

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004-0117  
Expires: July 31, 2010

RECEIVED

JUL 20 2012

NMOCD ARTESIA

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Mack Energy Corporation

3a. Address

P.O. Box 960 Artesia, NM 88210-0960

3b. Phone No. (include area code)

(575) 748-1288

4. Location of Well (Footage, Sec., T.R.M. or Survey Description)

SL: 1250 FSL & 200 FWL, Sec. 36 T17S R31E

BLH: 965 FSL & 355 FWL, Sec. 35 T17S R31E

7. If Unit of CA/Agreement, Name and/or No

8. Well Name and No.  
Tamano Federal #1

9. API Well No.  
30-015-37321

10. Field and Pool or Exploratory Area

Maljamar, Grayburg-San Andres

11. Country or Parish, State

Lea, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation. Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Mack Energy would like to make the following changes to this APD:

Surface Casing: 13 3/8 H-40 48# ST&C set @ 950' Lead w/450sx Class C, 13.5ppg, 1.75yld + 4% PF20 + 2% PF1 + 0.25#/sk PF29 + 0.2% PF46, tail 200sx Class C, 14.8ppg, 1.34yld + 1% PF1.  
Intermediate Casing: 9 5/8 J-55 36# ST&C set @ 2200'. Lead 500sx Class C, 13.5ppg, 1.75yld + 4% PF20 + 2% PF1 + 0.25#/sk PF29 + 0.2% PF46, tail 200sx Class C, 14.8ppg, 1.34yld + 1% PF1.  
Production Casing: 5 1/2 P-110 17# ST&C Set @ 9284' Lead 500sx Class H, 12.6ppg, 2.06yld + 2.55% bwoc R-3 + 3#/Sk LCM-1 + .005 gps FP-6L + 4% bwoc Sodium Metasilicate, tail 1450sx H 50:50:0 POZ. Class H, 13ppg, 1.47yld + 2% Sodium Chloride + 3#/Sk LCM-1 + .2% FL-52 + 1% FL-62 + .05% ASA-301 + .005 gps FP-6L + 2% Sodium Metasilicate

Use previously submitted lateral plan 12/22/2011.

Accepted for record

NMOCD

10/17/24/2012

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)

Jerry W. Sherrell

Title Production Clerk

Signature

Jerry W. Sherrell

Date 7/18/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

EGF

PETROLEUM ENGINEER

Title

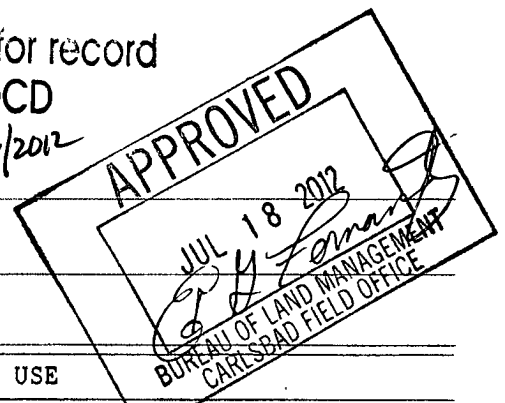
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for my person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

WITNESS SURFACE CASING



## Tamano Federal #1

### Surface-950' 13 3/8" 48# H-40

Stage 1	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead	Class C + 4% PF20 + 2% PF1 + 0.25#/sk PF29 + 0.2% PF46	13.5	1.75	450	100	surface
Tail	Class C + 1% PF1	14.8	1.34	200	100	650'

Comments:

### Intermediate-2200' 9 5/8"-36# J-55

Stage 1	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead	Class C + 4% PF20 + 2% PF1 + 0.25#/sk PF29 + 0.2% PF46	13.5	1.75	500	40	surface
Tail	Class C + 1% PF1	14.8	1.34	200	100	1800

Comments:

### Production-9010' 5 1/2" 17# P-110

Stage 1	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead	Class H + 2.55% bwoc R-3 + 3#/Sk LCM-1 + .005 gps FP-6L + 4% bwoc Sodium Metasilicate	12.6	2.06	500	35	Surface
Tail	H 50:50:0 POZ: Class H + 2% Sodium Chloride + 3#/Sk LCM-1 + .2% FL-52 + 1% FL-62 + .05% ASA-301 + .005 gps FP-6L + .2% Sodium Metasilicate	13	1.47	1450	35	2800'

Comments: Pump 10bbbls of chemical wash ahead of cement job. 20bbbls frac gel. 50 sks. Scavenger cement

Prior to any cement job it is Mack Energy policy to circulate bottoms up 2 times before commencing with cement operations. On wells where hole conditions have been an issue during the drilling and reaming process the number of circulations needs to increase to a minimum of 2 times around.

## CONDITIONS OF APPROVAL

Sundry dated 07/18/2012

OPERATOR'S NAME:	Mack Energy Corporation
LEASE NO.:	NMNM-122617
WELL NAME & NO.:	Tomano Federal #1
SURFACE HOLE FOOTAGE:	1250' FSL & 200' FWL
BOTTOM HOLE FOOTAGE	965' FSL & 355' FWL
SURFACE LOCATION:	Section 36, T. 17 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

**Original COA still applies with the following changes:**

### I. DRILLING

#### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

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

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the Grayburg formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run in the vertical portion of hole shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**
5. **Well must be produced at an orthodox location.**

## **B. CASING**

**Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out 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 for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possible water and brine flows in the Salado and Artesia Groups.**

**Possible lost circulation in the Grayburg and San Andres.**

**Revised (12/22/11) well path is  $\pm 330'$  NW of abandoned well Lowe Federal #1**

1. **The 13-3/8 inch surface casing shall be set at approximately 950 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. Fresh water 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.**

- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - 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 cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
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 **13-3/8"** surface casing shoe shall be **2000 (2M) psi. Operator installing a 3M BOP, but testing and using it as a 2M system.**
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before

cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
- c. The results of the test shall be reported to the appropriate BLM office.
- 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 appropriate BLM office.**
- e. 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.
- f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**EGF 071812**