

RECEIVED: 7/30/2018	REVIEWER: MAN	TYPE: DHC	APP NO: D44M1821146173
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Geological & 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

**Applicant:** RKI Exploration & Production, LLC**OGRID Number:** 246289**Well Name:** Old Cavern Fee 1**API:** 30-015-42355**Pool:** Bone Spring; Purple Sage Wolfcamp Gas Pool**Pool Code:** Assigned by District (Bone Spring); 98220 (Wolfcamp)

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION  
 INDICATED BELOW**

**1) TYPE OF APPLICATION:** Check those which apply for [A]

A. Location - Spacing Unit - Simultaneous Dedication

☐ NSL☐ NSP (PROJECT AREA)☐ NSP (PRORATION UNIT)☐ SD

B. Check one only for [I] or [II]

[I] Commingling - Storage - Measurement

☒ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

[II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX☐ PMX☐ SWD☐ IPI☐ EOR☐ PPR

DHC-4846

**2) NOTIFICATION REQUIRED TO:** Check those which apply.A. ☐ Offset operators or lease holdersB. ☒ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☐ Notification and/or concurrent approval by SLOE. ☐ Notification and/or concurrent approval by BLMF. ☐ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐ Notice Complete☐ Application  
Content  
Complete

**3) 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.**

Ashlee Fechino

Print or Type Name

Signature

7/30/2018

Date

539.573.0212

Phone Number

ashlee.fechino@wpenergy.com

e-mail Address

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

District II  
811 S. First St., Artesia, NM 88210

District III  
1000 Rio Brazos Road, Artesia, NM 87410

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

Form C-107A  
Revised August 1, 2011

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

APPLICATION FOR DOWNHOLE COMMINGLING

Operator RKI Exploration & Production LLC Address 3500 One Williams Center, MD35, Tulsa, OK 74172  
Lease Old Cavern Fee Well No. 1 Unit Letter-Section-Township-Range K-Sec 32-22S-R27E County Eddy  
OGRID No. 246289 Property Code 313183 API No. 30-015-42355 Lease Type: ☐ Federal ☐ State ☒ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Bone Spring		Purple Sage Wolfcamp Gas Pool
Pool Code	District to Assign		98220
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	Top: 6,370' TVD Bottom: 8,800' TVD		Top: 8,845' TVD Bottom: 9,130' TVD
Method of Production (Flowing or Artificial Lift)	Free Flow -> Artificial Lift		Free Flow -> Artificial Lift
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)	4,450 psi		5,000 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	Oil Gravity: ~47 Gas BTU: ~1,300		Oil Gravity: ~47 Gas BTU: ~1,300
Producing, Shut-In or 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.)	N/A Date: Rates:	Date: Rates:	N/A Date: Rates:
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil      Gas 96 %      96 %	Oil      Gas %      %	Oil      Gas 4 %      4 %

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 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 Ashlee Fecchino TITLE Regulatory Team Lead DATE 7/30/2018

TYPE OR PRINT NAME Ashlee Fecchino TELEPHONE NO. ( 539 ) 573.0212

E-MAIL ADDRESS ashlee.fecchino@wpenergy.com

**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 AS DRILLED PLAT**

<sup>1</sup> API Number 30-015-42355	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name PUPLS SAGE WOLFCAMP GAS POOL
<sup>4</sup> Property Code 313183	<sup>5</sup> Property Name OLD CAVERN FEE	<sup>6</sup> Well Number 001
<sup>7</sup> OGRID No. 246289	<sup>8</sup> Operator Name RKI EXPLORATION & PRODUCTION, LLC	<sup>9</sup> Elevation 3,166'

<sup>10</sup> Surface Location

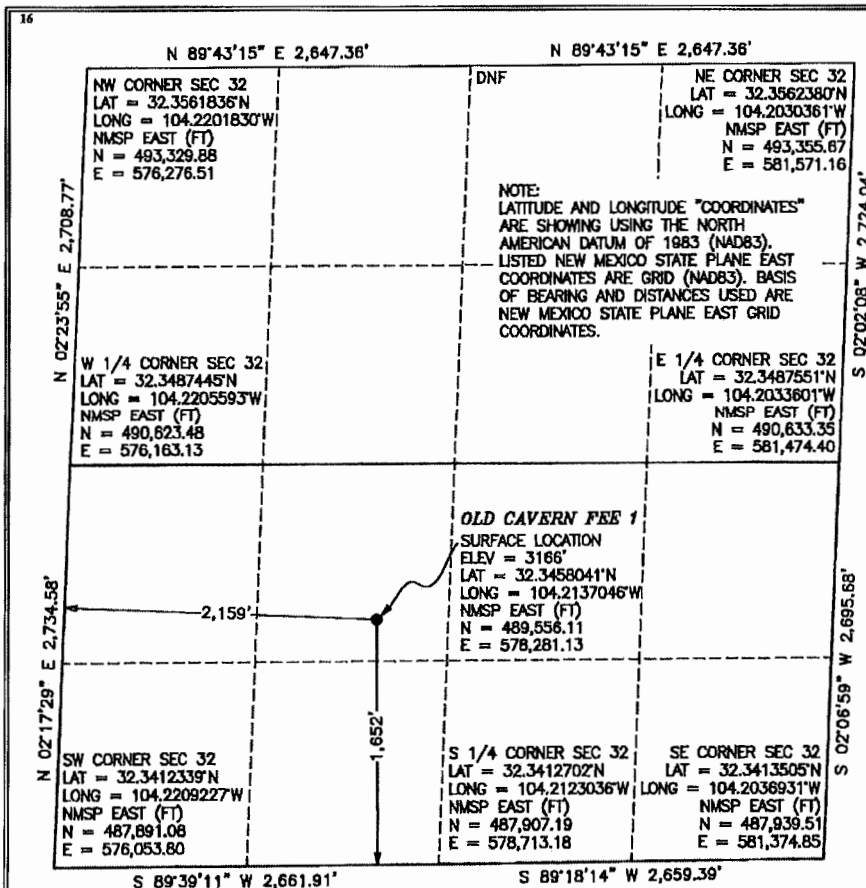
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	32	22S	27 E		1,652	SOUTH	2,159	WEST	EDDY

<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 320 AC. S/2	<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.



**<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, 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.

Signature: *Josh Walker* Date: 6/28/15

Printed Name: Josh Walker

Email Address: josh.walker@wpcenergy.com

**<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.

06-28-2018

Date of Survey

Signature and Seal of Professional Surveyor:

*Mark Dillon Harp*



MARK DILLON HARP 23786  
Certificate Number

DB/AW 2017030467

**District I**  
625 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**

**AS DRILLED PLAT**

<sup>1</sup> API Number 30-015-42355	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name BONE SPRING
<sup>4</sup> Property Code 313183	<sup>5</sup> Property Name OLD CAVERN FEE	<sup>6</sup> Well Number 001
<sup>7</sup> OGRID No. 246289	<sup>8</sup> Operator Name RKI EXPLORATION & PRODUCTION, LLC	<sup>9</sup> Elevation 3,166'

**<sup>10</sup> Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	32	22S	27 E		1,652	SOUTH	2,159	WEST	EDDY

**<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 AC. NE/SW	<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.

**16**

**17 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 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.

Signature: *Josh Walker* Date: 6/14/18  
Printed Name: Josh Walker  
E-mail Address: josh.walker@upenergy.com

**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.

06-07-2018  
Date of Survey  
Signature and Seal of Professional Surveyor: *Mark Dillon Harp*  
MARK DILLON HARP 23786  
Certificate Number DHJ/AW 2017030467

**17 OPERATOR CERTIFICATION**

**18 SURVEYOR CERTIFICATION**

## McMillan, Michael, EMNRD

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**From:** Fechino, Ashlee <Ashlee.Fechino@wpxenergy.com>  
**Sent:** Monday, July 30, 2018 1:22 PM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] RE: RKI - Downhole Commingling Applications

Hi Mike,

The ownership by pools is different.

This goes for the Skeleton Fee 1, Old Cavern Fee 1, and the Smedley Fee 1.

Thank you,

**Ashlee Fechino**  
W: 539.573.0212 | C: 970.404.5031

**From:** Fechino, Ashlee  
**Sent:** Monday, July 30, 2018 12:51 PM  
**To:** 'McMillan, Michael, EMNRD' <Michael.McMillan@state.nm.us>  
**Subject:** RE: [EXTERNAL] RE: RKI - Downhole Commingling Applications

Hi Mike,

Our Land team has indicated all three are potential compulsory poolings. We don't have a definitive answer, but as of today that is how our land team would represent them.

Thank you,

**Ashlee Fechino**  
Regulatory Team Lead  
WPX Energy – Permian Assets  
3500 One Williams Center MD 35 | Tulsa, OK 74172  
W: 539.573.0212 | C: 970.404.5031  
[ashlee.fechino@wpxenergy.com](mailto:ashlee.fechino@wpxenergy.com)  
[www.wpxenergy.com](http://www.wpxenergy.com)

**WPXENERGY.**

**From:** Fechino, Ashlee  
**Sent:** Monday, July 30, 2018 12:34 PM  
**To:** McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Subject:** RE: [EXTERNAL] RE: RKI - Downhole Commingling Applications

Hi Michael,

Attached are the 3 applications for:

- Smedley Fee 1 (API 30-015-42381)
- Skeleton Fee 1 (API 30-015-42249)
- Old Cavern Fee 1 (API 30-015-42355)

I'm checking with our land group on the compulsory pooling question. I will get back to you ASAP.

Thank you for your time reviewing. If you have any questions please let me know.

**Ashlee Fechino**

Regulatory Team Lead

WPX Energy – Permian Assets

3500 One Williams Center MD 35 | Tulsa, OK 74172

W: 539.573.0212 | C: 970.404.5031

[ashlee.fechino@wpxenergy.com](mailto:ashlee.fechino@wpxenergy.com)

[www.wpxenergy.com](http://www.wpxenergy.com)

**WPXENERGY.**

---

**From:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>

**Sent:** Monday, July 30, 2018 11:25 AM

**To:** Fechino, Ashlee <[Ashlee.Fechino@wpxenergy.com](mailto:Ashlee.Fechino@wpxenergy.com)>

**Subject:** [EXTERNAL] RE: RKI - Downhole Commingling Applications

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CAUTION: This email was sent from an EXTERNAL source. Use caution when clicking links or opening attachments.

---

E-mail me the application.

Was one of the applications subject to a compulsory pooling?

Mike

**From:** Fechino, Ashlee <[Ashlee.Fechino@wpxenergy.com](mailto:Ashlee.Fechino@wpxenergy.com)>

**Sent:** Monday, July 30, 2018 10:19 AM

**To:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>; Klein, Ranell, EMNRD <[Ranell.Klein@state.nm.us](mailto:Ranell.Klein@state.nm.us)>;

Podany, Raymond, EMNRD <[Raymond.Podany@state.nm.us](mailto:Raymond.Podany@state.nm.us)>

**Subject:** RKI - Downhole Commingling Applications

Michael, Rusty, and Ray,

RKI Exploration & Production, LLC is submitting 3 separate downhole commingling well applications to your attention for the following wells:

- Smedley Fee 1 (API 30-015-42381)
- Skeleton Fee 1 (API 30-015-42249)
- Old Cavern Fee 1 (API 30-015-42355)

**WPXENERGY**

July 30, 2018

Mr. Michael McMillan  
 Petroleum Engineer  
 New Mexico Oil Conservation Division (OCD)  
 New Mexico Energy, Mineral, and Natural Resources Department  
 1220 South St. Francis Dr.  
 Santa Fe, NM, 87505  
 505.476.3448

**RE: Old Cavern Fee 1 (API 30-015-42355) – Down Hole Commingling Application**

Dear Mr. McMillan,

RKI Exploration & Production LLC (OGRID# 246289) is applying to downhole commingling production from the Bone Spring and Wolfcamp (98220) Pool on the Old Cavern Fee 1 well.

The Artesia office has been assigning the pool number for the Bone Spring pool per project submittal; therefore, the pool number for Bone Spring is blank on this application.

The Old Cavern Fee 1 well has been drilled but is not yet completed. Estimated production rates and supporting data are attached.

Please find the following attached:

- Administrative Checklist
- Form C-107A
  - o Estimated Production Rates and Supporting Data
  - o Working, Royalty, and Overriding Royalty Notification list
  - o Proof of notification
- Form C-102 for Wolfcamp Pool
- Form C-102 for Bone Spring Pool
- Gas Capture Plan
- Proposed Completion Procedure



- Current Wellbore Diagram
- Proposed Wellbore Diagram

Thank you for your time reviewing our request.

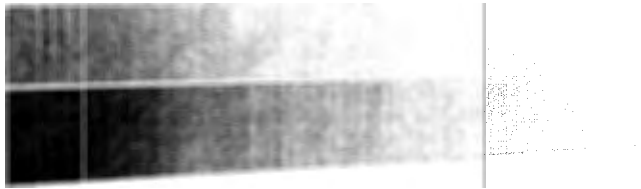
Sincerely,

A handwritten signature in black ink that reads "Ashlee Fechino". The signature is written in a cursive, flowing style.

Ashlee Fechino  
Regulatory Team lead  
[ashlee.fechino@wpxenergy.com](mailto:ashlee.fechino@wpxenergy.com)

cc     *Ray Podeny, OCD Artesia*  
       *Rusty Klein, OCD Artesia*



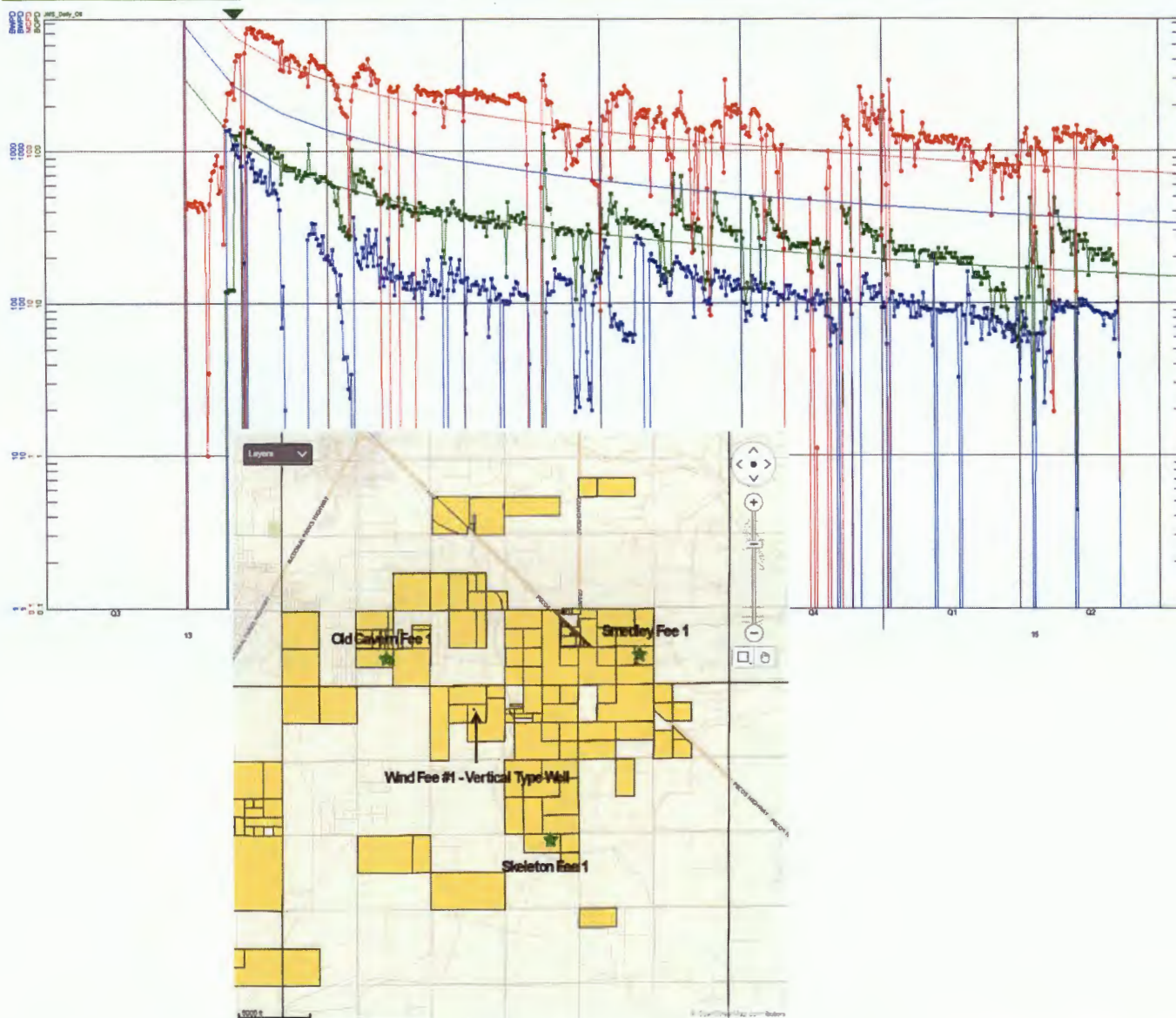


FORM C-107A



**PRODUCTION ESTIMATES**

# Production Estimation – Rustler Breaks Vertical DUCs



## Rustler Breaks Vertical DUCs

EUR oil, MBO	60.103
Peak rate 30, BOPD	106
Di, %/yr	82
Dmin, %/yr	6
B factor	1.3
Qf, BOPD	6
EUR, gas MMcfd	270
Peak rate 30, Mcfd	509
EUR water, MBW	805
WOR, bbl/stb	7
EUR MBOE	104

The logo for WPX Energy, featuring the company name in a bold, sans-serif font. Below the text is a stylized graphic element consisting of a thick, dark horizontal bar that tapers to the right, resembling a lightning bolt or a stylized 'W'.

#### **PRODUCTION ALLOCATIONS**

Allocation was determined based on the analysis of historical production allocation tests from the Derrick Fee 1 (API 30-015-40817) which has been applied to surrounding wells being downhole commingled in the same pools such as the Marvel Fee 1 (DHC-4765).

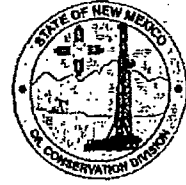
State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

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

David R. Catanach, Division Director  
Oil Conservation Division



Administrative Order DHC-4765

Order Date: May 13, 2015

Application Reference Number: pMAM1513329314

Mack Energy Corporation  
P. O. Box 960  
Artesia, New Mexico 88211-0960

Attention: Deana Weaver

Marvel Fee Well No. 1  
API No. 30-015-41922  
Unit F, Section 1, Township 23 South, Range 27 East NMPM  
Eddy County, New Mexico

Pool	CASS DRAW; BONE SPRING	Oil (10380)
Names:	WC-015 G-06 S232704H; UPPER WOLFCAMP	Oil (98125)

Reference is made to your recent application for an exception to Division Rule 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 appears that the subject well qualifies for approval for such exception pursuant to the provisions of Division Rule 19.15.12.11A. NMAC, and since 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 Division Rule 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.

As per the application, the assignment of allowable and allocation of oil production from the subject well shall be based on the analysis of the historical production from a surrounding well in the same pools.

Assignment of allowable and allocation of production from the well shall be as follows:

CASS DRAW; BONE SPRING (OIL) POOL	Pct. Oil: 96	Pct. Gas: 96
WC-015 G-06 S232704H; UPPER WOLFCAMP (OIL) POOL	Pct. Oil: 4	Pct. Gas: 4

It is also understood that notice of this application, pursuant to Division Rule 19.15.4.12A.(6), is not required since the interest ownership between the zones to be commingled is common throughout.

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

Pursuant to Division Rule 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.



David R. Catanach  
Director

DRC/mam

cc: New Mexico Oil Conservation Division – Artesia

SCANNED

Michael,

Mack Energy has perforated and produced some of our wells in the Carlsbad area. It was discovered that the bottom section of perforations were actually in the Wolfcamp formation. After meeting with Paul Kautz and Randy Dade to discuss this issue, we agreed to test one of the wells (Derrick Fee #1) and use this data for all wells within this area.

The water analysis for the Den SWD #1 and Spoon SWD #1 is attached.

Isolated Wolfcamp perms, Bone Spring Production Only

Date:	Oil	Gas	Water
3/22/2015	22	154	87
3/23/2015	25	152	127
3/24/2015	25	152	117
3/25/2015	22	161	119
3/26/2015	25	134	111
3/27/2015	22	140	141
3/28/2015	25	152	85

Commingled Wolfcamp and Bone Spring

Date:	Oil	Gas	Water
4/30/2015	28	153	146
5/1/2015	22	153	162
5/2/2015	25	161	236
5/3/2015	25	159	150

Commingled Bone Spring and Wolfcamp Avg:

Avg: 25 Oil, 157 MCF, 173 Water

Bone Spring Only Avg:

Avg: 24 Oil, 149 MCF, 112 Water

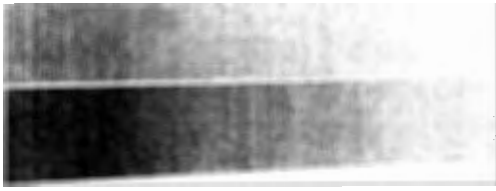
Avg: 96% Oil

Wolfcamp Only Avg:

Avg: 1 Oil, 8 MCF, 61 Water

Avg: 4% Oil

SCANNED



## NOTIFICATIONS

- Working, Royalty, and Overriding Royalty Notification list
- Proof of notification



# Affidavit of Publication

No. 24772

State of New Mexico

County of Eddy

Danny Scott

being duly sworn says that she is the

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

## Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for 1 Consecutive weeks/day on the same day as follows:

First Publication July 29, 2018

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

30th day of July 2018



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2019

*Latisha Romine*

Latisha Romine

Notary Public, Eddy County, New Mexico

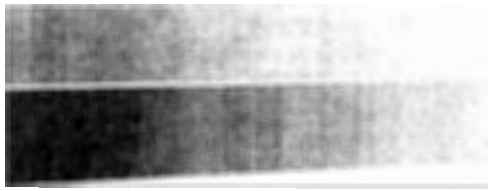
# Copy of Publication:

## Legal Notice

### Notice of Application for Downhole Commingling Application

RKI Exploration & Production LLC (RKI), located at 3500 One Williams Center, MD 35, Tulsa, OK 74172, is applying to the State of New Mexico Oil Conservation Division for a permit to downhole commingle production from the Bone Spring pool and Purple Sage Wolfcamp Gas pool on the Old Cavern Fee 1 well (API 30-015-42355). The upper zone Bone Spring interval is 6,370' - 8,800' TVD. The lower zone Purple Sage Wolfcamp Gas Pool interval is 8,845' - 9,130' TVD. This well will be located at 1,652' FSL, 2,159' FWL, Section 32, Township 22S, Range 27E, Eddy County, New Mexico. This notice is being made for all working, royalty, and overriding royalty interest owners in the commingled zones. Objection to this application may be made within 20 days of this publication to the State of New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505. Questions regarding this application may be directed to Ashlee Fechino, RKI Regulatory Team Lead, 539.573.0212.

Published in the Artesia Daily Press, Artesia, N.M., July 29, 2018 Legal No. 24772.



COPY OF NOTIFICATION LETTER

July 30, 2018

Ashlee Fechino  
Regulatory Team Lead  
3500 One Williams Center, MD 35  
Tulsa, OK 74172  
(539) 573-0212  
[ashlee.fechino@wpxenergy.com](mailto:ashlee.fechino@wpxenergy.com)

***Sent via Certified Mail, Return Receipt Requested***

Sir or Madam:

RKI Exploration & Production LLC (RKI), located at 3500 One Williams Center, MD 35, Tulsa, OK 74172, is applying to the State of New Mexico Oil Conservation Division for a permit to downhole commingle production from the Bone Spring pool and Purple Sage Wolfcamp Gas pool on the Old Cavern Fee 1 well (API 30-015-42355). The upper zone Bone Spring interval is 6,370' – 8,800 TVD. The lower zone Purple Sage Wolfcamp Gas Pool interval is 8,845' – 9,130' TVD. This well will be located at 1,652' FSL, 2,159' FWL, Section 32, Township 22S, Range 27E, Eddy County, New Mexico.

This notice is being made for all working, royalty, and overriding royalty interest owners in the commingled zones. Objection to this application may be made within 20 days of this publication to the State of New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505. Questions regarding this application may be directed to Ashlee Fechino, RKI Regulatory Team Lead, 539.573.0212.

Sincerely,

Ashlee Fechino

*Enclosure – Old Cavern Fee 1 Downhole Commingling Application*

Old Cavern Fee 1 – Notification List

Charlotte Susan Baxley and Montie Joe Baxley  
1200 North Thorp  
Hobbs, NM 88240

**7018 0680 0000 0726 7367**

Patricia Ann Davis and Charles Mason Davis  
1736 Valencia Dr.  
Las Cruces, NM 88001

**7018 0680 0000 0726 7350**

Paulette Burkham and Sammy M. Burkham  
75 East London Road  
Loving, NM 88256

**7018 0680 0000 0726 7343**

James A. Davis  
PO Box 3328  
Hobbs, NM 88241

**7018 0680 0000 0726 7268**

Pete M. Turner and Mary Jo Davis  
320 West Clearfork Dr.  
Hobbs, NM 88240

**7018 0680 0000 0726 7251**

William Benjamin Davis and Ima Gene Davis  
1204 South Country Club Circle  
Carlsbad, NM 88220

**7018 0680 0000 0726 7237**

Robert Allen Davis and Retha Denise Davis  
721 E. Hopi Road  
Carlsbad, NM 88220

**7018 0680 0000 0726 7220**

Heirs of Frederick William Petersen and Marlene Frances "Emmie" Mecke Petersen  
139 S. Nebraska Ave.  
Minden, NE 68959

**7018 0680 0000 0726 7244**

Kathy Marie Votaw Dubs  
4910 Custer Ave.  
Billings, MT 59106

**7018 0680 0000 0726 7213**

Kerri Votaw Kliewer  
1120 18th St.  
Henderson, NE 68371

**7018 0680 0000 0726 7206**

Dennis L. Sivits  
3514 Clinton Pkwy #419A  
Lawrence, KS 66047

**7018 0680 0000 0726 7190**

Old Cavern Fee 1 – Notification List

Amy M. Litteral  
5878 Ambau Rd.  
Spring Grove, PA 17362

**7018 0680 0000 0726 7183**

Jo Beth Elliot  
12823 W. 99th St.  
Lexena, KS 66215

**7018 0680 0000 0726 7176**

Estates of Laverne E. Sivits and Juanita M. Sivits  
Dennis L. Sivits  
3514 Clinton Pkwy #419A  
Lawrence, KS 66047

**7018 0680 0000 0726 7152**

Heirs of Frantz William Hansen, Deceased  
Address of Jean Marie Hansen:  
877 Pinehurst Ln.  
Akron, OH 44313

**7018 0680 0000 0726 7169**

Bibiana Bacon Fordyce  
PO Box 900  
Los Olivos, CA 93441

**7018 0680 0000 0726 7145**

John Erle Bacon  
1901 Fort Union Dr.  
Santa Fe, NM 87505

**7018 0680 0000 0726 7138**

Susan E. Fredrickson  
1046 Miramonte #8  
Santa Barbara, CA 93109

**7018 0680 0000 0726 7336**

Bonnie Larson  
1901 Fort Union Dr.  
Santa Fe, NM 87505

**7018 0680 0000 0726 7329**

David E. Evans & Christine B. Evans  
2425 Dublin Court  
Reno, NV 89509

**7018 0680 0000 0726 7312**

Jonathon B. Kocher  
PO Box 78  
Brazil, Indiana 47834

**7018 0680 0000 0726 7305**

Laura Louise Kusnierek and Christopher B. Kusnierek  
1780 North Bay  
Elkhart, IN 46514

**7018 0680 0000 0726 7299**

Old Cavern Fee 1 – Notification List

Legacy Royalty LLC  
PO Box 1091  
Artesia, NM 88211

**7018 0680 0000 0726 7282**

The Robert P. Bryon & Jeannine Hooper Bryon Revocable Trust  
PO Box 1562  
Roswell, NM 88202

**7018 0680 0000 0726 7275**

Roy G. Barton & Claudia Barton  
1919 North Tuner  
Hobbs, NM 88240

**7018 0680 0000 0726 7404**

Sharbro Holdings LLC  
PO Box 840  
Artesia, NM 88211

**7018 0680 0000 0726 7411**

Todd Ronald Foeckler  
55 South Harding Street, Unit 1-A  
Indianapolis, IN 46222

**7018 0680 0000 0726 7435**

EOG M Resources Inc  
104 S. 4<sup>th</sup> St.  
Artesia, NM 88210

**7018 0680 0000 0726 7442**

EOG Y Resources Inc  
104 S. 4<sup>th</sup> St.  
Artesia, NM 88210

**7018 0680 0000 0726 7473**

Fort Worth Mineral Co. LLC  
500 Main Street STE 1200  
Fort Worth, TX 76102

**7018 0680 0000 0726 7480**

Panhandle Properties, LLC  
PO Box 647  
Artesia, New Mexico 88211

**7018 0680 0000 0726 7497**

Xplor Resources, LLC  
1104 N. Shore Dr.  
Carlsbad, NM 88220

**7018 0680 0000 0726 0015**

Ross Duncan Properties LLC  
PO Box 647  
Artesia, NM 88211

**7018 0680 0000 0726 0022**

Old Cavern Fee 1 – Notification List

Tularosa Mineral Company, LLC

PO Box 471349

Fort Worth, TX 76147

**7018 0680 0000 0726 5218**

Flat Rock Royalties, LLC

PO Box 1287

Artesia, NM 88211

**7018 0680 0000 0726 5225**

Marathon Oil Permian, LLC

5555 San Felipe Street

Houston, TX 77056

**7018 0680 0000 0726 5232**

Scratch Properties, LLC

PO Box 1287

Artesia, NM 88211

**7018 0680 0000 0726 5244**

Streambed Holdings, LLC

4455 Camp Bowie Blvd., Ste 114, Box 128

Fort Worth, TX 76107

**7018 0680 0000 0726 5256**

Novo Oil & Gas, LLC

105 N. Hudson Avenue, Suite 500,

Oklahoma City, OK

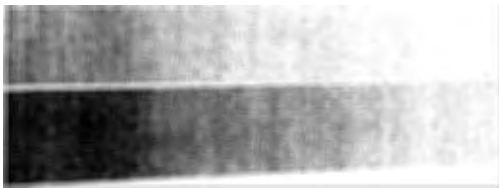
**7018 0680 0000 0726 5270**

Yates Industries LLC

PO Box 1091

Artesia, NM 88211

**7018 0680 0000 0726 5287**



**FORM C-102**

- Form C-102 for Wolfcamp Pool
- Form C-102 for Bone Spring Pool

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 AS DRILLED PLAT

<sup>1</sup> API Number 30-015-42355	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name PUPLS SAGE WOLF CAMP GAS POOL
<sup>4</sup> Property Code 313183	<sup>5</sup> Property Name OLD CAVERN FEE	<sup>6</sup> Well Number 001
<sup>7</sup> OGRID No. 246289	<sup>8</sup> Operator Name RKI EXPLORATION & PRODUCTION, LLC	<sup>9</sup> Elevation 3,166'

<sup>10</sup> Surface Location

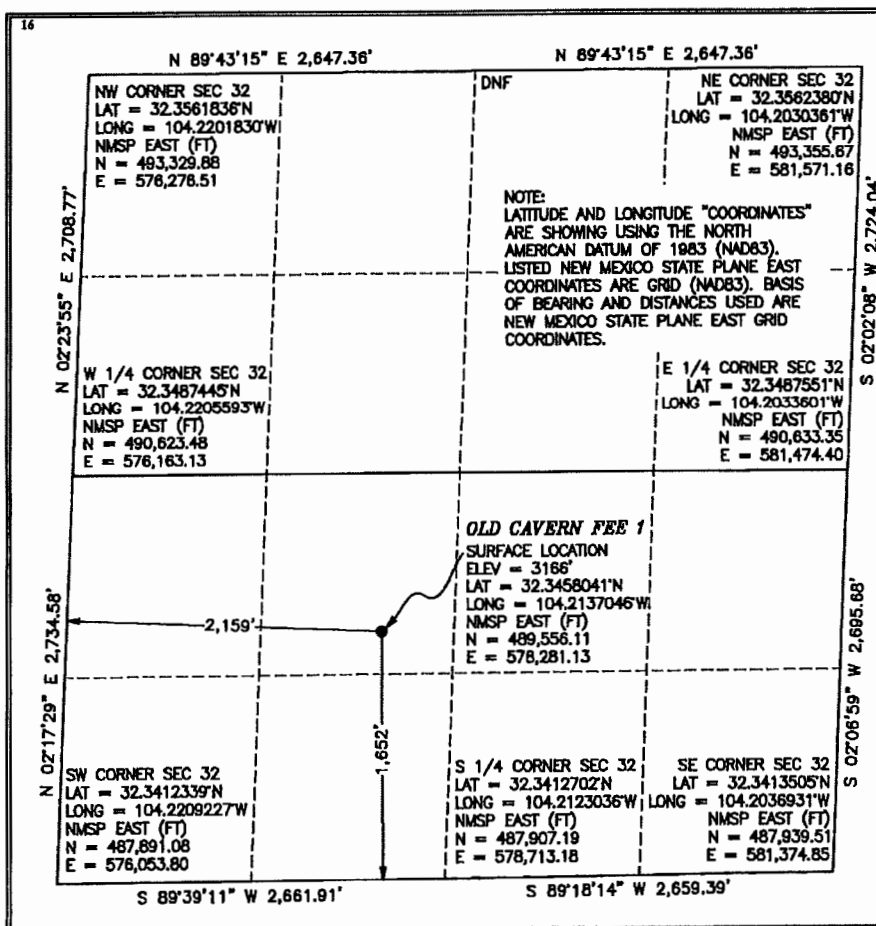
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	32	22S	27 E		1,652	SOUTH	2,159	WEST	EDDY

<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 320 AC. S/2	<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.



**17 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 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.

Signature: *Josh Walker* Date: 6/28/18  
Printed Name: Josh Walker  
Email Address: josh.walker@wpcenergy.com

**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.

06-28-2018  
Date of Survey  
Signature and Seal of Professional Surveyor: *Mark Dillon Harp*  
MARK DILLON HARP 23786  
Certificate Number  
DIH/AW 2017030467



**District I**  
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1000 Rio Brazos Road, Aztec, NM 87410  
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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**

**AS DRILLED PLAT**

<sup>1</sup> API Number 30-015-42355		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name BONE SPRING	
<sup>4</sup> Property Code 313183		<sup>5</sup> Property Name OLD CAVERN FEE			<sup>6</sup> Well Number 001
<sup>7</sup> OGRID No. 246289		<sup>8</sup> Operator Name RKI EXPLORATION & PRODUCTION, LLC			<sup>9</sup> Elevation 3,166'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	32	22S	27 E		1,652	SOUTH	2,159	WEST	EDDY

<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 AC. NE/SW	<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.

**16**

**17 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 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.

Signature: Josh Walker Date: 6/14/18

Printed Name: Josh Walker

E-mail Address: josh.walker@rpkenergy.com

**18 SURVEYOR CERTIFICATION**

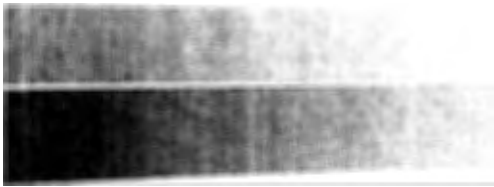
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

06-07-2018  
Date of Survey

Signature and Seal of Professional Surveyor: [Signature]

MARK DILLON HARP 23786  
Certificate Number

DH/AW 2017030467



## GAS CAPTURE PLAN

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit Original  
to Appropriate  
District Office

### GAS CAPTURE PLAN

Date: 6/14/2018

☒ Original Operator & OGRID No.: RKI Exploration & Production, LLC  
246289  
☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

#### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location	Footages	Expected MCF/D	Flared or Vented	Comments
Smedley Fee #1	30-015-42381	35-22S-27E	2161' FSL 1481' FEL	300	0% flared	
Old Cavern Fee #1	30-015-42355	32-22S-27E	1650' FSL 2160' FWL	300	0% flared	

#### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to N/A and will be connected to DCP Midstream, LP low/high pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. WPX Energy Permian, LLC provides (periodically) to DCP Midstream, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, WPX Energy Permian, LLC and DCP Midstream, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP Midstream, LP Processing Plant located: See Below. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP Midstream, LP system at that time. Based on current information, it is WPX Energy Permian, LLC belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**WPX Energy Permian, LLC:**

**Gas Capture Plan:** DCP Midstream, LP Processing Plant Information

WPX Energy Permian, LLC has the ability to deliver to the below listed Gas Processing Plants.

Zia II – Sec. 19 T19S R32E Lea Co., NM



## COMPLETION/COMMINGLED PROCEDURE



## Old Cavern FEE#1 Completion Procedure

Eddy County, New Mexico  
API # 30-015-42355

**KBE:** 3182.5'  
**GLE:** 3165'  
**KB-GL** 17.5'  
**TD:** 9160' (MD):  
**PBTD:**  
**BHT:** 155°F

### **CASING SUMMARY:**

#### **Safety Factor of 90%**

Size	Depth (ft)	Weight (#/ft)	Grade psi	Capacity (bbls/ft)	ID (in)	Drift (in)	Burst (psi)	Collapse (psi)	Tension (lbs)
13-3/8"	418'	48	H-40	0.1571	12.715	12.559	1,557	665	486,900
9-5/8"	1756'	36	J-55	0.0773	8.921	8.765	3,168	1,818	507,600
7"	9160'	26	HCP-110	0.0382	6.276	6.151	8,955	7,020	747,000

### **WELLHEAD:**

7 1/16" 10M Tubing Head

### **PROCEDURE:**

- 1) NU dry hole tree, NU and test 10K fracstack encompassing (bottom to top):
  - a. 7-1/16" 10M manual master valve
  - b. 7-1/16" 10M manual working valve
  - c. 1 Flowback wing with 2 4-1/16" 10K manual valves with 2" 1502 looking out
  - d. 10M frac goat-head
  - e. 10M 7-1/16" Manual valve with 10M WLA
- 2) Test all valves to 9000psi
- 3) MIRU Wireline unit and RIH with gauge ring and junk basket to TD
- 4) MIRU pump truck and pressure test lines to 10000psi,
- 5) RIH with RBL at 2000psi from TD to 500ft above TOC

- 6) Upon approval from engineer, perform a soft casing pressure test to 1000psi for 5min followed by a high pressure test to 7800psi and chart for 30min
- 7) RIH with Gamma and 4" guns loaded 2spf with 22.7 gram charges 180 deg phasing on wireline, correlate to SLB OH log dated 01/16/2015 and perforate stage-1 as per the perf table below. POOH LD perf tools and lubricator and verify that all shots fired
- 8) Establish injection at 2bpm until formation breaks down, increase rate to 5bpm and pump 1000gal of 7.5% NEFE, displace acid at 6500 psi max, over displace 50bbl and shut down. Record ISIP, 5,10,15.
- 9)
- 10)RU 5K lubricator on top of upper manual valve and test to 250 psi low and 8,000 psi high. RIH with 3 1/8" guns loaded with 22.7 gram Hunting/Titan EXP 3323-301T charges, 0.40 EHD, 35.60" pen and 90° phasing on wireline and perforate Stage #1 perforations as listed on following page. POOH, ensure all shots fired.
- 11)MIRU frac equipment, pressure test lines to 9000psi
- 12)Frac stage-1 per attached pump schedule
- 13)RIH on wireline, plug & perf stage-2 per perf table below
- 14)Repeat steps 12 and 13 until all 5 stages are complete
- 15)RDMO frac and wireline equipment
- 16)MIRU CT Unit. RIH with drillout BHA, drill plugs out and clean wellbore to PBTD
- 17)RDMO CT unit
- 18)MIRU WO unit,
- 19)Install tubing and AL per production department AL design
- 20)Install production tree,
- 21)Turn well over to production dpt

**Perf table:**

<b><u>Stage</u></b>	<b><u>Plug Depth</u></b>	<b><u>Top MD</u></b>	<b><u>Btm MD</u></b>	<b><u>Feet</u></b>	<b><u>SPF</u></b>	<b><u>Shots</u></b>	<b><u>Phasing</u></b>
1		9125	9127	2	2	4	180°
		9035	9037	2	2	4	180°
		8939	8943	4	2	8	180°
		8873	8876	3	2	6	180°
2		8715	8721	6	2	12	180°
		8542	8546	4	2	8	180°
3	8500	8428	8430	2	2	4	180°
		8315	8320	5	2	10	180°
		8153	8158	5	2	10	180°
		7925	7928	3	2	6	180°
4	7500	7070	7075	5	2	10	180°
		6982	6987	5	2	10	180°
5	6900	6583	6588	5	2	10	180°
		6495	6500	5	2	10	180°
		6405	6407	2	2	4	180°

### Pump Schedule: Stages 1 to 5

Stage Name	Pump Rate (bbl/min)	Stage Fluid			Proppant				Stage Time (min.)
		Fluid Type	Stage Volume (gal)	Stage Volume bbls	Total Vol (%)	WellHead Prop Conc. (PPG)	Stage Prop (LBS)	Percent Total Prop (%)	Cum Prop (LBS)
Injection	10	Slick Water	1,000	24	0%		0		2.4
Acidize	10	7.5% HCl	1,000	24	0%		0		2.4
Displace	50	Slick Water	27,600	657	11%		0		13.1
ISIP	0			0			0		2.0
Pad	50	Slick Water	10,000	238	4%		0		4.8
100 Mesh	50	Slick Water	10,000	238	4%	0.25	2,500	1%	2500
100 Mesh	50	Slick Water	15,000	357	6%	0.50	7,500	3%	10000
100 Mesh	50	Slick Water	15,000	357	6%	0.75	11,250	4%	21250
100 Mesh	50	Slick Water	15,000	357	6%	1.00	15,000	5%	36250
100 Mesh	50	Slick Water	20,000	476	8%	1.25	25,000	8%	61250
100 Mesh	50	Slick Water	25,000	595	10%	1.50	37,500	13%	98750
100 Mesh	50	Slick Water	25,000	595	10%	1.75	43,750	15%	142500
100 Mesh	50	Slick Water	25,000	595	10%	2.00	50,000	17%	192500
100 Mesh	50	Slick Water	25,000	595	10%	2.25	56,250	19%	248750
100 Mesh	50	Slick Water	20,500	488	8%	2.50	51,250	17%	300000
Flush *	50	Slick Water	22,731	541	9%		0	0%	10.8
<b>Total Volume</b>			<b>257,831</b>	<b>6,139</b>			<b>300,000</b>		<b>2.25 hrs.</b>
Acid Volume			1000						
Volume minus Acid			256,831						
Water Loading				1065					
Sand Loading				1244					
avg PPG				1.17					
							300,000	Total Prop	
							300,000	100 Mesh	100%
							.0 loads	40/70 Sand	0%
							.0 loads	30/50 Sand	0%

### Emergency Contacts – New Mexico:

Hospital: Carlsbad Medical Center  
(575) 887-4100  
2430 W. Pierce St., Carlsbad, NM 88220

Sheriff's Office: Lea County Sheriff Dept  
(575) 396-3611

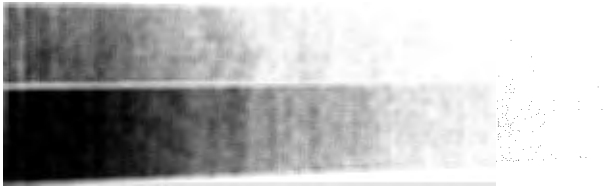
Eddy County Sheriff Dept  
(575) 887-7551

### Emergency Contacts – Texas:

Hospital: Reeves County Hospital  
(432) 447-3551  
2323 Texas St, Pecos TX 79772

Sheriff's Office: Reeves County Sheriff Dept  
(432) 445-4901  
Loving County Sheriff Dept  
(432) 377-2411





**CURRENT WELLBORE DIAGRAM**

**WELLBORE DIAGRAM (DUC)**

WELL:	Old Cavern Fee #1	EU NUMBER:	62459707	SPUD DATE:	6/26/2014
COUNTY:	Eddy	OPERATOR:	WPX Energy	TD:	9,160' MD (KB)
STATE:	New Mexico	WT:	100%	TVD:	- TVD (KB)
API:	30-015-42355	NRI:	75%	PBTD:	MD (KB)
LOCATION:	Sec. 32 - T22S - R27E			KB ELEVATION:	3,182.5' (17.5' KB)
FIELD / AREA:	Rustler Breaks			GL ELEVATION:	3,165.0'
FORMATION:	Bone Springs/Upper Wolfcamp			SURFACE LAT/LONG:	

13-3/8" @ 418' (MD)

### CASING RECORD

SURFACE CASING											
O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.	FC (top)	FS (top)
13-3/8"	48.00#	H-40		0'	418'	10	17-1/2"	470	0'	-	-

\*Circ 163sx to surface

### INTERMEDIATE CASING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT	FC (top)	FS (top)
9-5/8"	36.00#	J-55		0'	1,756'	41	12-1/4"	600	0'	-	-

\*Circ 180sx to surface

## PRODUCTION CASING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT	FC (top)	FS (top)
7"	26.00#	HCP-110		0'	9.160'	203	8-3/4"	1.190	-	-	-

\*Stage 1 - Circ 152sx

\*Stage 2 - Circ 82sx

## PERFORATION RECORD - DUC

ZONE - Stage	TOP	BOTTOM	Gross Perfs	Net Perfs	Shots (80')
				-	-
				-	-
				-	-

### TUBING DETAIL

[illegible]

\* Actual design may be slightly modified by WPX Rep.

7 in @ 9,160' (MD)  
TD @ 9,160' (MD)  
PBD @ 0' (MD)

Date: 5/22/2018  
Updated: BN  
CURRENT



## PROPOSED WELLBORE DIAGRAM

**WELLBORE DIAGRAM (PROPOSED)**

WELL:	<b>Old Cavern Fee #1</b>	EU NUMBER:	62459707	SPUD DATE:	8/26/2014	
COUNTY:	Eddy	OPERATOR:	WPX Energy	TD:	9,160'	MD (KB)
STATE:	New Mexico	WR:	100%	TVD:	--	TVD (KB)
API :	30-015-42355	NRI:	75%	PBTD:		MD (KB)
LOCATION:	Sec. 32 - T22S - R27E			KB ELEVATION:	3,182.5'	(17.5' KB)
FIELD / AREA:	Ruster Breaks			GL ELEVATION:	3,165.0'	
FORMATION:	Bone Springs/Upper Wolfcamp			SURFACE LAT/LONG:		

13-3/8" @ 418' (MD)

### CASING RECORD

## SURFACE CASING

O.D.	WT/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.	FC (top)	FS (top)
13-3/8"	48.00#	H-40		0'	418'	10	17-1/2"	470	0'	-	-

\*Circ 163sx to surface

### INTERMEDIATE CASING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT	FC (top)	FS (top)
9-5/8"	36.00#	J-55		0'	1,756'	41	12-1/4"	600	0'	-	-

\*Circ 180sx to surface

## PRODUCTION CASING

O.D.	WT/FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT	FC (top)	FS (top)
7"	26.00#	HCP-110		0'	9'160'	203	8-3/4"	1,190	-	-	-

\*Stage 1 - Circ 152sx

\*Stage 2 - Circ 82sx

## PERFORATION RECORD - PROPOSED

ZONE - Stage	TOP	BOTTOM	Gross Perfs	Net Perfs	Shots (180')
Stage #5	6.405	6.588	183'	11'	22
Stage #4	6.982	7.075	93'	10'	20
Stage #3	7.925	8.430	505'	15'	30
Stage #2	8.542	8.721	179'	10'	20
Stage #1	8.873	9.127	254'	12'	24

### TUBING DETAIL

[illegible]

\* Projected depths as a guide, actuals will vary.

**Top Perf (Stage 5): 6,405' MD**

**Bottom Perf (Stage 1): 9,127' MD**

7 ln @ 9,160' (MD)

TD @ 9,160' (MD)

PBTD @ 0' (MD)

22

Date: 7/26/2018  
Updated: BN  
PROPOSED

## McMillan, Michael, EMNRD

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**From:** Podany, Raymond, EMNRD  
**Sent:** Monday, July 30, 2018 2:21 PM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] RE: RKI - Downhole Commingling Applications

- **Smedley Fee 1 (API 30-015-42381) 10380 Cass Draw Bone Spring**
- **Skeleton Fee 1 (API 30-015-42249) 24660 Forehand Ranch Bone Spring**
- **Old Cavern Fee 1 (API 30-015-42355)10380 Cass Draw Bone Spring**

**From:** McMillan, Michael, EMNRD  
**Sent:** Monday, July 30, 2018 1:46 PM  
**To:** Podany, Raymond, EMNRD <Raymond.Podany@state.nm.us>  
**Subject:** FW: [EXTERNAL] RE: RKI - Downhole Commingling Applications

Ray:  
I need a Bone Spring Pool for the 3 wells listed below  
Mike

**From:** Fechino, Ashlee <Ashlee.Fechino@wpxenergy.com>  
**Sent:** Monday, July 30, 2018 11:34 AM  
**To:** McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Subject:** RE: [EXTERNAL] RE: RKI - Downhole Commingling Applications

Hi Michael,

Attached are the 3 applications for:

- **Smedley Fee 1 (API 30-015-42381)**
- **Skeleton Fee 1 (API 30-015-42249)**
- **Old Cavern Fee 1 (API 30-015-42355)**

I'm checking with our land group on the compulsory pooling question. I will get back to you ASAP.

Thank you for your time reviewing. If you have any questions please let me know.

**Ashlee Fechino**  
Regulatory Team Lead  
WPX Energy – Permian Assets  
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**WPXENERGY**