

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**

Sundry Notices and Reports on Wells

FEB 24 2009

Bureau of Land Management  
Farmington Field Office  
NMSF-080781

1. Type of Well  
GAS

6. If Indian, All. or  
Tribe Name

2. Name of Operator

**BURLINGTON**

RESOURCES OIL & GAS COMPANY LP

7. Unit Agreement Name

3. Address & Phone No. of Operator

P.O. Box 4289, Farmington, NM 87499

8. Well Name & Number  
Cain 16E

9. API Well No.

30-045-25740

4. Location of Well, Footage, Sec., T, R, M

Unit I (NESE), 1555' FSL & 1210' FEL, Section 30, T29N, R9W, NMPM

10. Field and Pool  
Basin Dakota

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

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☒ Other - BH Repair

☐ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Final Abandonment

☐ Plugging

☐ Non-Routine Fracturing

☐ Altering Casing

☐ Casing Repair

☐ Water Shut off

☐ Conversion to Injection

RCVD MAR 2 '09

OIL CONS. DIV.

13. Describe Proposed or Completed Operations

DIST. 3

Burlington Resources requests to repair the bradenhead on subject well per the attached procedure.

Attached: wellbore schematic

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

Signed Tracey N. Monroe Tracey N. Monroe Title Staff Regulatory Technician Date 2/24/09

(This space for Federal or State Office use)

APPROVED BY [Signature] Title Petr. Eng Date 2/26/09

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

NOTIFY NMOCD AZTEC 24 HOURS PRIOR TO START OF OPERATIONS

NMOCD

40

**ConocoPhillips**  
**Cain 16E**  
**Bradenhead Repair**

Lat 36° 41' 36.6" N      Long 107° 48' 56.999" W

**Prepared By:** Paul Nguyen      **Date:** 1 / 20 / 09  
**Production Engineering Peer review/approved By:**      **Date:** / /

**Scope of work:** Squeeze cement behind the production casing to repair the bradenhead and cleanout fill in the well.

**WELL DATA:**

**API:** 3004525740  
**Location:** 1555' FSL & 1210' FWL, Unit I, Section 30– T 29 N – R 09 W  
**PBTD:** 6613' **TD:** 6650'  
**Perforations:** 6421'-6487'; 6531'- 6597' (DK)

<b>Casing:</b>	<b>OD</b>	<b>Wt., Grade</b>	<b>Connection</b>	<b>ID/Drift (in)</b>	<b>Depth</b>
Surface:	8 5/8"	24.00#, K-55	ST&C	8.097/7.972	207'
Production:	5 1/2"	15.5#, K-55	-	4.950/4.825	6631'
Tubing:	2-3/8"	4.70#, J-55	EUE	1.995/1.901	6550'
F Nipple:	2-3/8"	4.70#, J-55	-	1.780	6549'

**Well History/ Justification:** The Cain 16E is a stand alone Dakota, drilled on 6/23/1983. In 1996, the plunger lift system was installed to increase the productivity. In 2005, a slickline report and confirmed a hole in the tubing. It was producing through casing for 2 years without fixing the tubing. In March of 2008, a workover rig repaired the tubing and cleanout the well due to water loading. Recently, a Bradenhead Test Report confirmed there's a bradenhead failure. The BLM representative, Jim Lovato, agrees there is no casing leak and ConocoPhillips is exempt from having to perform a mechanical integrity test on the well's casing from looking at the Bradenhead Report. The Audio Log confirms the migration of gas and water came from the formations below 4100'. The approximate uplift is about 20 McfD of gas and 1.0 BOD. It is recommended to run a CBL and squeeze cement behind the production casing. This will eliminate any gas and water migration to the bradenhead, at which point the well may be returned to production.

**B2 Adapters are required on all wells other than pumping wells.**

**Artificial lift on well (type):** Plunger Lift

**Est. Reservoir Pressure (psig):** 1500 (DK)

**Well Failure Date:** 9/8/2008 – BH Test Report

**Current Rate (Mcf/d):** 0 Mcfd      **Est. Rate Post Remedial (Mcf/d):** 20 Mcfd

**Earthen Pit Required:** NO

**ConocoPhillips**  
**Cain 16E**  
**Bradenhead Repair**

**Lat** 36° 41' 36.6" N      **Long** 107° 48' 56.999" W

**Special Requirements:**      Steel pit for cement returns, perforating service squeeze, several joints of 2-3/8" tubing, bit to cleanout inside 5-1/2" 15.5# casing, Cement Retainer and cast iron bridge plug for 5-1/2" 15.5# casing.

**Production Engineer:** Paul Nguyen      Office 599-3432, Cell: 320-1254

**Backup Engineer:** Asif Bari      Office: 324-5103, Cell: 947-1822

**MSO:** David Bixler      Cell: 320-4052

**Lead:** Fred Haskill      Cell: 486-2373

**Area Foreman:** Mike O'nan      Cell: 320-4998

**Regulatory:** Tracy Monroe      Cell: 326-9752

## PROCEDURE:

1. **Contact regulatory NMOCD at least 24 hours prior to cementing operations and/or MIT.** Hold pre-job safety meeting. Comply with all NMOCD, BLM, and COPC safety and environmental regulations. Test rig anchors prior to moving in rig.
2. **MIRU.** Check casing, tubing and bradenhead pressures and record them in WellView.
3. RU blow lines from casing valves and begin blowing down casing pressure. Kill well with 2% KCl, if necessary. ND wellhead and NU BOPE.
4. PU additional joint(s) as necessary to tag for fill. PBTD is at 6613', and EOT is at 6550'. Record fill depth in WellView and notify engineer of fill depth so tubing landing depth can be modified as necessary.
5. TOOH with tubing (detail below):

1 – 2-3/8" 4.7# J-55 EUE Tubing sub (10')  
209 – 2-3/8" 4.7# J-55 EUE tubing joints  
1 – 2-3/8" 4.7# J-55 EUE Pup joint (2')  
1 – 2-3/8" 4.7# J-55 EUE tubing joint  
1 – 2-3/8" F nipple  
1 – 2-3/8" expendable check

Visually inspect tubing and record findings in WellView. Make note of corrosion or scale. LD and replace any bad joints. If scale or paraffin is present, obtain water sample for analysis and contact engineer.

6. Roundtrip w/ GR to 6385'. RIH w/ CIBP for 5 1/2" 15.5# casing on wireline and set at 6371' KB (50' above the top perforation in the casing).
7. Rig up loggers to run CBL-VDL. Run CBL with 500 psi on casing. Do a fast downlog from surface to 4200'. Log from 4200 up to surface. **Be sure the well is loaded with 2% KCL.** Report TOC to engineer and provide copies of log (including a fast downlog pass) to engineer ASAP.
8. **Contact regulatory NMOCD at least 24 hours prior to cement squeeze.** Shoot squeeze hole per CBL TOC. TIH w/ cement retainer and set +/- 50' above top squeeze hole. Establish two rates and pressures into hole(s). Attempt to establish circulation to surface with Biocide and dye (**call Nalco for recommended amount to eliminate 7000 ppm of Sulfate on the backside of the production casing**) Ask Nalco for MSDS and chemical safety procedure. Report results of pressure/rate test and circulation attempt to engineer. The content and volume of cement is determined per cement service recommendation.
9. Pump cement at rate and pressure as determined from above results. Make sure that backside is loaded with water, and maintain 300-500 psi on the backside while pumping to avoid collapse of old casing. Monitor the casing valve pressure while pumping.
10. Pump at least 100% excess cement or more as determined from results of tests in step 9. Once good cement is circulated to surface, close bradenhead and continue pumping to 50' above perforation. While displacing, monitor pumping pressure at bradenhead carefully to avoid shallow fracturing. If any significant pressure increase is seen during displacement, immediately stop pumping cement, sting out of the CR and reverse circulate to clean up.

11. If sufficient displacement past CR was achieved, leave CR in hole to allow cement to set up. If sufficient displacement past CR was not achieved, sting out of the CR and reverse circulate to clean up and TOOH immediately.
12. TOOH w/ tubing and stinger and lay down same.
13. PU 4-3/4" bit and TIH to tag TOC. Record tag depth. Drill out CR and cement. Record depth of bottom of cement.
14. Load hole and pressure test to 500 psi for 30 minutes. Pressure test must be recorded on a 2 hour chart. Notify BLM and OCD before the MIT for witness if necessary. If pressure test held, circulate hole clean and TIH w/ 4 3/4" bit mill out CIBP at 6371'. Continue tripping in hole to cleanout to PBTD 6613'. TOOH w/ bit.
15. TIH w/ production tubing and Land tubing at +/- 6550' KB with F nipple at 6549'. Use drift check procedure provided. TIH using drift check procedure:
  - 1 – 2-3/8" expendable check
  - 1 – 2-3/8" F nipple
  - 1 – 2-3/8" 4.7# J-55 EUE tubing joint
  - 1 – 2-3/8" 4.7# J-55 EUE Pup joint (2')
  - 209 – 2-3/8" 4.7# J-55 EUE tubing joints
  - 1 – 2-3/8" 4.7# J-55 EUE Tubing sub (10')
16. Set standing valve and pressure test tubing to 1000 psi, retrieve standing valve.
17. ND BOP and NU wellhead. Pump off expendable check and make swab runs as necessary to kick well off. Notify MSO that well is ready to be returned to production and RDMOL.

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## DRIFT TEST PROCEDURE

**SAFETY NOTE:** To conform to COP well control manual, Sec 6.1, a barrier is required prior to performing below procedure. Where air units are being used, an expendable check is recommended; otherwise, a wireline set plug in profile nipple is recommended.

1. Set flow control in tubing. With air, on location, use expendable check. With no air on location, use wireline plug.
2. RU drift tool to a minimum 70' line. Drift tool will have an OD of at least the API drift specification of the tubing. (2.375" OD 4.70# EUE Tubing Drift ID = 1.90"), and will be at least 15" long. The tool will not weigh more than 10 lbs. and will have an ID bore the length of the tool, so fluids may be pumped through the tool if it becomes stuck.
3. Drop the tool into the tubing string and retrieve it after every 2 joints of tubing ran in hole. If any resistance to the tool movement is noticed, going in or out, that joint will be replaced.
4. In order to simulate the plunger lift operation, all equipment must be kept clean and free of debris.

The drift tool should be measured with calipers before each job, to ensure the OD is the correct size for the tubing being checked. The maximum allowable wear of the tool is .003"

# Current Schematic

ConocoPhillips

Well Name: CAIN #16E

API/UVI	State Legal Location	Field Name	License No.	State/Province	Well Configuration Type	Edit
3004525740	NMPM,030-029N-009W	BASIN DAKOTA (PROPOSED GAS)		NEW MEXICO		
Gross Elevation (ft)	Original KB/RT Elevation (ft)	KB-Gross Distance (ft)	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)		
5,694.00	5,706.00	12.00				

Well Config - Original Hole: 2/6/2009 3:07:49 PM

