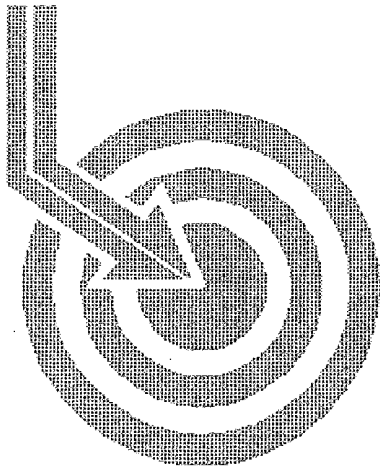




Scientific Drilling

BHLOC
A-26-17s-34e
4949 ASL 428 FEL

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HOBBSOCD

XTO ENERGY INC.

Field: Vacuum, North
Site: Lea County, NM
Well: North Vacuum Abo #308H
Wellpath: VH - Job #32K0410268
Survey: 04/17/10

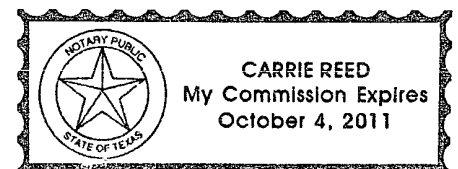
SUR @ P-26-17s-34e, 380/S & 379/E
BHL @ A-26-17s-34e, 4949/S & 428/E
API # 30-025-39694

This survey is correct to the best of my knowledge and is supported by actual field data.

Richard
Company Representative

Notarized this date 6th of May, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International, Inc.

Survey Report

Company: XTO ENERGY INC. Date: 4/22/2010 Time: 11:51:23 Page: 1
Field: Vacuum, North Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Site: Lea County, NM Vertical (TVD) Reference: SITE 0.0
Well: North Vacuum Abo #308H Section (VS) Reference: Well (0.00N,0.00E,359.51Azi)
Wellpath: VH - Job #32K0410268 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 04/17/10 Start Date: 4/17/2010
KSRG 0'-8215'
Company: Scientific Drilling Internatio Engineer: Madrid/Rowe/Williams
Tool: Keeper, Keeper Gyro Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	359.56	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.46	218.40	100.0	-0.3	-0.3	-0.2	0.46	0.4	218.40
200.0	0.46	228.85	200.0	-0.9	-0.9	-0.8	0.08	1.2	221.88
300.0	0.56	223.08	300.0	-1.5	-1.5	-1.4	0.11	2.1	223.50
400.0	0.49	236.54	400.0	-2.1	-2.1	-2.1	0.14	3.0	225.28
500.0	0.45	222.16	500.0	-2.6	-2.6	-2.7	0.12	3.8	226.21
600.0	0.36	195.24	600.0	-3.2	-3.2	-3.1	0.21	4.5	223.78
700.0	0.66	219.06	700.0	-3.9	-4.0	-3.5	0.36	5.3	221.66
800.0	0.65	203.07	800.0	-4.9	-4.9	-4.1	0.18	6.4	219.82
900.0	0.67	212.16	900.0	-5.9	-6.0	-4.7	0.11	7.6	217.99
1000.0	0.70	223.28	1000.0	-6.9	-6.9	-5.4	0.14	8.8	217.97
1100.0	0.35	226.85	1100.0	-7.5	-7.6	-6.0	0.35	9.7	218.58
1200.0	0.64	149.71	1200.0	-8.2	-8.2	-6.0	0.66	10.2	215.90
1300.0	0.91	133.57	1299.9	-9.2	-9.3	-5.1	0.34	10.6	208.86
1400.0	0.89	141.28	1399.9	-10.4	-10.4	-4.1	0.12	11.2	201.23
1500.0	0.85	141.12	1499.9	-11.6	-11.6	-3.1	0.04	12.0	194.95
1600.0	0.79	151.52	1599.9	-12.8	-12.8	-2.3	0.16	13.0	190.22
1700.0	0.74	137.86	1699.9	-13.9	-13.9	-1.5	0.19	14.0	186.35
1800.0	0.71	127.63	1799.9	-14.7	-14.7	-0.6	0.13	14.8	182.41
1900.0	0.60	103.61	1899.9	-15.2	-15.2	0.4	0.29	15.2	178.58
2000.0	0.57	98.43	1999.9	-15.4	-15.4	1.4	0.06	15.5	174.89
2100.0	0.59	98.77	2099.9	-15.6	-15.6	2.4	0.02	15.8	171.32
2200.0	0.42	117.56	2199.9	-15.9	-15.8	3.2	0.24	16.2	168.53
2300.0	0.69	118.10	2299.9	-16.3	-16.3	4.1	0.27	16.8	165.97
2400.0	0.70	123.84	2399.9	-17.0	-16.9	5.1	0.07	17.7	163.19
2500.0	0.90	119.27	2499.8	-17.7	-17.6	6.3	0.21	18.7	160.34
2600.0	1.43	107.15	2599.8	-18.5	-18.4	8.2	0.58	20.1	156.02
2700.0	1.59	104.52	2699.8	-19.2	-19.1	10.7	0.17	21.9	150.72
2800.0	1.75	113.85	2799.8	-20.2	-20.1	13.5	0.31	24.2	146.17
2900.0	1.60	128.29	2899.7	-21.7	-21.6	15.9	0.45	26.8	143.51
3000.0	1.49	135.80	2999.7	-23.5	-23.4	17.9	0.23	29.5	142.45
3100.0	1.55	150.31	3099.6	-25.6	-25.5	19.5	0.39	32.1	142.51
3200.0	1.64	159.40	3199.6	-28.1	-28.0	20.7	0.27	34.8	143.50
3300.0	1.73	164.49	3299.6	-31.0	-30.8	21.6	0.17	37.6	144.92
3400.0	1.75	175.06	3399.5	-33.9	-33.7	22.1	0.32	40.4	146.73
3500.0	1.65	179.41	3499.5	-36.9	-36.7	22.3	0.16	42.9	148.73
3600.0	1.03	190.02	3599.4	-39.2	-39.0	22.1	0.67	44.9	150.43
3700.0	0.76	189.94	3699.4	-40.8	-40.6	21.9	0.27	46.1	151.67
3800.0	0.50	186.49	3799.4	-41.8	-41.7	21.7	0.26	47.0	152.47
3900.0	0.33	194.46	3899.4	-42.5	-42.4	21.6	0.18	47.5	153.00
4000.0	0.21	191.76	3999.4	-43.0	-42.8	21.5	0.12	47.9	153.36
4100.0	0.24	239.26	4099.4	-43.3	-43.1	21.3	0.18	48.1	153.75
4200.0	0.30	244.21	4199.4	-43.5	-43.3	20.8	0.06	48.1	154.31
4300.0	0.28	239.60	4299.4	-43.7	-43.6	20.4	0.03	48.1	154.91
4400.0	0.44	277.23	4399.4	-43.8	-43.6	19.8	0.28	47.9	155.59
4500.0	0.56	275.84	4499.4	-43.7	-43.5	18.9	0.12	47.5	156.49
4600.0	0.42	262.33	4599.4	-43.7	-43.5	18.1	0.18	47.2	157.44
4700.0	0.49	287.95	4699.4	-43.6	-43.5	17.3	0.21	46.8	158.27
4800.0	0.62	259.90	4799.4	-43.6	-43.4	16.4	0.30	46.4	159.33



Scientific
Drilling

Scientific Drilling International, Inc.

Survey Report

Company: XTO ENERGY INC.	Date: 4/22/2010	Time: 11:51:23	Page: 2
Field: Vacuum, North	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: North Vacuum Abo #308H	Section (VS) Reference:	Well (0.00N,0.00E,359.51Azi)	
Wellpath: VH - Job #32K0410268	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.0	0.46	258.07	4899.4	-43.7	-43.6	15.5	0.16	46.3	160.48
5000.0	0.62	248.04	4999.4	-44.0	-43.9	14.6	0.19	46.2	161.64
5100.0	0.59	287.69	5099.4	-44.0	-43.9	13.6	0.41	46.0	162.84
5200.0	0.66	265.87	5199.4	-43.9	-43.8	12.5	0.25	45.6	164.07
5300.0	0.68	271.68	5299.4	-43.9	-43.8	11.3	0.07	45.3	165.50
5400.0	0.64	273.35	5399.4	-43.9	-43.8	10.2	0.04	45.0	166.91
5500.0	0.61	271.37	5499.4	-43.8	-43.7	9.1	0.04	44.7	168.25
5600.0	0.60	252.87	5599.4	-44.0	-43.9	8.1	0.19	44.6	169.59
5700.0	0.87	252.26	5699.3	-44.3	-44.3	6.8	0.27	44.8	171.22
5800.0	0.78	249.41	5799.3	-44.8	-44.7	5.5	0.10	45.1	173.02
5900.0	0.80	249.55	5899.3	-45.3	-45.2	4.2	0.02	45.4	174.71
6000.0	0.52	183.10	5999.3	-46.0	-45.9	3.5	0.76	46.1	175.63
6100.0	0.85	154.04	6099.3	-47.1	-47.0	3.8	0.47	47.2	175.37
6200.0	0.80	144.08	6199.3	-48.3	-48.3	4.5	0.15	48.5	174.62
6300.0	0.99	148.77	6299.3	-49.6	-49.6	5.4	0.20	49.9	173.78
6400.0	0.77	150.98	6399.3	-51.0	-50.9	6.2	0.22	51.3	173.08
6500.0	0.96	156.36	6499.3	-52.3	-52.3	6.8	0.21	52.7	172.55
6600.0	0.68	159.72	6599.3	-53.6	-53.6	7.4	0.28	54.1	172.16
6700.0	0.78	166.53	6699.2	-54.9	-54.8	7.7	0.13	55.4	171.96
6800.0	0.70	166.07	6799.2	-56.1	-56.1	8.0	0.08	56.6	171.83
6900.0	0.79	185.21	6899.2	-57.4	-57.3	8.1	0.26	57.9	171.93
7000.0	0.69	171.86	6999.2	-58.7	-58.6	8.2	0.20	59.2	172.08
7100.0	0.73	171.50	7099.2	-59.9	-59.8	8.3	0.04	60.4	172.07
7200.0	0.77	184.15	7199.2	-61.2	-61.1	8.4	0.17	61.7	172.19
7300.0	0.94	190.77	7299.2	-62.7	-62.6	8.2	0.20	63.2	172.56
7400.0	0.74	192.16	7399.2	-64.1	-64.1	7.9	0.20	64.5	172.98
7500.0	1.04	198.10	7499.2	-65.6	-65.6	7.5	0.31	66.0	173.50
7600.0	0.65	193.10	7599.2	-67.0	-67.0	7.1	0.40	67.3	173.98
7700.0	0.71	198.40	7699.2	-68.2	-68.1	6.7	0.09	68.4	174.35
7800.0	0.61	200.53	7799.1	-69.3	-69.2	6.4	0.10	69.5	174.75
7900.0	0.33	248.72	7899.1	-69.8	-69.8	5.9	0.46	70.1	175.17
8000.0	0.30	8.65	7999.1	-69.7	-69.6	5.7	0.55	69.9	175.34
8100.0	0.45	14.80	8099.1	-69.1	-69.0	5.8	0.16	69.3	175.19
8200.0	0.95	37.47	8199.1	-68.0	-68.0	6.4	0.56	68.3	174.61
8215.0	0.74	33.11	8214.1	-67.8	-67.8	6.5	1.46	68.1	174.49



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SUR @ P-26-17s-34e, 380/S & 350/E
BHL @ A-26--17s-34e, 4949/S & 428/E
API # 30-025-39694

XTO

Lea County
North Vacuum Abo Unit
#308H
OH

Survey: MWD #1

Pathfinder X & Y Survey Report

03 May, 2010

PATHFINDER



Pathfinder
Pathfinder X & Y Survey Report



Company: XTO
Project: Lea County
Site: North Vacuum Abo Unit
Well: #308H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #308H
TVD Reference: WELL @ 4029.00ft (19' KB)
MD Reference: WELL @ 4029.00ft (19' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey Program		Date 05/03/2010									
From (ft)	To (ft)	Survey (Wellbore)	Tool Name		Description						
100.00	8,215.00	Survey #1 (OH)	Gyro		GYRO						
8,237.00	13,365.00	MWD #1 (OH)	MWD		MWD - Standard						

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
8,215.00	0.74	33.11	8,214.13	4,185.13	-67.79	6.54	-67.84	0.00	655,507.31	748,930.14	
8,237.00	1.06	22.60	8,236.13	4,207.13	-67.48	6.70	-67.54	1.63	655,507.62	748,930.30	
8,267.00	1.85	10.65	8,266.12	4,237.12	-66.75	6.90	-66.81	2.81	655,508.35	748,930.50	
8,298.00	3.78	0.37	8,297.08	4,268.08	-65.24	7.00	-65.30	6.41	655,509.86	748,930.60	
8,329.00	5.89	356.67	8,327.97	4,298.97	-62.63	6.91	-62.69	6.88	655,512.47	748,930.51	
8,361.00	8.00	353.86	8,359.73	4,330.73	-58.77	6.58	-58.83	6.68	655,516.33	748,930.18	
8,392.00	10.11	351.67	8,390.34	4,361.34	-53.94	5.95	-53.99	6.90	655,521.16	748,929.55	
8,423.00	12.49	351.23	8,420.74	4,391.74	-47.93	5.05	-47.97	7.68	655,527.17	748,928.65	
8,454.00	14.86	352.19	8,450.86	4,421.86	-40.68	3.99	-40.71	7.68	655,534.42	748,927.59	
8,484.00	17.06	353.07	8,479.70	4,450.70	-32.50	2.94	-32.52	7.38	655,542.60	748,926.54	
8,515.00	19.08	354.13	8,509.17	4,480.17	-22.94	1.87	-22.96	6.60	655,552.16	748,925.47	
8,545.00	21.28	355.80	8,537.33	4,508.33	-12.63	0.97	-12.64	7.58	655,562.47	748,924.57	
8,576.00	23.57	357.03	8,565.98	4,536.98	-0.83	0.24	-0.84	7.54	655,574.27	748,923.84	
8,607.00	25.41	358.08	8,594.19	4,565.19	12.00	-0.30	12.01	6.10	655,587.10	748,923.30	
8,638.00	26.82	358.52	8,622.03	4,593.03	25.64	-0.71	25.65	4.59	655,600.74	748,922.89	
8,669.00	29.11	359.31	8,649.40	4,620.40	40.18	-0.98	40.18	7.48	655,615.28	748,922.62	
8,700.00	31.39	0.10	8,676.18	4,647.18	55.79	-1.06	55.80	7.47	655,630.89	748,922.54	
8,730.00	33.85	359.93	8,701.45	4,672.45	71.96	-1.05	71.97	8.21	655,647.06	748,922.55	
8,761.00	35.70	359.49	8,726.91	4,697.91	89.64	-1.14	89.65	6.02	655,664.74	748,922.46	
8,792.00	37.72	359.49	8,751.76	4,722.76	108.17	-1.31	108.18	6.52	655,683.27	748,922.29	
8,823.00	39.57	359.58	8,775.97	4,746.97	127.53	-1.46	127.54	5.97	655,702.63	748,922.14	



Pathfinder
Pathfinder X & Y Survey Report



Company: XTO
Project: Lea County
Site: North Vacuum Abo Unit
Well: #308H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #308H
TVD Reference: WELL @ 4029.00ft (19' KB)
MD Reference: WELL @ 4029.00ft (19' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
8,854.00	41.42	359.58	8,799.54	4,770.54	147.66	-1.61	147.67	5.97	655,722.76	748,921.99	
8,885.00	43.26	359.75	8,822.46	4,793.46	168.54	-1.73	168.55	5.95	655,743.64	748,921.87	
8,916.00	45.29	0.28	8,844.65	4,815.65	190.18	-1.73	190.18	6.66	655,765.28	748,921.87	
8,948.00	47.22	0.72	8,866.78	4,837.78	213.29	-1.52	213.30	6.11	655,788.39	748,922.08	
8,978.00	49.33	1.07	8,886.74	4,857.74	235.68	-1.17	235.68	7.09	655,810.78	748,922.43	
9,009.00	51.88	0.89	8,906.42	4,877.42	259.63	-0.76	259.63	8.24	655,834.73	748,922.84	
9,041.00	54.08	1.07	8,925.68	4,896.68	285.17	-0.33	285.17	6.89	655,860.27	748,923.27	
9,072.00	55.75	0.81	8,943.50	4,914.50	310.54	0.09	310.53	5.43	655,885.64	748,923.69	
9,103.00	57.60	0.28	8,960.53	4,931.53	336.44	0.33	336.42	6.14	655,911.54	748,923.93	
9,134.00	60.59	359.66	8,976.45	4,947.45	363.03	0.32	363.02	9.80	655,938.13	748,923.92	
9,165.00	63.49	359.40	8,990.98	4,961.98	390.41	0.09	390.40	9.38	655,965.51	748,923.69	
9,195.00	65.42	358.87	9,003.92	4,974.92	417.47	-0.32	417.46	6.63	655,992.57	748,923.28	
9,226.00	67.27	357.99	9,016.36	4,987.36	445.86	-1.10	445.85	6.51	656,020.96	748,922.50	
9,258.00	69.03	357.91	9,028.27	4,999.27	475.54	-2.16	475.54	5.50	656,050.64	748,921.44	
9,291.00	71.05	357.91	9,039.53	5,010.53	506.53	-3.29	506.54	6.12	656,081.63	748,920.31	
9,323.00	73.60	358.26	9,049.25	5,020.25	537.00	-4.31	537.02	8.04	656,112.10	748,919.29	
9,355.00	76.06	357.99	9,057.62	5,028.62	567.87	-5.32	567.89	7.73	656,142.97	748,918.28	
9,387.00	78.70	358.08	9,064.61	5,035.61	599.07	-6.39	599.11	8.25	656,174.17	748,917.21	
9,419.00	81.87	357.99	9,070.01	5,041.01	630.59	-7.47	630.63	9.91	656,205.69	748,916.13	
9,450.00	84.33	357.73	9,073.73	5,044.73	661.34	-8.62	661.39	7.98	656,236.44	748,914.98	
9,490.00	86.44	357.55	9,076.95	5,047.95	701.18	-10.26	701.24	5.29	656,276.28	748,913.34	
9,562.00	85.82	355.80	9,081.81	5,052.81	772.89	-14.43	772.99	2.57	656,347.99	748,909.17	
9,594.00	86.26	355.09	9,084.02	5,055.02	804.71	-16.96	804.83	2.61	656,379.81	748,906.64	
9,626.00	88.37	355.88	9,085.52	5,056.52	836.58	-19.48	836.71	7.04	656,411.68	748,904.12	
9,657.00	89.96	357.38	9,085.97	5,056.97	867.52	-21.30	867.67	7.05	656,442.62	748,902.30	
9,689.00	90.48	358.08	9,085.85	5,056.85	899.49	-22.57	899.65	2.73	656,474.59	748,901.03	
9,721.00	90.57	358.08	9,085.56	5,056.56	931.47	-23.64	931.64	0.28	656,506.57	748,899.96	



Pathfinder
Pathfinder X & Y Survey Report



Company: XTO
Project: Lea County
Site: North Vacuum Abo Unit
Well: #308H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #308H
TVD Reference: WELL @ 4029.00ft (19' KB)
MD Reference: WELL @ 4029.00ft (19' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,752.00	89.78	358.08	9,085.46	5,056.46	962.46	-24.68	962.63	2.55	656,537.56	748,898.92
9,816.00	88.55	358.79	9,086.39	5,057.39	1,026.42	-26.43	1,026.61	2.22	656,601.52	748,897.17
9,847.00	89.16	358.26	9,087.01	5,058.01	1,057.41	-27.22	1,057.60	2.61	656,632.51	748,896.38
9,879.00	89.96	358.17	9,087.26	5,058.26	1,089.39	-28.22	1,089.59	2.52	656,664.49	748,895.38
9,910.00	89.87	358.17	9,087.31	5,058.31	1,120.37	-29.21	1,120.58	0.29	656,695.47	748,894.39
9,942.00	89.34	359.05	9,087.53	5,058.53	1,152.36	-29.99	1,152.58	3.21	656,727.46	748,893.61
9,973.00	90.04	359.49	9,087.69	5,058.69	1,183.36	-30.38	1,183.58	2.67	656,758.46	748,893.22
10,005.00	88.64	0.28	9,088.06	5,059.06	1,215.36	-30.45	1,215.57	5.02	656,790.46	748,893.15
10,037.00	87.41	0.89	9,089.16	5,060.16	1,247.33	-30.12	1,247.55	4.29	656,822.43	748,893.48
10,068.00	88.02	1.25	9,090.40	5,061.40	1,278.30	-29.54	1,278.51	2.28	656,853.40	748,894.06
10,100.00	88.90	1.16	9,091.26	5,062.26	1,310.29	-28.87	1,310.48	2.76	656,885.39	748,894.73
10,131.00	89.16	0.81	9,091.79	5,062.79	1,341.28	-28.34	1,341.47	1.41	656,916.38	748,895.26
10,163.00	88.20	0.63	9,092.52	5,063.52	1,373.27	-27.93	1,373.45	3.05	656,948.37	748,895.67
10,195.00	88.55	0.37	9,093.43	5,064.43	1,405.25	-27.65	1,405.44	1.36	656,980.35	748,895.95
10,226.00	89.08	0.45	9,094.07	5,065.07	1,436.24	-27.43	1,436.43	1.73	657,011.34	748,896.17
10,258.00	88.81	0.01	9,094.66	5,065.66	1,468.24	-27.30	1,468.42	1.61	657,043.34	748,896.30
10,296.00	87.58	359.58	9,095.86	5,066.86	1,506.22	-27.44	1,506.40	3.43	657,081.32	748,896.16
10,328.00	86.44	358.79	9,097.53	5,068.53	1,538.17	-27.89	1,538.35	4.33	657,113.27	748,895.71
10,359.00	84.15	359.66	9,100.07	5,071.07	1,569.06	-28.31	1,569.25	7.90	657,144.16	748,895.29
10,391.00	84.59	359.40	9,103.21	5,074.21	1,600.91	-28.57	1,601.09	1.60	657,176.01	748,895.03
10,423.00	86.61	359.04	9,105.66	5,076.66	1,632.81	-29.01	1,632.99	6.41	657,207.91	748,894.59
10,455.00	87.67	358.96	9,107.26	5,078.26	1,664.76	-29.57	1,664.95	3.32	657,239.86	748,894.03
10,486.00	88.64	359.14	9,108.26	5,079.26	1,695.74	-30.08	1,695.94	3.18	657,270.84	748,893.52
10,518.00	87.76	359.66	9,109.26	5,080.26	1,727.72	-30.42	1,727.92	3.19	657,302.82	748,893.18
10,550.00	86.44	0.45	9,110.88	5,081.88	1,759.68	-30.38	1,759.88	4.81	657,334.78	748,893.22
10,581.00	87.05	0.28	9,112.64	5,083.64	1,790.63	-30.19	1,790.82	2.04	657,365.73	748,893.41
10,613.00	87.67	0.10	9,114.12	5,085.12	1,822.60	-30.08	1,822.79	2.02	657,397.70	748,893.52



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10,644.00	86.61	0.28	9,115.66	5,086.66	1,853.56	-29.98	1,853.74	3.47	657,428.66	748,893.62	
10,676.00	85.03	0.72	9,118.00	5,089.00	1,885.47	-29.70	1,885.65	5.12	657,460.57	748,893.90	
10,708.00	85.38	0.63	9,120.67	5,091.67	1,917.35	-29.32	1,917.53	1.13	657,492.45	748,894.28	
10,739.00	85.91	0.81	9,123.02	5,094.02	1,948.26	-28.94	1,948.44	1.81	657,523.36	748,894.66	
10,771.00	87.05	0.37	9,124.99	5,095.99	1,980.20	-28.61	1,980.37	3.82	657,555.30	748,894.99	
10,803.00	85.47	0.01	9,127.08	5,098.08	2,012.13	-28.50	2,012.30	5.06	657,587.23	748,895.10	
10,834.00	84.15	359.31	9,129.88	5,100.88	2,043.00	-28.68	2,043.17	4.82	657,618.10	748,894.92	
10,866.00	84.50	359.14	9,133.04	5,104.04	2,074.84	-29.12	2,075.01	1.21	657,649.94	748,894.48	
10,898.00	85.12	358.87	9,135.94	5,106.94	2,106.71	-29.67	2,106.88	2.11	657,681.81	748,893.93	
10,929.00	86.09	358.35	9,138.32	5,109.32	2,137.60	-30.42	2,137.79	3.55	657,712.70	748,893.18	
10,961.00	86.70	358.35	9,140.33	5,111.33	2,169.53	-31.34	2,169.72	1.91	657,744.63	748,892.26	
10,993.00	87.41	357.55	9,141.97	5,112.97	2,201.47	-32.48	2,201.66	3.34	657,776.57	748,891.12	
11,024.00	88.20	357.20	9,143.16	5,114.16	2,232.41	-33.90	2,232.62	2.79	657,807.51	748,889.70	
11,056.00	87.85	357.38	9,144.26	5,115.26	2,264.35	-35.41	2,264.57	1.23	657,839.45	748,888.19	
11,088.00	87.85	358.08	9,145.46	5,116.46	2,296.31	-36.68	2,296.54	2.19	657,871.41	748,886.92	
11,119.00	86.53	357.64	9,146.98	5,117.98	2,327.25	-37.83	2,327.49	4.49	657,902.35	748,885.77	
11,151.00	85.03	358.08	9,149.34	5,120.34	2,359.14	-39.03	2,359.38	4.88	657,934.24	748,884.57	
11,183.00	85.56	358.08	9,151.96	5,122.96	2,391.01	-40.10	2,391.27	1.66	657,966.11	748,883.50	
11,214.00	86.00	358.35	9,154.24	5,125.24	2,421.91	-41.06	2,422.17	1.66	657,997.01	748,882.54	
11,246.00	85.30	358.43	9,156.67	5,127.67	2,453.81	-41.95	2,454.08	2.20	658,028.91	748,881.65	
11,278.00	83.71	358.70	9,159.73	5,130.73	2,485.65	-42.75	2,485.92	5.04	658,060.75	748,880.85	
11,309.00	83.98	358.52	9,163.06	5,134.06	2,516.46	-43.50	2,516.74	1.04	658,091.56	748,880.10	
11,341.00	84.24	358.79	9,166.34	5,137.34	2,548.28	-44.25	2,548.57	1.17	658,123.38	748,879.35	
11,373.00	84.86	358.61	9,169.38	5,140.38	2,580.13	-44.97	2,580.42	2.02	658,155.23	748,878.63	
11,404.00	85.74	358.08	9,171.92	5,142.92	2,611.01	-45.86	2,611.31	3.31	658,186.11	748,877.74	
11,435.00	86.70	357.82	9,173.96	5,144.96	2,641.93	-46.97	2,642.23	3.21	658,217.03	748,876.63	
11,467.00	85.47	358.79	9,176.15	5,147.15	2,673.84	-47.91	2,674.15	4.89	658,248.94	748,875.69	



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11,499.00	84.77	0.19	9,178.87	5,149.87	2,705.72	-48.20	2,706.03	4.88	658,280.82	748,875.40	
11,530.00	85.38	0.28	9,181.53	5,152.53	2,736.60	-48.07	2,736.91	1.99	658,311.70	748,875.53	
11,562.00	85.91	0.63	9,183.96	5,154.96	2,768.51	-47.82	2,768.82	1.98	658,343.61	748,875.78	
11,593.00	87.05	0.63	9,185.87	5,156.87	2,799.45	-47.48	2,799.75	3.68	658,374.55	748,876.12	
11,625.00	88.29	0.19	9,187.17	5,158.17	2,831.42	-47.25	2,831.72	4.11	658,406.52	748,876.35	
11,657.00	87.58	359.84	9,188.32	5,159.32	2,863.40	-47.24	2,863.70	2.47	658,438.50	748,876.36	
11,688.00	87.49	0.28	9,189.65	5,160.65	2,894.37	-47.21	2,894.67	1.45	658,469.47	748,876.39	
11,720.00	85.30	0.10	9,191.67	5,162.67	2,926.30	-47.10	2,926.60	6.87	658,501.40	748,876.50	
11,752.00	86.09	0.10	9,194.07	5,165.07	2,958.21	-47.05	2,958.51	2.47	658,533.31	748,876.55	
11,783.00	85.12	359.93	9,196.44	5,167.44	2,989.12	-47.04	2,989.42	3.18	658,564.22	748,876.56	
11,815.00	85.82	359.66	9,198.97	5,169.97	3,021.02	-47.15	3,021.32	2.34	658,596.12	748,876.45	
11,847.00	86.17	359.31	9,201.21	5,172.21	3,052.94	-47.44	3,053.24	1.54	658,628.04	748,876.16	
11,878.00	86.26	359.22	9,203.25	5,174.25	3,083.87	-47.84	3,084.17	0.41	658,658.97	748,875.76	
11,910.00	87.14	358.96	9,205.09	5,176.09	3,115.82	-48.34	3,116.11	2.87	658,690.92	748,875.26	
11,942.00	88.20	359.05	9,206.39	5,177.39	3,147.78	-48.90	3,148.09	3.32	658,722.88	748,874.70	
11,973.00	88.11	359.22	9,207.39	5,178.39	3,178.76	-49.37	3,179.07	0.62	658,753.86	748,874.23	
12,005.00	86.97	359.31	9,208.77	5,179.77	3,210.73	-49.78	3,211.04	3.57	658,785.83	748,873.82	
12,037.00	87.58	359.40	9,210.29	5,181.29	3,242.69	-50.14	3,243.00	1.93	658,817.79	748,873.46	
12,068.00	88.64	359.14	9,211.31	5,182.31	3,273.67	-50.53	3,273.99	3.52	658,848.77	748,873.07	
12,100.00	89.96	358.79	9,211.70	5,182.70	3,305.66	-51.11	3,305.98	4.27	658,880.76	748,872.49	
12,131.00	88.99	358.87	9,211.99	5,182.99	3,336.66	-51.74	3,336.98	3.14	658,911.76	748,871.86	
12,163.00	87.93	359.05	9,212.84	5,183.84	3,368.64	-52.32	3,368.96	3.36	658,943.74	748,871.28	
12,194.00	88.02	359.05	9,213.94	5,184.94	3,399.62	-52.84	3,399.94	0.29	658,974.72	748,870.76	
12,226.00	88.46	358.43	9,214.92	5,185.92	3,431.59	-53.54	3,431.92	2.38	659,006.69	748,870.06	
12,257.00	88.99	358.61	9,215.61	5,186.61	3,462.57	-54.34	3,462.91	1.81	659,037.67	748,869.26	
12,289.00	89.60	358.35	9,216.01	5,187.01	3,494.56	-55.19	3,494.90	2.07	659,069.66	748,868.41	
12,320.00	90.22	357.99	9,216.06	5,187.06	3,525.54	-56.18	3,525.90	2.31	659,100.64	748,867.42	



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12,352.00	91.01	357.99	9,215.71	5,186.71	3,557.52	-57.30	3,557.88	2.47	659,132.62	748,866.30	
12,384.00	90.57	357.73	9,215.27	5,186.27	3,589.50	-58.50	3,589.87	1.60	659,164.60	748,865.10	
12,415.00	89.60	358.52	9,215.22	5,186.22	3,620.48	-59.51	3,620.86	4.04	659,195.58	748,864.09	
12,447.00	90.04	358.70	9,215.33	5,186.33	3,652.47	-60.29	3,652.85	1.49	659,227.57	748,863.31	
12,478.00	89.08	359.49	9,215.56	5,186.56	3,683.46	-60.78	3,683.85	4.01	659,258.56	748,862.82	
12,510.00	87.23	359.31	9,216.59	5,187.59	3,715.45	-61.11	3,715.83	5.81	659,290.55	748,862.49	
12,542.00	85.38	359.22	9,218.66	5,189.66	3,747.37	-61.52	3,747.76	5.79	659,322.47	748,862.08	
12,574.00	86.09	359.49	9,221.04	5,192.04	3,779.28	-61.88	3,779.67	2.37	659,354.38	748,861.72	
12,605.00	86.79	359.40	9,222.96	5,193.96	3,810.22	-62.18	3,810.61	2.28	659,385.32	748,861.42	
12,637.00	87.14	359.14	9,224.65	5,195.65	3,842.17	-62.59	3,842.57	1.36	659,417.27	748,861.01	
12,668.00	88.11	358.79	9,225.94	5,196.94	3,873.14	-63.15	3,873.54	3.33	659,448.24	748,860.45	
12,700.00	88.81	358.61	9,226.80	5,197.80	3,905.12	-63.87	3,905.53	2.26	659,480.22	748,859.73	
12,731.00	88.11	359.93	9,227.63	5,198.63	3,936.11	-64.27	3,936.51	4.82	659,511.21	748,859.33	
12,763.00	87.85	1.16	9,228.76	5,199.76	3,968.09	-63.96	3,968.49	3.93	659,543.19	748,859.64	
12,795.00	88.20	0.98	9,229.86	5,200.86	4,000.06	-63.36	4,000.46	1.23	659,575.16	748,860.24	
12,826.00	88.72	1.51	9,230.70	5,201.70	4,031.04	-62.69	4,031.43	2.39	659,606.14	748,860.91	
12,858.00	87.85	1.69	9,231.65	5,202.65	4,063.02	-61.80	4,063.40	2.78	659,638.12	748,861.80	
12,889.00	88.29	1.86	9,232.70	5,203.70	4,093.98	-60.84	4,094.35	1.52	659,669.08	748,862.76	
12,921.00	87.05	1.86	9,234.00	5,205.00	4,125.94	-59.80	4,126.30	3.87	659,701.04	748,863.80	
12,952.00	87.14	2.12	9,235.57	5,206.57	4,156.88	-58.73	4,157.23	0.89	659,731.98	748,864.87	
12,984.00	87.67	1.77	9,237.02	5,208.02	4,188.83	-57.64	4,189.17	1.98	659,763.93	748,865.96	
13,015.00	87.49	0.19	9,238.33	5,209.33	4,219.80	-57.11	4,220.13	5.13	659,794.90	748,866.49	
13,047.00	87.32	358.17	9,239.78	5,210.78	4,251.76	-57.57	4,252.10	6.33	659,826.86	748,866.03	
13,079.00	87.67	357.55	9,241.18	5,212.18	4,283.71	-58.76	4,284.05	2.22	659,858.81	748,864.84	
13,110.00	88.72	357.03	9,242.15	5,213.15	4,314.65	-60.23	4,315.01	3.78	659,889.75	748,863.37	
13,142.00	89.52	356.67	9,242.64	5,213.64	4,346.60	-61.99	4,346.97	2.74	659,921.70	748,861.61	
13,173.00	90.13	356.67	9,242.74	5,213.74	4,377.55	-63.79	4,377.93	1.97	659,952.65	748,859.81	



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13,205.00	89.43	356.06	9,242.86	5,213.86	4,409.48	-65.82	4,409.89	2.90	659,984.58	748,857.78
13,237.00	89.78	355.97	9,243.08	5,214.08	4,441.41	-68.04	4,441.83	1.13	660,016.51	748,855.56
13,268.00	90.66	355.62	9,242.96	5,213.96	4,472.32	-70.31	4,472.76	3.05	660,047.42	748,853.29
13,300.00	91.45	355.45	9,242.37	5,213.37	4,504.22	-72.80	4,504.68	2.53	660,079.32	748,850.80
13,315.00	91.63	355.36	9,241.97	5,212.97	4,519.17	-74.00	4,519.63	1.34	660,094.27	748,849.60
13,365.00	91.63	355.36	9,240.55	5,211.55	4,568.98	-78.05	4,569.48	0.00	660,144.08	748,845.55

BHL-13365.00'MD,91.63°INC,355.36°AZI, 9240.55'TVD, 4569.48'VS, 4568.98'N, -78.05'E - PBHL(#308H)

Targets

Target Name
- hit/miss target
- Shape

Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
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PBHL(#308H)	0.00	0.00	9,245.00	4,575.80	-60.40	660,150.900	748,863.200	32° 48' 44.001 N	103° 31' 23.969 W
- survey misses target center by 19.44ft at 13365.00ft MD (9240.55 TVD, 4568.98 N, -78.05 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
13,365.00	9,240.55	4,568.98	-78.05	BHL-13365.00'MD,91.63°INC,355.36°AZI, 9240.55'TVD, 4569.48'VS, 4

Checked By: _____ Approved By: _____ Date: _____



Project: Lea County
 Site: North Vacuum Abo Unit
 Well: #308H
 Wellbore: OH
 Plan: Plan #6 (#308H/OH)



Azimuths to Grid North
 True North: -0.44°
 Magnetic North: 7.31°

Magnetic Field
 Strength: 49080.7nT
 Dip Angle: 60.76°
 Date: 04/18/2010
 Model: IGRF2010



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	D-Log	T-Base	V-Sec	Target
1	11615.00	85.82	359.66	9198.97	3021.02	-47.15	0.00	0.00	3021.32	
2	11900.29	85.37	359.51	9203.29	-106.20	-47.77	3.00	-3.41	3106.49	
3	13370.54	86.37	359.51	9245.00	4575.80	-60.40	0.00	0.00	4576.15	PBHL(#308H)

WELL DETAILS: #308H

Ground Elevation: 4010.00
 RKB Elevation: WELL @ 4029.00ft (19' KB)
 Rig Name: 19' KB

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	655975.100	745923.600	32° 47' 58.721 N	103° 31' 23.672 W	

PROJECT DETAILS: Lea County
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level
 Local North: Grid

LEGEND

- #308H, OH, MWD #1
- Plan #6

