

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION  
ART DISTRICT  
GODARTESIA

APR 27 2015

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**SUNDRY NOTICES AND REPORTS ON WELLS**

**Do not use this form for 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

Injection

2. Name of Operator  
Tandem Energy Corporation

3a. Address  
2700 Post Oak Blvd., Ste. 1000  
Houston, TX 77056

3b. Phone No. (include area code)  
713-987-7326

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

5 FSL 1325 FWL 34 18S 29E

5. Lease Serial No.

LC-062029

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Brainard #007

9. API Well No.

30-015-10472

10. Field and Pool or Exploratory Area

Turkey Track

11. County or Parish, State

Eddy, 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 checked="" type="checkbox"/> Other Remedial Work
	<input 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 recomplete 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.)

BLM NOT AUTHORIZED FOR WORK WITH A PACKER-OPERATIONS!  
SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

1. MIRO pulling unit.
2. POOH with 2-3/8" tubing.
3. RIH w/ packer to better locate the interval of casing leak
4. RIH with 4-1/2" RBP and packer combination on tubing. Straddle the interval of the casing leak.
5. Establish pump in rate, then squeeze with 35 sks cement.
6. Drill out cement and pressure test to 500 psig.
7. Wash down to top of RBP and retrieve.
8. RIH with injection packer and set around 2,030'. Pressure test to 500 psig.
9. RDMO pulling unit and schedule a witnessed pressure test before returning the well to injection service.

**SUBJECT TO LIKE  
APPROVAL BY STATE**

~~See attached Order of Authorized Officer.~~

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

L. Kiki Lockett

Title Regulatory Specialist

Signature

L. Lockett

Date 02/19/2015

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

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.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any 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)

APPROVED

APPROVED

APR 22 2015

Date

BUREAU OF LAND MANAGEMENT

CARLSBAD FIELD OFFICE

## Conditions of Approval

Tandem Energy Corporation  
Brainard – 07, API 3001510472  
T18S-R29E, Sec 34, 05FSL & 1325FWL  
April 22, 2015

1. Before casing or a liner is added, replaced, or repaired prior BLM approval of the design is required. Use notice of intent Form 3160-5.
2. Subject to like approval by the New Mexico Oil Conservation Division.
3. Use of class "H" cement at depths greater than 7500ft & "C" at depths less than 7500ft will be necessary. Class "C" squeeze cement is be mixed 14.8#/gal, 1.32 ft<sup>3</sup>/sx, 6.3gal/sx water and "H" mixed 16.4#/gal, 1.06ft<sup>3</sup>/sx, 4.3gal/sx water.
4. **The cementing squeeze procedure should be planned to fill the 4 1/2" annulus from more than 50ft below the 7" casing shoe to more than 50' above the shoe, possible circulating to surface. The 7" casing vent valve is to be opened during the cementing procedure.**
5. **Post casing repair provide BLM with an electronic copy (Adobe Acrobat Document) cement bond log record from 2000' or below to top of cement taken with 0psig casing pressure. The CBL may be attached to a [pswartz@blm.gov](mailto:pswartz@blm.gov) email. The CFO BLM on call engineer may be reached at 575-706-2779.**
6. Surface disturbance beyond the existing pad shall have prior approval.
7. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
8. Functional H<sub>2</sub>S monitoring equipment shall be on location.
9. 2000 (2M) Blow Out Prevention Equipment to be used. All BOPE and workover procedures shall establish fail safe well control. Blind ram(s) and pipe ram(s) designed to close on all workstring diameters used is required equipment. A manual BOP closure system (hand wheels) shall be available for use regardless of BOP design. Function test the installed BOPE to 500psig when well conditions allow. Related equipment, (choke manifolds, kill trucks, gas vent or flare lines, etc.) shall be employed when needed for reasonable well control requirements.
10. All waste (i.e. trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over 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.
11. Workover approval is good for 90 days (completion to be within 90 days of approval). A legitimate request is necessary for extension of that date.

12. Submit a subsequent Sundry Form 3160-5 relating the dated daily wellbore and MIT activities. File the form within 30 days of any interrupted workover procedures and a complete workover subsequent sundry.
13. Submit the BLM Form 3160-4 Recompletion Report within 30 days of the date all BLM approved procedures are complete.

#### **Well with a Packer - Operations**

- 1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established. Repair that seal any time more than five barrels of packer fluid is replaced within 30 days.
- 2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). Verify all annular casing vent valves are open to the surface during this pressure test. An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
- 3) Document the pressure test on a one hour full rotation calibrated (within 6 months) recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
- 4) Make arrangements 24 hours before the test for BLM to witness. In Eddy County email Paul R. Swartz [pswartz@blm.gov](mailto:pswartz@blm.gov) or phone 575-200-7902, if there is no response, 575-361-2822. If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number.
- 5) Submit a subsequent Sundry Form 3160-5 relating the dated daily wellbore and MIT activities. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
- 6) Use of tubing internal protection, tubing on/off equipment just above the packer, a profile nipple, and an in line tubing check valve below the packer or between the on/off tool and packer is a "Best Management Practice". The setting depths and descriptions of each are to be included in the subsequent sundry. List (by date) descriptions of daily activity of any previously unreported wellbore workover.
- 7) **Submit the original subsequent sundry with three copies to BLM Carlsbad.**
- 8) When injection pressure is within 50 psig of the maximum pressure, install automation equipment that will prevent exceeding that maximum. Submit a subsequent report (Sundry Form 3160-5) describing the installed automation equipment within 30 days.
- 9) Unexplained significant variations of rate or pressure to be reported within 5 days of notice.

- 10) The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity. A BLM inspector may request verification of a full annular fluid level at any time.
- 11) A "Best Management Practice" is to maintain the annulus full of packer fluid at atmospheric pressure. Equipment that will display on site, continuous open to the air fluid level is necessary to achieve this goal.
- 12) Loss of packer fluid above five barrels per month indicates a developing problem. Notify BLM Carlsbad Field Office, Petroleum Engineering within 5 days.
- 13) A suggested format for monthly records documenting that the casing annulus is fluid filled is available from the BLM Carlsbad Field Office.
- 14) Gain of annular fluid requires notification within 24 hours. Cease injection and maintain a production casing pressure of 0 psia. Notify the BLM's authorized officer ("Paul R. Swartz" <[pswartz@blm.gov](mailto:pswartz@blm.gov)>, cell phone 575-200-7902). If there is no response phone 575-361-2822.
- 15) Submit a (Sundry Form 3160-5) subsequent report (daily reports) describing all wellbore activity and Mechanical Integrity Test as per item 1) above. Include the date(s) of the well work, and the setting depths of installed equipment: internally corrosive protected tubing, tubing on/off equipment just above the packer, and an in line tubing check valve below the packer or between the on/off tool and packer. The setting depths and descriptions of each are to be included in the subsequent sundry. List daily descriptions of any previously unreported wellbore workover(s) and reason(s) the well annular fluid was replaced.
- 16) A request for increased wellhead pressures is to be accompanied by a step rate test. **PRIOR to a Step Rate Test** BLM – CFO is requiring a Notice of Intent.

Access information for use of Form 3160-5 "Sundry Notices and Reports on Wells"

NM Fed Regs & Forms - [http://www.blm.gov/nm/st/en/prog/energy/oil\\_and\\_gas.html](http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html)

§ 43 CFR 3162.3-2 Subsequent Well Operations.

§ 43 CFR 3160.0-9(c)(1) Information collection.

§ 3162.4-1 (c) Well records and reports.