

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:**

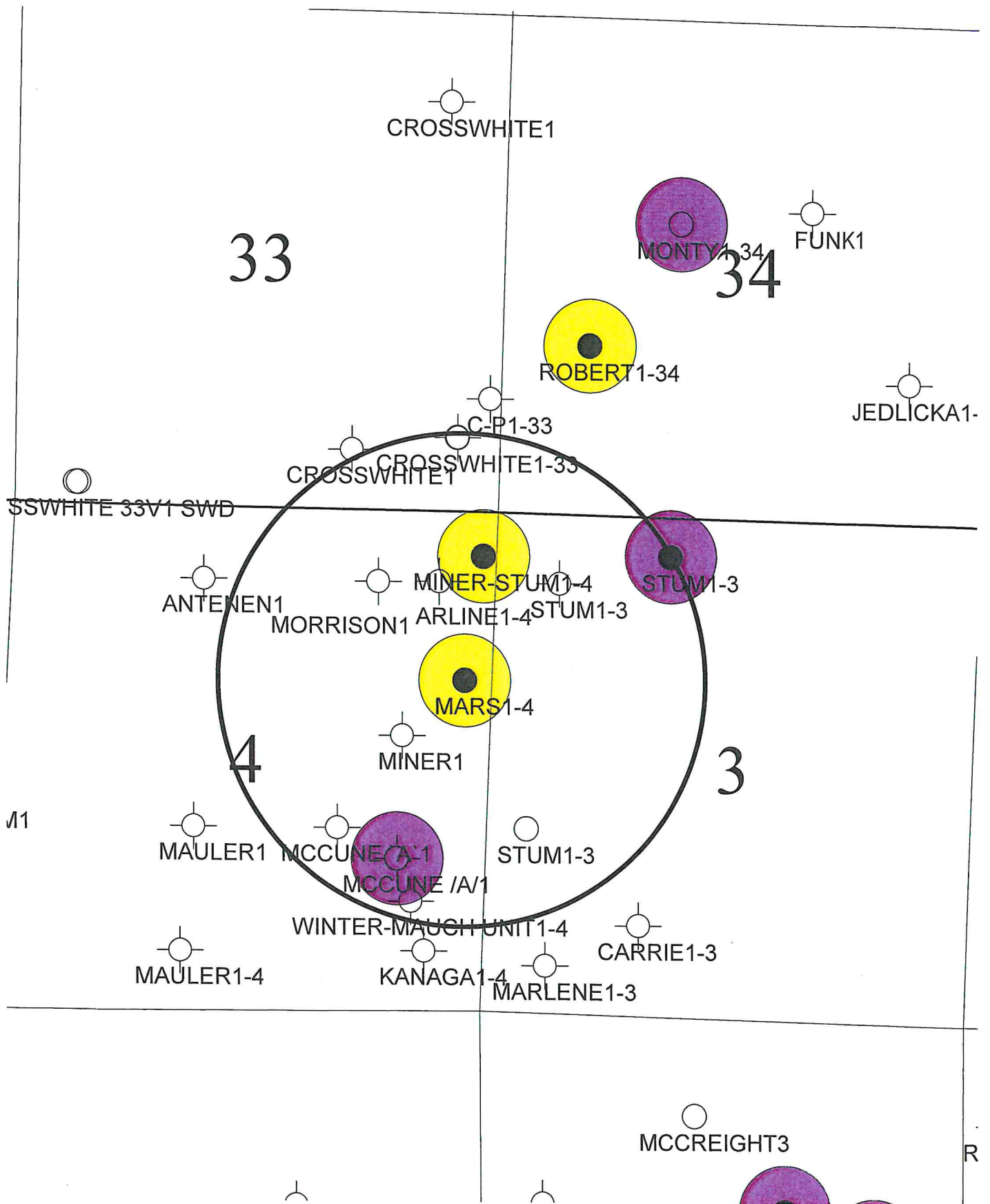
- 7. Well construction diagram of subject well.
- 8. Any available water chemistry data demonstrating the compatibility of the fluids to be commingled.

**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.*





**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. 6<sup>th</sup> 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 12<sup>th</sup> St.  
Victoria, Kansas 67671

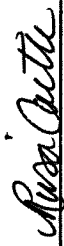
Section 4: S/2SE/4

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

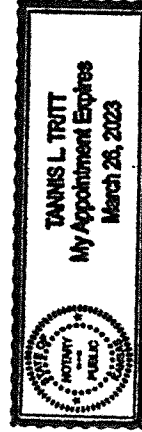
STATE OF KANSAS

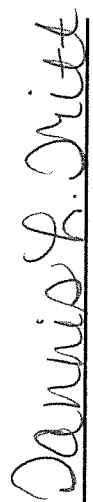
ACKNOWLEDGEMENT FOR INDIVIDUAL

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



## 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.

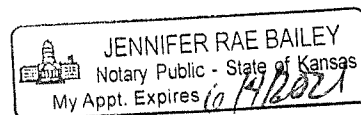
Mull Drilling Company, Inc.  
1700 N. Waterfront Parkway, Building 1200  
Wichita, KS 67206  
316-264-6366

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

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 whoseover  
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:

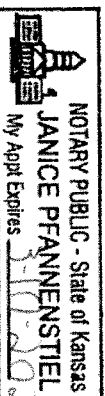
Jerry Clarke, being first duly sworn, Deposes and says: that he is Publisher of  
Ness County News, a weekly newspaper, published and printed in Ness City, State  
of Kansas, and published in and of general circulation in Ness County, Kansas, with  
a general paid circulation on a weekly basis in Ness 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, 20 19, 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, 20 19  
*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.

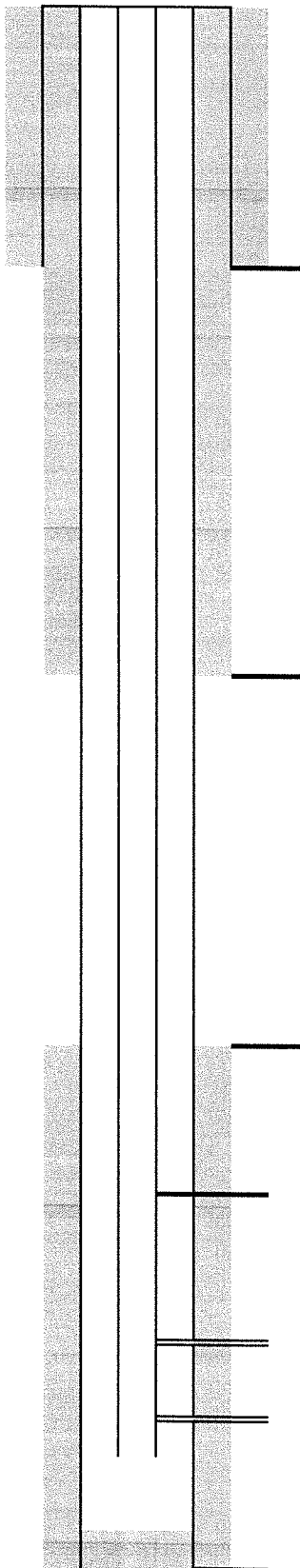
Attached Proof Of Publication approved this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

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



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

**Proposed Wellbore Configuration**



Date:	8/28/2019
Well Name:	MARS #1-4
Location:	1783' FNL & 335' FEL
	Section 4-T20S-R23W
County:	Ness
State:	KS
API:	15-135-25115
KB:	2263'
GL:	2254'
Spud Date:	8/4/2010

PBTD: 4679'  
RTD: 4780'

5-1/2", 15.5# casing set at 4730'.  
Cmt with 150 sks. 50/50 Pozmix



# DownHole SAT Rx

## FORMATION WATER CHEMISTRY INPUT

Mull Drilling  
Mars 1-4  
Wellhead

Pro-Stim Chemicals  
Troy Pelton  
Prepared by SGB Solutions

Report Date: 07-18-2015    Sampled: 07-01-2015  
Sample #: 168                      at 1644

### CATIONS

Calcium (as Ca)	2000
Magnesium (as Mg)	510.00
Barium (as Ba)	0.00
Strontium (as Sr)	0.00
Sodium (as Na)	16545
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)	2.50
Manganese (as Mn)	0.140
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

### ANIONS

Chloride (as Cl)	29000
Sulfate (as SO <sub>4</sub> )	2450
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	19.80
Bicarbonate (as HCO <sub>3</sub> )	640.00
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)	50.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

### PARAMETERS

Calculated T.D.S.	50797
Molar Conductivity	66688
Resistivity	15.00
Sp.Gr.(g/mL)	1.02
Pressure(psia)	14.70
pCO <sub>2</sub> (psia)	0.143
pH <sub>2</sub> S(atm)	0.00859
Temperature (°F)	73.00
pH	6.27

**COMMENT** All anions and cations are in mg/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	Pro-Stim Chemicals
Mars 1-4	Troy Pelton
Wellhead	Prepared by SGB Solutions

Report Date:	07-18-2015	Sampled:	07-01-2015
Sample #:	168		at 1644

**SATURATION LEVEL**

Calcite (CaCO <sub>3</sub> )	1.01
Aragonite (CaCO <sub>3</sub> )	0.881
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> )	0.222
Anhydrite (CaSO <sub>4</sub> )	0.609
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	0.973
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> )	1.85
Halite (NaCl)	0.00695
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	< 0.001
Iron sulfide (FeS)	2.25

**FREE ION MOMENTARY EXCESS (ppm)**

Calcite (CaCO <sub>3</sub> )	0.00180
Aragonite (CaCO <sub>3</sub> )	-0.0283
Witherite (BaCO <sub>3</sub> )	-55.40
Strontianite (SrCO <sub>3</sub> )	-17.98
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	-0.102
Magnesite (MgCO <sub>3</sub> )	-0.617
Anhydrite (CaSO <sub>4</sub> )	-878.69
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	-48.16
Barite (BaSO <sub>4</sub> )	-0.0532
Celestite (SrSO <sub>4</sub> )	-92.93
Fluorite (CaF <sub>2</sub> )	-18.23
Calcium phosphate	>-0.001
Hydroxyapatite	-971.45
Silica (SiO <sub>2</sub> )	-104.78
Brucite (Mg(OH) <sub>2</sub> )	0.00138
Magnesium silicate	-294.00
Iron hydroxide (Fe(OH) <sub>3</sub> )	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	>-0.001
Siderite (FeCO <sub>3</sub> )	0.108
Halite (NaCl)	-487304
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	-196754
Iron sulfide (FeS)	0.411

**SIMPLE INDICES**

Langgier	0.208
Ryznar	5.85
Puckorius	3.65
Larson-Skold Index	86.96
Stiff Davis Index	-0.427
Okda-Tomson	-0.592

**BOUND IONS**

Calcium	2000
Barium	0.00
Carbonate	1.31
Phosphate	0.00
Sulfate	2450

**TOTAL**

**FREE**

1750
0.00
0.126
0.00
1440

**OPERATING CONDITIONS**

Temperature (°F)	73.00
Time(mins)	3.00

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 CO111901  
Mars 1-4  
API No. 15-135-25115-00-00

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