## KOLAR Document ID: 1436670

| Confiden | tiality Re | equested: |
|----------|------------|-----------|
| Yes      | No         |           |

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION Form ACO-1 January 2018 Form must be Typed Form must be Signed All blanks must be Filled

# WELL COMPLETION FORM

| WELL HISTORY | - DESCRIPTION | <b>OF WELL &amp; LEASE</b> |
|--------------|---------------|----------------------------|

| OPERATOR: License #  | API No.:   |
|--|--|
| Name:  | Spot Description:  |
| Address 1:   |  |
| Address 2:   | Feet from North / South Line of Section                  |
| City: State: Zip:+   | Feet from East / West Line of Section                    |
| Contact Person:  | Footages Calculated from Nearest Outside Section Corner: |
| Phone: ()  |  |
| CONTRACTOR: License #  | GPS Location: Lat:, Long:                                |
| Name:  | (e.g. xx.xxxxx) (e.gxxx.xxxxx)                           |
| Wellsite Geologist:  | Datum: NAD27 NAD83 WGS84                                 |
| Purchaser:   | County:  |
| Designate Type of Completion:  | Lease Name: Well #:                                      |
| New Well Re-Entry Workover   | Field Name:  |
|  | Producing Formation:                                     |
|  | Elevation: Ground: Kelly Bushing:                        |
|  | Total Vertical Depth: Plug Back Total Depth:             |
| CM (Coal Bed Methane)  | Amount of Surface Pipe Set and Cemented at: Feet         |
| Cathodic Other (Core, Expl., etc.):                                      | Multiple Stage Cementing Collar Used?                    |
| If Workover/Re-entry: Old Well Info as follows:                          | If yes, show depth set: Feet                             |
| Operator:  | If Alternate II completion, cement circulated from:      |
| Well Name:   | feet depth to:w/sx cmt.                                  |
| Original Comp. Date: Original Total Depth:                               |  |
| Deepening Re-perf. Conv. to EOR Conv. to SWD                             | Drilling Fluid Management Plan                           |
| Plug Back Liner Conv. to GSW Conv. to Producer                           | (Data must be collected from the Reserve Pit)            |
|  | Chloride content: ppm Fluid volume: bbls                 |
| Commingled         Permit #:           Dual Completion         Permit #: | Dewatering method used:                                  |
| SWD         Permit #:  | Location of fluid disposal if hauled offsite:            |
| EOR         Permit #:  |  |
| GSW Permit #:  | Operator Name:   |
|  | Lease Name: License #:                                   |
| Spud Date or Date Reached TD Completion Date or                          | Quarter Sec TwpS. R East West                            |
| Recompletion Date Recompletion Date                                      | County: Permit #:  |

#### AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

## Submitted Electronically

| KCC Office Use ONLY                             |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|
| Confidentiality Requested                       |  |  |  |  |  |  |  |  |
| Date:   |  |  |  |  |  |  |  |  |
| Confidential Release Date:                      |  |  |  |  |  |  |  |  |
| Wireline Log Received Drill Stem Tests Received |  |  |  |  |  |  |  |  |
| Geologist Report / Mud Logs Received            |  |  |  |  |  |  |  |  |
| UIC Distribution                                |  |  |  |  |  |  |  |  |
| ALT I II III Approved by: Date:                 |  |  |  |  |  |  |  |  |

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| Operator Name:          | Lease Name: | Well #: |
|-------------------------|-------------|---------|
| Sec TwpS. R East 🗌 West | County:     |         |

Page Two

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

| Drill Stem Tests Taken<br>(Attach Additional Sheets)   |   | Y                            | es 🗌 No  |                       |  | og Formatio                   | n (Top), Depth        | and Datum   | Sample                        |
|--|---|------------------------------|--|-----------------------|--|-------------------------------|-----------------------|---|-------------------------------|
| Samples Sent to Geolog   | *   |                              | ′es 🗌 No   | Ν                     | lame   | e                             |                       | Тор   | Datum                         |
| Cores Taken<br>Electric Log Run<br>Geologist Report / Mud Logs<br>List All E. Logs Run:  |   |                              | <ul> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> </ul> |                       |  |                               |                       |   |                               |
|  |   | Repo                         | CASING I   |                       | ] Ne   | w Used<br>rmediate, productio | on, etc.              |   |                               |
| Purpose of String  | Size Hole<br>Drilled                                |                              | ze Casing<br>tt (In O.D.)  | Weight<br>Lbs. / Ft.  |  | Setting<br>Depth              | Type of<br>Cement     | # Sacks<br>Used   | Type and Percent<br>Additives |
|  |   |                              |  |                       |  |                               |                       |   |                               |
|  |   |                              |  |                       |  |                               |                       |   |                               |
|  |   |                              | ADDITIONAL   | CEMENTING /           | SQU  | EEZE RECORD                   |                       |   |                               |
| Purpose: Depth<br>Perforate Top Botton   |   | Type of Cement               |  | # Sacks Used          | sed Type   |                               |                       | e and Percent Additives                                     |                               |
| Protect Casing Plug Back TD Plug Off Zone  |   |                              |  |                       |  |                               |                       |   |                               |
| <ol> <li>Did you perform a hydra</li> <li>Does the volume of the is</li> <li>Was the hydraulic fractu</li> <li>Date of first Production/Inj</li> </ol> | total base fluid of the h<br>ring treatment informa | nydraulic fra<br>tion submit | acturing treatment   | al disclosure regis   | -  | Yes Yes Yes Yes               | No (If No, s          | kip questions 2 ar<br>kip question 3)<br>ill out Page Three |                               |
| Injection:   |   |                              | Flowing  | Pumping               |  | Gas Lift 🗌 O                  | ther <i>(Explain)</i> |   |                               |
| Estimated Production<br>Per 24 Hours   | Oil   | Bbls.                        | ls. Gas Mcf  |                       |  | Water Bbls. Gas-Oil Ratio G   |                       |   |                               |
| DISPOSITION  | I OF GAS:   |                              | METHOD OF  |                       |  | TION:                         |                       |   | ON INTERVAL:                  |
| Vented Sold<br>(If vented, Subm  | Used on Lease                                       |                              | Open Hole Perf.  |                       | Dually Comp. Commingled<br>(Submit ACO-5) (Submit ACO-4) |                               |                       | Top Bottom  |                               |
|  | oration Perfora<br>Top Botto                        |                              | Bridge Plug<br>Type  | Bridge Plug<br>Set At |  | Acid,                         |                       | ementing Squeeze  |                               |
|  |   |                              |  |                       |  |                               |                       |   |                               |
|  |   |                              |  |                       |  |                               |                       |   |                               |
|  |   |                              |  |                       |  |                               |                       |   |                               |
|  |   |                              |  |                       |  |                               |                       |   |                               |
| TUBING RECORD:   | Size:   | Set At:                      |  | Packer At:            |  |                               |                       |   |                               |

| Form      | ACO1 - Well Completion |
|-----------|------------------------|
| Operator  | RJ Energy, LLC         |
| Well Name | MURROW 18-A            |
| Doc ID    | 1436670                |

# Casing

| Purpose<br>Of String | Size Hole<br>Drilled | Size<br>Casing<br>Set | Weight | Setting<br>Depth | Type Of<br>Cement |    | Type and<br>Percent<br>Additives |
|----------------------|----------------------|-----------------------|--------|------------------|-------------------|----|----------------------------------|
| Surface              | 9.875                | 7                     | 17     | 20               | portland          | 4  |                                  |
| Production           | 5.625                | 2.875                 | 6.5    | 640              | portland          | 55 |                                  |
|                      |                      |                       |        |                  |                   |    |                                  |
|                      |                      |                       |        |                  |                   |    |                                  |



Mound City, KS 620.224.7406

|                       |                                     | W/o            | 11 #    |                     |      |          |         |                  | cina      | 620.224.7406 |
|-----------------------|-------------------------------------|----------------|---------|---------------------|------|----------|---------|------------------|-----------|--------------|
| Well #<br>Murrow #18A |                                     |                |         |                     |      |          |         |                  | sing      |              |
|                       |                                     | Murrov         | v #184  | 4                   |      |          |         | Surface          |           | Longstring   |
|                       |                                     | <b>RJ Ener</b> | gy, LLO | C                   |      |          | Size:   | 7 "              | Size:     | 2 7/8 "      |
|                       |                                     |                |         |                     |      |          | Tally:  | 20 '             | Tally:    | 640.1 '      |
| API #:                | 15-107                              | 7-25297        | S-T-R:  | 16-23S-22E          |      |          | Cement: | 4 sx             | Bit:      | 5.875 "      |
| County:               | unty: Linn Co., KS Date: 10.29.2018 |                |         |                     | Bit: | 9.875 "  | Date:   | 10.30.2018       |           |              |
| Тор                   | Top Base                            |                |         |                     | 1    | Тор      | Base    | Formation        |           |              |
| 0                     | 2                                   | Soil           |         |                     |      |          |         |                  |           |              |
| 2                     | 22                                  | Lime           |         |                     |      |          |         |                  | _         |              |
| 22                    | 24                                  | Shale          |         |                     |      |          |         |                  | _         |              |
| 24                    | 60                                  | Lime           |         |                     |      |          |         |                  | _         |              |
| 60                    | 66                                  | Shale          |         |                     |      |          |         |                  |           |              |
| 66                    | 74                                  | Lime           |         |                     |      |          |         |                  |           |              |
| 74                    | 239                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 239                   | 259                                 | Lime           |         |                     |      |          |         |                  | _         |              |
|                       | 327                                 |                |         |                     |      |          |         |                  |           |              |
| 258                   |                                     | Shale          |         | Odor                |      |          |         |                  |           |              |
| 327                   | 354                                 | Lime           |         | Odor                |      |          |         |                  |           |              |
| 354                   | 395                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 395                   | 415                                 | Lime           |         |                     |      |          |         |                  |           |              |
| 415                   | 426                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 426                   | 428                                 | Lime           |         |                     |      |          |         |                  |           |              |
| 428                   | 528                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 528                   | 529                                 | Lime           |         |                     |      |          |         |                  |           |              |
| 529                   | 611                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 611                   | 623                                 | Sand           |         | Good show           |      |          |         |                  |           |              |
| 623                   | 638                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 638                   | 643                                 | Sand           |         | Black, odor         |      |          |         |                  |           |              |
| 643                   | 655                                 | Shale          |         |                     |      |          |         |                  |           |              |
| 655                   |                                     | TD             |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         | Sand / Core D    | Detail    |              |
|                       |                                     |                |         |                     |      | Core #1: |         | Core #2          | :         |              |
|                       |                                     |                |         |                     |      | 611      | 623     | Soft brown sand; | very good | bleed        |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         |                     |      |          |         |                  |           |              |
|                       |                                     |                |         | Total Donth         | 6    | 66       | İ       |                  |           |              |
|                       |                                     |                |         | <b>Total Depth:</b> | 0    | 55       |         |                  |           |              |



### **HURRICANE SERVICES INC**

| Customer                 | RJ Ente              | rprises   | Lease & Well #   | Murow                   | 18A                 |                                     | Date            | 10/                                    | 30/2018       |            |
|--------------------------|----------------------|---|--|-------------------------|---------------------|-------------------------------------|-----------------|--|---------------|------------|
| Service District         | Garnet               | tt, KS  | County & State   | Linn, KS                | Legals S/T/R        |                                     |                 | # doL                                  | IC            | T 1520     |
| Јоb Туре                 | Longstring           | PROD  |  | SWD                     | New Well?           | √YES                                | No              | Ticket #                               |               | ICT 1520   |
| Equipment #              | Driver               |   |  | Job Safety              | Analysis - A Discus | sion of Hazards                     | & Safety Pro    | ocedures                               |               | ·····      |
| 271                      | Kevin                | ✓Hard hat   |  | Gloves                  |                     | Lockout/Tag                         | jout            | Warning Sign                           | s & Flagging  |            |
| 240                      | Seth                 | H2S Monitor   |  | Eye Protectio           | n                   | Required Pe                         | rmits           | Fall Protection                        | 1             |            |
| 110                      | Garrett              | ✓Safety Footwea   | ar   | Respiratory P           | Protection          | Slip/Trip/Fal                       | l Hazards       | Specific Job S                         | equence/Expe  | ectations  |
| 107                      | Mark                 | FRC/Protective  | e Clothing   | Additional Cl           | nemical/Acid PPE    | Overhead H                          | azards          | Muster Point/                          | Medical Locat | ions       |
| 77                       | Jake                 | ✓Hearing Protect  | ction  | Fire Extinguis          | sher                | Additional o                        | oncerns or iss  | sues noted below                       |               |            |
|                          |                      |   |  |                         | Con                 | nments                              |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         | -=                  |                                     |                 |  |               |            |
| Product/ Service<br>Code |                      | Desci   | ription  |                         | Unit of Measure     | Quantity                            |                 |  |               | Net Amount |
| c001                     | Heavy Equip. One \   |   | npaton -   |                         | mi                  | 30.00                               |                 | 1                                      |               | Net Amount |
| c002                     | Light Equip. One W   |   |  |                         | mi                  | 30.00                               |                 |  |               |            |
|                          |                      |   | · · · · · · · · · · · · · · · · · · ·  |                         |                     |                                     |                 |  |               |            |
| c020                     | Cement Pump          |   |  |                         | ea                  | 1.00                                |                 | 1                                      |               |            |
| c004                     | Minimum Ton Mile (   | Charge  |  |                         | ea                  | 1.00                                |                 |  |               | -          |
| t003                     | Vacuum Truck 80 b    |   |  |                         | Hour                | 3.00                                |                 |  |               |            |
|                          |                      |   | and the second |                         |                     |                                     |                 |  |               |            |
| cp014                    | Thixatropic          |   |  |                         | sack                | 55.00                               |                 |  |               |            |
| cp032                    | Mud Flush            |   |  |                         | gal                 | 420.00                              |                 | · · ·                                  |               |            |
| ср046                    | Rubber Plug 27/8"    |   |  |                         | ea                  | 2.00                                |                 |  |               |            |
| af022                    | H2O                  |   |  |                         | gal                 | 3,360.00                            |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               | _          |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   | •••••••••••••••••••••••••••••••••••••••  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   | · · · · · · · · · · · · · · · · · · ·  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
|                          |                      | ter and the second s |  | · · · · · · · · · · · · |                     |                                     |                 |  |               |            |
|                          |                      |   |  |                         |                     |                                     |                 |  |               |            |
| Custo                    | mer Section: On the  | a following scale b   | ow would you rate h  | Jurricano Sonvia        | on Inc. 2           | and a star for                      |                 |  |               |            |
| 00310                    |                      | s tonowing scale in   | ow would you rate i  |                         | es mo. :            | Total Tawahla                       |                 | T-u D-tu                               | Net:          |            |
| Bas                      | sed on this job, how | w likely is it vou v  | vould recommend  | HSI to a collead        | ue?                 | Total Taxable<br>State tax laws dee | s -             | Tax Rate:                              | Sale Tax:     |            |
|                          |                      |   |  |                         | •                   | used on new wells                   | to be sales tax | exempt. Hurricane                      | Salt IdX.     |            |
|                          |                      |   |  |                         |                     |                                     | to make a dete  | rovided well<br>ermination if services |               |            |
| U1                       | nlikely 1 2          | 3 4 5   | 6 7 8  | 9 10                    | Extremely Likely    | and/or products ar                  | e tax exempt.   |  | Total:        | <b>!</b>   |
|                          |                      |   |  |                         |                     | HSI Represe                         | entative:       | Jake Hea                               | rd            |            |

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 ½% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. <u>DISCLAIMER NOTICE</u>: Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results form the use of any product or service. The information presented is a best estimate of the accual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable ser

.

**CUSTOMER AUTHORIZATION SIGNATURE** 

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