

Submit 3 Copies to Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

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

WELL API NO.

30-045-07138

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Navajo Allotted Gas Com A

8. Well Number

1A

9. OGRID Number

778

10. Pool name or Wildcat

Blanco Mesaverde & Otero Chacra

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

BP America Production Company Attn: Cherry Hlava

3. Address of Operator

P.O. Box 3092 Houston, TX 77253

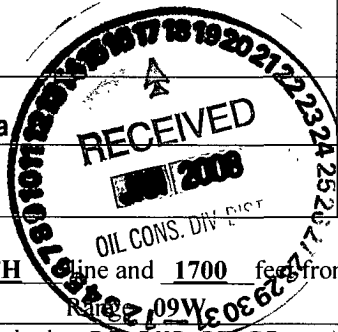
4. Well Location

Unit Letter J : 1925 feet from the SOUTH line and 1700 feet from the EAST line

Section 25 Township 28N Range 09W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

5827



Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type \_\_\_\_\_ Depth to Groundwater \_\_\_\_\_ Distance from nearest fresh water well \_\_\_\_\_ Distance from nearest surface water \_\_\_\_\_

Pit Liner Thickness: \_\_\_\_\_ mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

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 ☐

OTHER: Downhole Commingle ☒

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

BP America Production Company request permission to perforate and frac the upper Mesaverde (Menefee). Then complete into the Otero Chacra and commingle production downhole with the entire Blanco Mesaverde as per the attached procedure.

The Blanco Mesaverde (72319) & Otero Chacra (82329) pools are Pre-Approved for Downhole Commingling per NMOCD order R-11363. The working & all royalty interest owners in the proposed commingled pools are identical; therefore no additional notification is required.

BLM has been notified of the DHC via form 3160-5 for lease 1420603779 Eastern Navajo NMNM75890.

Production is proposed to be allocated based on a fixed percent using well tests. It is our intent to complete the Upper Mesaverde, set a bridge plug then complete into the Chacra, stabilize production and perform flow rate test on the Chacra, drill out the CIBP isolating the Mesaverde, commingle production and perform a flow rate test for the combined zones. The production rate for the Mesaverde will be determined using the flow rate test for the combined pools and minus the Chacra flow test rate. The resulting volumes will be used to determine a fixed percentage rate to be allocated to each pool.

Commingling Production Downhole in the subject well from the proposed pools will not reduce the value of the total remaining production.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cherry Hlava

TITLE Regulatory Analyst

DATE 01/16/2008

Type or print name Cherry Hlava E-mail address: hlavacl@bp.com

Telephone No. 281-366-4081

For State Use Only

APPROVED BY: [Signature] TITLE Deputy Oil & Gas Inspector,

District #3

DATE JAN 18 2008

Conditions of Approval (if any):

District I

1625 N French Dr , Hobbs, NM 88240  
Phone (505) 393-6161 Fax (505) 393-0720

District II

1301 W Grand Ave , Artesia, NM 88210  
Phone (505) 748-1283 Fax (505) 748-9720

District III

1000 Rio Brazos Rd , Aztec, NM 87410  
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District IV

1220 S St Francis Dr , Santa Fe, NM 87505  
Phone (505) 476-3470 Fax (505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**

**Oil Conservation Division**

**1220 S. St Francis Dr.**

**Santa Fe, NM 87505**

Form C-102  
Permit 51714

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number <b>30-045-07138</b>	2 Pool Code <b>82329</b>	3 Pool Name <b>OTERO CHACRA (GAS)</b>
4 Property Code <b>916</b>	5 Property Name <b>NAVAJO ALLOTTED GAS COM A</b>	6 Well No <b>001A</b>
7 OGRID No <b>778</b>	8 Operator Name <b>BP AMERICA PRODUCTION COMPANY</b>	9 Elevation

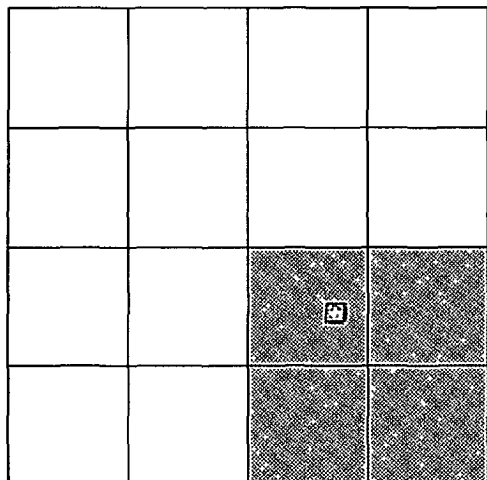
**10. Surface Location**

UL - Lot <b>J</b>	Section <b>25</b>	Township <b>28N</b>	Range <b>09W</b>	Lot Idn	Feet From <b>1925</b>	N/S Line <b>S</b>	Feet From <b>1700</b>	E/W Line <b>E</b>	County <b>SAN JUAN</b>
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**11. Bottom Hole Location If Different From Surface**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12 Dedicated Acres <b>160.00</b>	13 Joint or Infill	14 Consolidation Code	15 Order No						

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**



**OPERATOR CERTIFICATION**

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

E-Signed By: *Cherry Hlava*  
Title: *Regulatory Analyst*  
Date: *1-14-08*

**SURVEYOR CERTIFICATION**

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

Surveyed By:  
Date of Survey:  
Certificate Number: **Previously Filed**



**Well Name:** Navajo Allotted GC A 1A    **API #:** 30-045-07138  
**Location:** T28N-R9W-Sec 25  
**County:** San Juan  
**State:** New Mexico                      **Engr:** Cristin Cammon  
**Horizon:** Chacra/ Mesa Verde/Dakota                      cristin.cammon@bp.com  
    ph (281) 366-5721  
**Date:** January 9, 2008  
**Repair Type:** Menefee and CH Recomplete / Pay-add

1. TOH with completion. Set CBP to isolate lower MV.
2. Run CBL and RST log.
3. Perforate and fracture Menefee in the 1<sup>st</sup> stage. Set CBP over MV.
4. Perforate and fracture CH in 2<sup>nd</sup> stage. Flow test CH.
5. Clean out to TD. Flow test MV and CH.
6. Land tubing and return well to production.
7. Downhole commingle Mesa Verde and Chacra.

This well produced from the Dakota from 1965 to 1976. In 1976 the Mesa Verde was completed and the Dakota was plugged. It is producing approximately 75 mcf/d to date from the MV. The 2 3/8" tubing is landed at 4548'. The well is currently on plunger lift. We suspect a large amount of bradenhead repair work was performed on this well in 1994. Running a CBL to confirm cement placement will be necessary.

The objective is to recomplete this well to include the Menefee sand from the Mesa Verde horizon and Chacra horizon and to commingle production downhole with the existing Mesa Verde horizon. The job scope is to perforate and stimulate the Menefee formation in one stage, then perforate and stimulate the Chacra formation in a second stage, clean out to TD, and commingle Mesa Verde and Chacra production after performing an 8 hour test on both the Chacra only and Chacra and Mesa Verde together. The anticipated uplift is 185 mcfd. A composite bridge plug will be set at 4300' to isolate the lower Mesa Verde throughout the recomplete.

## Procedure:

1. Perform pre-rig site inspection. Check for: size of location, Gas Taps, other wells, other operators, running equipment, wetlands, wash (dikes req.), H<sub>2</sub>S, barriers needed for equipment, Landowner issues, location of pits (buried lines in pits), Raptor nesting, critical location, check anchors. Verify rig anchors are in place and tested. Check ID wellhead; if earth pit is required have One Call made 48 hours prior to digging.
2. Perform second site visit after lines are marked to ensure all lines clear marked pit locations. Planning and Scheduling to ready location for rig.
3. RU slickline unit or wireline unit. Pressure test lubricator and equipment. RIH and tag TD. Record TD along with indicated fluid level. RIH and set **two** barriers (CIBP, tbg collar stop w/plug, or plug set in nipple) for isolation in tubing string.
4. Check and record tubing, casing, and bradenhead pressures. Ensure production casing has double casing valves installed. Double valve all casing strings.
5. MIRU workover rig. LO/TO all necessary equipment including but not limited to: meter run, Automation, Separators and water lines.
6. Blow down well. Kill with 2% KCL water ONLY if necessary.
7. Check all casing strings to ensure no pressure exists on any annulus. **The operations of removal of wellhead and installation of BOP's will be performed under a dispensation for one (1) barrier on the backside.**
8. ND Wellhead. NU BOPs and diversion spool with 3" outlets and 3" pipe to the blow tank. Install two-way plug in tubing hanger and pressure test BOPs to 200 psi above BHP. Monitor flowing casing pressure with gauge (with casing flowing to blow tank) throughout workover.
9. Install stripping head, unseat and pull tubing hanger up above pipe rams, shut-in pipe rams, remove stripping rubber. Strip tubing hanger OOH. Re-install stripping rubber.
10. TOH 2 3/8" production tubing currently set at 4548', lay down tubing. Using approved "Under Balance Well Control Tripping Procedure". Visually inspect tubing while POOH, note any signs of pitting or corrosion and please document with pictures. Measure tubing out of hole. Recover isolation plugs from tubing.
11. TIH w/ 4-1/2" scraper. Check the distance between the top of the blind rams and the length of the bottom hole assembly that is being run. If the BHA is too long then the well has to be top killed and monitored prior to opening blind rams. RIH and scrape pipe to PBTD (~4599'). POOH. Lay down bit and scraper.
12. RU E-line equipment. Pressure test lubricator and equipment.
13. Pick up composite bridge plug and TIH. Set composite bridge plug at +/- 4300'. (Ensure plug is not set opposite a casing collar by doing a few passes at +/- 4300' with the CCL and then determine the setting depth.) Pressure test bridge plug to ensure it is holding. Fill casing w/ 2% KCl. POOH.

14. **Log well w/ CBL log and RST log from 4300' to surface.** Contact engineer after determining TOC in 4 1/2" casing to discuss perforation placement or need for remedial cement squeeze if cement coverage is inadequate for the pay-add or if integrity of casing appears sub-par. Contact operations geologist, Mark Durio, for final perf interval selection from the RST.
15. Pressure test 4 1/2" 10.5# K-55 casing to ~3200 psi (75% of burst is 3592 psi). Monitor outer annulus pressure closely. (To perform pressure test, RIH with tension set packer, set packer in casing just below lowest casing valve and test casing to desired pressure.)

### **Stage One: Menefee**

16. Prepare for explosive operations. Follow Schlumberger Explosive SOP including radio silence, suspension of welding operations, and isolation of electrical devices from the work area. Perform Pre-job Safety Meeting to review JSA and procedures. If someone has On Star on their vehicle they cannot enter closer than 300 foot. On Star cannot be turned off. PLEASE take special caution. This is in conjunction with all cell phones, pagers, radios and any electronic device that transmits a signal.
17. RIH with **3-1/8" High Shot Density casing gun loaded with Power Jet charges at 1 SPF 60 Degree Phasing** (total estimated holes will be 90) w/lubricator and perforate Menefee and Pt. Lookout formation.

#### **Perforated intervals will be:**

Menefee Channels: 3756' – 4330'; 574' gross interval  
3 intervals at 1 shot every other foot for 120 holes

- 3810' – 3900' (45 holes)
- 3960' – 4070' (55 holes)
- 4220' – 4240' (20 holes)

**NOTE: Final perf intervals will be determined after the RST log. Verify final perf intervals with engineer/geologist.**

POOH with perforating guns.

18. Hold Risk Assessment (JHA) meeting prior to initiating pumping services.
19. RU 10,000 psi frac isolation equipment (Stinger Isolation Tool).
20. RU Schlumberger frac equipment. **NOTE:** Frac tanks should be filled with fresh water, the KCl will be added on the fly.
21. Pressure test iron to Stinger frac valve at 5000 psi for 10 minutes. Function test treating line check valve during the prime and pressure test operation.
22. The frac is expected to pump at approximately 3000 psi. Maximum allowable treating pressure will be **3200 psi**.
23. Set stagger pump trips to **3200-3400 psi**. Function test pump trips individually.

24. Install and monitor production casing and treating pressure during entire job in frac van via pressure transducers on production casing and treating line. Be sure to monitor the casing annulus pressure throughout the duration of stimulation treatment.
25. Spearhead 1000 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Schlumberger schedule.
26. Fracture treat Mesa Verde down casing as per Schlumberger schedule. Treat well at a **maximum surface pressure of 3200 psi during frac job.**
27. Maintain surface pressures less than 3200 psi during frac job. Flush frac with foam. Fill out GWSI scorecard.

## **Stage Two: Chacra**

28. Rig-up electric line equipment. Pick up composite bridge plug and perforation gun assembly.
29. RIH with plug/gun assembly. Set composite bridge plug at **3600'**.
30. Perforate the Chacra with **3-1/8" High Shot Density casing gun loaded with Power Jet charges at 1 SPF 60 Degree Phasing** (total estimated holes will be 80) w/lubricator and perforate Chacra formation.

### **Perforated intervals will be:**

Chacra (Upper & Lower Sands): 3040' – 3180'; 140' gross interval  
1 interval at 1 shot every other foot for 70 holes

- 3040' – 3180'

31. 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.
32. Hold Risk Assessment (JHA) meeting prior to initiating pumping services
33. RU wellhead isolation tool and Schlumberger equipment. Pressure test iron to Stinger frac valve at 5000 psi.
34. The frac is expected to pump at approximately 2900 psi. Maximum allowable treating pressure will be 3200 psi.
35. Set stagger pump trips to **3200-3400 psi.**
36. Frac the Chacra interval as per Schlumberger schedule.

## **Flowback:**

37. Flowback Chacra frac immediately. Flow well through choke manifold on 1/4", 1/2" and 3/4" chokes slowly increasing drawdown until well dies or stabilizes. This is to aid in reducing sand flowback. Recommend 8 hours of flow for each choke size.
38. Rig up air package/unit, pressure test all lines (Testing procedure to be supplied from air company). TIH with 2 3/8" tubing with notched collar (muleshoe) and float check valve.
39. Cleanout fill to CBP set at +/- 3600'.
40. POOH with tubing and float.
41. RIH with tubing and wireline retrievable pump through plug. Hang off tubing at +/- 3100'. Retrieve plug.
42. Flow test the Chacra for 8 hrs for regulatory, allocation, and deliverability purposes.
43. POOH with tubing.
44. TIH w/ tubing and bit for 4-1/2" casing. Drill out CBP set at 3600'. Cleanout to and drill out CBP set at 4300'.
45. Cleanout to PBTD at 4599'.
46. Pull up to above top MV perforation and flow test the Chacra and Mesa Verde for 8 hrs for regulatory, allocation, and deliverability purposes.
47. Clean out any additional fill to PBTD after flow test. TOH with work string.
48. RIH with 2-3/8" production tubing (with muleshoe, F-nipple with plug, 4 ft pup, X-nipple with plug).
49. Land 2-3/8" production tubing at +/- 4550' or depth determined from logs. Lock down 2 3/8" tubing hanger and bonnet.
50. Pressure test tubing to 500 psi with air unit, make sure tubing spool valves are open. Care should be taken during pressure testing of the tubing due to potential problem caused if tubing parts close to surface or above the hanger. Check all casing string for pressure. **The operations of removal of wellhead and installation of BOP's will be performed under a dispensation for one (1) barrier on the backside.**
51. ND BOP's. NU Wellhead. During Master valve placement ensure the top of hanger has spacer nipple in place to bottom of bonnet flange so plunger equipment will not hang up through tree. Pressure test Wellhead.
52. RU WL unit. Run gauge ring for 2-3/8" tubing. Pull plugs. Set tubing stop for plunger and communicate plunger equipment status to IC room personnel.
53. RD WL unit.
54. Test well for air. Hook up well to surface facilities and return well to production and downhole commingle Mesa Verde and Dakota.

## Wellbore Diagram:

### Navajo Allotted GC A1A

Sec 25 - T28N - R9W

API # 30-045-07138

#### History

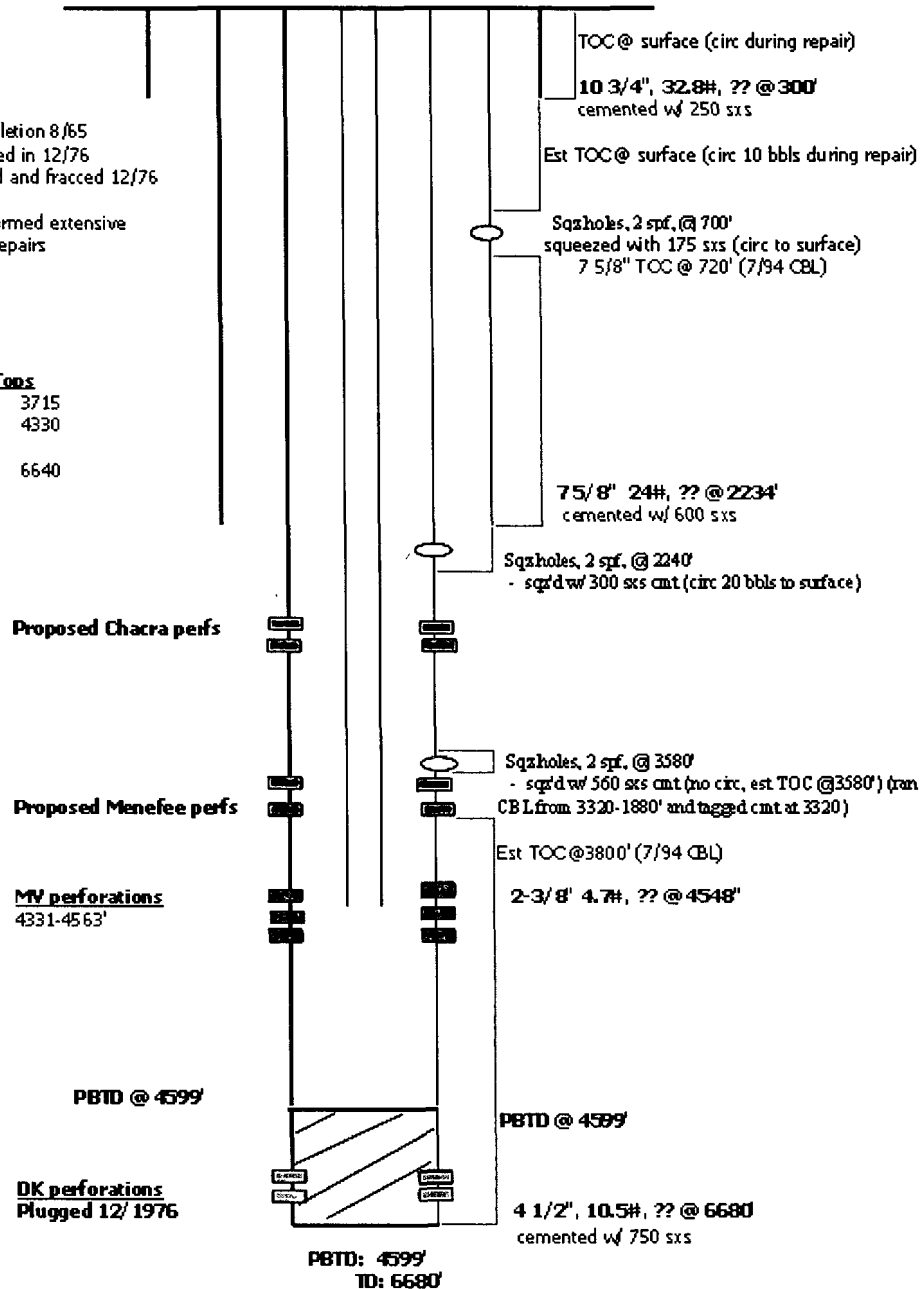
Original completion 8/65  
Dakota plugged in 12/76  
MV completed and fraced 12/76

7/1994: performed extensive  
Bradenhead repairs

#### Formation Tops

MV 3715  
Mancos 4330

DK 6640



updated: 10/16/07 CC

#### NOTES:

- 1) 1994 Bradenhead repair  
- water was flowing to surface behind surface csg  
- backed off 5-1.0" csg, sq'd surface and intermediate  
csg annuli