

Results of Directional Survey

API number:	30-025-40590		
OGRID:		Operator:	XTO ENERGY, INC
		Property:	MIS AMIGOS # 1H

surface	ULSTR:	O	31	T	23S	R	33E
				330	FSL	1979	FEL

BH Loc	ULSTR:	B	31	T	23S	R	33E
15450	MD	11094.0	TVD	328	FNL	2016	FEL
				4952	FSL		

Top Perf/OH	ULSTR:	O	31	T	23S	R	33E
11556	MD	11092.4	TVD	1061	FSL	2020	FEL

Bot Perf/OH	ULSTR:	B	31	T	23S	R	33E
15300	MD	11097.8	TVD	478	FNL	2017	FEL
				4802	FSL		

	MD	N/S	E/W	VD
	11520	695.10	-37.13	11090.64
TOP PERFS/OH	11556	730.84	-41.12	11092.41
	11582	756.65	-44.00	11093.69
	15235	4406.57	-38.65	11098.96
BOT PERFS/OH	15300	4471.56	-38.20	11097.76
	15328	4499.55	-38.01	11097.25

NEXT TO LAST	15399	4570.53	-37.58	11095.40
LAST READING	15450	4621.51	-37.46	11093.95
TD	15450	4621.51	-37.46	11093.95

Surface Location	330	FS	1979	FE
Projected BHL	4952	FS	2016	FE
Location of				
Top Perfs/OH	1061	FS	2020	FE
Bottom Perfs/OH	4802	FS	2017	FE

SUMMARY of Subsurface Locations

Surface Location	O-31-23S-33E	330	FS	1979	FE	Vert. Depth
Top Perfs/OH	O-31-23S-33E	1061	FS	2020	FE	11092.41
Bottom Perfs/OH	B-31-23S-33E	4802	FS	2017	FE	11097.76
Projected TD	B-31-23S-33E	4952	FS	2016	FE	11093.95

MAY 23 2013



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

XTO ENERGY

MIS AMIGOS #1H

LEA COUNTY, NEW MEXICO

SUR: O - 31-23S-33E, 330/s & 1970/e
BHL: B - 31-23S-33E, 4852/s & 2016/e
API # 30-025-40590

PREPARED BY: MARCUS MITCHAM

Pathfinder

6213 WCR. 112
Midland, Texas. 79706-3725, USA
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) ROBERT GIBBS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 9/10/12 TO 9/22/12
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY
7. TYPE OF SURVEY(S) PERFORMED: GAMMA-RAY
8. COMPLETE IDENTIFICATION OF WELL:

XTO ENERGY INC.
MIS AMIGOS #1H
LEA COUNTY, NM
RIG: PIONEER 33
9. SURVEY CERTIFIED FROM: 10,457 TO 15,399 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4,621.66 FEET ON A BEARING OF 359.54 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 15,450 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

A handwritten signature in black ink, appearing to read "MARCUS MITCHAM", written over a horizontal line.

MARCUS MITCHAM
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

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Tie-in Date: 09/10/2012
Date Completed: 09/22/2012

XTO ENERGY
MIS AMIGOS #1H / API# 30-025-40590
LEA COUNTY, NM
Rig: PIONEER 33
PathFinder Office Supervisor: MARCUS MITCHAM
PathFinder Field Engineers: R. Gibbs
J. Esparza

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.15.17.0905 N LON: 103.36.31.7089 W
GRID Reference: NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 723978.4000 Y: 457151.0000
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.07° EAST TO GRID
Vertical Section Plane: 359.61
Survey Vert. Reference: 19.00' Rotary Table To Ground
Altitude: 3654.00' Ground To MSL

Measured Depth	15450.00	(feet)
Inclination	91.63	(deg)
Azimuth	0.13	(deg)
True Vertical Depth	11093.95	(feet)
Vertical Section	4621.65	(feet)
Survey X cord	723940.94	(feet)
Survey Y cord	461772.51	(feet)
Survey Lat	32.26745147 N	(deg)
Survey Lon	103.60882830 W	(deg)
Rectangular Corr. N/S	4621.51 N	(feet)
Rectangular Corr. E/W	37.46 W	(feet)
Closure Distance	4621.66	(feet)
Direction of Closure	359.54	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

XTO ENERGY

MIS AMIGOS #1H / API# 30-025-40590

LEA COUNTY, NM

Rig:PIONEER 33

PathFinder Office Supervisor: MARCUS MITCHAM

PathFinder Field Engineers: R.Gibbs

J.Esparza

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.15.17.0905 N LON:103.36.31.7089 W

GRID Reference:NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 723978.4000 Y: 457151.0000

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.07° EAST TO GRID

Vertical Section Plane: 359.61

Survey Vert. Reference: 19.00' Rotary Table To Ground

Altitude:3654.00' Ground To MSL

Survey Calculations by RX5 V6.04B 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)
TIED INTO VAUGHN ENERGY SERVICES GYRO SURVEY @ 10410'MD.										
10410.00	0.78	271.71	10408.91	0.00	-11.31	11.42 S	16.37 W	19.96@	235.10	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
10467.00	0.97	350.60	10465.91	57.00	-10.82	10.93 S	16.84 W	20.07@	237.00	1.97
10498.00	3.43	14.46	10496.88	31.00	-9.66	9.78 S	16.65 W	19.31@	239.58	8.30
10529.00	5.98	20.30	10527.77	31.00	-7.25	7.36 S	15.86 W	17.48@	245.09	8.36
10560.00	8.44	20.19	10558.53	31.00	-3.61	3.71 S	14.51 W	14.98@	255.65	7.94
10591.00	11.17	16.26	10589.07	31.00	1.39	1.31 N	12.88 W	12.95@	275.79	9.06
10622.00	14.33	13.19	10619.30	31.00	8.00	7.93 N	11.17 W	13.69@	305.37	10.42
10653.00	17.41	11.86	10649.12	31.00	16.27	16.20 N	9.34 W	18.70@	330.04	10.00
10684.00	20.66	10.98	10678.42	31.00	26.16	26.11 N	7.34 W	27.12@	344.29	10.52
10715.00	23.48	10.65	10707.14	31.00	37.59	37.55 N	5.16 W	37.90@	352.18	9.11
10746.00	26.12	8.97	10735.28	31.00	50.38	50.36 N	2.95 W	50.45@	356.64	8.81
10777.00	29.55	6.42	10762.69	31.00	64.71	64.71 N	1.03 W	64.71@	359.08	11.71
10808.00	33.33	4.04	10789.14	31.00	80.80	80.80 N	0.42 E	80.81@	0.30	12.83
10839.00	37.99	2.73	10814.32	31.00	98.83	98.84 N	1.48 E	98.85@	0.86	15.23
10870.00	42.12	5.27	10838.04	31.00	118.71	118.73 N	2.89 E	118.77@	1.39	14.33
10901.00	44.93	4.62	10860.52	31.00	139.96	140.00 N	4.72 E	140.08@	1.93	9.18
10932.00	46.69	357.80	10882.14	31.00	162.16	162.19 N	5.17 E	162.28@	1.83	16.76
10963.00	48.98	358.95	10902.95	31.00	185.13	185.16 N	4.52 E	185.22@	1.40	7.88
10994.00	51.27	357.08	10922.82	31.00	208.90	208.93 N	3.69 E	208.97@	1.01	8.72
11025.00	53.73	0.96	10941.70	31.00	233.49	233.51 N	3.29 E	233.54@	0.81	12.71
11056.00	55.93	1.68	10959.55	31.00	258.81	258.85 N	3.87 E	258.88@	0.86	7.35
11087.00	57.86	1.37	10976.48	31.00	284.77	284.80 N	4.56 E	284.84@	0.92	6.28

PathFinder Energy Services, Inc.

Survey Report

XTO ENERGY
MIS AMIGOS #1H / API# 30-025-40590
LEA 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)
11118.00	59.53	356.69	10992.60	31.00	311.24	311.27 N	4.11 E	311.30@	0.76	13.98
11150.00	61.91	356.00	11008.25	32.00	339.10	339.13 N	2.32 E	339.14@	0.39	7.67
11181.00	65.69	356.07	11021.93	31.00	366.86	366.87 N	0.40 E	366.87@	0.06	12.19
11211.00	69.64	353.90	11033.33	30.00	394.51	394.51 N	2.03 W	394.51@	359.71	14.77
11242.00	72.11	353.13	11043.49	31.00	423.63	423.60 N	5.34 W	423.64@	359.28	8.31
11273.00	74.48	354.00	11052.40	31.00	453.16	453.11 N	8.67 W	453.19@	358.90	8.10
11304.00	77.21	352.26	11059.98	31.00	483.02	482.95 N	12.26 W	483.10@	358.55	10.35
11335.00	79.23	356.00	11066.31	31.00	513.22	513.13 N	15.36 W	513.36@	358.29	13.49
11366.00	80.81	353.24	11071.68	31.00	543.63	543.52 N	18.23 W	543.82@	358.08	10.14
11396.00	81.60	352.66	11076.27	30.00	573.08	572.94 N	21.87 W	573.36@	357.81	3.25
11427.00	81.78	352.57	11080.75	31.00	603.52	603.36 N	25.81 W	603.91@	357.55	0.65
11458.00	82.75	352.74	11084.92	31.00	634.01	633.83 N	29.74 W	634.52@	357.31	3.18
11489.00	84.68	353.10	11088.31	31.00	664.62	664.40 N	33.53 W	665.25@	357.11	6.33
11520.00	86.70	353.54	11090.64	31.00	695.34	695.10 N	37.13 W	696.10@	356.94	6.67
11582.00	87.67	353.71	11093.69	62.00	756.93	756.65 N	44.00 W	757.93@	356.67	1.59
11675.00	89.87	354.06	11095.68	93.00	849.44	849.09 N	53.91 W	850.80@	356.37	2.40
11768.00	90.31	353.97	11095.54	93.00	941.99	941.58 N	63.61 W	943.73@	356.14	0.48
11861.00	91.36	355.82	11094.18	93.00	1034.66	1034.20 N	71.88 W	1036.69@	356.02	2.29
11954.00	91.36	356.79	11091.98	93.00	1127.48	1126.98 N	77.87 W	1129.67@	356.05	1.04
12047.00	91.10	358.10	11089.98	93.00	1220.39	1219.86 N	82.02 W	1222.62@	356.15	1.44
12140.00	89.52	358.63	11089.48	93.00	1313.37	1312.82 N	84.67 W	1315.55@	356.31	1.79
12234.00	88.37	359.42	11091.21	94.00	1407.34	1406.79 N	86.27 W	1409.43@	356.49	1.48
12327.00	86.61	0.39	11095.28	93.00	1500.25	1499.69 N	86.42 W	1502.18@	356.70	2.16
12420.00	86.79	0.57	11100.63	93.00	1593.08	1592.54 N	85.65 W	1594.84@	356.92	0.27
12513.00	87.49	0.04	11105.27	93.00	1685.96	1685.42 N	85.15 W	1687.57@	357.11	0.94
12606.00	88.29	359.95	11108.70	93.00	1778.89	1778.35 N	85.16 W	1780.39@	357.26	0.87
12699.00	89.34	1.53	11110.62	93.00	1871.85	1871.32 N	83.96 W	1873.21@	357.43	2.04

PathFinder Energy Services, Inc.

Survey Report

XTO ENERGY
 MIS AMIGOS #1H / API# 30-025-40590
 LEA 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)
12791.00	89.78	1.45	11111.33	92.00	1963.80	1963.29 N	81.57 W	1964.98@	357.62	0.49
12884.00	90.13	1.09	11111.40	93.00	2056.76	2056.27 N	79.50 W	2057.80@	357.79	0.54
12978.00	90.66	1.27	11110.75	94.00	2150.72	2150.24 N	77.57 W	2151.64@	357.93	0.60
13071.00	89.52	1.80	11110.61	93.00	2243.67	2243.21 N	75.08 W	2244.46@	358.08	1.35
13164.00	89.60	1.45	11111.32	93.00	2336.61	2336.17 N	72.44 W	2337.29@	358.22	0.39
13257.00	89.25	0.57	11112.25	93.00	2429.57	2429.15 N	70.80 W	2430.18@	358.33	1.02
13349.00	90.13	1.09	11112.75	92.00	2521.55	2521.13 N	69.47 W	2522.09@	358.42	1.11
13442.00	90.66	1.27	11112.11	93.00	2614.51	2614.11 N	67.55 W	2614.99@	358.52	0.60
13534.00	91.63	1.53	11110.27	92.00	2706.45	2706.07 N	65.31 W	2706.85@	358.62	1.09
13627.00	90.84	1.80	11108.27	93.00	2799.37	2799.00 N	62.60 W	2799.70@	358.72	0.90
13720.00	90.84	2.15	11106.90	93.00	2892.28	2891.94 N	59.40 W	2892.55@	358.82	0.38
13813.00	91.10	1.45	11105.33	93.00	2985.19	2984.88 N	56.48 W	2985.41@	358.92	0.80
13907.00	91.10	1.80	11103.52	94.00	3079.12	3078.82 N	53.81 W	3079.29@	359.00	0.37
14000.00	91.36	1.27	11101.53	93.00	3172.04	3171.77 N	51.32 W	3172.18@	359.07	0.63
14092.00	91.36	0.92	11099.35	92.00	3263.99	3263.73 N	49.57 W	3264.10@	359.13	0.38
14186.00	89.96	1.18	11098.26	94.00	3357.95	3357.70 N	47.84 W	3358.04@	359.18	1.51
14279.00	89.34	1.53	11098.83	93.00	3450.90	3450.67 N	45.64 W	3450.97@	359.24	0.76
14372.00	88.64	0.57	11100.47	93.00	3543.86	3543.64 N	43.94 W	3543.91@	359.29	1.28
14492.00	89.60	0.57	11102.31	120.00	3663.83	3663.62 N	42.75 W	3663.87@	359.33	0.80
14585.00	90.22	0.39	11102.46	93.00	3756.81	3756.61 N	41.97 W	3756.85@	359.36	0.70
14678.00	90.92	359.86	11101.53	93.00	3849.81	3849.61 N	41.76 W	3849.84@	359.38	0.94
14771.00	89.25	0.48	11101.40	93.00	3942.80	3942.60 N	41.49 W	3942.82@	359.40	1.92
14864.00	89.78	0.22	11102.18	93.00	4035.79	4035.60 N	40.92 W	4035.81@	359.42	0.63
14956.00	90.40	0.04	11102.04	92.00	4127.78	4127.60 N	40.71 W	4127.80@	359.43	0.70
15049.00	90.40	0.92	11101.39	93.00	4220.77	4220.59 N	39.93 W	4220.78@	359.46	0.95
15142.00	90.92	0.22	11100.32	93.00	4313.75	4313.58 N	39.01 W	4313.76@	359.48	0.94
15235.00	90.75	0.22	11098.96	93.00	4406.73	4406.57 N	38.65 W	4406.74@	359.50	0.18

PathFinder Energy Services, Inc.

Survey Report

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 MIS AMIGOS #1H / API# 30-025-40590
 LEA 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		Closure Dist Dir		DLS
						(ft)	(ft)	(ft)	(deg)	(dg/100ft)
15328.00	91.36	0.57	11097.25	93.00	4499.71	4499.55 N	38.01 W	4499.71@	359.52	0.76
15399.00	91.63	0.13	11095.40	71.00	4570.68	4570.53 N	37.58 W	4570.68@	359.53	0.73
STRAIGHT LINE PROJECTION TO BIT @ 15450'MD.										
15450.00	91.63	0.13	11093.95	51.00	4621.65	4621.51 N	37.46 W	4621.66@	359.54	0.00

WELL NAME: MIS AMIGOS 1H
 LOCATION: 390' FSL & 1980' FEL, SEC 31 T23S R33E
 FORMATION: BONESPRINGS
 SPUD DATE: 08/23/12
 IP: 516 BOPD, 708 MCFPD

COUNTY/STATE: LEA, NM
 LEASE: TRIPLEX
 CURRENT STATUS: ESP
 COMPLDATE: 01/18/13
 API No: 30-025-40590



17 1/2" HOLE
 13-3/8" 48#, H40 STC, CSG @ 1237'
 CMT W/830 SX
 TAIL W/265 SX
 CIRC TO SURF W/435 SX

ELEV:
 OL: 3637'
 KB: 3654'

MD	INCH	TYD	DESK
0	0.00	0.0	
1.500	0.17	999.9	
20.000	0.29	8.997	
20.000	1.09	20.117	
20.000	1.09	20.000	
13.345	90.00	16.022	
15.487	90.00	16.022	
15.501	92.33	16.078	1.000

TUBING: (11/7/13)
 LUFKIN GAS SYSTEM & 2-7/8"
 JTS @ 10,449', ON/OFF TL @
 10,470', 5-1/2" PKR @ 10,472'.
 LANDED @ 10,479'.

MD	INCH	TYD	DESK
17.000			16.078
18.000	92.84	11.024	16.078
19.000	90.90	11.024	16.078
20.000	90.90	11.024	16.078
21.000	90.90	11.024	16.078
22.000	90.90	11.024	16.078
23.000	90.90	11.024	16.078
24.000	90.90	11.024	16.078
25.000	90.90	11.024	16.078
26.000	90.90	11.024	16.078
27.000	90.90	11.024	16.078
28.000	90.90	11.024	16.078
29.000	90.90	11.024	16.078
30.000	90.90	11.024	16.078
31.000	90.90	11.024	16.078
32.000	90.90	11.024	16.078
33.000	90.90	11.024	16.078
34.000	90.90	11.024	16.078
35.000	90.90	11.024	16.078
36.000	90.90	11.024	16.078
37.000	90.90	11.024	16.078
38.000	90.90	11.024	16.078
39.000	90.90	11.024	16.078
40.000	90.90	11.024	16.078
41.000	90.90	11.024	16.078
42.000	90.90	11.024	16.078
43.000	90.90	11.024	16.078
44.000	90.90	11.024	16.078
45.000	90.90	11.024	16.078
46.000	90.90	11.024	16.078
47.000	90.90	11.024	16.078
48.000	90.90	11.024	16.078
49.000	90.90	11.024	16.078
50.000	90.90	11.024	16.078
51.000	90.90	11.024	16.078
52.000	90.90	11.024	16.078
53.000	90.90	11.024	16.078
54.000	90.90	11.024	16.078
55.000	90.90	11.024	16.078
56.000	90.90	11.024	16.078
57.000	90.90	11.024	16.078
58.000	90.90	11.024	16.078
59.000	90.90	11.024	16.078
60.000	90.90	11.024	16.078
61.000	90.90	11.024	16.078
62.000	90.90	11.024	16.078
63.000	90.90	11.024	16.078
64.000	90.90	11.024	16.078
65.000	90.90	11.024	16.078
66.000	90.90	11.024	16.078
67.000	90.90	11.024	16.078
68.000	90.90	11.024	16.078
69.000	90.90	11.024	16.078
70.000	90.90	11.024	16.078
71.000	90.90	11.024	16.078
72.000	90.90	11.024	16.078
73.000	90.90	11.024	16.078
74.000	90.90	11.024	16.078
75.000	90.90	11.024	16.078
76.000	90.90	11.024	16.078
77.000	90.90	11.024	16.078
78.000	90.90	11.024	16.078
79.000	90.90	11.024	16.078
80.000	90.90	11.024	16.078
81.000	90.90	11.024	16.078
82.000	90.90	11.024	16.078
83.000	90.90	11.024	16.078
84.000	90.90	11.024	16.078
85.000	90.90	11.024	16.078
86.000	90.90	11.024	16.078
87.000	90.90	11.024	16.078
88.000	90.90	11.024	16.078
89.000	90.90	11.024	16.078
90.000	90.90	11.024	16.078
91.000	90.90	11.024	16.078
92.000	90.90	11.024	16.078
93.000	90.90	11.024	16.078
94.000	90.90	11.024	16.078
95.000	90.90	11.024	16.078
96.000	90.90	11.024	16.078
97.000	90.90	11.024	16.078
98.000	90.90	11.024	16.078
99.000	90.90	11.024	16.078
100.000	90.90	11.024	16.078

TOC @ 4202' (CBL)

12-1/4" HOLE
 9-5/8" 40#, HCL L80, CSG @ 5050'
 CMT W/1385 SX
 TAIL W/250 SX
 CIRC TO SURF W/224 SX

DV TOOL @ 5015'

8-3/4" HOLE
 5-1/2" 17#, HCP-110 LTC, CSG @ 15,435'
 CMT STG #1 - 1740 SX LEAD
 DID NOT BMP PLUG, NO CIRC
 STG #2 - 155 SX LEAD, 705 SX TAIL
 CIRC W/42 SX
 STG #3 - 120 SX LEAD, 320 SX TAIL
 CIRC TO 4202'

DV TOOL @ 8986'

MD: 15,450'
 TVD: 11,036'

KOP @ 10,467'

CURVE F/10,467'-11,675'

