District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1 000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

APR 08 2008
OCD-ARTESIA

Form C-101
May 27,2004

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1 Operator Name and Address	2 OGRID Number
Mack Energy Corporation P.O. Box 960 Artesia, NM 88211-0960	013837
	3 API Number 30- 005-64005

4 Property Code	5 Property Name	6 Well No
36691	Falcon State	3

7 Proposed Pool 1	Proposed Pool 2
Lone Wolf; San Andres, South	

7 Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	16	14S	29E		1675	North	2310	West	Chaves

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	16	14S	29E		1675	North	330	West	Chaves

Additional Well Information

11 Work Type Code	12 Well Type Code	13 Cable/Rotary	14 Lease Type Code	15 Ground Level Elevation
Plugback & drill horizontal	O	Rotary	S	3710' GR
16 Multiple	**17 Proposed Depth**	**18 Formation**	**19 Contractor**	**20 Spud Date**
No	4628' MD 2871' TVD	San Andres		4/9/08

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water
60'	1000'	1000'

Pit Liner Synthetic ☐ ____mils thick Clay ☐ Pit Volume _____bbls Drilling Method -

Closed-Loop System ☒ Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8	48	324	845sx	Surface
12 1/4	8 5/8	32	2275	875sx	Surface
7 7/8	5 1/2	17	4628' MD	1500sx	Surface

22 Describe the proposed program If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone
Describe the blowout prevention program, if any Use additional sheets if necessary.

Mack Energy Corporation proposes to plug back the Falcon State #3 setting 100' cement plugs from 7750-7650', 5700-5600', 3673-3573' as discussed with Tim Gum. Additionally a plug set from 2700-2100' for use as a kick off plug to drill horizontal to a MD of 4628'. Run 5 1/2 casing and cement. Put well on production.

CHANGE of BHL

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒ a general permit ☐, or an (attached) alternative OCD-approved plan. ☐**

Signature Jerry W Sherrell

Printed name	Jerry W. Sherrell
Title	Production Clerk
E-mail Address.	jerrys@mackenergycorp.com
Date 4/8/08	Phone (575)748-1288

OIL CONSERVATION DIVISION

Approved by Jim W. Gum

Title District II Supervisor

Approval Date 4/9/08 Expiration Date 4/9/10

Conditions of Approval Attached ☐

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	97662	Lone Wolf; San Andres, South

Property Code	Property Name	Well Number
36691	FALCON STATE	3H

OGRID No.	Operator Name	Elevation
013837	MACK ENERGY CORPORATION	3710'

Surface Location

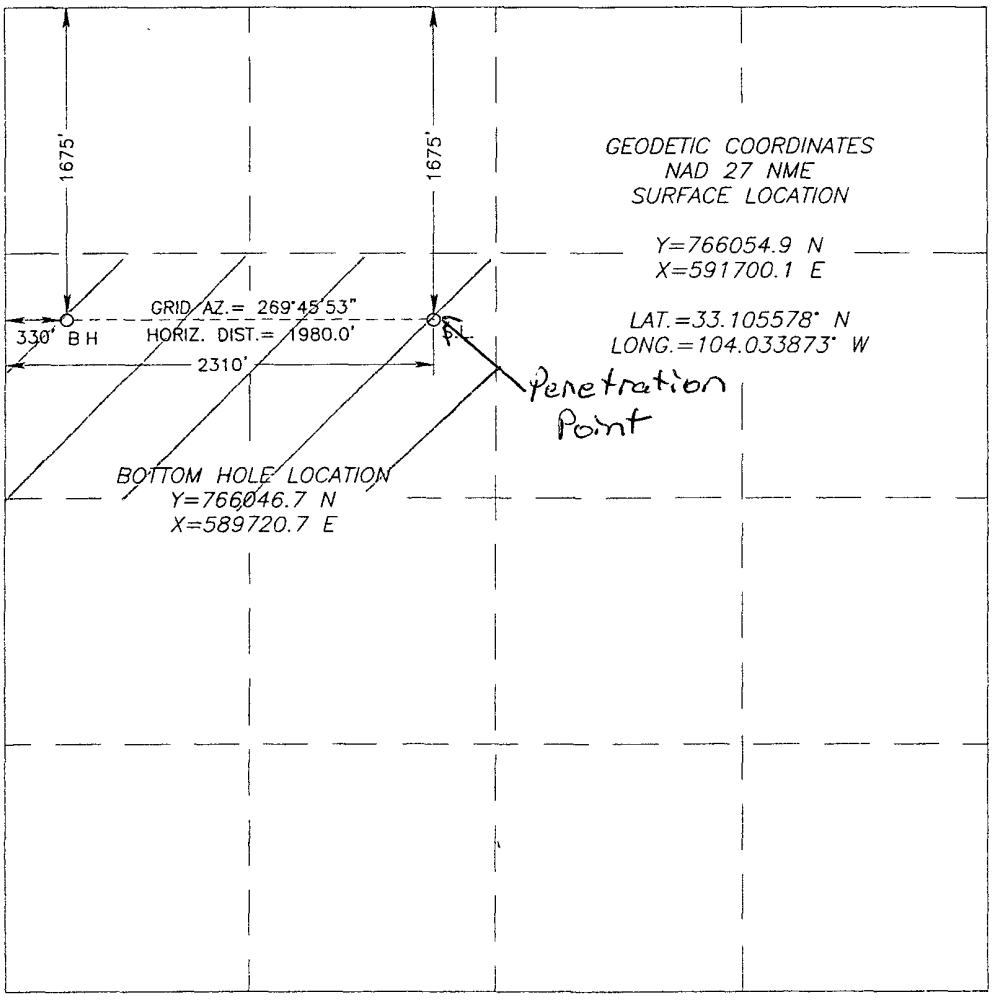
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	16	14-S	29-E		1675	NORTH	2310	WEST	CHAVES

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	16	14-S	29-E		1675	NORTH	330	WEST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
80			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jerry W. Sherrell 4/8/08
Signature Date

Jerry W. Sherrell
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JANUARY 24, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

Gary Eidson 2/1/08

08.11.0048

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

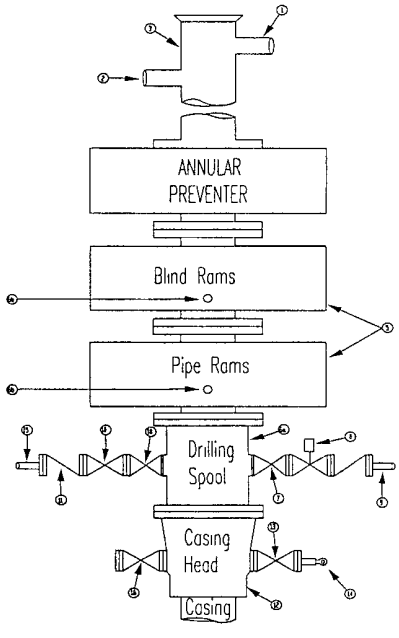
Mack Energy Corporation
Minimum Blowout Preventer Requirements
3000 psi Working Pressure
3 MWP
EXHIBIT #1-A

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 3000 psi minimum.
2 Automatic accumulator (80 gallon, minimum) capable of closing BOP in 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

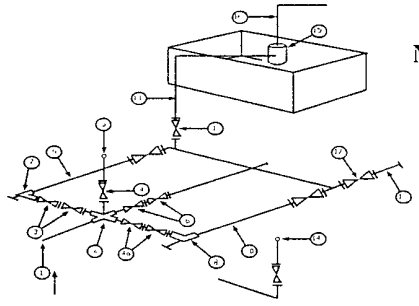
1 Bradenhead or casing head and side valves
2 Wear bushing If required

GENERAL NOTES

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
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 for immediate use.
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 (3000 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 Do not use kill line for routine fill up operations

Mack Energy Corporation

Exhibit #1-A
MIMIMUM CHOKE MANIFOLD
3,000, 5,000, and 10,000 PSI Working Pressure
3 M will be used or greater
3 MWP - 5 MWP - 10 MWP



Mud Pit

Reserve Pit

*** Location of separator optional**

Below Substructure

Mimimum requirements

		3,000 MWP			5,000 MWP			10,000 MWP		
No.		**I.D.**	**NOMINAL**	**Rating**	**I.D.**	**Nominal**	**Rating**	**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. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes As an 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

Mack Energy

Chaves County
Falcon State #3H
Falcon State #3H
Original Hole

Plan: Plan #1

Pathfinder Survey Report

08 April, 2008

Mack Energy Corporation

Azimuths to Grid North
True North: -0.16°
Magnetic North: 8.07°

Magnetic Field
Strength: 49435.3snT
Dip Angle: 61.01°
Date: 4/8/2008
Model: IGRF200510

PATHFINDER ENERGY SERVICES

WELL DETAILS: Falcon State #3H

Ground Elevation:: 3710.00
RKB Elevation: EST RKB @ 3727.00ft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	766054.900	591700.100	33° 6' 20.081 N	104° 2' 1.944 W	

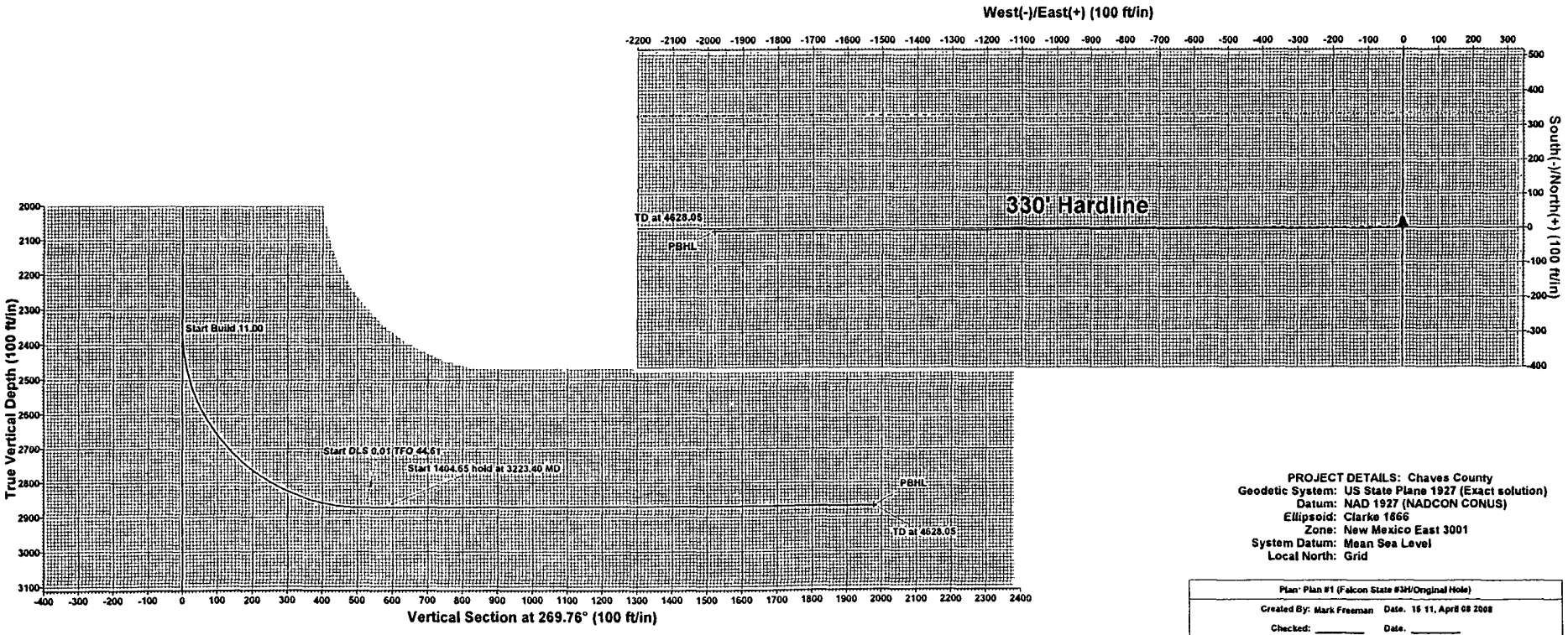
Project: Chaves County
Site: Falcon State #3H
Well: Falcon State #3H
Wellbore: Original Hole
Plan: Plan #1 (Falcon State #3H/Original Hole)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
pbhl	2867.00	-8.20	-1979.40	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2351.31	0.00	0.00	2351.31	0.00	0.00	0.00	0.00	0.00	
3	3171.31	90.20	269.76	2872.18	-2.19	-522.68	11.00	269.76	522.69	
4	3223.40	90.20	269.76	2871.99	-2.41	-574.77	0.01	44.61	574.77	
5	4628.05	90.20	269.76	2867.00	-8.20	-1979.40	0.00	0.00	1979.42	pbhl



PROJECT DETAILS: Chaves 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 (Falcon State #3H/Original Hole)	
Created By: Mark Freeman	Date: 15 11, April 08 2008
Checked: _____	Date: _____

WHS

Pathfinder Survey Report

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well Falcon State #3H
Project:	Chaves County	**TVD Reference:**	EST RKB @ 3727.00ft
Site:	Falcon State #3H	**MD Reference:**	EST RKB @ 3727.00ft
Well:	Falcon State #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Project Chaves 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 Falcon State #3H

Site Position:		**Northing:**	766,054.900ft	**Latitude:**	33° 6' 20.081 N
From:	Map	**Easting:**	591,700.100ft	**Longitude:**	104° 2' 1 944 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.16 °

Well Falcon State #3H

Well Position	**+N/-S**	0 00 ft	**Northing:**	766,054 900 ft	**Latitude:**	33° 6' 20 081 N
	+E/-W	0.00 ft	**Easting:**	591,700 100 ft	**Longitude:**	104° 2' 1.944 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,710.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/8/2008	8 24	61.01	49,435

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0 00	269.76

Survey Tool Program Date 4/8/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	4,628.05	Plan #1 (Original Hole)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
0.00	0 00	0 00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0 00	0.00
200.00	0.00	0 00	200.00	0 00	0.00	0 00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0 00	0.00
400 00	0.00	0.00	400.00	0 00	0.00	0.00	0 00
500.00	0.00	0.00	500.00	0.00	0 00	0 00	0.00
600.00	0.00	0.00	600.00	0 00	0.00	0.00	0.00
700.00	0.00	0 00	700.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0 00	0.00	0.00	0 00
900.00	0.00	0.00	900.00	0 00	0.00	0 00	0.00
1,000 00	0.00	0.00	1,000.00	0.00	0.00	0.00	0 00
1,100.00	0.00	0 00	1,100 00	0.00	0.00	0 00	0.00

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well Falcon State #3H
Project:	Chaves County	**TVD Reference:**	EST RKB @ 3727.00ft
Site:	Falcon State #3H	**MD Reference:**	EST RKB @ 3727.00ft
Well:	Falcon State #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
1,200.00	0.00	0.00	1,200.00	0.00	0 00	0.00	0 00
1,300 00	0.00	0 00	1,300.00	0.00	0 00	0.00	0.00
1,400.00	0.00	0 00	1,400.00	0.00	0.00	0.00	0 00
1,500.00	0.00	0.00	1,500.00	0.00	0 00	0 00	0.00
1,600.00	0 00	0.00	1,600 00	0 00	0.00	0.00	0.00
1,700.00	0 00	0.00	1,700.00	0.00	0.00	0.00	0 00
1,800.00	0 00	0.00	1,800.00	0 00	0.00	0.00	0 00
1,900 00	0.00	0 00	1,900 00	0 00	0.00	0.00	0 00
2,000.00	0.00	0 00	2,000.00	0 00	0 00	0 00	0.00
2,100 00	0.00	0 00	2,100.00	0.00	0 00	0 00	0 00
2,200 00	0 00	0 00	2,200.00	0 00	0.00	0.00	0.00
2,300.00	0 00	0 00	2,300 00	0.00	0.00	0.00	0 00
2,351 31	0 00	0 00	2,351 31	0.00	0.00	0.00	0.00
2,400.00	5.36	269 76	2,399 93	-0.01	-2 27	2 27	11 00
2,450 00	10.86	269 76	2,449.41	-0.04	-9.32	9 32	11.00
2,500 00	16.36	269.76	2,497.99	-0 09	-21 08	21 08	11.00
2,550.00	21 86	269 76	2,545 22	-0.16	-37 44	37 44	11 00
2,600.00	27 36	269 76	2,590 66	-0.24	-58.25	58 25	11.00
2,650.00	32 86	269.76	2,633 90	-0.35	-83.32	83.32	11.00
2,700.00	38.36	269.76	2,674.53	-0.47	-112.42	112.42	11.00
2,750.00	43 86	269.76	2,712.19	-0.61	-145 28	145 28	11.00
2,800 00	49 36	269.76	2,746.53	-0 76	-181.60	181.60	11.00
2,850 00	54.86	269 76	2,777 23	-0.93	-221 04	221 04	11 00
2,900 00	60 36	269 76	2,804.01	-1.10	-263.24	263 24	11 00
2,950 00	65.86	269.76	2,826 61	-1 29	-307.81	307 82	11.00
3,000.00	71 36	269.76	2,844 85	-1 48	-354 35	354.35	11.00
3,050.00	76 86	269 76	2,858 53	-1.69	-402 42	402.42	11.00
3,100 00	82.36	269.76	2,867.55	-1 89	-451.58	451.58	11 00
3,150 00	87.86	269.76	2,871.82	-2.10	-501.38	501 38	11 00
3,171.31	90.20	269 76	2,872.18	-2.19	-522.68	522.69	11.00
3,200.00	90 20	269 76	2,872.08	-2.31	-551.37	551.38	0 01
3,223 40	90.20	269 76	2,871.99	-2.41	-574 77	574 77	0.01
3,300 00	90 20	269 76	2,871.72	-2.72	-651.37	651 38	0 00
3,400.00	90.20	269.76	2,871.37	-3.13	-751.37	751.38	0 00
3,500.00	90.20	269.76	2,871.01	-3.55	-851.37	851 38	0 00
3,600.00	90.20	269.76	2,870 66	-3.96	-951.37	951 38	0 00
3,700 00	90.20	269 76	2,870 30	-4.37	-1,051.37	1,051.38	0.00
3,800.00	90.20	269.76	2,869.94	-4.78	-1,151.36	1,151.37	0.00
3,900.00	90.20	269.76	2,869.59	-5.20	-1,251.36	1,251.37	0.00
4,000.00	90.20	269 76	2,869.23	-5.61	-1,351.36	1,351 37	0.00
4,100 00	90.20	269 76	2,868.88	-6.02	-1,451.36	1,451.37	0 00
4,200.00	90 20	269.76	2,868.52	-6.43	-1,551.36	1,551.37	0.00
4,300.00	90.20	269.76	2,868.17	-6.85	-1,651.36	1,651 37	0.00
4,400.00	90.20	269.76	2,867.81	-7.26	-1,751 36	1,751.37	0.00

WHS

Pathfinder Survey Report

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well Falcon State #3H
Project:	Chaves County	**TVD Reference:**	EST RKB @ 3727.00ft
Site:	Falcon State #3H	**MD Reference:**	EST RKB @ 3727.00ft
Well:	Falcon State #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
4,500 00	90.20	269 76	2,867.46	-7.67	-1,851 35	1,851.37	0.00
4,600 00	90.20	269.76	2,867 10	-8 08	-1,951.35	1,951 37	0.00
4,628.05	90.20	269.76	2,867 00	-8.20	-1,979.40	1,979.42	0.00

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
pbhl - plan hits target - Point	0.00	0.00	2,867 00	-8 20	-1,979.40	766,046 700	589,720.700	33° 6' 20.056 N	104° 2' 25.214 W

Checked By: _____ Approved By: _____ Date: _____