



KANSAS CORPORATION COMMISSION 1311755  
OIL & GAS CONSERVATION DIVISION

Form ACO-4  
Form must be typed  
March 2009

APPLICATION FOR COMMINGLING OF *Commingling ID #* \_\_\_\_\_  
PRODUCTION (K.A.R. 82-3-123) OR FLUIDS (K.A.R. 82-3-123a)

OPERATOR: License # \_\_\_\_\_ API No. 15 - \_\_\_\_\_  
Name: \_\_\_\_\_ Spot Description: \_\_\_\_\_  
Address 1: \_\_\_\_\_ - - - - - Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
Address 2: \_\_\_\_\_ Feet from  North /  South Line of Section  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_ Feet from  East /  West Line of Section  
Contact Person: \_\_\_\_\_ County: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

1. Name and upper and lower limit of each production interval to be commingled:  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_

2. Estimated amount of fluid production to be commingled from each interval:  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_

3. Plat map showing the location of the subject well, all other wells on the subject lease, and all wells on offsetting leases within a 1/2 mile radius of the subject well, and for each well the names and addresses of the lessee of record or operator.

4. Signed certificate showing service of the application and affidavit of publication as required in K.A.R. 82-3-135a.

**For Commingling of PRODUCTION ONLY, include the following:**

- 5. Wireline log of subject well. Previously Filed with ACO-1:  Yes  No
- 6. Complete Form ACO-1 (*Well Completion form*) for the subject well.

**For Commingling of FLUIDS ONLY, include the following:**

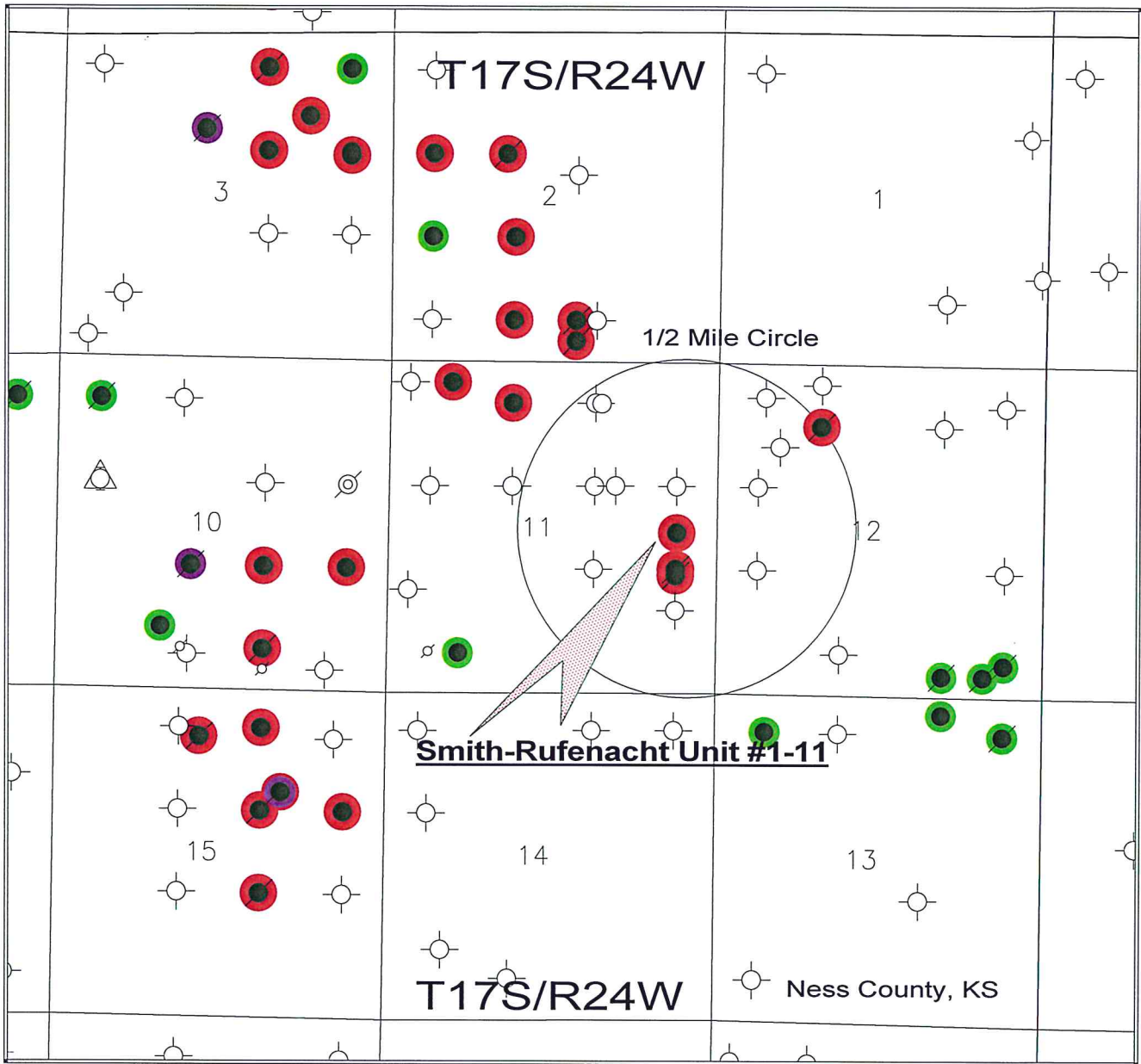
- 7. Well construction diagram of subject well.
- 8. Any available water chemistry data demonstrating the compatibility of the fluids to be commingled.

**AFFIDAVIT:** I am the affiant and hereby certify that to the best of my current information, knowledge and personal belief, this request for commingling is true and proper and I have no information or knowledge, which is inconsistent with the information supplied in this application.

Submitted Electronically

**KCC Office Use Only**  
 Denied  Approved  
15-Day Periods Ends: \_\_\_\_\_  
Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

*Protests may be filed by any party having a valid interest in the application. Protests must be in writing and comply with K.A.R. 82-3-135b and must be filed within 15 days of publication of the notice of application.*



LEGEND

- Marmaton Production
- Cherokee Production
- Mississippi Production



**DRILLING COMPANY, INC.**  
WICHITA, KANSAS

Smith-Rufenacht Unit #1-11  
Commingling Application

erm	Ness Co. Kansas	July 8, 2016
2 inches :: 1 mile		



**DRILLING COMPANY, INC.**  
WICHITA, KANSAS

**ATTACHMENT TO ACO-4  
APPLICATION FOR COMMINGLING OF PRODUCTION**

**Signed Certificate of Notice to Offset Operators and Unleased Mineral Holders**

Mull Drilling Company, Inc.  
Smith-Rufenacht Unit #1-11  
E/2 E/2 Section 11-17S-24W  
Ness County, Kansas  
API No. 15-135-25421-00-00

Names and addresses of each operator or lessee of record and each unleased mineral owner within one half mile of the subject well:

E/2 11-17S-24W

Mull Drilling Company, Inc.

NW/4 12-17S-24W

Klitzke Family Trust B  
C/O Cheryl Dawson, Trustee  
393 Waters Road  
York, PA 17403

SW/4 12-12S-24W

Jeb and Anna Mae Klitzke  
202 S Vermont Ave  
Ransom, KS 67572

NE/4 14-12S-24W

Fort Worth Royalty Company  
1315 W 10<sup>th</sup> Street  
Fort Worth, TX 76102

Evelyn L. Gerhardt  
1540 Venice  
Longmont, CO 80503

Lynne M. Harkness Trust No. 2  
C/O FNB of Hutchinson, Trustee  
PO Box 913  
Hutchinson, KS 67504

LANROY, INC.  
PO Box 3405  
Tulsa, OK 74101

J. R. McGinley, JR Revocable Trust  
PO Box 769  
Tulsa, OK 74101

Patrick A. McGinley Revocable Trust  
PO Box 3126  
Tulsa, OK 74101

Treva R. Montgomery, Tara A. Deveyns &  
Robert A. Hecht, JR  
22004 Ellis Hamilton Road  
Moss Point, MS 39562

Roger Pfannenstiel  
1408 Linden Street  
Longmont, CO 80501

Mull Drilling Company, Inc's Smith-Rufenacht Unit #1-11  
E/2 E/2 Section 11-17S-24W  
Ness County, Kansas  
Page 2


NE/4 14-12S-24W (continued)

Shriver Elevator, Inc.  
10280 NW Mcadoo Road  
Coats, KS 67028

Copy of the ACO-4 was mailed to the above listed companies/individuals on July 22, 2016.

Signed this 22nd day of July, 2016.

MULL DRILLING COMPANY, INC.

  
Risa Carter  
Production Technician

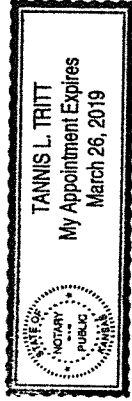
STATE OF KANSAS

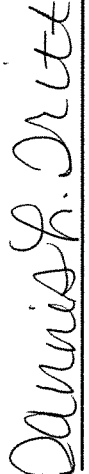
ACKNOWLEDGEMENT FOR INDIVIDUAL

COUNTY OF SEDGWICK

Before me, the undersigned, a Notary Public, within and for said county and state, on this 22nd day of July, 2015, personally appeared Risa Carter, Production Technician of Mull Drilling Company, Inc., to me personally known to be the identical person who executed the within and foregoing Certificate of Service Form and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.



  
Tannis L. Tritt, Notary Public

My commission expires: 3.26.2019

**BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS NOTICE OF FILING APPLICATION**

Re: Mull Drilling Company, Inc. - Application for order to permit commingling of production of the Smith-Rufenacht Unit #1-11, located in Ness County, Kansas.

To: All Oil & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons whosever concerned.

You, and each of you, are hereby notified that Mull Drilling Company, Inc. has filed an application to commingle production of the Fort Scott and Cherokee Sand formation on the Smith-Rufenacht Unit #1-11, located NW NE NE SE 11-17S-24W, Ness County, Kansas.

Any persons who object to or protest this application shall be required to file their objections or protests with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of the publication. These protests shall be filed pursuant to Commission regulations and must state specific reasons why the grant of the application may cause waste, violate correlative rights or pollute the natural resources of the state of Kansas. If no protests are received, this application may be granted through a summary proceeding. If valid protests are received, this matter will be set for hearing.

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly.

Mull Drilling Company,

STATE OF KANSAS, COUNTY OF NESS, ss:

Jerry Clarke, being first duly sworn, Deposes and says: that he is Publisher of Ness County News, a weekly newspaper, published and printed in Ness City, State of Kansas, and published in and of general circulation in Ness County, Kansas, with a general paid circulation on a weekly basis in Ness County, Kansas, and that said newspaper is not a trade, religious or fraternal publication.

Said newspaper is a weekly published at least 50 times a year; has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Ness City, in said County as second class mail matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for 1 consecutive weeks, the first publication thereof being made as aforesaid on the 28th day of July 16 20  , with subsequent publications being made on the following dates:

\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_  
\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_  
\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_

Jerry Clarke, Jerry Clarke, editor

Subscribed and sworn to before me this 1st day of July, 20   16



Janice Pfannenstiel  
Janice Pfannenstiel, Notary Public.

Publication Fee \_\_\_\_\_ \$ 41.40

Additional Copies @ \_\_\_\_\_ \$ \_\_\_\_\_

Total Publication Fees \_\_\_\_\_ \$ 41.40

Filed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Attached Proof Of Publication approved this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_  
District Magistrate Judge

Filed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Clerk of the District Court.

Attached Proof Of Publication approved this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_  
Judge Twenty-fourth Judicial District.



## LEGAL PROOF OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Lines
453877	0002583163	Published in the Wichita Eagle July 27, 2016 (258		\$176.60	1	49

**Attention:** risa carter

MULL DRILLING COMPANY, INC.  
PO BOX 2758  
WICHITA, KS 672012758

In The STATE OF KANSAS  
In and for the County of Sedgwick  
AFFIDAVIT OF PUBLICATION

1 Insertions

Beginning issue of: 07/27/2016

Ending issue of: 07/27/2016

STATE OF KANSAS)

.SS

County of Sedgwick)

Mark Fletchall, of lawful age, being first duly sworn, deposeth and saith: That he is Record Clerk of The Wichita Eagle, a daily newspaper published in the City of Wichita, County of Sedgwick, State of Kansas, and having a general paid circulation on a daily basis in said County, which said newspaper has been continuously and uninterruptedly published in said County for more than one year prior to the first publication of the notice hereinafter mentioned, and which said newspaper has been entered as second class mail matter at the United States Post Office in Wichita, Kansas, and which said newspaper is not a trade, religious or fraternal publication and that a notice of a true copy is hereto attached was published in the regular and entire Morning issue of said The Wichita Eagle from 7/27/2016 to 07/27/2016.

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

*Mark Fletchall*

(Signature of Principal Clerk)

DATED: 7/27/2016

**LEGAL PUBLICATION**

Published in the Wichita Eagle  
July 27, 2016 (2583163)

BEFORE THE STATE CORPORATION  
COMMISSION OF THE STATE OF KANSAS  
NOTICE OF FILING APPLICATION

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All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly.

Mull Drilling Company, Inc.  
1700 N. Waterfront Parkway, Building 1200  
Wichita, KS 67206  
316-264-6366

*[Signature]*  
Notary Public Sedgwick County, Kansas

JENNIFER RAE BAILEY  
Notary Public - State of Kansas  
My Appt. Expires 6/1/2012



**DRILLING COMPANY, INC.**  
**WICHITA, KANSAS**

**Proposed Wellbore Configuration**

Date:	7/27/2016
Well Name:	Smith-Rufenacht Unit #1-11
Location:	2561' FSL & 647' FEL
	Section 11-T17S-R24W
County:	Ness
State:	Kansas
API:	15-135-25421
KB:	2481'
GL:	2476'
Spud Date:	7/6/2012

8-5/8" surf csg set @ 233'  
 Cmt to surface w/165 sks.

Port collar at 1798'. Cmt to surface w/150 sks. SMD cement.

Top of Cement @3570' (CBL dated 8/6/12)

2-7/8" tubing set at 4470'

Fort Scott perms @ 4370'-4374'

Cherokee Sand perms @ 4452'-4458'

5-1/2", 14# csg set at 4537'. Cmt w/150 sks. 50/50 Pozmix.

RTD 4550

LTD 4548'



# DownHole SAT Rx

## FORMATION WATER CHEMISTRY INPUT

Mull Drilling  
Smith-Rufenacht 1-11

Pro-Stim Chemicals  
Troy Pelton  
Prepared by SGB Solutions

Report Date: 07-20-2016      Sampled: 07-13-2016  
Sample #: 1133                      at 0823

### CATIONS

Calcium (as Ca)	3280
Magnesium (as Mg)	316.00
Barium (as Ba)	0.00
Strontium (as Sr)	0.00
Sodium (as Na)	11603
Potassium (as K)	0.00
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	238.00
Manganese (as Mn)	1.21
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

### ANIONS

Chloride (as Cl)	24500
Sulfate (as SO <sub>4</sub> )	1350
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.667
Bicarbonate (as HCO <sub>3</sub> )	10.00
Carbonate (as CO <sub>3</sub> )	0.00
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

### PARAMETERS

Calculated T.D.S.	41079
Molar Conductivity	54510
Resistivity	18.35
Sp.Gr.(g/mL)	1.02
Pressure(psia)	14.70
pCO <sub>2</sub> (psia)	0.00477
pH <sub>2</sub> S(atm)	0.00
Temperature (°F)	68.00
pH	2.60

All anions & cations are in mg/l (CO<sub>2</sub> in MEq/L)

**FRENCH CREEK SOFTWARE, INC.**  
**1220 VALLEY FORGE ROAD, BUILDING 21, VALLEY FORGE, PA 19460**





# DownHole SAT Rx

## FORMATION WATER DEPOSITION POTENTIAL INDICATORS

Mull Drilling  
Smith-Rufenacht 1-11

Pro-Stim Chemicals  
Troy Pelton  
Prepared by SGB Solutions

Report Date: 07-20-2016  
Sample #: 1133

Sampled: 07-13-2016  
at 0823

### SATURATION LEVEL

Calcite (CaCO <sub>3</sub> )	< 0.001
Aragonite (CaCO <sub>3</sub> )	< 0.001
Witherite (BaCO <sub>3</sub> )	0.00
Strontianite (SrCO <sub>3</sub> )	0.00
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	0.00
Magnesite (MgCO <sub>3</sub> )	< 0.001
Anhydrite (CaSO <sub>4</sub> )	0.533
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	0.879
Barite (BaSO <sub>4</sub> )	0.00
Celestite (SrSO <sub>4</sub> )	0.00
Fluorite (CaF <sub>2</sub> )	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica (SiO <sub>2</sub> )	0.00
Brucite (Mg(OH) <sub>2</sub> )	< 0.001
Magnesium silicate	0.00
Iron hydroxide (Fe(OH) <sub>3</sub> )	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	0.00
Siderite (FeCO <sub>3</sub> )	< 0.001
Halite (NaCl)	0.00418
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	< 0.001
Iron sulfide (FeS)	0.00

### FREE ION MOMENTARY EXCESS (ppm)

Calcite (CaCO <sub>3</sub> )	-0.119
Aragonite (CaCO <sub>3</sub> )	-0.135
Witherite (BaCO <sub>3</sub> )	-52.55
Strontianite (SrCO <sub>3</sub> )	-17.33
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	-0.0553
Magnesite (MgCO <sub>3</sub> )	-1.27
Anhydrite (CaSO <sub>4</sub> )	-732.70
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	-137.14
Barite (BaSO <sub>4</sub> )	-0.0899
Celestite (SrSO <sub>4</sub> )	-162.90
Fluorite (CaF <sub>2</sub> )	-13.42
Calcium phosphate	>-0.001
Hydroxyapatite	-936.32
Silica (SiO <sub>2</sub> )	-99.74
Brucite (Mg(OH) <sub>2</sub> )	< 0.001
Magnesium silicate	-285.35
Iron hydroxide (Fe(OH) <sub>3</sub> )	0.0116
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	>-0.001
Siderite (FeCO <sub>3</sub> )	-0.00134
Halite (NaCl)	-495150
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	-192767
Iron sulfide (FeS)	-99.05

### SIMPLE INDICES

Langelier	-14.00
Ryznar	14.00
Puckorius	-4.54
Larson-Skold Index	4503
Stiff Davis Index	-5.74
Oddo-Tomson	-5.84

### BOUND IONS

	TOTAL	FREE
Calcium	3280	3094
Barium	0.00	0.00
Carbonate	< 0.001	< 0.001
Phosphate	0.00	0.00
Sulfate	1350	684.59

### OPERATING CONDITIONS

Temperature (°F)	68.00
Time(mins)	3.00

Conservation Division  
266 N. Main St., Ste. 220  
Wichita, KS 67202-1513



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Jay Scott Emler, Chairman  
Shari Feist Albrecht, Commissioner  
Pat Apple, Commissioner

Sam Brownback, Governor

September 1, 2016

Mark Shreve  
Mull Drilling Co., Inc.  
1700 N Waterfront Pkwy, Bldg 1200  
Wichita, KS 67206

RE: Approved Commingling CO081606  
Smith-Rufenacht Unit 1-11  
API No. 15-135-25421-00-00

Dear Mr. Shreve:

Your Application for Commingling (ACO-4) for the above described well has been reviewed and approved by the Kansas Corporation Commission (KCC) per K.A.R. 82-3-123. Notice was examined and found to be proper per K.A.R. 82-3-135a. No protest had been filed within the 15-day protest period.

Based upon the depth of the Cherokee Sand formation perforations, total oil production shall not exceed **200 BOPD** and total gas production shall not exceed 50% of the absolute open flow (AOF).

File form ACO-1 upon re-completion of the well to commingle.

Sincerely,

Rick Hestermann  
Production Department