

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1250423
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

| | | |
|-----------------------------------|-----------------|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1250423

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used | | | | | | | |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. | | | | | | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| ADDITIONAL CEMENTING / SQUEEZE RECORD | | | | |
|--|------------------|----------------|--------------|----------------------------|
| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| <input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone | | | | |
| | | | | |

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
| | | | | | |

| | | |
|--|---|---|
| DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

| | |
|-----------|---------------------------|
| Form | ACO1 - Well Completion |
| Operator | Murfin Drilling Co., Inc. |
| Well Name | Cheryl 1-33 |
| Doc ID | 1250423 |

All Electric Logs Run

| |
|------|
| |
| DIL |
| DUCP |
| MEL |
| BHCS |



PO Box 93999
Southlake, TX 76092

Voice: (817) 546-7282
Fax: (817) 246-3361

net. Prod mg

INVOICE

Invoice Number: 148585
Invoice Date: Feb 11, 2015
Page: 1

Federal Tax I.D.#: 20-8651475

Bill To:
Murfin Drlg. Co., Inc.
250 N. Water
STE #300
Wichita, KS 67202

ID 203 FH

| | | | |
|---------------------|-----------------------|----------------------|-----------------|
| Customer ID | Field Ticket # | Payment Terms | |
| Murfin | 63834 | Net 30 Days | |
| Job Location | Camp Location | Service Date | Due Date |
| KS1-01 | Oakley | Feb 11, 2015 | 3/13/15 |

| Quantity | Item | Description | Unit Price | Amount |
|----------|--------------------|-----------------------|------------|----------|
| 1.00 | WELL NAME | Cheryl #1-33 | | |
| 240.00 | CEMENT MATERIALS | Class A Common | 17.90 | 4,296.00 |
| 677.00 | CEMENT MATERIALS | Chloride | 1.10 | 744.70 |
| 252.00 | CEMENT SERVICE | Cubic Feet Charge | 2.48 | 624.96 |
| 929.60 | CEMENT SERVICE | Ton Mileage Charge | 2.75 | 2,556.40 |
| 1.00 | CEMENT SERVICE | Surface | 1,512.25 | 1,512.25 |
| 80.00 | CEMENT SERVICE | Pump Truck Mileage | 7.70 | 616.00 |
| 1.00 | CEMENT SERVICE | Manifold Head Rental | 275.00 | 275.00 |
| 80.00 | CEMENT SERVICE | Light Vehicle Mileage | 4.40 | 352.00 |
| 1.00 | CEMENT SUPERVISOR | Alan Ryan | | |
| 1.00 | EQUIPMENT OPERATOR | Kevin Ryan | | |
| 1.00 | OPERATOR ASSISTANT | George Grant | | |

| | |
|------------------------|------------------|
| Subtotal | 10,977.31 |
| Sales Tax | 398.22 |
| Total Invoice Amount | 11,375.53 |
| Payment/Credit Applied | |
| TOTAL | 11,375.53 |

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 4,939.78 *JK*

ONLY IF PAID ON OR BEFORE
Mar 13, 2015

OK JK

-4939.78
6435.75

ALLIED OIL & GAS SERVICES, LLC 063834

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Quilley 151

| | | | | | | | |
|-------------------------|-------------------|--|-----------------|------------|-------------------------|------------------------|-------------------------|
| DATE <u>2/11/19</u> | SEC. <u>33</u> | TWP. <u>1</u> | RANGE <u>36</u> | CALLED OUT | ON LOCATION | JOB START <u>7:30a</u> | JOB FINISH <u>8:00p</u> |
| LEASE <u>WVA</u> | WELL # <u>133</u> | LOCATION <u>McDonnell N 70 W R 1 W</u> | | | COUNTY <u>Henderson</u> | STATE <u>KS</u> | |
| OLD OR NEW (Circle one) | | <u>14 W 1 1/2 N</u> | | | | | |

CONTRACTOR Murfin R OWNER Same

TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D. 240
CASING SIZE 8 5/8 DEPTH 240
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 14.33

CEMENT AMOUNT ORDERED 240 can 3070 CC

EQUIPMENT

| | |
|---|--|
| PUMP TRUCK CEMENTER <u>Alan Ryan</u> | COMMON <u>240</u> @ <u>17.90</u> <u>4296.00</u> |
| # <u>495-281</u> HELPER <u>Kevin Ryan</u> | POZMIX @ |
| BULK TRUCK | GEL @ |
| # <u>873</u> DRIVER <u>George Grant</u> | CHLORIDE <u>677.16</u> @ <u>1.14</u> <u>774.36</u> |
| BULK TRUCK | ASC @ |
| # DRIVER | ASC @ |

Material total @ 3046.35
(2268.31/453)
HANDLING 250 CF @ 2.40 600.00
MILEAGE 275 @ 11.62 3193.50

REMARKS:
Run Cg, Cement, Mix Cement, Displace Cement, Start w/
Cement Add Circulate
8881 TO P.F.
Thank You Alan, Kevin, George

TOTAL _____
SERVICE
DEPTH OF JOB
PUMP TRUCK CHARGE 1512.25
EXTRA FOOTAGE @
MILEAGE 80 @ 8.20 656.00
MANIFOLD Head @ 275 275.00
150 Vehicle 80 @ 4.40 352.00

CHARGE TO: Mr Fin
STREET _____
CITY _____ STATE _____ ZIP _____

TOTAL 5936.61
(2267.47/453) TOTAL 5936.61

PLUG & FLOAT EQUIPMENT
@ _____
@ _____
@ _____
@ _____
@ _____
TOTAL _____

SALES TAX (If Any) _____
TOTAL CHARGES 10,977.31
DISCOUNT 4,939.78 (45%) IF PAID IN 30 DAYS

PRINTED NAME David Libezal
SIGNATURE David Libezal

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

6,037.52 Net.



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

| | |
|-----------|-----------|
| DATE | INVOICE # |
| 2/19/2015 | 28287 |

| |
|--|
| BILL TO |
| Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661 |
| USED FOR <u>C 103 R</u> |
| APPROVED <u>J. FR</u> |

- Acidizing
- Cement
- Tool Rental

| TERMS | Well No. | Lease | County | Contractor | Well Type | Well Category | Job Purpose | Operator |
|-------------------------------------|--|--------|---------|----------------|-----------|---------------|-------------------|--------------------|
| Net 30 | #1-33 | Cheryl | Rawlins | Company Rig #2 | Oil | Development | 5-1/2" LongString | Jason |
| PRICE REF. | DESCRIPTION | | | | QTY | UM | UNIT PRICE | AMOUNT |
| 575D | Mileage - 1 Way | | | | 150 | Miles | 5.00 | 750.00 |
| 579D | Pump Charge - Top To Bottom LongString | | | | 1 | Job | 1,700.00 | 1,700.00 |
| 403-5 | 5 1/2" Cement Basket | | | | 3 | Each | 250.00 | 750.00T |
| 406-5 | 5 1/2" Latch Down Plug & Baffle | | | | 1 | Each | 225.00 | 225.00T |
| 407-5 | 5 1/2" Insert Float Shoe With Auto Fill | | | | 1 | Each | 300.00 | 300.00T |
| 409-5 | 5 1/2" Turbolizer | | | | 15 | Each | 75.00 | 1,125.00T |
| 413-5 | 5 1/2" Roto Wall Scratcher | | | | 10 | Each | 35.00 | 350.00T |
| 419-5 | 5 1/2" Rotating Head Rental | | | | 1 | Each | 200.00 | 200.00T |
| 281 | Mud Flush | | | | 500 | Gallon(s) | 1.25 | 625.00T |
| 221 | Liquid KCL (Clayfix) | | | | 4 | Gallon(s) | 25.00 | 100.00T |
| 276 | Flocele | | | | 150 | Lb(s) | 2.25 | 337.50T |
| 284 | Calseal | | | | 9 | Sack(s) | 30.00 | 270.00T |
| 283 | Salt | | | | 1,000 | Lb(s) | 0.20 | 200.00T |
| 285 | CFR-1 | | | | 150 | Lb(s) | 4.50 | 675.00T |
| 290 | D-Air | | | | 5 | Gallon(s) | 42.00 | 210.00T |
| 325 | Standard Cement | | | | 200 | Sacks | 12.25 | 2,450.00T |
| 330 | Swift Multi-Density Standard (MIDCON II) | | | | 350 | Sacks | 15.75 | 5,512.50T |
| 581D | Service Charge Cement | | | | 550 | Sacks | 1.50 | 825.00 |
| 583D | Drayage | | | | 4,185 | Ton Miles | 0.75 | 3,138.75 |
| | Subtotal | | | | | | | 19,743.75 |
| | Sales Tax Rawlins County | | | | | | 7.90% | 1,053.07 |
| We Appreciate Your Business! | | | | | | | Total | \$20,796.82 |



CHARGE TO: **MURFIN DRILLING**
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 28287

PAGE 1 OF 2

SERVICE LOCATIONS
 1. **Ness City, KS.**
 2. **WELL/PROJECT NO. CHERRYL 1-33**
 3. **LEASE COUNTY/PARISH RAWLINS**
 4. **STATE KS. CITY MCDONALD, KS. DATE 19FEB15**
OWNER
 ORDER NO.
 WELLSITE NO. **7N1E14NW1E10**

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | LOC | ACCT | DF | DESCRIPTION | MILEAGE | QTY. | UM | QTY. | UM | UNIT PRICE | AMOUNT |
|-----------------|----------------------------------|-----|------|----|----------------------------|---------|------|----|------|----|------------|---------|
| | | | | | | | | | | | | |
| 575 | | | | | Pump Charge | 150 | mil | | | | 5.00 | 750.00 |
| 579 | | | | | Cement Baskets | 1700 | | | | | 1.00 | 1700.00 |
| 403 | | | | | LATCH DOWN PILE & BARGE | 250 | | | | | 3.00 | 750.00 |
| 4D6 | | | | | INSERT FLOAT SHADE W/ FILL | 225 | | | | | 3.00 | 675.00 |
| 4D7 | | | | | TURBIDIZERS | 300 | | | | | 3.00 | 900.00 |
| 4D9 | | | | | ROTO WALL SCRATERS | 75 | | | | | 15.00 | 1125.00 |
| 413 | | | | | ROTATING HEAD RENTAL | 10 EA | | | | | 35.00 | 350.00 |
| 419 | | | | | | 1508 | | | | | 2.00 | 300.00 |
| 281 | | | | | MUD FLUSH | 200 gal | | | | | 1.25 | 250.00 |
| 281 | | | | | LIQUID KEL | 4 gal | | | | | 25.00 | 100.00 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 DATE SIGNED **19FEB15** TIME SIGNED **1415** A.M. P.M.
 SIGNED **Wes Williams**
 REMIT PAYMENT TO:
SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR **Wes Williams** APPROVAL
 DATE SIGNED **19FEB15** TIME SIGNED **1415** A.M. P.M.
 TOTAL **20,996.82**
Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 19 FEB 15 PAGE NO.

CUSTOMER MURFIN DRILLING

WELL NO.

LEASE CHERYL 1-33

JOB TYPE 5 1/2 LONGSTRING

TICKET NO. 28287

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|----------------|--------|---|
| | | | | T | C | TUBING | CASING | |
| | 0800 | | | | | | | ON LOCATION |
| | 0915 | | | | | | | START PIPE 5 1/2 - 15.5" RTD @ 4950 - SET @ 4943 SHOE JT. 20.50 CENTRALIZERS 1-8, 10, 12, 14, 17, 19, 42, 62 BASKETS 20, 43, 63 CIRCULATE @ JT. 65 |
| | 1140 | | | | | | | DRDP BALL CIRCULATE |
| | 1223 | 6 | 12 | | ✓ | | 300 | Pump 500 gal MUD FLUSH |
| | | 6 | 20 | | ✓ | | 300 | Pump 20 bbl KCL SPACER |
| | 1229 | | 7.5 | | | | | PLUG RH 30sx - MH 20sx |
| | 1235 | 6 | 166 | | ✓ | | | MIX 300sx SMD |
| | | 4 | 48 | | ✓ | | | MIX 200sx EA-2 |
| | 1325 | | | | | | | WASH OUT PUMP & LINES. |
| | 1328 | 6 | | | ✓ | | | START DISPLACING PLUG. |
| | 1345 | Ø | 117 | | ✓ | | 2000 | PLUG DOWN - LATCH PLUG IN. |
| | 1347 | | | | ✓ | | | RELEASE PSI - DRY CIRCULATE CEMENT TO SURFACE. |
| | 1350 | | | | | | | WASH TRUCK |
| | 1415 | | | | | | | JOB COMPLETE. |
| | | | | | | | | THANKS # 115 |
| | | | | | | | | JASON DAVE (BLE CRAIG PRESTON) |

MDCI
 Cheryl #1-33
 990' FSL 1650'FEL
 Sec. 33-1S-36W
 3280' KB

| Formation | Sample top | Datum | Ref | Log tops | Datum | Ref |
|-------------|------------|-------|------|----------|-------|-----|
| Anhydrite | 3175 | +105 | -6 | 3170 | +110 | -1 |
| B/Anhydrite | 3206 | +74 | -1 | 3206 | +74 | -1 |
| Neva | 3666 | -386 | -7 | 3662 | -382 | -3 |
| Stotler | 3926 | -646 | -6 | 3925 | -645 | -5 |
| Topeka | 3998 | -718 | -4 | 3993 | -713 | +1 |
| Lansing | 4214 | -934 | -3 | 4213 | -933 | -2 |
| Stark | 4428 | -1148 | -2 | 4428 | -1148 | -2 |
| BKC | 4479 | -1199 | -2 | 4478 | -1198 | -1 |
| Pawnee | 4604 | -1324 | -3 | 4600 | -1320 | +1 |
| Cherokee | 4682 | -1402 | Flat | 4680 | -1400 | +2 |
| Mississippi | 4878 | -1598 | +1 | 4891 | -1611 | -12 |
| RTD | 4950 | -1670 | | | | |
| LTD | | | | 4952 | -1672 | |



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO INC**

250 N Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Cheryl #1-33

33-1s-36w Rawlins KS

Start Date: 2015.02.15 @ 16:00:00

End Date: 2015.02.16 @ 01:05:00

Job Ticket #: 60811 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.19 @ 08:31:57

Murfin Drilling CO INC
33-1s-36w Rawlins KS
Cheryl #1-33
DST # 1
LKC "B-D"
2015.02.15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60811

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.02.15 @ 16:00:00

GENERAL INFORMATION:

Formation: **LKC "B--D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:21:00

Time Test Ended: 01:05:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Robert Zodrow

Unit No: 66

Interval: 4232.00 ft (KB) To 4280.00 ft (KB) (TVD)

Reference Elevations: 3280.00 ft (KB)

Total Depth: 4280.00 ft (KB) (TVD)

3269.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8959

Inside

Press@RunDepth: 995.48 psig @ 4233.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.15

End Date:

2015.02.16

Last Calib.:

2015.02.16

Start Time: 16:00:05

End Time:

01:05:00

Time On Btm:

2015.02.15 @ 18:20:30

Time Off Btm:

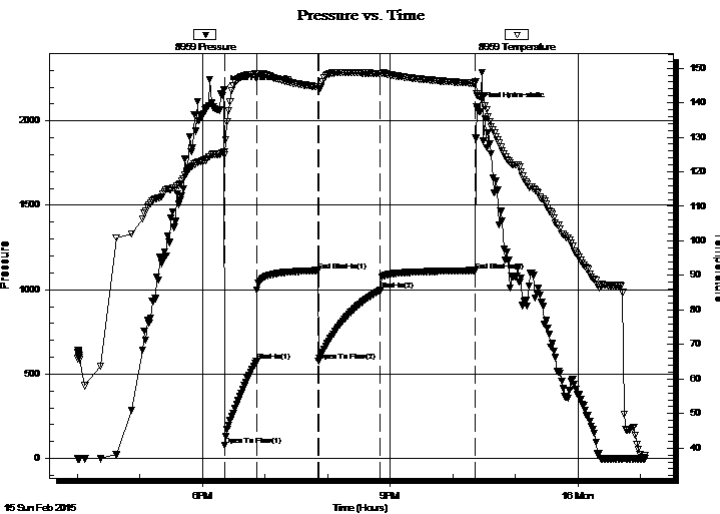
2015.02.15 @ 22:23:00

TEST COMMENT: 30-IF- Bob in 2 1/2 mins

60-ISI- No return

60-FF- Blow built to 3" died back to 1"

90-FSI- No return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2184.45 | 125.73 | Initial Hydro-static |
| 1 | 77.13 | 124.87 | Open To Flow (1) |
| 31 | 575.03 | 148.31 | Shut-In(1) |
| 90 | 1113.87 | 144.53 | End Shut-In(1) |
| 91 | 575.54 | 144.18 | Open To Flow (2) |
| 150 | 995.48 | 148.39 | Shut-In(2) |
| 241 | 1113.89 | 145.65 | End Shut-In(2) |
| 243 | 2086.07 | 142.59 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 900.00 | SW 100%W | 11.16 |
| 900.00 | MW 10%M 90%W | 13.16 |
| 480.00 | WM 15%W 85%M | 7.02 |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60811

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.02.15 @ 16:00:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4006.00 ft | Diameter: 3.88 inches | Volume: 58.58 bbl | Tool Weight: 2500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 206.00 ft | Diameter: 2.25 inches | Volume: 1.01 bbl | Weight to Pull Loose: 78000.00 lb |
| | | | <u>Total Volume: 59.59 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 7.00 ft | | | String Weight: Initial 64000.00 lb |
| Depth to Top Packer: | 4232.00 ft | | | Final 74000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 48.00 ft | | | |
| Tool Length: | 75.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool | 5.00 | | | 4210.00 | |
| Hydraulic tool | 5.00 | | | 4215.00 | |
| Jars | 5.00 | | | 4220.00 | |
| Safety Joint | 3.00 | | | 4223.00 | |
| Packer | 5.00 | | | 4228.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4232.00 | |
| Stubb | 1.00 | | | 4233.00 | |
| Recorder | 0.00 | 8959 | Inside | 4233.00 | |
| Recorder | 0.00 | 8521 | Outside | 4233.00 | |
| Perforations | 11.00 | | | 4244.00 | |
| Change Over Sub | 1.00 | | | 4245.00 | |
| Drill Pipe | 31.00 | | | 4276.00 | |
| Change Over Sub | 1.00 | | | 4277.00 | |
| Bullnose | 3.00 | | | 4280.00 | 48.00 Bottom Packers & Anchor |

Total Tool Length: 75.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60811

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2015.02.15 @ 16:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

20000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| 900.00 | SW 100%W | 11.162 |
| 900.00 | MW 10%M 90%W | 13.162 |
| 480.00 | WM 15%W 85%M | 7.020 |

Total Length: 2280.00 ft Total Volume: 31.344 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

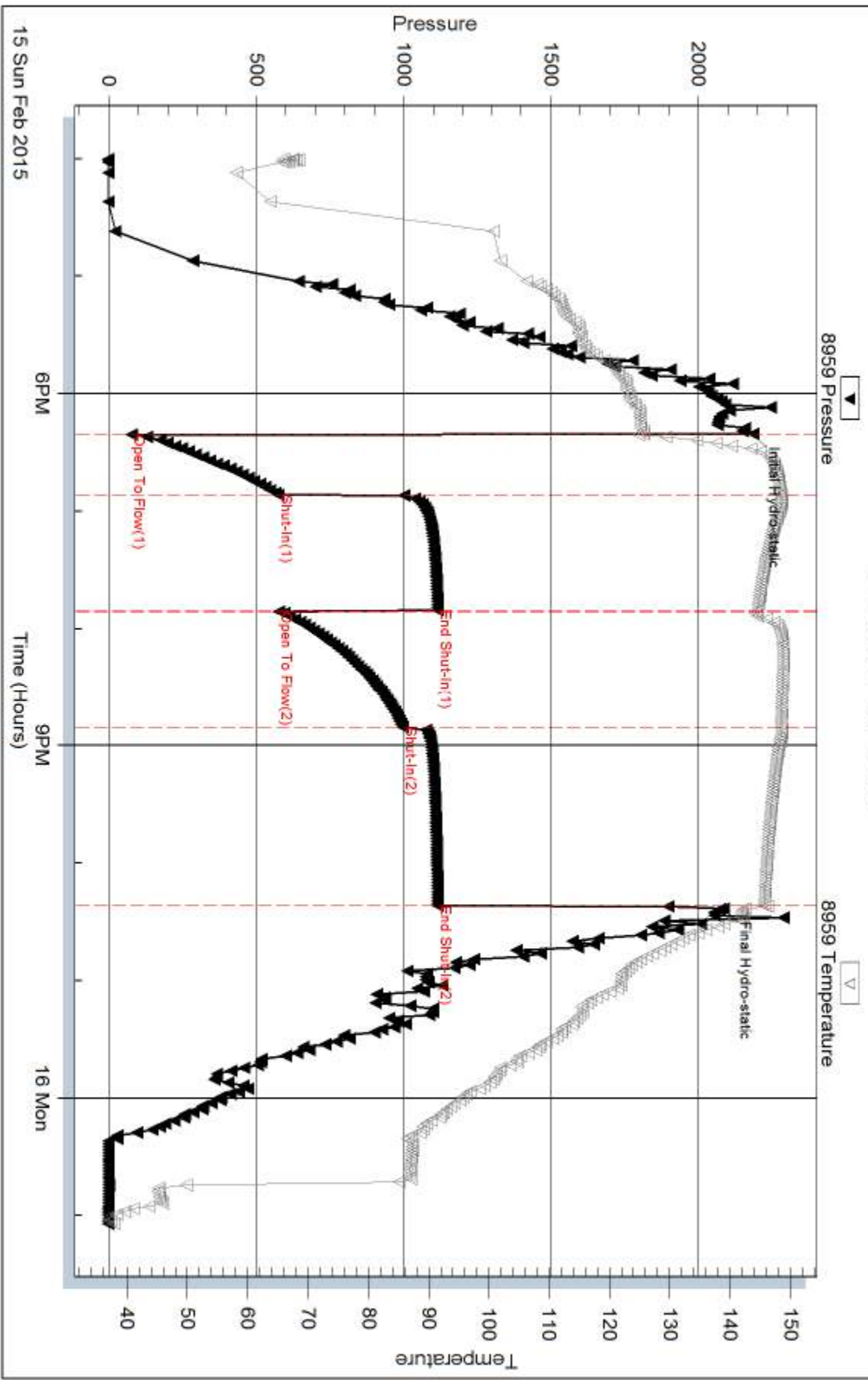
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .432 @ 55 Deg F = 20000

Pressure vs. Time

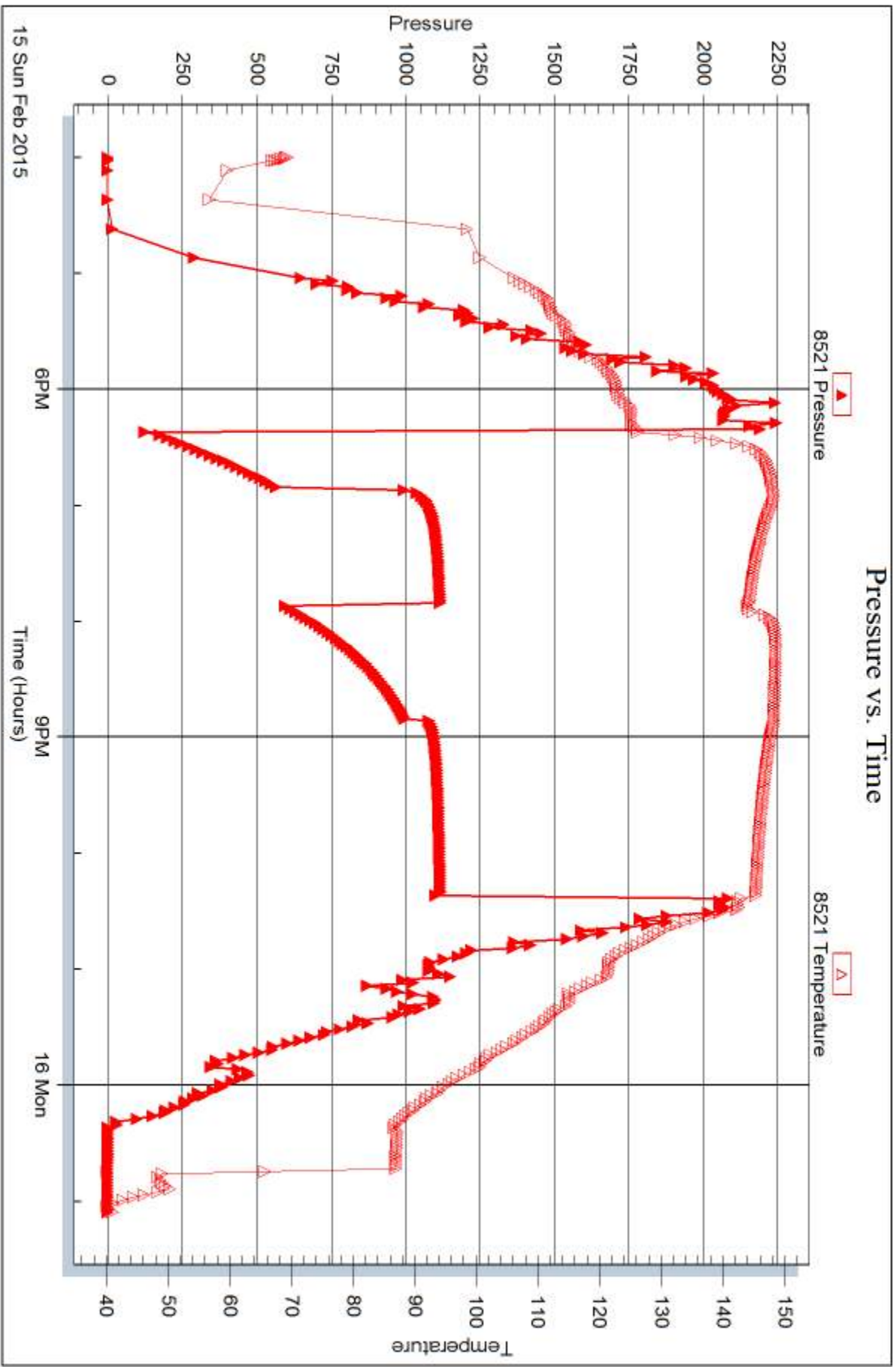


Serial #: 8521

Outside Murfin Drilling CO INC

Cheryl#1-33

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO INC**

250 N Water STE 300
Wichita KS 67202

ATTN: Saman Sharifaie

Cheryl #1-33

33-1s-36w Rawlins KS

Start Date: 2015.02.16 @ 17:25:00

End Date: 2015.02.17 @ 02:04:00

Job Ticket #: 60812 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.19 @ 08:31:27



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60812

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.02.16 @ 17:25:00

GENERAL INFORMATION:

Formation: **LKC "H--J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:27:00

Time Test Ended: 02:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 66

Interval: 4345.00 ft (KB) To 4430.00 ft (KB) (TVD)

Reference Elevations: 3280.00 ft (KB)

Total Depth: 4430.00 ft (KB) (TVD)

3269.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8959

Inside

Press@RunDepth: 199.34 psig @ 4346.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.16

End Date:

2015.02.17

Last Calib.:

2015.02.17

Start Time: 17:25:05

End Time:

02:04:00

Time On Btm:

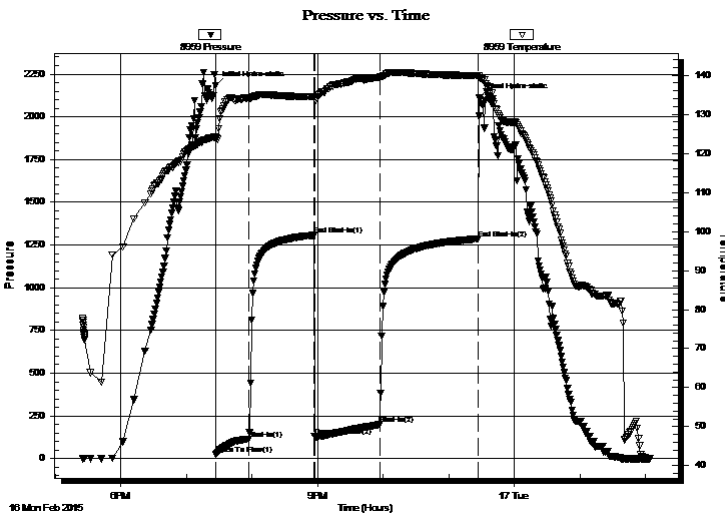
2015.02.16 @ 19:26:30

Time Off Btm:

2015.02.16 @ 23:28:00

TEST COMMENT: 30-IF- Bob in 14 mins
60-ISI- Return built to 1" died back to 1/4"
60-FF- Bob in 15 mins
90-FSI- Return built to 1 1/4" died back to 1/2"

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2181.73 | 124.32 | Initial Hydro-static |
| 1 | 25.54 | 123.84 | Open To Flow (1) |
| 31 | 114.75 | 134.01 | Shut-In(1) |
| 90 | 1306.81 | 134.50 | End Shut-In(1) |
| 91 | 130.69 | 133.92 | Open To Flow (2) |
| 150 | 199.34 | 139.49 | Shut-In(2) |
| 240 | 1286.49 | 139.91 | End Shut-In(2) |
| 242 | 2113.93 | 139.33 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 240.00 | GMCO 10%G 40%M 50%O | 1.51 |
| 180.00 | GO 10%G 90%O | 2.63 |
| 0.00 | GIP 360' | 0.00 |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60812

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.02.16 @ 17:25:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4130.00 ft | Diameter: 3.88 inches | Volume: 60.40 bbl | Tool Weight: | 2500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: 206.00 ft | Diameter: 2.25 inches | Volume: 1.01 bbl | Weight to Pull Loose: | 80000.00 lb |
| | | | <u>Total Volume: 61.41 bbl</u> | Tool Chased | ft |
| Drill Pipe Above KB: | 18.00 ft | | | String Weight: Initial | 70000.00 lb |
| Depth to Top Packer: | 4345.00 ft | | | Final | 71000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 85.00 ft | | | | |
| Tool Length: | 112.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|-------------------------------|
| Shut In Tool | 5.00 | | | 4323.00 | |
| Hydraulic tool | 5.00 | | | 4328.00 | |
| Jars | 5.00 | | | 4333.00 | |
| Safety Joint | 3.00 | | | 4336.00 | |
| Packer | 5.00 | | | 4341.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4345.00 | |
| Stubb | 1.00 | | | 4346.00 | |
| Recorder | 0.00 | 8959 | Inside | 4346.00 | |
| Recorder | 0.00 | 8521 | Outside | 4346.00 | |
| Perforations | 16.00 | | | 4362.00 | |
| Change Over Sub | 1.00 | | | 4363.00 | |
| Drill Pipe | 63.00 | | | 4426.00 | |
| Change Over Sub | 1.00 | | | 4427.00 | |
| Bullnose | 3.00 | | | 4430.00 | 85.00 Bottom Packers & Anchor |

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO INC

33-1s-36w Rawlins KS

250 N Water STE 300
Wichita KS 67202

Cheryl #1-33

Job Ticket: 60812

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2015.02.16 @ 17:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|---------------------|----------------|
| 240.00 | GMCO 10%G 40%M 50%O | 1.510 |
| 180.00 | GO 10%G 90%O | 2.632 |
| 0.00 | GIP 360' | 0.000 |

Total Length: 420.00 ft Total Volume: 4.142 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

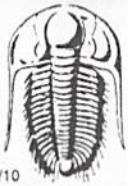
Serial #: 8521

Outside Murfin Drilling CO INC

Cheryl#1-33

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60811**

Well Name & No. Cheryl # 1-33 Test No. 1 Date 2-15-2015
 Company Murfin Drilling Co. Inc. Elevation ~~3280~~ 3280 KB ~~3280~~ 3268
 Address 250 N Water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Saman Sharif Aie Rig Murfin #2
 Location: Sec. 33 Twp. 1 S Rge. 36 W Co. Pawling State KS

Interval Tested 4232 — 4280 Zone Tested LKC "B-0"
 Anchor Length 48 Drill Pipe Run 4006 Mud Wt. 9.3
 Top Packer Depth 4228 Drill Collars Run 206 Vis 53
 Bottom Packer Depth 4232 Wt. Pipe Run 0 WL 6.8
 Total Depth 4280 Chlorides 700 ppm System LCM 8
 Blow Description FF - Bob in 2 1/2 mins
ISF - NO return
FF - Blow built to 3" died back to 1"
FSF - NO return

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|-----------|------|------------|-----------|------|
| <u>480</u> | <u>WM</u> | | <u>15</u> | <u>85</u> | |
| <u>900</u> | <u>MW</u> | | <u>90</u> | <u>10</u> | |
| <u>900</u> | <u>SW</u> | | <u>100</u> | | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

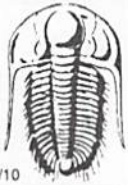
Rec Total 2280 BHT 145 Gravity — API RW 432 @ 55 °F Chlorides 20,000 ppm

| | | |
|-------------------------------------|---|--|
| (A) Initial Hydrostatic <u>2184</u> | <input checked="" type="checkbox"/> Test <u>1150</u> | T-On Location <u>15:00 2-15</u> |
| (B) First Initial Flow <u>77</u> | <input checked="" type="checkbox"/> Jars <u>250</u> | T-Started <u>16:00 2-15</u> |
| (C) First Final Flow <u>575</u> | <input checked="" type="checkbox"/> Safety Joint <u>75</u> | T-Open <u>18:21 2-15</u> |
| (D) Initial Shut-In <u>1114</u> | <input type="checkbox"/> Circ Sub | T-Pulled <u>22:21 2-15</u> |
| (E) Second Initial Flow <u>576</u> | <input type="checkbox"/> Hourly Standby | T-Out <u>01:05 2-16</u> |
| (F) Second Final Flow <u>995</u> | <input checked="" type="checkbox"/> Mileage <u>112 RT</u> 112 | Comments |
| (G) Final Shut-In <u>11103</u> | <input type="checkbox"/> Sampler | |
| (H) Final Hydrostatic <u>2086</u> | <input type="checkbox"/> Straddle | <input type="checkbox"/> Ruined Shale Packer |
| Initial Open <u>30</u> | <input type="checkbox"/> Shale Packer | <input type="checkbox"/> Ruined Packer |
| Initial Shut-In <u>60</u> | <input type="checkbox"/> Extra Packer | <input type="checkbox"/> Extra Copies |
| Final Flow <u>60</u> | <input type="checkbox"/> Extra Recorder | Sub Total <u>0</u> |
| Final Shut-In <u>90</u> | <input type="checkbox"/> Day Standby | Total <u>1587</u> |
| | <input type="checkbox"/> Accessibility | MP/DST Disc't |
| | Sub Total <u>1587</u> | |

Approved By _____

Our Representative Robert Zedner

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60812**

Well Name & No. Cheryl #1-33 Test No. 2 Date 2-16-2015
 Company Murfin Drilling Co. Inc. Elevation 3280 KB 3269 GL
 Address 250 N Water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Saman Sharif Aie Rig Murfin #2
 Location: Sec. 33 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 4345 - 4430 Zone Tested LKC "H-5"
 Anchor Length 85 Drill Pipe Run 4130 Mud Wt. 9.2
 Top Packer Depth 4341 Drill Collars Run 206 Vis 5.5
 Bottom Packer Depth 4345 Wt. Pipe Run 0 WL 6.4
 Total Depth 4430 Chlorides 700 ppm System LCM 10

Blow Description IF - Bob in 14 mins
FSI - Return built to 1" died back to 1/4"
FF - Bob in 15 mins
FSI - Return built to 1 1/4" died back to 1/2"

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|-----------------|-----------|-----------|--------|-----------|
| <u>180</u> | <u>90</u> | <u>10</u> | <u>90</u> | | |
| <u>240</u> | <u>9MCO</u> | <u>10</u> | <u>50</u> | | <u>40</u> |
| <u> </u> | <u>YIP 360'</u> | | | | |
| <u> </u> | <u> </u> | | | | |
| <u> </u> | <u> </u> | | | | |

Rec Total 420 BHT 140 Gravity 31 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2182 Test 1150 T-On Location 16:45 2-16
 (B) First Initial Flow 25 Jars 250 T-Started 17:25 2-16
 (C) First Final Flow 115 Safety Joint 75 T-Open 19:27 2-16
 (D) Initial Shut-In 1307 Circ Sub T-Pulled 23:26 2-16
 (E) Second Initial Flow 131 Hourly Standby T-Out 02:04 2-17
 (F) Second Final Flow 199 Mileage 11.2 RT x2 112 Comments drove out loaded
 (G) Final Shut-In 1286 Sampler 112 Tool 11:30 on 2-18-15
 (H) Final Hydrostatic 2114 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Extra Recorder Sub Total 0
 Day Standby Total 1699
 Accessibility MP/DST Disc't
 Sub Total 1699

Approved By _____ Our Representative Robert Zedler

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

