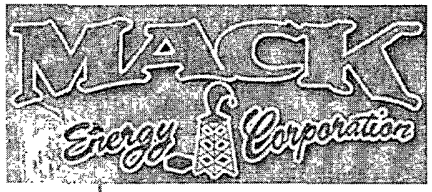

Mack Energy

Lea County
State 35
#7
OH

Plan: Plan #1

Pathfinder X & Y Report

27 October, 2011

PATHFINDER®
A Schlumberger Company

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #7
Project:	Lea County	**TVD Reference:**	KB = 20 @ 4131.0usft (Original Well Elev)
Site:	State 35	**MD Reference:**	KB = 20 @ 4131.0usft (Original Well Elev)
Well:	#7	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 5000.1 Single User Db

Project Lea County

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

Site State 35

Site Position:		**Northing:**	651,161.100 usft	**Latitude:**	32° 47' 17.526 N
From:	Map	**Easting:**	713,709.200 usft	**Longitude:**	103° 38' 16.547 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.38 °

Well #7

Well Position	**+N/-S**	0.0 usft	**Northing:**	651,161.100 usft	**Latitude:**	32° 47' 17.526 N
	+E/-W	0.0 usft	**Easting:**	713,709.200 usft	**Longitude:**	103° 38' 16.547 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	4,111.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/27/2011	7.60	60.71	48,944

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0 0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 0	0.0	0.0	134.48

Survey Tool Program **Date** 10/27/2011

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	8,811 6	Plan #1 (OH)	MWD	MWD - Standard

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #7
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Well:	#7	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 5000.1 Single User Db

Planned 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)
0.0	0.00	0.00	0.0	-4,131.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
100.0	0.00	0.00	100.0	-4,031.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
200.0	0.00	0.00	200.0	-3,931.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
300.0	0.00	0.00	300.0	-3,831.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
400.0	0.00	0.00	400.0	-3,731.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
500.0	0.00	0.00	500.0	-3,631.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
600.0	0.00	0.00	600.0	-3,531.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
700.0	0.00	0.00	700.0	-3,431.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
800.0	0.00	0.00	800.0	-3,331.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
900.0	0.00	0.00	900.0	-3,231.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,000.0	0.00	0.00	1,000.0	-3,131.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,100.0	0.00	0.00	1,100.0	-3,031.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,200.0	0.00	0.00	1,200.0	-2,931.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,300.0	0.00	0.00	1,300.0	-2,831.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,400.0	0.00	0.00	1,400.0	-2,731.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,500.0	0.00	0.00	1,500.0	-2,631.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,600.0	0.00	0.00	1,600.0	-2,531.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,700.0	0.00	0.00	1,700.0	-2,431.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,800.0	0.00	0.00	1,800.0	-2,331.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
1,900.0	0.00	0.00	1,900.0	-2,231.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,000.0	0.00	0.00	2,000.0	-2,131.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,100.0	0.00	0.00	2,100.0	-2,031.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,200.0	0.00	0.00	2,200.0	-1,931.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,300.0	0.00	0.00	2,300.0	-1,831.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,400.0	0.00	0.00	2,400.0	-1,731.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,500.0	0.00	0.00	2,500.0	-1,631.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,600.0	0.00	0.00	2,600.0	-1,531.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #7
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Site:	State 35	**MD Reference:**	KB = 20 @ 4131.0usft (Original Well Elev)
Well:	#7	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 5000.1 Single User Db

Planned 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)
2,700.0	0.00	0.00	2,700.0	-1,431.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,800.0	0.00	0.00	2,800.0	-1,331.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
2,900.0	0.00	0.00	2,900.0	-1,231.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,000.0	0.00	0.00	3,000.0	-1,131.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,100.0	0.00	0.00	3,100.0	-1,031.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,200.0	0.00	0.00	3,200.0	-931.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,300.0	0.00	0.00	3,300.0	-831.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,400.0	0.00	0.00	3,400.0	-731.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,500.0	0.00	0.00	3,500.0	-631.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,600.0	0.00	0.00	3,600.0	-531.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,700.0	0.00	0.00	3,700.0	-431.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,800.0	0.00	0.00	3,800.0	-331.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
3,900.0	0.00	0.00	3,900.0	-231.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,000.0	0.00	0.00	4,000.0	-131.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,100.0	0.00	0.00	4,100.0	-31.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,200.0	0.00	0.00	4,200.0	69.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,300.0	0.00	0.00	4,300.0	169.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,400.0	0.00	0.00	4,400.0	269.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,500.0	0.00	0.00	4,500.0	369.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,600.0	0.00	0.00	4,600.0	469.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,700.0	0.00	0.00	4,700.0	569.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,800.0	0.00	0.00	4,800.0	669.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
4,900.0	0.00	0.00	4,900.0	769.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
5,000.0	0.00	0.00	5,000.0	869.0	0.0	0.0	0.0	0.00	651,161.10	713,709.20
5,100.0	0.44	134.48	5,100.0	969.0	-0.3	0.3	0.4	0.44	651,160.83	713,709.47
5,200.0	0.88	134.48	5,200.0	1,069.0	-1.1	1.1	1.5	0.44	651,160.02	713,710.30
5,300.0	1.32	134.48	5,300.0	1,169.0	-2.4	2.5	3.5	0.44	651,158.68	713,711.67

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Well:	#7	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 5000.1 Single User Db

Planned 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)
5,400.0	1.76	134.48	5,399.9	1,268.9	-4.3	4.4	6.1	0.44	651,156.80	713,713.58
5,500.0	2.20	134.48	5,499.9	1,368.9	-6.7	6.8	9.6	0.44	651,154.37	713,716.05
5,600.0	2.64	134.48	5,599.8	1,468.8	-9.7	9.9	13.8	0.44	651,151.42	713,719.06
5,700.0	3.08	134.48	5,699.7	1,568.7	-13.2	13.4	18.8	0.44	651,147.92	713,722.62
5,800.0	3.52	134.48	5,799.5	1,668.5	-17.2	17.5	24.6	0.44	651,143.89	713,726.73
5,900.0	3.96	134.48	5,899.3	1,768.3	-21.8	22.2	31.1	0.44	651,139.32	713,731.38
6,000.0	4.40	134.48	5,999.0	1,868.0	-26.9	27.4	38.4	0.44	651,134.21	713,736.58
6,100.0	4.84	134.48	6,098.7	1,967.7	-32.5	33.1	46.4	0.44	651,128.56	713,742.33
6,135.7	5.00	134.48	6,134.2	2,003.2	-34.7	35.3	49.5	0.44	651,126.42	713,744.51
6,200.0	5.00	134.48	6,198.3	2,067.3	-38.6	39.3	55.1	0.00	651,122.49	713,748.51
6,300.0	5.00	134.48	6,297.9	2,166.9	-44.7	45.5	63.8	0.00	651,116.39	713,754.72
6,400.0	5.00	134.48	6,397.6	2,266.6	-50.8	51.7	72.5	0.00	651,110.29	713,760.94
6,500.0	5.00	134.48	6,497.2	2,366.2	-56.9	57.9	81.2	0.00	651,104.18	713,767.15
6,600.0	5.00	134.48	6,596.8	2,465.8	-63.0	64.2	89.9	0.00	651,098.08	713,773.36
6,700.0	5.00	134.48	6,696.4	2,565.4	-69.1	70.4	98.6	0.00	651,091.98	713,779.58
6,800.0	5.00	134.48	6,796.0	2,665.0	-75.2	76.6	107.4	0.00	651,085.87	713,785.79
6,900.0	5.00	134.48	6,895.7	2,764.7	-81.3	82.8	116.1	0.00	651,079.77	713,792.01
7,000.0	5.00	134.48	6,995.3	2,864.3	-87.4	89.0	124.8	0.00	651,073.67	713,798.22
7,100.0	5.00	134.48	7,094.9	2,963.9	-93.5	95.2	133.5	0.00	651,067.56	713,804.44
7,200.0	5.00	134.48	7,194.5	3,063.5	-99.6	101.4	142.2	0.00	651,061.46	713,810.65
7,300.0	5.00	134.48	7,294.1	3,163.1	-105.7	107.7	150.9	0.00	651,055.36	713,816.86
7,400.0	5 00	134.48	7,393.8	3,262.8	-111.8	113.9	159.6	0.00	651,049.25	713,823.08
7,500.0	5.00	134.48	7,493.4	3,362.4	-117.9	120.1	168.3	0.00	651,043.15	713,829.29
7,600.0	5.00	134.48	7,593.0	3,462.0	-124.1	126.3	177.0	0 00	651,037.05	713,835.51
7,700.0	5.00	134.48	7,692.6	3,561.6	-130.2	132.5	185.7	0 00	651,030.95	713,841.72
7,800 0	5.00	134.48	7,792.2	3,661.2	-136.3	138.7	194 5	0.00	651,024.84	713,847.94
7,900.0	5.00	134.48	7,891.9	3,760.9	-142.4	144.9	203.2	0 00	651,018.74	713,854.15

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #7
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Site:	State 35	**MD Reference:**	KB = 20 @ 4131.0usft (Original Well Elev)
Well:	#7	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 5000.1 Single User Db

Planned 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)
8,000.0	5.00	134.48	7,991.5	3,860.5	-148.5	151.2	211 9	0.00	651,012.64	713,860.36
8,100.0	5.00	134.48	8,091.1	3,960.1	-154.6	157.4	220.6	0.00	651,006.53	713,866.58
8,200.0	5.00	134.48	8,190.7	4,059.7	-160.7	163.6	229.3	0.00	651,000.43	713,872.79
8,300.0	5.00	134.48	8,290.3	4,159.3	-166.8	169.8	238.0	0.00	650,994.33	713,879.01
8,400.0	5.00	134.48	8,390.0	4,259.0	-172.9	176.0	246.7	0.00	650,988.22	713,885.22
8,500.0	5.00	134.48	8,489.6	4,358.6	-179.0	182.2	255.4	0.00	650,982.12	713,891.44
8,600.0	5.00	134.48	8,589.2	4,458.2	-185.1	188.4	264.1	0.00	650,976.02	713,897.65
8,700.0	5.00	134.48	8,688.8	4,557.8	-191.2	194.7	272.8	0.00	650,969.91	713,903.86
8,800.0	5.00	134.48	8,788.4	4,657.4	-197.3	200.9	281.6	0.00	650,963.81	713,910.08
8,811.6	5.00	134.48	8,800.0	4,669.0	-198.0	201.6	282.6	0.00	650,963.10	713,910.80

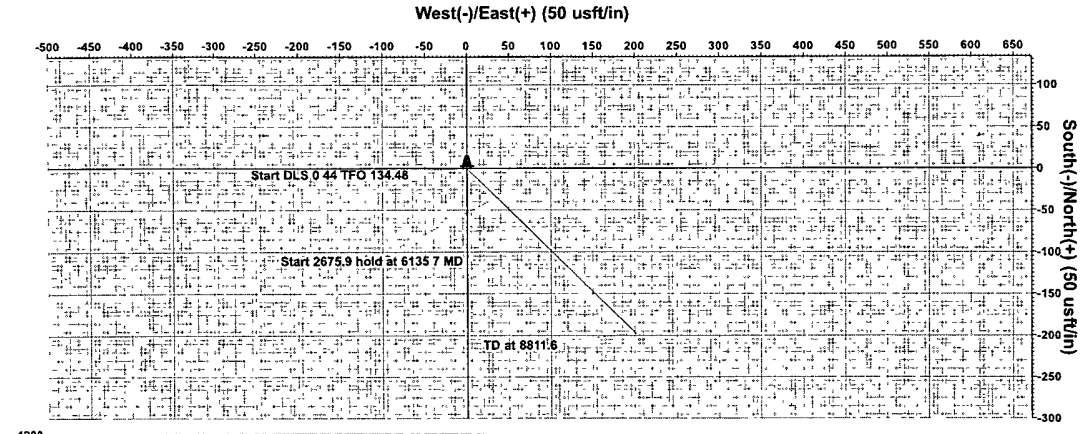
Checked By: _____ Approved By: _____ Date: _____

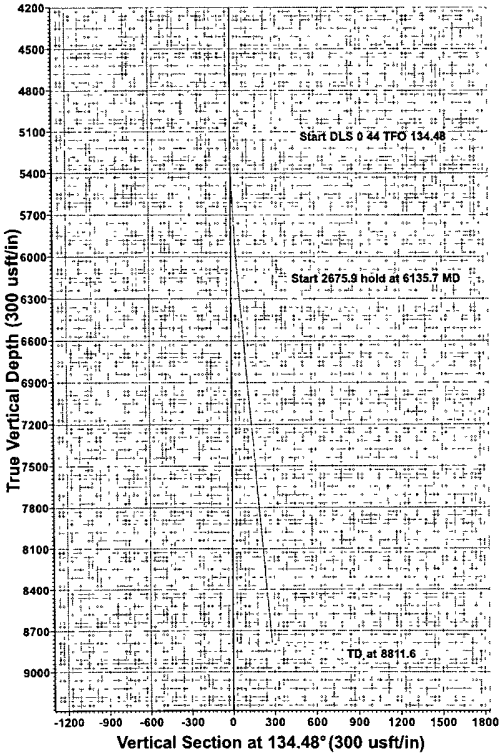
MACK Energy Corporation

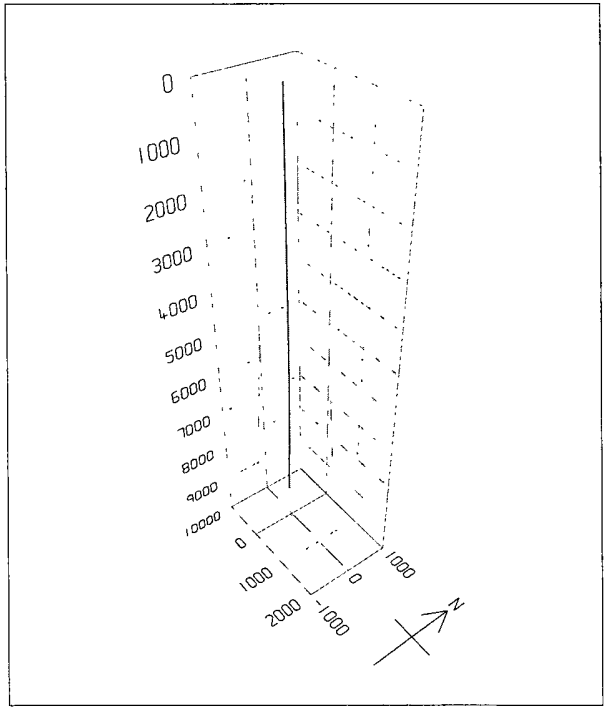
Azimuths to Grid North
True North: -0.38°
Magnetic North: 7.23°

Magnetic Field
Strength: 48943.7snT
Dip Angle: 60.71°
Date: 10/27/2011
Model: IGRF200510

PATHFINDER







Project: Lea County
Site: State 35
Well: #7
Wellbore: OH
Plan: Plan #1 (#7/OH)

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

WELL DETAILS. #7

Ground Elevation.: 4111.0
RKB Elevation. KB = 20 @ 4131.0usft (Original Well Elev)
Rig Name. Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 0	0 0	651161 100	713709.200	32°47' 17 526 N	103°38' 16 547 W	

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (STATE 35 #7)	8800 0	-198 0	201.6	650963.100	713910.800	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0 00	0.00	0 0	0 0	0.0	0.00	0 00	0 0	
2	5000 0	0 00	0.00	5000.0	0 0	0 0	0.00	0 00	0 0	
3	6135 7	5 00	134 48	6134.2	-34 7	35 3	0 44	134 48	49 5	
4	8811 6	5 00	134 48	8800.0	-198 0	201 6	0 00	0.00	282 6	PBHL (STATE 35 #7)

Plan. Plan #1 (#7/OH)

Created By Sam Biffle Date 9:35, October 27 2011

Checked _____ Date _____

Mack Energy Corporation

Minimum Blowout Preventer Requirements

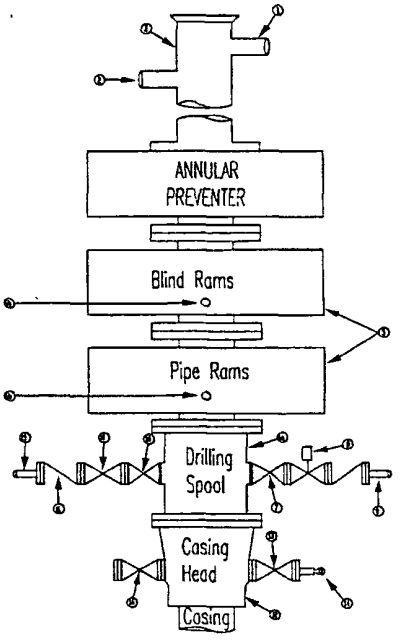
3000 psi Working Pressure
13 3/8 inch- 3 MWP
11 Inch - 3 MWP
EXHIBIT #1

Stack Requirements

NO	Items	Min I D	Min. Nominal
1	Flowline		2"
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		2" Choke
6b	2" min kill line and 3" min choke line outlets in ram (Alternate to 6a above)		
7	Valve Gate Plug	3 1/8	
8	Gate valve-power operated	3 1/8	
9	Line to choke manifold		3"
10	Valve Gate Plug	2 1/16	
11	Check valve	2 1/16	
12	Casing head		
13	Valve Gate Plug	1 13/16	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"

OPTIONAL

16	Flanged Valve	1 13/16	



CONTRACTOR'S OPTION TO FURNISH

1 All equipment and connections above bradenhead or casinghead Working pressure of preventers to be 2000 psi minimum.
2 Automatic accumulator (80 gallons, [illegible] 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers' position
4 Kelly equipped with Kelly cock
5 Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6 Kelly saver-sub equipped with rubber casing protector at all times
7 Plug type blowout preventer tester
8 Extra set pipe rams to fit drill pipe in use on location at all times
9 Type RX ring gaskets in place of Type R

MEC TO FURNISH:

1 Bradenhead or casing head and side valves
2 Wear bushing. If required

10

ME

GENERAL NOTES.

1 Deviations from this drawing may be made only with the express permission of MEC's [illegible]
2 All connections, valves, fittings, piping, etc , subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service
3. Controls to be of standard design and each marked, showing opening and closing position
4. Chokes will be positioned so as not to hamper or delay changing of choke beans.

Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use
5 All valves to be equipped with hand-wheels or handles ready [illegible]
6. Choke lines must be suitably anchored.
7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open Use outside valves except for emergency
9. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted
10 Casinghead connections shall not be used except in case of emergency.
11. Does not use kill line for routine fill up operations.

Mack Energy Corporation

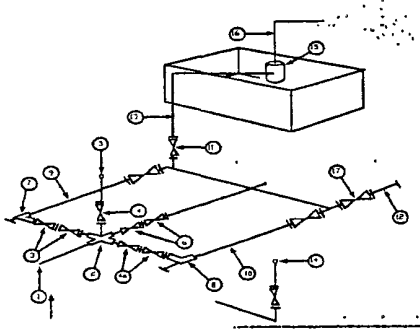
Exhibit #2

MIMIMUM CHOKE MANIFOLD

3,000, 5,000, and 10,000 PSI Working Pressure

3M will be used

3 MWP - 5 MWP - 10 MWP



Mud Pit

Reserve Pit

*** Location of separator optional**

Below Substructure

Mimimum requirements

No.		3,000 MWP I.D.	Nominal	Rating	5,000 MWP I.D.	Nominal	Rating	10,000 MWP I.D.	Nominal	Rating
1	Line from drilling Spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3" x 3" x 3" x 2"			3,000			5,000			
2	Cross 3" x 3" x 3" x 2"									10,000
3	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
4	Valve Gate Plug	1 13/16		3,000	1 13/16		5,000	1 13/16		10,000
4a	Valves (1)	2 1/16		3,000	2 1/16		5,000	2 1/16		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
7	Adjustable Choke (3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		2"	10,000
11	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
12	Line		3"	1,000		3"	1,000		3"	2,000
13	Line		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound Standpipe pressure quage			3,000			5,000			10,000
15	Gas Separator		2' x5'			2' x5'			2' x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000

(1) Only one required in Class 3M

(2) Gate valves only shall be used for Class 10 M

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

1 All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating

2 All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP

3. All lines shall be securely anchored

4 Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.

5 alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge

6. Line from drilling spool to choke manifold should bee as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees