

DATE IN 4.5.05	SUSPENSE	ENGINEER jones	LOGGED IN 4.6.05	TYPE DHC	APP NO. PSEM05D9628471
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ABOVE THIS LINE FOR DIVISION USE ONLY

1244A

RECEIVED

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



APR 05 2005  
 OIL CONSERVATION  
 DIVISION

**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.

**Marv Corley**  
 Print or Type Name

*Marv Corley*  
 Signature

**Sr. Regulatory Analyst** **03/31/2005**  
 Title Date

**corleyml@bp.com**  
 e-mail Address

District I  
1625 N. French Drive, Hobbs, NM 88240  
2000  
District II  
811 South First Street, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Pools  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised May 15,

*DHC-1294A*

**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, New Mexico 87505

APPLICATION TYPE  
 Single Well  
 Establish Pre-Approved

**APPLICATION FOR DOWNHOLE COMMINGLING**

EXISTING WELLBORE  
 Yes  No

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

Operator **Jones A 1M** Address **Unit F Section 35 T29N, R08W** **San Juan** County  
Lease **000778** Well No. **000578** Unit Letter-Section-Township-Range **30-045-31720** Federal  State  Fee

DATA ELEMENT	UPPER ZONE <i>WALCO 1294A</i>	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	<del>Chacra</del> <b>Chacra</b>	<b>Blanco Mesaverde</b>	<b>Basin Dakota</b>
Pool Code	<del>82329</del> <b>96545</b>	<b>72319</b> ✓	<b>71599</b> ✓
Top & Bottom of Pay Section (Perforated or Open-Hole Interval)	<b>To Be Determined</b>	<b>4377' - 5157</b>	<b>7095' - 7313'</b>
Method of Production (Flowing or Artificial Lift)	<b>Artificial Lift</b>	<b>Artificial Lift</b>	<b>Artificial Lift</b>
Bottomhole Pressure		<b>430</b>	<b>590</b>
Oil Gravity or Gas BTU (Degree API or Gas BTU)		<b>950</b>	<b>950</b>
Producing, Shut-In or New Zone	<b>New Zone</b>	<b>Producing</b>	<b>Producing</b>
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?  
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes  No   
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 communitized 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 03/31/2005  
TYPE OR PRINT NAME Mary Corley TELEPHONE NO. ( 281 ) 366-4491

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

<sup>1</sup> API Number <b>30-045-31720</b>	<sup>2</sup> Pool Code <b>82329</b>	<sup>3</sup> Pool Name <b>Otero Chacra</b>
<sup>4</sup> Property Code <b>000578</b>	<sup>5</sup> Property Name <b>Jones A</b>	
<sup>7</sup> OGRID No. <b>000778</b>	<sup>8</sup> Operator Name <b>BP America Production Company</b>	<sup>6</sup> Well Number <b>1M</b>
		<sup>9</sup> Elevation

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet from	East/West	County
<b>F</b>	<b>35</b>	<b>29N</b>	<b>08W</b>		<b>1940</b>	<b>North</b>	<b>1640</b>	<b>West</b>	<b>San Juan</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

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

<sup>12</sup> Dedicated Acres <b>160</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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><sup>17</sup> OPERATOR CERTIFICATION 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> Signature</p> <p><b>Mary Corley</b> Printed Name</p> <p><b>Sr. Regulatory Analyst</b> Title</p> <p><b>3/31/2005</b> Date</p>
	<p><sup>18</sup> 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.</p> <p><b>5/19/2003</b> Date of Survey</p> <p>Signature and Seal of Professional Surveyor:  <b>Gary Vann 7016</b> Certificate Number</p>

Allocation Method  
Jones A 1M

BP America Production Company request permission to complete the subject well into the Otero Chacra and tricomingle production downhole with the existing Basin Dakota 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 Dakota 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 Dakota & 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 - 077123

**Jones A 1 M**  
**Procedure to Complete into the Chacra & DHC with Dakota & Mesaverde**  
**March 9, 2005**

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1. Perform pre-rig site inspection. Check for: size of location, Gas Taps, other wells, other operators, running equipment, wetlands, wash (dikes req.), H2S, barriers needed for equipment, Landowner issues, location of pits (buried lines in pits), Raptor nesting, critical location, check anchors. 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 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 exist 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. Nipple down Wellhead. NU BOPs and diversion spool with 3" outlets and 3" pipe to the blow tank. 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 rubber, pull tubing hanger up above pipe rams, and shut pipe rams. Remove stripping rubber. Strip tubing hanger out of hole. Re-install stripping rubber.
10. TOH and LD 2-3/8" production tubing currently set at 7280'. Using approved "Under Balance Well Control Tripping Procedure".
11. TIH w/ scraper for 4-1/2". 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 to PBTD at +7,296'. POOH.
12. Set bridge plug at 4,300'. Fill casing w/ 2%KCl and test to 2,500 psi w/ rig pumps.
13. RU E-line equipment. Pressure test lubricator and equipment. Log well w/ CBL from PBTD to 2500'. If TOC is below Chacra', contact engineer to discuss need for remedial cement squeeze.

14. TIH w/ workstring and blow well dry.
15. 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.
16. RIH with 3-1/8" casing guns w/lubricator. Perforate Chacra formation w/ 4 SPF.
17. NU Frac isolation equipment. Install and monitor production casing and treating pressure during entire job in frac van via pressure transducers on production casing and treating line. Spearhead 500 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Schlumberger schedule. Maintain surface pressures less than 3,000 psi during frac job. Flush frac with foam. Fill out GWSI scorecard.
18. Flowback frac immediately. Flow well through choke manifold on 1/4", 1/2" and 3/4" chokes increasing drawdown until well dies or stabilizes. This is to aid in reducing sand flowback. Recommend 8 hours of flow for each choke size.
19. Rig up air package/unit, pressure test all lines (Testing procedure to be supplied from air company), TIH with tubing and bit for 4-1/2" casing. Cleanout fill to top of BP set at 4,300'. **Perform well test on Chacra for regulatory and document well test in DIMS.**
20. Cleanout fill and BP set at 4,300'. Cleanout to PBTD at +/- 7,296'. Blow well dry.
21. Rabbit tubing and RIH with 2-3/8" production tubing (with muleshoe, F-nipple with plug, 4 ft pup, X-nipple with plug).
22. Land 2-3/8" production tubing at +/-5,760'. Lock down hanger.
23. 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.**
24. 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.
25. RU WL unit. Run gauge ring for 2-3/8" tubing. Pull plugs and set tubing stop for plunger. Communicate plunger equipment status to IC room personnel.
26. RD slickline unit.
27. Test well for air. Return well to production and downhole tri-mingle Chacra, Mesaverde, and Dakota.

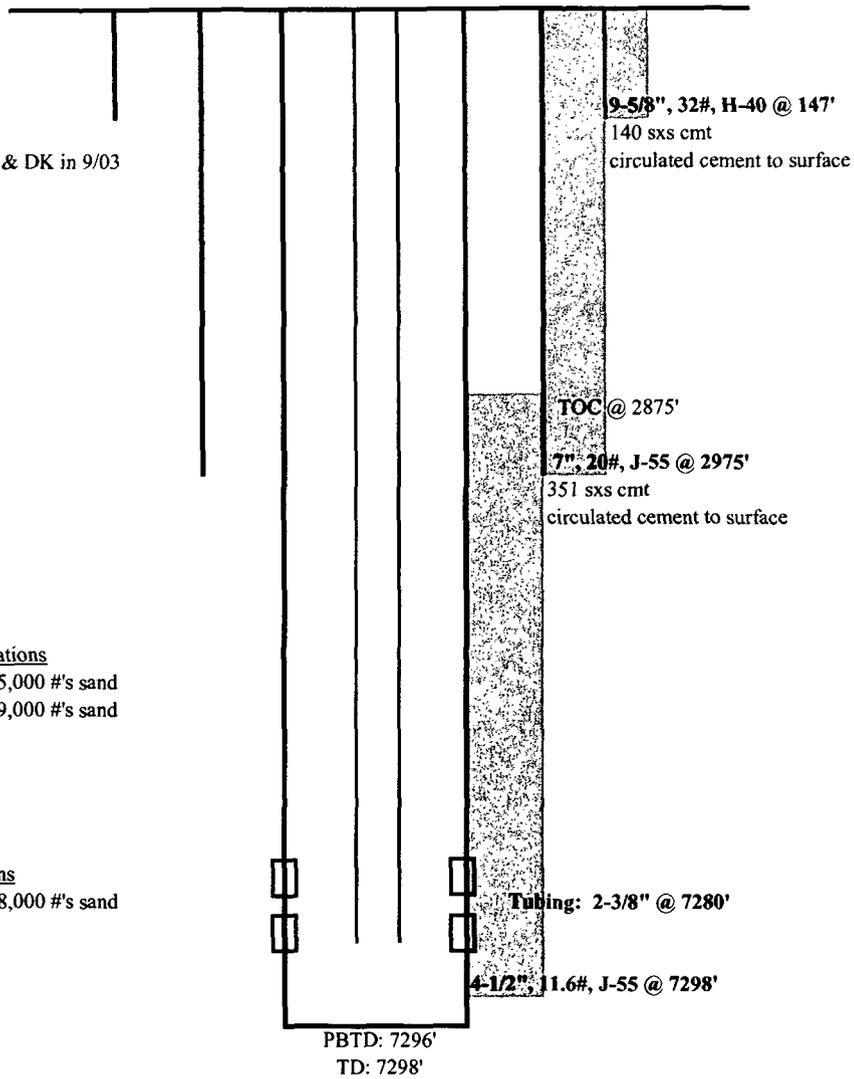
**Jones A 1 M**  
Sec 35, T29N, R9W  
API # 30-045-31720

GL: 6257'

History:  
Completed in MV & DK in 9/03

Mesaverde Perforations  
4377' - 4763' w/ 85,000 #'s sand  
4798' - 5157' w/ 89,000 #'s sand

Dakota Perforations  
7095' - 7313' w/ 48,000 #'s sand



updated: 3/9/05 CFR

# Jones A 1M Future Production Decline Estimate Mesaverde Daily Rates

$\ln(Q_f/Q_i) = -dt$   
 $Q_f = 266$   
 $Q_i = 278$   
 $rate = 266$   
 $time = 5$   
 $dt = -0.044124805$   
 $decline = -0.008824961$

Month	Gas Volume
Jan-2004	318
Feb-2004	440
Mar-2004	377
Apr-2004	341
May-2004	325
Jun-2004	290
Jul-2004	310
Aug-2004	278
Sep-2004	174
Oct-2004	410
Nov-2004	294
Dec-2004	266
Jan-2005	238
Feb-2005	219
Mar-2005	216
Apr-2005	214
May-2005	212
Jun-2005	210
Jul-2005	209
Aug-2005	207
Sep-2005	205
Oct-2005	203
Nov-2005	201
Dec-2005	200
Jan-2006	198
Feb-2006	196
Mar-2006	194
Apr-2006	193
May-2006	191
Jun-2006	189
Jul-2006	188
Aug-2006	186
Sep-2006	184
Oct-2006	183
Nov-2006	181
Dec-2006	179

Month	Gas Volume
Jan-2007	178
Feb-2007	176
Mar-2007	175
Apr-2007	173
May-2007	172
Jun-2007	170
Jul-2007	169
Aug-2007	167
Sep-2007	166
Oct-2007	164
Nov-2007	163
Dec-2007	161
Jan-2008	160
Feb-2008	159
Mar-2008	157
Apr-2008	156
May-2008	154
Jun-2008	153
Aug-2008	152
Sep-2008	150
Oct-2008	149
Nov-2008	148
Dec-2008	146
Jan-2009	145
Feb-2009	144
Mar-2009	143
Apr-2009	141
May-2009	140
Jun-2009	139
Jul-2009	138
Aug-2009	137
Sep-2009	135
Oct-2009	134
Nov-2009	133
Dec-2009	132
Jan-2010	131

Month	Gas Volume
Feb-2010	129
Mar-2010	128
Apr-2010	127
May-2010	126
Jun-2010	125
Jul-2010	124
Aug-2010	123
Sep-2010	122
Oct-2010	121
Nov-2010	120
Dec-2010	119
Jan-2011	117
Feb-2011	116
Mar-2011	115
Apr-2011	114
May-2011	113
Jun-2011	112
Jul-2011	111
Aug-2011	110
Sep-2011	109
Oct-2011	109
Nov-2011	108
Dec-2011	107
Jan-2012	106
Feb-2012	105
Mar-2012	104
Apr-2012	103
May-2012	102
Jun-2012	101
Jul-2012	100
Aug-2012	99
Sep-2012	98
Oct-2012	98
Nov-2012	97
Dec-2012	96
Jan-2013	95

**Jones A 1M**  
**Future Production Decline Estimate**  
**Mesaverde Daily Rates**

Month	Gas Volume	Month	Gas Volume
Feb-2013	94	Feb-2016	69
Mar-2013	93	Mar-2016	68
Apr-2013	93	Apr-2016	67
May-2013	92	May-2016	67
Jun-2013	91	Jun-2016	66
Jul-2013	90	Jul-2016	66
Aug-2013	89	Aug-2016	65
Sep-2013	89	Sep-2016	64
Oct-2013	88	Oct-2016	64
Nov-2013	87	Nov-2016	63
Dec-2013	86	Dec-2016	63
Jan-2014	86	Jan-2017	62
Feb-2014	85	Feb-2017	62
Mar-2014	84	Mar-2017	61
Apr-2014	83	Apr-2017	61
May-2014	83	May-2017	60
Jun-2014	82	Jun-2017	60
Jul-2014	81	Jul-2017	59
Aug-2014	80	Aug-2017	59
Sep-2014	80	Sep-2017	58
Oct-2014	79	Oct-2017	57
Nov-2014	78	Nov-2017	57
Dec-2014	78	Dec-2017	56
Jan-2015	77	Jan-2018	56
Feb-2015	76	Feb-2018	55
Mar-2015	76	Mar-2018	55
Apr-2015	75	Apr-2018	55
May-2015	74	May-2018	54
Jun-2015	74	Jun-2018	54
Jul-2015	73	Jul-2018	53
Aug-2015	72	Aug-2018	53
Sep-2015	72	Sep-2018	52
Oct-2015	71	Oct-2018	52
Nov-2015	70	Nov-2018	51
Dec-2015	70	Dec-2018	51
Jan-2016	69	Jan-2019	50

# Jones A 1M Future Production Decline Estimate Dakota Daily Rates

$\ln(Q_f/Q_i) = -dt$   
 $Q_f = 66$   
 $Q_i = 69$   
 $rate = 66$   
 $time = 5$   
 $dt = -0.0444451763$   
 $decline = -0.008890353$

Month	Gas Volume
Jan-2004	79
Feb-2004	109
Mar-2004	94
Apr-2004	85
May-2004	80
Jun-2004	72
Jul-2004	77
Aug-2004	69
Sep-2004	43
Oct-2004	102
Nov-2004	73
Dec-2004	66
Jan-2005	60
Feb-2005	55
Mar-2005	54
Apr-2005	54
May-2005	53
Jun-2005	53
Jul-2005	52
Aug-2005	52
Sep-2005	51
Oct-2005	51
Nov-2005	50
Dec-2005	50
Jan-2006	49
Feb-2006	49
Mar-2006	49
Apr-2006	48
May-2006	48
Jun-2006	47
Jul-2006	47
Aug-2006	46
Sep-2006	46
Oct-2006	46
Nov-2006	45
Dec-2006	45

Month	Gas Volume
Jan-2007	44
Feb-2007	44
Mar-2007	44
Apr-2007	43
May-2007	43
Jun-2007	42
Jul-2007	42
Aug-2007	42
Sep-2007	41
Oct-2007	41
Nov-2007	41
Dec-2007	40
Jan-2008	40
Feb-2008	40
Mar-2008	39
Apr-2008	39
May-2008	39
Jul-2008	38
Aug-2008	38
Sep-2008	38
Oct-2008	37
Nov-2008	37
Dec-2008	37
Jan-2009	36
Feb-2009	36
Mar-2009	36
Apr-2009	35
May-2009	35
Jun-2009	35
Jul-2009	34
Aug-2009	34
Sep-2009	34
Oct-2009	33
Nov-2009	33
Dec-2009	33
Jan-2010	33

Month	Gas Volume
Feb-2010	32
Mar-2010	32
Apr-2010	32
May-2010	31
Jun-2010	31
Jul-2010	31
Aug-2010	31
Sep-2010	30
Oct-2010	30
Nov-2010	30
Dec-2010	30
Jan-2011	29
Feb-2011	29
Mar-2011	29
Apr-2011	28
May-2011	28
Jun-2011	28
Jul-2011	28
Aug-2011	27
Sep-2011	27
Oct-2011	27
Nov-2011	27
Dec-2011	27
Jan-2012	26
Feb-2012	26
Mar-2012	26
Apr-2012	26
May-2012	25
Jun-2012	25
Jul-2012	25
Aug-2012	25
Sep-2012	24
Oct-2012	24
Nov-2012	24
Dec-2012	24
Jan-2013	24

**Jones A 1M**  
**Future Production Decline Estimate**  
**Dakota Daily Rates**

Month	Gas Volume
Feb-2013	23
Mar-2013	23
Apr-2013	23
May-2013	23
Jun-2013	23
Jul-2013	22
Aug-2013	22
Sep-2013	22
Oct-2013	22
Nov-2013	22
Dec-2013	21
Jan-2014	21
Feb-2014	21
Mar-2014	21
Apr-2014	21
May-2014	20
Jun-2014	20
Jul-2014	20
Aug-2014	20
Sep-2014	20
Oct-2014	20
Nov-2014	19
Dec-2014	19
Jan-2015	19
Feb-2015	19
Mar-2015	19
Apr-2015	19
May-2015	18
Jun-2015	18
Jul-2015	18
Aug-2015	18
Sep-2015	18
Oct-2015	18
Nov-2015	17
Dec-2015	17
Jan-2016	17

Month	Gas Volume
Feb-2016	17
Mar-2016	17
Apr-2016	17
May-2016	17
Jun-2016	16
Jul-2016	16
Aug-2016	16
Sep-2016	16
Oct-2016	16
Nov-2016	16
Dec-2016	16
Jan-2017	15
Feb-2017	15
Mar-2017	15
Apr-2017	15
May-2017	15
Jun-2017	15
Jul-2017	15
Aug-2017	14
Sep-2017	14
Oct-2017	14
Nov-2017	14
Dec-2017	14
Jan-2018	14
Feb-2018	14
Mar-2018	14
Apr-2018	13
May-2018	13
Jun-2018	13
Jul-2018	13
Aug-2018	13
Sep-2018	13
Oct-2018	13
Nov-2018	13
Dec-2018	13
Jan-2019	12