

Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
5. Indicate Type of Lease
STATE [ ] FEE [ ]
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name
8. Well Number
9. OGRID Number
10. Pool name or Wildcat
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)
1. Type of Well: Oil Well [ ] Gas Well [ ] Other [ ]
2. Name of Operator
3. Address of Operator
4. Well Location
Unit Letter \_\_\_\_\_ : \_\_\_\_\_ feet from the \_\_\_\_\_ line and \_\_\_\_\_ feet from the \_\_\_\_\_ line
Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ NMPM \_\_\_\_\_ County \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK [ ] PLUG AND ABANDON [ ]
TEMPORARILY ABANDON [ ] CHANGE PLANS [ ]
PULL OR ALTER CASING [ ] MULTIPLE COMPL [ ]
DOWNHOLE COMMINGLE [ ]
CLOSED-LOOP SYSTEM [ ]
OTHER: [ ]
SUBSEQUENT REPORT OF:
REMEDIAL WORK [ ] ALTERING CASING [ ]
COMMENCE DRILLING OPNS. [ ] P AND A [ ]
CASING/CEMENT JOB [ ]
OTHER: [ ]

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Spud Date: [ ]

Rig Release Date: [ ]

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

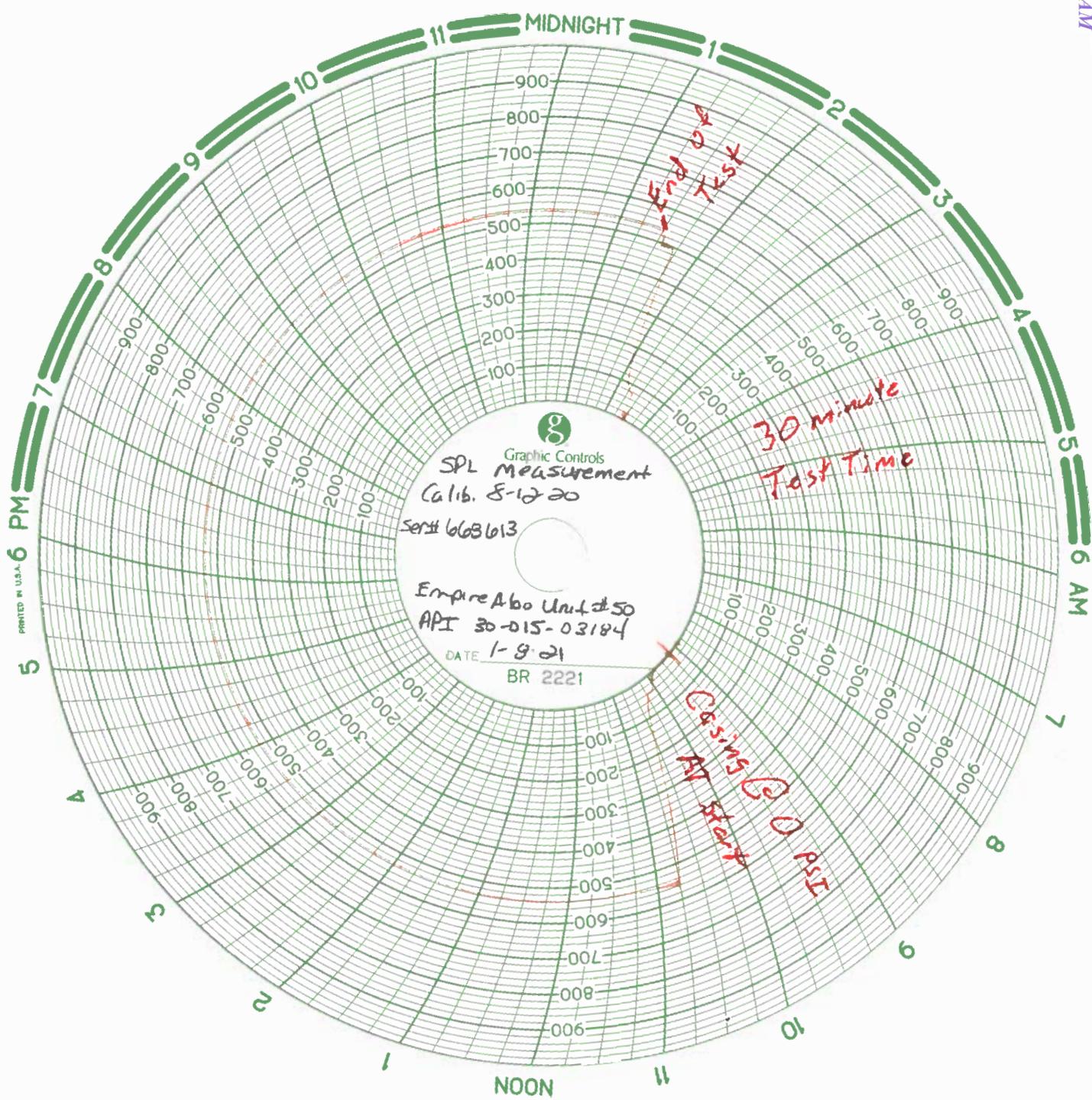
SIGNATURE alicia fulton TITLE DATE

Type or print name E-mail address: PHONE:

For State Use Only

APPROVED BY: [ ] TITLE Staff Manager DATE 3/11/2021

Conditions of Approval (if any):



State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Michelle Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary

**Todd E. Leahy, JD, PhD**  
Deputy Cabinet Secretary

**Adrienne Sandoval**  
Director, Oil Conservation Division



January 6, 2021

**By Electronic Mail**

Ms. Reesa Fisher  
Senior Regulatory Analyst  
Apache Corporation  
303 Veterans Airpark Lane, #1000  
Midland, Texas 79705  
*reesa.fisher@apachecorp.com*

RE: Request for Bradenhead Testing

Ms. Fisher,

On December 24, 2020 the New Mexico Oil Conservation Division (OCD) sent Apache a request to cease injection into two wells; Empire Abo Unit #49 (API 30-015-03180) and Empire Abo Unit #50 (API 30-015-03184) as they are located near an incident where substantial volumes of produced water and hydrogen sulfide gas have recently been appearing at the surface in Eddy County west of Loco Hills, New Mexico (latitude 32.801639°, longitude -104.088583°).

As the OCD continues to identify the causes of this release, we are compiling information on the injection wells that have been shut in. As part of that effort, Apache needs to complete bradenhead testing to collect pressure measurement of the annular spaces between casings and pressure measurements of tubing. The following requirements for the testing must be observed or the results will be considered unacceptable.

- 1) Verify that the valves other than on the tubing string have been shut in at least 24 hours prior to the test.
- 2) All annulus valves are properly identified, and all gauges are properly installed.
- 3) All necessary gauges are properly functioning and calibrated with documentation to support the calibrations.
- 4) The necessary gauges are an appropriate scale to accurately measure the pressures.
- 5) Ensure all pressures are accurate and properly recorded.
- 6) All personnel performing the test are trained and competent in performing the testing.

Initial Pressure Measurements

- 1) Measure and record the initial pressures on the tubing string, surface casing, all intermediate casings, and production casing.
- 2) If there is zero initial pressure or the pressure immediately blows down, continue to flow a minimum of 15 minutes to see if there is a water flow.

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Flowing Pressure Measurements

- 1) Testing time will be for a minimum of 30 minutes for each annulus with measurements recorded at 5-minute intervals.
- 2) The flowing stage of the test is to be performed while the bradenhead (surface casing) valve is open to the atmosphere. Similarly, the intermediate valve will be opened for the intermediate annulus test.
- 3) The flowing tests are to be performed consecutively on each annular space, starting with the bradenhead or surface casing annulus and ending with the innermost annulus.
- 4) Upon completing the flow test and with all valves shut for a minimum of 5 minutes, observe and record the individual annular pressures.
- 5) In addition to pressure measurements, record the flow characteristics (puff, continuous, surge, down to nothing) and any fluid type (gas, oil, vapor, water, mud) observed being discharged from the annulus.

Reporting of the information should be provided on an OCD form C-103 for each of the wells tested and include photographic documentation of gauge readings along with the names of the personnel who conducted each test.

Please conduct these inspections and provide the results to me no later than **Monday, January 11, 2021**.

If a test indicates a potential failure, high unexplained pressures, or communication between the annuli, immediately report these observations to me and follow up with a Notice of Intent to investigate and repair issues, as necessary.

For any questions or further direction, please contact me at 505-660-1067 or by email at jim.griswold@state.nm.us.

Respectfully,



Jim Griswold

cc: Javier Berdoza, Apache; javierberdoza@apachecorp.com

**District I**

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**State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505**

CONDITIONS

Action 19284

**CONDITIONS OF APPROVAL**

Operator: #1000 APACHE CORPORATION Midland, TX79705		303 Veterans Airpark Ln	OGRID: 873	Action Number: 19284	Action Type: C-103Z
OCD Reviewer gcordero			Condition None		