

**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.**

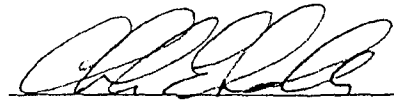
Case No. 14,437

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

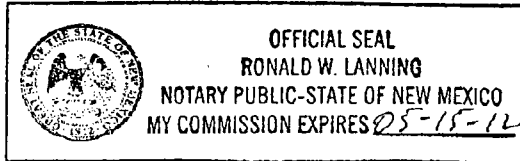


EXHIBIT A

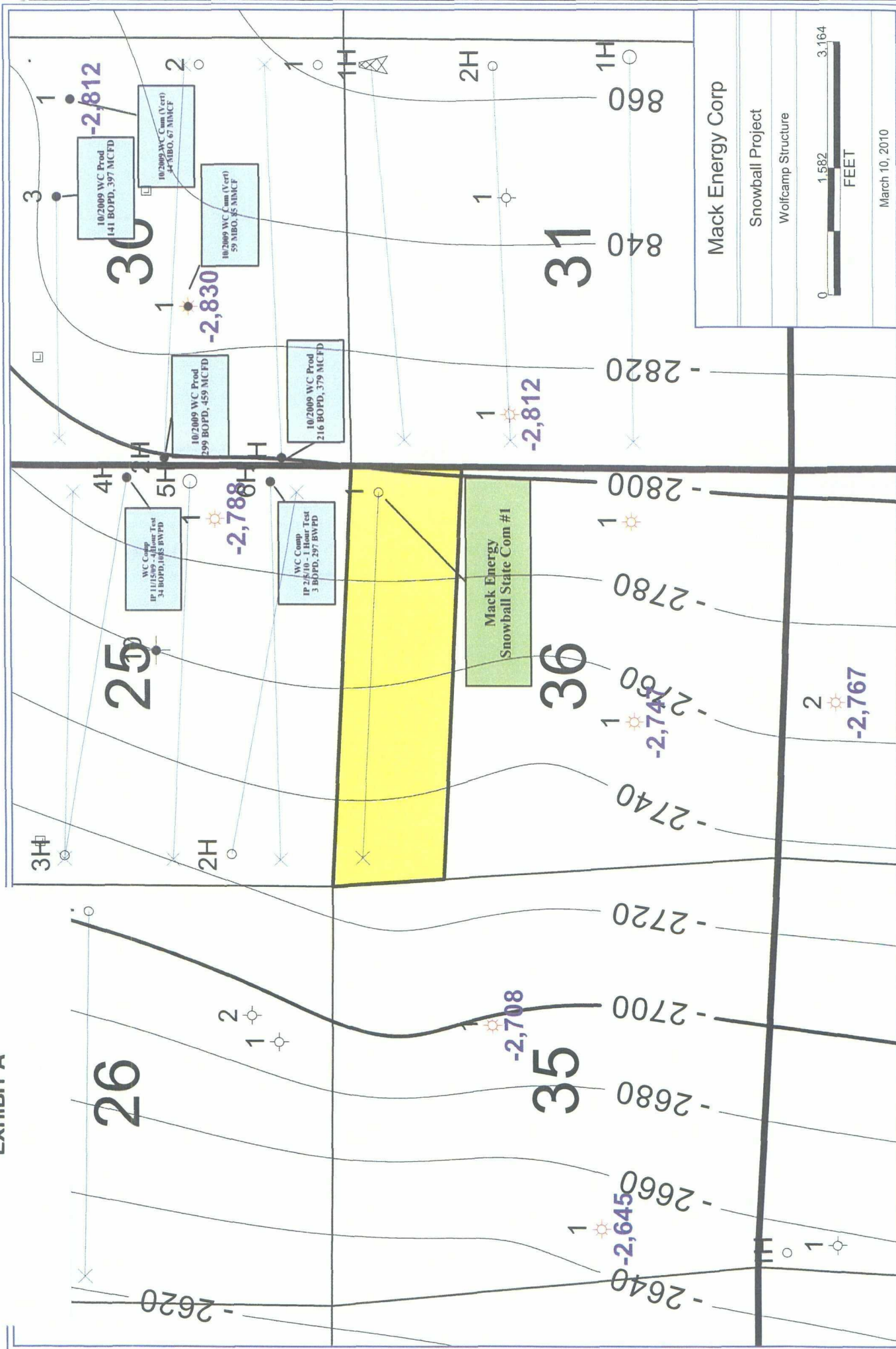


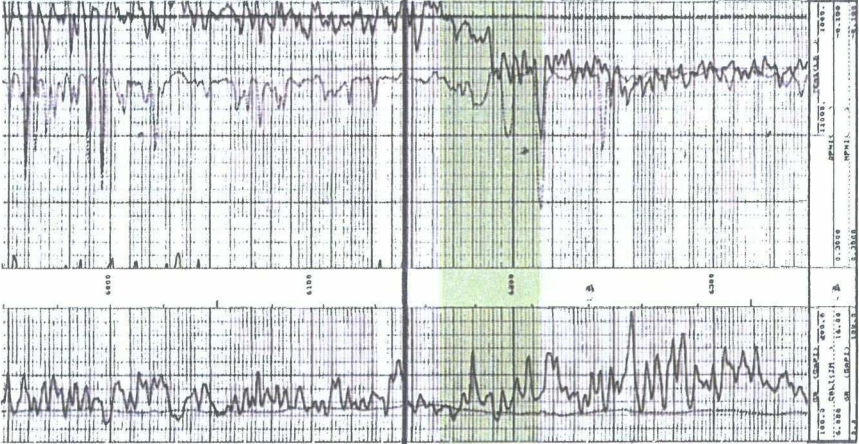
EXHIBIT B

SW

DOG CANYON '35-G' STT



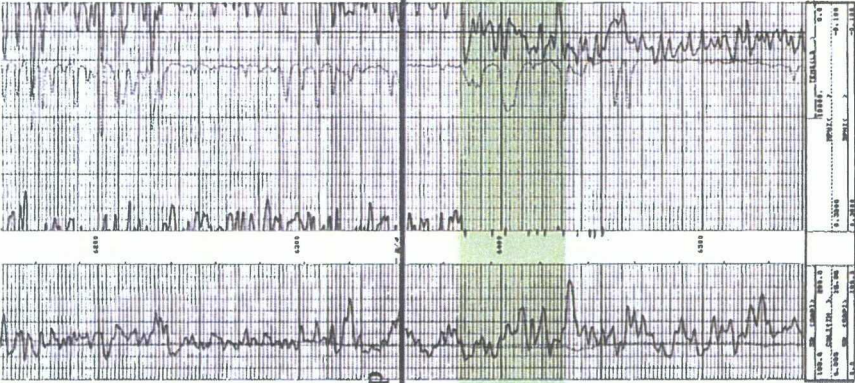
T16S R27E S35



DOG CANYON '31E' FEDRL



T16S R28E S31



SNOWBALL STATE COM



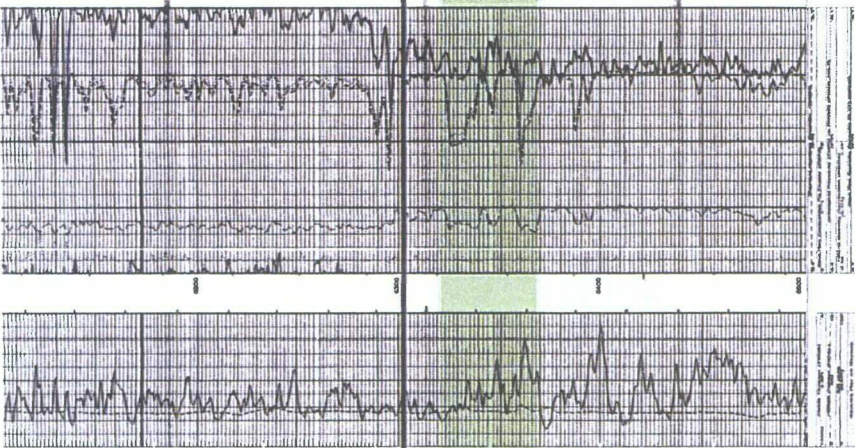
T16S R27E S36



CARBON VALLEY '25'



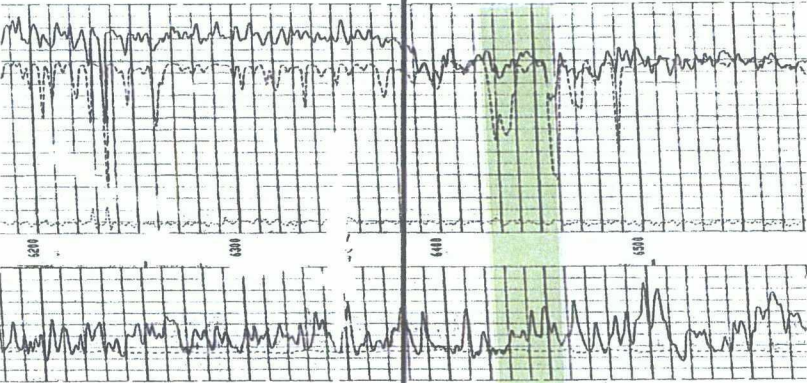
T16S R27E S25



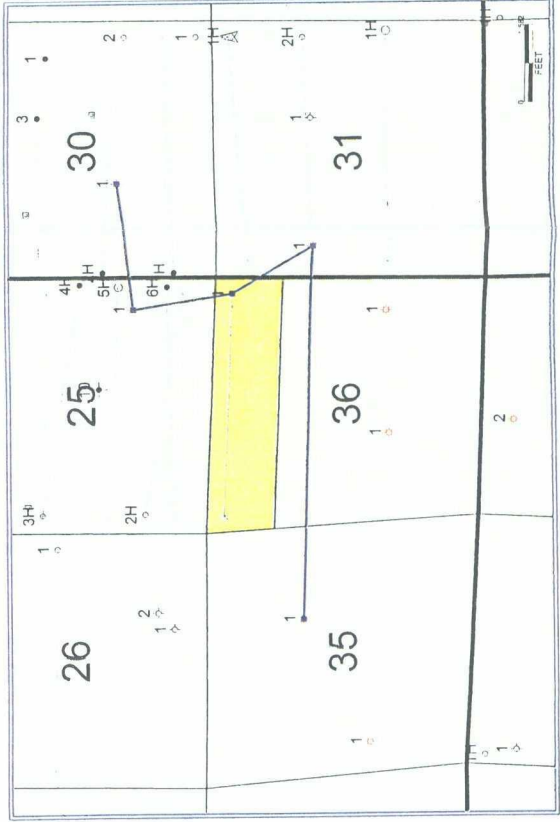
CROW FLATS FED COM



T16S R28E S30



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

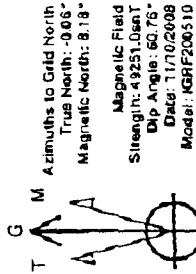
EXHIBIT C

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

Plan: Plan #1

Patfinder X & Y Survey Report

10 November, 2008



Azimuths to Grid North
True North: 0.65°
Magnetic North: 0.18°
Magnetic Field
Strength: 49251.0
Dip Angle: 60.75°
Data: 11/10/2008
Model: KGRF200510



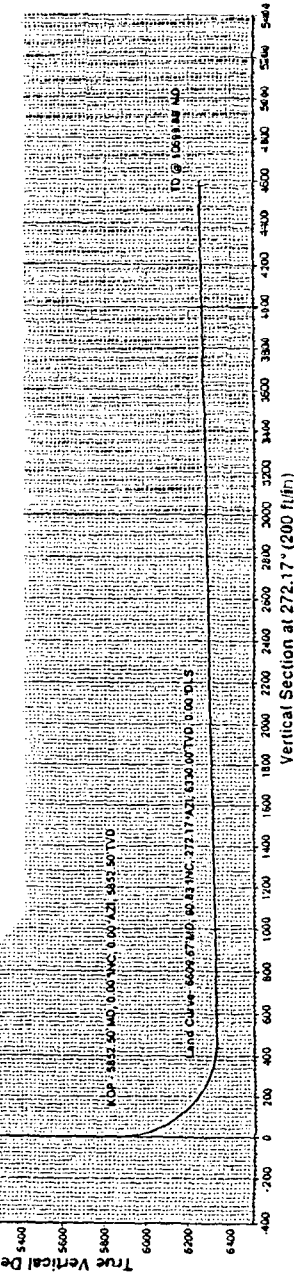
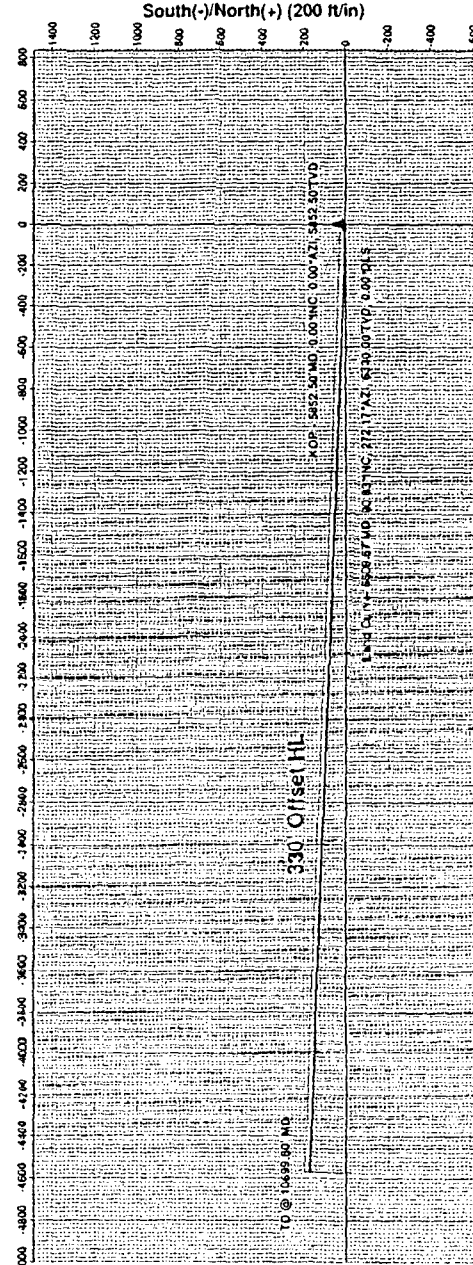
Project: Eddy County
Site: Snowball State Com #1
Well: Snowball State Com
Wellbore: OH
Plan: Plan #1 (Snowball State Com/OH)

NAME	TVD	N-S	E-W	Shape
PBHL (Snowball #1)	6552.50	173.20	-4570.70	POLY
Target 4 (Snowball)	5243.00	151.56	-3897.41	POLY
Target 3 (Snowball)	5243.00	151.56	-3897.41	POLY
Target 2 (Snowball)	5243.00	151.56	-3897.41	POLY
Target 1 (Snowball)	5243.00	151.56	-3897.41	POLY

WELL DETAILS: Snowball State Com			
Ground Elevation: 3470.00			
RKB Elevation: WELL @ 3484.00 (RKB = 18')			
RKB Name: RKB = 18'			
N-S	E-W	Easting	Latitude
0.00	0.00	553409.100	37° 53' 3.451 N
			104° 13' 28.210 W
			Sub

SECTION DETAILS									
Sec	MO	INC	AVI	TVD	N-S	E-W	Depth	VS-Set	Target
2	5452.50	0.00	0.00	5452.50	0.00	0.00	0.00	0.00	0.00
3	6609.55	90.83	272.17	6330.00	18.34	-484.12	12.00	272.17	484.47
4	6661.73	90.83	272.17	6329.25	20.30	-535.76	0.01	6.05	536.15
5	7125.17	90.83	272.17	6322.50	27.57	-1998.31	0.00	0.00	1000.00
6	8209.43	91.12	272.17	6307.00	75.77	-1998.80	0.00	0.00	2000.24
7	8209.43	91.12	272.17	6307.00	75.77	-1998.80	0.00	0.00	2000.24
8	8209.43	91.12	272.17	6307.00	75.77	-1998.80	0.00	0.00	2000.24
9	9125.65	91.15	272.17	6283.00	113.66	-2897.97	0.00	0.00	3000.12
10	9151.16	91.15	272.17	6282.49	114.63	-3023.46	0.00	0.00	3025.63
11	10130.88	91.00	272.17	6282.81	151.75	-4202.38	2.00	-180.00	4005.25
12	10130.88	91.00	272.17	6282.81	151.75	-4202.38	2.00	-180.00	4005.25
13	10689.80	91.00	272.17	6253.00	173.30	-4570.70	0.00	0.00	4573.96

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



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 Rubin	Date: 11/21, November 19 2008
Checked: _____	Date: _____	

Pathfinder Energy Services Pathfinder 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 Coordinate Reference: 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		Northings: 685,434.100 ft Eastings: 533,409.100 ft Spot 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 Position Uncertainty 0.00 ft		Northings: 685,434.100 ft Eastings: 533,409.100 ft Wellhead Elevation: 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		Dip Angle Field Strength 60.76 49.251	
Design: Plan #1			
Audit Notes:			
Version:		Phase: PLAN	
Vertical Section:		Tie On Depth: 0.00	
Depth From (TVP) From (ft) To (ft) 0.00 0.00		Direction (ft) (ft) 0.00 272.17	
Survey Tool Program: Date 11/10/2008			
From (ft) To (ft) Survey (Wellbore)		Tool Name Description MWD MWD - Standard	
0.00 10.699.77 Plan #1 (OH)			

Pathfinder Energy Services

Pathfinder X & Y Survey Report

Company: Mack Energy			Well Snowball State Com			Local Coordinate Reference			Well Snowball State Com		
Project: Eddy County			Snowball State Com #1			TYP Reference			WELL @ 3488.00ft (RKB= 18')		
Site: Snowball State Com						MB Reference			WELL @ 3488.00ft (RKB= 18')		
Well: OH						North Reference			Grid		
Wellbore Design: Plan #1						Survey Regulation Method:			EDM 2003.16 Single User Db		
						Database:					
Planned Survey											
MD (ft)	Inc (ft)	AZI (°)	TYP (ft)	TPSS (ft)	N/S (ft)	EW (ft)	V/Spc (ft)	PLeg (ft/100ft)	Nothing (ft)	Existing (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	

Pathfinder Energy Services

Pathfinder 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 Coordinates Reference TVD Reference North Reference Survey Calculation Method Display								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)	Incl (°)	Azi (°)	TVP (ft)	TVDSS (ft)	NS (ft)	EW (ft)	Y-Stop (ft)	Plan (1/100ft)	North (ft)	East (ft)			
2,700.00	0.00	0.00	2,700.00	-788.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
2,800.00	0.00	0.00	2,800.00	-688.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
2,900.00	0.00	0.00	2,900.00	-588.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,000.00	0.00	0.00	3,000.00	-488.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,100.00	0.00	0.00	3,100.00	-388.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,200.00	0.00	0.00	3,200.00	-288.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,300.00	0.00	0.00	3,300.00	-188.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,400.00	0.00	0.00	3,400.00	-88.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,500.00	0.00	0.00	3,500.00	12.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,600.00	0.00	0.00	3,600.00	112.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,700.00	0.00	0.00	3,700.00	212.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,800.00	0.00	0.00	3,800.00	312.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
3,900.00	0.00	0.00	3,900.00	412.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,000.00	0.00	0.00	4,000.00	512.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,100.00	0.00	0.00	4,100.00	612.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,200.00	0.00	0.00	4,200.00	712.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,300.00	0.00	0.00	4,300.00	812.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,400.00	0.00	0.00	4,400.00	912.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,500.00	0.00	0.00	4,500.00	1,012.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,600.00	0.00	0.00	4,600.00	1,112.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,700.00	0.00	0.00	4,700.00	1,212.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,800.00	0.00	0.00	4,800.00	1,312.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
4,900.00	0.00	0.00	4,900.00	1,412.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,000.00	0.00	0.00	5,000.00	1,512.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,100.00	0.00	0.00	5,100.00	1,612.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,200.00	0.00	0.00	5,200.00	1,712.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			
5,300.00	0.00	0.00	5,300.00	1,812.00	0.00	0.00	0.00	0.00	685,434.10	533,409.10			

Pathfinder Energy Services Patfinder X & Y Survey Report

Company: Mack Energy Eddy County Snowball State Com #1 Snowball State Com OH Plan #1			Local Coordinate 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)	TVSS (ft)	N/S (ft)	E/W (ft)	V. Sep (ft)	Plat (ft/100ft)	Nothing (ft)	Ending (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
 Pathfinder X & Y Survey Report

Company/Project				Mack Energy Eddy County Snowball State Com #1				Well Snowball State Com			
Site				Snowball State Com				WELL @ 3488.00ft (RKB= 18)			
Well				OH				Grd			
Wellbore				OH				Minimum Curvature			
Design				Plan #1				EDM 2003.16 Single User Db			
Total Coordinates Reference											
TVD Reference											
MD Reference											
North Reference											
Survey Calculation Method											
Database											
Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	NS (ft)	EW (ft)	VtSp (ft)	DtSp (%/100ft)	Northing (ft)	Easting (ft)	
6,375.00	62.69	272.17	6,276.82	2,786.82	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	2,808.39	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- 6609.67°MD, 90.83°INC, 272.17°AZI, 6330.00°TVD, 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

Pathfinder 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 Coordinates Reference: TVD Reference: MD Reference: North Reference: Survey Calculated from North: 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)	Incl (°)	Azi (°)	TVD (ft)	TPDSS (ft)	NS (ft)	EW (ft)	V. Spc (ft)	D. Leg (V/100ft)	Nothing (ft)	East (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 Project Site Well Wellbore Design			Mack Energy Eddy County Snowball State Com #1 Snowball State Com OH Plan #1			Legal Coordinates Reference: TYP Reference: MP Reference: North Reference: Survey Calculation Method: Datums:						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														
MP (ft)	Inc (°)	Azi (°)	TYP (ft)	IVPSS (ft)	INS (ft)	EW (ft)	V/Sec (ft)	Plag (ft/100ft)	Nothing (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 Pathfinder X & Y Survey Report

Mack Energy Eddy County Snowball State Com #1 Snowball State Com OH Plan #1					Well Snowball State Com WELL @ 3488.00ft (RKB= 18) WELL @ 3488.00ft (RKB= 18) Grid Minimum Curvature EDM 2003.16 Single User Db									
Local Coordinates Reference TVD Reference MD Reference North Reference Survey Calculation Method Database														
Company	Project	Site	Well	Design	Target Name	Dip Angle (°)	Dip Dir (°)	TVD (ft)	N/S (ft)	E/W (ft)	North (ft)	East (ft)	Latitude	Longitude
					Target 1 (Snowball) - plan hits target - Point	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
					Target 2 (Snowball) - plan hits target - Point	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
					Target 3 (Snowball) - plan hits target - Point	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
					PBHL (Snowball #1) - plan hits target - Point	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
					Target 4 (Snowball) - plan hits target - Point	0.00	0.00	6,263.00	151.56	-3,997.41	685,565.660	529,411.690	32° 53' 4.989 N	104° 14' 15.086 W
Plan Annotations														
					Local Coordinates									
					Measured Depth (ft)	Vertical Depth (ft)	+N/S (ft)	+E/W (ft)	Comment					
					5,852.50	5,852.50	0.00	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					
</														