



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1205261
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: _____

1205261

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 <i>(Attach Additional Sheets)</i> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Log | Formation (Top), Depth and Datum | <input type="checkbox"/> Sample |
| Samples Sent to Geological Survey | <input type="checkbox"/> Yes <input type="checkbox"/> No | Name | Top | Datum |
| 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: | | | | |

| 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 | Downing 1-6 |
| Doc ID | 1205261 |

All Electric Logs Run

| |
|----------------------|
| |
| Dual Induction |
| Dual Compensated |
| Microresistivity |
| Borehole Compensated |



INVOICE

acct. Prod. - 6

PO Box 93999
Southlake, TX 76092

Invoice Number: 141264

Invoice Date: Feb 3, 2014

Page: 1

Voice: (817) 546-7282

Fax: (817) 246-3361

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

| Customer ID | Field Ticket # | Payment Terms | |
|--------------|----------------|---------------|----------|
| Murfin | 62552 | Net 30 Days | |
| Job Location | Camp Location | Service Date | Due Date |
| KS1-01 | Oakley | Feb 3, 2014 | 3/5/14 |

| Quantity | Item | Description | Unit Price | Amount |
|----------|--------------------|-----------------------|------------|----------|
| 1.00 | WELL NAME | Downing #1-6 | | |
| 220.00 | CEMENT MATERIALS | Class A Common | 17.90 | 3,938.00 |
| 8.00 | CEMENT MATERIALS | Chloride | 64.00 | 512.00 |
| 231.00 | CEMENT SERVICE | Cubic Feet Charge | 2.48 | 572.88 |
| 852.00 | CEMENT SERVICE | Ton Mileage Charge | 2.60 | 2,215.20 |
| 1.00 | CEMENT SERVICE | Surface | 1,512.25 | 1,512.25 |
| 80.00 | CEMENT SERVICE | Pump Truck Mileage | 7.70 | 616.00 |
| 80.00 | CEMENT SERVICE | Light Vehicle Mileage | 4.40 | 352.00 |
| 1.00 | CEMENT SUPERVISOR | Alan Ryan | | |
| 1.00 | EQUIPMENT OPERATOR | LaRene Wentz | | |

12

| | |
|------------------------|------------------|
| Subtotal | 9,718.33 |
| Sales Tax | 351.55 |
| Total Invoice Amount | 10,069.88 |
| Payment/Credit Applied | |
| TOTAL | 10,069.88 |

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

\$ 3,401.41 *ole 3/5/14*

ONLY IF PAID ON OR BEFORE

Feb 28, 2014

- 3401.41
6668.47

ALLIED OIL & GAS SERVICES, LLC 062552

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dakota Ky
2/4/14

| | | | | | | | |
|----------------------------------|------------------|--|-----------------|------------|--------------------------|----------------------------|-----------------------------|
| DATE <u>2/3/14</u> | SEC. <u>6</u> | TWP <u>1</u> | RANGE <u>35</u> | CALLED OUT | ON LOCATION | JOB START <u>5:30am</u> | JOB FINISH <u>6:00am</u> |
| LEASE <u>Deering</u> | WELL# <u>1-6</u> | LOCATION <u>Rawlady NW 702 3W 20 R27</u> | | | COUNTY <u>Rawlins</u> | STATE <u>KS</u> | |
| OLD OR NEW (Circle one) <u>S</u> | | | | | | | |

CONTRACTOR Murfin

TYPE OF JOB Sealant

HOLE SIZE 12 1/4 T.D. 258'

CASING SIZE 8 1/2 DEPTH 258'

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 15,479

OWNER Same

CEMENT AMOUNT ORDERED 220 cu 390 cc

EQUIPMENT

PUMP TRUCK CEMENTER Alan Rypop

404281 HELPER Ladene Wentz

BULK TRUCK

373 DRIVER Thomas (TWS)

BULK TRUCK

DRIVER

COMMON 220 @ 17.90 3938.00

POZMIX @

GEL @

CHLORIDE 8 @ 6.40 51.20

ASC @

HANDLING @ 2.40 572.80

MILEAGE 2.00 700 mile @ .65/mile 2215.00

REMARKS:

Rawlins, Colorado, NW corner of 3rd & 4th
Com. 5' Section

Cement 220 cu 390 cc
to pit

Frank E. Alan Rypop

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @

MILEAGE 80 miles @ 7.20 616.00

MANIFOLD @

4 telechokes 80 miles @ 4.40 352.00

CHARGE TO Murfin Drdg.

STREET

CITY STATE ZIP

TOTAL 2400.25

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

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.

PRINTED NAME Ladney Fair

SIGNATURE Ladney Fair

SALES TAX (If Any) _____

TOTAL CHARGES 9,718.33

DISCOUNT 3,401.41 IF PAID IN 30 DAYS

6,316.91 Net.



CONSOLIDATED
Oil Well Services, LLC

REMITTO
Consolidated Oil Well Services, LLC
Dept. 970
P.O. Box 4346
Houston, TX 77210-4346

MAIN OFFICE
P.O. Box 884
Chanute, KS 66720
620/431-9210 • 1-800/467-8676
Fax 620/431-0012

Accty

cc: WF

cc: h12

cc: L-1

INVOICE

Invoice # 265986

Invoice Date: 02/18/2014 Terms: 10/10/30,n/30

Page 1

MURFIN DRILLING
P.O. BOX 288
RUSSELL KS 67665
() -

DOWNING 1-6
43132
6-1-35W
02-15-2014
KS

USED FOR IC 103
APPROVED JTR
FH

| Part Number | Description | Qty | Unit Price | Total |
|-------------|--------------------------|---------|------------|---------|
| 1104D | CLASS "A" CEMENT CMD | 300.00 | 27.9200 | 8376.00 |
| 1126 | OIL WELL CEMENT | 200.00 | 23.7000 | 4740.00 |
| 1101 | CAL SEAL | 1000.00 | .5200 | 520.00 |
| 1107 | FLO-SEAL (25#) | 150.00 | 2.9700 | 445.50 |
| 1142A | KCL SUB MB6875 CC3107 (1 | 2.00 | 41.1000 | 82.20 |
| 1144G | MUD FLUSH (SALE) | 500.00 | 1.0000 | 500.00 |
| 4104 | CEMENT BASKET 5 1/2" | 3.00 | 290.0000 | 870.00 |
| 4136 | TURBOLIZER 5 1/2" | 15.00 | 75.7500 | 1136.25 |
| 4159 | FLOAT SHOE AFU 5 1/2" | 1.00 | 433.7500 | 433.75 |
| 4454 | 5 1/2" LATCH DOWN PLUG | 1.00 | 567.0000 | 567.00 |
| 4315 | ROTATING SCRATCHERS | 20.00 | 94.5000 | 1890.00 |
| 4310 | 5 1/2" ROTATING HEAD | 1.00 | 150.0000 | 150.00 |
| 1111 | SODIUM CHLORIDE (GRANULA | 200.00 | .0000 | .00 |

| Sublet Performed | Description | Total |
|------------------|---------------------------|----------|
| 9996-130 | CEMENT MATERIAL DISCOUNT | -1971.07 |
| 9995-130 | CEMENT EQUIPMENT DISCOUNT | -665.35 |

| Description | Hours | Unit Price | Total |
|---------------------------------|-------|------------|---------|
| 399 SINGLE PUMP | 1.00 | 3175.00 | 3175.00 |
| 399 EQUIPMENT MILEAGE (ONE WAY) | 75.00 | 5.25 | 393.75 |
| T-127 TON MILEAGE DELIVERY | 1.00 | 3084.75 | 3084.75 |

Amount Due 27921.33 if paid after 03/20/2014

| | | | | | | | |
|--------|----------|-----------|-----|---------|----------|----|----------|
| Parts: | 19710.70 | Freight: | .00 | Tax: | 1401.42 | AR | 25129.20 |
| Labor: | .00 | Misc: | .00 | Total: | 25129.20 | | |
| Sublt: | -2636.42 | Supplies: | .00 | Change: | .00 | | |

Signed _____

Date _____



CONSOLIDATED
Oil Well Services, LLC

265986

TICKET NUMBER 43132

LOCATION OAKLEY KS.

FOREMAN DAMON M.

WALT DINKEL

PO Box 881, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT

KS.

| DATE | CUSTOMER # | WELL NAME & NUMBER | SECTION | TOWNSHIP | RANGE | COUNTY | |
|--|------------|---|--------------------------|-----------------|---------------|---------|--------|
| 2-15-14 | 5406 | DOWNING 1-6 | 6 | 1 | 35W | RAWLINS | |
| CUSTOMER <u>MURFIN DRUG.</u> | | BEARDSLEY N 40 DEAD END 3W 1/2S E.S. | | TRUCK # | DRIVER | TRUCK # | DRIVER |
| MAILING ADDRESS <u>250 N. WATER STE 300</u> | | | | <u>399</u> | <u>TIM W.</u> | | |
| CITY <u>WICHITA</u> | | STATE <u>KS.</u> | ZIP CODE <u>67202</u> | <u>52BT-12T</u> | <u>MIKER</u> | | |

JOB TYPE LONG STRING HOLE SIZE 7 7/8 HOLE DEPTH 4500 CASING SIZE & WEIGHT 5 1/2 #15.5
 CASING DEPTH 4493 DRILL PIPE _____ TUBING _____ OTHER ✓
 SLURRY WEIGHT 10.7/14.2 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT IN CASING SINCE 21.50
 DISPLACEMENT 106.42 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting rig up on MURFIN #B RUN FLOAT EQUIPMENT TURBO-
LIZER #1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, 17, 32, 47 BASKETS ON #11, 33, 48
RAN REST OF CASING TO #60 CIRC 30 MIN THEN RAN REST OF CASING CIRC ON
BOTTOM FOR 1 HR. Pumped 5 BBL OF H2O 500 GAL MUDFLUSH 5 BBL OF H2O
MIX 250 SKS CMO 1/2# FLOSEAL TAIED IN WITH 200 SKS OWC #5 KOLSEAL SHUT
DOWN WASHED PUMPED LINES DROPPED PLUG AND PUMPED 104 1/2 BBL OF H2O
FIRST 20 BBL HAD KCL LIFE WAS #1250 LARD PLUG AT #1750 RELEASED
PRESSURE FLOAT HELD CEMENT CIRC 5 BBL THEN LOST CIRCULATION

RH 30 SKS
MH. 20 SKS

THANK YOU DAMON, WALT, & CREW

| ACCOUNT CODE | QUANTITY or UNITS | DESCRIPTION of SERVICES or PRODUCT | UNIT PRICE | TOTAL |
|--------------|-------------------|------------------------------------|-----------------|------------|
| 5401C | 1 | PUMP CHARGE | 3175.00 | 3175.00 ✓ |
| 5406 | 75 | MILEAGE | 5.25 | 393.75 ✓ |
| 5407A | 23.5 | TON MILEAGE DELIVERY | 1.75 | 3084.75 ✓ |
| 11040 | 300 SKS. | CMO | 27.92 | 8376.00 ✓ |
| 1126 | 200 SKS. | OWC | 23.70 | 4740.00 ✓ |
| 1101 | 1000# | KOLSEAL | .52 | 520.00 ✓ |
| 1107 | 150# | FLOSEAL | 2.97 | 445.50 ✓ |
| 1142A | 2 GAL | KCL | 41.10 | 82.20 ✓ |
| 11446 | 500 GAL | MUDFLUSH | 1.00 | 500.00 ✓ |
| 4104 | 3 | 5 1/2 BASKETS (W) | 290.00 | 870.00 ✓ |
| 4136 | 15 | 5 1/2 TURBO LIZERS | 75.75 | 1136.25 ✓ |
| 4159 | 1 | 5 1/2 AFU FLOAT SHOE (W) | 433.75 | 433.75 ✓ |
| 4454 | 1 | 5 1/2 LATCHDOWN PLUG (I) | 567.00 | 567.00 ✓ |
| 4315 | 20 | 5' SCRATCHERS | 94.50 | 1890.00 ✓ |
| 4310 | 1 | 5 1/2 ROTATING HEAD | 150.00 | 150.00 ✓ |
| 1111 | 200# | SALT N/C N/C ✓ | | |
| | | | SUBTOTAL | 26364.20 ✓ |
| | | | LESS 10% | 2636.42 ✓ |
| | | | SUBTOTAL | 23727.78 ✓ |
| | | | SALES TAX | 1401.42 ✓ |
| | | | ESTIMATED TOTAL | 25129.20 ✓ |

completed 7.9

Ravin 3737

AUTHORIZATION [Signature]

TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

Downing #1-6
 Daily Drilling Report
 Page Two

- 2/13/14 Depth 4298'. Cut 100'. DT: None. CT: 19 ½ hrs. Dev.: None. **LKC G:** pr w/ tr fr intrprtcal por, scat lt-drk brn sptd-sub sat stn, S-FSFO (some bleeding), no odor. **LKC G Prime:** pr por, scat blk sptd-sat stn, NSFO, no odor. **LKC H:** pr intrprtcal por, scat blk tarry-asph sptd-patchy stn, 1 pc w/ brn stn & VSSFO (caving?), no odor. On bottom with test at 6:17AM. **DST #2 4194-4298 (LKC G-H):** 30-60-30-60. IF: surface blow built to ¾". IF: no blow. Rec. 5' M (100% M). HP: 2064-2039. FP: 15/19, 20/24. SIP: 512-406. BHT: 119°.
- 2/14/14 Depth 4385'. Cut 87'. DT: 1¾ hrs oil line. CT: 17¾ hrs. Dev.: None. **LKC I:** pr por, NS. **LKC J:** pr w/ tr fr intrprtcal & pin point por, tr lt-med brn sptd-sub sat stn, mstly SS w/ cpl pcs FSFO, no odor, tr barren pin point por. **LKC K:** pr por, NS. **DST #3 4296-4385 (LKC J-K):** 30-60-60-90. IF: BOB in 11 min. ISl: blow back built to ½". FF: BOB in 11 min. Rec. 850' TF, 46' Free Oil (100% O), 804' OSMW (spots O, 80% W, 20% M). Oil Gravity 34° API. Chlr. 72,000 ppm. Pit chlr. 1,100 ppm. HP: 2134-2130. FP: 44/225, 230/395. SIP: 720-697. BHT: 135°.
- 2/15/14 RTD 4500'. Cut 115'. DT: None. CT: 17½ hrs. Dev.: None. TD @ 8:15PM 2/14. Pioneer logged 12:00AM to 6:00AM 2/15.
- 2/16/14 RTD 4500'. CT: 17¼ hrs. Ran 108jts of 15.5# 5½" prod csg, set @ 4493'. C.O.W.S cmt w/200sxs OWC, 250sxsCMD, PD @ 8:15PM 2/15. 30sxs RH, 20sxs MH. Circ to cellar. RR @ 12:15AM 12/16/14. FINAL REPORT.

| MDCI Downing #1-6 2150' FSL 2140' FWL Sec. 6-T1S-R35W 3169' KB | | | | | | | MDCI Walter 'A' OWWO #1-1 1980' FSL 2080' FEL Sec. 1-T1S-R36W 3237' KB | |
|--|------------|-------|-----|---------|-------|------|--|-------|
| Formation | Sample top | Datum | Ref | Log Top | Datum | Ref | Log Top | Datum |
| Anhydrite | 3100 | +69 | +10 | 3099 | +70 | +11 | 3178 | +59 |
| B/Anhydrite | 3132 | +37 | +10 | 3132 | +37 | +10 | 3210 | +27 |
| Neva | 3592 | -423 | -3 | 3594 | -425 | -5 | 3657 | -420 |
| Red Eagle | 3658 | -489 | -7 | 3658 | -489 | -7 | 3719 | -482 |
| Foraker | 3705 | -536 | -6 | 3706 | -537 | -7 | 3767 | -530 |
| Topeka | 3913 | -744 | -7 | 3914 | -745 | -8 | 3974 | -737 |
| Oread | 4029 | -860 | -3 | 4026 | -857 | Flat | 4094 | -857 |
| Lansing | 4131 | -962 | -6 | 4134 | -965 | -9 | 4193 | -956 |
| Stark | 4348 | -1179 | -9 | 4347 | -1178 | -8 | 4407 | -1170 |
| BKC | 4400 | -1231 | -11 | 4398 | -1229 | -9 | 4457 | -1220 |
| RTD | 4500 | -1331 | | | | | 5270 | |
| LTD | | | | 4500 | -1331 | | 5266 | |



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing #1-6

6-1s-35w Rawlins,KS

Start Date: 2014.02.12 @ 05:21:00

End Date: 2014.02.12 @ 14:52:30

Job Ticket #: 55168 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 16:36:12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

6-1s-35w Rawlins,KS

Downing #1-6

Job Ticket: 55168

DST#: 1

Test Start: 2014.02.12 @ 05:21:00

GENERAL INFORMATION:

Formation: **LKC D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:24:00
 Time Test Ended: 14:52:30
 Interval: **4143.00 ft (KB) To 4198.00 ft (KB) (TVD)**
 Total Depth: 4198.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3169.00 ft (KB)
 3164.00 ft (CF)
 KB to GR/CF: 5.00 ft

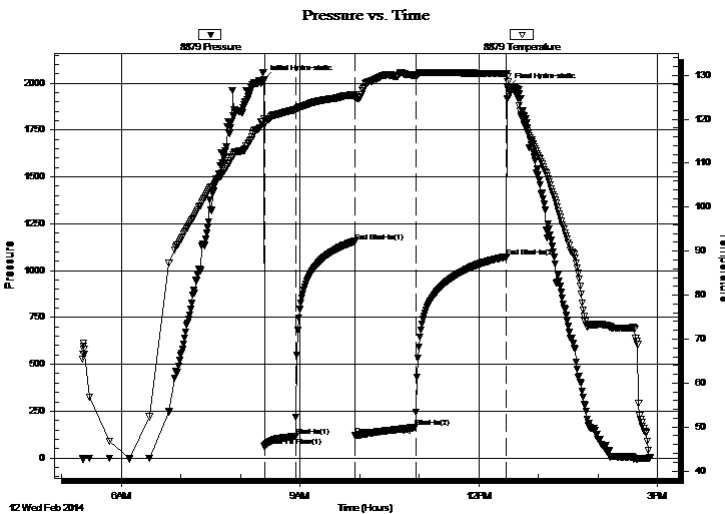
Serial #: 8879

Inside

Press@RunDepth: 163.01 psig @ 4144.00 ft (KB)
 Start Date: 2014.02.12 End Date: 2014.02.12
 Start Time: 05:21:05 End Time: 14:52:30
 Capacity: 8000.00 psig
 Last Calib.: 2014.02.12
 Time On Btm: 2014.02.12 @ 08:23:45
 Time Off Btm: 2014.02.12 @ 12:29:00

TEST COMMENT: 30 - IF - Surface blow built to 6"
 60 - ISI - No Return
 30 - FF - Surface blow built to 2 1/2"
 60 - FSI - No Return

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2016.64 | 120.14 | Initial Hydro-static |
| 1 | 59.47 | 118.81 | Open To Flow (1) |
| 32 | 116.98 | 122.20 | Shut-In(1) |
| 91 | 1155.62 | 125.53 | End Shut-In(1) |
| 92 | 118.95 | 124.94 | Open To Flow (2) |
| 153 | 163.01 | 129.98 | Shut-In(2) |
| 244 | 1074.46 | 130.40 | End Shut-In(2) |
| 246 | 1974.29 | 128.44 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 189.00 | OSMW - 10M - 90W - oil spots | 0.97 |
| 131.00 | OSWM - 60M - 40W - oil spots | 1.84 |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Rocky Milford

6-1s-35w Rawlins,KS

Downing #1-6

Job Ticket: 55168

DST#: 1

Test Start: 2014.02.12 @ 05:21:00

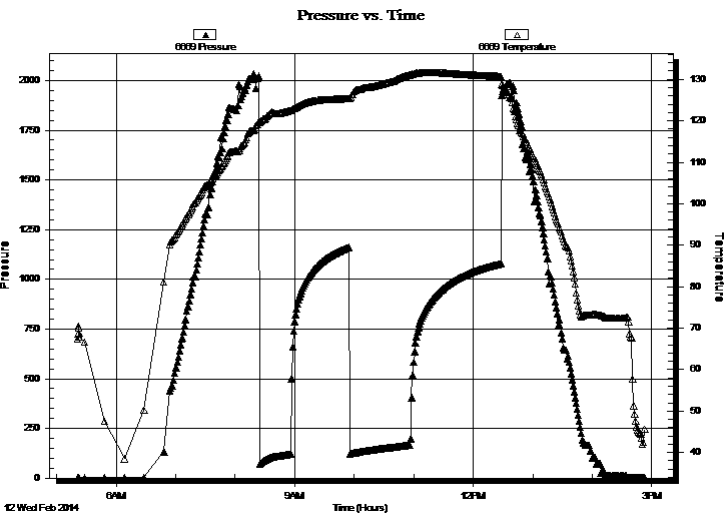
GENERAL INFORMATION:

Formation: **LKC D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:24:00
 Time Test Ended: 14:52:30
 Interval: **4143.00 ft (KB) To 4198.00 ft (KB) (TVD)**
 Total Depth: 4198.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3169.00 ft (KB)
 3164.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6669 Inside

Press@RunDepth: psig @ 4144.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.12 End Date: 2014.02.12 Last Calib.: 2014.02.12
 Start Time: 05:21:05 End Time: 14:52:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to 6"
 60 - ISI - No Return
 30 - FF - Surface blow built to 2 1/2"
 60 - FSI - No Return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 189.00 | OSMW - 10M - 90W - oil spots | 0.97 |
| 131.00 | OSWM - 60M - 40W - oil spots | 1.84 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55168

DST#: 1

ATTN: Rocky Milford

Test Start: 2014.02.12 @ 05:21:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3942.00 ft | Diameter: 3.80 inches | Volume: 55.30 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: 185.00 ft | Diameter: 2.25 inches | Volume: 0.91 bbl | Weight to Pull Loose: | 72000.00 lb |
| | | | <u>Total Volume: 56.21 bbl</u> | Tool Chased | 10.00 ft |
| Drill Pipe Above KB: | 11.00 ft | | | String Weight: Initial | 62000.00 lb |
| Depth to Top Packer: | 4143.00 ft | | | Final | 64000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 55.00 ft | | | | |
| Tool Length: | 82.00 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments: Hit a bridge 10' off bottom w hich opened tool, unset tool then w ent back dow n and reset tool.

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

| | | | | | |
|-----------------|-------|------|--------|---------|-------------------------------|
| Shut In Tool | 5.00 | | | 4121.00 | |
| Hydraulic tool | 5.00 | | | 4126.00 | |
| Jars | 5.00 | | | 4131.00 | |
| Safety Joint | 3.00 | | | 4134.00 | |
| Packer | 4.00 | | | 4138.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4143.00 | |
| Stubb | 1.00 | | | 4144.00 | |
| Recorder | 0.00 | 6669 | Inside | 4144.00 | |
| Recorder | 0.00 | 8879 | Inside | 4144.00 | |
| Perforations | 18.00 | | | 4162.00 | |
| Change Over Sub | 1.00 | | | 4163.00 | |
| Drill Pipe | 31.00 | | | 4194.00 | |
| Change Over Sub | 1.00 | | | 4195.00 | |
| Bullnose | 3.00 | | | 4198.00 | 55.00 Bottom Packers & Anchor |

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55168

DST#: 1

ATTN: Rocky Milford

Test Start: 2014.02.12 @ 05:21:00

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:

81000 ppm

Viscosity: 80.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbf |
|--------------|------------------------------|---------------|
| 189.00 | OSMW - 10M - 90W - oil spots | 0.966 |
| 131.00 | OSWM - 60M - 40W - oil spots | 1.838 |

Total Length: 320.00 ft

Total Volume: 2.804 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

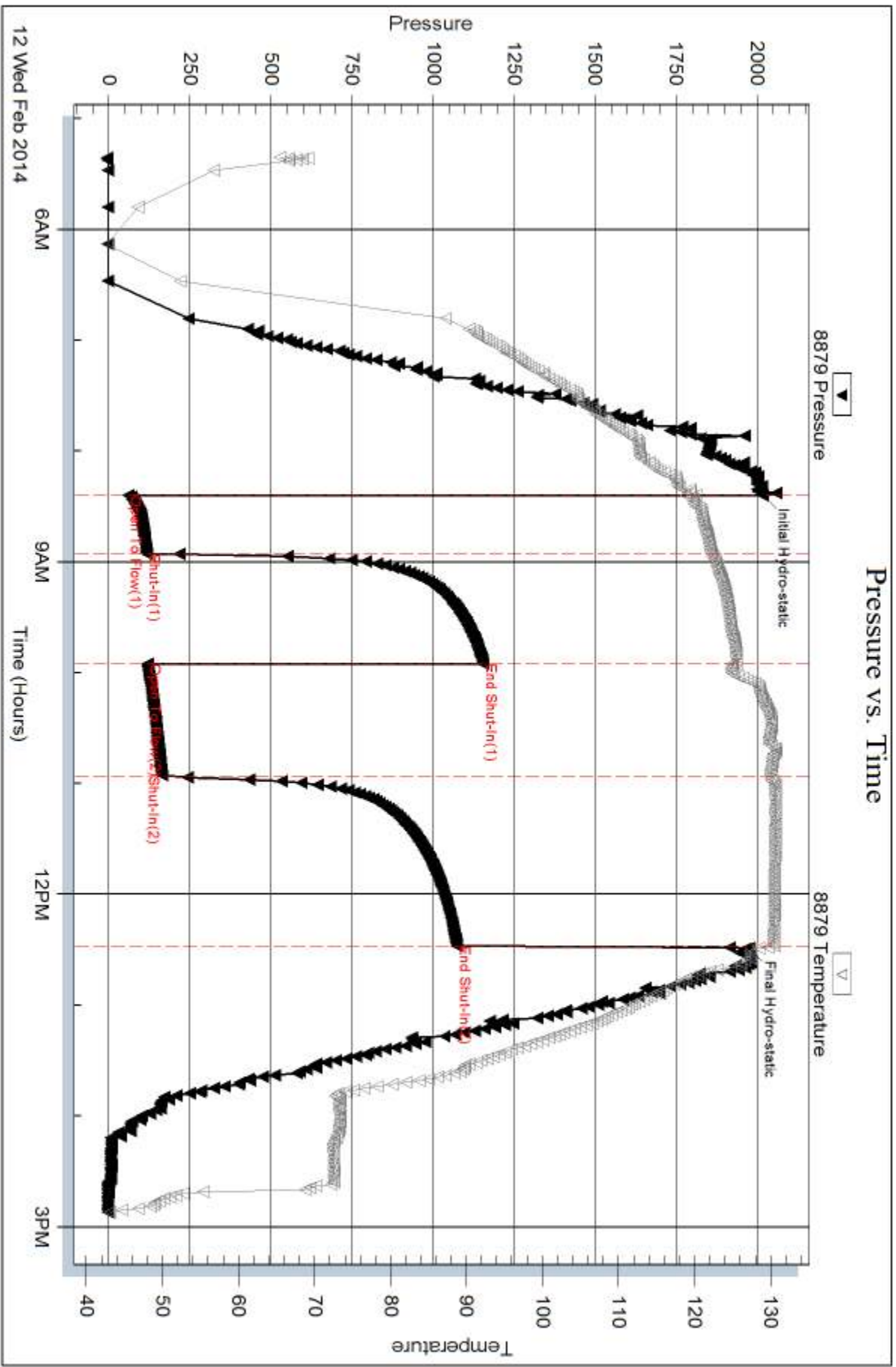
Serial #: 8879

Inside

Murfin Drilling Co., Inc.

Downing #1-6

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55168

Printed: 2014.02.14 @ 16:36:15

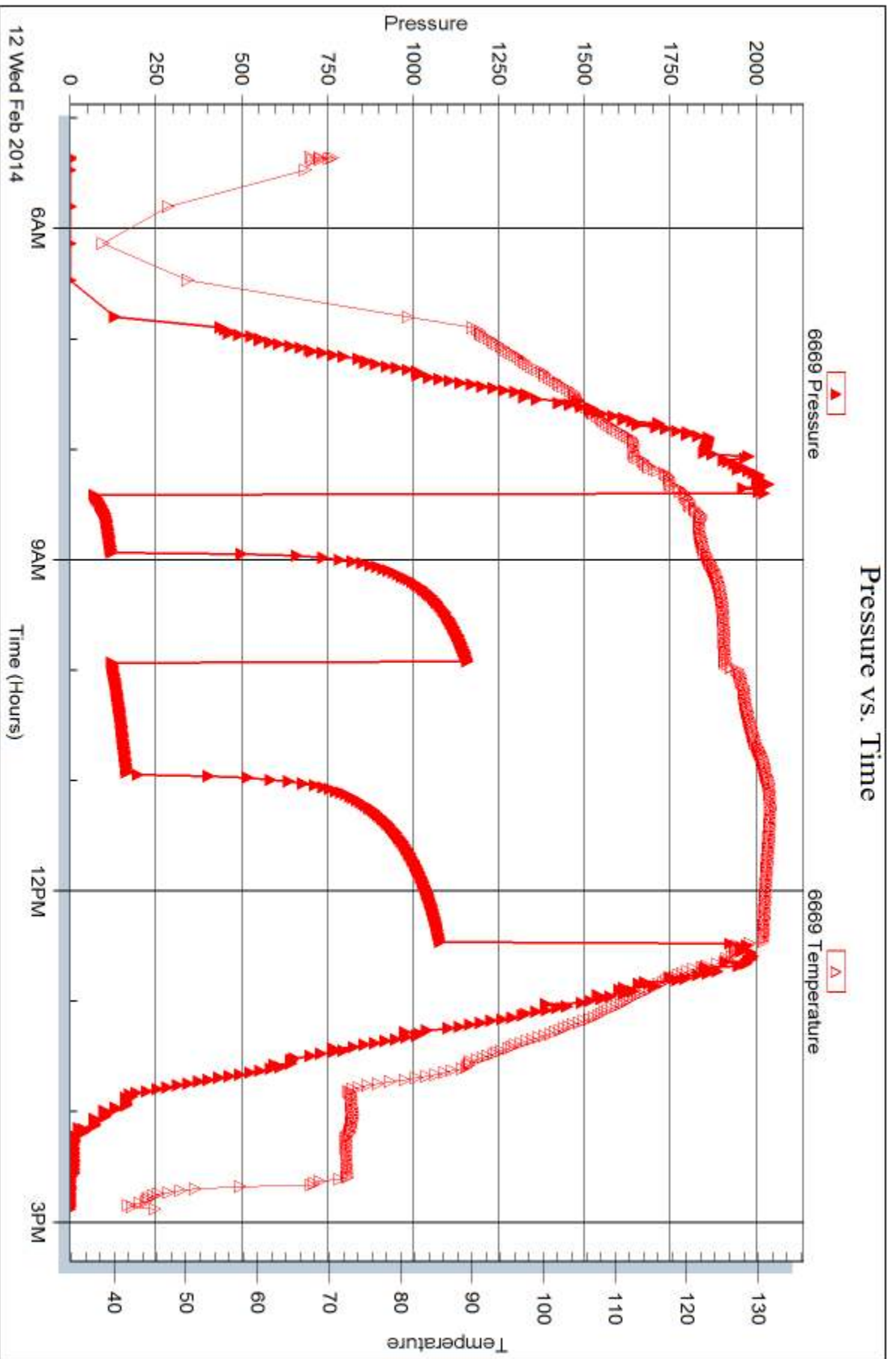
Serial #: 6669

Inside

Murfin Drilling Co., Inc.

Downing #1-6

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55168

Printed: 2014.02.14 @ 16:36:15



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing #1-6

6-1s-35w Rawlins,KS

Start Date: 2014.02.13 @ 03:37:00

End Date: 2014.02.13 @ 11:24:30

Job Ticket #: 55169 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 16:35:48



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55169

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.02.13 @ 03:37:00

GENERAL INFORMATION:

Formation: **LKC G-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:45

Time Test Ended: 11:24:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: 4194.00 ft (KB) To 4298.00 ft (KB) (TVD)

Reference Elevations: 3169.00 ft (KB)

Total Depth: 4298.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8879

Inside

Press@RunDepth: 24.50 psig @ 4195.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.13

End Date:

2014.02.13

Last Calib.:

2014.02.13

Start Time:

03:37:05

End Time:

11:24:29

Time On Btm:

2014.02.13 @ 06:14:30

Time Off Btm:

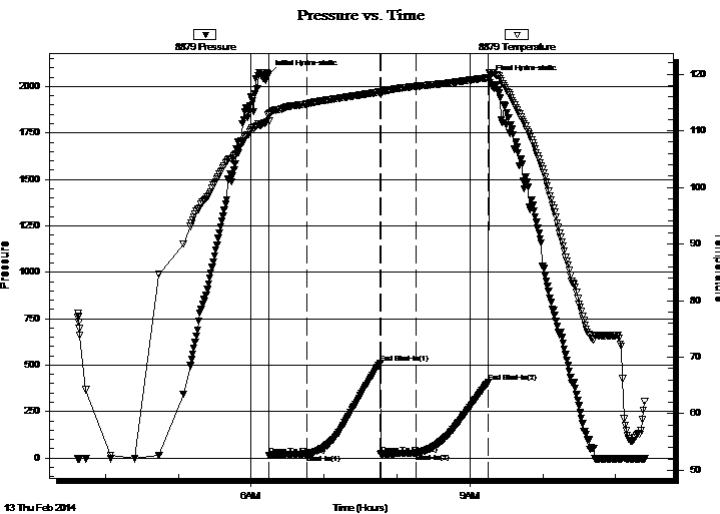
2014.02.13 @ 09:15:45

TEST COMMENT: 30 - IF - Surface blow built to 3/4"

60 - ISI - No Return

30 - FF - No Surface blow

60 - FSI - No Return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2063.75 | 112.97 | Initial Hydro-static |
| 1 | 15.39 | 111.69 | Open To Flow (1) |
| 31 | 19.46 | 114.76 | Shut-In(1) |
| 92 | 512.35 | 116.87 | End Shut-In(1) |
| 92 | 19.97 | 116.48 | Open To Flow (2) |
| 121 | 24.50 | 117.85 | Shut-In(2) |
| 181 | 406.17 | 119.37 | End Shut-In(2) |
| 182 | 2039.31 | 120.24 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00 | Mud - 100M | 0.02 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55169

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.02.13 @ 03:37:00

GENERAL INFORMATION:

Formation: **LKC G-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:45

Time Test Ended: 11:24:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: 4194.00 ft (KB) To 4298.00 ft (KB) (TVD)

Reference Elevations: 3169.00 ft (KB)

Total Depth: 4298.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6669

Inside

Press@RunDepth: psig @ 4195.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.13

End Date:

2014.02.13

Last Calib.:

2014.02.13

Start Time:

03:37:05

End Time:

11:24:30

Time On Btm:

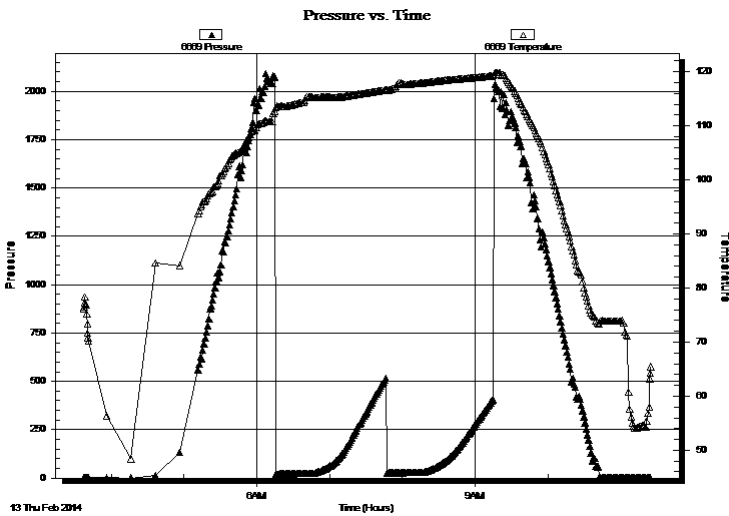
Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to 3/4"

60 - ISI - No Return

30 - FF - No Surface blow

60 - FSI - No Return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00 | Mud - 100M | 0.02 |
| | | |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55169

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.02.13 @ 03:37:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4005.00 ft | Diameter: 3.80 inches | Volume: 56.18 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: 185.00 ft | Diameter: 2.25 inches | Volume: 0.91 bbl | Weight to Pull Loose: | 68000.00 lb |
| | | | <u>Total Volume: 57.09 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 23.00 ft | | | String Weight: Initial | 64000.00 lb |
| Depth to Top Packer: | 4194.00 ft | | | Final | 64000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 104.00 ft | | | | |
| Tool Length: | 131.00 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 | | | 4172.00 | |
| Hydraulic tool | 5.00 | | | 4177.00 | |
| Jars | 5.00 | | | 4182.00 | |
| Safety Joint | 3.00 | | | 4185.00 | |
| Packer | 4.00 | | | 4189.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4194.00 | |
| Stubb | 1.00 | | | 4195.00 | |
| Recorder | 0.00 | 6669 | Inside | 4195.00 | |
| Recorder | 0.00 | 8879 | Inside | 4195.00 | |
| Perforations | 5.00 | | | 4200.00 | |
| Change Over Sub | 1.00 | | | 4201.00 | |
| Drill Pipe | 93.00 | | | 4294.00 | |
| Change Over Sub | 1.00 | | | 4295.00 | |
| Bullnose | 3.00 | | | 4298.00 | 104.00 Bottom Packers & Anchor |

Total Tool Length: 131.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55169

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.02.13 @ 03:37:00

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:

ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 5.00 | Mud - 100M | 0.025 |

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

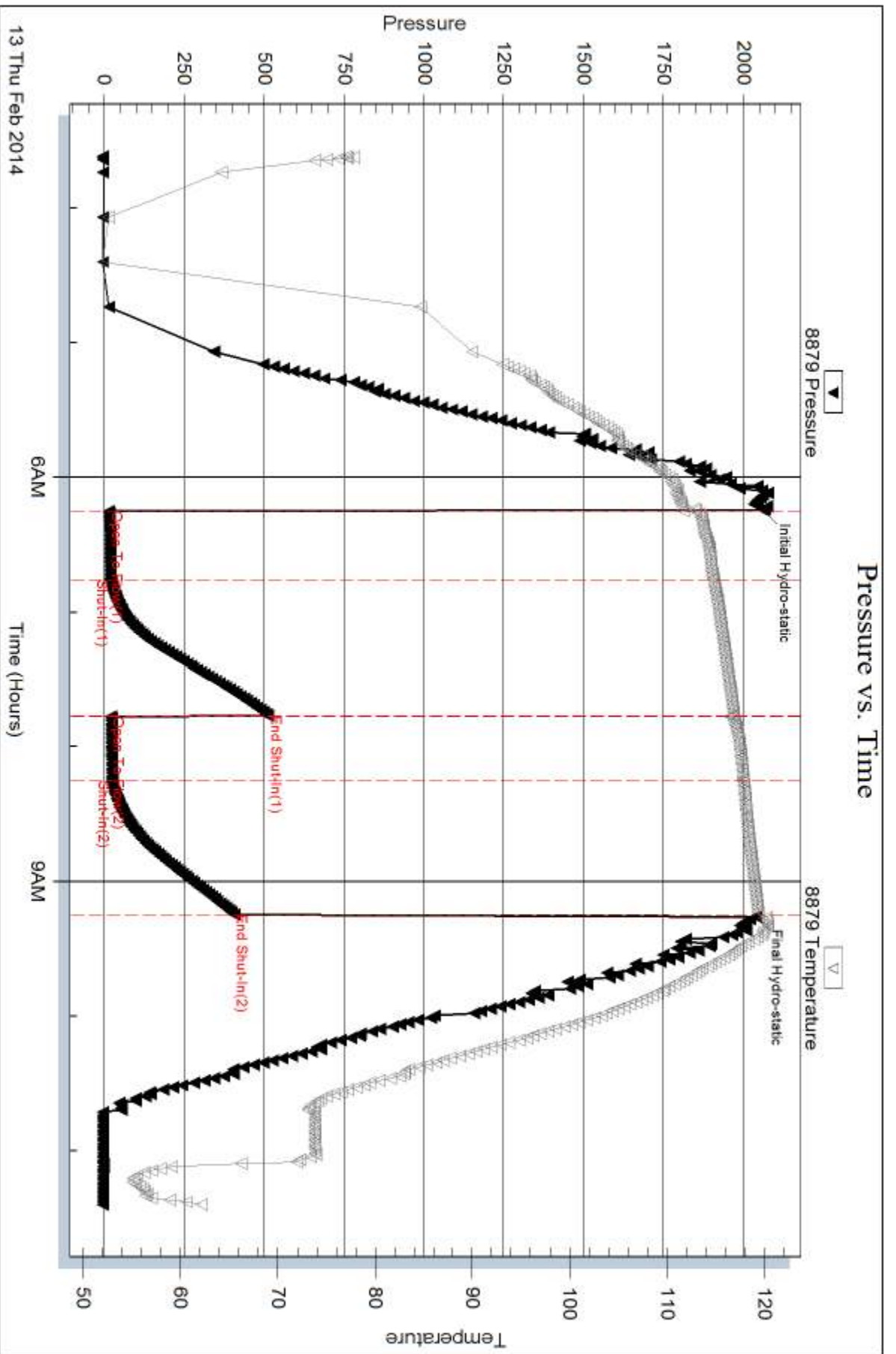
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



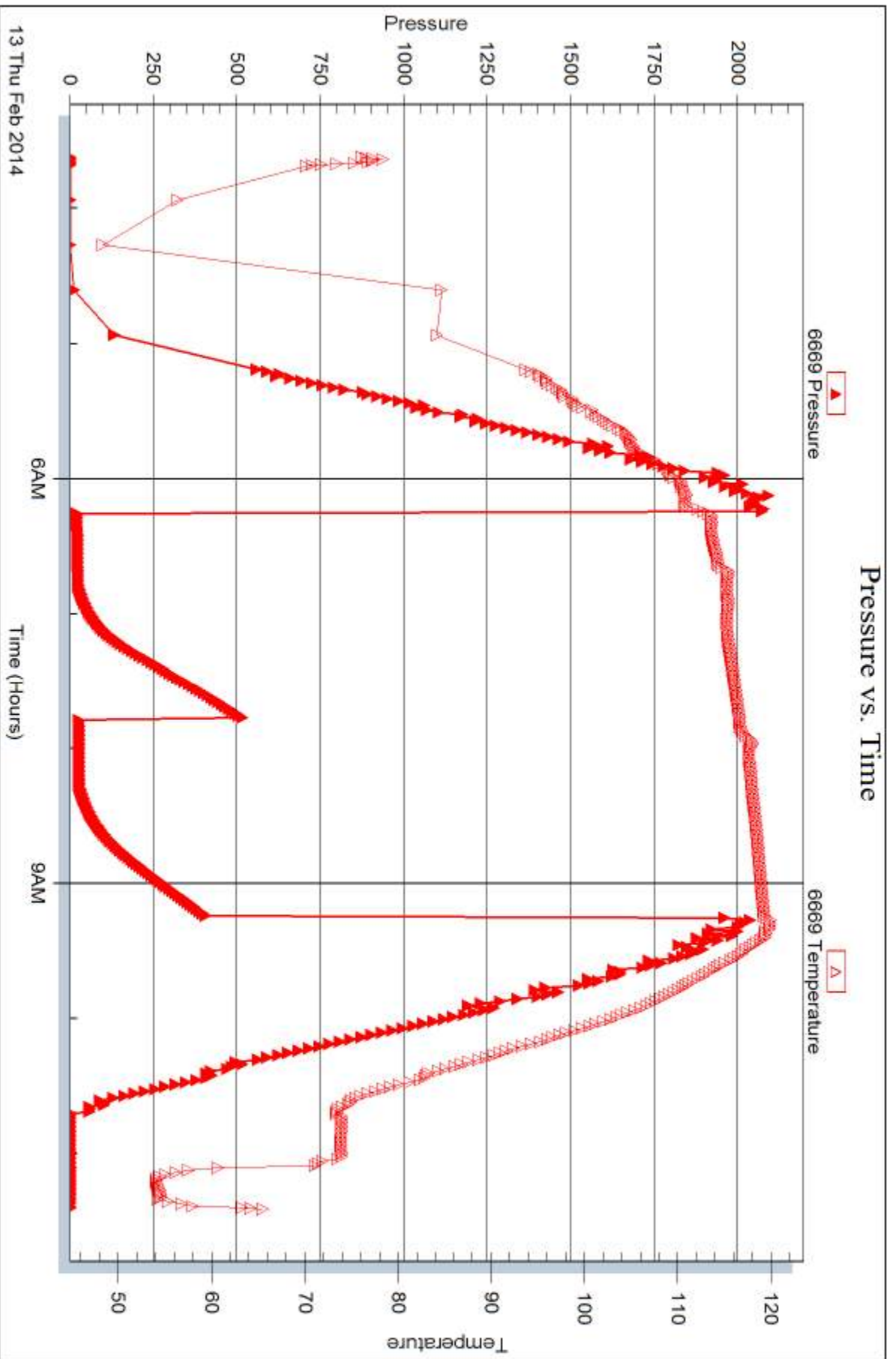
Serial #: 6669

Inside

Murfin Drilling Co., Inc.

Downing #1-6

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 55169

Printed: 2014.02.14 @ 16:35:50



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing #1-6

6-1s-35w Rawlins,KS

Start Date: 2014.02.14 @ 00:05:00

End Date: 2014.02.14 @ 10:26:47

Job Ticket #: 55170 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 16:35:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Rocky Milford

6-1s-35w Rawlins,KS

Downing #1-6

Job Ticket: 55170

DST#: 3

Test Start: 2014.02.14 @ 00:05:00

GENERAL INFORMATION:

Formation: **LKC J-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:59:48
 Time Test Ended: 10:26:47
 Interval: **4296.00 ft (KB) To 4385.00 ft (KB) (TVD)**
 Total Depth: 4385.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 3169.00 ft (KB)
 3164.00 ft (CF)
 KB to GR/CF: 5.00 ft

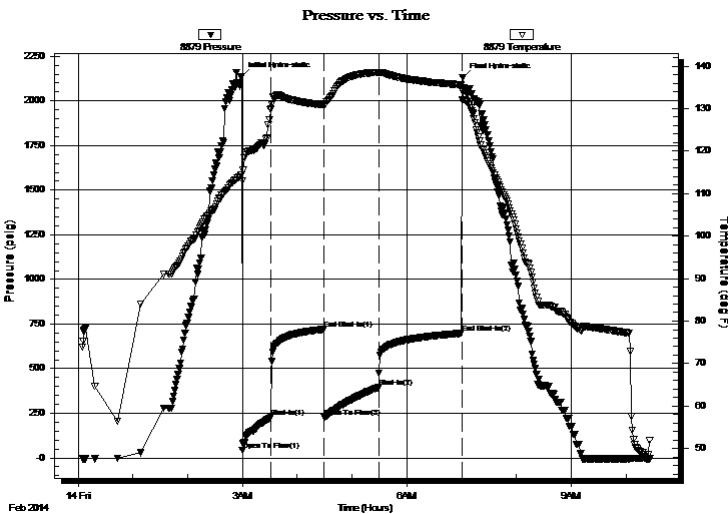
Serial #: 8879

Inside

Press@RunDepth: 395.55 psig @ 4297.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.14 End Date: 2014.02.14 Last Calib.: 2014.02.14
 Start Time: 00:05:05 End Time: 10:26:48 Time On Btm: 2014.02.14 @ 02:59:33
 Time Off Btm: 2014.02.14 @ 07:01:02

TEST COMMENT: 30 - IF - Surface blow built to bottom of bucket in 11 min.
 60 - ISI - Return built to 1/2"
 60 - FF - Surface blow built to bottom of bucket in 11 min.
 90 - FSI - No return

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2134.86 | 114.42 | Initial Hydro-static |
| 1 | 44.04 | 112.98 | Open To Flow (1) |
| 32 | 225.57 | 130.06 | Shut-In(1) |
| 90 | 720.64 | 130.93 | End Shut-In(1) |
| 90 | 230.00 | 130.62 | Open To Flow (2) |
| 150 | 395.55 | 138.47 | Shut-In(2) |
| 241 | 697.84 | 135.57 | End Shut-In(2) |
| 242 | 2130.80 | 133.85 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 804.00 | OSMW - 80W - 20M - oil spots | 9.59 |
| 46.00 | Free oil - 100o | 0.65 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55170

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.02.14 @ 00:05:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4101.00 ft | Diameter: 3.80 inches | Volume: 57.53 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: 185.00 ft | Diameter: 2.25 inches | Volume: 0.91 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 58.44 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 17.00 ft | | | String Weight: Initial 64000.00 lb |
| Depth to Top Packer: | 4296.00 ft | | | Final 70000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 89.00 ft | | | |
| Tool Length: | 116.00 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 | | | 4274.00 | |
| Hydraulic tool | 5.00 | | | 4279.00 | |
| Jars | 5.00 | | | 4284.00 | |
| Safety Joint | 3.00 | | | 4287.00 | |
| Packer | 4.00 | | | 4291.00 | 27.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4296.00 | |
| Stubb | 1.00 | | | 4297.00 | |
| Recorder | 0.00 | 6669 | Inside | 4297.00 | |
| Recorder | 0.00 | 8879 | Inside | 4297.00 | |
| Perforations | 20.00 | | | 4317.00 | |
| Change Over Sub | 1.00 | | | 4318.00 | |
| Drill Pipe | 63.00 | | | 4381.00 | |
| Change Over Sub | 1.00 | | | 4382.00 | |
| Bullnose | 3.00 | | | 4385.00 | 89.00 Bottom Packers & Anchor |

Total Tool Length: 116.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

6-1s-35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing #1-6

Job Ticket: 55170

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.02.14 @ 00:05:00

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:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------------|---------------|
| 804.00 | OSMW - 80W - 20M - oil spots | 9.593 |
| 46.00 | Free oil - 100o | 0.645 |

Total Length: 850.00 ft Total Volume: 10.238 bbl

Num Fluid Samples: 0

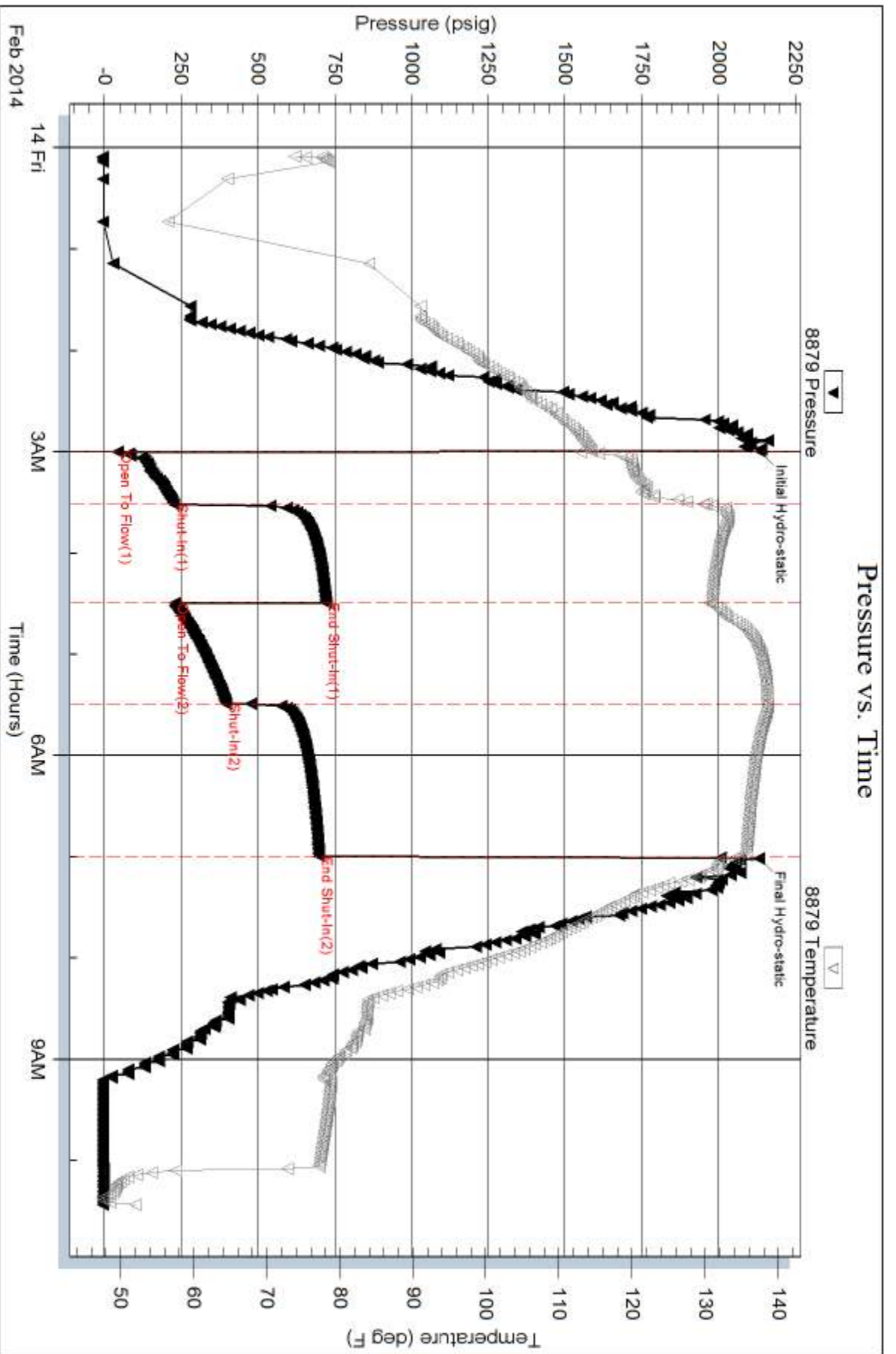
Num Gas Bombs: 0

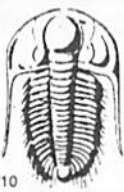
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55168**

Well Name & No. Downing # 1-6 Test No. 1 Date 2-12-14
 Company Murfin Drilling Co., Inc. Elevation 3169 KB 3164 GL
 Address 250 N. Water Ste. 300 Wichita KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 6 Twp. 15 Rge. 35W Co. Rawlins State KS

Interval Tested 4143-4198 Zone Tested Lansing D
 Anchor Length 55' Drill Pipe Run 3942 Mud Wt. 9.0
 Top Packer Depth 4139 Drill Collars Run 185' Vis 80
 Bottom Packer Depth 4143 Wt. Pipe Run 0 WL 5.2
 Total Depth 4198 Chlorides 600 ppm System LCM 4#

Blow Description IF - Surface blow built to 6"
ISI - No Return
FF - Surface blow built to 2 1/2"
FSI - No Return

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|-------------|--------------|-----------|-----------|------|
| <u>131</u> | <u>OSWm</u> | <u>Spots</u> | <u>40</u> | <u>60</u> | |
| <u>189'</u> | <u>OSmw</u> | <u>Spots</u> | <u>90</u> | <u>10</u> | |
| | | | | | |
| | | | | | |
| | | | | | |

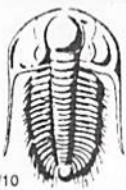
Rec Total 320' BHT 130°F Gravity _____ API RW .155 @ 43 °F Chlorides 81,000 ppm

(A) Initial Hydrostatic 2016 Test 1250 T-On Location 4:35am
 (B) First Initial Flow 59 Jars 250 T-Started 5:21am
 (C) First Final Flow 116 Safety Joint 75 T-Open 8:25am
 (D) Initial Shut-In 1155 Circ Sub N/C T-Pulled 12:25pm
 (E) Second Initial Flow 118 Hourly Standby _____ T-Out 2:53pm
 (F) Second Final Flow 163 Mileage 110 R/T 170.50 Comments Hit bridge 10' off
 (G) Final Shut-In 1074 Sampler _____ bottom opened tool, unset
 (H) Final Hydrostatic 1974 Straddle _____ tool, then reset

Ruined Shale Packer _____
 Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____
 Extra Recorder _____
 Sub Total 0
 Day Standby _____
 Total 1745.50
 Accessibility _____
 MP/DST Disc't _____
 Sub Total 1745.50

Approved By _____ Our Representative [Signature]

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. **55169**

Well Name & No. Downing # 1-#6 Test No. 2 Date 2-13-14
 Company Murfin Drilling Co., Inc. Elevation 3169 KB 3164 GL
 Address 250 N. Water St. 300 Wichita KS. 67202
 Co. Rep / Geo. Rocky Mitchell Rig Murfin #8
 Location: Sec. 6 Twp. 1S Rge. 35W Co. Rawlins State KS

Interval Tested 4194 - 4298 Zone Tested LKC G-H
 Anchor Length 104' Drill Pipe Run 4005 Mud Wt. 9.2
 Top Packer Depth 4190 Drill Collars Run 185' Vis 40
 Bottom Packer Depth 4194 Wt. Pipe Run 0 WL 7.2
 Total Depth 4298 Chlorides 500 ppm System LCM 2#

Blow Description IF - Surface blow built to 3/4"
ISI - No Return
FF - No Surface blow
FST - No Return

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|------------|------|------|------------|------|
| <u>5'</u> | <u>Mud</u> | | | <u>100</u> | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 5' BHT 119°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2063 Test 1250 T-On Location 2:45am
 (B) First Initial Flow 15 Jars 250 T-Started 3:37am
 (C) First Final Flow 19 Safety Joint 75 T-Open 6:15am
 (D) Initial Shut-In 512 Circ Sub N/C T-Pulled 9:15am
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 11:25am
 (F) Second Final Flow 24 Mileage 110 R/T 170.50 Comments _____
 (G) Final Shut-In 406 Sampler _____
 (H) Final Hydrostatic 2039 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 60 Extra Packer _____ Ruined Packer _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 1745.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1745.50

Approved By _____ Our Representative [Signature]

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. **55170**

Well Name & No. Downing #1-6 Test No. 3 Date 2-13-14
 Company Murfin Drilling Co., Inc. Elevation 3169 KB 3164 GL
 Address 250 N. Water Ste. 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 6 Twp. 1S Rge. 35W Co. Rawlins State KS

Interval Tested 4296 - 4385 Zone Tested LKC J-K
 Anchor Length 89' Drill Pipe Run 4101 Mud Wt. 9.2
 Top Packer Depth 4292 Drill Collars Run 185' Vis 51
 Bottom Packer Depth 4296 Wt. Pipe Run 0 WL 7.6
 Total Depth 4385 Chlorides 1100 ppm System LCM 4#

Blow Description IF - Surface blow built to bottom of bucket in 11 min.
ISI - Return built to 1/2"
FF - Surface blow built to bottom of bucket in 11 min.
FSI - No return

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|-----------------|--------------|-----------|-----------|------|
| <u>46'</u> | <u>Free oil</u> | <u>100</u> | | | |
| <u>804'</u> | <u>OSMW</u> | <u>Spots</u> | <u>80</u> | <u>20</u> | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 850' BHT 135°F Gravity 34 API RW .150 @ 50 °F Chlorides 72000 ppm

(A) Initial Hydrostatic 2134 Test 1250 T-On Location 11:20 pm
 (B) First Initial Flow 44 Jars 250 T-Started 12:05 am
 (C) First Final Flow 225 Safety Joint 75 T-Open 3:00 am
 (D) Initial Shut-In 220 Circ Sub N/C T-Pulled 7:00 am
 (E) Second Initial Flow 230 Hourly Standby .5h 50 T-Out 10:28 am
 (F) Second Final Flow 395 Mileage 110 R/T 170.50 Comments loaded tool after test
 (G) Final Shut-In 697 Sampler
 (H) Final Hydrostatic 2130 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer

Initial Open 30 Extra Packer Extra Copies
 Initial Shut-In 60 Extra Recorder Sub Total 0
 Final Flow 60 Day Standby Total 1795.50
 Final Shut-In 90 Accessibility MP/DST Disc't

Sub Total 1795.50

Approved By _____ Our Representative Rocky Milford

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.

Robert L. Milford

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **Murfin Drilling Company, Inc.**
LEASE **Dworing #1-6**
LOC. SPOT **160' S & 160' E of N2 NE SW**

LOC. FOOTAGE **2,150 FSL 2,140 FWL**
SEC. **6** TWPSP **15** RANG **35W**
COUNTY **Rawlins** STATE **Kansas**

API **15-153-20981-00-00**
CONTRACTOR **Murfin Drilling Co., Inc.** RIG NO. **8**
DRILLING STARTED **2-3-2014** COMPLETED **2-14-2014**
MUD DISPLACED **3,793** MUD TYPE **Chemical**
DRILLING TIME KEPT FROM **3,990** TO **RTD**
SAMPLES SAVED FROM **3,990** TO **RTD**
SAMPLES EXAMINED FROM **3,990** TO **RTD**
GEOLOGICAL SUPERVISION FROM **3,490** TO **RTD**

MEASUREMENTS
CASINO RECORD
SURFACE **8.5/8" @ 298'**
CONDUCTOR
PRODUCTION **5.1/2" @ 4493'**
w/ 450 sacks cement

ELEVATIONS
KB **3,169'**
GL **3,164'**

FORMATION NAME LOG LOG DATE TIME TOP DATUM SAMPLE TOP DATUM

| FORMATION NAME | LOG | LOG DATE | LOG TIME | TOP DATUM | SAMPLE TOP DATUM |
|-------------------|--------|----------|----------|-----------|------------------|
| Stone Corral | 3,100' | +69 | 3,100' | +37 | +69 |
| Base Stone Corral | 3,132' | -424 | 3,132' | -424 | -424 |
| Neva | 3,593' | -536 | 3,593' | -536 | -536 |
| Foraker | 3,705' | -746 | 3,707' | -747 | -747 |
| Topeka | 3,915' | -857 | 3,916' | -857 | -857 |
| Oread | 4,026' | -965 | 4,027' | -965 | -965 |
| Lansing | 4,134' | -1078 | 4,134' | -1078 | -1078 |
| Stark | 4,347' | -1178 | 4,347' | -1178 | -1178 |
| B/KC | 4,398' | -1229 | 4,398' | -1229 | -1229 |
| Total Depth | 4,500' | -1331 | 4,500' | -1331 | -1331 |

| DATE | 7:00 AM DEPTH | REMARKS |
|---------|---------------|---|
| 2-3-14 | 0' | Spud @ 8:45 pm. Plug down @ 5:45 am on 2-4-14. Dev.: 0.5° @ 258' |
| 2-4-14 | 258' | Cut 258' in last 24 hrs. Drilled out plug @ 1:45 pm. Shut down for weather @ 288' |
| 2-5-14 | 288' | Cut 30' in last 24 hrs; 0.5 hrs drlg. Shut down for weather |
| 2-6-14 | 288' | Cut 0' in last 24 hrs. Shut down for weather |
| 2-7-14 | 288' | Cut 0' in last 24 hrs. Shut down for weather |
| 2-8-14 | 288' | Cut 0' in last 24 hrs. Started drilling @ 12:00 pm w/ PDC bit. |
| 2-9-14 | 2,060' | Cut 1,772' in last 24 hrs; 17 hrs drlg. Bit trip @ 3331' (PDC bit went bad, ran button bit) |
| 2-10-14 | 3,363' | Cut 1,303' in last 24 hrs; 17.5 hrs drlg. |
| 2-11-14 | 3,920' | Cut 557' in last 24 hrs; 21.5 hrs drlg. DST #1 @ 4198' |
| 2-12-14 | 4,198' | Cut 278' in last 24 hrs; 13.25 hrs drlg. DST #2 @ 4298' |
| 2-13-14 | 4,298' | Cut 100' in last 24 hrs; 4.5 hrs drlg. DST #3 @ 4385' |
| 2-14-14 | 4,385' | Cut 87' in last 24 hrs; 4 hrs drlg. RTD 4500' @ 8:12 pm |
| 2-15-14 | 4,500' | Cut 115' in last 24 hrs; 6 hrs drlg. Ran production casing. |

Remarks

The electric log measurements correlate from even to 2' higher to the drilling measurements.

Formation tops and lithology on this report have been corrected to the electric log.

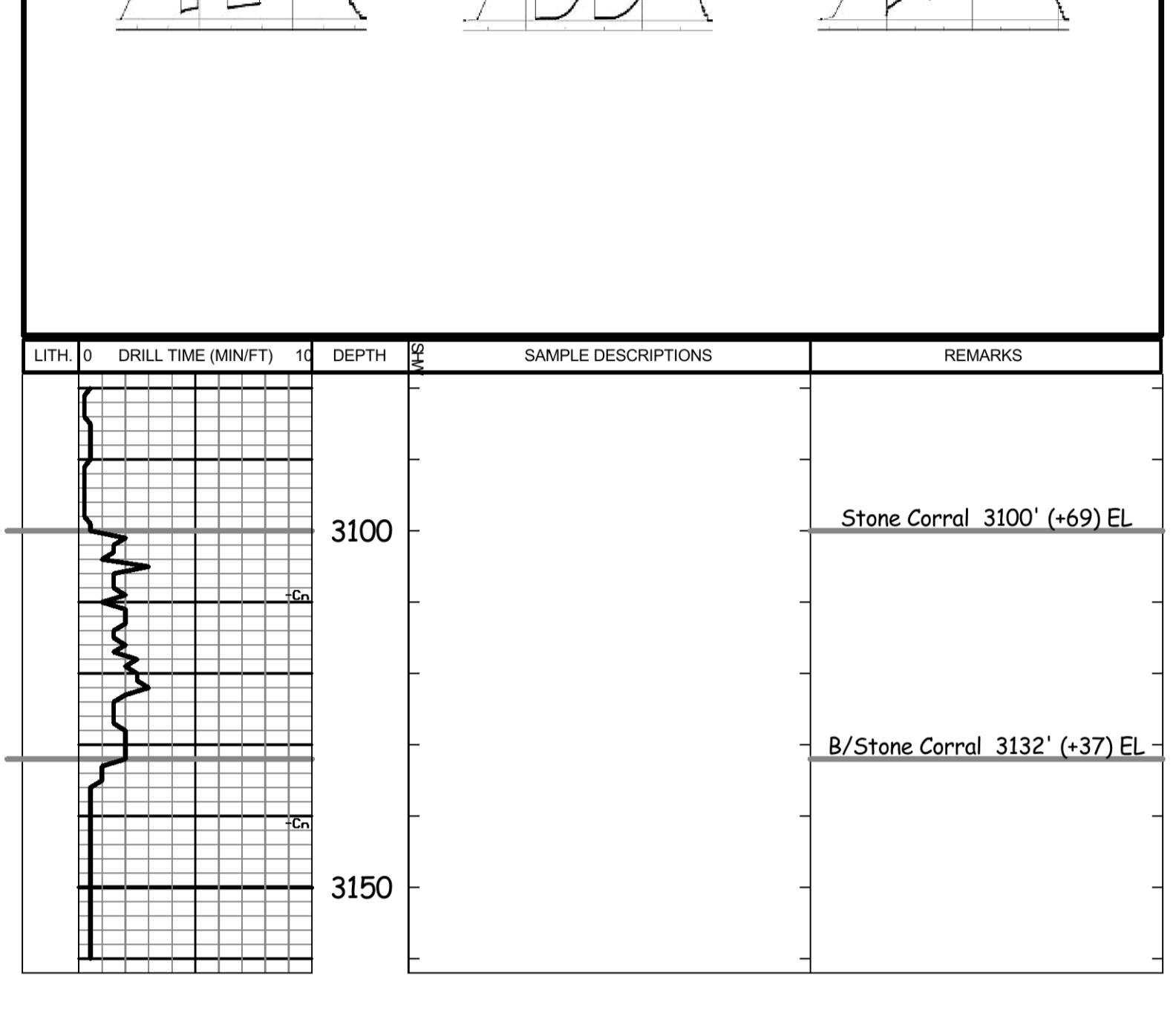
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford

Drill Stem Test Charts

Drill Stem Test by Trilobite Testing, Inc.



| LITH. | DRILL TIME (MIN/FT) | DEPTH (FT) | SAMPLE DESCRIPTIONS | REMARKS |
|-------|---------------------|------------|--|-------------------------------|
| | | 3100 | | Stone Corral 3100' (+69) EL |
| | | 3150 | | B/Stone Corral 3132' (+37) EL |
| | | 3500 | Sdy Sh: red-brn, fn-vry fn grain sd, some soft & gummy, w/ some Sd; crm-lt gry, fn-vry fn grain, sli calc, semi fri-brittle, pr vis por, NS | |
| | | 3550 | Sdy Sh: red-brn, w/ Sd; crm-lt gry, fn-vry fn grain, vry sli calc, semi fri-brittle, pr vis por, NS | |
| | | 3600 | Sdy Sh: red-brn, some soft & gummy, w/ some Sd; A.A., pr vis por, NS | |
| | | 3650 | Sdy Sh: red-brn, some soft & gummy, w/ small amt of Sd; A.A., pr vis por, NS | |
| | | 3700 | Sdy Sh: red-brn, gd amt soft & gummy, w/ minor amt of Sd; A.A., pr vis por, NS | |
| | | 3750 | Sdy Sh: red-brn, soft & gummy in prt, w/ tr Sh; grn & gry, & small amt of Sd; lt gry-lt grn, fn-vry fn grain, shly in prt, calc, mstly soft w/ some semi brittle, pr vis por, NS | |
| | | 3800 | LS: wh-lt gry, fxln, fos, sub chky-prtly dns w/ some chky-vry chky, pr fos por, NS | |
| | | 3850 | Sdy Sh: red-brn, some soft & gummy | |
| | | 3900 | Sdy Sh: A.A. w/ small amt of Shly Sd; lt gry, fn-vry fn grain, calc, soft, pr vis por, NS | |
| | | 3950 | Sdy Sh: red-brn, soft & gummy in prt | |
| | | 4000 | Sdy Sh: A.A. w/ Sd; lt gry, fn-vry fn grain, sli calc, semi brittle-brittle, pr vis por, NS | |
| | | 4050 | Sdy Sh: red-brn, some soft & gummy | |
| | | 4100 | LS: crm-lt gry, fxln, fos in prt, sli chty (crm-org), sub chky-prtly dns w/ some chky, pr por, NS | |
| | | 4150 | Sdy Sh: red-brn, soft & gummy in prt | |
| | | 4200 | Sdy Sh: A.A. | |
| | | 4250 | LS: wh-crm, fxln, fos in prt, tr cht (crm), sub chky-prtly dns w/ some chky-vry chky, pr fos por, fr amt med-drk brn w/ some blk spdt-sat stn, no live stn, NSFO, no odor, w/ some Shly LS: gry-tan, flxn, gritty-prtly dns pr por, NS | |
| | | 4300 | LS: crm-lt gry, fxln, granular, tr cht (crm-tan), sub chky-prtly dns, pr w/ tr fr intrprtcl por, NS | |
| | | 4350 | LS: wh-tan, fxln, fos in prt, some sli shly, sub chky-prtly dns w/ some chky-vry chky, pr por, NS | |
| | | 4400 | Dal: crm-tan, fxln, sub chky-prtly dns, fr w/ some gd pin point-small vug por, NS | |
| | | 4450 | Sh: red-brn, w/ some grn | |
| | | 4500 | Sh: A.A. | |
| | | 4550 | LS: crm-lt gry, fxln, sub chky-prtly dns, pr por, NS | |
| | | 4600 | Sh: red-brn, some soft & gummy, w/ some gry & grn | |
| | | 4650 | LS: crm-lt gry, fxln, fos-ool in prt, sub chky-prtly dns, pr por, NS | |
| | | 4700 | Sh: red-brn, soft & gummy in prt, w/ some gry-grn | |
| | | 4750 | LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns, pr por, NS | |
| | | 4800 | Sh: red-brn & gry-grn | |
| | | 4850 | LS: crm-lt gry, fxln, fos in prt, some shly (red-brn, mottled), sub chky-prtly dns, pr por, NS | |
| | | 4900 | LS: wh-tan, fxln, fos in prt, sub chky-prtly dns w/ some chky-vry chky, pr por, vry scat dead brn-blk spdt stn, NSFO, no odor | |
| | | 4950 | Sh: red-brn, soft & gummy in prt, some sdy, some gry-grn | |
| | | 5000 | Sh: A.A. | |
| | | 5050 | LS: crm-lt gry, fxln, fos in prt, some shly (red-brn, mottled), sub chky-prtly dns w/ some chky, pr por, NS | |
| | | 5100 | Calc Sh: lt red-brn & lt purple | |
| | | 5150 | Sh: red-brn, some soft & gummy | |
| | | 5200 | Sh: red-brn, soft & gummy in prt, some gry | |
| | | 5250 | Sh: A.A. w/ some drk gry & grn | |
| | | 5300 | LS: wh-lt gry, fxln, sli fos, sub chky-prtly dns w/ some chky-vry chky, pr por, tr blk tarry-ash spdt stn, NSFO, no odor | |
| | | 5350 | LS: wh-lt gry, fxln, sub chky-prtly dns w/ some chky, pr por, NS | |
| | | 5400 | LS: lt gry-tan, fxln, sli shly in prt, sub chky-prtly dns, pr por, NS | |
| | | 5450 | LS: gry-tan, fxln, chty (lt brn), sli shly in prt, sub chky-prtly dns, 2 pcs w/ blk tarry-ash spdt stn (look like cavings), NSFO, sli odor | |
| | | 5500 | Shly LS: gry, fxln, sli gritty-prtly dns, pr por, NS, w/ Calc Sh: lt-med drk gry | |
| | | 5550 | Calc Sh: A.A. w/ some Sh: drk gry | |
| | | 5600 | LS: crm-tan, fxln, sub chky-prtly dns, pr por, tr med brn spdt stn, NSFO, no odor | |
| | | 5650 | Sd: lt gry, fn-vry fn grain, calc, sli pyr, some shly, soft-brittle, pr vis por, tr lt brn sat stn, VS live oil stn, NSFO, yell floor, fr cut, no odor | |
| | | 5700 | Sh: lt gry, mstly soft & gummy | |
| | | 5750 | Sh: red-brn, soft & gummy in prt, w/ some gry & grn | |
| | | 5800 | LS: crm-tan, fxln, shly in prt, sub chky-dns w/ some chky, pr por, scat dead med-drk brn spdt-patchy & edge stn, NSFO, no odor | |
| | | 5850 | LS: A.A. w/ tr pr vug por, & tr drk brn-blk spdt stn, cpl pcs w/ VSFO, no odor | |
| | | 5900 | Sd: lt gry-lt grn, fn-vry fn grain, sli calc, semi fri-brittle, pr vis por, scat dead blk spkld-sub sat stn, NSFO, no odor | |
| | | 5950 | Sh: red-brn, mstly soft & gummy | |
| | | 6000 | Sh: A.A. | |
| | | 6050 | LS: crm-tan, fxln, fos-ool in prt, sub chky-prtly dns, fr-gd intrprtcl-vug por, scat drk brn-blk patchy-sat stn, FSFO (some bleeding), no odor | |
| | | 6100 | LS: crm-lt gry, fxln, sub chky-prtly dns, pr por, NS | |
| | | 6150 | Sh: red-brn, w/ some gry & grn | |
| | | 6200 | LS: crm-lt gry, fxln, fos, sub chky-prtly dns, pr por, NS | |
| | | 6250 | Sh: red-brn, mstly soft & gummy, w/ some gry | |
| | | 6300 | Sh: red-brn, mstly soft & gummy, some gry & grn | |
| | | 6350 | LS: crm-tan, fxln, fos-ool in prt, sub chky-prtly dns w/ some chky-vry chky, pr w/ tr fr intrprtcl por, scat lt-drk brn spdt-sat stn, S-FSFO (some bleeding), no odor | |
| | | 6400 | Calc Sh: lt-med gry | |
| | | 6450 | Calc Sh: A.A. w/ some lt brn & red-brn, | |
| | | 6500 | Sh: red-brn | |
| | | 6550 | LS: crm-tan, fxln, fos in prt, sub chky-prtly dns, pr por, scat blk spdt-sat stn, NSFO, no odor | |
| | | 6600 | Sh: red-brn, soft & gummy in prt | |
| | | 6650 | LS: wh-crm, fxln, fos-ool in prt, tr calcite, chky-prtly dns w/ some vry chky, pr w/ tr fr intrprtcl & pin point por, tr lt-med brn spdt-sat stn, mstly SS w/ cpl pcs FSFO, no odor, tr barren pin point por | |
| | | 6700 | Sh: red-brn & gry-grn, w/ some lt gry, soft & gummy, w/ some Shly LS: gry, fxln, gritty-prtly dns, pr por, NS | |
| | | 6750 | Sh: red-brn, soft & gummy in prt, some sdy, w/ some gry-grn | |
| | | 6800 | LS: wh-lt gry, fxln, fos-ool, sub chky-prtly dns w/ some chky-vry chky, pr por, NS | |
| | | 6850 | Sh: red-brn, some soft & gummy | |
| | | 6900 | Sh: red-brn w/ some gry, grn & brn | |
| | | 6950 | LS: wh-tan, fxln, fos-ool, sub chky-prtly dns w/ some chky, pr por, NS | |
| | | 7000 | Sh: red-brn & gry | |
| | | 7050 | LS: crm-gry, fxln, fos in prt, sub chky-prtly dns, pr por, NS | |
| | | 7100 | Sh: red-brn, soft & gummy in prt, w/ some gry & grn | |
| | | 7150 | LS: wh-tan, fxln, fos-ool, sub chky-prtly dns w/ some chky, pr por, NS | |
| | | 7200 | Sh: red-brn, some soft & gummy, w/ some gry | |
| | | 7250 | Sh: red-brn, some soft & gummy, w/ some gry & grn | |
| | | 7300 | LS: crm-lt gry, fxln, sli fos, sub chky-prtly dns, pr por, NS | |
| | | 7350 | Ran 7 stand short trip @ TD, prior to CFS | |
| | | 7400 | RTD 4500' (-1331) | |
| | | 7450 | L.T.D. 4500' (-1331) | |
| | | 7500 | Straight Hole Survey @ 4500': 1° Dev. | |

Call depth 3200' @ 10:26 pm on 2-9-14
Mud displaced from 3379' to 3395'
Morgan Mud check @ 3395': 110 Vis, 8.6 Wt, 6.0 WL, 600 ppm Chl, 6# LCM
Samples start 3490' @ 12:21 pm on 2-10-14

Neva 3593' (-424) EL

Red Eagle 3658' (-489) EL

Foraker 3705' (-536) EL

Topeka 3915' (-746) EL

Oread 4026' (-857) EL

Lansing 4134' (-965) EL

DST #1 4143'-4198' Lans 'lwr A'-D'
IF: blow built to 6" ISI: no blow back
FF: blow built to 2.5" FSI: no blow back
Recovery: 320' TOTAL FLUID
131' OSWM (spots O, 40% W, 60% M)
189' OSWM (spots O, 90% W, 10% M)
Chl ppm: 81,000 DST: 600 Mud
IFP: 59-116#/30° ISIP: 1155#/60°
Note: Hit bridge 10' off bottom. Tool opened, unset tool, then reset tool.

Ran 20 stand short trip prior to DST #1
Pipe Strap @ 4198': Strap long 7.07'
Straight Hole Survey @ 4198': 0.5° Dev.
Morgan Mud check @ 4198': 40 Vis, 9.2 Wt, 7.2 WL, 500 ppm Chl, 2# LCM
Ran another bit @ 4198'

DST #2 4194'-4298' Lans 'G'-H' zns
IF: blow built to 0.75" ISI: no blow back
FF: BOB in 11" FSI: no blow back
Rec: 5' Mud
IFP: 15-19#/30° ISIP: 512#/60°
FFP: 19-24#/30° FSI: 406#/60°

Morgan Mud check @ 4298': 51 Vis, 9.2 Wt, 7.6 WL, 1,100 ppm Chl, 4# LCM

DST #3 4296'-4385' Lans 'J'-K' zns
IF: blow built to 6" ISI: no blow back
FF: BOB in 11" FSI: no blow back
Rec: 850' TOTAL FLUID:
46' Free Oil (100% O)
804' OSWM (spots O, 80% W, 20% M)
Oil Gravity 34° API
Chl ppm: 72,000 DST: 1,100 Mud
IFP: 44-225#/30° ISIP: 720#/60°
FFP: 230-395#/60° FSI: 697#/90°

Stark 4347' (-1178) EL

Morgan Mud check @ 4385': 80 Vis, 9.4 Wt, 6.8 WL, 800 ppm Chl, 7# LCM

B/KC 4398' (-1229) EL