

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**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.*

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

5. Lease Serial No.

**NMNM - 04208**

6. If Indian, Allottee or tribe Name

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

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☐ Oil Well

☒ Gas Well

☐ Other

8. Well Name and No.

**McCulley LS 4E**

2. Name of Operator

**BP America Production Company Attn: Cherry Hlava**

9. API Well No.

**30-045-32511**

3a. Address

**P.O. Box 3092 Houston, TX 77253**

3b. Phone No. (include area code)

**281-366-4081**

10. Field and Pool, or Exploratory Area

**Basin Dakota/Blanco Mesaverde**

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

**NENW 730' FNL & 1510' FWL Sec. 14 T28N, R09W**

11. County or Parish, State

**San Juan County, New Mexico**

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

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Water Disposal

☐ Water shut-Off

☐ Well Integrity

☒ Other **Chng 7" Csg Depth**

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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.

**On 3/30/05 BP America spud subject well and completed into the Dakota formation. It is now our plan to come up hole & complete into the Mesaverde as per the original drilling permit approved on 12/9/04. (DHC 1732AZ)**

**While completing the DK formation the cement top was recorded at 3868' therefore requiring cement remediation prior to completing the Mesaverde.**

**Please see attached the Mesaverde completion procedure with remedial cement.**

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

**Cherry Hlava**

Title **Regulatory Analyst**

Signature

*Cherry Hlava*

Date **02/21/2006**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

*Matt Halbur*

Title

*PETE ENG*

Date

*3/8/06*

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

*BLM-FFO*

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.

NMOC

# Mesa Verde/Dakota Infill Drilling Well Completion Procedure

**Well Name:**

**McCulley LS 4E**

**Version:**

**2.1**

**Date:**

**January 25, 2006**

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## Summary of Objectives

1. RU SU. POOH w/ completion string.
2. Set bridge plug to isolate DK formation.
3. Perform remedial cement work to isolate the MV Pt. Lookout.
4. Perforate and frac (one-stage N2 Foam) the MV Pt. Lookout.
5. Perform remedial cement work to isolate the Menefee.
6. Perforate and frac (one-stage N2 Foam) the MV Menefee.
7. Clean out MV, perform flow test for production allocation.
8. Drill out isolation plug, commingle MV/DK and clean out wellbore to PBTD.
9. Run completion string. RDSU
10. Turn well back to production.

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## Pertinent Information

|                   |               |                  |                                    |
|-------------------|---------------|------------------|------------------------------------|
| <b>Location</b>   | Sec14, 28N-9W | <b>Horizon</b>   | Basin Dakota/Mesaverde             |
| <b>County</b>     | San Juan      | <b>Engineer</b>  | John Papageorge                    |
| <b>State</b>      | New Mexico    | <b>Phone #s</b>  | 281-366-5721 wk. 713-822-5053 cell |
| <b>API Number</b> | 30-045-32511  | <b>Geologist</b> | Jim Perkins                        |
| <b>Well Flac</b>  |               | <b>Phone #</b>   | 281-366-0713                       |
| <b>SAP Number</b> | Need new      |                  |                                    |

**Note:** BTU content of the produced gas will exceed 1100. Therefore, adhere to requirements as detailed in Venting and Flaring document.

## HSE Observations and Issues

1. Materials and equipment taken to site will be handled with extreme care to reduce any potential hazard to the environment.
2. A safety meeting will be held at the beginning of each event. The site and surrounding area will be kept clean and tidy throughout all operations with appropriate warning signs will be placed around work area.
3. Flare whenever possible to reduce green house gas emissions. Record in DIMS
4. KPI's will be agreed upon on-site prior to perforating and stimulation operations.
5. Risk Assessment to be performed.

## **Completion Procedure**

**Note:** As applicable within the following completion program, reference the following BP DWOP documents for detailed procedures with regard to:

**Under-Balanced Well Control Tripping Procedure** (Proc # NOP-7812, Rev 1)

**Procedure for Flowback Operations** (Proc # NOP-7814)

**Wellbore Air Purge** (Proc # NOP-7804-01, Rev 1)

**Procedure for At-Risk Well Locations** (Proc #NOP-7803-01, Rev 5)

1. Check and record tubing, casing and bradenhead pressures. Ensure production casing has double casing valves installed. Meet with stimulation service company to determine number of frac tanks required and the layout of the site. Locate frac tanks and fill.
2. RU slickline equipment. RIH and set two barriers for isolation.
3. MI RU service unit. Conduct daily and event-specific safety meetings and JHAs with all personnel on site.
4. Blow well down and kill w/2% KCl water only as necessary. Check all casing strings to ensure no pressure exists on any annulus. Note: The operation for removal of wellhead and installation of BOPs will be performed under a dispensation for one barrier on the backside.
5. ND wellhead. NU BOPs and diversion spool with 3" outlet and 3" pipe to the blow tank. Pressure test BOPs.
6. Pull tubing hanger, shut pipe rams and install stripping rubber.
7. PU extra tubing joints as necessary to RIH and tag for fill. Tubing currently set at 6541'. POOH and stand back tubing.
8. Rig up electric line equipment and set 4-1/2" composite bridge plug at 4825' to isolate Dakota. Make sure well is static and all valves are closed when running in the hole with plug and setting tool. Load hole with 2% KCL. Pressure test plug and casing to 1500 psi using rig pump.

**Note:** Remedial cement work will be required prior to proceeding with Menefee completion.

9. Perforate 4 squeeze holes at 4335'. Set retainer and perform cement squeeze. Drill out retainer and cement. Run CBL. If sufficient annular isolation is evident, proceed with Pt. Lookout completion.
10. Conduct risk assessment (JHA) prior to perf and frac operations. **NOTE:** Follow Schlumberger Explosive SOP. Any electronic device that transmits a signal should be shut off or prohibited from within 300' of location. Also, ensure all vehicle data recorder (VDR) systems are disabled prior to driving on location. Contact control center at 326-9475 for verification.

### **LOWER MESA VERDE (Pt. Lookout) Stage**

11. Perforate the lower Mesa Verde (*Point Lookout formation*) with 120° phasing as follows:

**4625, 4615, 4562, 4528' @ 4 spf = 16 holes**

**4504, 4490, 4475, 4467, 4461, 4454, 4446' @ 3 spf = 21 holes**

**4385, 4378, 4370, 4362, 4353, 4344' @ 4 spf = 24 holes**

12. POOH with plug/gun assembly and check firing rate of guns. Immediately report to Houston if firing rate less than 100% to determine if additional runs need to be made.
13. RU wellhead isolation tool and Service Company equipment. Pressure test all lines and equipment. Frac the lower Mesa Verde interval as per service company schedule.
14. Flow back to clean up sufficiently after frac.

**Note: Remedial cement work will be required prior to proceeding with Menefee completion.**

15. Set bridge plug 4300' and pressure test. Perforate 4 squeeze holes at 4000'. Set retainer and perform cement squeeze. Drill out retainer and cement. Run CBL. If sufficient annular isolation is evident, proceed with Menefee completion.

### **UPPER MESAVERDE (Menefee) STAGE**

16. Rig-up electric line equipment. Perforate the upper Mesaverde (*Menefee formation*) using 120° phasing as follows:

**4278, 4270, 4244, 4235, 4229, 4200, 4187, 4155, 4127, 4110, 4090, 4075, 4061, 4014, 4003' @ 4 spf = 60 holes**

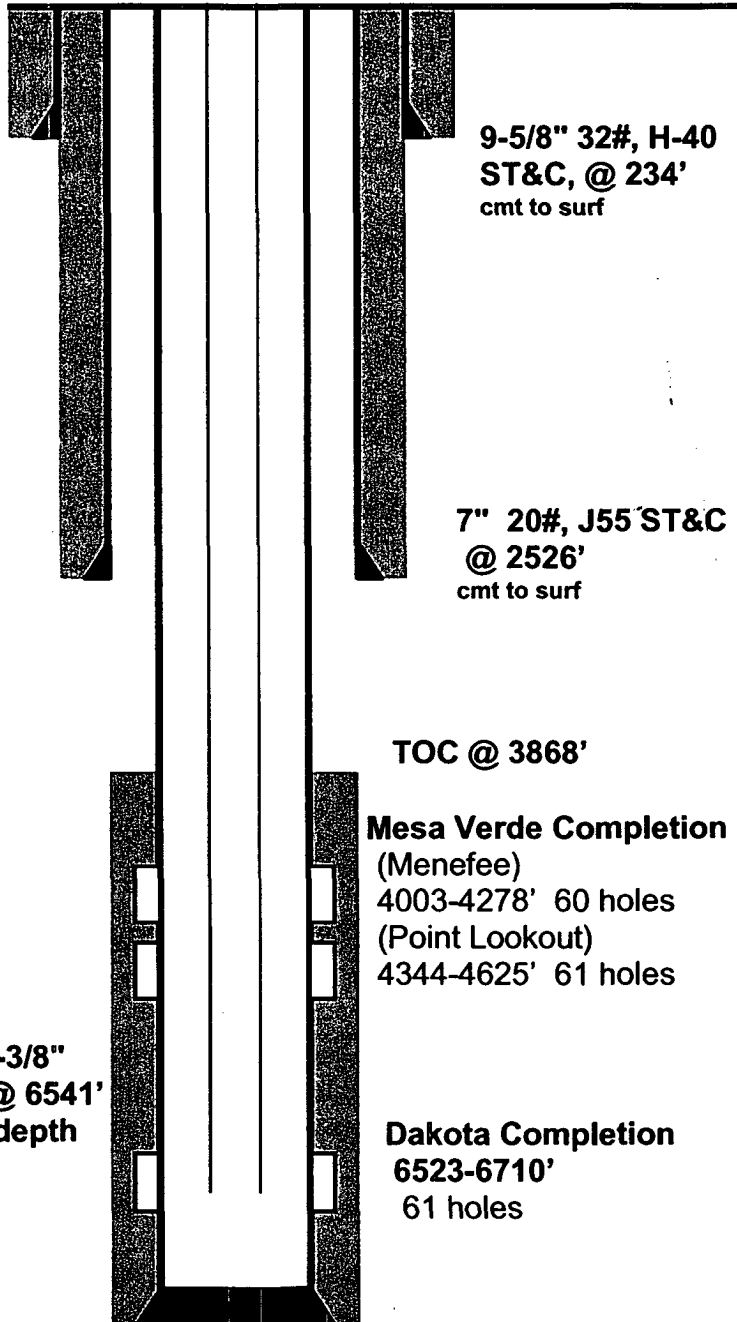
17. POOH with guns. Immediately report to Houston if firing rate less than 100% to determine if additional runs need to be made. RD perforating equipment.
18. Rig-up service company equipment and pressure test all lines to 3000#. Frac the Upper MV per Schlumberger pump schedule.
19. Rig down stinger and frac equipment. Open well up on ¼" choke and flowback overnight to clean up MV frac. After initial 8 hour flowback, open on ½" choke for 8 hours and then ¾" choke until stabilized.
20. RIH w/bit on 2-3/8" tubing. Knock out isolation plug at 4300' and clean out wellbore to the top of bridge plug at 4825'.
21. When Mesaverde has been cleaned sufficiently, perform the 12-hour governmental flow test.
22. RIH with 2 3/8" tubing and drill out plug at 4825'. Pick up additional tubing and proceed with RIH to PBTD. Clean out fill as necessary. Flow back MV/Dakota to clean up. When well has cleaned up sufficiently, POOH with tubing and bit.
23. Pick up and run 2 3/8" production tubing. Bottom assembly made up of: 2-3/8" expendable pump thru-check valve (ball shear type), 2' sub, "F" landing nipple, 4' sub, "X" landing nipple with plug. Land tubing in lower section of Dakota formation at approximately 6675'.
24. Install do-nut (wrap-around), and land into wellhead. Set lockdown screws on donut. Make sure that donut is landed in hanger correctly.
25. Send appropriate information to Cherry Hlava (281-366-4081) to file the C-104.
26. Check pressures on all casing strings.
27. The operation of removal of wellhead and installation of BOPs will be performed under a dispensation for one (1) barrier on the backside. Nipple down BOP's, install Xmas tree and test to 3000 psi. If wellhead tests ok, retrieve "X"plug. If not, check seals on wellhead and re-test. Pump out pump-through check valve and unload well. SI.
28. RDMO Service rig
29. Install flowline and surface facilities. Produce the well to sales line.

# McCulley LS 4E

Sec. 14, T28N R 9W

API: 30-045-32511

GL: 5832'  
KB: 5846'



9-5/8" 32#, H-40  
ST&C, @ 234'  
cmt to surf

7" 20#, J55 ST&C  
@ 2526'  
cmt to surf

TOC @ 3868'

**Mesa Verde Completion**  
(Menefee)  
4003-4278' 60 holes  
(Point Lookout)  
4344-4625' 61 holes

**Dakota Completion**  
6523-6710'  
61 holes

Tubing: 2-3/8"  
4.7#, J55 @ 6541'  
orig, new depth  
~6675'

PBTD to 6722'  
TD @ 6730'

4-1/2" 11.6#, P-110  
LT&C @ 6724'  
marker jts @ 3301' & 6373'

Updated: 11/30/05 JLP/JMP