

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR
- [D] Other: Specify _____

- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] Offset Operators, Leaseholders or Surface Owner
- [C] Application is One Which Requires Published Legal Notice
- [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Mary Corley
Print or Type Name

Mary Corley
Signature

Sr. Regulatory Analyst 04/22/2004
Title Date

corleym1@bp.com
e-mail Address

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised May 15,

2000

District II

111 South First Street, Arroyo, NM 88210

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

APPLICATION TYPE

Single Well
 Establish Pre-Approved

District III

1000 Rio Brazos Road, Arroyo, NM 87410

Pools

District IV

2040 South Pacheco, Santa Fe, NM 87505

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

Yes No

BP America Production Company P. O. Box 3092 Houston, TX 77253

Operator

Address

McCulley LS 2

Unit L Section 14 T28N, R09W

San Juan

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. **000778** Property Code **000911** API No. **30-045-07443** 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)	2244' - 2302'	3210' - 3380	4875' - 5068'
Method of Production (Flowing or Artificial Lift)	Artificial Lift	Artificial Lift	Artificial Lift
Bottomhole Pressure	280	430	490
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1267	1210	1267
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
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

Will commingling decrease the value of production? Yes No

If this well is on, or communized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes No

NMOCD Reference Case No. applicable to this well: _____

Attachments:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE *Mary Corley* TITLE Sr. Regulatory Analyst DATE 04/22/2004

TYPE OR PRINT NAME Mary Corley TELEPHONE NO. (281) 366-4491



BP America Production Company
San Juan Performance Unit
Mary Corley, Senior Regulatory Analyst
corleymi@bp.com

FAX MESSAGE

To: Will Jones

Fax: 8-505-476-3462

From: Mary Corley

Date: 08/09/2004

Fax: 281-366-0700

Phone: 281-366-4491

Pages to Follow: 2

URGENT

ORDINARY

CONFIDENTIAL

Will

Attached application to tri-mingle Pictured Cliffs, Mesaverde and Chacra Pools.
Should you have any questions please contact me at 281-366-4491 or at the
above email address.

Thank You,

Mary Corley

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

Form C-102
Revised August 15, 2000

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-07443		² Pool Code 82329		³ Pool Name Otero Chacra	
⁴ Property Code 000911		⁵ Property Name McCulley LS			⁶ Well Number 2
⁷ OGRID No. 000778		⁸ Operator Name BP America Production Company			⁹ Elevation 5924' GR

¹⁰ Surface Location

UL or lot no. Unit L	Section 14	Township 28N	Range 09W	Lot Idn	Feet from 1850'	North/South South	Feet from 1090'	East/West West	County San Juan
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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

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Mary Corley</i></p> <p>Signature Mary Corley</p> <p>Printed Name Sr. Regulatory Analyst</p> <p>Title 04/22/2004</p> <p>Date</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>1/15/1957</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>E S Oberly</p> <p>Certificate Number</p>

Allocation Method
McCulley LS 2

BP America Production Company request permission to complete the subject well into the Otero Chacra and tricomingle production downhole with the existing Aztec Pictured Cliffs and Blanco Mesaverde Pools as per the attached procedure.

The interest owners are identical between these three Pools, therefore, no additional notification is required prior to downhole commingling approval.

Production is proposed to be allocated based on the subtraction method using the projected future 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 with not reduce the value of the total remaining production.

Application has also been submitted to BLM on Form 3160-5, Federal Lease No. SF - 03549.

Pre Approved Pools:

Blanco-Mesaverde (72319) & Aztec Pictured Cliffs (71280) Pools

Blanco-Mesaverde (72319) & Otero-Chacra (82329) Pools

Aztec Pictured Cliffs (71280) & Otero-Chacra (82329) Pools

4/22/2004

McCulley LS 2
Future Production Decline Estimate
Mesaverde Daily Rates

Month	Gas Volume
Jan-2003	137
Feb-2003	165
Mar-2003	171
Apr-2003	145
May-2003	149
Jun-2003	148
Jul-2003	160
Aug-2003	151
Sep-2003	144
Oct-2003	150
Nov-2003	139
Dec-2003	147
Jan-2004	126
Feb-2004	125
Mar-2004	125
Apr-2004	125
May-2004	125
Jun-2004	124
Jul-2004	124
Aug-2004	124
Sep-2004	124
Oct-2004	123
Nov-2004	123
Dec-2004	123
Jan-2005	123
Feb-2005	122
Mar-2005	122
Apr-2005	122
May-2005	122
Jun-2005	121
Jul-2005	121
Aug-2005	121
Sep-2005	121
Oct-2005	121
Nov-2005	120
Dec-2005	120

$\ln(Q_i/Q_j) = -dt$
 $Q_i = 147$
 $Q_j = 149$
 $rate = 147$
 $** time = 8$
 $dt = -0.013513718$
 $decline = -0.24831459$

Month	Gas Volume
Jan-2006	120
Feb-2006	120
Mar-2006	119
Apr-2006	119
May-2006	119
Jun-2006	119
Jul-2006	118
Aug-2006	118
Sep-2006	118
Oct-2006	118
Nov-2006	117
Dec-2006	117
Jan-2007	117
Feb-2007	117
Mar-2007	116
Apr-2007	116
May-2007	116
Jun-2007	116
Jul-2007	115
Aug-2007	115
Sep-2007	115
Oct-2007	115
Nov-2007	114
Dec-2007	114
Jan-2008	114
Feb-2008	114
Mar-2008	113
Apr-2008	113
May-2008	113
Jun-2008	113
Jul-2008	113
Aug-2008	112
Sep-2008	112
Oct-2008	112
Nov-2008	112
Dec-2008	111
Jan-2009	111

Month	Gas Volume
Feb-2009	111
Mar-2009	111
Apr-2009	110
May-2009	110
Jun-2009	110
Jul-2009	110
Aug-2009	109
Sep-2009	109
Oct-2009	109
Nov-2009	109
Dec-2009	108
Jan-2010	108
Feb-2010	108
Mar-2010	108
Apr-2010	107
May-2010	107
Jun-2010	107
Jul-2010	107
Aug-2010	106
Sep-2010	106
Oct-2010	106
Nov-2010	106
Dec-2010	105
Jan-2011	105
Feb-2011	105
Mar-2011	105
Apr-2011	104
May-2011	104
Jun-2011	104
Jul-2011	104
Aug-2011	103
Sep-2011	103
Oct-2011	103
Nov-2011	103
Dec-2011	102
Jan-2012	102

4/22/2004

**McCulley LS 2
Future Production Decline Estimate
Mesaverde Daily Rates**

Feb-2012	102	Feb-2015	97
Mar-2012	102	Mar-2015	97
Apr-2012	102	Apr-2015	97
May-2012	102	May-2015	96
Jun-2012	101	Jun-2015	96
Jul-2012	101	Jul-2015	96
Aug-2012	101	Aug-2015	96
Sep-2012	101	Sep-2015	96
Oct-2012	101	Oct-2015	96
Nov-2012	101	Nov-2015	98
Dec-2012	101	Dec-2015	95
Jan-2013	100	Jan-2016	95
Feb-2013	100	Feb-2016	95
Mar-2013	100	Mar-2016	95
Apr-2013	100	Apr-2016	95
May-2013	100	May-2016	95
Jun-2013	100	Jun-2016	95
Jul-2013	100	Jul-2016	94
Aug-2013	98	Aug-2016	94
Sep-2013	99	Sep-2016	94
Oct-2013	99	Oct-2016	94
Nov-2013	99	Nov-2016	94
Dec-2013	98	Dec-2016	94
Jan-2014	99	Jan-2017	94
Feb-2014	99	Feb-2017	93
Mar-2014	98	Mar-2017	93
Apr-2014	98	Apr-2017	93
May-2014	98	May-2017	93
Jun-2014	98	Jun-2017	93
Jul-2014	98	Jul-2017	93
Aug-2014	98	Aug-2017	93
Sep-2014	98	Sep-2017	92
Oct-2014	97	Oct-2017	92
Nov-2014	97	Nov-2017	92
Dec-2014	97	Dec-2017	92
Jan-2015	97	Jan-2018	92

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McCulley LS 2
Future Production Decline Estimate
Pictured Cliffs Daily Rates

$\ln(Qf/Qi) = -dt$
 $Qf = 125$
 $Qi = 127$
 $rate = 125$
 $** \text{ time} = 8$
 $dt = -0.015873349$
 $decline = -0.248021081$

Month	Gas Volume
Jan-2003	116
Feb-2003	140
Mar-2003	146
Apr-2003	128
May-2003	127
Jun-2003	126
Jul-2003	137
Aug-2003	129
Sep-2003	127
Oct-2003	127
Nov-2003	119
Dec-2003	125
Jan-2004	107
Feb-2004	107
Mar-2004	107
Apr-2004	106
May-2004	106
Jun-2004	106
Jul-2004	106
Aug-2004	105
Sep-2004	105
Oct-2004	105
Nov-2004	105
Dec-2004	104
Jan-2005	104
Feb-2005	104
Mar-2005	104
Apr-2005	103
May-2005	103
Jun-2005	103
Jul-2005	103
Aug-2005	102
Sep-2005	102
Oct-2005	102
Nov-2005	102
Dec-2005	101

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Month	Gas Volume
Jan-2006	101
Feb-2006	101
Mar-2006	101
Apr-2006	100
May-2006	100
Jun-2006	100
Jul-2006	100
Aug-2006	99
Sep-2006	99
Oct-2006	99
Nov-2006	99
Dec-2006	98
Jan-2007	98
Feb-2007	98
Mar-2007	98
Apr-2007	97
May-2007	97
Jun-2007	97
Jul-2007	97
Aug-2007	96
Sep-2007	96
Oct-2007	96
Nov-2007	96
Dec-2007	95
Jan-2008	95
Feb-2008	95
Mar-2008	95
Apr-2008	94
May-2008	94
Jun-2008	94
Jul-2008	94
Aug-2008	94
Sep-2008	93
Oct-2008	93
Nov-2008	93
Dec-2008	93
Jan-2009	92

Month	Gas Volume
Feb-2009	92
Mar-2009	92
Apr-2009	92
May-2009	91
Jun-2009	91
Jul-2009	91
Aug-2009	91
Sep-2009	90
Oct-2009	90
Nov-2009	90
Dec-2009	90
Jan-2010	89
Feb-2010	89
Mar-2010	89
Apr-2010	89
May-2010	88
Jun-2010	88
Jul-2010	88
Aug-2010	88
Sep-2010	87
Oct-2010	87
Nov-2010	87
Dec-2010	87
Jan-2011	86
Feb-2011	86
Mar-2011	86
Apr-2011	86
May-2011	85
Jun-2011	85
Jul-2011	85
Aug-2011	85
Sep-2011	84
Oct-2011	84
Nov-2011	84
Dec-2011	84
Jan-2012	83

4/22/2004

McCulley LS 2
Future Production Decline Estimate
Pictured Cliffs Daily Rates

Feb-2012	83
Mar-2012	83
Apr-2012	83
May-2012	83
Jun-2012	83
Jul-2012	83
Aug-2012	82
Sep-2012	82
Oct-2012	82
Nov-2012	82
Dec-2012	82
Jan-2013	82
Feb-2013	82
Mar-2013	81
Apr-2013	81
May-2013	81
Jun-2013	81
Jul-2013	81
Aug-2013	81
Sep-2013	81
Oct-2013	80
Nov-2013	80
Dec-2013	80
Jan-2014	80
Feb-2014	80
Mar-2014	80
Apr-2014	80
May-2014	79
Jun-2014	79
Jul-2014	79
Aug-2014	79
Sep-2014	79
Oct-2014	79
Nov-2014	79
Dec-2014	78
Jan-2015	78
Feb-2015	78
Mar-2015	78
Apr-2015	78
May-2015	78
Jun-2015	78
Jul-2015	77
Aug-2015	77
Sep-2015	77
Oct-2015	77
Nov-2015	77
Dec-2015	77
Jan-2016	77
Feb-2016	76
Mar-2016	76
Apr-2016	76
May-2016	76
Jun-2016	76
Jul-2016	76
Aug-2016	76
Sep-2016	75
Oct-2016	75
Nov-2016	75
Dec-2016	75
Jan-2017	75
Feb-2017	75
Mar-2017	75
Apr-2017	74
May-2017	74
Jun-2017	74
Jul-2017	74
Aug-2017	74
Sep-2017	74
Oct-2017	74
Nov-2017	74
Dec-2017	73
Jan-2018	73