ATS-08-13

OCD-ARTESIA

DEC 17 2007

OCD-ARTESIA

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Form 3160 -3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

176

FORM APPROVED
OMB No 1004-0137
Expires March 31 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. ~~NMNM-117954~~ LC-068677	
6 If Indian, Allotee or Tribe Name	
1a Typeofwork- ☒ DRILL ☐ REENTER	7 If Unit or CA Agreement, Name and No
1b Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	8, Lease Name and Well No. Oilers Federal #2
2 Name of Operator Mack Energy Corporation 13837	9. API Well No. 30-015-35994
3a Address P.O. Box 960 Artesia, NM 88211-0960 / 3b PhoneNo (include area code) (505)748-1288	10. Field and Pool, or Exploratory Wildcat Wolfcamp
4 Location of Well (Report location clearly andinaccorounce with any State requirements*) At surface 2310 FSL & 330 FEL; At proposed prod. zone 2285 FSL & 330 FWL	11 Sec, T R. M or Blk and Survey or Area Sec. 9 T16S R29E
14. Distance in miles and direction from nearest town or post office* 12 miles northwest of Loco Hills, NM	12 County or Parish Eddy / 13 State NM
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg unit line, if any) 330	16 No. of acres in lease 1680 / 17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1320	19 Proposed Depth TVD 7155 ~~11150MD~~ 11552 / 20 BLM/BIA Bond No on file NMB000286 — per sctnd'd loc drlg report
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3699' GR	22 Approximate date work will start* 11/4/07 / 23 Estimated duration 35 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form

1 Well plat certified by a registered surveyor
2 A Drilling Plan
3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above),
5 Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

25 Signature Jerry W. Sherrell	Name (Printed/Typed) Jerry W. Sherrell	Date 10/16/07
Title Production Clerk		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date DEC 12 2007
Title FOR FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrantor certify that the applicant holds lega orequitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Tide 43 U S C Section 1212, make it a crime for any person knowirilly and willfully to make to any department or agency ofthe United States any false, fictitious or fraudulent statements or representations as to any matter within its juris iction

(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS 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
	96086	Wildcat Wolfcamp

Property Code	Property Name	Well Number
36904	OILERS FEDERAL	2

OGRID No.	Operator Name	Elevation
013837	MACK ENERGY CORPORATION	3699'

Surface Location

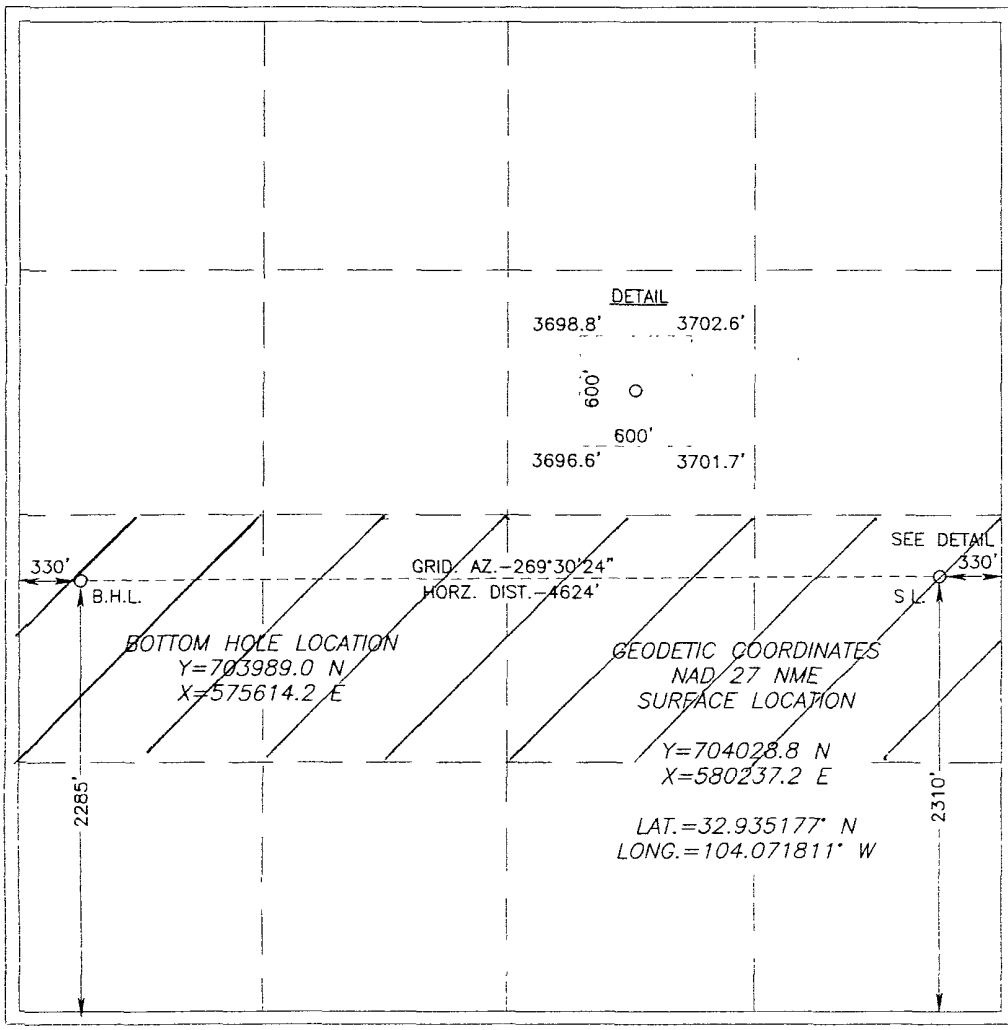
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	9	16-S	29-E		2310	SOUTH	330	EAST	EDDY

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
L	9	16-S	29-E		2285	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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 10/17/07
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.

SEPTEMBER 10, 2007
Date Surveyed DSS

Signature & Seal of Professional Surveyor

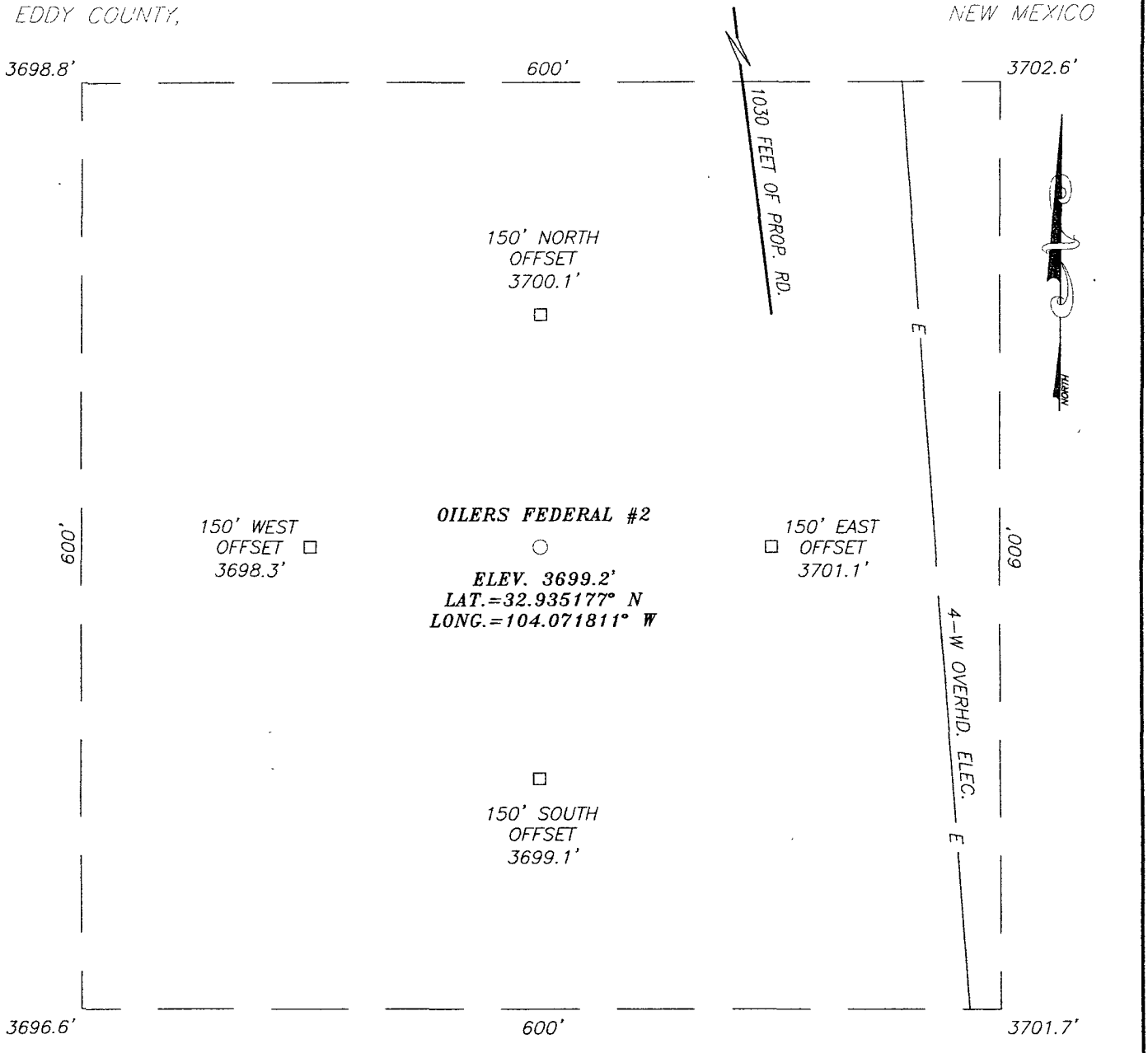
RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR
9/27/07

07.11.1198

Certificate No. GARY EIDSON 12641
RONALD EIDSON 3239

SECTION 9, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. #82 AND CO. RD. #214 (BARNAVAL DRAW RD.), GO NORTH ON CO. RD. #214 APPROX. 6.2 MILES. TURN RIGHT AT "Y" INTERSECTION AND GO APPROX. 0.6 MILES. TURN LEFT AT "Y" INTERSECTION AND GO APPROX. 1.3 MILES TO OILERS FEDERAL #3 WELL. FOLLOW STAKED ROAD SOUTH 1030 FEET TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

PROVIDING SURVEYING SERVICES SINCE 1946

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO

HOBBS, N.M. 88240

(505) 393-3117

MACK ENERGY CORPORATION

OILERS FEDERAL #2 WELL
LOCATED 2310 FEET FROM THE SOUTH LINE
AND 330 FEET FROM THE EAST LINE OF SECTION 9,
TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 09/10/07	Sheet 1 of 1 Sheets		
W.O. Number: 07.11.1198	Dr By: DSS	Rev 1:N/A	
Date: 09/25/07	Disk: .	07111198	Scale:1"=100'

Attached to Form 3160-3
Mack Energy Corporation
Oilers Federal #2
SHL 2310 FSL & 330 FEL Unit I, Sec. 9 T16S R29E
BHL 2285 FSL & 330 FWL Unit L, Sec 9 T16S R29E
Eddy County, NM

DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface	Wolfcamp	7050'
San Andres	2220'		
Glorieta	3750'		
Tubb	4960'		
Abo	5730'		

3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

Water Sand	150'	Fresh Water
San Andres	2220'	Oil/Gas
Abo	5730'	Oil/Gas
Wolfcamp	7050'	Oil/Gas

See COA

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 250' and circulating cement back to surface will protect the surface fresh water sand. Salt Section will be protected by setting 8 5/8" casing to 1600' and circulating cement back to surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing 5 1/2" production casing, sufficient cement will be pumped to circulate back to surface.

4. Casing Program:

Hole Size	Interval	OD Casing	Wt, Grade, Jt, cond, burst/collapse/tension
17 ½"	0-250'	13 3/8"	48#, H-40, ST&C, New, 3.92/1.676/6.71
12 ¼"	0-1600'	8 5/8"	24#, J-55, ST&C, New, 2.71/1.819/7.01
7 7/8"	0-~~11,150'~~ 11552 ± per scientific drlg report 12/3/07 WWI	5 1/2"	17#, J-55, LT&C, New, 1.50/1.385/1.94

See COA

5. Cement Program:

13 3/8" Surface Casing: Class C, 300sx, yield 1.32.

8 5/8 Intermiate Casing: Class C, 850sx, yield 1.32.

5 1/2" Production Casing: Class C, 2500sx, yield 1.32.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) minimum preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. The BOP will be nipped up on the 13 3/8" surface casing and tested to 1500 psi by a 3rd party. The BOP will then be nipped up on the 8 5/8" intermediate casing and tested by a 3rd party to 2000 psi and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of intermediate casing. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with a minimum 2000 psi WP rating.

7. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-250'	Fresh Water	8.5	28	N.C.
250-1600'	Brine	10	30	N.C.
1600'-TD	Cut Brine	9.1	29	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

8. Auxiliary Well Control and Monitoring Equipment:

A. Kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

9. Logging, Testing and Coring Program:

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. to 8 5/8 casing shoe.

B. Drill Stem test is not anticipated.

C. No conventional coring is anticipated.

D. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows and log evaluation.

10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 3250 psig. Low levels of Hydrogen sulfide have been monitors in producing wells in the area, so H2S may be present while drilling of the well a plan is attached to the Drilling program. No major loss of circulation zones has been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is November 4, 2007. Once commenced, the drilling operation should be finished in approximately 35 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

Attachment to Exhibit #9
NOTES REGARDING THE BLOWOUT PREVENTERS
Oilers Federal #2
Eddy County, New Mexico

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.

2. Wear ring to be properly installed in head.

3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.

4. All fittings to be flanged.

5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.

6. All choke and fill lines to be securely anchored especially ends of choke lines.

7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.

8. Kelly cock on Kelly.

9. Extension wrenches and hands wheels to be properly installed.

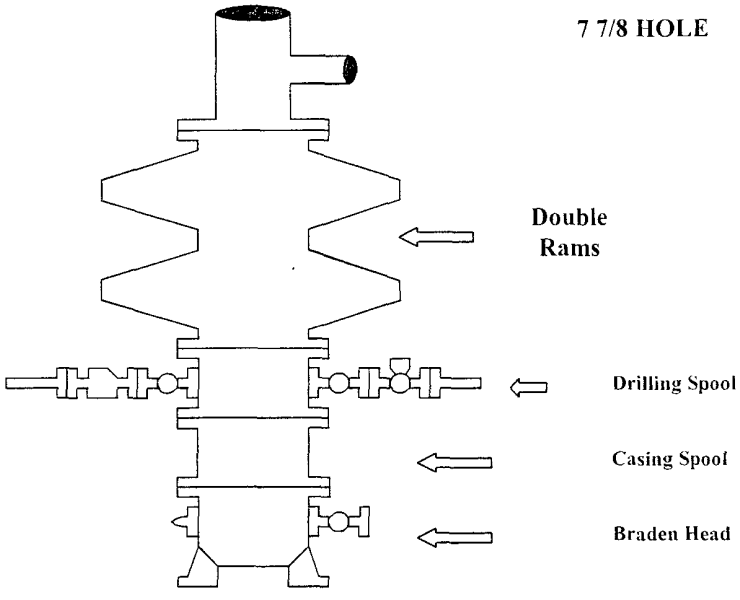
10. Blow out preventer control to be located as close to driller's position as feasible.

11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.

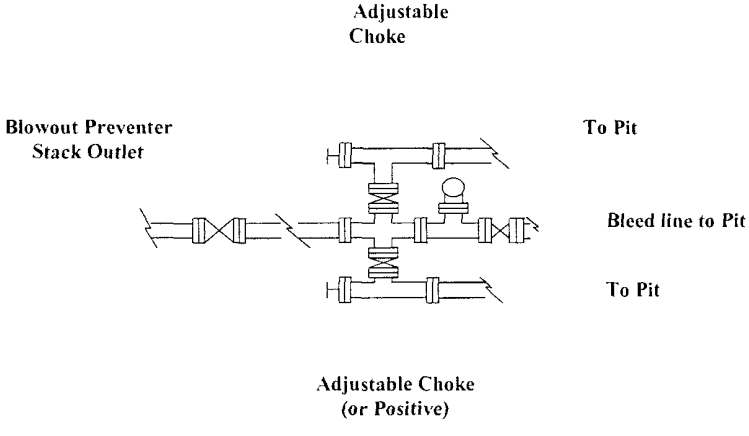
Mack Energy Corporation

Exhibit #9

BOPE Schematic



Choke Manifold Requirement (2000 psi WP minimum)
No Annular Required
See Exhibit #11 for Detail



Mack Energy Corporation

Minimum Blowout Preventer Requirements

2000 psi Working Pressure

2 MWP

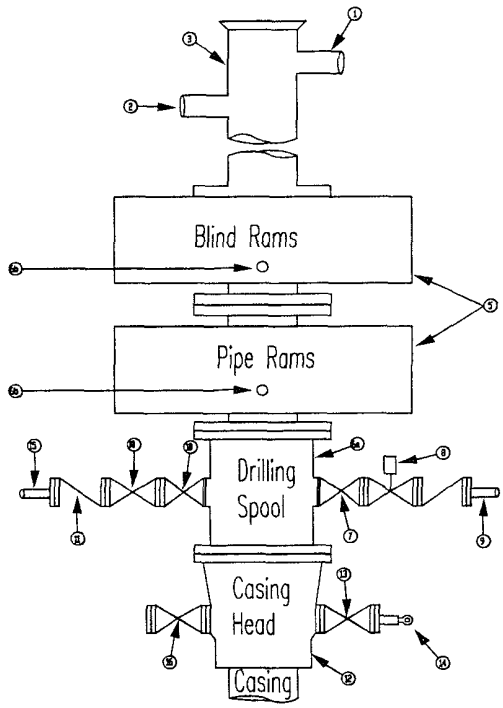
EXHIBIT #10

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 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 (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. Do not use kill line for routine fill up operations

Mack Energy Corporation

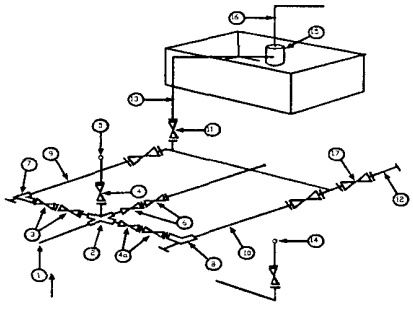
Exhibit #11

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

		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 guage			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 Corporation

Mack Energy Corp.

Eddy County, NM (NAD 27 NME)
Oilers Federal #2[redacted]
Oilers Federal #2[redacted]
Wellbore #1

Plan: Plan #2

Standard Planning Report

04 November, 2007

Scientific Drilling
Directional Drilling Operations

Database:	EDM 2003 16 Single User Db	Local Co-ordinate Reference:	Well Oilers Federal #2H
Company:	Mack Energy Corp	TVD Reference:	Well @ 3717 00ft (KB Elev)
Project:	Eddy County, NM (NAD 27 NME)	MD Reference:	Well @ 3717 00ft (KB Elev)
Site:	Oilers Federal #2H	North Reference:	Grid
Well:	Oilers Federal #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project Eddy County, NM (NAD 27 NME)

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 Oilers Federal #2H

Site Position:		Northing:	704,028 80 ft	Latitude:	32° 56' 6 636 N
From:	Map	Easting:	580,237 20 ft	Longitude:	104° 4' 18 518 W
Position Uncertainty:	0 00 ft	Slot Radius:	ft	Grid Convergence:	0 14 °

Well Oilers Federal #2H

Well Position	+N/-S	0 00 ft	Northing:	704,028 80 ft	Latitude:	32° 56' 6 636 N
	+E/-W	0 00 ft	Easting:	580,237 20 ft	Longitude:	104° 4' 18 518 W
Position Uncertainty		0 00 ft	Wellhead Elevation:	3,717 00 ft	Ground Level:	3,699 00 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/4/2007	8 29	60 86	49,370

Design Plan #2

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 38

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
6,650.00	0 00	0 00	6,650 00	0 00	0 00	0 00	0 00	0 00	0 00	
7,451 98	90 98	269 38	7,155 00	-5.55	-513 66	11 34	11 34	0 00	269 38	
11,552 16	90 98	269 38	7,085 00	-49 80	-4,613 00	0 00	0 00	0 00	0 00	PBHL-Oilers Fed #2H

Database:	EDM 2003 16 Single User Db	**Local Co-ordinate Reference:**	Well Oilers Federal #2H
Company:	Mack Energy Corp	**TVD Reference:**	Well @ 3717 00ft (KB Elev)
Project:	Eddy County, NM (NAD 27 NME)	**MD Reference:**	Well @ 3717 00ft (KB Elev)
Site:	Oilers Federal #2H	**North Reference:**	Grid
Well:	Oilers Federal #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
North HL-Oilers Fed #2H - West HL-Oilers Fed #2H									
100 00	0 00	0 00	100 00	0 00	0 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	0 00	0 00
300 00	0 00	0 00	300 00	0 00	0 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	0 00	0 00
500 00	0 00	0 00	500 00	0 00	0 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	0 00	0 00
700 00	0 00	0 00	700 00	0 00	0 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	0 00	0 00
900 00	0 00	0 00	900 00	0 00	0 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	0 00	0 00
1,100 00	0 00	0 00	1,100 00	0 00	0 00	0 00	0 00	0 00	0 00
1,200 00	0 00	0 00	1,200 00	0 00	0 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	0 00	0 00
1,400 00	0 00	0 00	1,400 00	0 00	0 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	0 00	0 00
1,600 00	0 00	0 00	1,600 00	0 00	0 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	0 00	0 00
1,800 00	0 00	0 00	1,800 00	0 00	0 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	0 00	0 00
2,000 00	0 00	0 00	2,000 00	0 00	0 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	0 00	0 00
2,200 00	0 00	0 00	2,200 00	0 00	0 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	0 00	0 00
2,400 00	0 00	0 00	2,400 00	0 00	0 00	0 00	0 00	0 00	0 00
2,500 00	0 00	0 00	2,500 00	0 00	0 00	0 00	0 00	0 00	0 00
2,600 00	0 00	0 00	2,600 00	0 00	0 00	0 00	0 00	0 00	0 00
2,700 00	0 00	0 00	2,700 00	0 00	0 00	0 00	0 00	0 00	0 00
2,800 00	0 00	0 00	2,800 00	0 00	0 00	0 00	0 00	0 00	0 00
2,900 00	0 00	0 00	2,900 00	0 00	0 00	0 00	0 00	0 00	0 00
3,000 00	0 00	0 00	3,000 00	0 00	0 00	0 00	0 00	0 00	0 00
3,100 00	0 00	0 00	3,100 00	0 00	0 00	0 00	0 00	0 00	0 00
3,200 00	0 00	0 00	3,200 00	0 00	0 00	0 00	0 00	0 00	0 00
3,300 00	0 00	0 00	3,300 00	0 00	0 00	0 00	0 00	0 00	0 00
3,400 00	0 00	0 00	3,400 00	0 00	0 00	0 00	0 00	0 00	0 00
3,500 00	0 00	0 00	3,500 00	0 00	0 00	0 00	0 00	0 00	0 00
3,600 00	0 00	0 00	3,600 00	0 00	0 00	0 00	0 00	0 00	0 00
3,700 00	0 00	0 00	3,700 00	0 00	0 00	0 00	0 00	0 00	0 00
3,800 00	0 00	0 00	3,800 00	0 00	0 00	0 00	0 00	0 00	0 00
3,900 00	0 00	0 00	3,900 00	0 00	0 00	0 00	0 00	0 00	0 00
4,000 00	0 00	0 00	4,000 00	0 00	0 00	0 00	0 00	0 00	0 00
4,100 00	0 00	0 00	4,100 00	0 00	0 00	0 00	0 00	0 00	0 00
4,200 00	0 00	0 00	4,200 00	0 00	0 00	0 00	0 00	0 00	0 00
4,300 00	0 00	0 00	4,300 00	0 00	0 00	0 00	0 00	0 00	0 00
4,400 00	0 00	0 00	4,400 00	0 00	0 00	0 00	0 00	0 00	0 00
4,500 00	0 00	0 00	4,500 00	0 00	0 00	0 00	0 00	0 00	0 00
4,600 00	0 00	0 00	4,600 00	0 00	0 00	0 00	0 00	0 00	0 00
4,700 00	0 00	0 00	4,700 00	0 00	0 00	0 00	0 00	0 00	0 00
4,800 00	0.00	0 00	4,800 00	0 00	0 00	0 00	0 00	0 00	0 00
4,900 00	0 00	0 00	4,900 00	0 00	0 00	0 00	0 00	0 00	0 00
5,000 00	0 00	0 00	5,000 00	0 00	0 00	0 00	0 00	0 00	0 00
5,100 00	0 00	0 00	5,100 00	0 00	0 00	0 00	0 00	0 00	0 00

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference**	Well Oilers Federal #2H
Company:	Mack Energy Corp	**TVD Reference**	Well @ 3717 00ft (KB Elev)
Project:	Eddy County, NM (NAD 27 NME)	**MD Reference**	Well @ 3717 00ft (KB Elev)
Site:	Oilers Federal #2H	**North Reference**	Grid
Well:	Oilers Federal #2H	**Survey Calculation Method**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200 00	0 00	0 00	5,200 00	0 00	0 00	0 00	0 00	0 00	0 00
5,300 00	0 00	0 00	5,300 00	0 00	0 00	0 00	0 00	0 00	0 00
5,400 00	0 00	0.00	5,400 00	0 00	0 00	0 00	0 00	0 00	0 00
5,500 00	0 00	0 00	5,500 00	0 00	0 00	0 00	0 00	0 00	0 00
5,600 00	0 00	0 00	5,600 00	0 00	0 00	0 00	0 00	0 00	0 00
5,700 00	0 00	0 00	5,700 00	0 00	0 00	0 00	0 00	0 00	0 00
5,800 00	0 00	0 00	5,800 00	0 00	0 00	0 00	0 00	0 00	0 00
5,900 00	0 00	0 00	5,900 00	0 00	0 00	0 00	0 00	0 00	0 00
6,000 00	0 00	0 00	6,000 00	0 00	0 00	0 00	0 00	0 00	0 00
6,100 00	0 00	0 00	6,100 00	0 00	0 00	0 00	0 00	0 00	0 00
6,200 00	0 00	0 00	6,200 00	0 00	0 00	0 00	0 00	0 00	0 00
6,300 00	0 00	0 00	6,300 00	0 00	0 00	0 00	0 00	0 00	0 00
6,400 00	0 00	0 00	6,400 00	0 00	0 00	0 00	0 00	0 00	0 00
6,500 00	0 00	0 00	6,500 00	0 00	0 00	0 00	0 00	0 00	0 00
6,600 00	0 00	0 00	6,600 00	0 00	0 00	0 00	0 00	0 00	0 00
6,650 00	0 00	0 00	6,650 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start 11.34°/100'									
6,700 00	5 67	269 38	6,699 92	-0 03	-2 47	2 47	11 34	11 34	0 00
6,800 00	17 02	269 38	6,797 80	-0 24	-22 11	22 11	11 34	11 34	0 00
6,900 00	28 36	269 38	6,889 92	-0 65	-60 62	60 62	11 34	11 34	0 00
7,000 00	39 70	269 38	6,972 65	-1 26	-116 49	116 49	11 34	11 34	0 00
7,100 00	51 05	269 38	7,042 78	-2 02	-187 54	187 55	11 34	11 34	0 00
7,200 00	62 39	269 38	7,097 56	-2 93	-271 00	271 02	11 34	11 34	0 00
7,300 00	73 74	269 38	7,134 86	-3 93	-363 60	363 63	11 34	11 34	0 00
7,400 00	85 08	269 38	7,153 21	-4 98	-461 73	461 76	11 34	11 34	0 00
7,451.98	90 98	269 38	7,155 00	-5 55	-513 65	513 68	11 34	11 34	0 00
EOC hold 90.98°									
7,451 98	90 98	269 38	7,155 00	-5 55	-513 66	513 69	11 34	11 34	0 00
7,500 00	90 98	269 38	7,154 18	-6 06	-561 67	561 70	0 00	0 00	0 00
7,600 00	90 98	269 38	7,152 47	-7 14	-661 65	661 69	0 00	0 00	0 00
7,700 00	90 98	269 38	7,150 76	-8 22	-761 63	761 67	0 00	0 00	0 00
7,800 00	90 98	269 38	7,149 05	-9 30	-861 61	861 66	0 00	0 00	0 00
7,900 00	90 98	269 38	7,147 35	-10 38	-961 59	961 64	0 00	0 00	0 00
8,000 00	90 98	269 38	7,145 64	-11 46	-1,061 57	1,061 63	0 00	0 00	0 00
8,100 00	90 98	269 38	7,143 93	-12 54	-1,161 55	1,161 61	0 00	0 00	0 00
8,200 00	90 98	269 38	7,142 23	-13 62	-1,261 53	1,261 60	0 00	0 00	0 00
8,300 00	90 98	269 38	7,140 52	-14 70	-1,361 51	1,361 58	0 00	0 00	0 00
8,400 00	90 98	269 38	7,138 81	-15 78	-1,461 48	1,461 57	0 00	0 00	0 00
8,500 00	90 98	269 38	7,137 10	-16 86	-1,561 46	1,561 56	0 00	0 00	0 00
8,600 00	90 98	269 38	7,135 40	-17 94	-1,661 44	1,661 54	0 00	0 00	0 00
8,700 00	90 98	269 38	7,133 69	-19 02	-1,761 42	1,761.53	0 00	0 00	0 00
8,800 00	90 98	269 38	7,131 98	-20 09	-1,861 40	1,861 51	0 00	0 00	0 00
8,900 00	90 98	269 38	7,130 28	-21 17	-1,961 38	1,961 50	0 00	0 00	0 00
9,000 00	90 98	269 38	7,128 57	-22 25	-2,061 36	2,061 48	0 00	0 00	0 00
9,100 00	90 98	269 38	7,126 86	-23 33	-2,161 34	2,161 47	0 00	0 00	0 00
9,200 00	90 98	269 38	7,125 15	-24 41	-2,261 32	2,261 45	0 00	0 00	0 00
9,300 00	90 98	269 38	7,123 45	-25 49	-2,361 30	2,361 44	0 00	0 00	0 00
9,400 00	90 98	269 38	7,121 74	-26 57	-2,461 28	2,461 42	0 00	0 00	0 00
9,500 00	90 98	269.38	7,120 03	-27 65	-2,561 26	2,561 41	0 00	0 00	0 00
9,600 00	90 98	269 38	7,118 33	-28 73	-2,661 24	2,661 40	0 00	0 00	0 00
9,700 00	90 98	269 38	7,116 62	-29 81	-2,761 22	2,761 38	0 00	0 00	0 00
9,800 00	90 98	269 38	7,114 91	-30 89	-2,861 20	2,861 37	0 00	0 00	0 00
9,900 00	90 98	269 38	7,113 20	-31 97	-2,961 18	2,961 35	0 00	0 00	0 00

Database:	EDM 2003 16 Single User Db	Local Co-ordinate Reference:	Well Oilers Federal #2H
Company:	Mack Energy Corp	TVD Reference:	Well @ 3717 00ft (KB Elev)
Project:	Eddy County, NM (NAD 27 NME)	MD Reference:	Well @ 3717 00ft (KB Elev)
Site:	Oilers Federal #2H	North Reference:	Grid
Well:	Oilers Federal #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,000 00	90 98	269 38	7,111 50	-33 05	-3,061 16	3,061 34	0 00	0 00	0 00
10,100 00	90 98	269 38	7,109 79	-34 13	-3,161 14	3,161 32	0 00	0 00	0 00
10,200 00	90 98	269 38	7,108 08	-35 21	-3,261 12	3,261 31	0 00	0 00	0 00
10,300 00	90 98	269 38	7,106 38	-36 28	-3,361 10	3,361 29	0 00	0 00	0 00
10,400 00	90 98	269 38	7,104 67	-37 36	-3,461 08	3,461 28	0 00	0 00	0 00
10,500 00	90 98	269 38	7,102 96	-38 44	-3,561 06	3,561 26	0 00	0 00	0 00
10,600 00	90 98	269 38	7,101 25	-39 52	-3,661 04	3,661 25	0 00	0 00	0 00
10 700 00	90 98	269 38	7,099 55	-40 60	-3,761 02	3,761 23	0 00	0 00	0 00
10,800 00	90 98	269 38	7,097 84	-41 68	-3,861 00	3,861 22	0 00	0 00	0 00
10,900 00	90 98	269 38	7,096 13	-42 76	-3,960 97	3,961 21	0 00	0 00	0 00
11,000 00	90 98	269 38	7,094 43	-43 84	-4,060 95	4,061 19	0 00	0 00	0 00
11,100 00	90 98	269 38	7,092 72	-44 92	-4,160 93	4,161 18	0 00	0 00	0 00
11,200 00	90 98	269 38	7,091 01	-46 00	-4,260 91	4,261 16	0 00	0 00	0 00
11,300 00	90 98	269 38	7,089 30	-47 08	-4,360 89	4,361 15	0 00	0 00	0 00
11,400 00	90 98	269 38	7,087 60	-48 16	-4,460 87	4,461 13	0 00	0 00	0 00
11,500 00	90 98	269 38	7,085 89	-49 24	-4,560 85	4,561 12	0 00	0 00	0 00
11,552 16	90 98	269 38	7,085 00	-49 80	-4,613 00	4,613 27	0 00	0 00	0 00
PBHL-Oilers Fed #2H									

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
West HL-Oilers Fed #2H	0 00	0 00	0 00	-39 80	-4,623 00	703,989 00	575,614 20	32° 56' 6 353 N	104° 5' 12 764 W
- plan misses by 4623 17ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W500 00 H0 00 D0 00)									
North HL-Oilers Fed #2H	0 00	0 00	0 00	-39 80	-4,623 00	703,989 00	575,614 20	32° 56' 6 353 N	104° 5' 12 764 W
- plan misses by 4623 17ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H2 000 00 D0 00)									
PBHL-Oilers Fed #2H	0 00	0 00	7,085 00	-49 80	-4,613 00	703,979 00	575,624 20	32° 56' 6 253 N	104° 5' 12 647 W
- plan hits target									
- Circle (radius 10 00)									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
6,650 00	6,650 00	0 00	0 00	KOP Start 11 34°/100'
7,451 98	7,155 00	-5 55	-513 65	EOC hold 90 98°

MACK Energy Corporation

Scientific Drilling for Mack Energy Corp.
Site: Eddy County, NM (NAD 27 NME)
Well: Oilers Federal #2H
Wellbore: Wellbore #1
Design: Plan #2

Scientific Drilling
Directional Drilling Operations

SECTION DETAILS

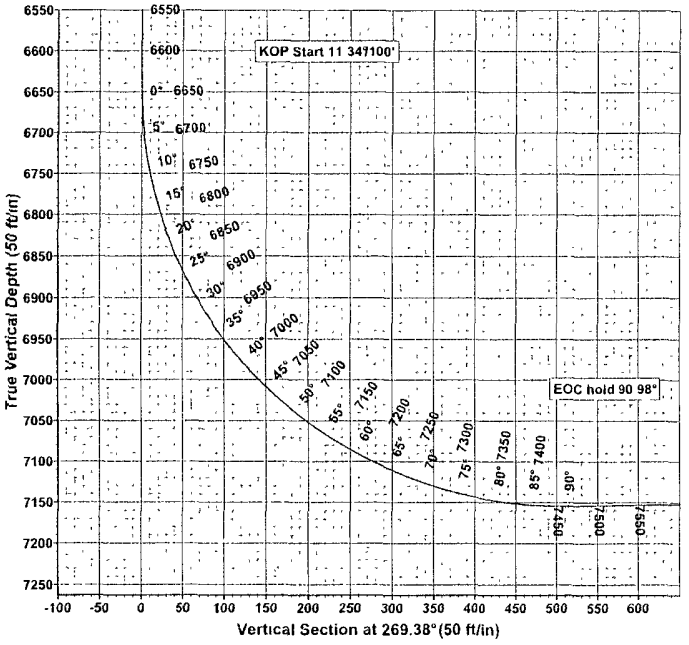
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0.00	0 00	0.00	0 00	0.00	0 00	0.00	0 00	
2	6650 00	0.00	0.00	6650 00	0 00	0.00	0 00	0.00	0 00	
3	7451 98	90.98	269 38	7154 99	-5 55	-513 66	11 34	269 38	513 69	
4	11552 16	90 98	269 38	7085 00	-49 80	-4613 00	0 00	0 00	4613 27	PBHL-Oilers Fed #2H

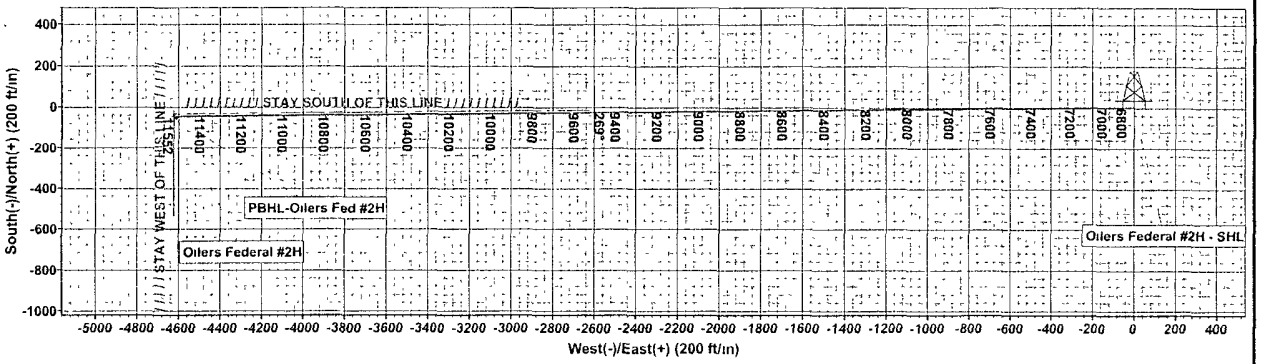
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

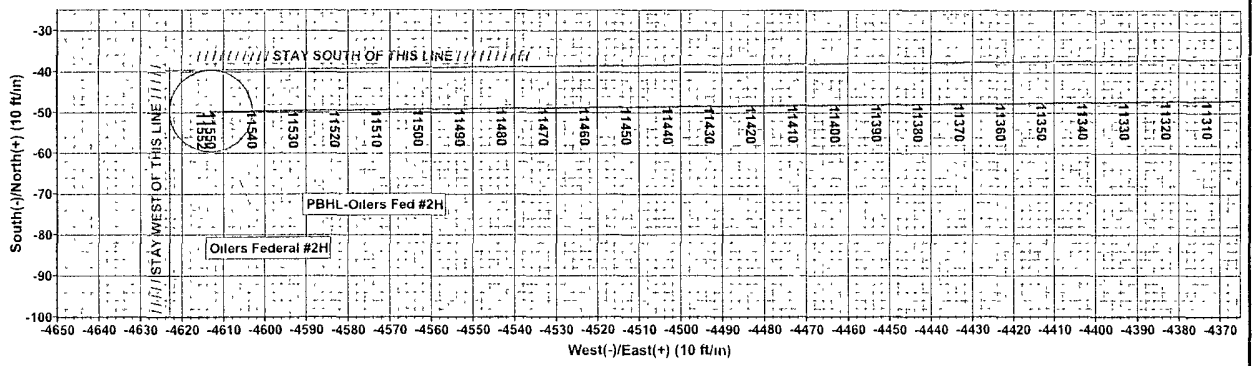
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
North HL-Oilers Fed #2H	0 00	-39 80	-4623 00	703989.00	575614 20	32°56' 6 353 N	104°5' 12 764 W	Rectangle (S ides. L0.00 W2000 00)
West HL-Oilers Fed #2H	0 00	-39 80	-4623 00	703989 00	575614 20	32°56' 6 353 N	104°5' 12 764 W	Rectangle (Sl des L500 00 W0 00)
PBHL-Oilers Fed #2H	7085 00	-49 80	-4613 00	703979 00	575624 20	32°56' 6 253 N	104°5' 12 647 W	Circle (Radiu s. 10 00)

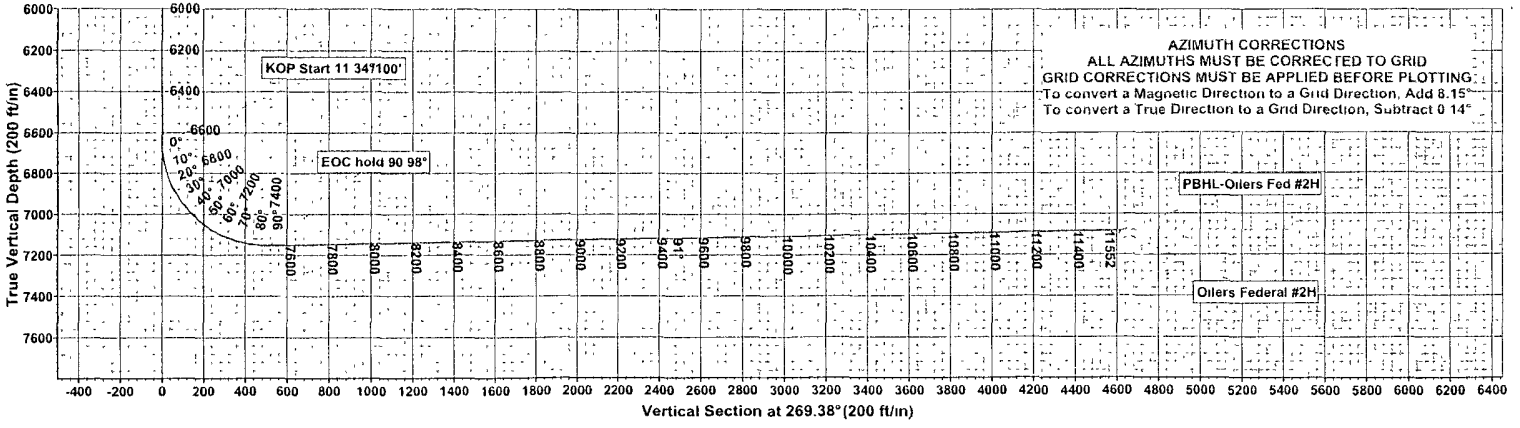
WELL DETAILS Oilers Federal #2H

		Ground Level 3699 00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude Slot
0 00	0 00	704028 80	580237 20	32°56' 6 636 N	104°4' 18 .518 W

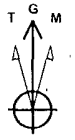








AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 8.15°
To convert a True Direction to a Grid Direction, Subtract 0 14°



Azimuths to Grid North
True North: -0.14°
Magnetic North. 8 15°

Magnetic Field
Strength 49369 6snT
Dip Angle: 60 85°
Date. 11/4/2007
Model IGRF200510

PROJECT DETAILS Eddy County, NM (NAD 27 NME)

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

Plan Plan #2 (Oilers Federal #2H/Wellbore #1)

Created By Julio Pina Date 04-Nov-07
Checked Date
Reviewed Date
Approved Date

Mack Energy Corporation

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards an characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. **Well Control Equipment:**

   A. Flare line.

   B. Choke manifold.

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. **Protective equipment for essential personnel:**

   A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. **H2S detection and monitoring equipment:**

   A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. **Visual warning systems:**

   A. Wind direction indicators as shown on well site diagram (Exhibit #8).

   B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. **Mud program:**

   A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

   B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.

   B. Land line (telephone) communication at Office.

8. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

EXHIBIT #7

WARNING

YOU ARE ENTERING AN H2S

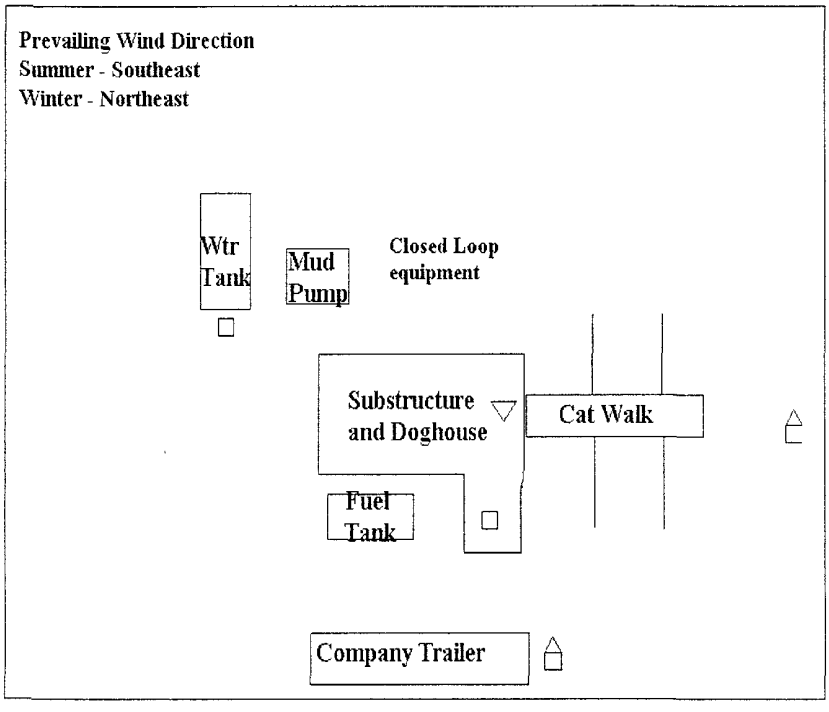
AUTHORIZED PERSONNEL ONLY

1. **BEARDS OR CONTACT LENSES NOT ALLOWED**
2. **HARD HATS REQUIRED**
3. **SMOKING IN DESIGNATED AREAS ONLY**
4. **BE WIND CONSCIOUS AT ALL TIMES**
5. **CHECK WITH MACK ENERGY FOREMAN AT OFFICE**

MACK ENERGY CORPORATION

1-505-748-1288

DRILLING LOCATION H2S SAFTY EQUIPMENT
Exhibit # 8



▽ H2S Monitors with alarms at the bell nipple

□ Wind Direction Indicators

△ □ Safe Briefing areas with caution signs and breathing equipment min 150 feet from

Attached to Form 3160-3
Mack Energy Corporation
Oilers Federal #2
SHL 2310 FSL & 330 FEL Unit I, Sec. 9 T16S R29E
BHL 2285 FSL & 330 FWL Unit L, Sec 9 T16S R29E
Eddy County, NM

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

A. The well site and elevation plat for the proposed well is shown in Exhibit #1. It was staked by John West Engineering, Hobbs, NM.

B. All roads to the location are shown in Exhibit below. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling well will be done where necessary.

C. Directions to Location: From the intersection of Hwy 82 and CR 214 go north 6.2 miles, turn right at Y .6 mile, turn left at Y 1.3 miles, to Oilers Federal #3, follow road survey south 1030' to location.

D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

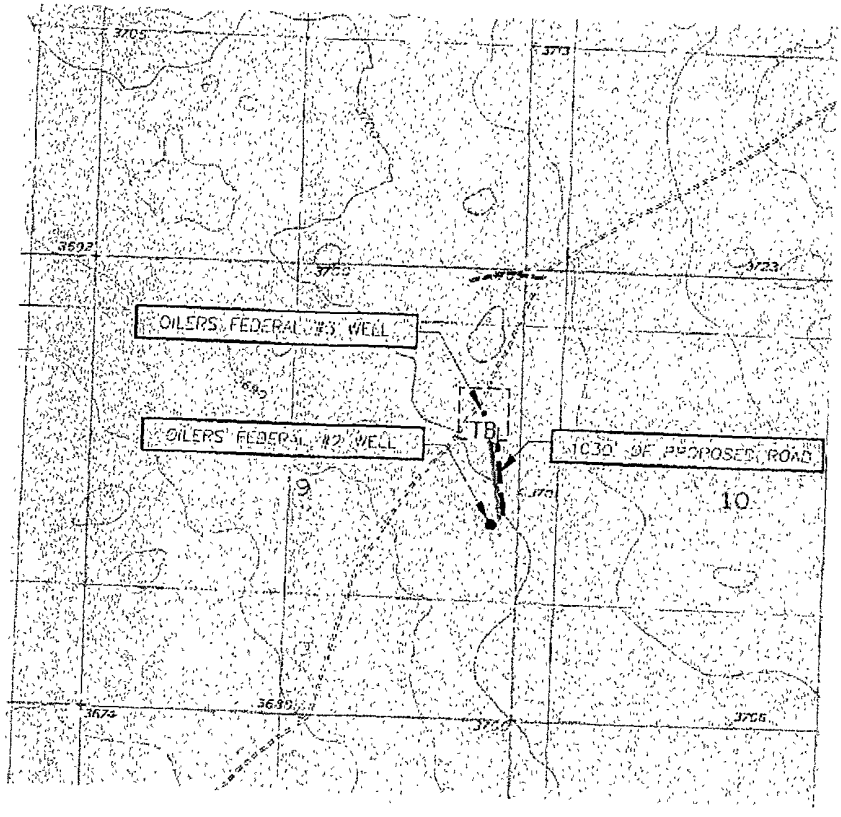


Exhibit #4

2. Proposed Access Road:

Exhibit #3 shows the 696' of new access road to be constructed. The road will be constructed as follows:

A. The Maximum width of the running surface will be 14'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

B. The average grade will be less than 1%.

C. No turnouts are planned.

D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.

E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM approved caliche pit or reserve pit area.

F. The proposed access road as shown in Exhibit #3 has been centerline flagged by John West Engineering, Hobbs, New Mexico.

3. Location of Existing Wells & Proposed flow lines for New Wells:

Exhibit #4 shows all existing wells within a one-mile radius of this well. Proposed flow lines, will follow an archaeologically approved route to the Oilers Federal #3 Tank Battery.

4. Location of Existing and/or Proposed Facilities:

A. Mack Energy Corporation does not operate a production facility on this lease.

B. If the well is productive, contemplated facilities will be as follows:

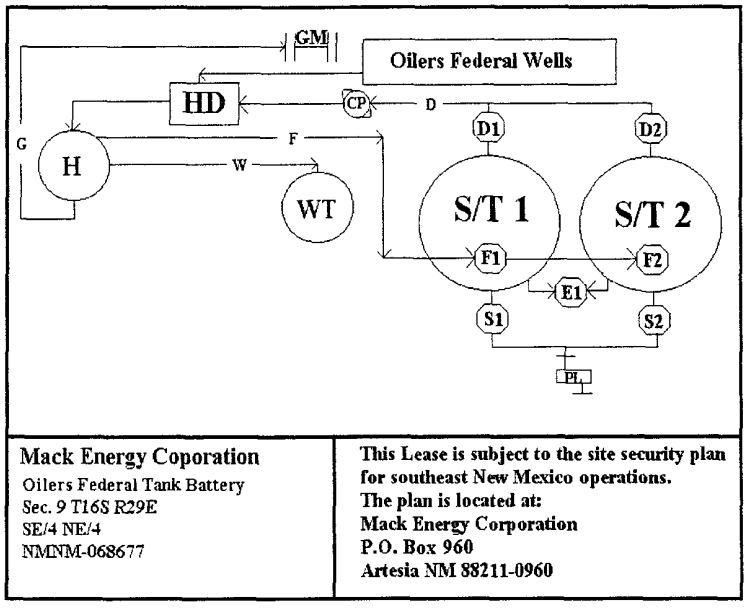
1) Wolfcamp Completion: Will be sent to the Oilers Federal TB located at the #3 well. The Facility is shown in Exhibit #5.

2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.

3) Any additional caliche will be obtained from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.

4) It will be necessary to run electric power if this well is productive. Power will be run by CVE and they will send in a separate plan for power.

Exhibit #5



A. If the well is productive, rehabilitation plans are as follows:

1) Topsoil removed from the drill site will be used to recontour the surrounding area to the original natural level, as nearly as possible, and reseeded as per BLM specifications.

5. Location and Type of Water Supply:

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Exhibit #4. If a commercial fresh water source is nearby, fasline may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials:

All caliche required for construction of the drill pad and proposed new access road (approximately 2500 cubic yards) will be obtained from a BLM approved caliche pit.

7. Methods of Handling Water Disposal:

A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.

B. Drilling fluids will be contained in steel tanks using a closed loop system.

C. Water produced from the well during completion may be disposed into a steel tank. After the well is permanently placed on production, produced water will be collected in tanks (fiberglass) until pumped to an approved disposal system; produced oil will be collected in steel tanks until sold.

D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. All water and fluids will be disposed of into an approved facility. No toxic waste or hazardous chemicals will be produced by this operation.

E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

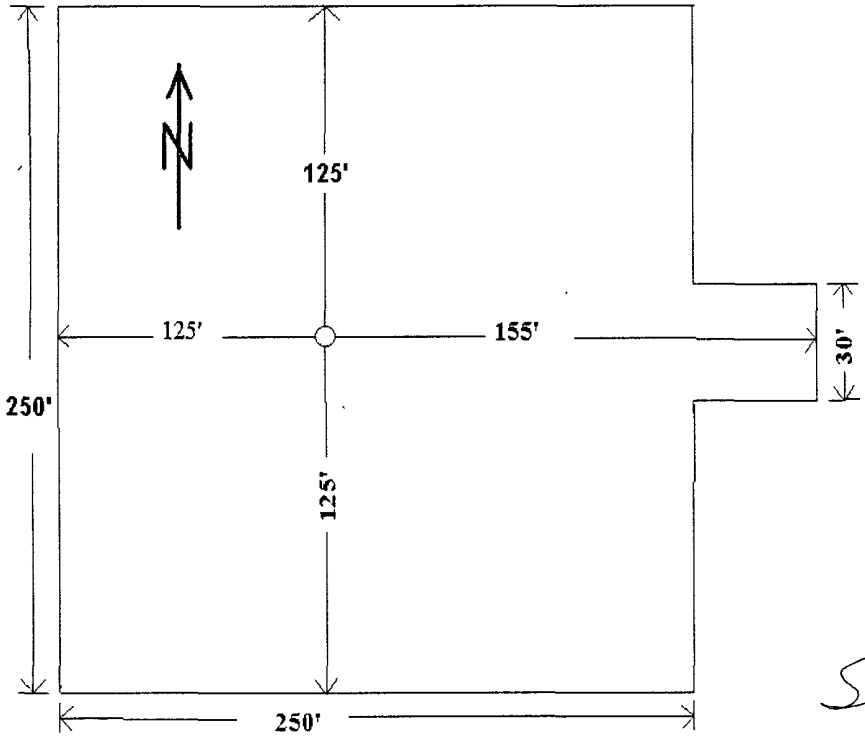
8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

9. Well Site Layout:

A. The drill pad layout, with elevations staked by John West Engineering, is shown in Exhibit #6. Dimensions of the pad are shown. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.

B. Diagram below shows the proposed orientation of the location. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.



See COA

Exhibit #6

10. Plans for Restoration of the Surface:

A. Upon completion of the proposed operations, if the well is completed, any additional caliche required for facilities will be obtained from a BLM approved caliche pit.

B. In the event of a dry hole. Topsoil removed from the drill site will be used to recontour the area to its original natural level and reseeded as per BLM specifications.

11. Surface Ownership:

The well site and lease is located entirely on Federal surface. We have notified the surface lessee of the impending operations. According to BLM the leasee is Bogel Limited Company, Lewis Derrick, P.O. Box 460 Dexter, NM 88230.

12. Other Information:

A. The area around the well site is grassland and the topsoil is sandy. The vegetation is native scrub grass with sagebrush.

B. There is no permanent or live water in the immediate area.

C. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

13. Lessee's and Operator's Representative:

The Mack Energy Corporation representative responsible for assuring compliance with the surface use plan is as follows:

Jerry W. Sherrell
Mack Energy Corporation
P.O. Box 960
Artesia, NM 88211-0960
Phone (505) 748-1288 (office)

CERTIFICATION

I hereby certify that I, or person under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this APD are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mack Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 10-17-07

Signed: Jerry W. Sherrell

Jerry W. Sherrell

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Chaves and Roosevelt Counties, T16S Eddy County**
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201. (575) 627-0205.

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Wolfcamp** formation. **Hydrogen Sulfide has been reported in this township measuring 1600-7000 ppm in gas streams and 100 ppm in STVs.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the Salt at approximately 380** feet and cemented to the surface. **Fresh water mud to be used to setting depth.**

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

   b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.
Possible water flows in the Salado and Artesia Groups.
Possible high pressure gas bursts within the Wolfcamp formation

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.
   Casing to be set at approximately 1600 feet in the Tansill formation.

Formation below the 8-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **3000 (3M)** psi. **3M system based on pressures expected by BLM geologist in the Wolfcamp formation.**

4. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.

a. The tests shall be done by an independent service company.

b. The results of the test shall be reported to the appropriate BLM office.

c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

f. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1500** psi is approved.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Engineer on call phone (after hours): **Carlsbad: (575) 706-2779**

WWI 120307