16
9246.00	92.33	269.91	6756.79	32.00	2854.90	50.86 S	2854.47 W	2854.93@	268.98	0.81
9278.00	92.24	269.30	6755.51	32.00	2886.88	51.08 S	2886.45 W	2886.90@	268.99	1.93

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9309.00	91.89	268.86	6754.40	31.00	2917.86	51.58 S	2917.42 W	2917.88@	268.99	1.81
9341.00	90.75	268.07	6753.66	32.00	2949.84	52.43 S	2949.40 W	2949.87@	268.98	4.33
9373.00	88.90	266.22	6753.76	32.00	2981.82	54.03 S	2981.36 W	2981.85@	268.96	8.18
9404.00	88.55	266.57	6754.45	31.00	3012.77	55.98 S	3012.29 W	3012.81@	268.94	1.60
9436.00	89.34	266.83	6755.03	32.00	3044.74	57.82 S	3044.23 W	3044.78@	268.91	2.60
9467.00	89.69	266.22	6755.30	31.00	3075.70	59.70 S	3075.17 W	3075.75@	268.89	2.27
9499.00	90.22	266.83	6755.32	32.00	3107.67	61.64 S	3107.11 W	3107.73@	268.86	2.53
9531.00	91.01	268.07	6754.98	32.00	3139.65	63.06 S	3139.08 W	3139.71@	268.85	4.59
9562.00	91.01	267.98	6754.43	31.00	3170.64	64.13 S	3170.06 W	3170.71@	268.84	0.29
9594.00	91.54	268.24	6753.72	32.00	3202.62	65.18 S	3202.03 W	3202.70@	268.83	1.84
9625.00	91.63	267.54	6752.86	31.00	3233.60	66.32 S	3233.00 W	3233.68@	268.82	2.28
9657.00	90.66	266.40	6752.22	32.00	3265.57	68.01 S	3264.95 W	3265.66@	268.81	4.68
9689.00	90.40	266.48	6751.93	32.00	3297.53	70.00 S	3296.88 W	3297.63@	268.78	0.85
9720.00	91.01	267.89	6751.55	31.00	3328.51	71.52 S	3327.84 W	3328.61@	268.77	4.96
9752.00	91.19	269.21	6750.93	32.00	3360.50	72.33 S	3359.83 W	3360.60@	268.77	4.16
9784.00	91.36	270.35	6750.22	32.00	3392.49	72.46 S	3391.82 W	3392.59@	268.78	3.60
9814.00	91.89	272.64	6749.37	30.00	3422.45	71.67 S	3421.79 W	3422.54@	268.80	7.83
9845.00	93.30	273.69	6747.97	31.00	3453.34	69.96 S	3452.71 W	3453.42@	268.84	5.67
9877.00	93.74	273.60	6746.00	32.00	3485.19	67.93 S	3484.59 W	3485.25@	268.88	1.40
9908.00	92.86	272.72	6744.22	31.00	3516.06	66.23 S	3515.49 W	3516.11@	268.92	4.01
9939.00	92.15	272.20	6742.86	31.00	3546.99	64.90 S	3546.43 W	3547.02@	268.95	2.84
9971.00	91.80	271.93	6741.76	32.00	3578.93	63.75 S	3578.39 W	3578.96@	268.98	1.38
10002.00	91.71	271.14	6740.81	31.00	3609.89	62.92 S	3609.36 W	3609.91@	269.00	2.56
10033.00	91.28	271.05	6740.00	31.00	3640.86	62.32 S	3640.35 W	3640.88@	269.02	1.42
10065.00	91.36	270.17	6739.26	32.00	3672.84	61.98 S	3672.34 W	3672.86@	269.03	2.76
10096.00	91.80	270.44	6738.41	31.00	3703.82	61.82 S	3703.33 W	3703.84@	269.04	1.66
10128.00	91.89	269.82	6737.38	32.00	3735.80	61.75 S	3735.31 W	3735.82@	269.05	1.96
10159.00	91.45	268.51	6736.47	31.00	3766.79	62.20 S	3766.29 W	3766.80@	269.05	4.46

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10190.00	91.19	267.89	6735.76	31.00	3797.78	63.17 S	3797.27 W	3797.79@	269.05	2.17
10222.00	91.45	267.89	6735.02	32.00	3829.76	64.35 S	3829.24 W	3829.78@	269.04	0.81
10253.00	91.71	267.63	6734.17	31.00	3860.74	65.56 S	3860.20 W	3860.76@	269.03	1.19
10284.00	91.45	267.98	6733.31	31.00	3891.72	66.75 S	3891.17 W	3891.74@	269.02	1.41
10316.00	91.10	268.33	6732.60	32.00	3923.70	67.78 S	3923.14 W	3923.73@	269.01	1.55
10347.00	89.69	267.71	6732.39	31.00	3954.69	68.85 S	3954.12 W	3954.72@	269.00	4.97
10379.00	89.43	268.07	6732.63	32.00	3986.68	70.03 S	3986.10 W	3986.72@	268.99	1.39
10410.00	88.64	267.19	6733.16	31.00	4017.67	71.31 S	4017.07 W	4017.70@	268.98	3.81
10441.00	88.20	267.27	6734.01	31.00	4048.64	72.81 S	4048.02 W	4048.67@	268.97	1.44
10472.00	88.72	268.59	6734.84	31.00	4079.62	73.92 S	4078.99 W	4079.66@	268.96	4.58
10504.00	90.48	269.74	6735.07	32.00	4111.61	74.39 S	4110.98 W	4111.65@	268.96	6.57
10535.00	91.71	271.49	6734.47	31.00	4142.60	74.06 S	4141.97 W	4142.63@	268.98	6.90
10566.00	92.42	271.05	6733.36	31.00	4173.56	73.37 S	4172.94 W	4173.59@	268.99	2.69
10598.00	92.15	270.26	6732.08	32.00	4205.52	73.01 S	4204.92 W	4205.55@	269.01	2.61
10629.00	92.42	269.91	6730.85	31.00	4236.49	72.96 S	4235.89 W	4236.52@	269.01	1.43
10661.00	91.89	270.35	6729.64	32.00	4268.47	72.89 S	4267.87 W	4268.49@	269.02	2.15
10692.00	90.75	270.70	6728.93	31.00	4299.45	72.60 S	4298.86 W	4299.47@	269.03	3.85
10723.00	90.66	270.26	6728.55	31.00	4330.44	72.34 S	4329.86 W	4330.46@	269.04	1.45
10755.00	90.84	269.38	6728.13	32.00	4362.43	72.44 S	4361.85 W	4362.45@	269.05	2.81
10786.00	91.54	269.47	6727.48	31.00	4393.43	72.76 S	4392.84 W	4393.45@	269.05	2.28
10818.00	91.89	268.68	6726.53	32.00	4425.41	73.27 S	4424.83 W	4425.43@	269.05	2.70
10849.00	92.07	268.51	6725.46	31.00	4456.39	74.03 S	4455.80 W	4456.41@	269.05	0.80
10881.00	92.59	268.95	6724.15	32.00	4488.36	74.74 S	4487.76 W	4488.39@	269.05	2.13
10912.00	93.47	268.77	6722.52	31.00	4519.32	75.36 S	4518.71 W	4519.34@	269.04	2.90
10950.00	93.56	268.15	6720.19	38.00	4557.25	76.38 S	4556.63 W	4557.27@	269.04	1.65
STRAIGHT LINE PROJECTION TO BIT AT 11010' MD.										
11010.00	93.56	268.15	6716.46	60.00	4617.12	78.31 S	4616.48 W	4617.14@	269.03	0.00

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** 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.