

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION FOR
THE PURPOSE OF CONSIDERING:**

**APPLICATION OF CHASE OIL CORPORATION
FOR A NON-STANDARD OIL SPACING AND
PRORATION UNIT AND COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO.**

Case No. 14,437

VERIFIED STATEMENT OF CHARLES E. SADLER

COUNTY OF EDDY)
) ss.
STATE OF NEW MEXICO)

Charles E. Sadler, being duly sworn upon his oath, deposes and states:

1. I am over the age of 18, and have personal knowledge of the matters stated herein.
2. I am a geologist for Chase Oil Corporation.
3. Exhibit A is a structure map on top of the Abo/Wolfcamp formation. The formation dips gently to the southeast. Exhibit A also contains production data from existing wells in the area.
4. Exhibit B is a cross section which shows the productive interval and stratigraphic target for horizontal Abo/Wolfcamp wells in the area.
5. Attached as Exhibit C is the horizontal drilling plan for the subject well. A horizontal wellbore will test a greater reservoir length, increasing the chances for an economic completion.
6. All four quarter-quarter sections in the well unit are prospective in the Abo/Wolfcamp formation, and Chase Oil Corporation anticipates producing reserves from each quarter-quarter section.



Charles E. Sadler

Oil Conservation Division
Case No. _____
Exhibit No. H

SUBSCRIBED AND SWORN TO before me this 10th day of March, 2010 by Charles E. Sadler.

My Commission Expires: May 15, 2012



Notary Public

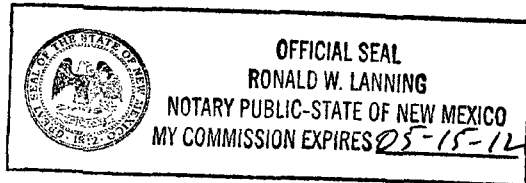
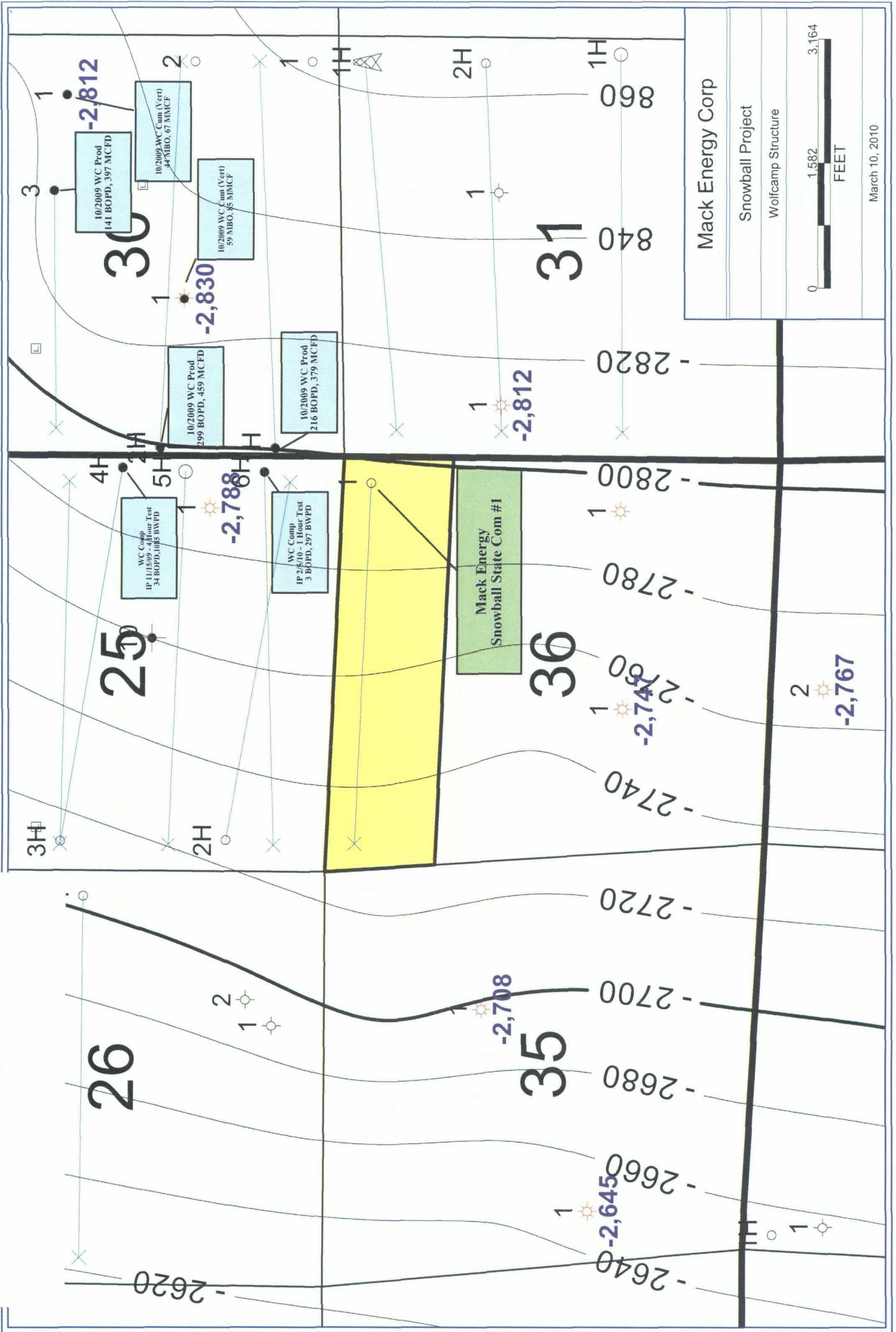
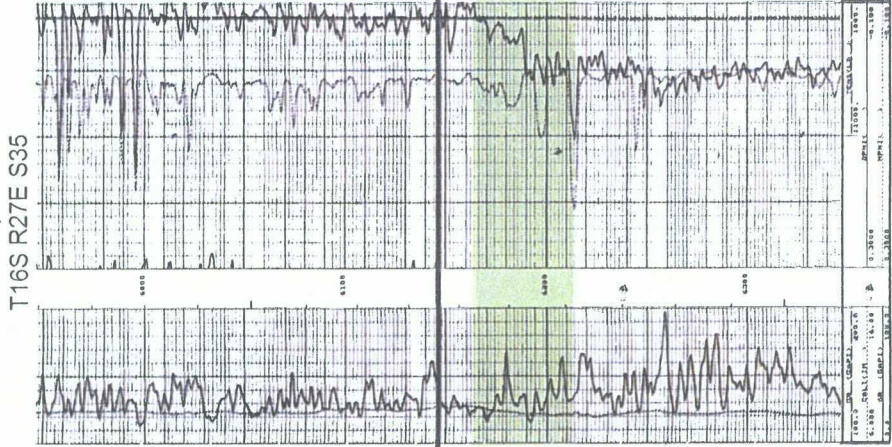


EXHIBIT A



SW

DOG CANYON '35-G' STT



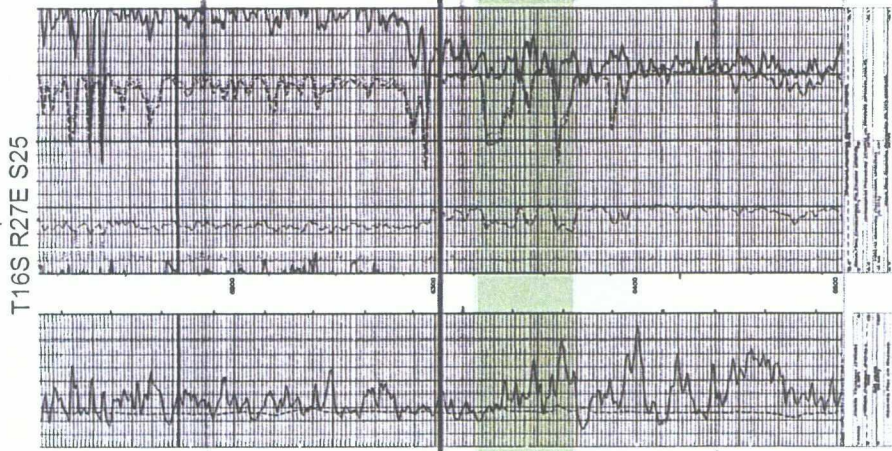
DOG CANYON '31E' FEDRL



SNOWBALL STATE COM



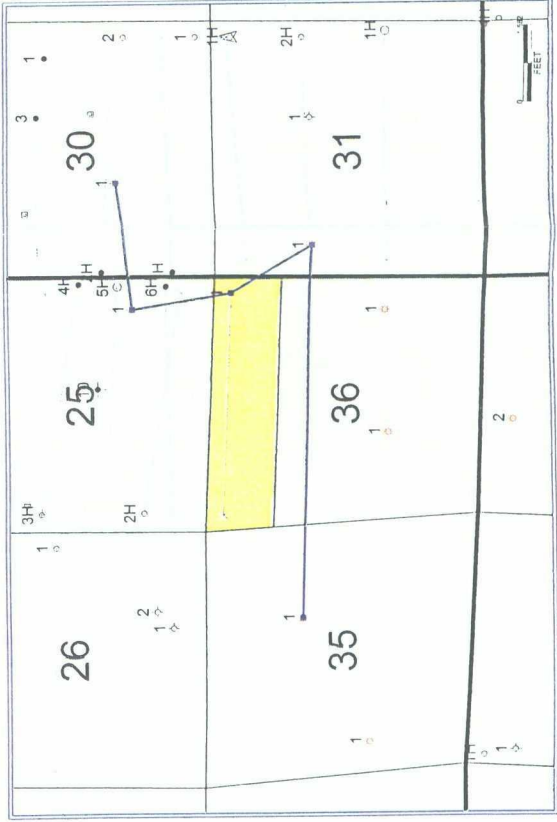
CARBON VALLEY '25'



CROW FLATS FED COM



NE



Mack Energy Corp

Snowball Project

Wolfcamp Stratigraphic Section

Horizontal Scale = 353.0
Vertical Scale = 25.0
Vertical Exaggeration = 14.1x

March 10, 2010 2:23 PM

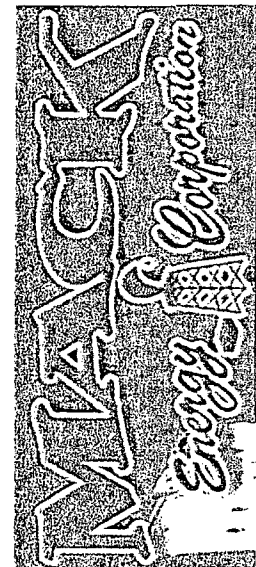
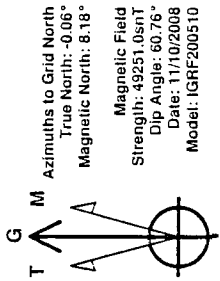
Mack Energy
Eddy County
Snowball State Com #1
Snowball State Com
OH

Plan: Plan #1

Patfinder X & Y Survey Report

10 November, 2008





WELL DETAILS: Snowball State Com

Ground Elevation: 3170.00
RKB Elevation: WELL @ 3485.00ft (RKB: 19')
Rig Name: RKB: 15'

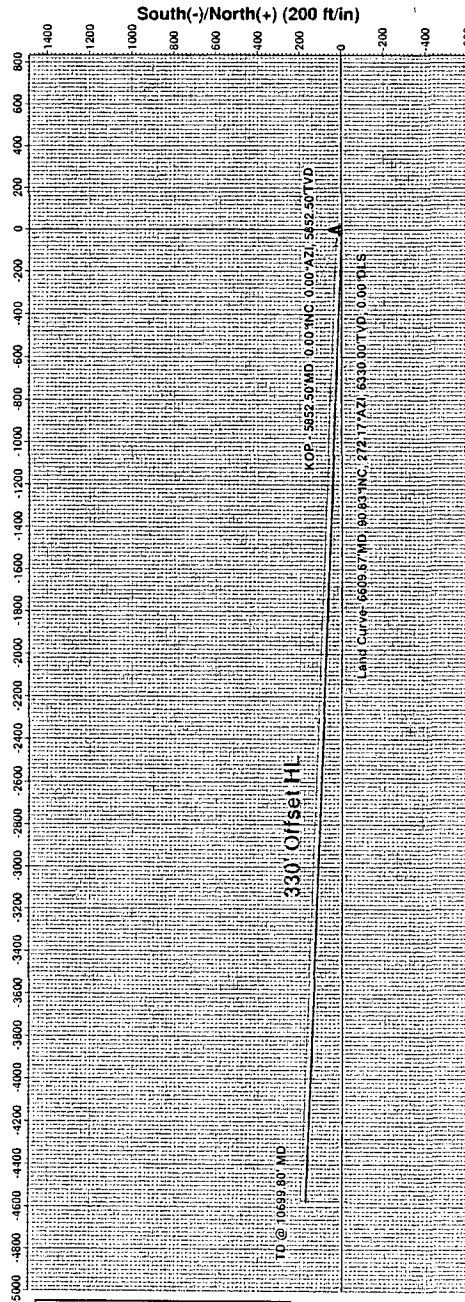
+N-S 0.00 Northing 685434.100 Easting 533409.100 Latitude 32° 53' 3.451" N Longitude 104° 13' 28.210" W Slot

WELLBORE TARGET DETAILS

Name	TVD	+N-S	+E-W	Shape
PBHL (Snowball #1)	6253.00	171.30	-4570.70	Point
Target 1 (Snowball)	6253.00	151.56	-3997.41	Point
Target 2 (Snowball)	6253.00	151.56	-3997.41	Point
Target 3 (Snowball)	6253.00	151.56	-3997.41	Point
Target 4 (Snowball)	6253.00	151.56	-3997.41	Point

Project: Eddy County
Site: Snowball State Com #1
Well: Snowball State Com
Wellbore: OH
Plan: Plan #1 (Snowball State Com/OH)

West(-)/East(+) (200 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	Tface	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5852.50	0.00	0.00	5852.50	0.00	0.00	0.00	0.00	0.00	
3	6253.00	0.00	0.00	6253.00	151.56	-3997.41	0.00	0.00	0.00	
4	6663.23	30.83	272.17	6329.25	20.30	-535.75	0.00	0.00	0.00	
5	7125.17	90.83	272.17	6322.50	37.87	-959.31	0.00	0.00	0.00	Target 1 (Snowball)
6	7134.65	91.12	272.17	6322.34	38.23	-1008.79	0.00	0.22	1009.51	Target 2 (Snowball)
7	8125.56	91.12	272.17	6303.00	75.77	-1958.80	0.00	0.00	2000.24	Target 3 (Snowball)
8	8208.43	91.15	272.17	6301.34	78.95	-2082.59	0.03	0.24	2084.08	Target 4 (Snowball)
9	9151.16	91.15	272.17	6282.49	114.63	-3023.46	0.00	0.00	3025.53	
10	10126.01	91.15	272.17	6263.00	151.56	-3997.41	0.00	0.00	4000.28	
11	10130.98	91.00	272.17	6262.91	151.75	-4002.38	3.00	-180.00	4005.25	
12	10699.80	91.00	272.17	6253.00	173.30	-4570.70	0.00	0.00	4573.98	PBHL (Snowball #1)

330' Offset HL

TD @ 10699.80' MD

KOP: 5852.50 MD, 0.00 INC, 0.00 AZI, 5452.50 TVD

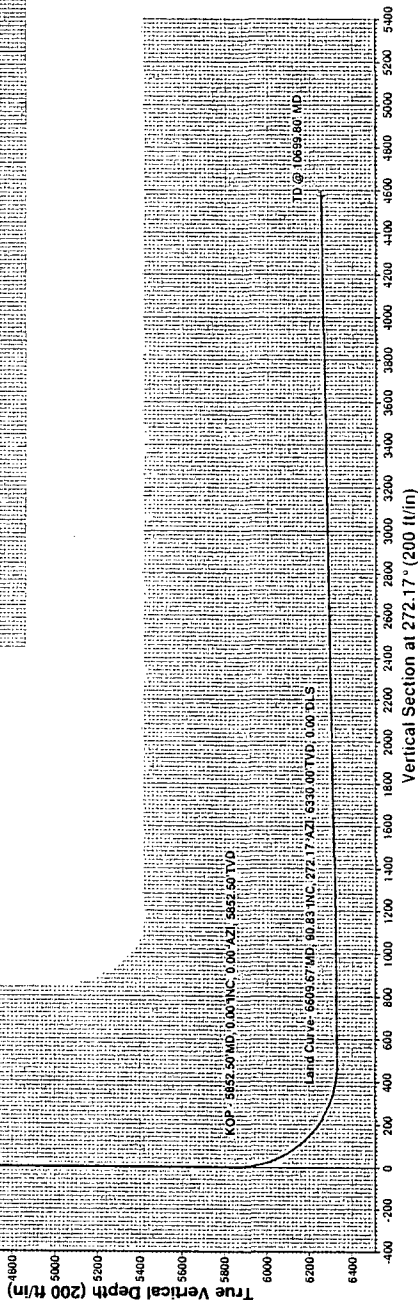
Land Curve: 6609.67 MD, 90.83 INC, 272.17 AZI, 5452.50 TVD

TD @ 10699.80' MD

KOP: 5852.50 MD, 0.00 INC, 0.00 AZI, 5452.50 TVD

Land Curve: 6609.67 MD, 90.83 INC, 272.17 AZI, 5452.50 TVD

TD @ 10699.80' MD



PROJECT DETAILS: Eddy 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

Plan: Plan #1 (Snowball State Com/OH)

Created By: Aaron Pullin Date: 11/30/2008

Checked: _____ Date: _____

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company: Mack Energy Project: Eddy County Site: Snowball State Com #1 Well: Snowball State Com Wellbore: OH Design: Plan #1		Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:		Well Snowball State Com WELL @ 3488.00ft (RKB= 18') WELL @ 3488.00ft (RKB= 18') Grid Minimum Curvature EDM 2003.16 Single User Db	
Project Eddy County		System Datum: Mean Sea Level			
Map System: US State Plane 1927 (Exact solution) Geo Datum: NAD 1927 (NADCON CONUS) Map Zone: New Mexico East 3001					
Site Snowball State Com #1					
Site Position: From: Map Position Uncertainty: 0.00 ft		Northing: 685,434.100 ft Easting: 533,409.100 ft Slot Radius: "		Latitude: 32° 53' 3.451 N Longitude: 104° 13' 28.210 W Grid Convergence: 0.06 °	
Well Snowball State Com					
Well Position +N-S 0.00 ft +E-W 0.00 ft Wellhead Elevation: 0.00 ft		Northing: 685,434.100 ft Easting: 533,409.100 ft		Latitude: 32° 53' 3.451 N Longitude: 104° 13' 28.210 W Ground Level: 3,470.00ft	
Wellbore OH					
Magnetics Model Name Sample Date IGRF200510 11/10/2008		Declination (°) 8.24		Dip Angle (°) 60.76 Field Strength (nT) 49,251	
Design Plan #1					
Audit Notes: Version:		Phase: PLAN		Tie On Depth: 0.00	
Vertical Section: From (ft) To (ft)		Depth From (TVD) (ft) 0.00		Direction (°) 272.17	
Survey Tool Program Date 11/10/2008					
From (ft) To (ft)		Tool Name Survey (Wellbore)		Description MWD - Standard	
0.00 10,699.77 Plan #1 (OH)		MWD		MWD - Standard	

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company: Mack Energy Project: Eddy County Site: Snowball State Com #1 Well: Snowball State Com Wellbore: OH Design: Plan #1			Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:					Well Snowball State Com WELL @ 3488.00ft (RKB= 18) WELL @ 3488.00ft (RKB= 18) Grid Minimum Curvature EDM 2003 16 Single User Db		
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V/Sec (ft)	D/Leg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,488.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
100.00	0.00	0.00	100.00	-3,388.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
200.00	0.00	0.00	200.00	-3,288.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
300.00	0.00	0.00	300.00	-3,188.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
400.00	0.00	0.00	400.00	-3,088.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
500.00	0.00	0.00	500.00	-2,988.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
600.00	0.00	0.00	600.00	-2,888.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
700.00	0.00	0.00	700.00	-2,788.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
800.00	0.00	0.00	800.00	-2,688.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
900.00	0.00	0.00	900.00	-2,588.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,000.00	0.00	0.00	1,000.00	-2,488.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,100.00	0.00	0.00	1,100.00	-2,388.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,200.00	0.00	0.00	1,200.00	-2,288.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,300.00	0.00	0.00	1,300.00	-2,188.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,400.00	0.00	0.00	1,400.00	-2,088.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,500.00	0.00	0.00	1,500.00	-1,988.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,600.00	0.00	0.00	1,600.00	-1,888.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,700.00	0.00	0.00	1,700.00	-1,788.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,800.00	0.00	0.00	1,800.00	-1,688.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
1,900.00	0.00	0.00	1,900.00	-1,588.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,000.00	0.00	0.00	2,000.00	-1,488.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,100.00	0.00	0.00	2,100.00	-1,388.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,200.00	0.00	0.00	2,200.00	-1,288.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,300.00	0.00	0.00	2,300.00	-1,188.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,400.00	0.00	0.00	2,400.00	-1,088.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,500.00	0.00	0.00	2,500.00	-988.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10
2,600.00	0.00	0.00	2,600.00	-888.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10

Patfinder X & Y Survey Report

COMPASS 2003.16 Build 42F

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company: Project: Site: Well: Wellbore: Design:		Mack Energy Eddy County Snowball State Com #1 Snowball State Com OH Plan #1		Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:							Well Snowball State Com. WELL @ 3488.00ft (RKB= 18') WELL @ 3488.00ft (RKB= 18') Grid Minimum Curvature EDM 2003.16 Single User Db		
Planned Survey													
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V'Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)			
5,400.00	0.00	0.00	5,400.00	1,912.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,500.00	0.00	0.00	5,500.00	2,012.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,600.00	0.00	0.00	5,600.00	2,112.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,700.00	0.00	0.00	5,700.00	2,212.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,800.00	0.00	0.00	5,800.00	2,312.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,852.50	0.00	0.00	5,852.50	2,364.50	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
KOP - 5852.50*MD, 0.00*INC, 0.00*AZI, 5852.50*TVD													
5,875.00	2.70	272.17	5,874.99	2,386.99	0.02	-0.53	0.53	12.00	685,434.12	533,408.57			
5,900.00	5.70	272.17	5,899.92	2,411.92	0.09	-2.36	2.36	12.00	685,434.19	533,406.74			
5,925.00	8.70	272.17	5,924.72	2,436.72	0.21	-5.49	5.49	12.00	685,434.31	533,403.61			
5,950.00	11.70	272.17	5,949.32	2,461.32	0.38	-9.91	9.92	12.00	685,434.48	533,399.19			
5,975.00	14.70	272.17	5,973.66	2,485.66	0.59	-15.61	15.63	12.00	685,434.69	533,393.49			
6,000.00	17.70	272.17	5,997.67	2,509.67	0.86	-22.58	22.60	12.00	685,434.96	533,386.52			
6,025.00	20.70	272.17	6,021.27	2,533.27	1.17	-30.80	30.82	12.00	685,435.27	533,378.30			
6,050.00	23.70	272.17	6,044.42	2,556.42	1.52	-40.23	40.26	12.00	685,435.62	533,368.87			
6,075.00	26.70	272.17	6,067.04	2,579.04	1.93	-50.87	50.90	12.00	685,436.03	533,358.23			
6,100.00	29.69	272.17	6,089.07	2,601.07	2.37	-62.67	62.71	12.00	685,436.47	533,346.43			
6,125.00	32.69	272.17	6,110.45	2,622.45	2.86	-75.61	75.66	12.00	685,436.96	533,333.49			
6,150.00	35.69	272.17	6,131.13	2,643.13	3.40	-89.64	89.71	12.00	685,437.50	533,319.46			
6,175.00	38.69	272.17	6,151.04	2,663.04	3.97	-104.74	104.82	12.00	685,438.07	533,304.36			
6,200.00	41.69	272.17	6,170.13	2,682.13	4.58	-120.86	120.95	12.00	685,438.68	533,288.24			
6,225.00	44.69	272.17	6,188.36	2,700.36	5.23	-137.96	138.06	12.00	685,439.33	533,271.14			
6,250.00	47.69	272.17	6,205.66	2,717.66	5.91	-155.99	156.10	12.00	685,440.01	533,253.11			
6,275.00	50.69	272.17	6,222.00	2,734.00	6.63	-174.90	175.02	12.00	685,440.73	533,234.20			
6,300.00	53.69	272.17	6,237.32	2,749.32	7.37	-194.63	194.77	12.00	685,441.47	533,214.47			
6,325.00	56.69	272.17	6,251.59	2,763.59	8.15	-215.14	215.29	12.00	685,442.25	533,193.96			
6,350.00	59.69	272.17	6,264.77	2,776.77	8.96	-236.37	236.54	12.00	685,443.06	533,172.73			

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company: Mack Energy Project: Eddy County Site: Snowball State Com #1 Well: Snowball State Com Wellbore: OH Design: Plan #1				Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:				Well Snowball State Com WELL @ 3488.00ft (RKB= 18') WELL @ 3488.00ft (RKB= 18') Grid Minimum Curvature EDM 2003.16 Single User Db			
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V/Sec (ft)	DLeg (ft/100ft)	Northing (ft)	Easting (ft)	
6,375.00	62.69	272.17	6,276.82	2,788.82	9.79	-258.25	258.44	12.00	685,443.89	533,150.85	
6,400.00	65.69	272.17	6,287.70	2,799.70	10.64	-280.74	280.94	12.00	685,444.74	533,128.36	
6,425.00	68.69	272.17	6,297.39	2,809.39	11.51	-303.77	303.98	12.00	685,445.61	533,105.33	
6,450.00	71.69	272.17	6,305.86	2,817.86	12.40	-327.27	327.50	12.00	685,446.50	533,081.83	
6,475.00	74.69	272.17	6,313.10	2,825.10	13.31	-351.18	351.43	12.00	685,447.41	533,057.92	
6,500.00	77.69	272.17	6,319.06	2,831.06	14.23	-375.44	375.70	12.00	685,448.33	533,033.66	
6,525.00	80.69	272.17	6,323.75	2,835.75	15.16	-399.97	400.26	12.00	685,449.26	533,009.13	
6,550.00	83.69	272.17	6,327.15	2,839.15	16.09	-424.72	425.02	12.00	685,450.19	532,984.38	
6,575.00	86.68	272.17	6,329.25	2,841.25	17.04	-449.61	449.93	12.00	685,451.14	532,959.49	
6,600.00	89.68	272.17	6,330.04	2,842.04	17.98	-474.58	474.92	12.00	685,452.08	532,934.52	
6,609.55	90.83	272.17	6,330.00	2,842.00	18.34	-484.12	484.47	12.00	685,452.44	532,924.98	
6,609.67	90.83	272.17	6,330.00	2,842.00	18.35	-484.24	484.58	0.00	685,452.45	532,924.86	
Land Curve- 6609.67MD, 90.83°INC, 272.17°AZI, 6330.00TVD, 0.00°DLS											
6,700.00	90.83	272.17	6,328.69	2,840.69	21.77	-574.49	574.91	0.00	685,455.87	532,834.61	
6,800.00	90.83	272.17	6,327.24	2,839.24	25.55	-674.41	674.90	0.00	685,459.65	532,734.69	
6,900.00	90.83	272.17	6,325.79	2,837.79	29.34	-774.33	774.89	0.00	685,463.44	532,634.77	
7,000.00	90.83	272.17	6,324.34	2,836.34	33.13	-874.25	874.87	0.00	685,467.23	532,534.85	
7,100.00	90.83	272.17	6,322.90	2,834.90	36.91	-974.17	974.86	0.00	685,471.01	532,434.93	
7,125.17	90.83	272.17	6,322.50	2,834.50	37.87	-999.31	1,000.03	0.00	685,471.97	532,409.79	
Target 1 (Snowball)											
7,134.78	91.12	272.17	6,322.34	2,834.34	38.23	-1,008.91	1,009.64	3.00	685,472.33	532,400.19	
7,200.00	91.12	272.17	6,321.06	2,833.06	40.70	-1,074.08	1,074.85	0.00	685,474.80	532,335.02	
7,300.00	91.12	272.17	6,319.11	2,831.11	44.49	-1,173.99	1,174.83	0.00	685,478.59	532,235.11	
7,400.00	91.12	272.17	6,317.16	2,829.16	48.28	-1,273.89	1,274.81	0.00	685,482.38	532,135.21	
7,500.00	91.12	272.17	6,315.21	2,827.21	52.07	-1,373.80	1,374.79	0.00	685,486.17	532,035.30	
7,600.00	91.12	272.17	6,313.26	2,825.26	55.86	-1,473.71	1,474.77	0.00	685,489.96	531,935.39	
7,700.00	91.12	272.17	6,311.31	2,823.31	59.65	-1,573.62	1,574.75	0.00	685,493.75	531,835.48	

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company			Mack Energy			Local Co-ordinate Reference:					Well Snowball State Com		
Project:			Eddy County			TVD Reference:					WELL @ 3488.00ft (RKB= 18')		
Site:			Snowball State Com #1			MD Reference:					WELL @ 3488.00ft (RKB= 18')		
Well:			Snowball State Com			North Reference:					Grid		
Wellbore Design:			OH			Survey Calculation Method:					Minimum Curvature		
Plan #1						Database:					EDM 2003.16 Single User Db		
Planned Survey													
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	D Leg (°/100ft)	Northing (ft)	Easting (ft)			
7,800.00	91.12	272.17	6,309.35	2,821.35	63.44	-1,673.53	1,674.73	0.00	685,497.54	531,735.57			
7,900.00	91.12	272.17	6,307.40	2,819.40	67.22	-1,773.44	1,774.71	0.00	685,501.32	531,635.66			
8,000.00	91.12	272.17	6,305.45	2,817.45	71.01	-1,873.35	1,874.70	0.00	685,505.11	531,535.75			
8,100.00	91.12	272.17	6,303.50	2,815.50	74.80	-1,973.26	1,974.68	0.00	685,508.90	531,435.84			
8,125.56	91.12	272.17	6,303.00	2,815.00	75.77	-1,998.80	2,000.24	0.00	685,509.87	531,410.30			
Target 2 (Snowball)													
8,209.32	91.15	272.17	6,301.34	2,813.34	78.94	-2,082.48	2,083.97	0.03	685,513.04	531,326.62			
8,300.00	91.15	272.17	6,299.53	2,811.53	82.38	-2,173.08	2,174.64	0.00	685,516.48	531,236.02			
8,400.00	91.15	272.17	6,297.53	2,809.53	86.17	-2,272.98	2,274.62	0.00	685,520.27	531,136.12			
8,500.00	91.15	272.17	6,295.53	2,807.53	89.96	-2,372.89	2,374.60	0.00	685,524.06	531,036.21			
8,600.00	91.15	272.17	6,293.52	2,805.52	93.74	-2,472.80	2,474.58	0.00	685,527.84	530,936.30			
8,700.00	91.15	272.17	6,291.52	2,803.52	97.53	-2,572.71	2,574.56	0.00	685,531.63	530,836.39			
8,800.00	91.15	272.17	6,289.52	2,801.52	101.32	-2,672.62	2,674.54	0.00	685,535.42	530,736.48			
8,900.00	91.15	272.17	6,287.52	2,799.52	105.11	-2,772.52	2,774.52	0.00	685,539.21	530,636.58			
9,000.00	91.15	272.17	6,285.52	2,797.52	108.90	-2,872.43	2,874.50	0.00	685,543.00	530,536.67			
9,100.00	91.15	272.17	6,283.51	2,795.51	112.69	-2,972.34	2,974.48	0.00	685,546.79	530,436.76			
9,125.65	91.15	272.17	6,283.00	2,795.00	113.66	-2,997.97	3,000.12	0.00	685,547.76	530,411.13			
Target 3 (Snowball)													
9,151.11	91.15	272.17	6,282.49	2,794.49	114.62	-3,023.41	3,025.58	0.00	685,548.72	530,385.69			
9,200.00	91.15	272.17	6,281.51	2,793.51	116.48	-3,072.25	3,074.46	0.00	685,550.58	530,336.85			
9,300.00	91.15	272.17	6,279.51	2,791.51	120.27	-3,172.16	3,174.44	0.00	685,554.37	530,236.94			
9,400.00	91.15	272.17	6,277.51	2,789.51	124.05	-3,272.07	3,274.42	0.00	685,558.15	530,137.03			
9,500.00	91.15	272.17	6,275.51	2,787.51	127.84	-3,371.97	3,374.40	0.00	685,561.94	530,037.13			
9,600.00	91.15	272.17	6,273.50	2,785.50	131.63	-3,471.88	3,474.38	0.00	685,565.73	529,937.22			
9,700.00	91.15	272.17	6,271.50	2,783.50	135.42	-3,571.79	3,574.36	0.00	685,569.52	529,837.31			
9,800.00	91.15	272.17	6,269.50	2,781.50	139.21	-3,671.70	3,674.34	0.00	685,573.31	529,737.40			
9,900.00	91.15	272.17	6,267.50	2,779.50	143.00	-3,771.61	3,774.32	0.00	685,577.10	529,637.49			

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company: Mack Energy			Local Co-ordinate Reference:			Well Snowball State Com				
Project: Eddy County			TVD Reference:			WELL @ 3488.00ft (RKB= 18')				
Site: Snowball State Com #1			MD Reference:			WELL @ 3488.00ft (RKB= 18')				
Well: Snowball State Com			North Reference:			Grid				
Wellbore: OH			Survey Calculation Method:			Minimum Curvature				
Design: Plan #1			Database:			EDM 2003.16 Single User Db				
Planned Survey										
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (ft/100ft)	Northing (ft)	Easting (ft)
10,000.00	91.15	272.17	6,265.50	2,777.50	146.79	-3,871.51	3,874.30	0.00	685,580.89	529,537.59
10,100.00	91.15	272.17	6,263.49	2,775.49	150.57	-3,971.42	3,974.28	0.00	685,584.67	529,437.68
10,126.01	91.15	272.17	6,263.00	2,775.00	151.56	-3,997.41	4,000.28	0.00	685,585.66	529,411.69
Target 4 (Snowball)										
10,130.98	91.00	272.17	6,262.91	2,774.91	151.75	-4,002.38	4,005.25	3.00	685,585.85	529,406.72
10,200.00	91.00	272.17	6,261.70	2,773.70	154.36	-4,071.33	4,074.26	0.00	685,588.46	529,337.77
10,300.00	91.00	272.17	6,259.96	2,771.96	158.15	-4,171.25	4,174.24	0.00	685,592.25	529,237.85
10,400.00	91.00	272.17	6,258.22	2,770.22	161.94	-4,271.16	4,274.23	0.00	685,596.04	529,137.94
10,500.00	91.00	272.17	6,256.48	2,768.48	165.73	-4,371.07	4,374.21	0.00	685,599.83	529,038.03
10,600.00	91.00	272.17	6,254.74	2,766.74	169.52	-4,470.99	4,474.20	0.00	685,603.62	528,938.11
10,699.80	91.00	272.17	6,253.00	2,765.00	173.30	-4,570.70	4,573.98	0.00	685,607.40	528,838.40
TD @ 10699.80' MD - PBHL (Snowball #1)										

Pathfinder Energy Services

Patfinder X & Y Survey Report

Company:	Mack Energy	Local Coordinate Reference:	Well Snowball State Com
Project:	Eddy County	TVD Reference:	WELL @ 3488.00ft (RKB= 18')
Site:	Snowball State Com #1	MD Reference:	WELL @ 3488.00ft (RKB= 18')
Well:	Snowball State Com	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.16 Single User Db

Targets	Target Name	Dip Angle (°)	Dip Dir (°)	TVD (ft)	N/S (ft)	E/W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Target 1 (Snowball)	- hit/miss target	0.00	0.00	6,322.50	37.87	-999.31	685,471.970	532,409.790	32° 53' 3.836 N	104° 13' 39.929 W
	- plan hits target									
	- Point									
Target 2 (Snowball)	- plan hits target	0.00	0.00	6,303.00	75.77	-1,998.80	685,509.870	531,410.300	32° 53' 4.220 N	104° 13' 51.649 W
	- Point									
Target 3 (Snowball)	- plan hits target	0.00	0.00	6,283.00	113.66	-2,997.97	685,547.760	530,411.130	32° 53' 4.605 N	104° 14' 3.366 W
	- Point									
PBHL (Snowball #1)	- plan hits target	0.00	0.00	6,253.00	173.30	-4,570.70	685,607.400	528,838.400	32° 53' 5.209 N	104° 14' 21.809 W
	- Point									
Target 4 (Snowball)	- plan hits target	0.00	0.00	6,263.00	151.56	-3,997.41	685,585.660	529,411.690	32° 53' 4.989 N	104° 14' 15.086 W
	- Point									

Plan Annotations	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
	5,852.50	5,852.50	N/S 0.00	KOP - 5852.50'MD, 0.00°INC, 0.00°AZI, 5852.50'TVD
	6,609.67	6,330.00	18.35	-484.24 Land Curve- 6609.67'MD, 90.83°INC, 272.17°AZI, 6330.00'TVD, 0.00°I
	10,699.80	6,253.00	37.87	-999.31 TD @ 10699.80' MD

Checked By: _____ Approved By: _____ Date: _____