

State of New Mexico  
Energy, Minerals and Natural Resources Department

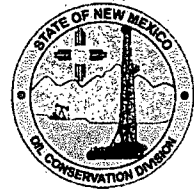
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**Susana Martinez**  
Governor

**John Bemis**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**Jami Bailey**  
Division Director  
Oil Conservation Division



Administrative Order DHC-4605

Order Date: 2/25/2013

Application Reference Number: pPRG1305160233

Logos Operating, LLC  
4001 N. Butler, Bldg 7101  
Farmington, NM 87401

Attention: John Akers

	Logos Well No. 3	
	API No: 30-043-21135	
	Unit letter P, Section 5, Township 22 North, Range 6 West, NMPM	
	Sandoval County, New Mexico	
Pool	WC 22N6W5; Dakota	Oil 97997
Names:	Wildcat; Gallup	Oil 96894
	Wildcat; Mesaverde	Oil 96900

Reference is made to your recent application for an exception to 19.15.12.9A NMAC of the Division Rules and Regulations to permit the above-described well to commingle production from the subject pools in the wellbore.

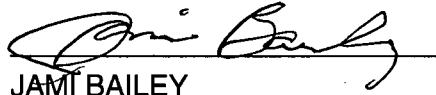
It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of 19.15.12.11A NMAC, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion or otherwise required separation of the zones is hereby placed in abeyance.

In accordance with 19.15.12.11A.(6) NMAC, the production attributed to any commingled pool within the well shall not exceed the allowable applicable to that pool.

The production allocation percentages of oil and gas between these pools shall be supplied to the Division's Santa Fe office within 60 days following completion of this well or workover.

**REMARKS:** The operator shall notify the Division's district office upon implementation of commingling operations.

Pursuant to 19.15.12.11B NMAC, the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

A handwritten signature in black ink, appearing to read "Jami Bailey", is written over a horizontal line.

JAMI BAILEY  
Director

JB/prg

cc: Oil Conservation Division – Aztec District Office  
Bureau of Land Management – Farmington Field Office

ABOVE THIS LINE FOR DIVISION USE ONLY

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



Logos Operating  
30-043-21135-  
Logos #3 00-00

**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.

John Austin Akers

Print or Type Name

Signature

VP. of Land

Title

02/18/2013

Date

aakers@logosresourcesllc.com

e-mail Address



4001 N. Butler Blvd. Bldg 7101  
Farmington, NM 87401  
Phone: (505) 436-2626  
Fax: (303) 974-1767

February 18, 2013

NMOCD- Santa Fe Office  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Sent Via US Overnight Mail**

**Re: Logos Operating, LLC  
Downhole Comingling Application Notice  
Logos No. 3 well  
API No. – 30-043-21135  
1263' FSL and 741' FEL (vertical)  
SE/4SE/4 Section 5, T22N, R6W  
Sandoval County, New Mexico**

To whom it may concern:

Enclosed please find a C-107A application and associated documents for the Logos No. 3 well. This application requests comingling of the following three pools:

- Mesa Verde (WC)- Oil
- Gallup (WC)- Oil
- Dakota (WC)- Oil

The Federal government owns 100% minerals in all depths in this well and has been notified of this application. All ownership is uniform across all depths. Furthermore, all pools have identical 40 acre spacing.

Should you have any concerns regarding this application please contact me at 303-550-1877 or [aakers@logosresourcesllc.com](mailto:aakers@logosresourcesllc.com)

Very truly yours,

A handwritten signature in black ink, appearing to read "John Austin Akers", written over a horizontal line.

John Austin Akers  
Vice President of Land  
Enclosures: C107A application

RECEIVED OGD  
2013 FEB 22 P 3:14



4001 N. Butler Ave  
Farmington, NM 87401  
Phone: (505) 215-8215  
Fax: (303) 974-1767

Date: February 18, 2013

To: NMOCD

Re: Logos #3 - Downhole Commingle Allocation

Dear NMOCD,

Logos Operating, LLC (OGRID 289408) proposes to downhole commingle the Logos #3 (API 30-043-21135) Dakota, Gallup, and Mesa Verde formations. The Logos #3 commingle proposal is based on the success obtained in the offset Logos #2 (API 30-043-21120) and Logos #1 (API 30-043-21119) which were commingled in the Dakota, Gallup, and Mesa Verde.

The allocation formula will be based on results obtained from the flowback operations after completion. The allocation will be adjusted approximately 6 months after completion which will allow sufficient time for the frac fluid to be recovered.

Logos Operating recommends using the flowback data and future swab data to create the allocations rather than using offset production data. The Mesa Verde productivity is highly discontinuous in the region and there is no close Dakota production in the region to base allocations on. The Logos #1 and Logos #2 offset wells do not have sufficient production data to use as allocation references since they have just recently recovered the majority of the frac fluid. The Logos #1 and Logos #2 allocation formulas have been approved to use flowback results and swab results for the allocation percentages; therefore, Logos Operating recommends using the same allocation methodology for Logos #3.

Regards,

A handwritten signature in black ink, appearing to read "David Gonzales", with a stylized flourish at the end.

David Gonzales  
Vice President of Operations

RECEIVED OGD  
2013 FEB 22 P 3:10

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-043-21135	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name Wildcat Mesa Verde
<sup>4</sup> Property Code 311963	<sup>5</sup> Property Name Logos	<sup>6</sup> Well Number 3
<sup>7</sup> OGRID No. 289408	<sup>8</sup> Operator Name Logos Operating, LLC	<sup>9</sup> Elevation 7181'

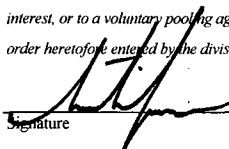
<sup>10</sup> Surface Location

UL or lot no. P	Section 5	Township 22N	Range 6W	Lot Idn P	Feet from the 741	North/South line South	Feet from the 1263	East/West line East	County Sandoval
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.

<div style="position: relative; height: 467px;"> <div style="position: absolute; bottom: 100px; left: 100px; border: 1px solid black; padding: 2px;">741'</div> <div style="position: absolute; bottom: 100px; left: 450px; border: 1px solid black; padding: 2px;">1263'</div> </div>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p><i>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 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.</i></p> <p style="text-align: right;">12/15/2013</p> <p>Signature  Date</p> <p>John Austin Akers- VP of Land Printed Name</p> <p>aakers@logosresourcesllc.com E-mail Address</p>	
	<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p><i>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.</i></p>	
	<p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>NOTE: THIS C-102 USES THE EXACT FOOTAGES FROM THE C-102 FILED COMPLETED BY DAVID RUSSELL ON OCTOBER 1, 2012. CERTIFICATE NO. 10201</p> <p>Certificate Number</p>	

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-043-21135	<sup>2</sup> Pool Code 97997	<sup>3</sup> Pool Name WC 22N6W5; DAKOTA (O)
<sup>4</sup> Property Code 311963	<sup>5</sup> Property Name Logos	
<sup>7</sup> OGRID No. 289408	<sup>8</sup> Operator Name Logos Operating, LLC	<sup>6</sup> Well Number 3
		<sup>9</sup> Elevation 7181'

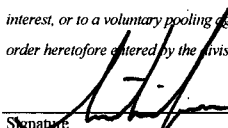
<sup>10</sup> Surface Location

UL or lot no. P	Section 5	Township 22N	Range 6W	Lot Idn P	Feet from the 741	North/South line South	Feet from the 1263	East/West line East	County Sandoval
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 40 <sup>13</sup> Joint or Infill <sup>14</sup> Consolidation Code <sup>15</sup> 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.

<div style="border: 1px solid black; height: 100px; width: 100%;"></div> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> 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 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.</p> <p style="text-align: right;">12/15/2013</p> <p>Signature:  Date</p> <p>John Austin Akers- VP of Land Printed Name</p> <p>aakers@logosresourcesllc.com E-mail Address</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>NOTE: THIS C-102 USES THE EXACT FOOTAGES FROM THE C-102 FILED COMPLETED BY DAVID RUSSELL ON OCTOBER 1, 2012. CERTIFICATE NO. 10201</p> <p>Certificate Number</p>
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741'

1263'

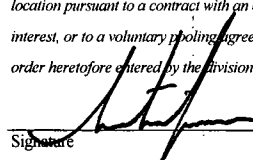
State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

<sup>1</sup> API Number 30-043-21135	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name Wildcat Gallup
<sup>4</sup> Property Code 311963	<sup>5</sup> Property Name Logos	<sup>6</sup> Well Number 3
<sup>7</sup> OGRID No. 289408	<sup>8</sup> Operator Name Logos Operating, LLC	<sup>9</sup> Elevation 7181'

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
P	5	22N	6W	P	741	South	1263	East	Sandoval

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.					

16					<b>17 OPERATOR CERTIFICATION</b> <i>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 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.</i>
					 Signature Date 12/15/2013 John Austin Akers- VP of Land Printed Name aakers@logosresourcesllc.com E-mail Address
					<b>18 SURVEYOR CERTIFICATION</b> <i>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.</i>
					Date of Survey Signature and Seal of Professional Surveyor: NOTE: THIS C-102 USES THE EXACT FOOTAGES FROM THE C-102 FILED COMPLETED BY DAVID RUSSELL ON OCTOBER 1, 2012. CERTIFICATE NO..10201 Certificate Number

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1000 Rio Brazos Road, Aztec, NM 87410

District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised August 1, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

APPLICATION TYPE  
☒ Single Well  
☐ Establish Pre-Approved Pools  
EXISTING WELLBORE  
☐ Yes ☒ No

APPLICATION FOR DOWNHOLE COMMINGLING

Logos Operating, LLC

4001 N. Butler, Bldg 7101 Farmington, NM 87401

Operator Address  
Logos #3 Unit Letter P, Section 5, T22N, R6W ~~Rio Arriba~~ Sandoval

Lease Well No. Unit Letter-Section-Township-Range County  
OGRID No. 289408 Property Code 311963 API No. 30-043-21135 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	WILDCAT MESA VERDE- OIL POOL NOT YET ASSIGNED	WILDCAT GALLUP - OIL POOL NOT YET ASSIGNED	WC22N6W5- DAKOTA OIL
Pool Code			13379
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	Est. 3727' - 3918'	Est. 5024' - 6223'	Est. 6236' - 6272'
Method of Production (Flowing or Artificial Lift)	Pumping	Pumping	Pumping
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	Est. 1600 psi	Est. 2000 psi	Est. 2700 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	Est. Oil Gravity 42	Est. Oil Gravity 38	Est. Oil Gravity 42
Producing, Shut-In or New Zone	New Zone	New Zone	New Zone
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Rates: Est. 15 bopd, Est. 5 mcf/d	Rates: Est. 40 bopd, Est. 70 mcf/d	Rates: Est. 20 bopd, Est. 60 mcf/d
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	The allocation of produced volumes will be based on flowback results and offset production data from the Logos 1 and Logos 2.	The allocation of produced volumes will be based on flowback results and offset production data from the Logos 1 and Logos 2.	The allocation of produced volumes will be based on flowback results and offset production data from the Logos 1 and Logos 2.

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  TITLE: VP of Land DATE 2/18/2013

TYPE OR PRINT NAME John Austin Akers TELEPHONE NO. ( 303 ) 550-1877  
E-MAIL ADDRESS aakers@logosresourcesllc.com