

Results of Directional Survey

API number:	30-025-40730		
OGRID:		Operator:	BC OPERATING, INC.
		Property:	MIDWAY 22 STATE # 1H

surface	ULSTR:	B	22	T	17S	R	36E
				330	FNL	1980	FEL

BH Loc	ULSTR:	O	22	T	17S	R	36E
14560	MD	10141.0	TVD	289	FSL	1881	FEL
				4991	FNL		

Top Perf/OH	ULSTR:	B	22	T	17S	R	36E
10240	MD	10073.9	TVD	679	FNL	1958	FEL

Bot Perf/OH	ULSTR:	O	22	T	17S	R	36E
14450	MD	10138.3	TVD	399	FSL	1881	FEL
				4881	FNL		

	MD	N/S	E/W	VD
	10237	-346.70	21.70	10072.8
TOP PERFS/OH	10240	-349.48	21.71	10073.91
	10269	-376.40	21.80	10084.60
	14383	-4484.10	98.80	10137.10
BOT PERFS/OH	14450	-4551.10	98.94	10138.30
	14478	-4579.10	99.00	10138.80

NEXT TO LAST	14517	-4618.10	99.20	10139.80
LAST READING	14560	-4661.00	99.50	10141.00
TD	14560	-4661.00	99.50	10141.00

Surface Location	330	FN	1980	FE
Projected BHL	4991	FN	1881	FE
Location of				
Top Perfs/OH	679	FN	1958	FE
Bottom Perfs/OH	4881	FN	1881	FE

SUMMARY of Subsurface Locations

Surface Location	B-22-17S-36E	330	FN	1980	FE	Vert. Depth
Top Perfs/OH	B-22-17S-36E	679	FN	1958	FE	10073.91
Bottom Perfs/OH	O-22-17S-36E	4881	FN	1881	FE	10138.30
Projected TD	O-22-17S-36E	4991	FN	1881	FE	10141.00

MAR 14 2013

30-025-40730



A Schlumberger Company

BC Operating Inc.

Lea County (NAD 27)

Midway 22 State

#1H

ST01

Design: ST01

Pathfinder X&Y Report

20 December, 2012



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Pathfinder Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Site Midway 22 State
TVD Reference: KB = 22' @ 3863.0usft (Nabors M45)
MD Reference: KB = 22' @ 3863.0usft (Nabors M45)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project: Lea County (NAD 27)

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site: Midway 22 State

Site Position:	Northing: 665,886.800 usft	Latitude: 32.826666
From: Map	Easting: 805,222.200 usft	Longitude: -103.339732
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.54 °

Well: #1H

Well Position	+N/-S 0.0 usft	Northing: 665,886.800 usft	Latitude: 32.826666
	+E/-W 0.0 usft	Easting: 805,222.200 usft	Longitude: -103.339732
Position Uncertainty	0.0 usft	Wellhead Elevation: usft	Ground Level: 3,841.0 usft

Wellbore: ST01

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/27/2012	7.33	60.77	48,895

Design: ST01

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 9,411.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.41



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Survey Program Date 12/20/2012

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
222.0	9,411.0	MWD #1 (OH)	MWD	MWD - Standard
9,445.0	14,560.0	MWD #2 (ST01)	MWD	MWD - Standard

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,863.0	0.0	0.0	0.0	0.00	665,886.80	805,222.20
222.0	0.90	82.70	222.0	-3,641.0	0.2	1.7	-0.2	0.41	665,887.02	805,223.93
312.0	0.60	57.30	312.0	-3,551.0	0.6	2.8	-0.5	0.49	665,887.37	805,225.03
408.0	0.80	126.30	408.0	-3,455.0	0.4	3.8	-0.4	0.84	665,887.24	805,225.99
532.0	0.60	80.60	532.0	-3,331.0	0.0	5.1	0.0	0.46	665,886.83	805,227.33
718.0	1.20	43.60	717.9	-3,145.1	1.6	7.4	-1.5	0.43	665,888.40	805,229.63
901.0	1.40	347.20	900.9	-2,962.1	5.2	8.3	-5.1	0.68	665,891.97	805,230.46
1,087.0	2.50	336.20	1,086.8	-2,776.2	11.1	6.1	-11.0	0.62	665,897.90	805,228.32
1,273.0	1.60	16.00	1,272.7	-2,590.3	17.3	5.2	-17.3	0.88	665,904.11	805,227.40
1,463.0	3.00	136.50	1,462.6	-2,400.4	16.3	9.4	-16.2	2.13	665,903.05	805,231.55
1,653.0	1.20	243.50	1,652.5	-2,210.5	11.8	11.0	-11.6	1.86	665,898.55	805,233.19
1,844.0	2.20	269.00	1,843.4	-2,019.6	10.8	5.5	-10.7	0.64	665,897.60	805,227.74
2,034.0	3.00	252.10	2,033.2	-1,829.8	9.2	-2.8	-9.2	0.58	665,896.01	805,219.36
2,130.0	3.30	246.30	2,129.1	-1,733.9	7.3	-7.8	-7.4	0.46	665,894.12	805,214.44
2,225.0	2.50	239.50	2,224.0	-1,639.0	5.2	-12.0	-5.3	0.92	665,891.97	805,210.15
2,319.0	1.30	232.70	2,317.9	-1,545.1	3.5	-14.7	-3.6	1.30	665,890.29	805,207.54
2,414.0	1.00	218.50	2,412.9	-1,450.1	2.2	-16.0	-2.4	0.43	665,888.98	805,206.16
2,509.0	0.30	100.10	2,507.9	-1,355.1	1.5	-16.3	-1.7	1.23	665,888.29	805,205.89
2,605.0	0.70	69.20	2,603.9	-1,259.1	1.7	-15.5	-1.8	0.49	665,888.46	805,206.69
2,700.0	0.70	79.90	2,698.9	-1,164.1	2.0	-14.4	-2.1	0.14	665,888.76	805,207.80
2,795.0	0.90	84.90	2,793.9	-1,069.1	2.1	-13.1	-2.3	0.22	665,888.93	805,209.12



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Pathfinder

Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Site Midway,22 State
TVD Reference: KB = 22' @ 3863.0usft (Nabors M45)
MD Reference: KB = 22' @ 3863.0usft (Nabors M45)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,890.0	0.80	87.70	2,888.9	-974.1	2.2	-11.7	-2.3	0.11	665,889.02	805,210.52
2,985.0	0.70	286.00	2,983.9	-879.1	2.4	-11.6	-2.5	1.56	665,889.21	805,210.63
3,080.0	0.90	292.00	3,078.8	-784.2	2.9	-12.8	-3.0	0.23	665,889.65	805,209.38
3,175.0	0.20	216.50	3,173.8	-689.2	3.0	-13.6	-3.1	0.92	665,889.80	805,208.59
3,270.0	0.50	137.20	3,268.8	-594.2	2.6	-13.4	-2.7	0.53	665,889.36	805,208.77
3,344.0	0.60	141.60	3,342.8	-520.2	2.0	-13.0	-2.2	0.15	665,888.82	805,209.23
3,421.0	0.50	104.60	3,419.8	-443.2	1.6	-12.4	-1.7	0.47	665,888.42	805,209.81
3,516.0	0.70	130.50	3,514.8	-348.2	1.1	-11.6	-1.3	0.35	665,887.94	805,210.65
3,611.0	0.80	100.70	3,609.8	-253.2	0.6	-10.5	-0.7	0.42	665,887.44	805,211.74
3,706.0	0.70	93.30	3,704.8	-158.2	0.5	-9.2	-0.6	0.15	665,887.28	805,212.97
3,801.0	1.00	80.30	3,799.8	-63.2	0.6	-7.8	-0.7	0.37	665,887.39	805,214.37
3,897.0	0.30	82.40	3,895.8	32.8	0.8	-6.8	-0.8	0.73	665,887.56	805,215.44
3,992.0	0.20	51.80	3,990.8	127.8	0.9	-6.4	-1.0	0.17	665,887.70	805,215.82
4,087.0	0.70	78.50	4,085.8	222.8	1.1	-5.7	-1.2	0.56	665,887.91	805,216.52
4,182.0	0.60	76.90	4,180.8	317.8	1.3	-4.6	-1.4	0.11	665,888.14	805,217.57
4,277.0	0.70	68.10	4,275.8	412.8	1.7	-3.6	-1.7	0.15	665,888.47	805,218.60
4,372.0	1.00	71.60	4,370.8	507.8	2.2	-2.3	-2.2	0.32	665,888.95	805,219.92
4,467.0	0.70	64.30	4,465.8	602.8	2.7	-1.0	-2.7	0.34	665,889.46	805,221.23
4,563.0	1.00	69.20	4,561.7	698.7	3.2	0.3	-3.2	0.32	665,890.02	805,222.54
4,658.0	0.50	32.80	4,656.7	793.7	3.9	1.3	-3.8	0.70	665,890.66	805,223.54
4,753.0	0.50	52.80	4,751.7	888.7	4.5	1.9	-4.4	0.18	665,891.26	805,224.10
4,849.0	0.60	55.00	4,847.7	984.7	5.0	2.6	-5.0	0.11	665,891.80	805,224.84
4,944.0	0.80	77.90	4,942.7	1,079.7	5.4	3.7	-5.4	0.36	665,892.22	805,225.90
5,039.0	0.90	88.90	5,037.7	1,174.7	5.6	5.1	-5.5	0.20	665,892.38	805,227.29
5,134.0	0.90	90.10	5,132.7	1,269.7	5.6	6.6	-5.5	0.02	665,892.39	805,228.78
5,229.0	1.10	91.90	5,227.7	1,364.7	5.6	8.2	-5.5	0.21	665,892.36	805,230.44
5,324.0	0.50	128.20	5,322.7	1,459.7	5.3	9.5	-5.2	0.80	665,892.07	805,231.68



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Well: #1H
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Design: ST01

Local Co-ordinate Reference: Site Midway 22 State
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Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,420.0	0.40	102.40	5,418.7	1,555.7	4.9	10.1	-4.8	0.23	665,891.74	805,232.33	
5,515.0	0.30	141.10	5,513.7	1,650.7	4.7	10.6	-4.6	0.26	665,891.48	805,232.81	
5,610.0	0.30	96.50	5,608.7	1,745.7	4.5	11.0	-4.3	0.24	665,891.25	805,233.22	
5,705.0	0.20	57.80	5,703.7	1,840.7	4.5	11.4	-4.4	0.20	665,891.31	805,233.60	
5,800.0	0.40	115.80	5,798.7	1,935.7	4.5	11.8	-4.3	0.36	665,891.26	805,234.04	
5,895.0	0.70	100.90	5,893.7	2,030.7	4.2	12.7	-4.1	0.35	665,891.00	805,234.91	
5,990.0	0.90	101.60	5,988.7	2,125.7	3.9	14.0	-3.8	0.21	665,890.74	805,236.21	
6,086.0	0.90	112.30	6,084.6	2,221.6	3.5	15.4	-3.3	0.17	665,890.31	805,237.65	
6,181.0	1.00	106.80	6,179.6	2,316.6	3.0	16.9	-2.8	0.14	665,889.78	805,239.13	
6,276.0	0.40	94.30	6,274.6	2,411.6	2.7	18.1	-2.5	0.65	665,889.52	805,240.26	
6,371.0	0.40	119.40	6,369.6	2,506.6	2.5	18.7	-2.3	0.18	665,889.33	805,240.88	
6,467.0	0.40	126.50	6,465.6	2,602.6	2.2	19.2	-2.0	0.05	665,888.97	805,241.44	
6,562.0	0.40	101.60	6,560.6	2,697.6	1.9	19.8	-1.7	0.18	665,888.70	805,242.03	
6,657.0	0.50	81.00	6,655.6	2,792.6	1.9	20.6	-1.7	0.20	665,888.70	805,242.76	
6,753.0	0.70	99.30	6,751.6	2,888.6	1.9	21.6	-1.6	0.29	665,888.67	805,243.76	
6,848.0	0.70	76.20	6,846.6	2,983.6	1.9	22.7	-1.7	0.30	665,888.72	805,244.89	
6,943.0	0.50	50.30	6,941.6	3,078.6	2.3	23.6	-2.1	0.35	665,889.12	805,245.77	
7,038.0	0.70	57.90	7,036.6	3,173.6	2.9	24.4	-2.6	0.23	665,889.69	805,246.59	
7,133.0	0.80	27.60	7,131.6	3,268.6	3.8	25.2	-3.5	0.42	665,890.59	805,247.38	
7,228.0	1.10	35.20	7,226.6	3,363.6	5.1	26.0	-4.9	0.34	665,891.92	805,248.22	
7,323.0	0.70	7.80	7,321.6	3,458.6	6.4	26.6	-6.2	0.61	665,893.24	805,248.82	
7,419.0	0.60	24.30	7,417.5	3,554.5	7.5	26.9	-7.2	0.22	665,894.28	805,249.11	
7,514.0	0.50	1.50	7,512.5	3,649.5	8.4	27.1	-8.1	0.25	665,895.15	805,249.32	
7,609.0	0.50	345.70	7,607.5	3,744.5	9.2	27.0	-8.9	0.14	665,895.97	805,249.23	
7,704.0	0.40	3.70	7,702.5	3,839.5	9.9	27.0	-9.6	0.18	665,896.70	805,249.15	
7,799.0	0.50	23.40	7,797.5	3,934.5	10.6	27.1	-10.3	0.19	665,897.41	805,249.34	
7,894.0	0.90	4.50	7,892.5	4,029.5	11.7	27.4	-11.4	0.48	665,898.53	805,249.56	



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7,989.0	1.20	344.50	7,987.5	4,124.5	13.4	27.2	-13.2	0.49	665,900.24	805,249.35
8,084.0	1.00	323.70	8,082.5	4,219.5	15.1	26.4	-14.8	0.47	665,901.86	805,248.60
8,179.0	1.00	320.50	8,177.5	4,314.5	16.4	25.4	-16.1	0.06	665,903.17	805,247.58
8,275.0	1.10	319.30	8,273.5	4,410.5	17.7	24.2	-17.5	0.11	665,904.52	805,246.44
8,390.0	0.90	313.40	8,388.4	4,525.4	19.2	22.9	-18.9	0.20	665,905.97	805,245.07
8,465.0	1.10	317.90	8,463.4	4,600.4	20.1	22.0	-19.9	0.29	665,906.91	805,244.16
8,555.0	2.20	335.60	8,553.4	4,690.4	22.3	20.7	-22.1	1.33	665,909.13	805,242.86
8,650.0	2.30	356.00	8,648.3	4,785.3	25.9	19.8	-25.7	0.84	665,912.69	805,241.98
8,745.0	2.00	8.70	8,743.3	4,880.3	29.4	19.9	-29.2	0.59	665,916.23	805,242.10
8,840.0	1.80	11.40	8,838.2	4,975.2	32.5	20.4	-32.3	0.23	665,919.33	805,242.64
8,935.0	2.60	356.60	8,933.1	5,070.1	36.1	20.6	-35.9	1.03	665,922.94	805,242.81
9,030.0	1.70	342.30	9,028.1	5,165.1	39.6	20.1	-39.4	1.10	665,926.44	805,242.25
9,125.0	1.40	2.00	9,123.0	5,260.0	42.1	19.7	-41.9	0.64	665,928.94	805,241.87
9,220.0	1.50	339.70	9,218.0	5,355.0	44.5	19.3	-44.3	0.60	665,931.27	805,241.47
9,315.0	1.00	350.10	9,313.0	5,450.0	46.4	18.7	-46.3	0.58	665,933.25	805,240.90
9,411.0	0.80	357.20	9,409.0	5,546.0	47.9	18.5	-47.7	0.24	665,934.74	805,240.72
9,445.0	1.14	5.25	9,443.0	5,580.0	48.5	18.5	-48.3	1.07	665,935.32	805,240.74
9,508.0	0.62	79.52	9,506.0	5,643.0	49.2	18.9	-49.0	1.81	665,936.00	805,241.14
KOP - 9508.0 'MD, 9506.0 'TVD, 49.2 'N, 18.9 'E										
9,540.0	2.73	150.39	9,537.9	5,674.9	48.6	19.5	-48.4	8.11	665,935.37	805,241.68
9,572.0	6.16	159.62	9,569.8	5,706.8	46.3	20.5	-46.1	10.91	665,933.10	805,242.66
9,603.0	9.67	164.55	9,600.5	5,737.5	42.2	21.7	-42.0	11.52	665,929.03	805,243.93
9,635.0	13.63	166.54	9,631.9	5,768.9	36.0	23.3	-35.7	12.44	665,922.77	805,245.52
9,667.0	18.11	169.49	9,662.7	5,799.7	27.4	25.1	-27.1	14.22	665,914.21	805,247.31
9,699.0	22.07	174.19	9,692.7	5,829.7	16.5	26.6	-16.3	13.35	665,903.33	805,248.83
9,730.0	25.41	178.94	9,721.1	5,858.1	4.1	27.3	-3.8	12.41	665,890.88	805,249.54
9,762.0	28.23	180.54	9,749.6	5,886.6	-10.4	27.4	10.6	9.10	665,876.45	805,249.60



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Pathfinder
Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Site Midway 22 State
TVD Reference: KB = 22' @ 3863.0usft (Nabors M45)
MD Reference: KB = 22' @ 3863.0usft (Nabors M45)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,794.0	30.60	180.84	9,777.5	5,914.5	-26.1	27.2	26.3	7.42	665,860.73	805,249.40
9,825.0	33.33	181.84	9,803.8	5,940.8	-42.5	26.8	42.7	8.97	665,844.33	805,249.02
9,857.0	35.61	181.01	9,830.2	5,967.2	-60.6	26.4	60.8	7.27	665,826.23	805,248.57
9,889.0	37.20	180.75	9,855.9	5,992.9	-79.6	26.1	79.8	4.99	665,807.24	805,248.28
9,921.0	38.87	181.20	9,881.1	6,018.1	-99.3	25.7	99.5	5.29	665,787.52	805,247.94
9,952.0	40.71	181.26	9,905.0	6,042.0	-119.1	25.3	119.4	5.94	665,767.69	805,247.51
9,983.0	43.53	181.51	9,928.0	6,065.0	-139.9	24.8	140.1	9.11	665,746.91	805,247.01
10,015.0	46.60	181.49	9,950.6	6,087.6	-162.5	24.2	162.8	9.59	665,724.26	805,246.42
10,047.0	49.77	181.12	9,971.9	6,108.9	-186.4	23.7	186.6	9.94	665,700.42	805,245.88
10,079.0	52.85	181.07	9,991.9	6,128.9	-211.3	23.2	211.6	9.63	665,675.45	805,245.40
10,110.0	55.75	181.14	10,010.0	6,147.0	-236.5	22.7	236.7	9.36	665,650.29	805,244.91
10,142.0	57.60	181.34	10,027.6	6,164.6	-263.2	22.1	263.5	5.80	665,623.56	805,244.34
10,174.0	59.79	180.68	10,044.2	6,181.2	-290.6	21.7	290.8	7.07	665,596.22	805,243.86
10,205.0	62.78	179.83	10,059.1	6,196.1	-317.8	21.5	318.0	9.94	665,569.04	805,243.74
10,237.0	66.39	179.70	10,072.8	6,209.8	-346.7	21.7	346.9	11.29	665,540.14	805,243.86
10,269.0	70.17	179.84	10,084.6	6,221.6	-376.4	21.8	376.6	11.82	665,510.42	805,243.98
10,300.0	73.95	179.88	10,094.2	6,231.2	-405.9	21.8	406.1	12.19	665,480.93	805,244.05
10,332.0	78.00	179.96	10,101.9	6,238.9	-436.9	21.9	437.1	12.66	665,449.89	805,244.09
10,364.0	82.04	180.26	10,107.5	6,244.5	-468.4	21.8	468.6	12.66	665,418.38	805,244.03
10,395.0	86.17	180.39	10,110.7	6,247.7	-499.2	21.7	499.4	13.33	665,387.55	805,243.85
10,490.0	88.72	180.57	10,114.9	6,251.9	-594.1	20.9	594.3	2.69	665,292.66	805,243.06
LP - 10490.0 'MD, 10114.9 'TVD, -594.1 'N, 20.9 'E										
10,585.0	89.25	180.94	10,116.6	6,253.6	-689.1	19.6	689.3	0.68	665,197.68	805,241.81
10,680.0	89.43	180.29	10,117.7	6,254.7	-784.1	18.6	784.3	0.71	665,102.69	805,240.79
10,775.0	89.43	179.76	10,118.6	6,255.6	-879.1	18.5	879.2	0.56	665,007.70	805,240.75
10,870.0	89.43	179.10	10,119.6	6,256.6	-974.1	19.5	974.2	0.69	664,912.71	805,241.69
10,965.0	89.25	179.01	10,120.7	6,257.7	-1,069.1	21.1	1,069.2	0.21	664,817.73	805,243.26



A Schlumberger Company

Pathfinder Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Site Midway 22 State
KB = 22' @ 3863.0usft (Nabors M45)
KB = 22' @ 3863.0usft (Nabors M45)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
11,060.0	89.34	178.67	10,121.8	6,258.8	-1,164.0	23.0	1,164.2	0.37	664,722.75	805,245.18	
11,155.0	89.60	177.95	10,122.7	6,259.7	-1,259.0	25.8	1,259.2	0.81	664,627.80	805,247.98	
11,251.0	89.78	178.16	10,123.2	6,260.2	-1,354.9	29.0	1,355.2	0.29	664,531.86	805,251.24	
11,346.0	90.75	178.10	10,122.8	6,259.8	-1,449.9	32.1	1,450.1	1.02	664,436.91	805,254.34	
11,441.0	90.75	177.98	10,121.6	6,258.6	-1,544.8	35.4	1,545.1	0.13	664,341.97	805,257.59	
11,536.0	90.92	178.31	10,120.2	6,257.2	-1,639.8	38.5	1,640.1	0.39	664,247.03	805,260.66	
11,631.0	90.92	177.67	10,118.6	6,255.6	-1,734.7	41.8	1,735.0	0.67	664,152.11	805,264.00	
11,726.0	89.87	178.05	10,118.0	6,255.0	-1,829.6	45.3	1,830.0	1.18	664,057.18	805,267.54	
11,821.0	88.64	177.87	10,119.2	6,256.2	-1,924.6	48.7	1,925.0	1.31	663,962.25	805,270.92	
11,916.0	90.13	177.90	10,120.2	6,257.2	-2,019.5	52.2	2,019.9	1.57	663,867.32	805,274.43	
12,011.0	91.28	178.14	10,119.1	6,256.1	-2,114.4	55.5	2,114.9	1.24	663,772.38	805,277.71	
12,106.0	91.98	178.43	10,116.4	6,253.4	-2,209.3	58.4	2,209.8	0.80	663,677.47	805,280.55	
12,201.0	91.63	178.08	10,113.4	6,250.4	-2,304.2	61.2	2,304.8	0.52	663,582.56	805,283.45	
12,246.0	92.24	177.83	10,111.9	6,248.9	-2,349.2	62.9	2,349.7	1.46	663,537.61	805,285.05	
12,296.0	91.36	177.62	10,110.3	6,247.3	-2,399.1	64.8	2,399.7	1.81	663,487.68	805,287.03	
12,348.0	90.57	177.22	10,109.4	6,246.4	-2,451.1	67.2	2,451.6	1.70	663,435.74	805,289.38	
12,392.0	90.04	176.74	10,109.2	6,246.2	-2,495.0	69.5	2,495.6	1.63	663,391.80	805,291.69	
12,437.0	89.34	176.39	10,109.4	6,246.4	-2,539.9	72.2	2,540.5	1.74	663,346.88	805,294.39	
12,487.0	88.46	176.54	10,110.4	6,247.4	-2,589.8	75.3	2,590.5	1.79	663,296.99	805,297.47	
12,532.0	89.34	176.85	10,111.2	6,248.2	-2,634.7	77.9	2,635.4	2.07	663,252.07	805,300.07	
12,581.0	88.72	176.35	10,112.1	6,249.1	-2,683.6	80.8	2,684.3	1.63	663,203.16	805,302.97	
12,676.0	89.25	176.25	10,113.8	6,250.8	-2,778.4	86.9	2,779.2	0.57	663,108.38	805,309.10	
12,721.0	88.81	176.11	10,114.5	6,251.5	-2,823.3	89.9	2,824.1	1.03	663,063.48	805,312.10	
12,771.0	88.64	176.63	10,115.6	6,252.6	-2,873.2	93.1	2,874.0	1.09	663,013.60	805,315.26	
12,816.0	89.52	176.94	10,116.4	6,253.4	-2,918.1	95.6	2,919.0	2.07	662,968.67	805,317.79	
12,866.0	89.08	177.69	10,117.0	6,254.0	-2,968.1	97.9	2,968.9	1.74	662,918.73	805,320.13	
12,961.0	88.72	175.35	10,118.8	6,255.8	-3,062.9	103.7	3,063.8	2.49	662,823.93	805,325.89	



A Schlumberger Company

Pathfinder Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Site Midway 22 State
TVD Reference: KB = 22' @ 3863.0usft (Nabors M45)
MD Reference: KB = 22' @ 3863.0usft (Nabors M45)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
13,056.0	89.60	177.07	10,120.2	6,257.2	-3,157.6	110.0	3,158.6	2.03	662,729.15	805,332.17	
13,151.0	90.13	178.11	10,120.4	6,257.4	-3,252.6	114.0	3,253.6	1.23	662,634.24	805,336.17	
13,246.0	89.34	178.94	10,120.8	6,257.8	-3,347.5	116.4	3,348.6	1.21	662,539.27	805,338.61	
13,341.0	89.69	179.52	10,121.6	6,258.6	-3,442.5	117.7	3,443.6	0.71	662,444.29	805,339.89	
13,437.0	89.16	180.54	10,122.6	6,259.6	-3,538.5	117.6	3,539.5	1.20	662,348.29	805,339.84	
13,532.0	88.64	181.42	10,124.4	6,261.4	-3,633.5	116.0	3,634.5	1.08	662,253.33	805,338.21	
13,627.0	89.08	182.15	10,126.3	6,263.3	-3,728.4	113.1	3,729.4	0.90	662,158.39	805,335.26	
13,722.0	89.78	182.27	10,127.3	6,264.3	-3,823.3	109.4	3,824.3	0.75	662,063.47	805,331.59	
13,817.0	88.46	181.89	10,128.7	6,265.7	-3,918.3	105.9	3,919.1	1.45	661,968.54	805,328.14	
13,912.0	88.81	181.64	10,131.0	6,268.0	-4,013.2	103.0	4,014.0	0.45	661,873.62	805,325.22	
14,008.0	89.34	181.39	10,132.5	6,269.5	-4,109.1	100.5	4,110.0	0.61	661,777.66	805,322.68	
14,098.0	89.08	180.33	10,133.8	6,270.8	-4,199.1	99.1	4,199.9	1.21	661,687.68	805,321.33	
14,193.0	89.08	180.32	10,135.3	6,272.3	-4,294.1	98.6	4,294.9	0.01	661,592.70	805,320.79	
14,288.0	89.69	179.79	10,136.3	6,273.3	-4,389.1	98.5	4,389.9	0.85	661,497.70	805,320.70	
14,383.0	89.34	179.83	10,137.1	6,274.1	-4,484.1	98.8	4,484.9	0.37	661,402.71	805,321.02	
14,478.0	88.64	179.90	10,138.8	6,275.8	-4,579.1	99.0	4,579.9	0.74	661,307.72	805,321.24	
14,517.0	88.37	179.64	10,139.8	6,276.8	-4,618.1	99.2	4,618.8	0.96	661,268.74	805,321.40	
PBHL (Midway 22 State)											
14,560.0	88.37	179.64	10,141.0	6,278.0	-4,661.0	99.5	4,661.8	0.00	661,225.75	805,321.67	
PROJECTED BHL - 14560.0 'MD, 10141.0 'TVD, -4661.0 'N, 99.5 'E											



A Schlumberger Company

Pathfinder

Pathfinder X&Y Report

Company: BC Operating Inc.
Project: Lea County (NAD 27)
Site: Midway 22 State
Well: #1H
Wellbore: ST01
Design: ST01

Local Co-ordinate Reference: Site Midway 22 State
TVD Reference: KB = 22' @ 3863.0usft (Nabors M45)
MD Reference: KB = 22' @ 3863.0usft (Nabors M45)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,508.0	9,506.0	49.2	18.9	KOP - 9508.0 'MD, 9506.0 'TVD, 49.2 'N, 18.9 'E
10,490.0	10,114.9	-594.1	20.9	LP - 10490.0 'MD, 10114.9 'TVD, -594.1 'N, 20.9 'E
14,560.0	10,141.0	-4,661.0	99.5	PROJECTED BHL - 14560.0 'MD, 10141.0 'TVD, -4661.0 'N, 99.5 'E

Checked By: _____ Approved By: _____ Date: _____

PathFinder Energy Services, Inc.

Survey Report

BC OPERATING, INC
MIDWAY 22 STATE #1H
LEA COUNTY, NM
Rig:NABORS M45

PathFinder Office Supervisor: JOSEPH HOGAN
PathFinder Field Engineers: D. EASLEY
S. BECENTI

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.49.35.9959 N LON:103.20.23.0342 W
GRID Reference:NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 805222.2000 Y: 665886.8000
North Aligned To:GRID NORTH
Total Magnetic Correction: 6.81°EAST TO GRID
Vertical Section Plane: 179.41
Survey Vert. Reference: 22.00' Rotary Table To Ground
Altitude:3841.00' 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)
0.00	0.00	0.00	-0.07	0.00	-0.06	0.06 N	0.03 E	0.06@	25.38	0.00
THE FOLLOWING ARE BULL DIRECTIONAL SURVEYS.										
222.00	0.90	82.70	221.92	222.00	-0.26	0.28 N	1.76 E	1.78@	81.04	0.41
312.00	0.60	57.30	311.91	90.00	-0.59	0.62 N	2.85 E	2.92@	77.72	0.49
408.00	0.80	126.30	407.91	96.00	-0.46	0.50 N	3.82 E	3.85@	82.59	0.84
532.00	0.60	80.60	531.90	124.00	-0.04	0.09 N	5.15 E	5.16@	89.00	0.46
718.00	1.20	43.60	717.88	186.00	-1.58	1.66 N	7.46 E	7.64@	77.46	0.43
901.00	1.40	347.20	900.84	183.00	-5.14	5.23 N	8.28 E	9.80@	57.75	0.68
1087.00	2.50	336.20	1086.73	186.00	-11.09	11.15 N	6.14 E	12.73@	28.85	0.62
1273.00	1.60	16.00	1272.61	186.00	-17.31	17.36 N	5.22 E	18.13@	16.74	0.88
1463.00	3.00	136.50	1462.53	190.00	-16.21	16.31 N	9.38 E	18.81@	29.91	2.13
1653.00	1.20	243.50	1652.44	190.00	-11.70	11.81 N	11.02 E	16.15@	43.02	1.86
1844.00	2.20	269.00	1843.35	191.00	-10.80	10.85 N	5.57 E	12.20@	27.15	0.64
2034.00	3.00	252.10	2033.16	190.00	-9.29	9.26 N	2.81 W	9.68@	343.11	0.58
2130.00	3.30	246.30	2129.01	96.00	-7.46	7.38 N	7.73 W	10.69@	313.66	0.46
2225.00	2.50	239.50	2223.89	95.00	-5.35	5.23 N	12.02 W	13.11@	293.50	0.92
2319.00	1.30	232.70	2317.84	94.00	-3.69	3.54 N	14.64 W	15.06@	283.60	1.30
2414.00	1.00	218.50	2412.82	95.00	-2.40	2.24 N	16.01 W	16.17@	277.96	0.43
2509.00	0.30	100.10	2507.81	95.00	-1.71	1.55 N	16.28 W	16.35@	275.43	1.23
2605.00	0.70	69.20	2603.81	96.00	-1.87	1.71 N	15.49 W	15.58@	276.31	0.49
2700.00	0.70	79.90	2698.80	95.00	-2.17	2.02 N	14.37 W	14.51@	278.00	0.14
2795.00	0.90	84.90	2793.79	95.00	-2.32	2.19 N	13.06 W	13.24@	279.51	0.22
2890.00	0.80	87.70	2888.78	95.00	-2.40	2.28 N	11.65 W	11.87@	281.07	0.11
2985.00	0.70	286.00	2983.78	95.00	-2.59	2.47 N	11.55 W	11.81@	282.06	1.56
3080.00	0.90	292.00	3078.77	95.00	-3.04	2.91 N	12.80 W	13.12@	282.80	0.23
3175.00	0.20	216.50	3173.77	95.00	-3.19	3.05 N	13.59 W	13.93@	282.66	0.92

PathFinder Energy Services, Inc.

Survey Report

BC OPERATING, INC
MIDWAY 22 STATE #1H
LEA COUNTY, NM
RIG:NABORS M45

Page 02/05

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)
3270.00	0.50	137.20	3268.76	95.00	-2.75	2.61 N	13.40 W	13.66@	281.04	0.53
3344.00	0.60	141.60	3342.76	74.00	-2.21	2.07 N	12.94 W	13.11@	279.11	0.15
3421.00	0.50	104.60	3419.76	77.00	-1.80	1.67 N	12.37 W	12.48@	277.71	0.47
3516.00	0.70	130.50	3514.75	95.00	-1.31	1.19 N	11.53 W	11.59@	275.91	0.35
3611.00	0.80	100.70	3609.75	95.00	-0.80	0.69 N	10.43 W	10.46@	273.80	0.42
3706.00	0.70	93.30	3704.74	95.00	-0.63	0.54 N	9.20 W	9.22@	273.33	0.15
3801.00	1.00	80.30	3799.73	95.00	-0.72	0.64 N	7.81 W	7.83@	274.70	0.37
3897.00	0.30	82.40	3895.72	96.00	-0.89	0.82 N	6.73 W	6.78@	276.92	0.73
3992.00	0.20	51.80	3990.72	95.00	-1.02	0.95 N	6.35 W	6.42@	278.52	0.17
4087.00	0.70	78.50	4085.72	95.00	-1.23	1.17 N	5.65 W	5.77@	281.69	0.56
4182.00	0.60	76.90	4180.71	95.00	-1.45	1.40 N	4.60 W	4.81@	286.91	0.11
4277.00	0.70	68.10	4275.70	95.00	-1.76	1.73 N	3.58 W	3.97@	295.77	0.15
4372.00	1.00	71.60	4370.69	95.00	-2.23	2.21 N	2.25 W	3.15@	314.39	0.32
4467.00	0.70	64.30	4465.68	95.00	-2.73	2.72 N	0.94 W	2.88@	340.85	0.34
4563.00	1.00	69.20	4561.67	96.00	-3.27	3.27 N	0.37 E	3.29@	6.41	0.32
4658.00	0.50	32.80	4656.66	95.00	-3.90	3.91 N	1.37 E	4.15@	19.25	0.70
4753.00	0.50	52.80	4751.66	95.00	-4.49	4.51 N	1.92 E	4.90@	23.06	0.18
4849.01	0.60	55.00	4847.67	96.01	-5.03	5.05 N	2.67 E	5.72@	27.82	0.11
4944.01	0.80	77.90	4942.66	95.00	-5.44	5.48 N	3.72 E	6.62@	34.20	0.36
5039.00	0.90	88.90	5037.64	94.99	-5.58	5.63 N	5.12 E	7.61@	42.26	0.20
5134.00	0.90	90.10	5132.63	95.00	-5.58	5.65 N	6.61 E	8.69@	49.50	0.02
5229.00	1.10	91.90	5227.61	95.00	-5.53	5.61 N	8.27 E	9.99@	55.82	0.21
5324.00	0.50	128.20	5322.60	95.00	-5.23	5.33 N	9.50 E	10.90@	60.73	0.80
5420.00	0.40	102.40	5418.60	96.00	-4.89	5.00 N	10.16 E	11.32@	63.82	0.23
5515.00	0.30	141.10	5513.60	95.00	-4.62	4.73 N	10.64 E	11.65@	66.03	0.26
5610.00	0.30	96.50	5608.60	95.00	-4.40	4.51 N	11.04 E	11.93@	67.79	0.24
5705.00	0.20	57.80	5703.60	95.00	-4.45	4.57 N	11.43 E	12.31@	68.21	0.20
5800.00	0.40	115.80	5798.60	95.00	-4.39	4.51 N	11.87 E	12.70@	69.18	0.36

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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)
5895.00	0.70	100.90	5893.59	95.00	-4.13	4.26 N	12.74 E	13.43@	71.51	0.35
5990.00	0.90	101.60	5988.58	95.00	-3.86	4.00 N	14.04 E	14.60@	74.10	0.21
6086.00	0.90	112.30	6084.57	96.00	-3.40	3.56 N	15.48 E	15.88@	77.04	0.17
6181.00	1.00	106.80	6179.56	95.00	-2.86	3.04 N	16.96 E	17.23@	79.84	0.14
6276.00	0.40	94.30	6274.55	95.00	-2.59	2.78 N	18.08 E	18.30@	81.28	0.65
6371.00	0.40	119.40	6369.55	95.00	-2.39	2.59 N	18.70 E	18.88@	82.12	0.18
6467.00	0.40	126.50	6465.54	96.00	-2.03	2.22 N	19.26 E	19.39@	83.42	0.05
6562.00	0.40	101.60	6560.54	95.00	-1.76	1.96 N	19.86 E	19.95@	84.36	0.18
6657.00	0.50	81.00	6655.54	95.00	-1.75	1.96 N	20.59 E	20.68@	84.57	0.20
6753.00	0.70	99.30	6751.53	96.00	-1.71	1.93 N	21.58 E	21.67@	84.89	0.29
6848.00	0.70	76.20	6846.53	95.00	-1.74	1.97 N	22.72 E	22.80@	85.04	0.30
6943.00	0.50	50.30	6941.52	95.00	-2.13	2.38 N	23.60 E	23.72@	84.25	0.35
7038.00	0.70	57.90	7036.52	95.00	-2.70	2.95 N	24.41 E	24.59@	83.11	0.23
7133.00	0.80	27.60	7131.51	95.00	-3.59	3.85 N	25.21 E	25.50@	81.33	0.42
7228.00	1.10	35.20	7226.50	95.00	-4.91	5.18 N	26.04 E	26.55@	78.75	0.34
7323.00	0.70	7.80	7321.48	95.00	-6.22	6.50 N	26.65 E	27.43@	76.29	0.61
7419.00	0.60	24.30	7417.48	96.00	-7.26	7.54 N	26.93 E	27.97@	74.36	0.22
7514.00	0.50	1.50	7512.47	95.00	-8.13	8.41 N	27.15 E	28.42@	72.80	0.25
7609.00	0.50	347.50	7607.47	95.00	-8.95	9.22 N	27.07 E	28.60@	71.18	0.13
7704.00	0.40	3.70	7702.47	95.00	-9.68	9.96 N	27.00 E	28.78@	69.75	0.17
7799.00	0.50	23.40	7797.46	95.00	-10.39	10.67 N	27.19 E	29.21@	68.57	0.19
7894.00	0.90	4.50	7892.46	95.00	-11.51	11.80 N	27.41 E	29.84@	66.72	0.48
7989.00	1.20	344.50	7987.44	95.00	-13.22	13.50 N	27.20 E	30.37@	63.61	0.49
8084.00	1.00	323.70	8082.42	95.00	-14.85	15.13 N	26.45 E	30.47@	60.24	0.47
8179.00	1.00	320.50	8177.41	95.00	-16.17	16.43 N	25.43 E	30.28@	57.13	0.06
8275.00	1.10	319.30	8273.39	96.00	-17.53	17.78 N	24.30 E	30.11@	53.81	0.11
8390.00	0.90	313.40	8388.38	115.00	-19.00	19.24 N	22.92 E	29.92@	50.00	0.20
8465.00	1.10	317.90	8463.37	75.00	-19.95	20.17 N	22.01 E	29.86@	47.49	0.29

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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)
8555.00	2.20	335.60	8553.33	90.00	-22.17	22.39 N	20.72 E	30.50@	42.78	1.33
8650.00	2.30	356.00	8648.26	95.00	-25.74	25.95 N	19.83 E	32.66@	37.39	0.85
8745.00	2.00	8.70	8743.19	95.00	-29.28	29.49 N	19.95 E	35.60@	34.07	0.59
8840.00	1.80	11.40	8838.14	95.00	-32.38	32.59 N	20.49 E	38.50@	32.16	0.23
8935.00	2.60	355.60	8933.07	95.00	-35.99	36.20 N	20.62 E	41.67@	29.67	1.05
9030.00	1.70	342.30	9028.00	95.00	-39.49	39.69 N	20.03 E	44.46@	26.78	1.08
9125.00	1.40	2.00	9122.97	95.00	-41.99	42.20 N	19.64 E	46.54@	24.96	0.64
9220.00	1.50	339.70	9217.93	95.00	-44.32	44.52 N	19.25 E	48.51@	23.38	0.60
9315.00	1.00	350.10	9312.91	95.00	-46.31	46.51 N	18.68 E	50.12@	21.88	0.58
** TIE IN TO BULL DIRECTIONAL SURVEYS.										
9411.00	0.80	357.20	9408.90	96.00	-47.81	48.00 N	18.50 E	51.44@	21.08	0.24
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
9445.00	1.14	5.25	9442.90	34.00	-48.38	48.57 N	18.52 E	51.98@	20.87	1.07
9508.00	0.62	79.52	9505.89	63.00	-49.06	49.26 N	18.91 E	52.77@	21.00	1.81
9540.00	2.73	150.39	9537.88	32.00	-48.43	48.63 N	19.46 E	52.38@	21.81	8.10
9572.00	6.16	159.62	9569.78	32.00	-46.14	46.36 N	20.43 E	50.66@	23.79	10.91
9603.00	9.67	164.55	9600.48	31.00	-42.06	42.29 N	21.71 E	47.53@	27.17	11.52
9635.00	13.63	166.54	9631.81	32.00	-35.78	36.03 N	23.30 E	42.90@	32.89	12.44
9667.00	18.11	169.49	9662.58	32.00	-27.21	27.47 N	25.09 E	37.20@	42.41	14.22
9699.00	22.07	174.19	9692.63	32.00	-16.31	16.59 N	26.60 E	31.35@	58.05	13.35
9730.00	25.41	178.94	9721.01	31.00	-3.86	4.14 N	27.32 E	27.63@	81.38	12.41
9762.00	28.23	180.54	9749.56	32.00	10.58	10.29 S	27.37 E	29.24@	110.61	9.10
9794.00	30.60	180.84	9777.44	32.00	26.29	26.01 S	27.18 E	37.62@	133.74	7.42
9825.00	33.33	181.84	9803.73	31.00	42.69	42.41 S	26.79 E	50.17@	147.72	8.97
9857.00	35.61	181.01	9830.11	32.00	60.79	60.52 S	26.35 E	66.00@	156.48	7.27
9889.00	37.20	180.75	9855.87	32.00	79.77	79.51 S	26.05 E	83.67@	161.86	4.99
9921.00	38.87	181.20	9881.07	32.00	99.48	99.22 S	25.72 E	102.50@	165.47	5.29
9952.00	40.71	181.26	9904.89	31.00	119.31	119.05 S	25.29 E	121.71@	168.01	5.94
9983.00	43.53	181.55	9927.88	31.00	140.08	139.84 S	24.78 E	142.01@	169.95	9.12

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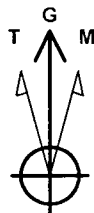
Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS
						(ft)	(ft)	(ft)	(deg)	(dg/100ft)
10015.00	46.60	181.49	9950.48	32.00	162.72	162.48 S	24.18 E	164.27@	171.54	9.59
10047.00	49.77	181.12	9971.81	32.00	186.55	186.32 S	23.64 E	187.81@	172.77	9.94
10079.00	52.85	181.07	9991.81	32.00	211.52	211.29 S	23.16 E	212.55@	173.74	9.63

** 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.

30-025-40730

BC Operating

Project: Lea County (NAD 27)
 Site: Midway 22 State
 Well: #1H
 Wellbore: ST01
 Plan: Plan #3 (#1H/ST01)



Azimuths to Grid North
 True North: -0.54°
 Magnetic North: 6.79°

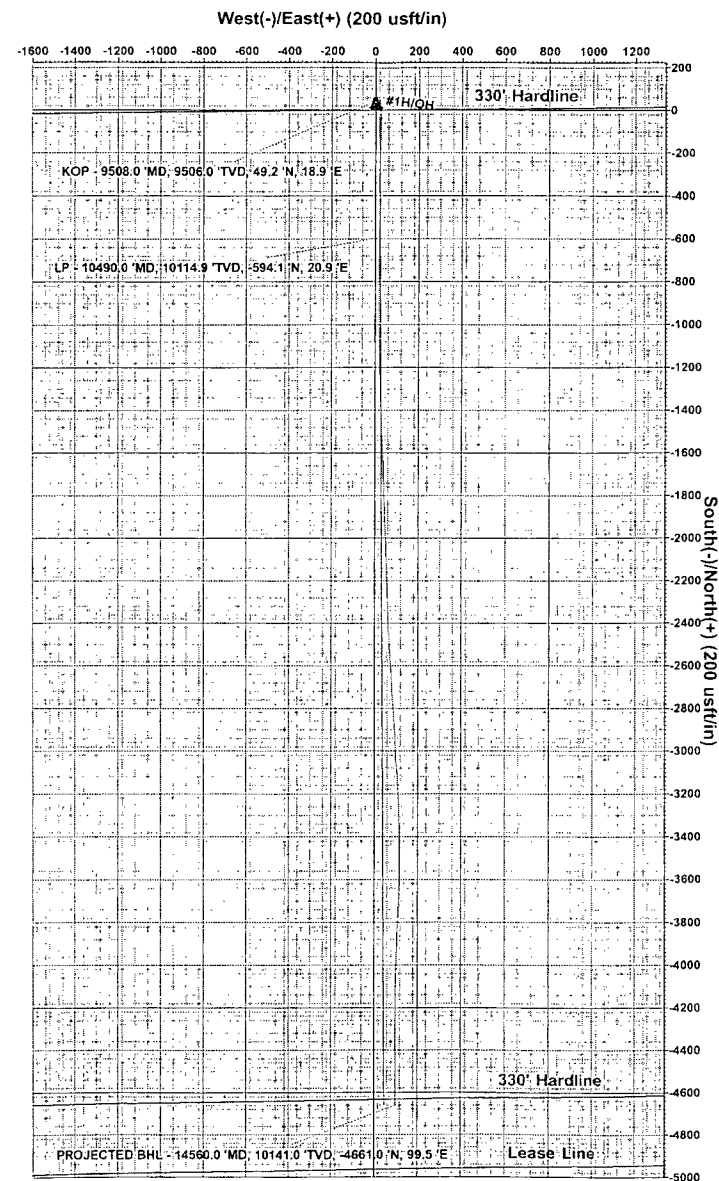
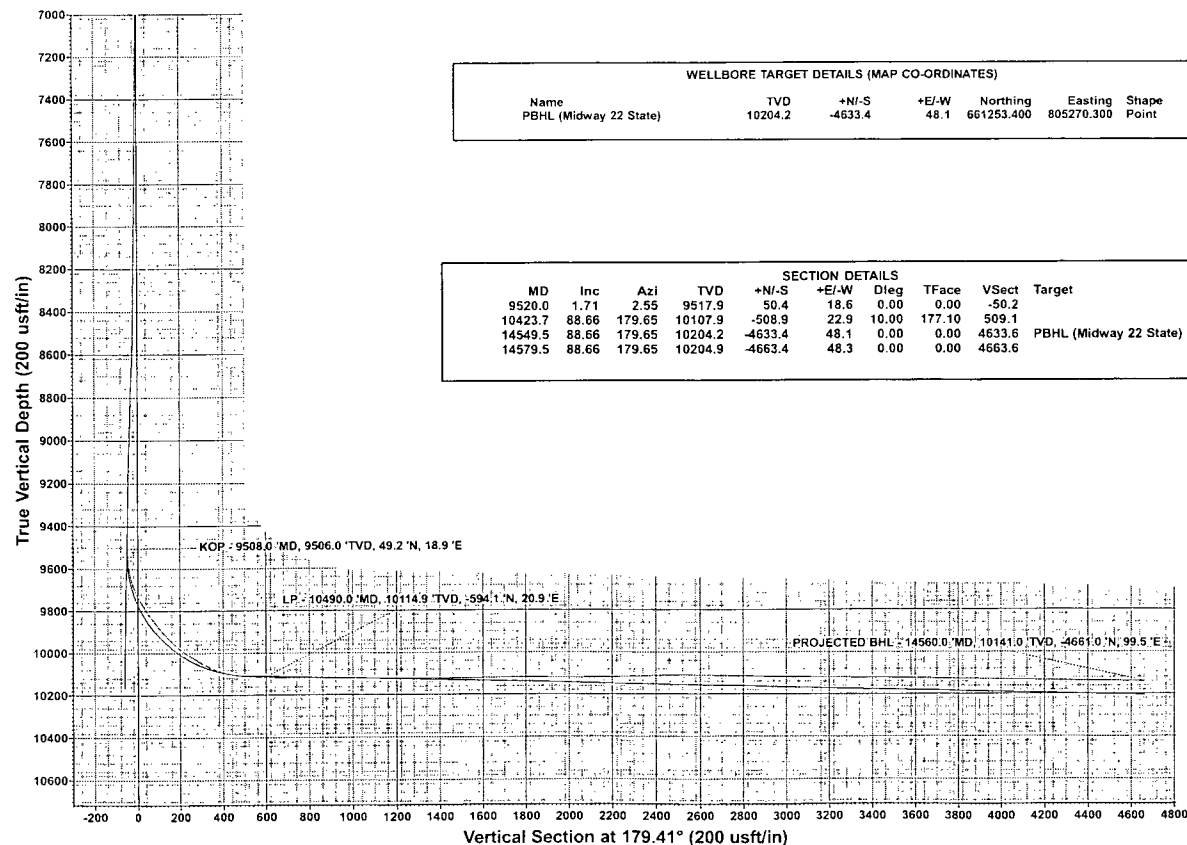
Magnetic Field
 Strength: 48894.8snT
 Dip Angle: 60.77°
 Date: 11/27/2012
 Model: IGRF200510

PROJECT DETAILS: Lea County (NAD 27)
 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

WELL DETAILS: #1H						
Ground Elevation:: 3841.0						
RKB Elevation: KB = 22' @ 3863.0usft (Nabors M45)						
Rig Name: Nabors M45						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	665886.800	805222.200	32.826666	-103.339732	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (Midway 22 State)	10204.2	-4633.4	48.1	661253.400	805270.300	Point

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
9520.0	1.71	2.55	9517.9	50.4	18.6	0.00	0.00	-50.2	
10423.7	88.66	179.65	10107.9	-508.9	22.9	10.00	177.10	509.1	
14549.5	88.66	179.65	10204.2	-4633.4	48.1	0.00	0.00	4633.6	PBHL (Midway 22 State)
14579.5	88.66	179.65	10204.9	-4663.4	48.3	0.00	0.00	4663.6	



Plan: Plan #3 (#1H/ST01)

Created By: Michael Trout Date: 9/04, December 20 2012

Checked: _____ Date: _____