New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160 -3
(April 2004)

RECEIVED
JAN 29 2010
HOBBSOCD

FORM APPROVED
OMB No 1004-0137
Expires March 31 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No: NMNM-119274

6 If Indian, Allotee or Tribe Name:

Ia Typeofwork- ☒ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No:

Ib Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8, Lease Name and Well No: Peery Federal #10 <303941>

2 Name of Operator: Mack Energy Corporation <13837>

9. API Well No: 30-005-29118

3a Address: P.O. Box 960 Artesia, NM 88211-0960

3b. PhoneNo *(include area code)*: (575)748-1288

10 Field and Pool, or Exploratory: Wildcat Abo

4 Location of Well *(Report location clearly andinaccorounce with any State requirements*)*

At surface: 1395 FNL & 305 FEL Unit H

At proposed prod zone: 1675 FNL & 330 FWL Unit E

11 Sec , T R M or Blk and Survey or Area: Sec. 29 T15S R30E

14 Distance in miles and direction from nearest town or post office*: 15 miles north of Loco Hills, NM

12 County or Parish: Chaves

13 State: NM

15 Distance from proposed* location to nearest property or lease line. ft (Also to nearest drlg unit line. if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
305	640	160

18 Distance from proposed location* to nearest well, drilling, completed. applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No on file
1320'	MD 13,157' TVD 8,700'	NMB000286

21 Elevations (Show whether DF, KDB, RT. GL, etc)	22 Approximate date work will start*	23 Estimated duration
3989' GR	1/1/2010	35 days

24. Attachments

~~ROSWELL CONTROLLED WATER BASIN~~

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	Name *(Printed/Typed)*	Date
Jerry W. Sherrell	Jerry W. Sherrell	12/9/09
Title: Production Clerk		
Approved by *(Signature)*: /s/ Angel Mayes	Name *(Printed/Typed)*: Angel Mayes	Date: JAN 27 2010
Title: Assistant Field Manager, Lands And Minerals	Office: ROSWELL FIELD OFFICE	

Application approval does not warrantor certify that the applicant holds lega brequitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Conditions of approval, if any, are attached

APPROVED FOR 2 YEARS

person knowiritly and willfully to make to any department or agency ofthe United ithin its juris iction

Oil Conservation Division
Conditions of approval : Approval for drilling/workover ONLY-- CANNOT produce Downhole Commingled until DHC is approved in Santa Fe.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

DECLARED WATER BASIN

CEMENT BEHIND THE 9⅝" CASING MUST BE CIRCULATED

WITNESS

RECEIVED
DEC 08 2009

RECEIVED
JAN 29 2010
HOBBSOCD

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
11885 S ST FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
11885 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
30-005-29118	✓	✓ Wildcat Abo

Property Code	Property Name	Well Number
303941 ✓	PEERY FEDERAL	10

OGRID No	Operator Name	Elevation
013837 ✓	MACK ENERGY CORPORATION	3989'

Surface Location

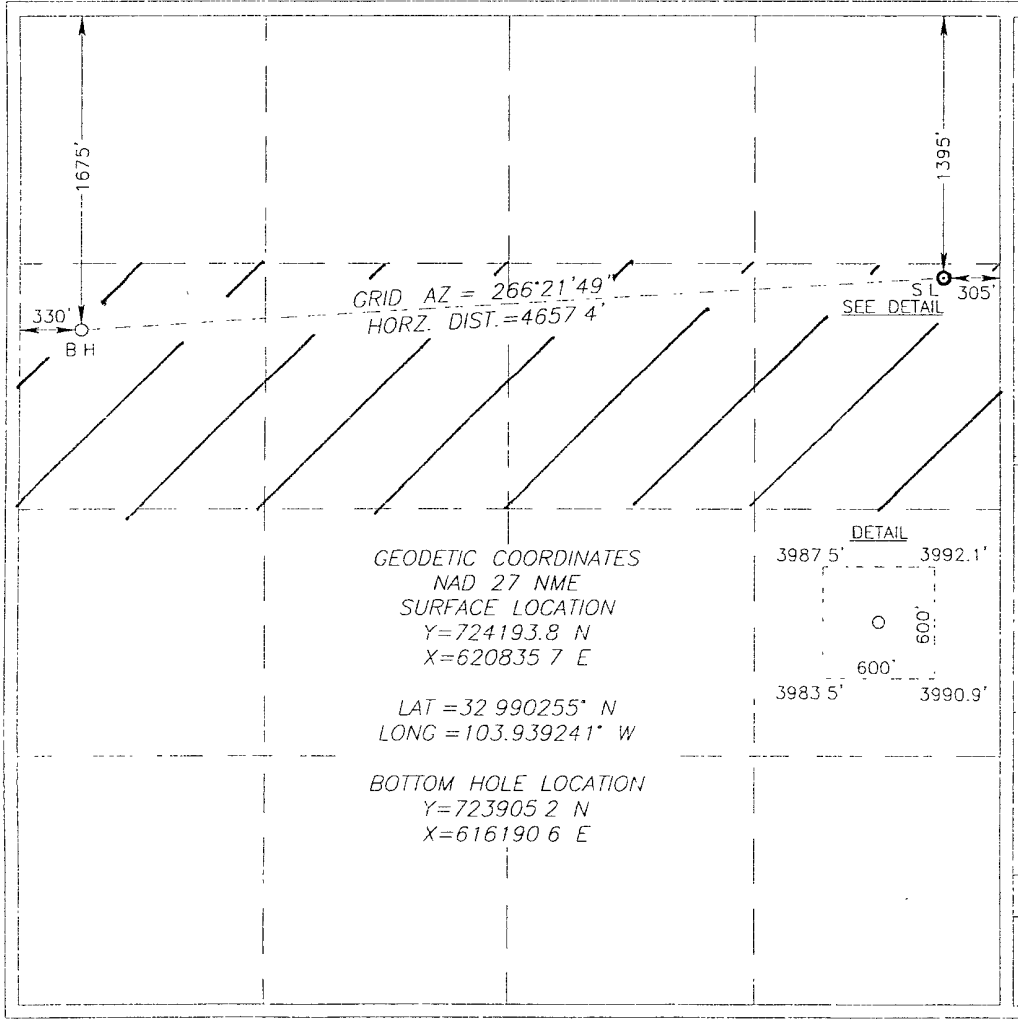
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	29	15-S	30-E		1395	NORTH	305	EAST	CHAVES

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	29	15-S	30-E		1675	NORTH	330	WEST	CHAVES

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



GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y=724193.8 N
X=620835.7 E

LAT = 32.990255° N
LONG = 103.939241° W

BOTTOM HOLE LOCATION
Y=723905.2 N
X=616190.6 E

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 12/9/09
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.

NOVEMBER 19, 2009
Date Surveyed DSS

Signature & Seal of Professional Surveyor

Ronald J. Eidson 12-01-09

09 11 1030

Certificate No. GARY EIDSON 12641
RONALD EIDSON 3239

Attached to Form 3160-3
Mack Energy Corporation
Peery Federal #10
SL 1395 FNL & 305 FEL, Unit H, Sec. 29 T15S R30E
BHL 1675 FNL & 330 FWL, Unit E, Sec. 29 T15S R30E
Chaves County, NM

DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Yates	1480'	Tubb	5710'
Queen	2240'	Abo	6510'
San Andres	2920'	WC	7900'
Glorieta	4520'	Strawn	9725'

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

Water Sand	150'	Fresh Water
San Andres	2920'	Oil/Gas
Abo	6510'	Oil/Gas
WC	7900'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 9 5/8" casing to 450' and circulating cement back to surface will protect the surface fresh water sand. An optional Intermediate string of 7" casing set @ 2300' should hole problems occur. Salt Section and any shallower zones above production zone, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing a combination string of 5 1/2" and 4 ½" production casing thru a ported collar @ 6800', sufficient cement will be pumped to circulate back to surface.

4. Casing Program:

Hole Size	Interval	OD Casing	Wt, Grade, Jt, cond, collapse/burst/tension
14 ¾"	0-450'	9 5/8"	36#, J-55, ST&C, New, 10.875/6.877/7.040
8 ¾"	0-2300'	7"	23#,J-55, LT&C, New, 2.707/15.137/14.533
7 7/8"	0-7850'	5 ½"	17#, HCP-110, LT&C, New, 2.189/3.364/3.547
6 1/8"	7850-13151'	4 ½"	11.6# HCP-110, LT&C, New, 1.422/3.286/3.56

5. Cement Program:

9 5/8" Surface Casing: Class C, 500sx yield 1.34
7" Optional Intermediate Casing: Class C, 700sx, yield 1.34.
5 ½" Production Casing: Class C, 1000sx, yield 1.34.
4 ½" Production Casing: Set with isolation packers.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (3000 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 9 5/8" surface casing and tested to 2000 psi by a 3rd party and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of surface 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 3000 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
0-450'	Fresh Water	8.5	28	N.C.
450-3050'	Brine	10	30	N.C.
3050'-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 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 at TD.

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 2250 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 January 1, 2010. Once commenced, the drilling operation should be finished in approximately 30 days. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

1. 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.

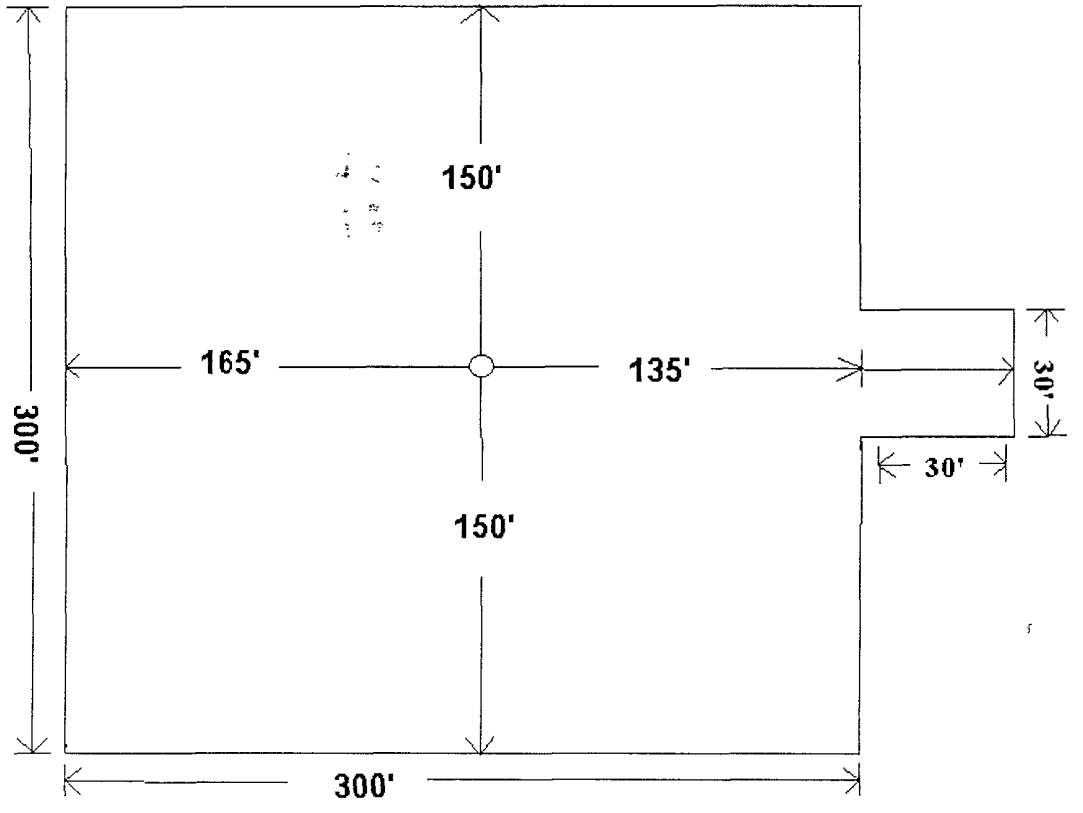


Exhibit #6

Attachment to Exhibit #9
NOTES REGARDING THE BLOWOUT PREVENTERS
Peery Federal #10
Chaves 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

Minimum Blowout Preventer Requirements

3000 psi Working Pressure

3 MWP

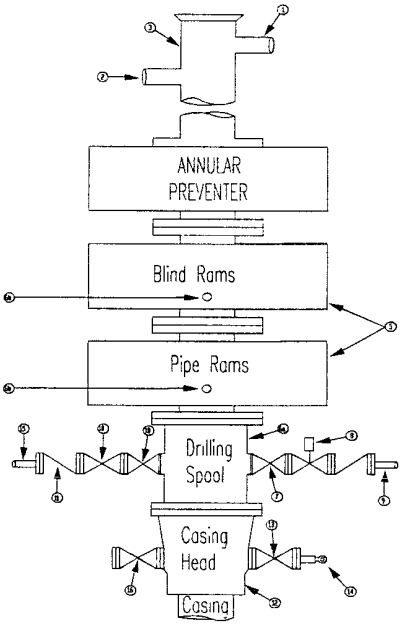
EXHIBIT #10

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

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, 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
10
ME

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 Does not use kill line for routine fill up operations

Mack Energy Corporation

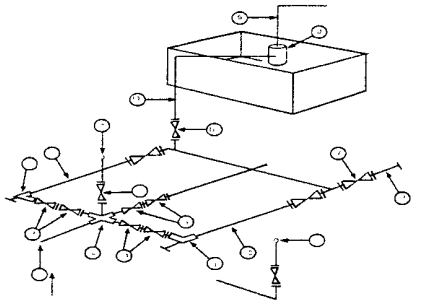
Exhibit #11

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

No.		3,000 MWP			5,000 MWP			10,000 MWP		
		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

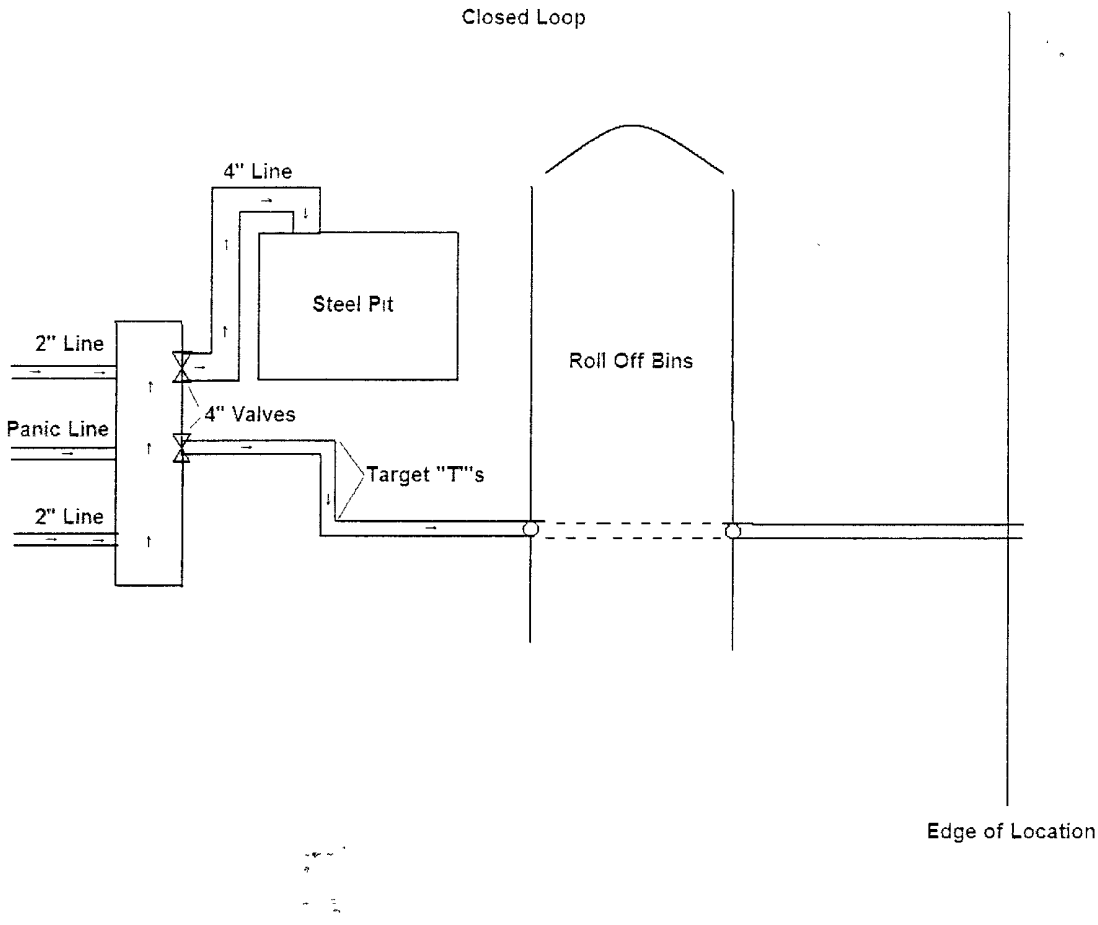
4 Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available

5. 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

MANIFOLD SCHEMATIC



Mack Energy Corporation
Onshore Order #6
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 the 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

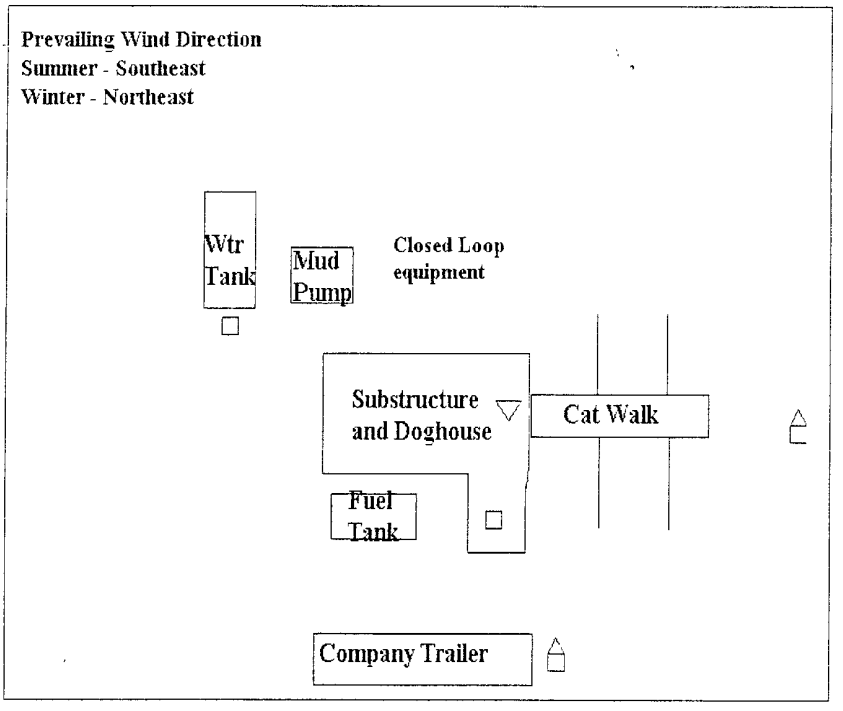
AUTHORIZED PERSONNEL ONLY

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

1-575-748-1288

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
Peery Federal #10
SL 1395 FNL & 305 FEL, Unit H, Sec. 29 T15S R30E
BHL 1675 FNL & 330 FWL, Unit E, Sec. 29 T15S R30E
Chaves 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 #249 and County RD #217. go south 5.0 miles, turn left/east 2.1 miles, turn north 1 mile, turn east .4 mile, turn south .2 mile, location is 150' east.

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.

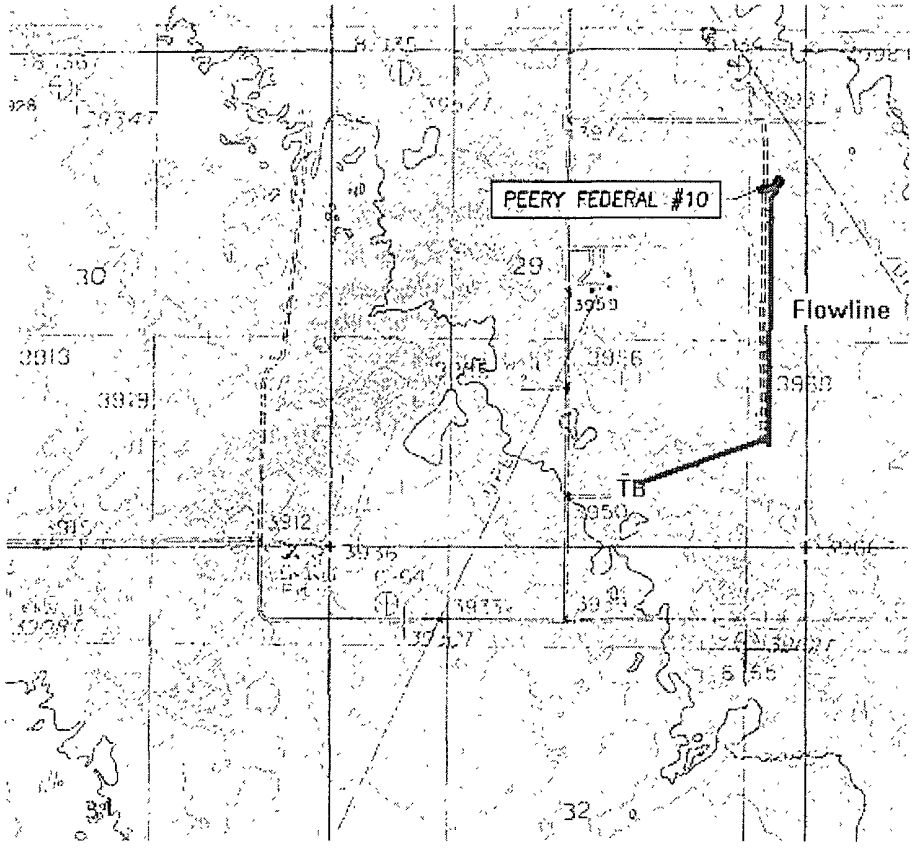


Exhibit #4

2. Proposed Access Road:

Exhibit #3 shows the 0' 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.

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 TB at the #2 well.

4. Location of Existing and/or Proposed Facilities:

A. Mack Energy Corporation does 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 Peery Federal TB located at the #2 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.

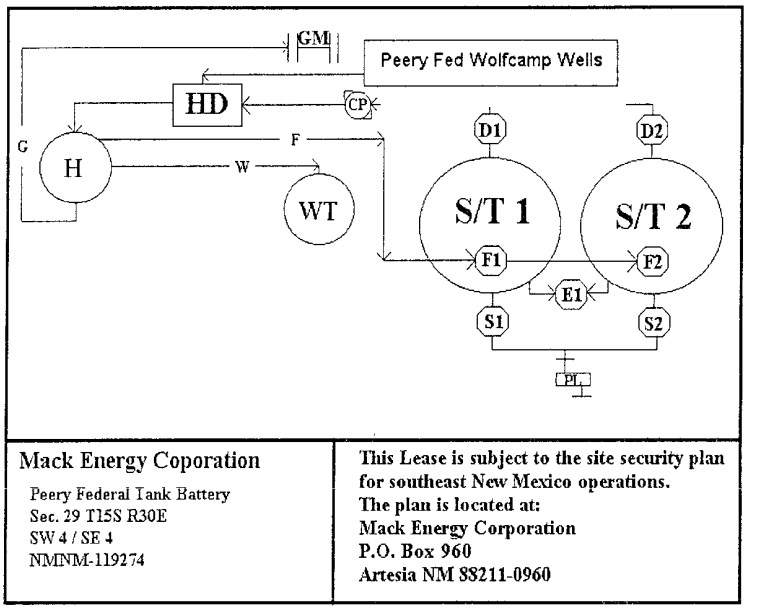


Exhibit #5

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 steel tanks and hauled to an approved facility.

12. Lessee's and Operator's Representative:

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

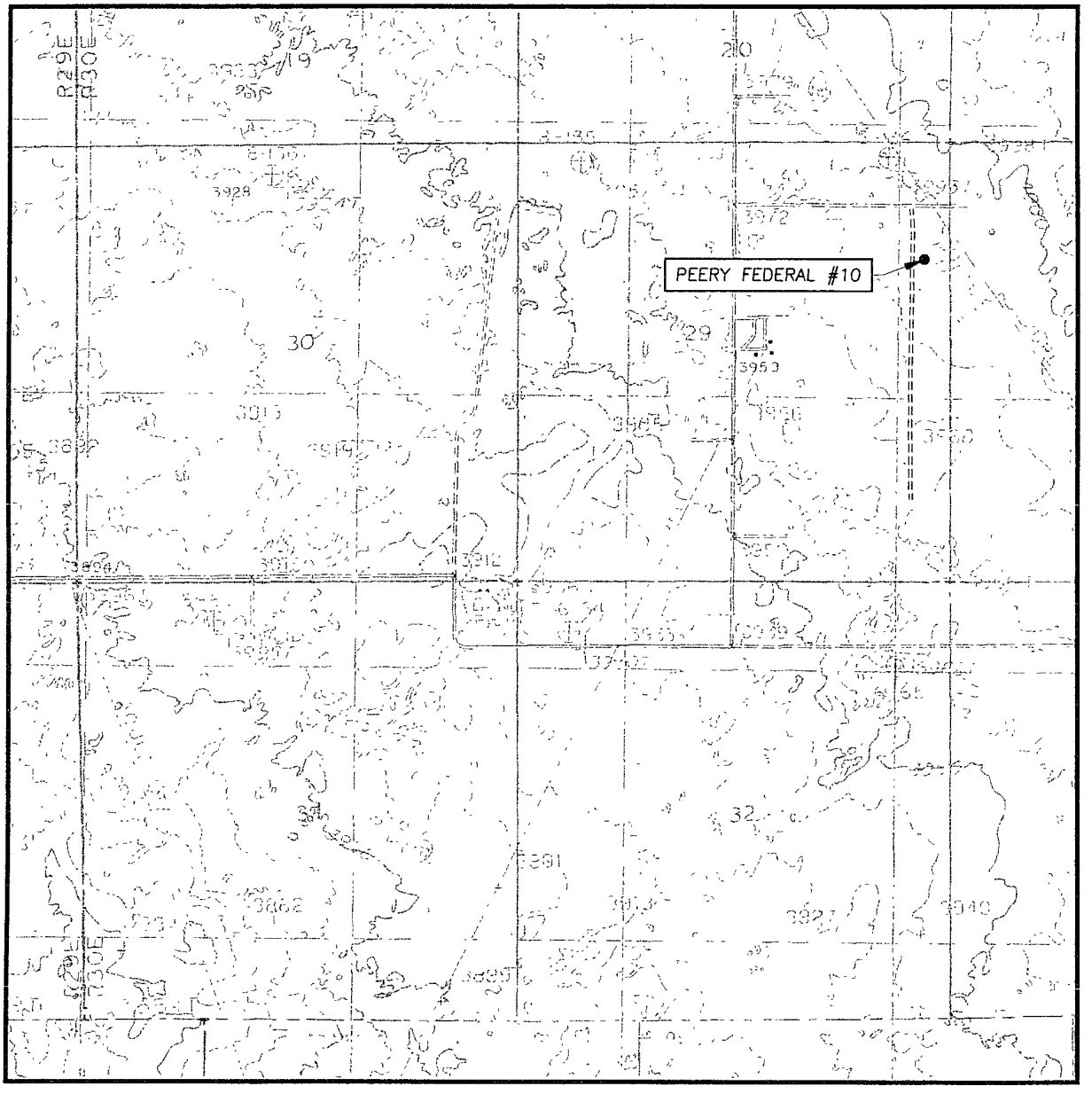
Jerry W. Sherrell
Mack Energy Corporation
P.O. Box 960
Artesia, NM 88211-0960
Phone (575) 748-1288 (office)

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: _____ Signed: Jerry W. Sherrell
Jerry W. Sherrell

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HENSHAW TANK, N.M. – 10'

SEC. 29 TWP. 15-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 1395' FNL & 305' FEL

ELEVATION 3989'

OPERATOR MACK ENERGY CORPORATION

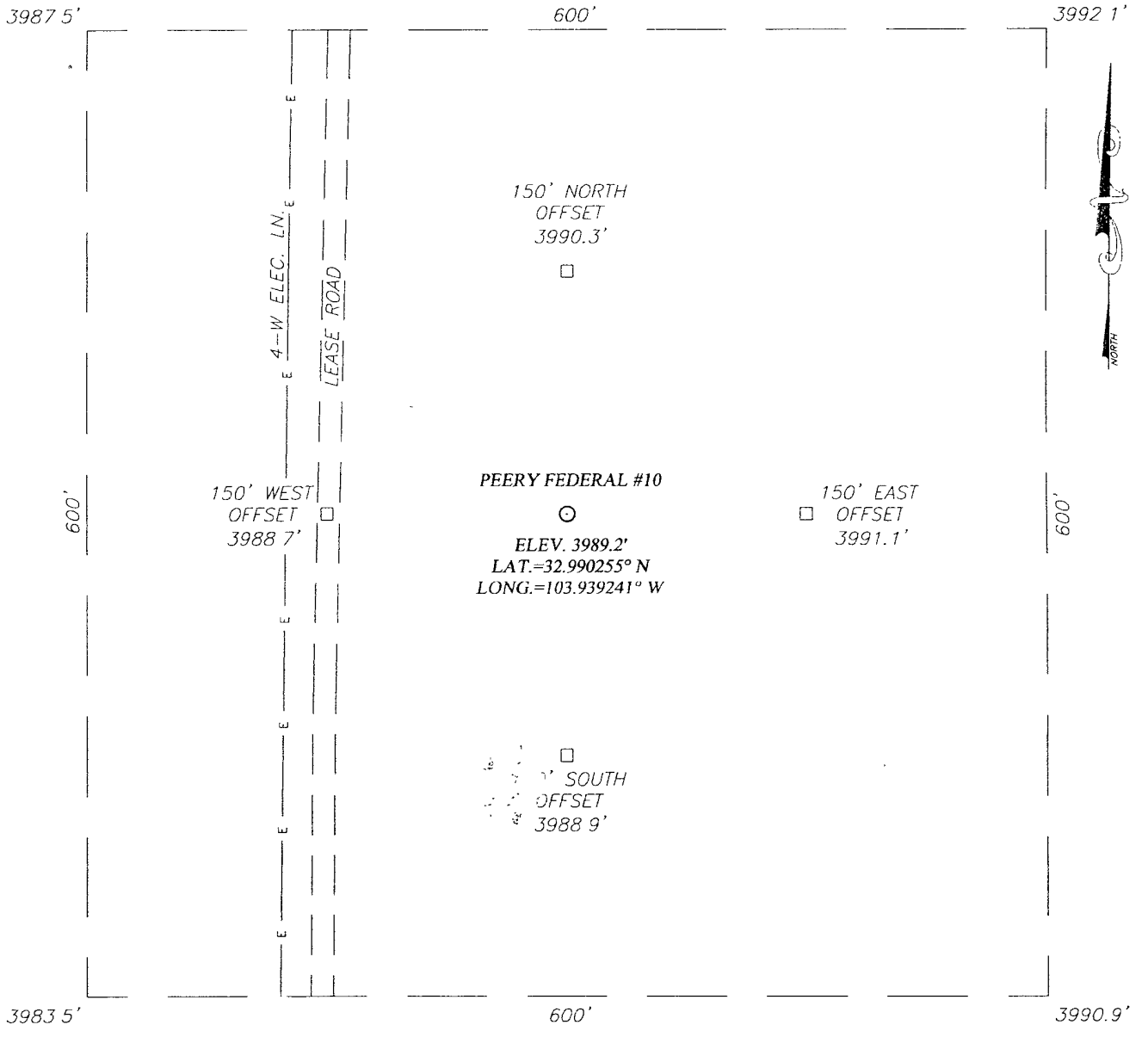
LEASE PEERY FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
HENSHAW TANK, N.M

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M 88240
(575) 393-3117

SECTION 29, TOWNSHIP 15 SOUTH, RANGE 30 EAST, N.M.P.M.,

CHAVES COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #217 (HAGERMAN CUTOFF) AND CO. RD. #256 (BOOGER LANGSTON), GO NORTH ON CO. RD. #217 APPROX. 1.8 MILES. TURN RIGHT AND GO EAST APPROX. 1.5 MILES. TURN RIGHT AND GO SOUTH APPROX. 0.2 MILES. TURN LEFT AND GO EAST APPROX. 0.6 MILES TURN LEFT AND GO NORTH APPROX. 1.0 MILE TURN RIGHT AND GO EAST APPROX 0 4 MILES. TURN RIGHT AND GO SOUTH APPROX. 0.2 MILES. THIS LOCATION STAKE IS APPROX. 150 EAST.

100 0 100 200 Feet

Scale: 1"=100'

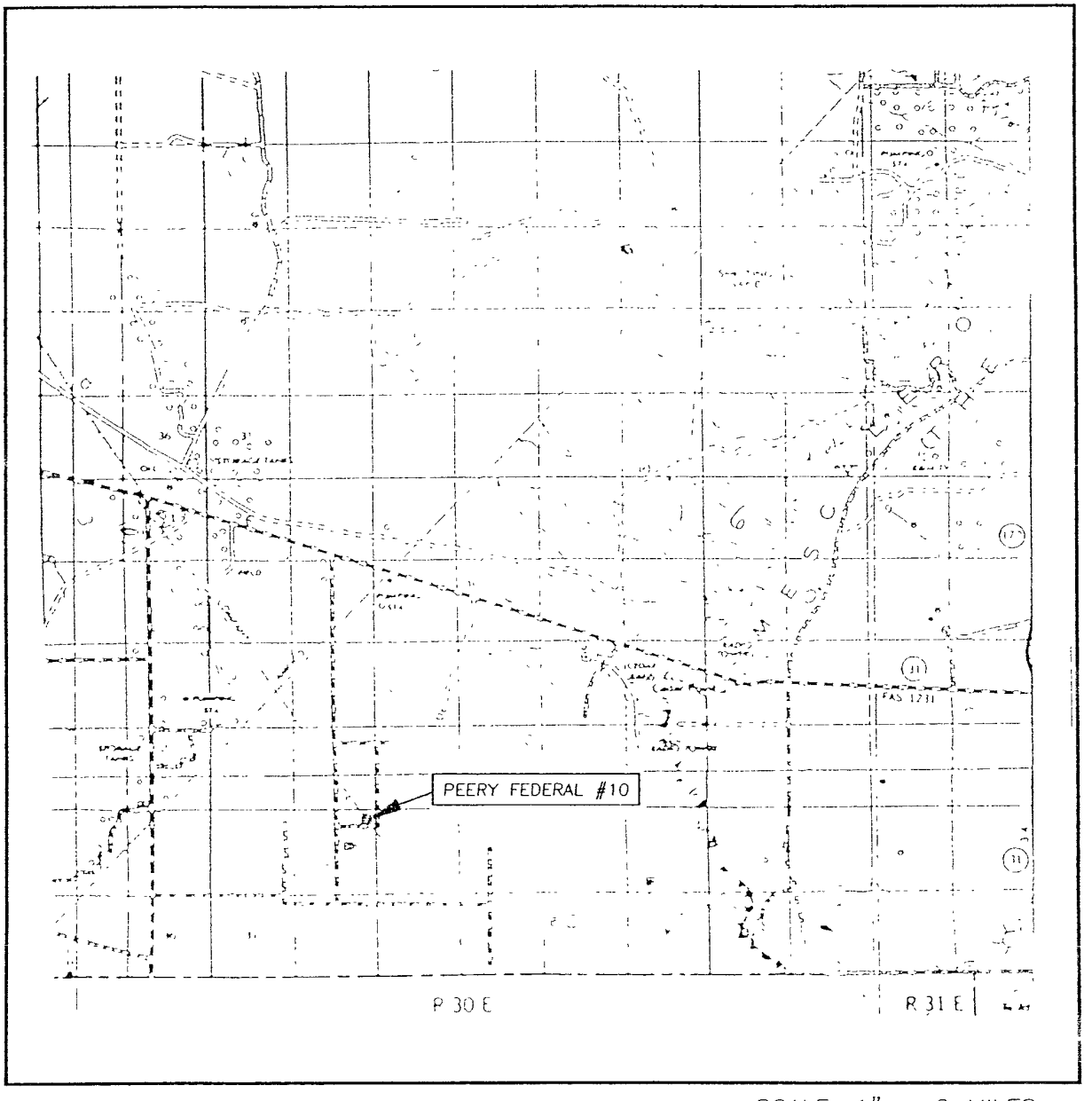
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N M. 88240
(575) 393-3117

MACK ENERGY CORPORATION

PEERY FEDERAL #10 WELL
LOCATED 1395 FEET FROM THE NORTH LINE
AND 305 FEET FROM THE EAST LINE OF SECTION 29,
TOWNSHIP 15 SOUTH, RANGE 30 EAST, N M.P M.,
CHAVES COUNTY, NEW MEXICO

Survey Date: 11/19/09	Sheet 1 of 1 Sheets		
W.O Number: 09.11.1030	Dr By: DSS	Rev 1:N/A	
Date. 11/30/09		09111030	Scale·1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 29 TWP. 15-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 1395' FNL & 305' FEL

ELEVATION 3989'

OPERATOR MACK ENERGY CORPORATION

LEASE PEERY FEDERAL

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

Mack Energy

Chaves County
Peery Federal
#10
S-Well

Plan: Plan #1

Pathfinder X & Y Planning Report

14 December, 2009

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	S-Well	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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 Peery Federal

Site Position:		**Northing:**	721,535.600 ft	**Latitude:**	32° 58' 58.617 N
From:	Map	**Easting:**	620,821 500 ft	**Longitude:**	103° 56' 21 552 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.21 °

Well #10

Well Position	**+N/-S**	0 00 ft	**Northing:**	724,193 800 ft	**Latitude:**	32° 59' 24 919 N
	+E/-W	0.00 ft	**Easting:**	620,835.700 ft	**Longitude:**	103° 56' 21 269 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3 989 00 ft

Wellbore S-Well

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	7.98	60.88	49,207

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	266.44

Survey Tool Program **Date** 12/14/2009

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.00	9,018 82	Plan #1 (S-Well)	MWD	MWD - Standard

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
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Well:	#10	**North Reference:**	Grid
Wellbore:	S-Well	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0 00	0 00	0.00	0 00	-4,008.00	0 00	0 00	0 00	0 00	724,193 80	620,835 70
100 00	0.00	0.00	100 00	-3,908.00	0.00	0 00	0.00	0.00	724,193 80	620,835.70
200 00	0 00	0.00	200.00	-3,808 00	0 00	0 00	0 00	0 00	724,193.80	620,835 70
300.00	0 00	0.00	300.00	-3,708 00	0 00	0.00	0 00	0 00	724,193.80	620,835 70
400 00	0 00	0 00	400.00	-3,608.00	0.00	0.00	0.00	0.00	724,193.80	620,835 70
500 00	0.00	0.00	500.00	-3,508.00	0 00	0.00	0 00	0.00	724,193 80	620,835 70
600 00	0.00	0 00	600 00	-3,408 00	0 00	0.00	0 00	0 00	724,193.80	620,835 70
700 00	0 00	0.00	700 00	-3,308.00	0.00	0 00	0 00	0 00	724,193 80	620,835 70
800.00	0.00	0 00	800 00	-3,208 00	0 00	0 00	0 00	0 00	724,193 80	620,835.70
900.00	0.00	0 00	900.00	-3,108 00	0.00	0 00	0 00	0 00	724,193 80	620,835 70
1,000.00	0 00	0.00	1,000.00	-3,008.00	0.00	0.00	0.00	0 00	724,193.80	620,835.70
1,100 00	0 00	0.00	1,100.00	-2,908.00	0.00	0.00	0.00	0 00	724,193 80	620,835 70
1,200.00	0 00	0 00	1,200.00	-2,808.00	0 00	0 00	0 00	0 00	724,193 80	620,835.70
1,300.00	0 00	0 00	1,300.00	-2,708.00	0.00	0.00	0.00	0.00	724,193 80	620,835.70
1,400 00	0 00	0 00	1,400.00	-2,608.00	0 00	0.00	0 00	0 00	724,193 80	620,835 70
1,500 00	0.00	0 00	1,500.00	-2,508.00	0 00	0 00	0 00	0.00	724,193 80	620,835.70
1,600 00	0 00	0 00	1,600.00	-2,408.00	0.00	0.00	0 00	0.00	724,193 80	620,835 70
1,700 00	0 00	0 00	1,700.00	-2,308.00		0.00	0.00	0 00	724,193 80	620,835 70
1,800 00	0 00	0.00	1,800.00	-2,208.00		0.00	0.00	0.00	724,193 80	620,835.70
1,900 00	0.00	0.00	1,900.00	-2,108.00	0.00	0.00	0.00	0.00	724,193 80	620,835 70
2,000.00	0 00	0.00	2,000 00	-2,008 00	0 00	0.00	0.00	0 00	724,193 80	620,835 70
2,100.00	0.00	0 00	2,100 00	-1,908 00	0 00	0.00	0.00	0 00	724,193 80	620,835 70
2,200.00	0 00	0.00	2,200 00	-1,808 00	0 00	0.00	0.00	0 00	724,193.80	620,835 70
2,300 00	0.00	0 00	2,300 00	-1,708.00	0.00	0.00	0.00	0 00	724,193 80	620,835.70
2,400 00	0.00	0 00	2,400.00	-1,608.00	0.00	0 00	0.00	0 00	724,193 80	620,835 70
2,500 00	0 00	0 00	2,500 00	-1,508 00	0 00	0.00	0.00	0 00	724,193 80	620,835.70
2,600.00	0 00	0.00	2,600 00	-1,408 00	0 00	0 00	0.00	0 00	724,193 80	620,835 70

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
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Well:	#10	**North Reference:**	Grid
Wellbore:	S-Well	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,700.00	0.00	0.00	2,700.00	-1,308 00	0 00	0.00	0.00	0 00	724,193 80	620,835 70
2,800.00	0 00	0.00	2,800 00	-1,208 00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
2,900 00	0 00	0.00	2,900 00	-1,108 00	0 00	0.00	0 00	0 00	724,193 80	620,835 70
3,000.00	0 00	0.00	3,000 00	-1,008 00	0.00	0 00	0 00	0.00	724,193.80	620,835.70
3,100.00	0 00	0.00	3,100.00	-908 00	0.00	0 00	0.00	0 00	724,193.80	620,835 70
3,200 00	0.00	0.00	3,200.00	-808.00	0 00	0 00	0.00	0.00	724,193.80	620,835 70
3,300 00	0 00	0.00	3,300.00	-708.00	0 00	0.00	0 00	0 00	724,193 80	620,835.70
3,400 00	0 00	0 00	3,400.00	-608.00	0 00	0 00	0 00	0 00	724,193 80	620,835 70
3,500 00	0 00	0 00	3,500.00	-508.00	0 00	0.00	0 00	0 00	724,193 80	620,835 70
3,600 00	0 00	0.00	3,600.00	-408 00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
3,700 00	0 00	0 00	3,700.00	-308.00	0 00	0.00	0 00	0 00	724,193 80	620,835 70
3,800.00	0 00	0 00	3,800.00	-208 00	0 00	0.00	0.00	0.00	724,193.80	620,835 70
3,900.00	0 00	0 00	3,900 00	-108 00	0.00	0.00	0.00	0 00	724,193 80	620,835.70
4,000 00	0 00	0 00	4,000.00	-8 00	0 00	0.00	0.00	0.00	724,193.80	620,835.70
4,100.00	0.00	0.00	4,100.00	92 00	0.00	0.00	0.00	0.00	724,193.80	620,835 70
4,200.00	0 00	0 00	4,200.00	192.00	0.00	0.00	0 00	0 00	724,193.80	620,835.70
4,300.00	0 00	0.00	4,300 00	292.00	0.00	0.00	0 00	0 00	724,193.80	620,835 70
4,400 00	0 00	0.00	4,400.00	392.00	0.00	0.00	0.00	0.00	724,193 80	620,835.70
4,500.00	0.00	0 00	4,500.00	492 00	0.00	0 00	0.00	0 00	724,193 80	620,835 70
4,600 00	0 00	0.00	4,600.00	592 00	0.00	0 00	0.00	0.00	724,193 80	620,835 70
4,700.00	0 00	0 00	4,700.00	692 00	0.00	0.00	0.00	0 00	724,193 80	620,835 70
4,800.00	0.00	0 00	4,800.00	792 00	0 00	0.00	0 00	0 00	724,193 80	620,835 70
4,900.00	0 00	0 00	4,900.00	892.00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
5,000 00	0 00	0.00	5,000.00	992.00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
5,100 00	2.50	185 10	5,099 97	1,091 97	-2.17	-0.19	0 33	2.50	724,191 63	620,835 51
5,200.00	5.00	185 10	5,199 75	1,191.75	-8 69	-0.78	1 31	2 50	724,185 11	620,834 92
5,300 00	7 50	185 10	5,299 14	1,291 14	-19.53	-1.74	2 95	2 50	724,174.27	620,833 96

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
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Well:	#10	**North Reference:**	Grid
Wellbore:	S-Well	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,323 95	8.10	185.10	5,322.87	1,314 87	-22.77	-2.03	3.44	2 50	724,171 03	620,833.67
5,400.00	8.10	185.10	5,398 16	1,390.16	-33.44	-2.99	5.06	0 00	724,160.36	620,832 71
5,500.00	8.10	185 10	5,497.17	1,489.17	-47.47	-4 24	7.18	0.00	724,146.33	620,831.46
5,600 00	8.10	185.10	5,596 17	1,588.17	-61.50	-5.49	9.30	0.00	724,132.30	620,830 21
5,700.00	8.10	185 10	5,695 17	1,687.17	-75.53	-6.74	11 42	0 00	724,118 27	620,828 96
5,800.00	8.10	185 10	5,794.17	1,786.17	-89.57	-8.00	13.54	0 00	724,104 23	620,827.70
5,900.00	8.10	185.10	5,893.18	1,885.18	-103.60	-9.25	15 66	0 00	724,090 20	620,826 45
6,000.00	8 10	185.10	5,992.18	1,984.18	-117 63	-10.50	17.79	0 00	724,076 17	620,825 20
6,100.00	8.10	185 10	6,091 18	2,083.18	-131.66	-11.76	19 91	0 00	724,062 14	620,823 94
6,200.00	8.10	185 10	6,190.19	2,182 19	-145.70	-13.01	22 03	0 00	724,048 10	620,822.69
6,300 00	8.10	185.10	6,289.19	2,281.19	-159.73	-14.26	24.15	0 00	724,034 07	620,821.44
6,400 00	8.10	185 10	6,388 19	2,380 19	-173.76	-15.51	26 27	0.00	724,020 04	620,820 19
6,500.00	8 10	185.10	6,487.19	2,479.19	-187.79	-16.77	28 40	0.00	724,006.01	620,818 93
6,600 00	8 10	185 10	6,586 20	2,578 20	-201.82	-18.02	30.52	0 00	723,991.98	620,817 68
6,700.00	8.10	185 10	6,685.20	2,677.20	-215.86	-19.27	32 64	0.00	723,977.94	620,816 43
6,800 00	8 10	185 10	6,784 20	2,776 20	-229 89	-20.53	34 76	0 00	723,963 91	620,815 17
6,900 00	8 10	185 10	6,883 20	2,875 20	-243 92	-21.78	36 88	0 00	723,949 88	620,813 92
6,994 87	8.10	185 10	6,977 13	2,969 13	-257.23	-22.97	38 90	0 00	723,936 57	620,812 73
7,000 00	7.97	185.10	6,982 21	2,974 21	-257 95	-23.03	39 00	2.50	723,935 85	620,812 67
7,100 00	5 47	185.10	7,081 51	3,073 51	-269.60	-24.07	40 77	2 50	723,924.20	620,811 63
7,200 00	2.97	185.10	7,181.23	3,173 23	-276 93	-24.73	41.87	2 50	723,916 87	620,810 97
7,300 00	0 47	185.10	7,281.18	3,273 18	-279.92	-24.99	42 33	2.50	723,913.88	620,810 71
7,318 82	0 00	0 00	7,300 00	3,292.00	-280 00	-25.00	42.34	2 50	723,913 80	620,810 70
PBHL-Swell#10										
7,400 00	0 00	0 00	7,381 18	3,373 18	-280 00	-25.00	42.34	0 00	723,913.80	620,810 70
7,500 00	0.00	0 00	7,481 18	3,473 18	-280 00	-25.00	42 34	0 00	723,913 80	620,810 70
7,600 00	0 00	0.00	7,581.18	3,573.18	-280 00	-25.00	42 34	0.00	723,913 80	620,810 70

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
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7,700 00	0.00	0.00	7,681.18	3,673 18	-280.00	-25 00	42 34	0.00	723,913 80	620,810.70
7,800 00	0.00	0 00	7,781.18	3,773.18	-280.00	-25.00	42.34	0.00	723,913 80	620,810.70
7 900.00	0.00	0 00	7,881.18	3,873.18	-280.00	-25.00	42.34	0.00	723,913 80	620,810.70
8,000 00	0 00	0 00	7,981.18	3,973.18	-280 00	-25 00	42.34	0.00	723,913.80	620,810 70
8.100.00	0.00	0 00	8,081.18	4,073.18	-280.00	-25 00	42 34	0 00	723,913 80	620,810 70
8,200 00	0 00	0.00	8,181.18	4,173.18	-280.00	-25 00	42.34	0 00	723.913 80	620,810 70
8,300 00	0 00	0.00	8,281 18	4,273.18	-280 00	-25.00	42 34	0.00	723,913 80	620,810 70
8,400 00	0.00	0 00	8,381.18	4,373.18	-280.00	-25.00	42 34	0 00	723,913 80	620,810 70
8,500 00	0.00	0 00	8,481.18	4,473.18	-280.00	-25.00	42 34	0 00	723,913 80	620,810 70
8,600.00	0 00	0.00	8,581.18	4,573.18	-280.00	-25.00	42 34	0 00	723,913 80	620,810 70
8,700 00	0 00	0 00	8,681.18	4,673.18	-280.00	-25.00	42 34	0 00	723,913 80	620,810 70
8,800.00	0 00	0.00	8,781.18	4,773.18	-280 00	-25.00	42 34	0 00	723,913 80	620,810 70
8,900 00	0 00	0.00	8,881.18	4,873.18	-280.00	-25.00	42.34	0 00	723,913.80	620,810 70
9,000 00	0 00	0.00	8,981.18	4,973 18	-280.00	-25 00	42 34	0 00	723,913 80	620,810 70
9,018 82	0 00	0.00	9,000 00	4,992 00	-280.00	-25 00	42 34	0 00	723.913 80	620,810 70

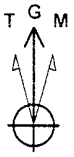
Targets

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-Swell#10 - plan hits target - Point	0 00	0 00	7,300.00	-280.00	-25.00	723,913.800	620,810.700	32° 59' 22 149 N	103° 56' 21 574 W

Checked By _____ Approved By: _____ Date _____

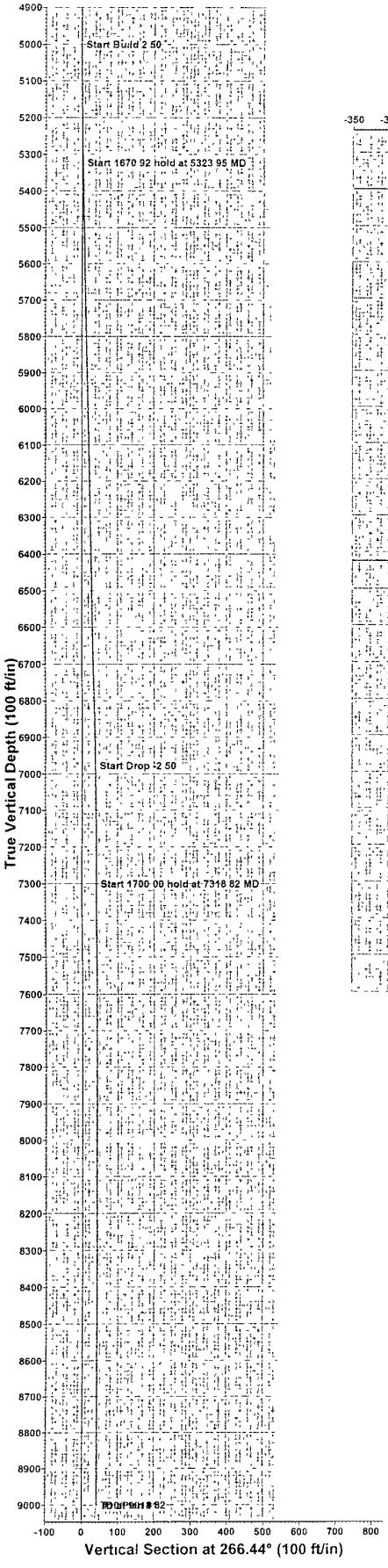
MACK Energy Corporation

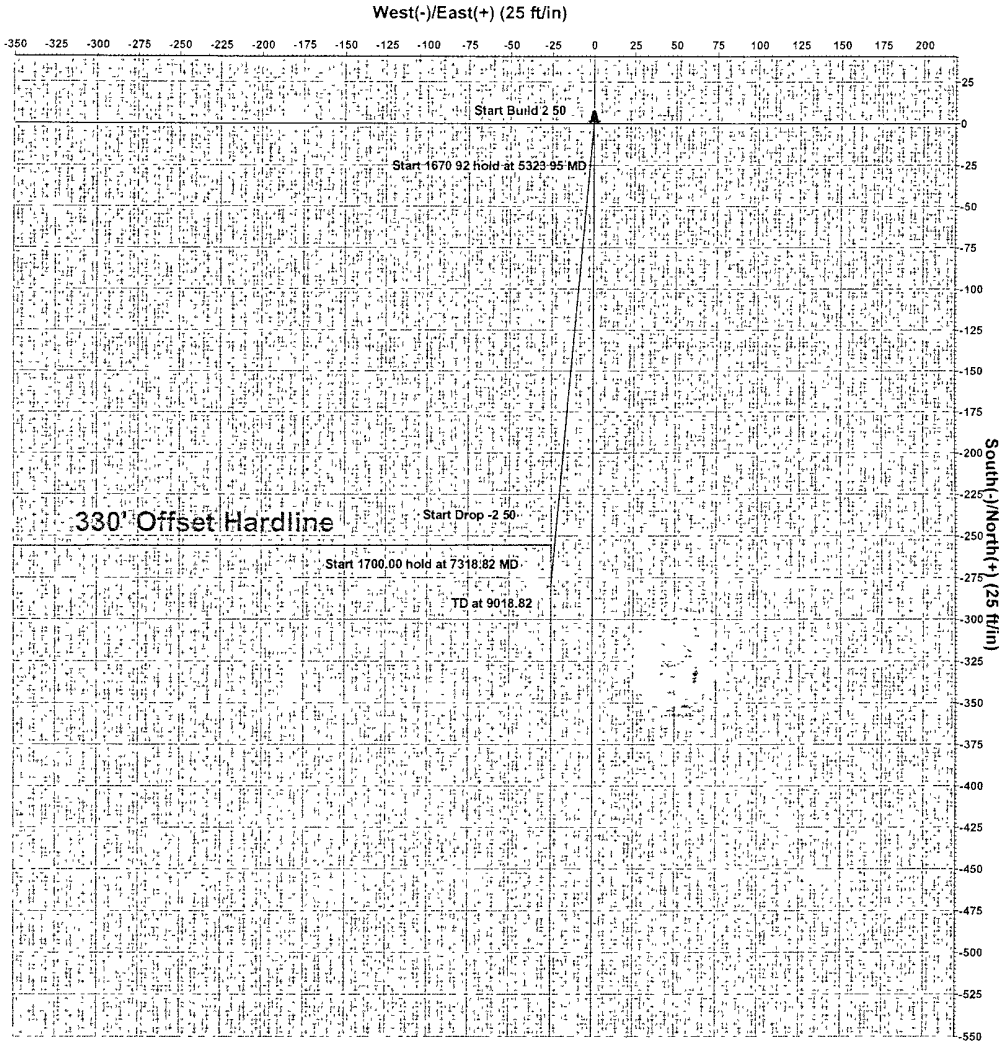
PATHFINDER



Azimuths to Grid North
True North: -0.21°
Magnetic North: 7.76°

Magnetic Field
Strength: 49207.5snT
Dip Angle: 60.38°
Date: 12/31/2009
Model: IGRF200510





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	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	
3	5323.95	8.10	185.10	5322.87	-22.77	-2.03	2.50	185.10	3.44	
4	6994.87	8.10	185.10	6977.13	-257.23	-22.97	0.00	0.00	38.90	
5	7318.82	0.00	0.00	7300.00	-280.00	-25.00	2.50	180.00	42.34	PBHL-Swell#10
6	9018.82	0.00	0.00	9000.00	-280.00	-25.00	0.00	0.00	42.34	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL-Swell#10	7300.00	-280.00	-25.00	723913.800	620810.700	Point

WELL DETAILS #10

Ground Elevation 3989.00
RKB Elevation WELL @ 4008.00ft (Original Well Elev)
Rig Name Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	724193.800	620835.700	32° 59' 24.919 N	103° 56' 21.269 W	

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

Project: Chaves County
Site: Peery Federal
Well: #10
Wellbore: S-Well
Plan: Plan #1 (#10/S-Well)

Plan: Plan #1 (#10/S-Well)
Created By: Nate Bingham Date: 14:00, December 14 2009
Checked: _____ Date: _____

Mack Energy

Chaves County
Peery Federal
#10
ST01

RECEIVED
JAN 29 2010
HOBBSOCD

Plan: Plan #1

Pathfinder X & Y Planning Report

14 December, 2009

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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 Peery Federal

Site Position:		**Northing:**	721,535.600 ft	**Latitude:**	32° 58' 58 617 N
From:	Map	**Easting:**	620,821.500 ft	**Longitude:**	103° 56' 21.552 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 21 °

Well #10

Well Position	**+N/-S**	0 00 ft	**Northing:**	724,193.800 ft	**Latitude:**	32° 59' 24 919 N
	+E/-W	0 00 ft	**Easting:**	620,835.700 ft	**Longitude:**	103° 56' 21 269 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,989 00 ft

Wellbore ST01

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	7.98	60.88	49,207

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	8,279.00

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0 00	0.00	0 00	266.44

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Survey Tool Program **Date** 12/14/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,279 00	Plan #1 (S-Well)	MWD	MWD - Standard
8,279 00	13,151.30	Plan #1 (ST01)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0 00	-4,008.00	0 00	0 00	0.00	0 00	724,193.80	620,835.70
100.00	0 00	0 00	100 00	-3,908.00	0 00	0.00	0.00	0 00	724,193.80	620,835 70
200.00	0 00	0.00	200 00	-3,808 00	0 00	0.00	0 00	0 00	724,193.80	620,835 70
300 00	0 00	0.00	300.00	-3,708 00	0 00	0 00	0.00	0.00	724,193 80	620,835 70
400.00	0.00	0 00	400.00	-3,608.00	0 00	0.00	0.00	0 00	724,193.80	620,835 70
500 00	0.00	0.00	500.00	-3,508.00	0.00	0.00	0.00	0.00	724,193.80	620,835 70
600.00	0.00	0.00	600.00	-3,408.00	0.00	0.00	0.00	0 00	724,193 80	620,835 70
700 00	0 00	0.00	700.00	-3,308.00	0 00	0 00	0 00	0.00	724,193 80	620,835.70
800.00	0 00	0 00	800.00	-3,208 00	0.00	0 00	0.00	0 00	724,193 80	620,835 70
900 00	0 00	0.00	900.00	-3,108 00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
1,000 00	0.00	0.00	1,000.00	-3,008 00	0.00	0.00	0 00	0.00	724,193.80	620,835 70
1,100.00	0.00	0.00	1,100.00	-2,908.00	0.00	0 00	0 00	0.00	724,193 80	620,835 70
1,200.00	0 00	0 00	1,200.00	-2,808 00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
1,300 00	0.00	0.00	1,300.00	-2,708 00	0.00	0.00	0 00	0 00	724,193 80	620,835 70
1,400.00	0 00	0 00	1,400 00	-2,608.00	0 00	0 00	0.00	0.00	724,193 80	620,835 70
1,500 00	0 00	0 00	1,500.00	-2,508 00	0.00	0 00	0.00	0.00	724,193 80	620,835 70
1,600 00	0 00	0 00	1,600 00	-2,408.00	0.00	0 00	0.00	0.00	724,193.80	620,835 70
1,700 00	0.00	0 00	1,700.00	-2,308 00	0 00	0 00	0 00	0.00	724,193.80	620,835 70
1,800 00	0.00	0.00	1,800.00	-2,208 00	0 00	0 00	0.00	0.00	724,193.80	620,835 70
1,900 00	0.00	0.00	1,900.00	-2,108 00	0 00	0.00	0 00	0.00	724,193 80	620,835 70
2,000.00	0 00	0 00	2,000 00	-2,008 00	0 00	0.00	0 00	0 00	724,193 80	620,835 70

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,100 00	0 00	0.00	2,100 00	-1,908.00	0 00	0 00	0 00	0 00	724,193.80	620,835 70
2,200 00	0 00	0 00	2,200 00	-1,808.00	0.00	0.00	0 00	0 00	724,193.80	620,835 70
2,300 00	0 00	0 00	2,300.00	-1,708.00	0.00	0 00	0 00	0 00	724,193.80	620,835.70
2,400.00	0 00	0.00	2,400.00	-1,608.00	0 00	0 00	0.00	0 00	724,193 80	620,835.70
2,500.00	0 00	0 00	2,500.00	-1,508.00	0.00	0.00	0.00	0 00	724,193.80	620,835 70
2,600.00	0.00	0.00	2,600.00	-1,408 00	0 00	0 00	0.00	0.00	724,193 80	620,835 70
2,700.00	0 00	0.00	2,700.00	-1,308 00	0.00	0.00	0 00	0 00	724,193.80	620,835 70
2,800.00	0 00	0.00	2,800.00	-1,208 00	0.00	0 00	0 00	0.00	724,193.80	620,835.70
2,900 00	0.00	0 00	2,900 00	-1,108.00	0.00	0 00	0.00	0.00	724,193.80	620,835.70
3,000.00	0 00	0.00	3,000 00	-1,008.00	0.00	0 00	0 00	0.00	724,193 80	620,835.70
3,100 00	0 00	0 00	3,100.00	-908 00	0.00	0.00	0 00	0.00	724,193.80	620,835.70
3,200.00	0 00	0 00	3,200 00	-808.00	0.00	0.00	0.00	0.00	724,193.80	620,835.70
3,300.00	0 00	0 00	3,300.00	-708 00	0.00	0 00	0.00	0.00	724,193 80	620,835.70
3,400.00	0 00	0 00	3,400.00	-608.00	0 00	0 00	0.00	0.00	724,193 80	620,835 70
3,500 00	0 00	0.00	3,500.00	-508.00	0.00	0.00	0.00	0.00	724,193.80	620,835.70
3,600 00	0.00	0 00	3,600.00	-408 00	0 00	0 00	0.00	0 00	724,193 80	620,835 70
3,700 00	0 00	0 00	3,700 00	-308 00	0.00	0.00	0 00	0.00	724,193 80	620,835.70
3,800.00	0 00	0.00	3,800.00	-208.00	0.00	0.00	0 00	0.00	724,193 80	620,835 70
3,900 00	0 00	0 00	3,900.00	-108 00	0.00	0.00	0 00	0.00	724,193 80	620,835 70
4,000 00	0 00	0 00	4,000.00	-8 00	0.00	0.00	0 00	0.00	724,193 80	620,835.70
4,100 00	0 00	0.00	4,100.00	92.00	0.00	0.00	0 00	0 00	724,193 80	620,835.70
4,200 00	0 00	0.00	4,200 00	192.00	0.00	0 00	0.00	0 00	724,193 80	620,835 70
4,300.00	0 00	0.00	4,300.00	292.00	0.00	0 00	0 00	0 00	724,193.80	620,835.70
4,400 00	0 00	0.00	4,400.00	392 00	0.00	0.00	0 00	0 00	724,193.80	620,835 70
4,500 00	0.00	0.00	4,500 00	492 00	0 00	0 00	0 00	0 00	724,193.80	620,835 70
4,600 00	0.00	0 00	4,600.00	592 00	0 00	0 00	0.00	0.00	724,193.80	620,835 70
4,700 00	0 00	0 00	4,700 00	692 00	0 00	0 00	0 00	0.00	724,193 80	620,835 70

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
4,800.00	0.00	0 00	4,800.00	792.0	0 00	0 00	0 00	0 00	724,193.80	620,835.70
4 900 00	0 00	0 00	4,900 00	892 00	0 00	0 00	0 00	0 00	724,193.80	620,835 70
5,000 00	0 00	0 00	5,000 00	992 00	0 00	0 00	0 00	0 00	724,193.80	620,835.70
5,100 00	2 50	185 10	5,099 97	1,091.97	-2.17	-0.19	0.33	2 50	724,191.63	620,835.51
5,200.00	5 00	185 10	5,199 75	1,191.75	-8.69	-0.78	1 31	2 50	724,185.11	620,834 92
5,300 00	7 50	185 10	5,299.14	1,291.14	-19.53	-1 74	2.95	2 50	724,174.27	620,833 96
5,323 95	8 10	185.10	5,322.87	1,314.87	-22.77	-2.03	3 44	2 50	724,171.03	620,833 67
5,400.00	8 10	185.10	5,398 16	1,390 16	-33.44	-2.99	5 05	0 00	724,160.36	620,832 71
5,500 00	8 10	185 10	5,497 17	1,489 17	-47.47	-4 24	7 17	0 00	724,146.33	620,831 46
5,600 00	8.10	185.10	5,596 17	1,588 17	-61.50	-5 49	9 29	0 00	724,132.30	620,830 21
5,700.00	8.10	185 10	5,695.17	1,687.17	-75.53	-6.74	11.42	0.00	724,118 27	620,828 96
5,800 00	8 10	185 10	5,794.17	1,786 17	-89 57	-8 00	13 54	0.00	724,104 23	620,827 70
5,900.00	8.10	185.10	5,893 18	1,885 18	-103.60	-9 25	15 66	0 00	724,090 20	620,826 45
6,000 00	8 10	185 10	5,992.18	1,984.18	-117 63	-10 50	17 78	0.00	724,076 17	620,825 20
6,100 00	8.10	185.10	6,091.18	2,083 18	-131.66	-11.76	19 90	0.00	724,062.14	620,823 94
6,200.00	8.10	185 10	6,190.19	2,182 19	-145.70	-13.01	22 02	0.00	724,048 10	620,822 69
6,300 00	8 10	185 10	6,289 19	2,281.19	-159.73	-14.26	24 14	0 00	724,034 07	620,821 44
6,400 00	8.10	185 10	6,388.19	2,380 19	-173.76	-15.51	26.26	0 00	724,020.04	620,820 19
6,500 00	8.10	185 10	6,487.19	2,479.19	-187.79	-16 77	28.38	0 00	724,006.01	620,818 93
6,600 00	8.10	185 10	6,586.20	2,578.20	-201 82	-18 02	30.50	0 00	723,991.98	620,817 68
6,700.00	8 10	185.10	6,685 20	2,677 20	-215 86	-19 27	32.62	0.00	723,977.94	620,816 43
6,800.00	8 10	185.10	6,784 20	2,776 20	-229.89	-20.53	34.74	0 00	723,963.91	620,815 17
6,900 00	8 10	185.10	6,883 20	2,875 20	-243.92	-21.78	36 86	0.00	723,949 88	620,813 92
6,994.87	8.10	185.10	6,977.13	2,969.13	-257.23	-22 97	38.87	0.00	723,936.57	620,812 73
7,000.00	7 97	185 10	6,982.21	2,974 21	-257.95	-23 03	38.98	2.50	723,935.85	620,812.67
7,100 00	5 47	185.10	7,081 51	3,073 51	-269.60	-24.07	40 74	2 50	723,924.20	620,811.63
7,200 00	2.97	185 10	7,181 23	3,173 23	-276.93	-24.73	41 85	2 50	723,916 87	620,810.97

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,300.00	0 47	185.10	7,281.18	3,273 18	-279.92	-24.99	42 30	2 50	723,913 88	620,810 71
7,318.82	0.00	0.00	7,300.00	3,292 00	-280 00	-25.00	42.31	2 50	723,913.80	620,810.70
7,400 00	0.00	0.00	7,381.18	3,373 18	-280 00	-25.00	42.31	0 00	723,913 80	620,810.70
7,500.00	0.00	0.00	7,481.18	3,473 18	-280.00	-25 00	42.31	0.00	723,913 80	620,810 70
7,600 00	0 00	0 00	7,581.18	3,573.18	-280 00	-25.00	42.31	0.00	723,913 80	620,810 70
7,700 00	0 00	0 00	7,681 18	3,673.18	-280.00	-25 00	42 31	0.00	723,913 80	620,810 70
7,800 00	0 00	0.00	7,781 18	3,773.18	-280.00	-25 00	42 31	0.00	723,913.80	620,810.70
7,900.00	0 00	0 00	7,881 18	3,873.18	-280.00	-25.00	42.31	0.00	723,913.80	620,810 70
8,000 00	0.00	0.00	7,981 18	3,973 18	-280.00	-25 00	42 31	0 00	723,913.80	620,810 70
8,100.00	0.00	0.00	8,081.18	4,073.18	-280.00	-25 00	42.31	0.00	723,913 80	620,810 70
8,200 00	0 00	0.00	8,181 18	4,173.18	-280.00	-25.00	42.31	0 00	723,913 80	620,810 70
8,279 00	0 00	0.00	8,260.18	4,252.18	-280.00	-25 00	42 31	0 00	723,913.80	620,810 70
8,300.00	2.73	269.89	8,281.17	4,273 17	-280.00	-25.50	42 81	13.01	723,913 80	620,810 20
8,325.00	5 99	269 89	8,306.10	4,298 10	-280.00	-27.40	44.71	13 01	723,913.80	620,808 30
8,350.00	9.24	269.89	8,330.87	4,322 87	-280.01	-30 71	48.02	13 01	723,913.79	620,804.99
8,375 00	12.49	269 89	8,355 42	4,347.42	-280.02	-35.43	52 72	13 01	723,913.78	620,800 27
8,400.00	15 75	269 89	8,379.66	4,371.66	-280.03	-41.52	58.81	13 01	723,913.77	620,794 18
8,425 00	19.00	269.89	8,403.52	4,395.52	-280 05	-48 99	66 26	13 01	723,913.75	620,786.71
8,450 00	22.25	269 89	8,426.91	4,418.91	-280.06	-57 79	75 05	13 01	723,913.74	620,777.91
8,475 00	25.51	269.89	8,449.77	4,441 77	-280.08	-67.91	85 15	13 01	723,913.72	620,767.79
8,500 00	28.76	269.89	8,472.01	4,464 01	-280.10	-79 31	96 53	13 01	723,913.70	620,756 39
8,525.00	32 02	269.89	8,493.58	4,485.58	-280.13	-91.96	109 15	13.01	723,913.67	620,743.74
8,550 00	35 27	269.89	8,514 39	4,506.39	-280 16	-105 81	122.98	13.01	723,913.64	620,729.89
8,575 00	38.52	269.89	8,534.38	4,526.38	-280.18	-120 82	137.96	13.01	723,913.62	620,714.88
8,600 00	41.78	269.89	8,553 48	4,545 48	-280.21	-136 93	154 05	13.01	723,913.59	620,698.77
8,625.00	45 03	269 89	8,571 64	4,563 64	-280.25	-154.11	171.19	13 01	723,913 55	620,681 59
8,650.00	48.28	269 89	8,588.80	4,580.80	-280.28	-172 29	189.34	13 01	723,913.52	620,663.41

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,675.00	51 54	269.89	8,604 90	4,596.90	-280.32	-191.41	208.43	13 01	723,913 48	620,644.29
8,700.00	54.79	269.89	8,619.88	4,611.88	-280.36	-211.42	228 40	13 01	723,913 44	620,624.28
8,725 00	58 04	269.89	8,633.71	4,625.71	-280.40	-232.24	249.18	13.01	723.913 40	620,603.46
8,750.00	61.30	269 89	8,646.33	4,638.33	-280.44	-253 82	270.72	13.01	723,913.36	620,581 88
8,775.00	64 55	269 89	8,657.71	4,649.71	-280 48	-276.07	292.94	13.01	723,913.32	620,559.63
8,800 00	67 81	269 89	8,667.81	4,659.81	-280.53	-298 94	315 76	13 01	723,913.27	620,536 76
8,825.00	71 06	269.89	8,676.59	4,668.59	-280.57	-322.35	339.12	13 01	723,913.23	620,513 35
8,850.00	74 31	269.89	8,684.03	4,676 03	-280.62	-346 21	362.94	13.01	723,913.18	620,489.49
8,875.00	77.57	269.89	8,690.10	4,682.10	-280.66	-370.46	387.15	13 01	723,913 14	620,465.24
8,900.00	80.82	269 89	8,694.79	4,686.79	-280 71	-395.01	411.66	13.01	723,913 09	620,440 69
8,925.00	84 07	269.89	8,698 07	4,690.07	-280.76	-419 79	436 39	13.01	723,913 04	620,415.91
8,950.00	87 33	269.89	8,699.95	4,691.95	-280 81	-444.72	461.27	13 01	723,912.99	620,390.98
8,975 00	90 58	269 89	8,700.40	4,692.40	-280.85	-469.71	486 22	13 01	723,912 95	620,365.99
8,989 90	92 52	269.89	8,700 00	4,692.00	-280 88	-484.60	501.09	13 01	723,912 92	620,351.10
9,000.00	92.52	269.89	8,699.56	4,691.56	-280.90	-494.69	511 16	0 01	723,912 90	620,341 01
9,027 44	92 52	269.89	8,698.35	4,690.35	-280.95	-522.10	538 52	0.01	723,912 85	620,313.60
9,100.00	92 52	269.89	8,695.16	4,687.16	-281.09	-594.60	610 88	0.00	723,912 71	620,241.10
9,200 00	92.52	269 89	8,690 75	4,682 75	-281.28	-694.50	710 60	0.00	723,912 52	620,141.20
9,300.00	92.52	269 89	8,686.35	4,678.35	-281.48	-794.40	810.33	0.00	723,912 32	620,041 30
9,400 00	92 52	269.89	8,681 95	4,673.95	-281.67	-894 30	910.05	0 00	723,912 13	619,941 40
9,489 78	92 52	269 89	8,678.00	4,670.00	-281.84	-984.00	999 58	0.00	723,911 96	619,851 70
TGT1(#10)@1000'VS										
9,500.00	92 32	269.89	8,677.57	4,669.57	-281.86	-994.21	1,009 77	2.00	723,911 94	619,841 49
9,539 99	91 52	269 89	8,676 23	4,668.23	-281.94	-1,034 17	1,049.67	2 00	723,911 86	619,801.53
9,600 00	91 52	269.89	8,674.64	4,666 64	-282.05	-1,094 16	1,109 55	0 00	723,911 75	619,741 54
9,700 00	91.52	269.89	8,671.99	4,663 99	-282 24	-1,194.13	1,209 33	0 00	723,911 56	619,641.57
9,800.00	91 52	269.89	8,669 34	4,661 34	-282.43	-1,294.09	1,309.12	0 00	723,911 37	619,541.61

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,900.00	91.52	269.89	8,666.69	4,658.69	-282.63	-1,394.06	1,408 90	0.00	723,911.17	619,441.64
10,000.00	91.52	269.89	8,664.04	4,656.04	-282 82	-1,494 02	1,508.69	0.00	723,910.98	619,341.68
10,100 00	91.52	269.89	8,661.39	4,653.39	-283.01	-1,593 99	1,608.47	0.00	723,910 79	619,241.71
10,200.00	91 52	269.89	8,658.74	4,650.74	-283 20	-1,693.95	1,708.25	0 00	723,910 60	619,141.75
10,300 00	91.52	269.89	8,656.09	4,648.09	-283.39	-1,793 92	1,808.04	0.00	723,910 41	619,041.78
10,400 00	91 52	269.89	8,653 44	4,645.44	-283 58	-1,893 88	1,907.82	0 00	723,910.22	618,941.82
10,492.15	91 52	269.89	8,651.00	4,643.00	-283.76	-1,986 00	1,999.77	0 00	723,910.04	618,849 70
TGT2(#10)@2000'VS										
10,500.00	91.36	269.89	8,650 80	4,642 80	-283.78	-1,993 85	2,007 61	2 00	723,910.02	618,841 85
10,529.22	90.78	269 89	8,650.26	4,642.26	-283 83	-2,023 06	2,036.77	2.00	723,909.97	618,812.64
10,600.00	90.78	269.89	8,649.30	4,641.30	-283 97	-2,093 83	2,107 41	0.00	723,909.83	618,741 87
10,700.00	90.78	269.89	8,647.94	4,639.94	-284 16	-2,193.83	2,207 22	0 00	723,909 64	618,641.87
10,800.00	90 78	269.89	8,646.59	4,638 59	-284.36	-2,293 82	2,307.03	0.00	723,909 44	618,541.88
10,843.19	90 78	269.89	8,646.00	4,638 00	-284.44	-2,337 00	2,350 14	0 00	723,909 36	618,498 70
TGT3(#10)@2350'VS										
10,873 49	90 17	269.89	8,645.75	4,637 75	-284.50	-2,367.30	2,380 39	2 00	723,909 30	618,468.40
10,900 00	90 17	269.89	8,645 67	4,637 67	-284.55	-2,393.81	2,406.85	0 00	723,909 25	618,441.89
11,000 00	90 17	269 89	8,645.37	4,637.37	-284.74	-2,493 81	2,506 67	0 00	723,909 06	618.341.89
11,100.00	90.17	269 89	8,645 07	4,637 07	-284.93	-2,593 81	2,606.49	0 00	723,908 87	618,241.89
11,200.00	90.17	269 89	8,644.78	4,636.78	-285.13	-2,693.81	2,706.30	0 00	723,908 67	618,141 89
11,300 00	90.17	269 89	8,644 48	4,636.48	-285.32	-2,793 81	2,806.12	0.00	723,908 48	618,041 89
11,400 00	90.17	269 89	8,644.18	4,636.18	-285.51	-2,893.81	2,905.94	0 00	723,908 29	617,941 89
11,500 00	90 17	269 89	8,643 88	4,635.88	-285 70	-2,993 81	3,005 76	0.00	723,908.10	617,841 89
11,600 00	90 17	269 89	8,643 58	4,635 58	-285 89	-3,093 81	3,105 58	0.00	723,907 91	617,741 89
11,700 00	90 17	269 89	8,643.28	4,635.28	-286 09	-3,193.81	3,205 40	0.00	723,907.71	617,641.89
11,795.20	90 17	269 89	8,643.00	4,635 00	-286.27	-3,289.00	3,300.42	0 00	723,907.53	617,546 70
TGT4(#10)@3300'VS										

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,800 00	90.07	269.89	8,642.99	4,634.99	-286.28	-3,293.80	3,305.22	2 00	723,907 52	617,541 90
11,813 45	89 81	269 89	8,643.00	4,635 00	-286.31	-3,307.26	3,318.65	2.00	723,907.49	617,528 44
11,900 00	89.81	269 89	8,643.30	4,635.30	-286.47	-3,393.80	3,405.04	0.00	723,907.33	617,441.90
12,000.00	89.81	269.89	8,643.64	4,635.64	-286.66	-3,493 80	3,504 86	0.00	723,907.14	617,341 90
12,100.00	89 81	269 89	8,643 98	4,635 98	-286 85	-3,593.80	3,604 67	0.00	723,906 95	617,241 90
12,200.00	89 81	269 89	8,644 31	4,636.31	-287.05	-3,693 80	3,704.49	0 00	723,906.75	617,141 90
12,300.00	89 81	269 89	8,644.65	4,636.65	-287 24	-3,793.80	3,804.31	0.00	723,906 56	617,041.90
12,400 00	89.81	269.89	8,644.99	4,636 99	-287.43	-3,893.80	3,904.13	0 00	723,906.37	616,941 90
12,500.00	89 81	269 89	8,645.33	4,637 33	-287 62	-3,993.80	4,003.95	0.00	723,906 18	616,841.90
12,600 00	89.81	269 89	8,645 67	4,637 67	-287 81	-4,093 80	4,103 77	0 00	723,905.99	616,741.90
12,697.20	89.81	269.89	8,646 00	4,638.00	-288 00	-4,191.00	4,200 79	0 00	723,905.80	616,644 70
TGT5(#10)@4200'VS										
12,701.03	89 87	269 92	8,646 01	4,638.01	-288 01	-4,194.83	4,204.61	2 00	723,905.79	616,640 87
12,800.00	89.87	269.92	8,646 23	4,638.23	-288 14	-4,293 80	4,303.40	0 00	723,905.66	616,541.90
12,900.00	89 87	269.92	8,646 45	4,638 45	-288.27	-4,393.80	4,403.22	0 00	723,905.53	616,441.90
13,000.00	89 87	269.92	8,646 67	4,638.67	-288 40	-4,493 80	4,503.03	0.00	723,905.40	616,341.90
13,100 00	89 87	269.92	8,646.89	4,638 89	-288 53	-4,593 80	4,602 85	0 00	723,905.27	616,241.90
13,151 30	89.87	269.92	8,647.00	4,639.00	-288 60	-4,645 10	4,654 06	0.00	723,905.20	616,190 60
PBHL(ST#10)										

Company:	Mack Energy	**Local Co-ordinate Reference:**	Well #10
Project:	Chaves County	**TVD Reference:**	WELL @ 4008.00ft (Original Well Elev)
Site:	Peery Federal	**MD Reference:**	WELL @ 4008 00ft (Original Well Elev)
Well:	#10	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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
TGT4(#10)@3300'VS - plan hits target - Point	0 00	0 00	8,643.00	-286 27	-3,289.00	723,907.530	617,546.700	32° 59' 22 207 N	103° 56' 59 896 W
TGT5(#10)@4200'VS - plan hits target - Point	0 00	0 00	8,646.00	-288 00	-4,191.00	723,905.800	616,644.700	32° 59' 22.222 N	103° 57' 10 486 W
TGT2(#10)@2000'VS - plan hits target - Point	0.00	0.00	8,651 00	-283.76	-1,986.00	723,910 040	618,849.700	32° 59' 22.184 N	103° 56' 44.598 W
TGT1(#10)@1000'VS - plan hits target - Point	0.00	0 00	8,678 00	-281.84	-984.00	723,911.960	619,851.700	32° 59' 22.167 N	103° 56' 32.834 W
TGT3(#10)@2350'VS - plan hits target - Point	0 00	0.00	8,646.00	-284.44	-2,337.00	723,909.360	618,498 700	32° 59' 22.190 N	103° 56' 48 719 W
PBHL(ST#10) - plan hits target - Point	0 00	0 00	8,647.00	-288.60	-4,645.10	723,905.200	616,190.600	32° 59' 22 232 N	103° 57' 15 818 W

Checked By: _____ Approved By: _____ Date: _____

MACK Energy Corporation

PATHFINDER

Azimuths to Grid North
True North: -0.21°
Magnetic North: 7.76°

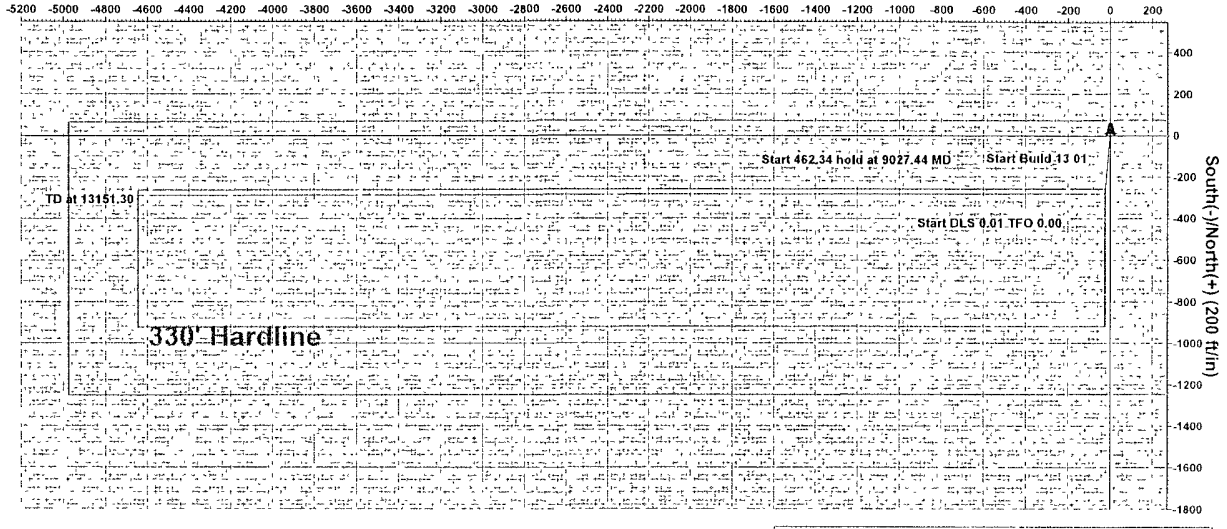
Magnetic Field
Strength: 49207.5snT
Dip Angle: 60.88°
Date: 12/31/2009
Model: IGRF200510

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
TGT4(#10)@3300'VS	8643.00	-286.27	-3289.00	Point
TGT3(#10)@2350'VS	8646.00	-284.44	-2337.00	Point
TGT5(#10)@4200'VS	8646.00	-288.00	-4191.00	Point
PBHL(ST#10)	8647.00	-288.60	-4645.10	Point
TGT2(#10)@2000'VS	8651.00	-283.76	-1986.00	Point
TGT1(#10)@1000'VS	8678.00	-281.84	-984.00	Point

SECTION DETAILS

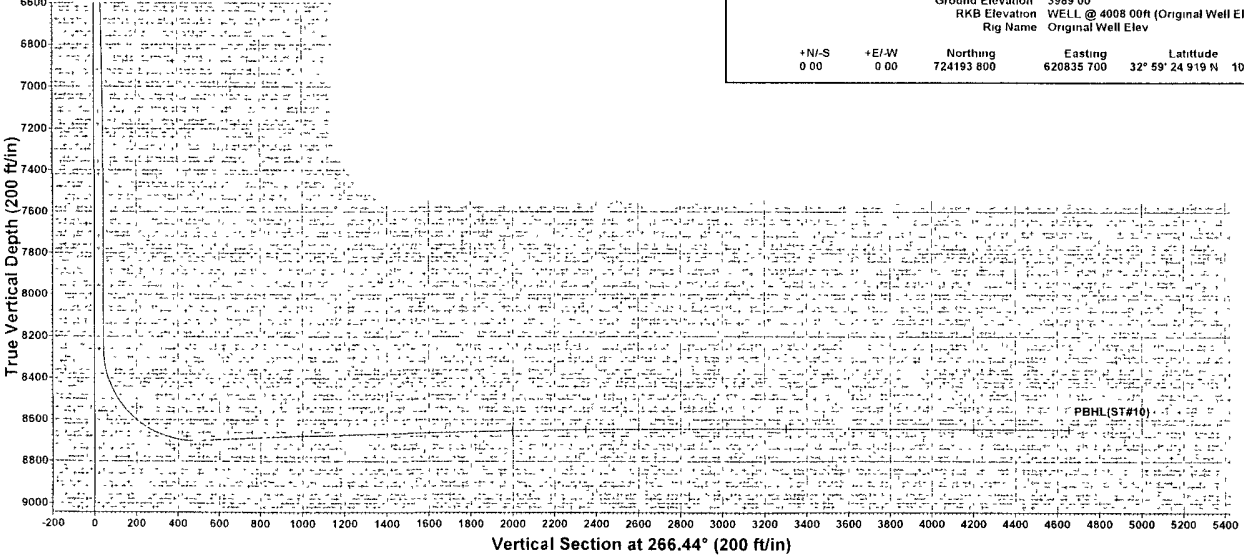
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	8279.00	0.00	0.00	8260.18	-280.00	-25.00	0.00	0.00	42.31	
2	8989.90	92.52	269.89	8700.00	-280.88	-484.60	13.01	269.89	501.09	
3	9027.44	92.52	269.89	8698.35	-280.95	-522.10	0.01	0.00	538.52	
4	9488.78	92.52	269.89	8678.00	-281.84	-984.00	0.00	0.00	999.58	TGT1(#10)@1000'VS
5	9539.99	91.52	269.89	8676.23	-281.94	-1034.17	2.00	180.00	1049.67	
6	10492.15	91.52	269.89	8651.00	-283.76	-1986.00	0.00	0.00	1999.77	TGT2(#10)@2000'VS
7	10529.22	90.78	269.89	8650.26	-283.83	-2023.06	2.00	-179.90	2036.77	
8	10843.19	90.78	269.89	8646.00	-284.44	-2337.00	0.00	0.00	2350.14	TGT3(#10)@2350'VS
9	10873.49	90.17	269.89	8645.75	-284.50	-2367.30	2.00	179.91	2380.39	
10	11795.20	90.17	269.89	8643.00	-286.27	-3289.00	0.00	0.00	3300.42	TGT4(#10)@3300'VS
11	11813.45	89.81	269.89	8643.00	-286.31	-3307.26	2.00	179.96	3318.65	
12	12697.20	89.81	269.89	8646.00	-288.00	-4191.00	0.00	0.00	4200.79	TGT5(#10)@4200'VS
13	12701.03	89.87	269.92	8646.01	-288.01	-4194.83	2.00	26.66	4204.61	
14	13151.30	89.87	269.92	8647.00	-288.60	-4645.10	0.00	0.00	4654.06	PBHL(ST#10)

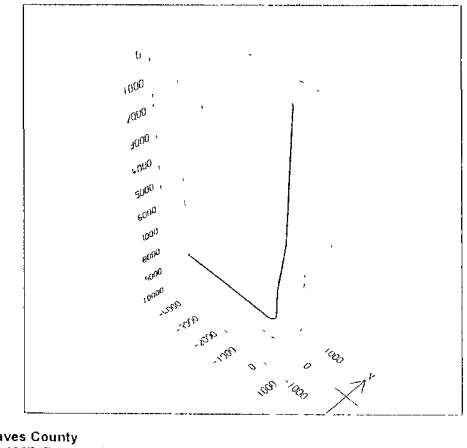


WELL DETAILS #10

Ground Elevation 3989.00
RKB Elevation WELL @ 4008.00ft (Original Well Elev)
Rig Name Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	724193.800	620835.700	32° 59' 24.919 N	103° 56' 21.269 W	





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 (#10/ST01)
Created By: Nate Bingham Date: 14:01, December 14 2009
Checked _____ Date _____

EXHIBIT B

PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL

January, 2010

OPERATORS NAME: **Mack Energy Corporation**
LEASE NO.: **NM-119274**
WELL NAME & NO: **Peery Federal #10**
SURFACE HOLE FOOTAGE: **1395' FNL & 305' FEL**
BOTTOM HOLE FOOTAGE: **1675' FNL & 330' FWL**
LOCATION: **Section 29, T. 15 S., R. 30 E.**
COUNTY: **Chaves County, New Mexico**

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

The project falls within the area covered by the Permian Basin Memorandum of Agreement (MOA). The Permian Basin MOA is an optional method of compliance with Section 106 of the National Historic Preservation Act for energy related projects in a 28 quadrangle area of the Pecos District a portion of which is within the Roswell Field Office. The proponent chose to participate in the Permian Basin MOA by planning to avoid all known NRHP eligible and potentially eligible cultural resources. The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the MOA serves as mitigation for the effects of this project on cultural resources. If any skeletal remains that might be human or funerary objects are discovered by any activities, the project proponent will cease activities in the area of discovery and notify the BLM within 24 hours as required by the Permian Basin MOA.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0209 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall be used for interim and final reclamation. The soil shall be stockpiled on the southeast corner of the well pad.

C. CLOSED LOOP SYSTEM: **No reserve pit will be used.**

Steel tanks are required for drilling operations: No Pits Allowed.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad. Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Egress and Ingress

The access road shall be constructed to access the northwest corner of the well pad. The access road will traverse the west side of the well location and will continue on to another well location

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

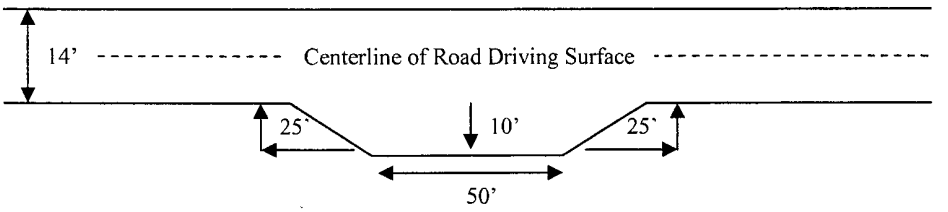
Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

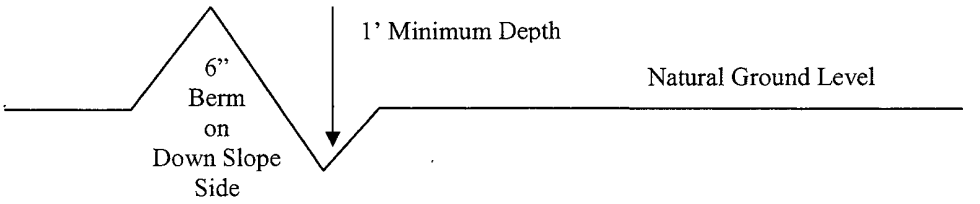


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section Of Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval Of Lead-off Ditches

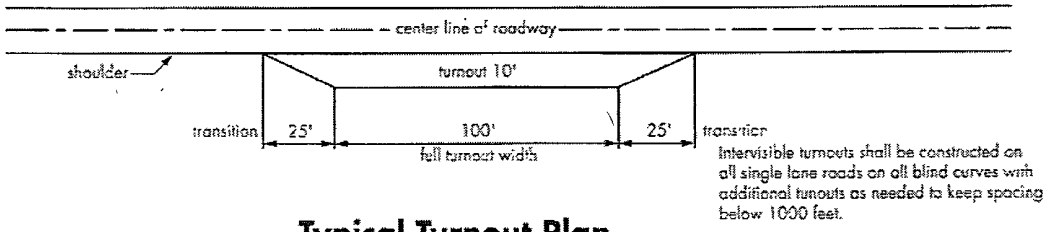
Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Public Access

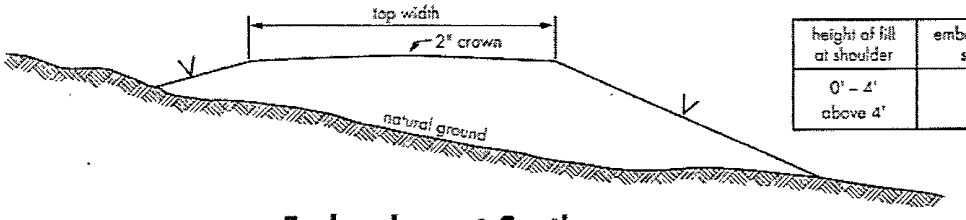
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



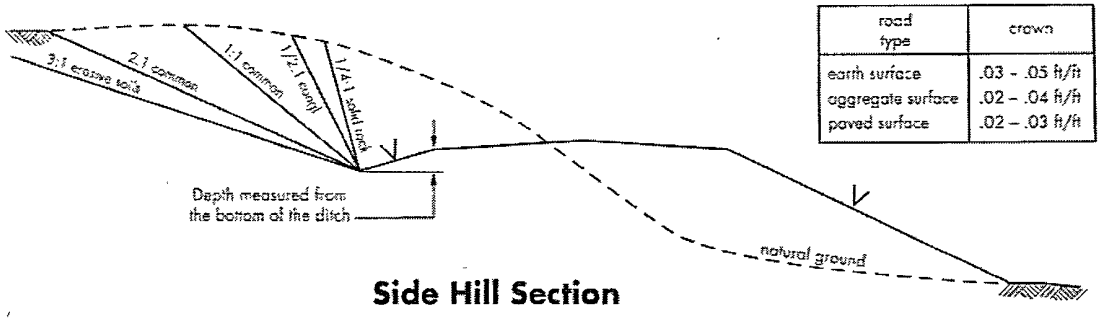
Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan



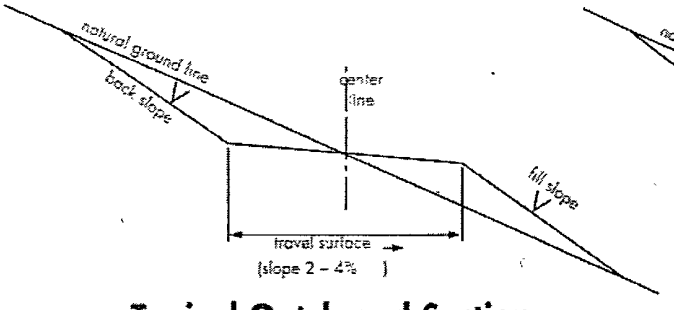
height of fill at shoulder	embankment slope
0' – 4'	3:1
above 4'	2:1

Embankment Section

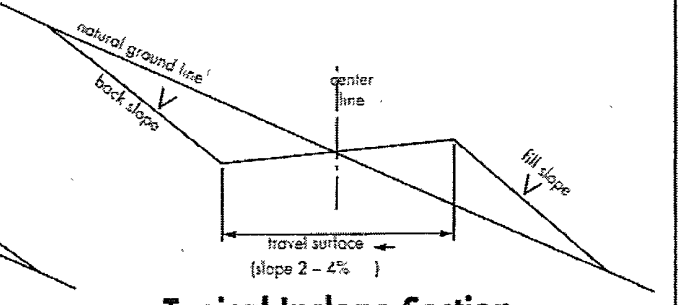


road type	crown
earth surface	.03 - .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS:

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

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

The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

   BOPE Tests

3. 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.

4. Include the API Number assigned to well by NMOCD on the subsequent report of setting the first casing string.

5. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion

6. Fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string(s). Any polymers used will be water based and non-toxic.

B. CASING

1. The **9 5/8** inch usable water protection casing string(s) shall be set at approximately **450** feet opposite competent bedrock. The operator may have to drill a little deeper to set the surface casin the top 25 ft of the Rustler Anhydrite. In no way shall the surface casing be set in the Rustler Halite.

a. If cement does not circulate to the surface, the Roswell Field 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 or 500 pounds compression 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 compression strength, whichever is greater.

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

2. The minimum required fill of cement behind the 7 inch intermediate casing is **sufficient to circulate to the surface.** If cement does not circulate see B.1.a-d above. **Optional**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet true vertical depth above the uppermost perforation in the pay zone**. If cement does not circulate, 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.

4. There is no required fill of cement behind the **4-1/2** inch production liner since a Isolation Packer will be used for lateral and will not require cementing.

5. 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. Before drilling below the **9-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the **7 or 5 ½** inch intermediate casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the **9-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi. Before drilling below the **7 or 5 1/2** inch intermediate casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **3000** psi.

3. The BOPE shall be installed before drilling below the **9-5/8** inch surface casing and the **7 or 5-1/2** inch intermediate casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

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

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

c. 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.

d. 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 BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

g. The requested variance to test the BOPE prior to **drilling below the 9-5/8 inch surface casing** to the reduced pressure of **1000** psi using the rig pumps is approved.

D. DRILLING MUD

1. Fresh water and non toxic drilling mud shall be used to 450 feet to drill the 14-3/4 inch hole for the 9-5/8 inch surface casing to be set at 450 feet.

VI. PRODUCTION

A. WELL STRUCTURES & FACILITIES

1. Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim re-contouring and re-vegetation of the well location.

2. Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

3. Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Juniper Green**, Standard Environmental Colors.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site within 6 months of well completion. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations shall undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operator should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

B. DPC SEED MIXTURE

During reclamation, the removal of caliche is important to increasing the success of re-vegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing re-vegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be re-vegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

The following seed mixture shall be used for interim reclamation and upon abandonment of the well on all areas of disturbance:

Sand Hills CP-2 Ecological Site

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Sand bluestem	(*Andropogon hallii)*	0.50 lb.
Little bluestem	(*Schizachyrium scoparium*)	0.50 lb.
Sideoats grama,	(*Bouteloua curtipendula)*	1.50 lbs.
Sand dropseed	(*Sporobolus cryptandrus)*	0.50 lb.
Spike dropseed	(*S. contractus*)	0.50 lb.
Mesa dropseed	(*S. flexuosus*)	0.50 lb.
Plains bristlegrass	(*Setaria macrostachya)*	2.00 lbs.
Desert or Scarlet Globemallow or Buckwheat	(*Sphaeralcea ambigua*) (*S. coccinea)* (*Eriogonum* spp.)	0.50 lb. 1.50 lbs.
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		8.00 lbs.

IF ONE SPECIES IS NOT AVAILABLE, INCREASE ALL OTHER PROPORTIONATELY. NO LESS THAN SIX (6) SPECIES WITH A MINIMUM OF ONE (1) FORB. NO LESS THAN 8.0 POUNDS PLS PER ACRE SHALL BE APPLIED. CERTIFIED WEED FREE SEED.

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

During the life of the development, all disturbed areas not needed for active support of production operations shall undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses. Earthwork for interim and final reclamation must be completed within 6 months of well completion or well plugging (weather permitting). The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

IX. Range Requirement

The operator shall keep traffic to a minimum, with the speed limit less than 20 MPH. When conflicts with livestock do arise as a result of the access road and well pad construction, in consultation with the allottee, measures will be taken to resolve the conflicts.

X. Wildlife Requirement

The operator shall cover with netting open top storage tanks and install cones on separator stacks.