

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000**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.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other	8. Well Name and No. WARREN A LS 2
2. Name of Operator BP AMERICA PRODUCTION CO	9. API Well No. 30-045-07353-00-C1
3a. Address P. O. BOX 3092 HOUSTON, TX 77253	10. Field and Pool, or Exploratory BLANCO MV/ PC OTERO CHACRA
3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	11. County or Parish, and State SAN JUAN COUNTY, NM
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 23 T28N R9W NENE Tract A GONZALES 0917FNL 1125FEL 36.65230 N Lat, 107.75232 W Lon	

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

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Acidize
☐ Subsequent Report	☐ Deepen
☐ Final Abandonment Notice	☐ Fracture Treat
	☐ New Construction
	☐ Plug and Abandon
	☐ Plug Back
	☐ Production (Start/Resume)
	☐ Reclamation
	☐ Recomplete
	☐ Temporarily Abandon
	☐ Water Disposal
	☐ Water Shut-Off
	☐ Well Integrity
	☒ Other Subsurface Commingling

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 recompleate 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 recompletion 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.)

BP America Production Company request permission to recompleate the subject well into the Otero Charca Pool and trimingle production downhole with the existing Blanco Mesaverde and Pictured Cliffs Pools as per the attached procedure.

Application is being submitted to the NMOCD's Santa Fe Office for approval of the trimingling application of the Blanco Mesaverde (72319), Aztec Pictured Cliffs (71280) & Otero Chacra (82329)Pools.

The working and overriding royalty interest owners in the proposed commingled pools are identical, therefore no further notification of this application is required.

Production is proposed to be allocated based on the subtraction method using the projected future

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #21246 verified by the BLM Well Information System For BP AMERICA PRODUCTION CO, sent to the Farmington Committed to AFMSS for processing by Matthew Halbert on 06/19/2003 (03MXH0939SE)	
Name (Printed/Typed) MARY CORLEY	Title AUTHORIZED REPRESENTATIVE
Signature (Electronic Submission)	Date 04/30/2003

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>/s/ Jim Lovato</u>	Title	Date <u>24 2003</u>
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	

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #21246 that would not fit on the form

32. Additional remarks, continued

decline for production from the Pictured Cliffs and Mesaverde Pools. This production shall serve as a base for production subtracted from the total production for the commingled well. The balance of the production will be attributed to the Chacra. Attached are the future production decline estimates for the Pictured Cliffs & Mesaverde Pools.

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

Warren A LS #2 Recompletion and Trimingle Procedure

Procedure:

1. Check anchors. MIRU workover rig.
2. Check and record tubing, casing, and bradenhead pressures.
3. Blow down well. Kill with 2% KCL water ONLY if necessary.
4. Nipple down WH. NU BOPs.
5. Tag for fill and tally OH with 2-3/8" production tubing currently set at 4784'.
6. TIH with bit and scraper for 5-1/2" casing to 4801'. Work casing scraper across Mesaverde perforations (4422' – 4801') and new Chacra interval (3375' – 3575').
7. RU WL unit. RIH with 5-1/2" CIBP. Set CIBP at 3700'.
8. Load well with 2% KCL to the bottom of the Pictured Cliffs perforations.
9. RU WL unit. Run cased-hole dipole sonic log across Chacra interval from 3200' – 3700'.
11. RIH with 3-1/8" casing guns. Perforate Chacra formation (correlate to GR log).

Chacra perforations, 2 spf (20 shots/40 holes):

3385' – 3390'
3415' – 3420'
3500' – 3505'
3515' – 3520'

12. RIH with 2-7/8" X 3-1/2" tapered frac string and 5-1/2" packer. Set packer at 3350'.
13. Spearhead 500 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Schlumberger schedule.
14. Flowback frac immediately.
15. Release packer. TOH and LD frac string and packer.
16. TIH with tubing and bit. Cleanout fill and drill bridge plug set at 3700'. Cleanout fill to PBTB at 4864'. Blow well dry at PBTB.
17. RIH with 2-3/8" production tubing.
18. Land 2-3/8" production tubing at 4775'.
19. ND BOP's. NU WH. Test well for air. Return well to production and downhole trimingle Pictured Cliffs, Chacra, and Mesaverde production.

Warren A LS #2

Sec 23, T28N, R9W

API # 30-045-07353

History:

Completed in 12/57

Aug 1974: Replace short string & leaky packer

Apr 2001: Refrac'd PC and DHC'd PC/MV

Tubing: 1-1/4" 2.4#, K55 @ 2508'

PC Perforations

2416' - 2440' 2 spf

2448' - 2468' 2 spf

frac'd w/ 34,000# sand

re-frac'd w/ 102,000# sand

MV Perforations (MF & PL)

4422' - 4438' 2 spf

4480' - 4488' 2 spf

4572' - 4594' 2 spf

4641' - 4660' 2 spf

4684' - 4709' 2 spf

4717' - 4727' 2 spf

4750' - 4764' 2 spf

4767' - 4801' 2 spf

PBTD: 4864'

est TOC @ surface (circ)

10-3/4" 32# Armco S.W. @ 162'
150 sxs cmt (circulated)

Est TOC @ 1300' (1957 temp surv)

Burns Liner Hanger @ 2518'

7-5/8" 26#, J55 @ 2564'
250 sxs cmt

Est TOC @ 2518' (1957 temp surv)

Tubing: 2-3/8" 4.7#, J55 @ 4784'
(w F-nipple at 4781')

5-1/2" liner, 15.5#, J55 @ 5693'
300 sxs cmt

NOTES:

updated: 4/14/03 jad

District I -

1625 N. French Dr., Hobbs, NM 88240

District II-

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department**OIL CONSERVATION DIVISION**2040 South Pacheco
Santa Fe, NM 87505Form C-102
Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

¹ API Number 30-045-07019		² Pool Code 82329	³ Pool Name Otero Chacra
⁴ Property Code 001210	⁵ Property Name Warren A LS		⁶ Well Number 2
⁷ OGRID No. 000778	⁸ Operator Name BP America Production Company		⁹ Elevation 6121' GR

¹⁰ Surface Location

UL or lot no. Unit A	Section 23	Township 28N	Range 09W	Lot Idn	Feet from 917	North/South North	Feet from 1125	East/West East	County San Juan
--------------------------------	----------------------	------------------------	---------------------	---------	-------------------------	-----------------------------	--------------------------	--------------------------	---------------------------

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet	East/West	County
---------------	---------	----------	-------	---------	-----------	-------------	------	-----------	--------

¹² Dedicated Acres 160	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

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Mary Corley</i> Signature Mary Corley Printed Name Sr. Regulatory Analyst Title 04/30/2003 Date
	¹⁸ 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. 00/00/1957 Date of Survey Signature and Seal of Professional Surveyor: On File Certificate Number

District I
1625 N. French Drive, Hobbs, NM 88240

May 15, 2000

District II

811 South First Street, Artesia, NM 88210

TYPE

District III

1000 Rio Brazos Road, Aztec, NM 87410

Pre-Approved Pools

District IV

2040 South Pacheco, Santa Fe, NM 87505

No

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A

OIL CONSERVATION DIVISION

APPLI

2040 South Pacheco

Santa Fe, New Mexico 87505

☒ Single Well

☐ Establish

EXISTING WELLBORE

APPLICATION FOR DOWNHOLE COMMINGLING

☒ Yes ☐ No

BP America Production Company

P. O. Box 3092 Houston, TX 77253

Operator

Address

Warren A LS

2

Unit A Section 23 T28N, R09W

San Juan

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. **000778** Property Code **001210** API No. **30-045-07353** Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Aztec Pictured Cliffs	Otero Chacra	Blanco Mesaverde
Pool Code	71280	82329	72319
Top & Bottom of Pay Section (Perforated or Open-Hole Interval)	2416' - 2468'	3385' - 3520	4422' - 4801'
Method of Production (Flowing or Artificial Lift)	Flowing	Flowing	Flowing
Bottomhole Pressure	270	425	499
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1294	1202.6	1256
Producing, Shut-In or New Zone	Producing	New Zone	Producing
Date and Oil/Gas/Water Rates of Last Production.	Date: Rates:	Date: Rates:	Date: Rates:
Fixed Allocation Percentage	Oil % Gas %	Oil % Gas %	Oil % Gas %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones?

Yes ☒ No ☐

No ☐

If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other?

Yes ☒ No ☐

No ☐

Will commingling decrease the value of production?

Warren A LS 2

7/16/2003

Future Production Decline Estimate Mesaverde (Daily Rates)

Month	Gas Volume
Jan-2002	87
Feb-2002	90
Mar-2002	86
Apr-2002	84
May-2002	77
Jun-2002	84
Jul-2002	83
Aug-2002	78
Sep-2002	73
Oct-2002	80
Nov-2002	72
Dec-2002	76
Jan-2003	76
Feb-2003	75
Mar-2003	75
Apr-2003	74
May-2003	74
Jun-2003	73
Jul-2003	73
Aug-2003	72
Sep-2003	72
Oct-2003	71
Nov-2003	71
Dec-2003	70
Jan-2004	70
Feb-2004	69
Mar-2004	69
Apr-2004	68
May-2004	68
Jun-2004	67
Jul-2004	67
Aug-2004	66
Sep-2004	66
Oct-2004	65
Nov-2004	65
Dec-2004	64

$$\ln(Q_f/Q_i) = -dt$$

$$Q_f = 75$$

$$Q_i = 78$$

$$\text{rate} = 75$$

$$\text{time} = 6$$

$$dt = -0.039220713$$

$$\text{decline} = -0.490258914$$

$$\ln(75/78) = -0.0065$$

640

$$-4903$$

Month	Gas Volume
Jan-2005	64
Feb-2005	63
Mar-2005	63
Apr-2005	62
May-2005	62
Jun-2005	61
Jul-2005	61
Aug-2005	60
Sep-2005	60
Oct-2005	59
Nov-2005	59
Dec-2005	58
Jan-2006	58
Feb-2006	57
Mar-2006	57
Apr-2006	56
May-2006	56
Jun-2006	55
Jul-2006	55
Aug-2006	54
Sep-2006	54
Oct-2006	54
Nov-2006	53
Dec-2006	53
Jan-2007	52
Feb-2007	52
Mar-2007	51
May-2007	51
Jun-2007	50
Jul-2007	50
Aug-2007	49
Sep-2007	49
Oct-2007	48
Nov-2007	48
Dec-2007	47
Jan-2008	47

Month	Gas Volume
Feb-2008	46
Mar-2008	46
Apr-2008	45
May-2008	45
Jun-2008	45
Jul-2008	45
Aug-2008	45
Sep-2008	45
Oct-2008	45
Nov-2008	44
Dec-2008	44
Jan-2009	44
Feb-2009	44
Mar-2009	44
Apr-2009	44
May-2009	43
Jun-2009	43
Jul-2009	43
Aug-2009	43
Sep-2009	43
Oct-2009	43
Nov-2009	43
Dec-2009	42
Jan-2010	42
Feb-2010	42
Mar-2010	42
Apr-2010	42
May-2010	42
Jun-2010	42
Jul-2010	41
Aug-2010	41
Sep-2010	41
Oct-2010	41
Nov-2010	41
Dec-2010	41
Jan-2011	41

Warren A LS 2

7/16/2003

Future Production Decline Estimate Mesaverde (Daily Rates)

Month	Gas Volume
Feb-2011	40
Mar-2011	40
Apr-2011	39
May-2011	39
Jun-2011	38
Jul-2011	38
Aug-2011	37
Sep-2011	37
Oct-2011	36
Nov-2011	36
Dec-2011	35
Jan-2012	35
Feb-2012	34
Mar-2012	34
Apr-2012	33
May-2012	33
Jun-2012	32
Jul-2012	32
Aug-2012	31
Sep-2012	31
Oct-2012	30
Nov-2012	30
Dec-2012	29
Jan-2013	29
Feb-2013	28
Mar-2013	28
Apr-2013	27
May-2013	27
Jun-2013	26
Jul-2013	26
Aug-2013	25
Sep-2013	25
Oct-2013	24
Nov-2013	24
Dec-2013	23
Jan-2014	23

Month	Gas Volume
Feb-2014	22
Mar-2014	22
Apr-2014	21
May-2014	21
Jun-2014	20
Jul-2014	20
Aug-2014	20
Sep-2014	19
Oct-2014	19
Nov-2014	18
Dec-2014	18
Jan-2015	17
Feb-2015	17
Mar-2015	16
Apr-2015	16
May-2015	15
Jun-2015	15
Jul-2015	14
Aug-2015	14
Sep-2015	13
Oct-2015	13
Nov-2015	12
Dec-2015	12
Jan-2016	11
Feb-2016	11
Mar-2016	10
Apr-2016	10
May-2016	9
Jun-2016	9
Jul-2016	8
Aug-2016	8
Sep-2016	7
Oct-2016	7
Nov-2016	6
Dec-2016	6
Jan-2017	5

Month	Gas Volume
Feb-2017	5
Mar-2017	4
Apr-2017	4
May-2017	3
Jun-2017	3
Jul-2017	2
Aug-2017	2
Sep-2017	1
Oct-2017	1
Nov-2017	0
Dec-2017	0
Jan-2018	0
Feb-2018	0
Mar-2018	0
Apr-2018	0
May-2018	0
Jun-2018	0
Jul-2018	0
Aug-2018	0
Sep-2018	0
Oct-2018	0
Nov-2018	0
Dec-2018	0
Jan-2019	0
Feb-2019	0
Mar-2019	0
Apr-2019	0
May-2019	0
Jun-2019	0
Jul-2019	0
Aug-2019	0
Sep-2019	0
Oct-2019	0
Nov-2019	0
Dec-2019	0
Jan-2020	0

Month	Gas Volume
Feb-2020	0
Mar-2020	0
Apr-2020	0
May-2020	0
Jun-2020	0
Jul-2020	0
Aug-2020	0
Sep-2020	0
Oct-2020	0
Nov-2020	0
Dec-2020	0
Jan-2021	0
Feb-2021	0
Mar-2021	0
Apr-2021	0
May-2021	0
Jun-2021	0
Jul-2021	0
Aug-2021	0
Sep-2021	0
Oct-2021	0
Nov-2021	0
Dec-2021	0
Jan-2022	0
Feb-2022	0
Mar-2022	0
Apr-2022	0
May-2022	0
Jun-2022	0
Jul-2022	0
Aug-2022	0
Sep-2022	0
Oct-2022	0
Nov-2022	0
Dec-2022	0
Jan-2023	0

Warren A LS 2

7/14/2003

Future Production Decline Estimate Pictured Cliffs (Daily Rates)

Month	Gas Volume
Jan-2002	274
Feb-2002	286
Mar-2002	273
Apr-2002	267
May-2002	245
Jun-2002	266
Jul-2002	261
Aug-2002	248
Sep-2002	230
Oct-2002	253
Nov-2002	227
Dec-2002	242
Jan-2003	242
Feb-2003	238
Mar-2003	236
Apr-2003	235
May-2003	233
Jun-2003	231
Jul-2003	230
Aug-2003	228
Sep-2003	227
Oct-2003	225
Nov-2003	223
Dec-2003	222
Jan-2004	220
Feb-2004	218
Mar-2004	217
Apr-2004	215
May-2004	214
Jun-2004	212
Jul-2004	210
Aug-2004	209
Sep-2004	207
Oct-2004	205
Nov-2004	204
Dec-2004	202

$LN(Q_i/Q_1) = -dt$
 $Q_i = 238$
 $Q_1 = 248$
 $rate = 238$
 $time = 6$
 $dt = -0.041158072$
 $decline = -1.632603542$

$ln(238/248) = -0.0412$
 $6 mo$
 $6 mo \times 0.0412 = 0.0069$

$ln(0.1/6)$
 T
 1.63

Month	Gas Volume
Jan-2005	200
Feb-2005	199
Mar-2005	199
Apr-2005	198
May-2005	198
Jun-2005	198
Jul-2005	198
Aug-2005	198
Sep-2005	197
Oct-2005	197
Nov-2005	197
Dec-2005	197
Jan-2006	197
Feb-2006	196
Mar-2006	196
Apr-2006	196
May-2006	196
Jun-2006	196
Jul-2006	195
Aug-2006	195
Sep-2006	195
Oct-2006	195
Nov-2006	195
Dec-2006	194
Jan-2007	194
Feb-2007	194
Mar-2007	194
May-2007	194
Jun-2007	194
Jul-2007	193
Aug-2007	193
Sep-2007	193
Oct-2007	193
Nov-2007	193
Dec-2007	192
Jan-2008	192

Month	Gas Volume
Feb-2008	191
Mar-2008	189
Apr-2008	187
May-2008	186
Jun-2008	184
Jul-2008	182
Aug-2008	181
Sep-2008	179
Oct-2008	177
Nov-2008	176
Dec-2008	174
Jan-2009	173
Feb-2009	171
Mar-2009	169
Apr-2009	168
May-2009	166
Jun-2009	164
Jul-2009	163
Aug-2009	161
Sep-2009	160
Oct-2009	158
Nov-2009	156
Dec-2009	155
Jan-2010	153
Feb-2010	151
Mar-2010	150
Apr-2010	148
May-2010	146
Jun-2010	145
Jul-2010	143
Aug-2010	142
Sep-2010	140
Oct-2010	138
Nov-2010	137
Dec-2010	135
Jan-2011	133

Warren A LS 2

7/14/2003

Future Production Decline Estimate Pictured Cliffs (Daily Rates)

Month	Gas Volume
Feb-2011	132
Mar-2011	130
Apr-2011	129
May-2011	127
Jun-2011	125
Jul-2011	124
Aug-2011	122
Sep-2011	120
Oct-2011	119
Nov-2011	117
Dec-2011	115
Jan-2012	114
Feb-2012	112
Mar-2012	111
Apr-2012	109
May-2012	107
Jun-2012	106
Jul-2012	104
Aug-2012	102
Sep-2012	101
Oct-2012	99
Nov-2012	97
Dec-2012	96
Jan-2013	94
Feb-2013	93
Mar-2013	91
Apr-2013	89
May-2013	88
Jun-2013	86
Jul-2013	84
Aug-2013	83
Sep-2013	81
Oct-2013	80
Nov-2013	78
Dec-2013	76
Jan-2014	75

Month	Gas Volume
Feb-2014	73
Mar-2014	71
Apr-2014	70
May-2014	68
Jun-2014	66
Jul-2014	65
Aug-2014	63
Sep-2014	62
Oct-2014	60
Nov-2014	58
Dec-2014	57
Jan-2015	55
Feb-2015	53
Mar-2015	52
Apr-2015	50
May-2015	49
Jun-2015	47
Jul-2015	45
Aug-2015	44
Sep-2015	42
Oct-2015	40
Nov-2015	39
Dec-2015	37
Jan-2016	35
Feb-2016	34
Mar-2016	32
Apr-2016	31
May-2016	29
Jun-2016	27
Jul-2016	26
Aug-2016	24
Sep-2016	22
Oct-2016	21
Nov-2016	19
Dec-2016	17
Jan-2017	16

Month	Gas Volume
Feb-2017	14
Mar-2017	13
Apr-2017	11
May-2017	9
Jun-2017	8
Jul-2017	6
Aug-2017	4
Sep-2017	3
Oct-2017	1
Nov-2017	0
Dec-2017	0
Jan-2018	0
Feb-2018	0
Mar-2018	0
Apr-2018	0
May-2018	0
Jun-2018	0
Jul-2018	0
Aug-2018	0
Sep-2018	0
Oct-2018	0
Nov-2018	0
Dec-2018	0
Jan-2019	0
Feb-2019	0
Mar-2019	0
Apr-2019	0
May-2019	0
Jun-2019	0
Jul-2019	0
Aug-2019	0
Sep-2019	0
Oct-2019	0
Nov-2019	0
Dec-2019	0
Jan-2020	0

Month	Gas Volume
Feb-2020	0
Mar-2020	0
Apr-2020	0
May-2020	0
Jun-2020	0
Jul-2020	0
Aug-2020	0
Sep-2020	0
Oct-2020	0
Nov-2020	0
Dec-2020	0
Jan-2021	0
Feb-2021	0
Mar-2021	0
Apr-2021	0
May-2021	0
Jun-2021	0
Jul-2021	0
Aug-2021	0
Sep-2021	0
Oct-2021	0
Nov-2021	0
Dec-2021	0
Jan-2022	0
Feb-2022	0
Mar-2022	0
Apr-2022	0
May-2022	0
Jun-2022	0
Jul-2022	0
Aug-2022	0
Sep-2022	0
Oct-2022	0
Nov-2022	0
Dec-2022	0
Jan-2023	0