

**RECEIVED**

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

APR 07 2010

**Bureau of Land Management  
Farmington Field Office**

## Sundry Notices and Reports on Wells

1. Type of Well  
GAS

2. Name of Operator  
**BURLINGTON**  
RESOURCES OIL & GAS COMPANY LP

3. Address & Phone No. of Operator  
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M  
Surf: Unit H (SENE), 1490' FNL & 1190' FEL, Section 14, T28N, R11W, NMPM

5. Lease Number  
NMNM - 03179  
6. If Indian, All. or  
Tribe Name  
7. Unit Agreement Name  
8. Well Name & Number  
Aztec 8E  
9. API Well No.  
30-045-23751  
10. Field and Pool  
Basin Dakota/Otero Chacra  
11. County and State  
San Juan Co., NM

**12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission	Type of Action			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans	<input checked="" type="checkbox"/> Other -	<input type="checkbox"/> Exception on MIT
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction		
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging	<input type="checkbox"/> Non-Routine Fracturing		
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut off		
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection		

**13. Describe Proposed or Completed Operations**

Attached is a letter and documentation requesting an exception for an MIT performed 2/9/10.

CONDUCT QUARTERLY BRADENHEAD TESTS FOR A PERIOD OF ONE YEAR. RCVD APR 20 '10  
A MECHANICAL INTEGRITY TEST MUST BE CONDUCTED ON OR BEFORE OIL CONS. DIV.

14. I hereby certify that the foregoing is true and correct.

2-9-2011

DIST. 3

Signed Rhonda Rogers Rhonda Rogers Title Staff Regulatory Technician Date 4/6/10

(This space for Federal or State Office use)

APPROVED BY \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

CONDITION OF APPROVAL, if any:

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

**ACCEPTED FOR RECORD**

APR 13 2010

**FARMINGTON FIELD OFFICE**

NMOCD

2-4/30

P



Charlie T. Perrin  
District Supervisor  
Oil and Gas Inspector  
Oil Conservation Division

Mr. Perrin:

I am petitioning for an exception to rule 19.15.25.14 for Mechanical Integrity Tests (MIT). I have created a document which outlines ConocoPhillips' view on the February 9, 2010 MIT completed on the Aztec #8E (300452375100). I appreciate the time you are taking to work with us to resolve this issue. We will ensure that all of our field personnel as well as our Production Engineers know of the requirements for MIT's as stated in rule 19.15.25.14. If you have any questions, please give Rhonda Rogers a call at 505-599-4018. She will be able to arrange a meeting for us to speak.

Thank you,

Jonathan Coberly  
Associate Production Engineer  
ConocoPhillips – SJB

## Work Description:

The area in question is the section between 3136' and 3416' of the casing (Figure 1). On February 9, 2010 we had drilled the cement from 3293' to 3416' between 10:00 am to 12:45 pm with an air/mist. We circulated the hole clean, tripped out of hole, and then set a packer at 3136' at 3:15 pm. We immediately loaded the hole with 2% KCL water and began a Mechanical Integrity Test (MIT) on the casing from 3136' to 3416' that lasted from 3:15 pm to 4:30 pm. In that time, the pressure in the casing went from 560 psig to 600 psig in 23 minutes. The decision was made to restart the test to help relieve some of the pressure caused by completing the test so soon after we filled the hole with fluid. The pressure was relieved to 500 psig. The test lasted for 66 minutes and the final pressure was at 640 psig. The pressure after 30 minutes was 580 psig. The test was verbally confirmed with Derrick, the NMOCD field representative, and then sent in to the NMOCD office. Tubing and rods were landed and the rig moved off location.

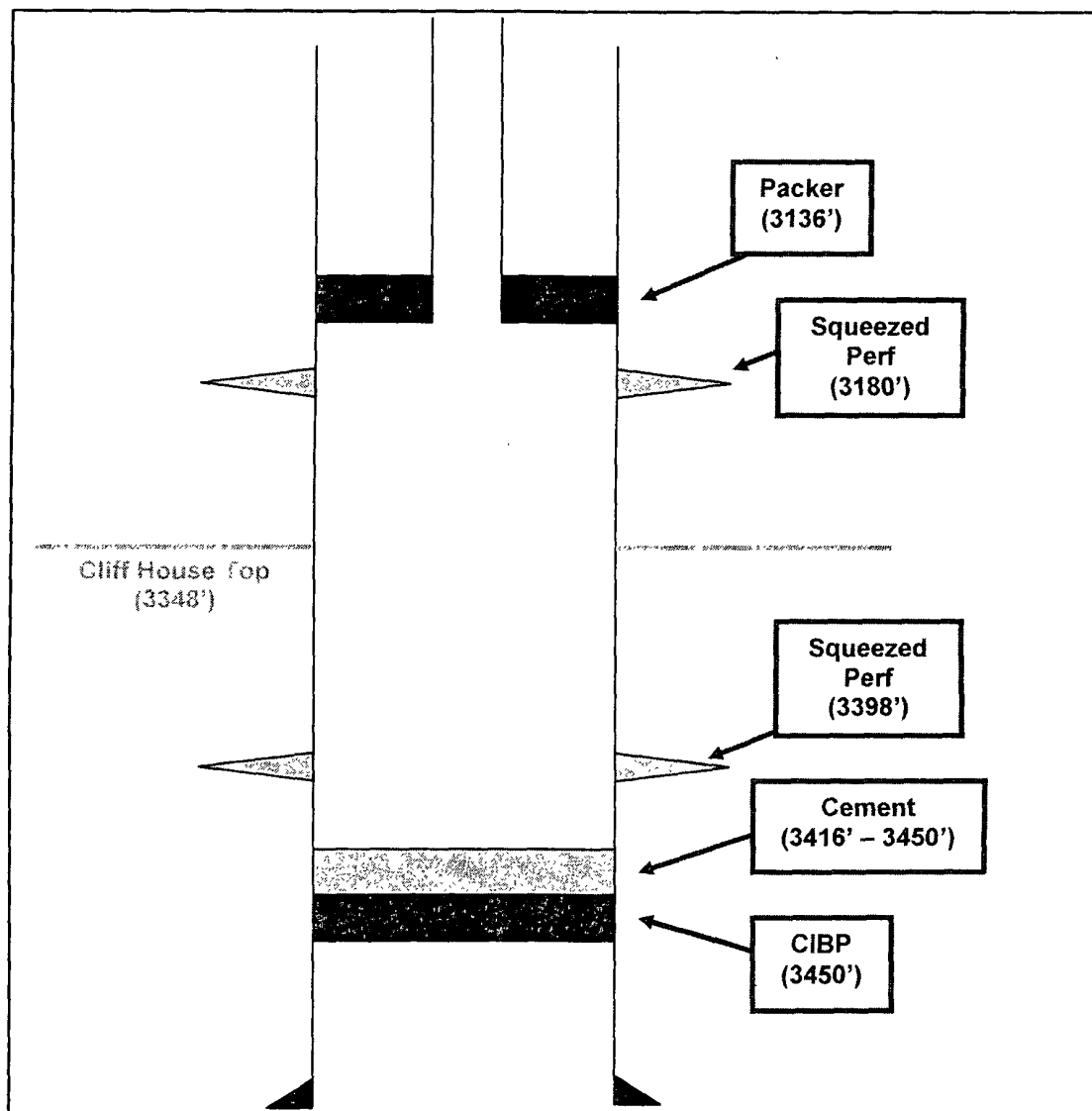


Figure 1: Setup for MIT.

## Reasons for Exception:

The reservoir pressure of the Cliff House formation is approximately 1300 psi in this area, 28N-11W-14. This is based off of a pressure gradient from the outcrop. The calculated pressure exerted on the squeeze perforations during the MIT test is between 1930 psig and 2110 psig (Figure 2).

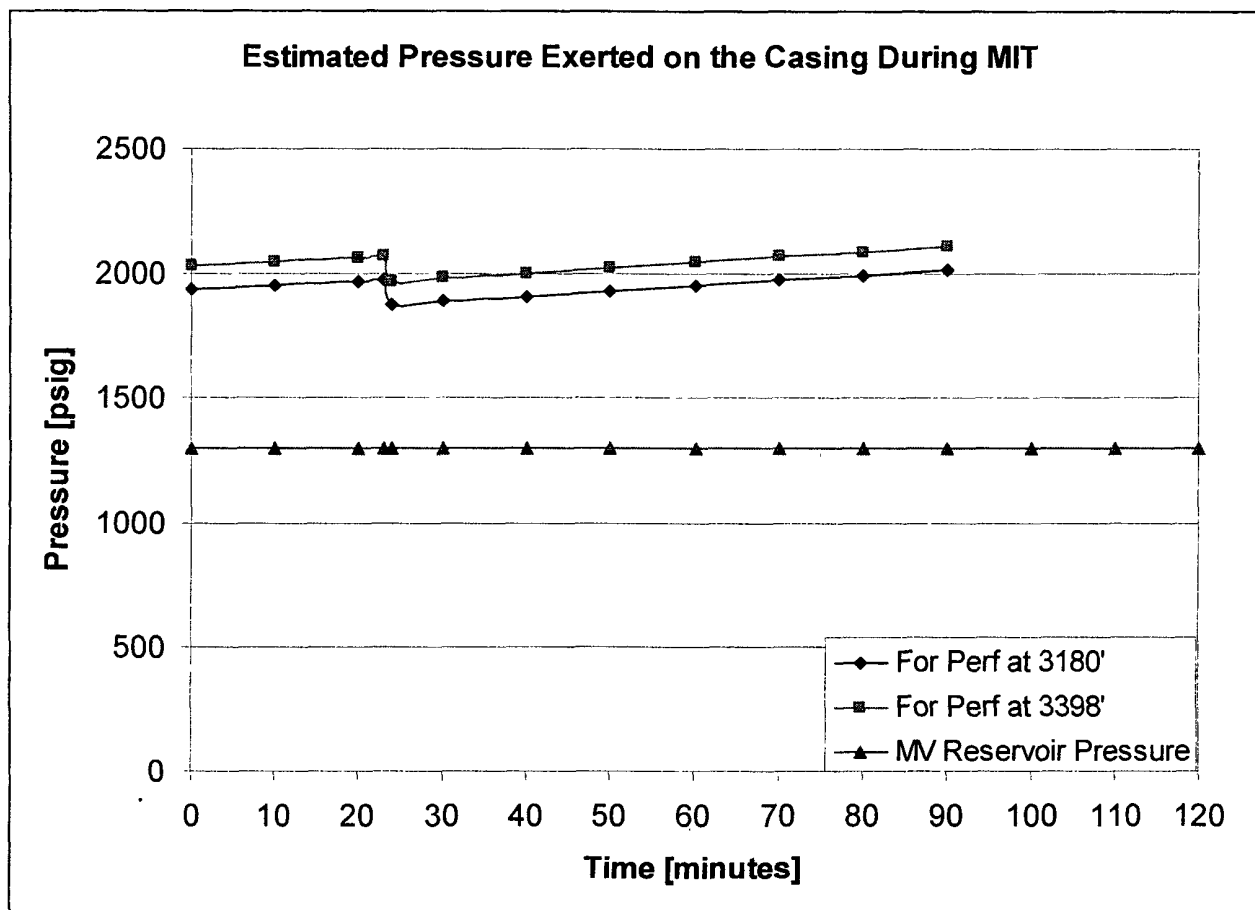


Figure 2: Estimated Pressure Exerted on the Casing During the MIT.

The estimated pressures on the perforations are calculated using the hydrostatic gradient of 0.433 psi/ft and the corresponding depths plus the gauge pressure on the surface. Figures 3 and 4 show the approximate gauge pressure on the surface during the MIT from the two hour chart. With that said, the increase in pressure could not possibly be coming from the formation. There is at least a differential of 630 psi between the formation pressure and the pressure exerted on the squeeze perforations. The increased pressure must be coming from the combination of cold fluid in the casing and tubing, hot casing from drilling the cement, formation temperature, and the fact the test was started immediately after filling the hole with fluid.

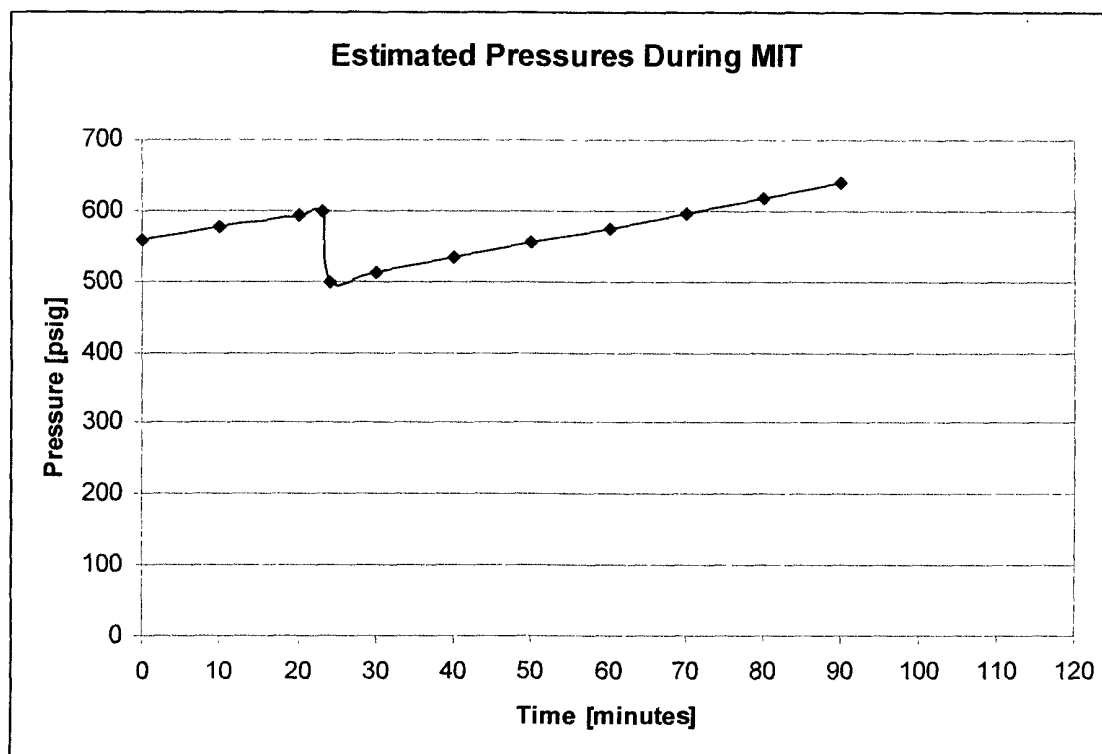


Figure 3: Estimated Surface Gauge Pressure During MIT.

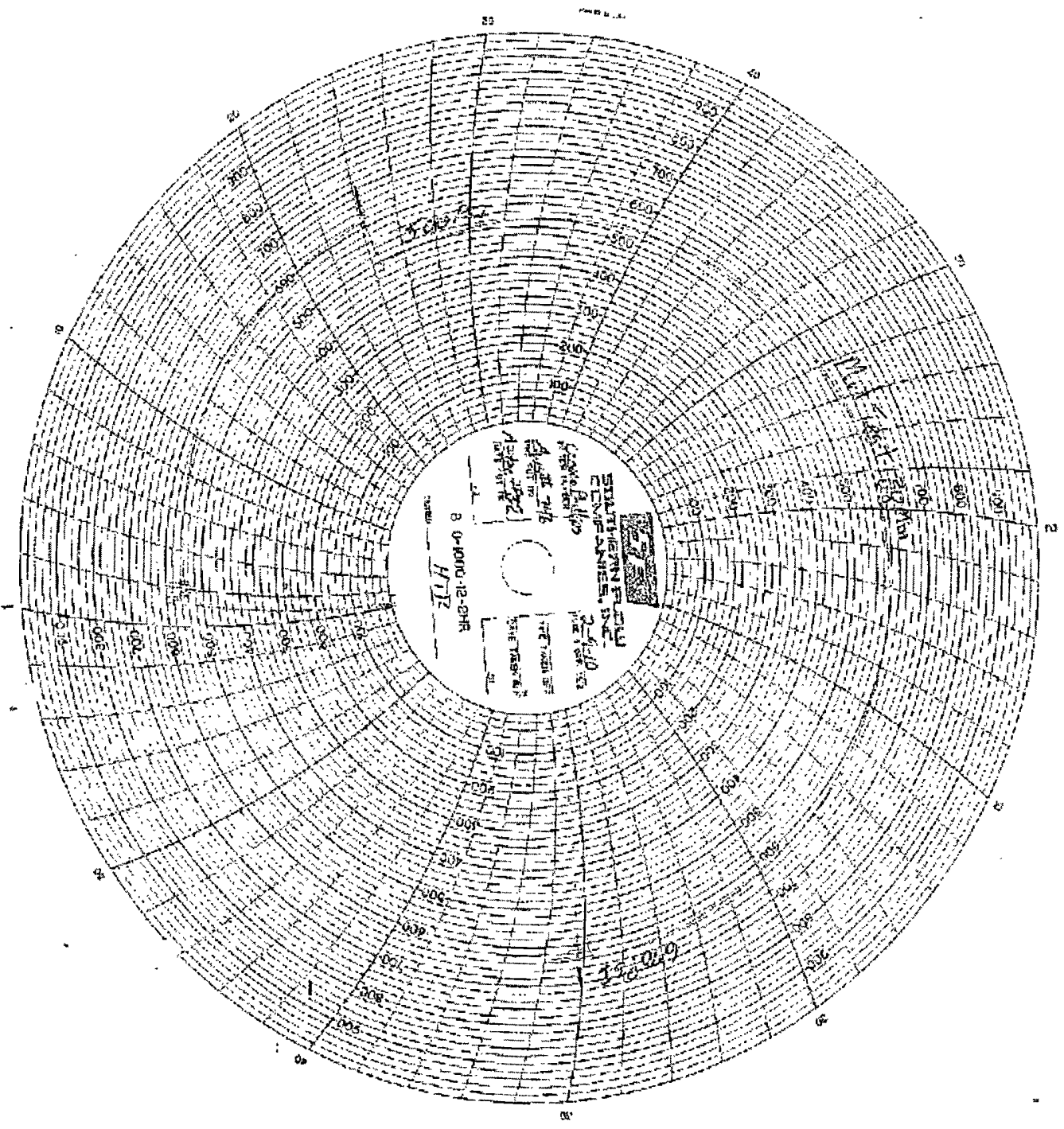


Figure 4: Two Hour Chart Showing MIT.

## Conclusions:

It is determined that the only option for the increasing pressure on the surface gauges is that it was caused by the combination of cold fluid in the casing and tubing, hot casing from drilling the cement, formation temperature, and the fact the test was started immediately after filling the hole with fluid. The significance of these factors is nearly impossible to calculate simply because there are just too many unknown variables (gas in solution, casing temperature, etc...). The most significant contributor to the problem was the little time between filling the hole with fluid and testing the casing. Not enough time was allowed for the fluid to rise in temperature and release all entrained gas bubbles before the test was conducted. The pressure is not coming from the formation because of the lack of reservoir pressure to overcome the opposing forces. In the future, ConocoPhillips will allow enough time for the fluid to settle and equalize in temperature in order to get a more accurate test.

[19.15.25.13 NMAC - Rp, 19.15.4.203 NMAC, 12/1/08]

### 19.15.25.14 DEMONSTRATING MECHANICAL INTEGRITY:

A. An operator may use the following methods of demonstrating internal casing integrity for wells to be placed in approved temporary abandonment.

(1) the operator may set a cast iron bridge plug within 100 feet of uppermost perforations or production casing shoe, load the casing with inert fluid and pressure test to 500 psi surface pressure with a pressure drop of not more than 10 percent over a 30 minute period;

(2) the operator may run a retrievable bridge plug or packer to within 100 feet of uppermost perforations or production casing shoe, and test the well to 500 psi surface pressure for 30 minutes with a pressure drop of not greater than 10 percent over a 30 minute period, or

(3) the operator may demonstrate that the well has been completed for less than five years and has not been connected to a pipeline

B. During the testing described in Paragraphs (1) and (2) of Subsection A of 19.15.25.14 NMAC the operator shall:

(1) open all casing valves during the internal pressure tests and report a flow or pressure change occurring immediately before, during or immediately after the 30 minute pressure test;

(2) top off the casing with inert fluid prior to leaving the location;

(3) report flow during the test in Paragraph (2) of Subsection A of 19.15.25.14 NMAC to the appropriate division district office prior to completion of the temporary abandonment operations; the division may require remediation of the flow prior to approving the well's temporary abandonment.

C. An operator may use any method approved by the BPA in 40 C.F.R. section 146.8(c) to demonstrate external casing and cement

<http://www.nrcpr.state.nm.us/nmac/parts/title19/19.015.0025.html> [1/16/2009 4:32:13 PM]

Figure 5: Rule for Demonstrating Mechanical Integrity 19.15.25.14