

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-4
Form must be typed
March 2009

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

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.



Company: Mull Drilling
 Source : wellhead
 Number : 11738

Location:
 Date Sampled:
 Salesman:
 Attention:

Miner Stam 1-4
 July 17, 2009
 Randy Rodgers
 Dennis Pfeifer

ANALYSIS	mg/L	EQ. WT.	MEQ/L
1. pH	7.26		
2. Specific Gravity 60/60 F	1.027		
3. Hydrogen Sulfide	5.7 PPM		
4. Carbon Dioxide	ND		
5. Dissolved Oxygen	ND		
6. Hydroxyl (OH ⁻)	0 /	17.0 =	0.00
7. Carbonate (CO ₃ ⁻²)	0 /	30.0 =	0.00
8. Bicarbonate (HCO ₃ ⁻)	525 /	61.1 =	8.59
9. Chloride (Cl ⁻)	22,995 /	35.5 =	647.75
10. Sulfate (SO ₄ ⁻²)	2,477 /	48.8 =	50.76
11. Calcium (Ca ⁺²)	874 /	20.1 =	43.46
12. Magnesium (Mg ⁺²)	481 /	12.2 =	39.42
13. Sodium (Na ⁺)	14,357 /	23.0 =	624.22
14. Barium (Ba ⁺²)	ND		
15. Total Iron (Fe)	0.50		
16. Manganese	0.30		
17. Strontium	ND		
18. Total Dissolved Solids	41,709		
19. Resistivity @ 75 °F (calculated)	0.19 /cm		
20. CaCO ₃ Saturation Index			
@ 80 °F	0.1741		
@ 100 °F	0.5241		
@ 120 °F	0.7741		
@ 140 °F	1.1141		
@ 160 °F	1.4241		
21. CaSO ₄ Supersaturation Ratio			
@ 70 °F	0.4693		
@ 90 °F	0.4677		
@ 110 °F	0.4678		
@ 130 °F	0.4711		
@ 150 °F	0.4781		
Ratio Greater than 1 indicates Scale			

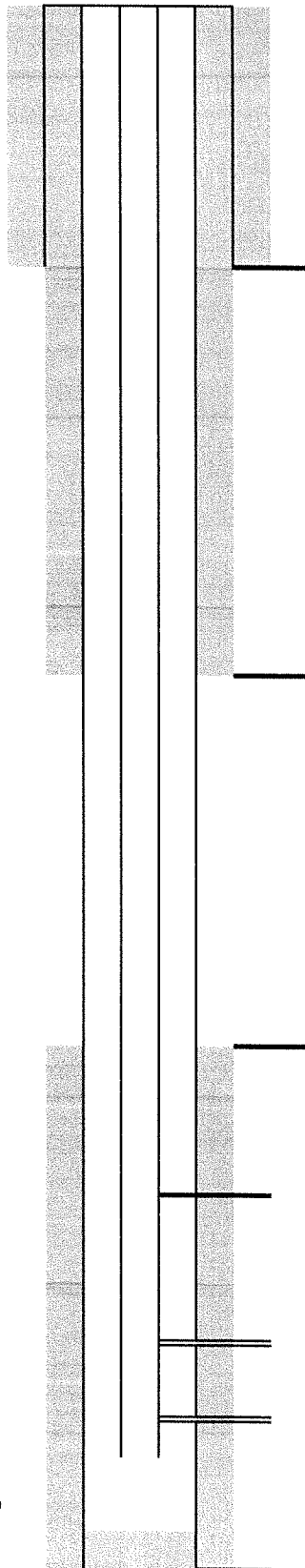
PROBABLE MINERAL COMPOSITION				
COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO ₃) ₂	81.04		8.59	696
CaSO ₄	68.07		34.87	2,374
CaCl ₂	55.50		0.00	0
Mg(HCO ₃) ₂	73.17		0.00	0
MgSO ₄	60.19		15.89	956
MgCl ₂	47.62		23.53	1,120
NaHCO ₃	84.00		0.00	0
NaSO ₄	71.03		0.00	0
NaCl	58.46		624.22	36,492

Zondra Pointer
 Analyst:



DRILLING COMPANY, INC.
WICHITA, KANSAS

Proposed Wellbore Configuration



Date:	<u>8/28/2019</u>
Well Name:	<u>Miner-Stum #1-4</u>
Location:	<u>450' FNL & 190' FEL</u>
	<u>Section 4-T20S-R23W</u>
County:	<u>Ness</u>
State:	<u>KS</u>
API:	<u>15-135-24373</u>
KB:	<u>2258'</u>
GL:	<u>2249'</u>
Spud Date:	<u>8/29/2005</u>

8-5/8" Surface Casing
Set at 210'. Cmt to
Surface w/150 sks.

Port Collar at 1529'
Cmt to surface with 155 sks. SMD

TOC @ 3460' (CBL 9/13/05)

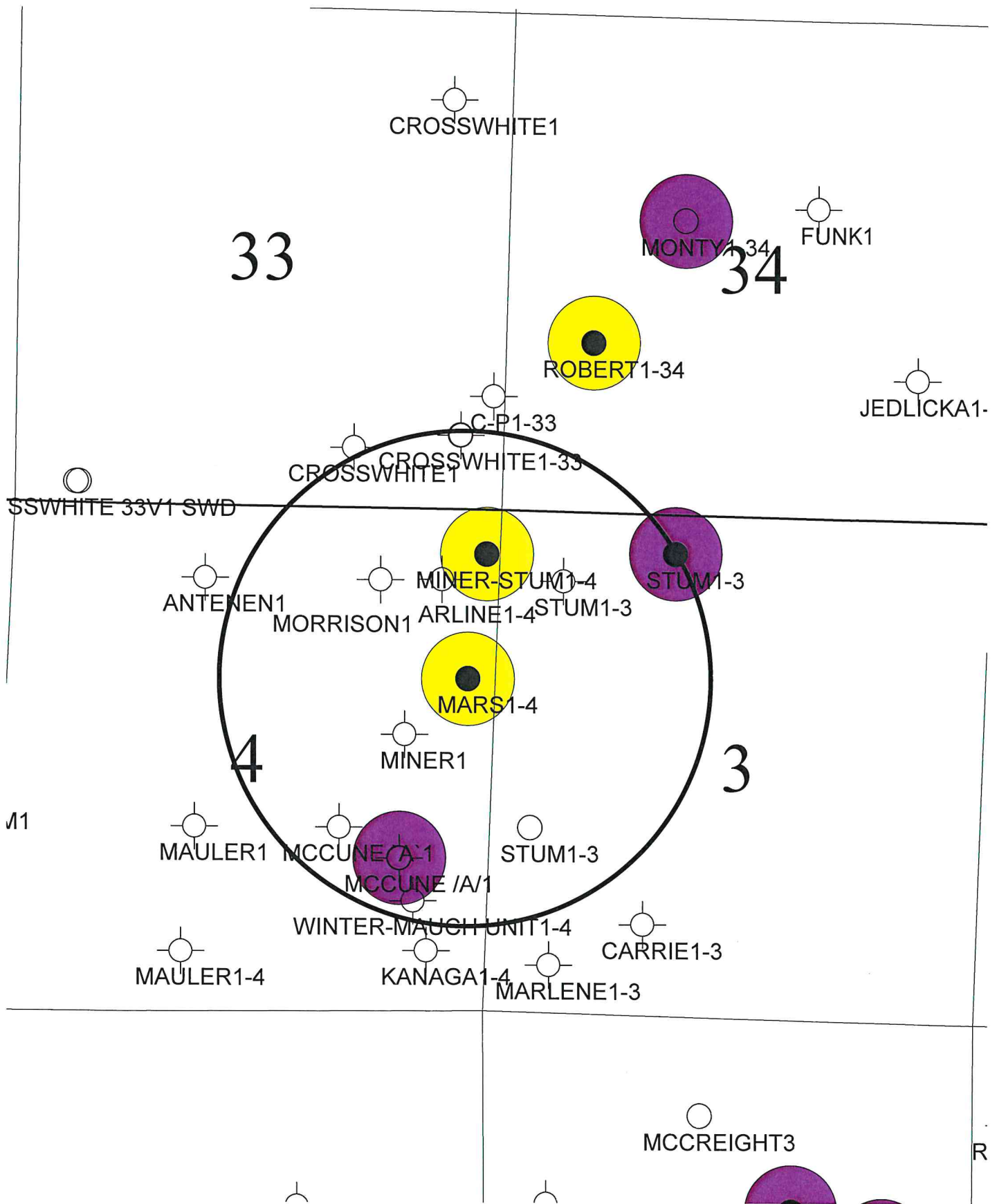
2-7/8" tubing set at 4359'

Proposed Fort Scott Perfs @ 4346'-4356'

Existing Cherokee Sand Perfs @ 4268'-4274'

PBTD: 4378'
RTD: 4430'

5-1/2", 14 & 15.5# casing set at 4425'.
Cmt with 150 sks. 50/50 Pozmix



First published in the
Ness County News,
Thursday, September
19, 2019. -11

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

Re: Mull Drilling
Company, Inc. -
Application for order to
permit commingling of
production of the
MARS #1-4 and the
Miner-Stum #1-4,
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
MARS #1-4, located SW
NE SE NE 4-20S-23W
and on the Miner-Stum
#1-4, located SE NE NE
NE 4-20S-23W, 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,
Inc.
1700 N. Waterfront
Parkway, Building 1200
Wichita, KS 67206
316-264-6366

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 pub-
lished 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 19th day of
September, 2019, with subsequent publications being made
on the following dates:

_____ 20 _____ 20____
_____ 20 _____ 20____
_____ 20 _____ 20____

Subscribed and sworn to before me this 19th day of September, 2019
Jerry Clarke, Jerry Clarke, editor



Janice Pfannenstiel
Janice Pfannenstiel, Notary Public.

Publication Fee _____ \$ 39.75

Additional Copies @ _____ 10 _____ \$ _____

Total Publication Fees _____ \$ 39.75

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	0004377072	BEFORE THE STATE CORPORATION COMMIS	MARS #1-4 and Miner-Stum #1-4	\$291.49	1	47

Attention: Risa Carter

MULL DRILLING COMPANY, INC.
1700 N. WATERFRONT PKWY, BUILDING 1200
WICHITA, KS 67206

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

1 Insertions

Beginning issue of: 09/12/2019

Ending issue of: 09/12/2019

STATE OF KANSAS)

.SS

County of Sedgwick)

**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

MARS #1-4 and the Miner-Stum #1-4, located in Ness County, Kansas.

To: All Oil & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons whosoever 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 MARS #1-4, located SW NE SE NE 4-20S-23W and on the Miner-Stum #1-4, located SE NE NE 4-20S-23W, 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.

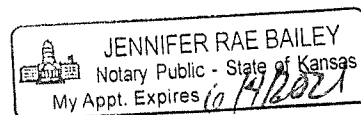
Mull Drilling Company, Inc.
1700 N. Waterfront Parkway, Building 1200
Wichita, KS 67206
316-264-6366

Dale Seiwert, of lawful age, being first duly sworn, deposeseth 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 9/12/2019 to 09/12/2019.

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

(Signature of Principal Clerk)

DATED: 9/12/2019



Notary Public Sedgwick County, Kansas



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.**

**MARS #1-4
SE/4 NE/4 Section 4-20S-23W
Ness County, Kansas
API No. 15-135-251115-00-00**

**Miner-Stum
NE/4 NE/4 Section 4-20S-23W
Ness County, Kansas
API No. 15-135-24373**

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

Section 33: SE/4

Bruce A. Crosswhite
412 W. 6th St.
Kinsley, Kansas 67547

Earl D. Crosswhite
610 S. Iowa
Ness City, Kansas 67560

Section 34: SW/4

Robert I. Pfannenstiel
212 N. Grand
Ness City, Kansas 67560

Section 3: NW/4

Mull Drilling Company, Inc.

Section 3: SW/4

American Warrior, Inc.
P.O. Box 399
Garden City, Kansas 67846

Section 4: NE/4

Mull Drilling Company, Inc.

Section 4: NE/4

Craig Miner Family Trust*
303 Circle Drive
Wichita, Kansas 67208
**Unleased below the producing zone*

Section 4: NW/4

Steven K. Antenen and Gail A. Antenen Trust
305 N. Iowa
Ness City, Kansas 67560

Craig Miner Family Trust
303 Circle Drive
Wichita, Kansas 67208

John A. Morrison
c/o John Taylor Morrison
825 W. Victory Road
Boise, Idaho 83706

Swanson Family Trust dated April 18, 1991
8987 E. Tanque Verde Road, #309-347
Tucson, Arizona 85749

Section 4: SW/4

Karen F. Churchman
3353 S. Holmes Road
Salina, Kansas 67401

Jody R. Lichter
707 Wilson St.
Great Bend, Kansas 67530

Mull Drilling Company, Inc's
MARS #1-4
SE/4 NE/4 Section 4-20S-23W
Ness County, Kansas
Page 2

Miner-Stum
NE/4 NE/4 Section 4-20S-23W
Ness County, Kansas

Section 4: SW/4 continued

Kevin J. Lichter
3621 Robin Road
Great Bend, Kansas 67530

Janice A. Read
3904 Canyon Lake Drive
Pearland, Texas 77581

Section 4: N/2SE/4

Kathy E. Brenner
118 W. Cedar St.
Ness City, Kansas 67560

Valerie Erickson
124 Mark St.
Aurora, Nebraska 68818

Ryan Mauch
801 12th St.
Victoria, Kansas 67671

Section 4: S/2SE/4

George A. Winter and Mary L. Winter
6031 Birchwood Drive
Great Bend, Kansas 67530

Copy of the ACO-4 was mailed to the above listed companies/individuals on September 12, 2019.

Signed this 12th day of September, 2019.

MULL DRILLING COMPANY, INC.



Risa Carter
Production Technician

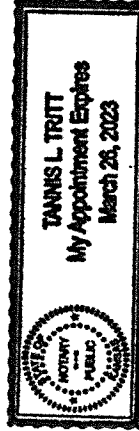
STATE OF KANSAS

ACKNOWLEDGEMENT FOR INDIVIDUAL

COUNTY OF SEDGWICK

Before me, the undersigned, a Notary Public, within and for said county and state, on this 12th day of September, 2019, 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: 3.26.2023

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



Phone: 316-337-6200
Fax: 346-337-6211
<http://kcc.ks.gov/>

Dwight D. Keen, Chair
Shari Feist Albrecht, Commissioner
Susan K. Duffy, Commissioner

Laura Kelly, Governor

November 6, 2019

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

RE: Approved Commingling CO111902
Miner Stum 1-4
API No. 15-135-24373-00-00

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