



**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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- 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

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

|   |   |
|---|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(If no, Submit Copy)</i><br><br>List All E. Logs Run: | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>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 |
| _____ Perforate<br>_____ Protect Casing<br>_____ Plug Back TD<br>_____ Plug Off Zone |                  |                |              |                            |
|  |                  |                |              |                            |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><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:<br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION:<br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____<br><i>(Submit ACO-4)</i> | PRODUCTION INTERVAL:<br>_____<br>_____ |
|---|--|--|

|           |                                    |
|-----------|------------------------------------|
| Form      | ACO1 - Well Completion             |
| Operator  | Samuel Gary Jr. & Associates, Inc. |
| Well Name | WAGNER TRUST 3-1                   |
| Doc ID    | 1057601                            |

All Electric Logs Run

|       |
|-------|
|       |
| MICRO |
| DIL   |
| POR   |
| SONIC |

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



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

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

June 13, 2011

CLAYTON CAMOZZI  
Samuel Gary Jr. & Associates, Inc.  
1515 WYNKOOP, STE 700  
DENVER, CO 80202

Re: ACO1  
API 15-165-21914-00-00  
WAGNER TRUST 3-1  
NW/4 Sec.01-16S-16W  
Rush County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office at 303-831-4673.

Respectfully,  
CLAYTON CAMOZZI

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4753

|  |                  |          |            |            |    |  |    |  |      |       |    |             |  |        |          |  |
|--|------------------|----------|------------|------------|----|--|----|--|------|-------|----|-------------|--|--------|----------|--|
| Date   | 2-15-11          | Sec.     | 1          | Twp.       | 16 | Range  | 16 | County   | Rush | State | Ks | On Location |  | Finish | 11:00 AM |  |
| Lease  | Wagner           | Well No. | 3-1        |            |    | Location Gotham, Ks - S to C.L., 12 W, 1/2 S |    |  |      |       |    |             |  |        |          |  |
| Contractor   | Discovery Rig #2 |          |            |            |    |  |    | Owner  | E/S  |       |    |             |  |        |          |  |
| Type Job   | Surface          |          |            |            |    |  |    | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |      |       |    |             |  |        |          |  |
| Hole Size  | 12 1/4"          |          | T.D.       | 1030'      |    |  |    |  |      |       |    |             |  |        |          |  |
| Csg.   | 8 5/8"           |          | Depth      | 1030, 30'  |    |  |    |  |      |       |    |             |  |        |          |  |
| Tbg. Size  |                  |          | Depth      |            |    |  |    |  |      |       |    |             |  |        |          |  |
| Tool   |                  |          | Depth      |            |    |  |    |  |      |       |    |             |  |        |          |  |
| Cement Left in Csg.  | 26.82            |          | Shoe Joint | 26.82      |    |  |    |  |      |       |    |             |  |        |          |  |
| Meas Line  |                  |          | Displace   | 63.3/4 BLS |    |  |    |  |      |       |    |             |  |        |          |  |
|  |                  |          |            |            |    |  |    | Charge To Sam Gary   |      |       |    |             |  |        |          |  |
|  |                  |          |            |            |    |  |    | Street   |      |       |    |             |  |        |          |  |
|  |                  |          |            |            |    |  |    | City State   |      |       |    |             |  |        |          |  |
| The above was done to satisfaction and supervision of owner agent or contractor. |                  |          |            |            |    |  |    |  |      |       |    |             |  |        |          |  |
|  |                  |          |            |            |    |  |    | Cement Amount Ordered 400 Common 3/6 CL 2% Gel   |      |       |    |             |  |        |          |  |

**EQUIPMENT**

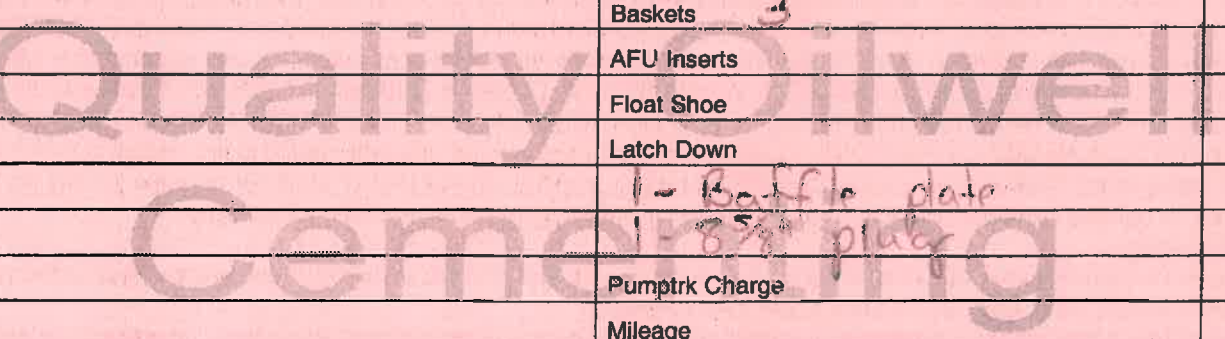
|         |      |     |          |       |  |  |  |  |  |  |  |  |  |  |  |
|---------|------|-----|----------|-------|--|--|--|--|--|--|--|--|--|--|--|
| Pumptrk | 1    | No. | Cementer |       |  |  |  |  |  |  |  |  |  |  |  |
|         |      |     | Helper   | Noale |  |  |  |  |  |  |  |  |  |  |  |
| Bulktrk | 12   | No. | Driver   | Cisco |  |  |  |  |  |  |  |  |  |  |  |
|         |      |     | Driver   |       |  |  |  |  |  |  |  |  |  |  |  |
| Bulktrk | pat. | No. | Driver   | Rick  |  |  |  |  |  |  |  |  |  |  |  |
|         |      |     | Driver   |       |  |  |  |  |  |  |  |  |  |  |  |

**JOB SERVICES & REMARKS**

|                    |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Remarks:           | Cement did Circulate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rat Hole           |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mouse Hole         |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Centralizers       | 2, 13, 20            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Baskets            | 2, 13, 20            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D/V or Port Collar |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    | Sand                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    | Handling             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    | Mileage              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**FLOAT EQUIPMENT**

|  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  | Guide Shoe       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Centralizer 3    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Baskets 3        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | AFU Inserts      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Float Shoe       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Latch Down       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 - Baffle plate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 - 8 5/8" plug  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Pumptrk Charge   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Mileage          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



*[Handwritten Signature]*

X Signature

|              |  |
|--------------|--|
| Tax          |  |
| Discount     |  |
| Total Charge |  |

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4819

| Date  | Sec. | Twp.                | Range  | County  | State | On Location | Finish    |
|---|------|---------------------|--------|---|-------|-------------|-----------|
| 1-22-11   | 1    | 16                  | 16     | Rush  | KS    |             | 3:45 A.M. |
| Lease <u>WAGNER TRUST</u>                       |      | Well No. <u>3-1</u> |        | Location <u>Coarhorn 3 Coline 1/2 W 1/4 S Einto</u> |       |             |           |
| Contractor <u>D. Scriver #2</u>                 |      |                     |        | Owner   |       |             |           |
| Type Job <u>Production</u>                      |      |                     |        | To Quality Oilwell Cementing, Inc.                  |       |             |           |
| Hole Size <u>7 7/8</u>                          |      |                     |        | T.D. <u>3600</u>                                    |       |             |           |
| Csg. <u>5 1/2</u>                               |      |                     |        | Depth <u>3395</u>                                   |       |             |           |
| Tbg. Size                                       |      |                     |        | Depth   |       |             |           |
| Tool  |      |                     |        | Depth   |       |             |           |
| Cement Left in Csg. <u>42.46</u>                |      |                     |        | Shoe Joint <u>42.46</u>                             |       |             |           |
| Meas Line                                       |      |                     |        | Displace <u>84 1/2 BCL</u>                          |       |             |           |
| EQUIPMENT                                       |      |                     |        | Charge To <u>Sam Coary</u>                          |       |             |           |
| Pumptrk   | No.  | Cement              | Helper | Common  |       |             |           |
| Bulktrk   | No.  | Driver              | Driver | Poz. Mix  |       |             |           |
| Bulktrk   | No.  | Driver              | Driver | Gel.  |       |             |           |
| JOB SERVICES & REMARKS                          |      |                     |        | Calcium   |       |             |           |
| Remarks: <u>500 gal mud/cap 2081 KCL</u>        |      |                     |        | Hulls   |       |             |           |
| Rat Hole <u>30</u>                              |      |                     |        | Salt  |       |             |           |
| Mouse Hole <u>15</u>                            |      |                     |        | Flowseal  |       |             |           |
| Centralizers                                    |      |                     |        | Kol-Seal  |       |             |           |
| Baskets   |      |                     |        | Mud CLR 48  |       |             |           |
| DV or Port Collar                               |      |                     |        | CFL-117 or CD110 GAF 38                             |       |             |           |
| <u>5 1/2 SAG 3595 Insert @ 3550.54</u>          |      |                     |        | Sand  |       |             |           |
| <u>5/4 Circulation Pump 500 gal mud/cap</u>     |      |                     |        | Handling  |       |             |           |
| <u>Plug Retainer mousehole Cement casing</u>    |      |                     |        | Mileage   |       |             |           |
| <u>Displace plug with 84 1/2 BCL KCL</u>        |      |                     |        | FLOAT EQUIPMENT                                     |       |             |           |
| <u>Plug landed 1300# Hold. Release Pressure</u> |      |                     |        | Guide Shoe <u>5 1/2</u>                             |       |             |           |
| <u>24</u>                                       |      |                     |        | Centralizer <u>Turbo's 8</u>                        |       |             |           |
|   |      |                     |        | Baskets <u>3</u>                                    |       |             |           |
|   |      |                     |        | AFU Inserts <u>AFU Float shoe</u>                   |       |             |           |
|   |      |                     |        | Float Shoe  |       |             |           |
|   |      |                     |        | Latch Down <u>1</u>                                 |       |             |           |
|   |      |                     |        | Pumptrk Charge                                      |       |             |           |
|   |      |                     |        | Mileage   |       |             |           |
|   |      |                     |        | Tax   |       |             |           |
|   |      |                     |        | Discount  |       |             |           |
|   |      |                     |        | Total Charge  |       |             |           |
| Signature <u>[Handwritten Signature]</u>        |      |                     |        |   |       |             |           |



**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665  
 Phone: 785-324-1041 fax: 785-483-1087  
 Email: cementing@ruraltel.net

Date: 2/24/2011  
 Invoice # 4819

P.O.#:  
 Due Date: 3/26/2011  
 Division: Russell

# Invoice

**Contact:**  
 Samuel Gary Jr & Associates Inc  
**Address/Job Location:**  
 Samuel Gary Jr & Associates Inc  
 3111 W. 10th Street  
 Great Bend, KS 67503

DRLG  COMP  W/O  LOE  GG

|               |                  |
|---------------|------------------|
| Account       | 8300-238         |
| Well/Prospect | WAGNER TRUST 3-1 |
| Deck          |                  |
| AFB           |                  |
| Approval      | [Signature]      |
| Description   |                  |

**Reference:**  
 WAGNER TRUST 3-1

**Description of Work:**  
 PROD. LONG STRING

**Services / Items Included:**

| Quantity                                | Price       | Taxable | Item   | Quantity    | Price    | Taxable      |
|---|-------------|---------|--|-------------|----------|--------------|
| Labor                                   | \$ 423.15   | No      |  | Salt (Fine) | 19       | \$245.83 Yes |
| Pro-C Cement                            | \$ 3,545.12 | Yes     | Latch Down Plug & Baffle, 5 1/2"             | 1           | \$207.61 | Yes          |
| Gilsonite                               | \$ 1,469.49 | Yes     | Pump Truck Mileage-Job to Nearest Camp       | 23          | \$212.74 | No           |
| CFL 117                                 | \$ 1,004.83 | Yes     | Bulk Truck Mileage-Job to Nearest Bulk Plant | 23          | \$124.49 | No           |
| 5 1/2" Basket                           | \$ 639.51   | Yes     | Flo Seal                                     | 56          | \$103.80 | Yes          |
| CD-110                                  | \$ 630.24   | Yes     | KCL  | 2           | \$55.35  | Yes          |
| 5 1/2" Turbolizer                       | \$ 430.05   | Yes     |  |             |          |              |
| Bulk Truck Matl-Material Service Charge | \$ 417.07   | No      |  |             |          |              |
| Mud Clear                               | \$ 342.93   | Yes     |  |             |          |              |
| Defoamer A or CAF-38                    | \$ 324.39   | Yes     |  |             |          |              |
| Auto Fill Float Shoe, 5 1/2"            | \$ 283.61   | Yes     |  |             |          |              |

**Invoice Terms:**

Net 30

SubTotal: \$ 10,460.23  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,569.03)

SubTotal for Taxable Items: \$ 7,890.35  
 SubTotal for Non-Taxable Items: \$ 641.16

6.30% Rush County Sales Tax

Total: \$ 8,891.20  
 Tax: \$ 497.09

Amount Due: \$ 9,388.29  
 Applied Payments:  
 Balance Due: \$ 9,388.29

**Thank You For Your Business!**

Past Due Invoices are subject to a service charge (annual rate of 24%)  
 This does not include any applicable taxes unless it is listed.  
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RECEIVED

MAR 08 2011

SAMUEL GARY JR.  
 & ASSOCIATES, INC.

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4819

|                     |               |                |                 |                    |                 |             |                         |
|---------------------|---------------|----------------|-----------------|--------------------|-----------------|-------------|-------------------------|
| Date <u>7-22-11</u> | Sec. <u>1</u> | Twp. <u>16</u> | Range <u>16</u> | County <u>Rush</u> | State <u>KS</u> | On Location | Finish <u>3:45 A.M.</u> |
|---------------------|---------------|----------------|-----------------|--------------------|-----------------|-------------|-------------------------|

Lease WAGNER TRUST Well No. 3-1 Location Leorham's coline 1 1/2 W 1/4 S Rinto

|  |  |
|--|--|
| Contractor <u>Discovery #2</u>   | Owner  |
| Type Job <u>Production</u>   | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Hole Size <u>7 7/8</u>   | T.D. <u>3600</u>   |
| Csg. <u>5 1/2</u>  | Depth <u>3595</u>  |
| Tbg. Size  | Charge To <u>Sam Gary</u>  |
| Tool   | Street   |
| Cement Left in Csg. <u>42.46</u>   | Shoe Joint <u>42.46</u>  |
| Meas Line  | Displace <u>84 1/2 BCL</u>   |
| The above was done to satisfaction and supervision of owner agent or contractor. |  |
| Cement Amount Ordered <u>225 QPR C 10% 5" KCL</u>                                |  |

**EQUIPMENT**

|                               |                      |          |
|-------------------------------|----------------------|----------|
| Pumptrk <u>9</u> No. <u>1</u> | Cementor <u>Paul</u> | Common   |
| Bulktrk <u>8</u> No. <u>1</u> | Driver <u>Doug</u>   | Poz. Mix |
| Bulktrk <u>8</u> No. <u>1</u> | Driver <u>Doug</u>   | Gel.     |

**JOB SERVICES & REMARKS**

|  |                                    |
|--|------------------------------------|
| Remarks: <u>500gal mud clear 20BCL KCL</u>         | Calcium <u>CD-110 170#</u>         |
| Rat Hole <u>30</u>                                 | <del>Salt</del> <u>KCL 2 gal</u>   |
| Mouse Hole <u>15</u>                               | Salt <u>19</u>                     |
| Centralizers                                       | Flowseal <u>56#</u>                |
| Baskets  | Kol-Seal <u>1057#</u>              |
| D/V or Port Collar                                 | Mud CLR 48 <u>500 gal</u>          |
| <u>5 1/2 set @ 3595 Insert @ 3552.54</u>           | CFL-117 or CD110 <u>CAP 38 50#</u> |
| <u>Est Circulation Pump 500gal mud clear</u>       | <del>CFL-117</del> <u>176#</u>     |
| <u>Plug Kothole &amp; Mousehole Cement casing.</u> | Handling                           |
| <u>Displace plug with 84 1/2 BCL w KCL</u>         | Mileage                            |
| <u>Plug landed 1300# Hold. Release Pressure</u>    |                                    |
| <u>Dry.</u>  |                                    |

**FLOAT EQUIPMENT**

|                                   |
|-----------------------------------|
| Guide Shoe <u>5 1/2</u>           |
| Centralizer <u>Torbo's 8</u>      |
| Baskets <u>3</u>                  |
| AFU Inserts <u>AFU Float shoe</u> |
| Float Shoe                        |
| Latch Down <u>1</u>               |

|  |
|--|
| Pumptrk Charge <u>procal long string</u> |
| Mileage <u>23</u>                        |

X Signature [Signature] Tax Discount Total Charge





## DRILL STEM TEST REPORT

Prepared For: **SamGary Jr. Associates**

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**1-16-16, Rush Ks**

**Wagner Trust 3-1**

Start Date: 2011.02.18 @ 16:35:14

End Date: 2011.02.19 @ 01:09:44

Job Ticket #: 41920                      DST #: 1

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41920

**DST#: 1**

ATTN: Cloayton Camozzi

Test Start: 2011.02.18 @ 16:35:14

## GENERAL INFORMATION:

Formation: **KC"A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:58:14

Time Test Ended: 01:09:44

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3175.00 ft (KB) To 3237.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3237.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**

Press@RunDepth: 54.31 psig @ 3180.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.18

End Date: 2011.02.19

Last Calib.: 2011.02.19

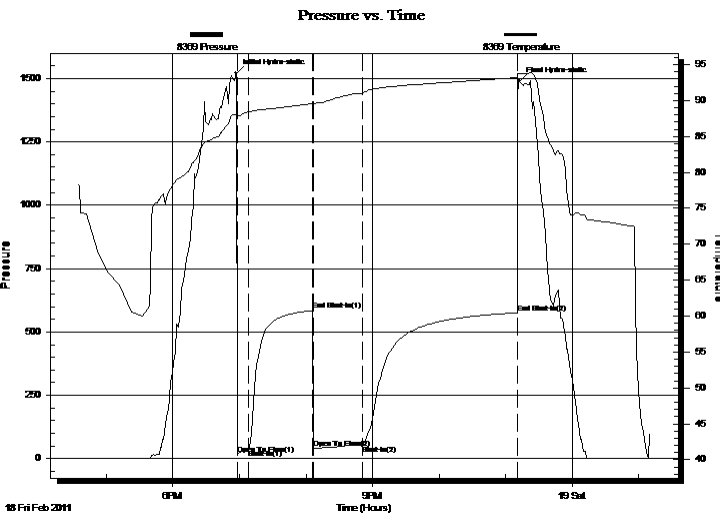
Start Time: 16:35:19

End Time: 01:09:44

Time On Btm: 2011.02.18 @ 18:57:14

Time Off Btm: 2011.02.18 @ 23:12:44

**TEST COMMENT:** IF-2.5in blow  
ISI-No blow  
FF-4.25in blow  
FSI-No blow



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1519.63         | 88.05        | Initial Hydro-static |
| 1           | 17.63           | 87.61        | Open To Flow (1)     |
| 11          | 35.48           | 88.41        | Shut-In(1)           |
| 69          | 584.47          | 89.58        | End Shut-In(1)       |
| 70          | 39.76           | 89.51        | Open To Flow (2)     |
| 114         | 54.31           | 91.07        | Shut-In(2)           |
| 253         | 575.62          | 93.23        | End Shut-In(2)       |
| 256         | 1488.29         | 93.74        | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 70.00       | Mud         | 0.71         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41920

**DST#: 1**

ATTN: Cloayton Camozzi

Test Start: 2011.02.18 @ 16:35:14

## GENERAL INFORMATION:

Formation: **KC"A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:58:14

Time Test Ended: 01:09:44

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3175.00 ft (KB) To 3237.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3237.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6719 Inside**

Press@RunDepth: psig @ 3180.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.18 End Date: 2011.02.19

Last Calib.: 2011.02.19

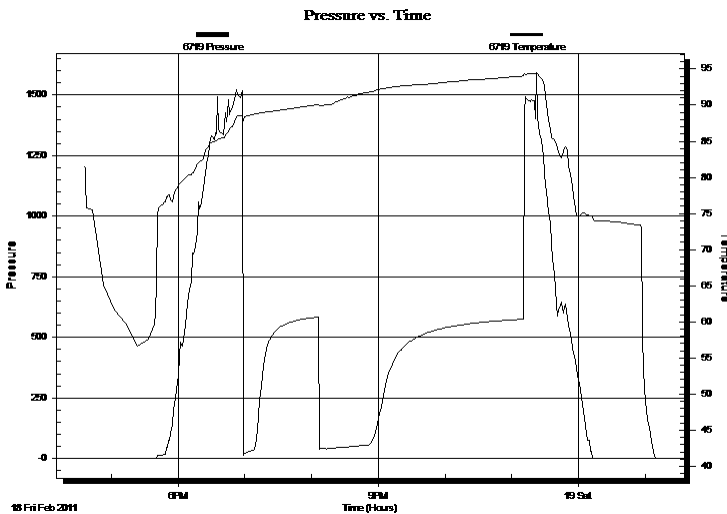
Start Time: 16:36:02 End Time: 01:09:27

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-2.5in blow  
ISI-No blow  
FF-4.25in blow  
FSI-No blow

## PRESSURE SUMMARY



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

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 70.00       | Mud         | 0.71         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

SamGary Jr. Associates

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**Wagner Trust 3-1**

**1-16-16, Rush Ks**

Job Ticket: 41920

**DST#: 1**

Test Start: 2011.02.18 @ 16:35:14

### GENERAL INFORMATION:

Formation: **KC"A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:58:14

Time Test Ended: 01:09:44

**Interval: 3175.00 ft (KB) To 3237.00 ft (KB) (TVD)**

Total Depth: 3237.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Reference Elevations: 1941.00 ft (KB)

1933.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8319**

**Fluid**

Press@RunDepth: psig @ 3140.00 ft (KB)

Start Date: 2011.02.18

End Date: 2011.02.19

Start Time: 16:35:19

End Time: 01:13:44

Capacity: 8000.00 psig

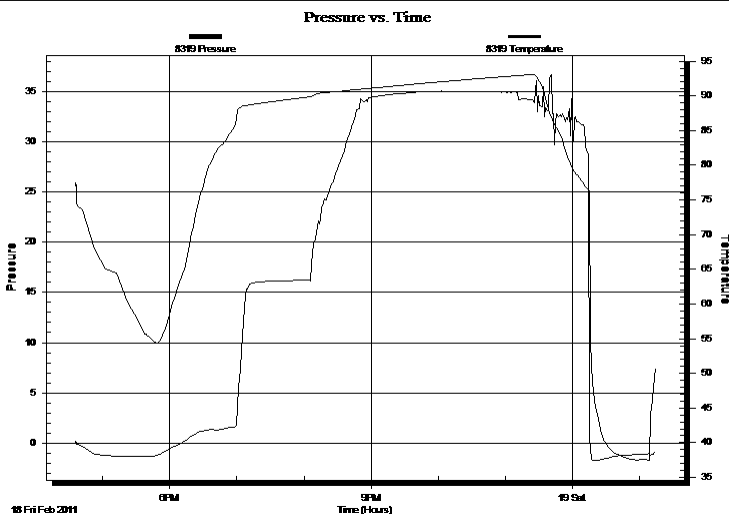
Last Calib.: 2011.02.19

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-2.5in blow  
ISI-No blow  
FF-4.25in blow  
FSI-No blow

### PRESSURE SUMMARY



Time  
(Min.)

Pressure  
(psig)

Temp  
(deg F)

Annotation

### Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 70.00       | Mud         | 0.71         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41920

**DST#: 1**

ATTN: Cloayton Camozzi

Test Start: 2011.02.18 @ 16:35:14

## Tool Information

|                           |                    |                       |                            |                                    |
|---------------------------|--------------------|-----------------------|----------------------------|------------------------------------|
| Drill Pipe:               | Length: 3136.00 ft | Diameter: 3.80 inches | Volume: 43.99 bbl          | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: ft         | Diameter: 2.70 inches | Volume: - bbl              | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl           | Weight to Pull Loose: 50000.00 lb  |
|                           |                    |                       | <u>Total Volume: - bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 27.00 ft           |                       |                            | String Weight: Initial 46000.00 lb |
| Depth to Top Packer:      | 3175.00 ft         |                       |                            | Final 46000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                            |                                    |
| Interval between Packers: | 62.00 ft           |                       |                            |                                    |
| Tool Length:              | 98.00 ft           |                       |                            |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                            |                                    |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3140.00    |                               |
| Recorder         | 0.00        | 8319       | Fluid    | 3140.00    |                               |
| Drill Pipe       | 5.00        |            |          | 3145.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3150.00    |                               |
| Sampler          | 3.00        |            |          | 3153.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3158.00    |                               |
| Jars             | 5.00        |            |          | 3163.00    |                               |
| Safety Joint     | 3.00        |            |          | 3166.00    |                               |
| Packer           | 4.00        |            |          | 3170.00    | 36.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3175.00    |                               |
| Stubb            | 1.00        |            |          | 3176.00    |                               |
| Perforations     | 3.00        |            |          | 3179.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3180.00    |                               |
| Recorder         | 0.00        | 8369       | Outside  | 3180.00    |                               |
| Recorder         | 0.00        | 6719       | Inside   | 3180.00    |                               |
| Blank Spacing    | 31.00       |            |          | 3211.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3212.00    |                               |
| Perforations     | 22.00       |            |          | 3234.00    |                               |
| Bullnose         | 3.00        |            |          | 3237.00    | 62.00 Bottom Packers & Anchor |

**Total Tool Length: 98.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41920

**DST#: 1**

ATTN: Cloayton Camozzi

Test Start: 2011.02.18 @ 16:35:14

**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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 70.00        | Mud         | 0.709         |

Total Length: 70.00 ft      Total Volume: 0.709 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

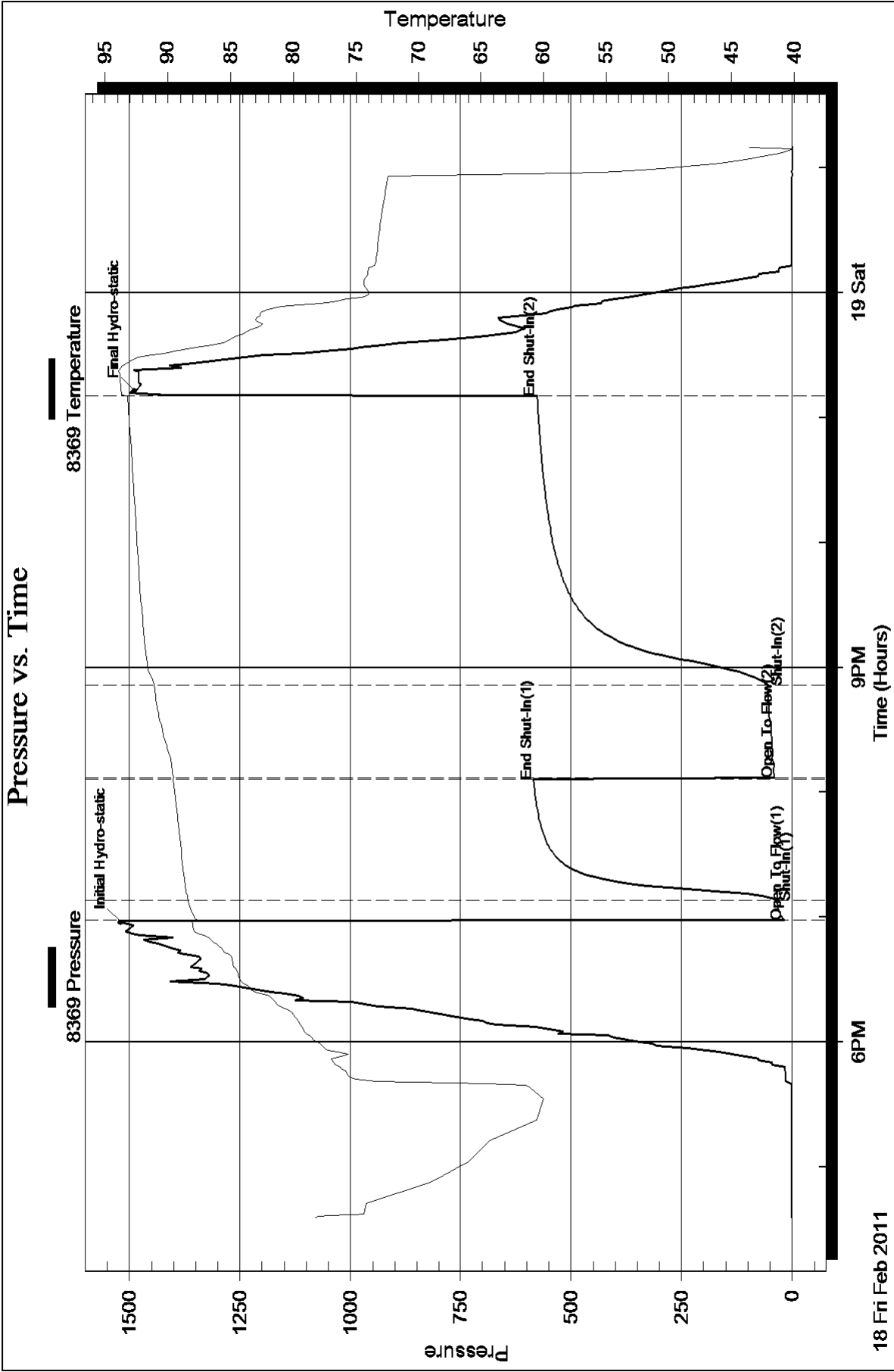
Serial #:

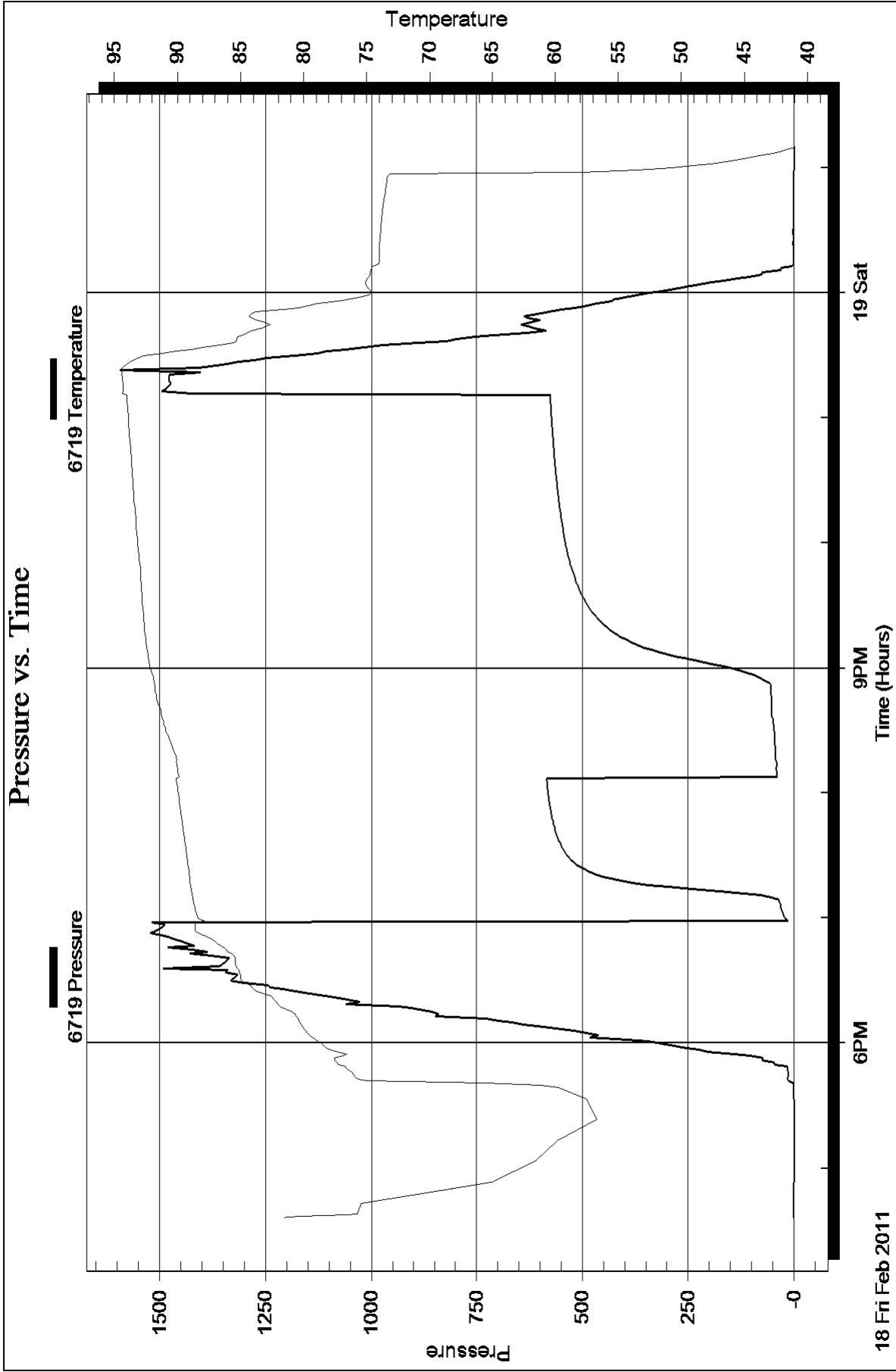
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data  
4000ml Mud

# Pressure vs. Time







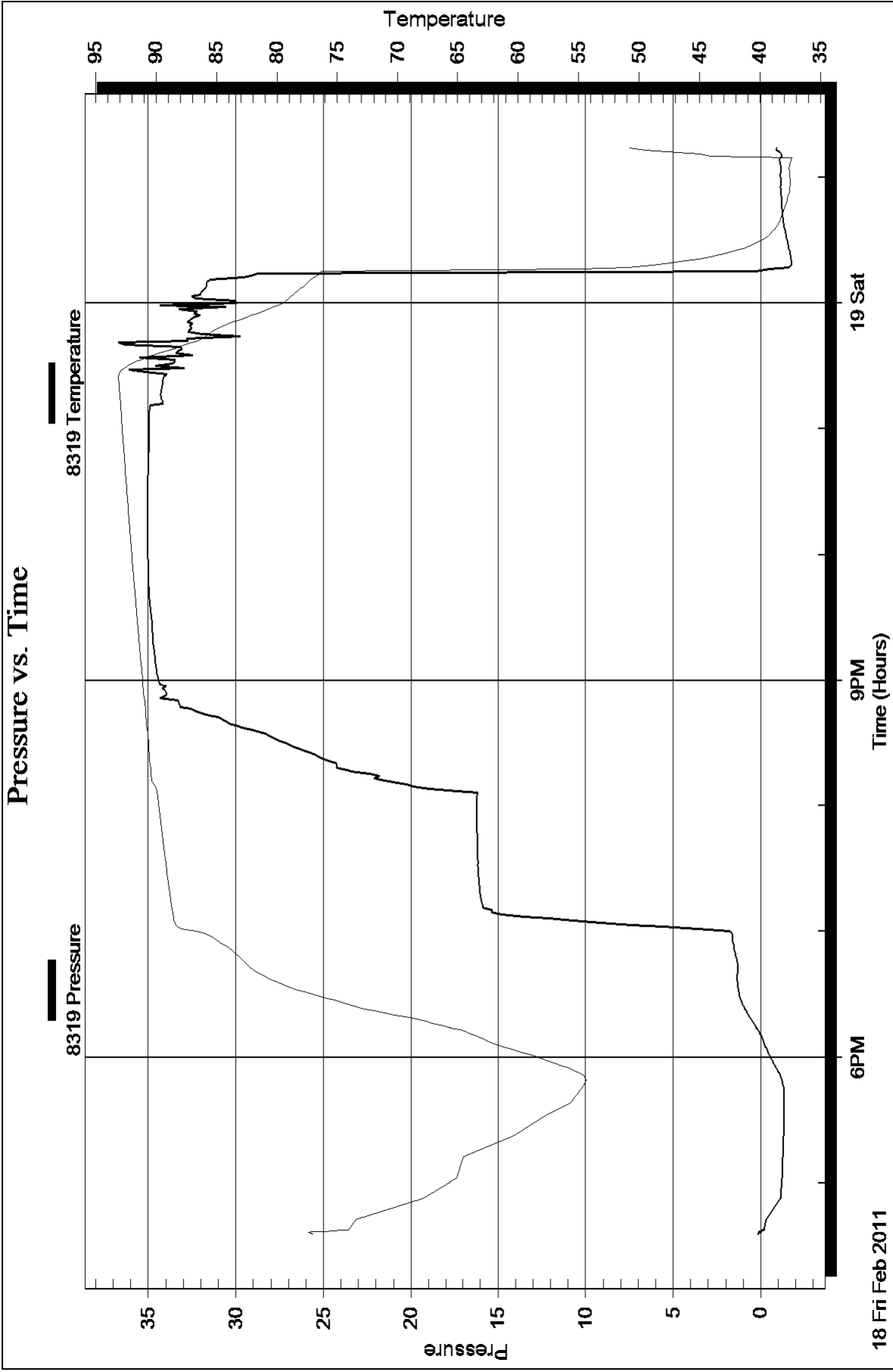
Serial #: 8319

Fluid

SamGary Jr. Associates

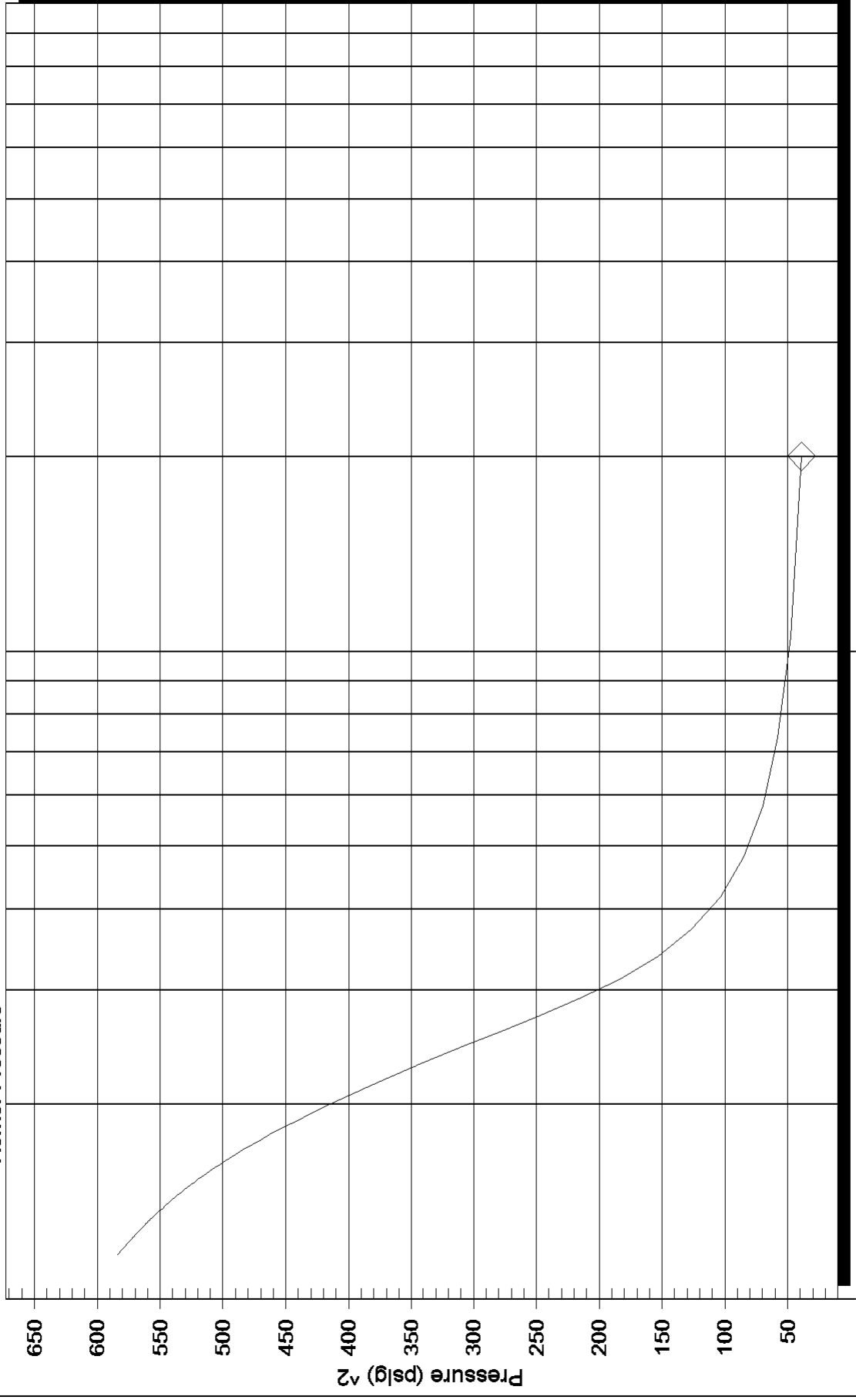
1-16-16, Rush Ks

DST Test Number: 1



### Homer Plot

Homer Pressure

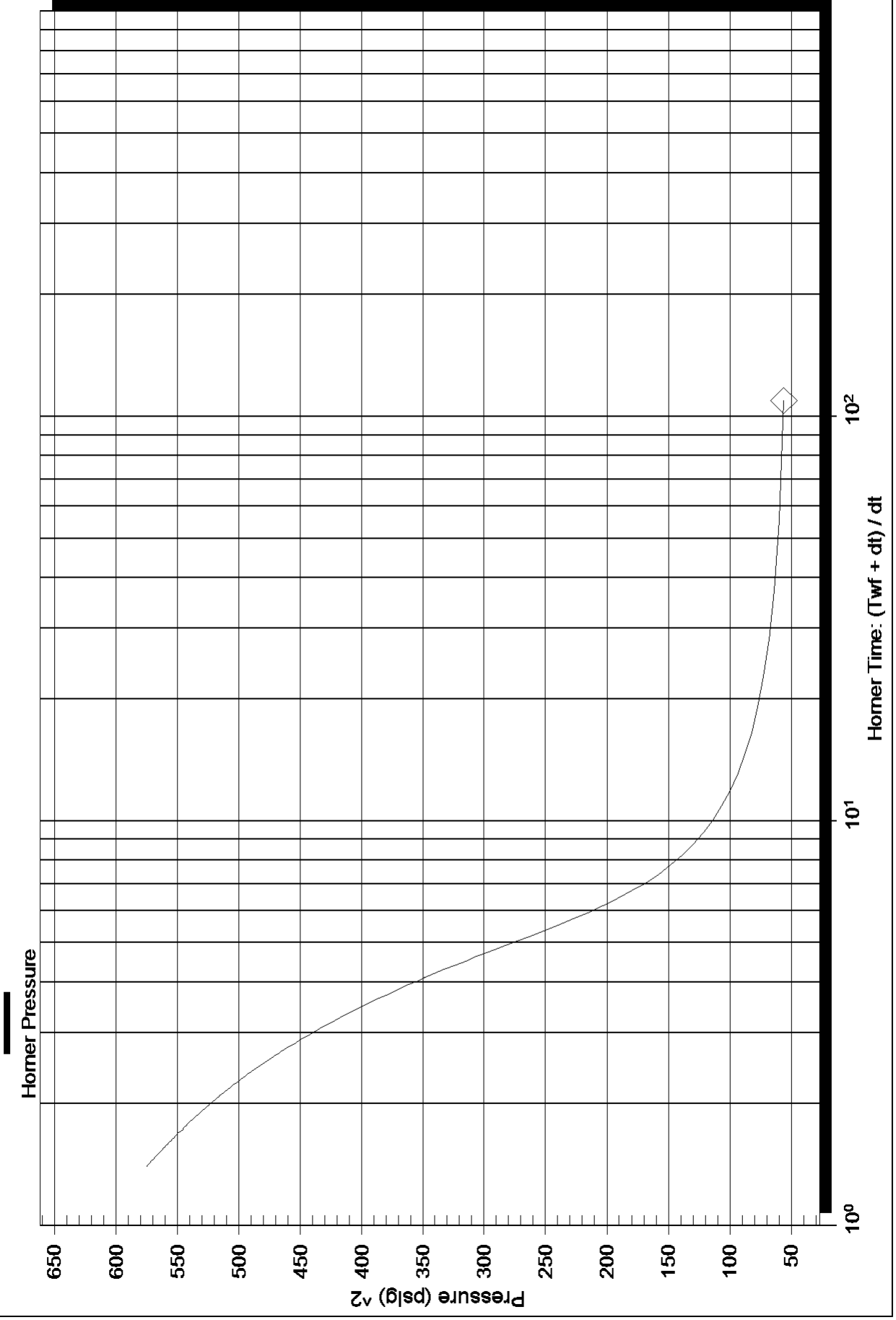


10<sup>0</sup>

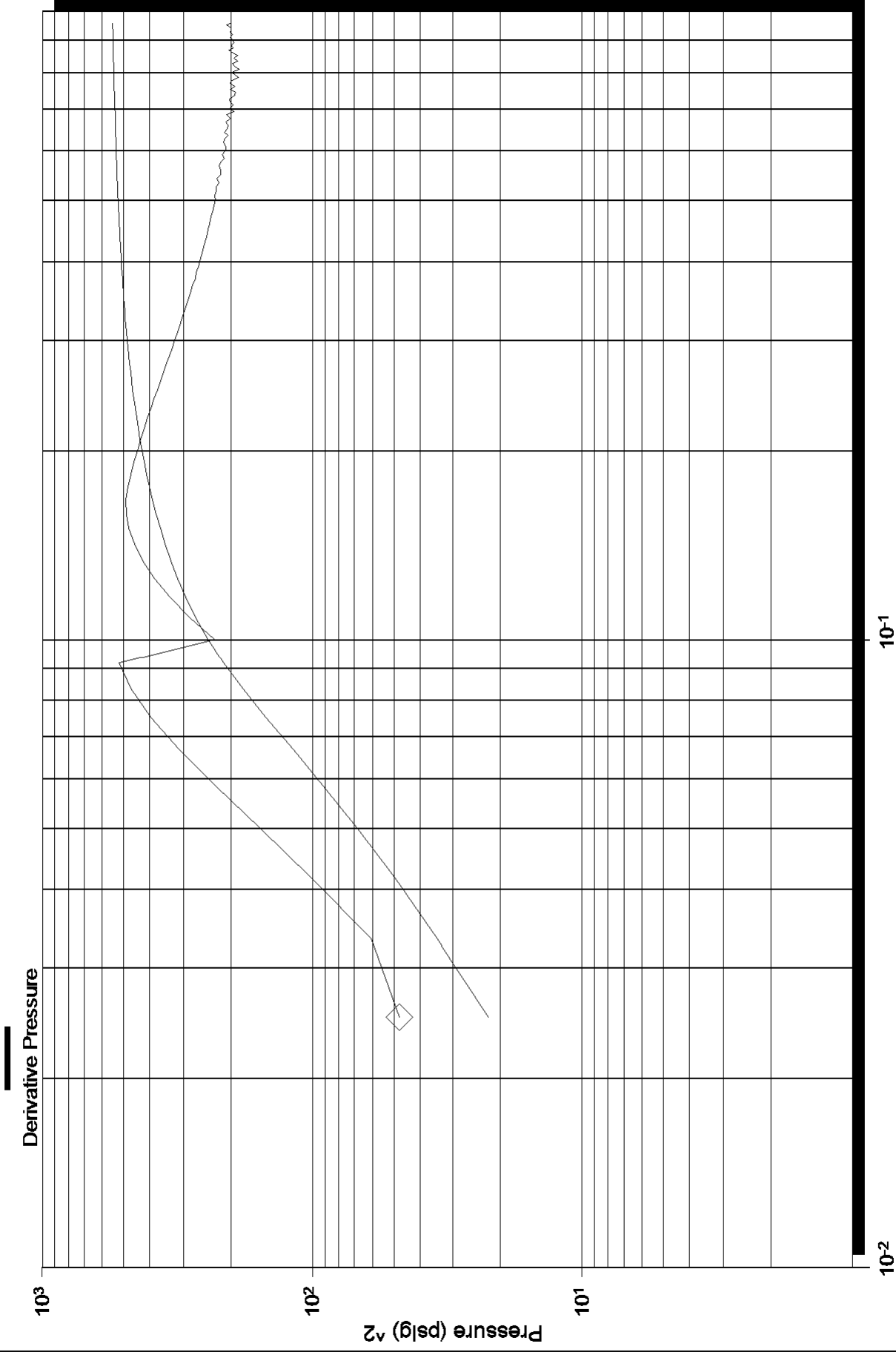
10<sup>1</sup>

Homer Time: (Twf + dt) / dt

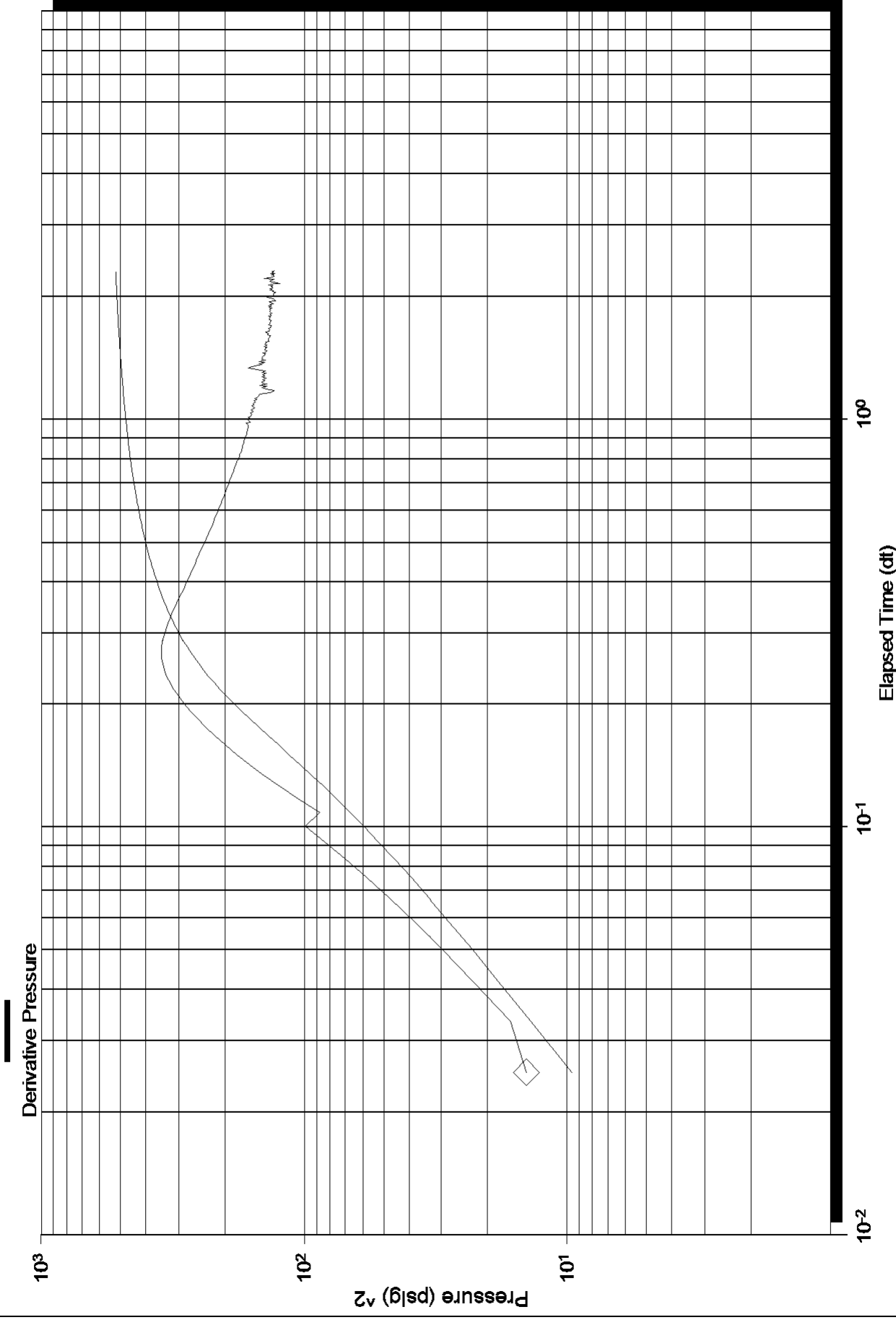
### Homer Plot



### Log-Log and Pseudo-Log-Derivative



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **SamGary Jr. Associates**

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**1-16-16, Rush Ks**

**Wagner Trust 3-1**

Start Date: 2011.02.19 @ 09:25:21

End Date: 2011.02.19 @ 16:48:51

Job Ticket #: 41921                      DST #: 2

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41921

**DST#: 2**

ATTN: Cloayton Camozzi

Test Start: 2011.02.19 @ 09:25:21

## GENERAL INFORMATION:

Formation: **KC "F,G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:21

Time Test Ended: 16:48:51

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3266.00 ft (KB) To 3300.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3300.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**

Press @ Run Depth: 161.30 psig @ 3270.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.19

End Date:

2011.02.19

Last Calib.:

2011.02.19

Start Time:

09:25:26

End Time:

16:48:50

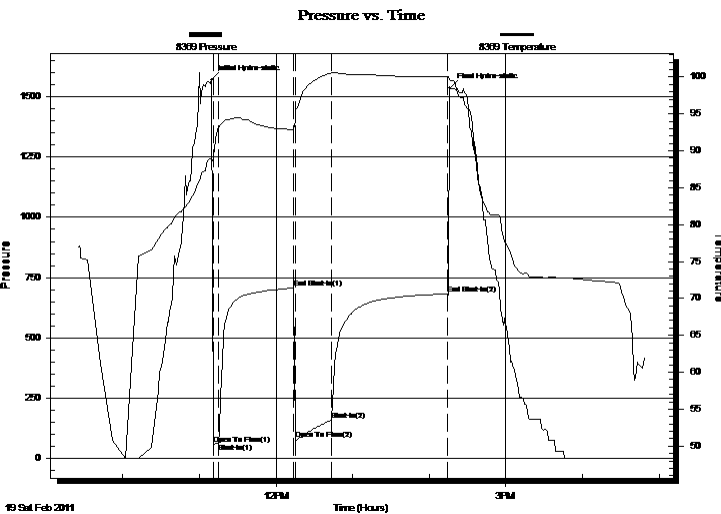
Time On Btm:

2011.02.19 @ 11:09:51

Time Off Btm:

2011.02.19 @ 14:16:21

**TEST COMMENT:** IF 5 MIN-BOB in 1.5min  
ISI 60 MIN-No blow  
FF 30 MIN-BOB in 30sec  
FSI 90 MIN-BOB in 13min



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1569.06         | 89.00        | Initial Hydro-static |
| 2           | 61.62           | 89.32        | Open To Flow (1)     |
| 5           | 64.68           | 93.34        | Shut-In(1)           |
| 64          | 707.28          | 92.93        | End Shut-In(1)       |
| 66          | 79.35           | 95.41        | Open To Flow (2)     |
| 94          | 161.30          | 100.58       | Shut-In(2)           |
| 185         | 682.50          | 100.04       | End Shut-In(2)       |
| 187         | 1535.16         | 99.56        | Final Hydro-static   |

## Recovery

| Length (ft) | Description                 | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 90.00       | V SOMCW 2%O 5%M 93%W        | 0.99         |
| 250.00      | V SM&WCGO 5%W 5%M 30%G 60%O | 3.51         |
| 0.00        | 640ft GIP                   | 0.00         |
|             |                             |              |
|             |                             |              |

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Sam Gary Jr. Associates

1515 Wynkoop STE 700  
Denver Co

ATTN: Clayton Camozzi

**Wagner Trust 3-1**

**1-16-16, Rush Ks**

Job Ticket: 41921

**DST#: 2**

Test Start: 2011.02.19 @ 09:25:21

### GENERAL INFORMATION:

Formation: **KC "F,G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:21

Time Test Ended: 16:48:51

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3266.00 ft (KB) To 3300.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3300.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

### Serial #: 8319 Fluid

Press @ RunDepth: psig @ 3231.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.19

End Date:

2011.02.19

Last Calib.:

2011.02.19

Start Time: 09:25:56

End Time:

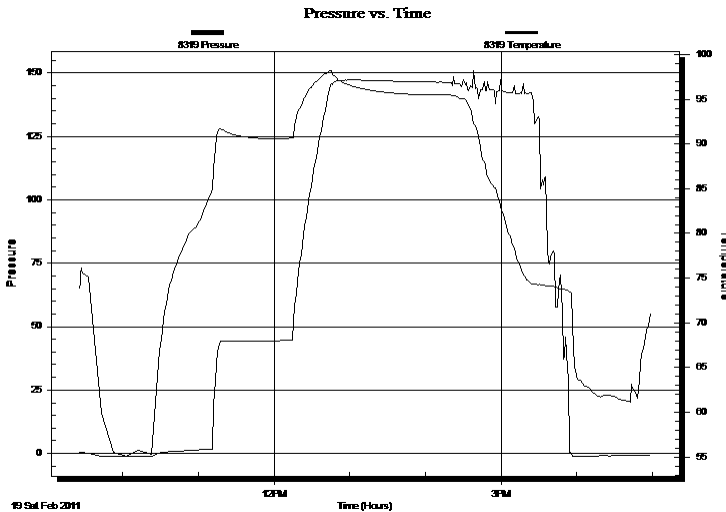
16:58:50

Time On Btm:

Time Off Btm:

TEST COMMENT: IF 5 MIN-BOB in 1.5min  
ISI 60 MIN-No blow  
FF 30 MIN-BOB in 30sec  
FSI 90 MIN-BOB in 13min

### PRESSURE SUMMARY



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

### Recovery

| Length (ft) | Description                 | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 90.00       | V SOMCW 2%O 5%M 93%W        | 0.99         |
| 250.00      | V SM&WCGO 5%W 5%M 30%G 60%O | 3.51         |
| 0.00        | 640ft GIP                   | 0.00         |
|             |                             |              |
|             |                             |              |
|             |                             |              |

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41921

**DST#: 2**

ATTN: Cloayton Camozzi

Test Start: 2011.02.19 @ 09:25:21

## Tool Information

|                           |                    |                       |                      |                        |             |
|---------------------------|--------------------|-----------------------|----------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3230.00 ft | Diameter: 3.80 inches | Volume: 45.31 bbl    | Tool Weight:           | 2500.00 lb  |
| Heavy Wt. Pipe:           | Length: ft         | Diameter: 2.70 inches | Volume: - bbl        | Weight set on Packer:  | 25000.00 lb |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl     | Weight to Pull Loose:  | 55000.00 lb |
|                           |                    |                       | <u>Total Volume:</u> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 30.00 ft           |                       |                      | String Weight: Initial | 46000.00 lb |
| Depth to Top Packer:      | 3266.00 ft         |                       |                      | Final                  | 48000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                      |                        |             |
| Interval between Packers: | 34.00 ft           |                       |                      |                        |             |
| Tool Length:              | 70.00 ft           |                       |                      |                        |             |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                      |                        |             |

Tool Comments:

## Tool Description

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub           | 1.00         |            |          | 3231.00    |                               |
| Recorder                  | 0.00         | 8319       | Fluid    | 3231.00    |                               |
| Drill Pipe                | 5.00         |            |          | 3236.00    |                               |
| Shut In Tool              | 5.00         |            |          | 3241.00    |                               |
| Sampler                   | 3.00         |            |          | 3244.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 3249.00    |                               |
| Jars                      | 5.00         |            |          | 3254.00    |                               |
| Safety Joint              | 3.00         |            |          | 3257.00    |                               |
| Packer                    | 4.00         |            |          | 3261.00    | 36.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |            |          | 3266.00    |                               |
| Stubb                     | 1.00         |            |          | 3267.00    |                               |
| Perforations              | 3.00         |            |          | 3270.00    |                               |
| Recorder                  | 0.00         | 8369       | Outside  | 3270.00    |                               |
| Recorder                  | 0.00         | 6719       | Inside   | 3270.00    |                               |
| Perforations              | 27.00        |            |          | 3297.00    |                               |
| Bullnose                  | 3.00         |            |          | 3300.00    | 34.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>70.00</b> |            |          |            |                               |



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41921

**DST#: 2**

ATTN: Cloayton Camozzi

Test Start: 2011.02.19 @ 09:25:21

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

124000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description                | Volume<br>bbbl |
|--------------|----------------------------|----------------|
| 90.00        | VSOMCW 2%O 5%M 93%W        | 0.989          |
| 250.00       | VSM&WCGO 5%W 5%M 30%G 60%O | 3.507          |
| 0.00         | 640ft GIP                  | 0.000          |

Total Length: 340.00 ft      Total Volume: 4.496 bbl

Num Fluid Samples: 0

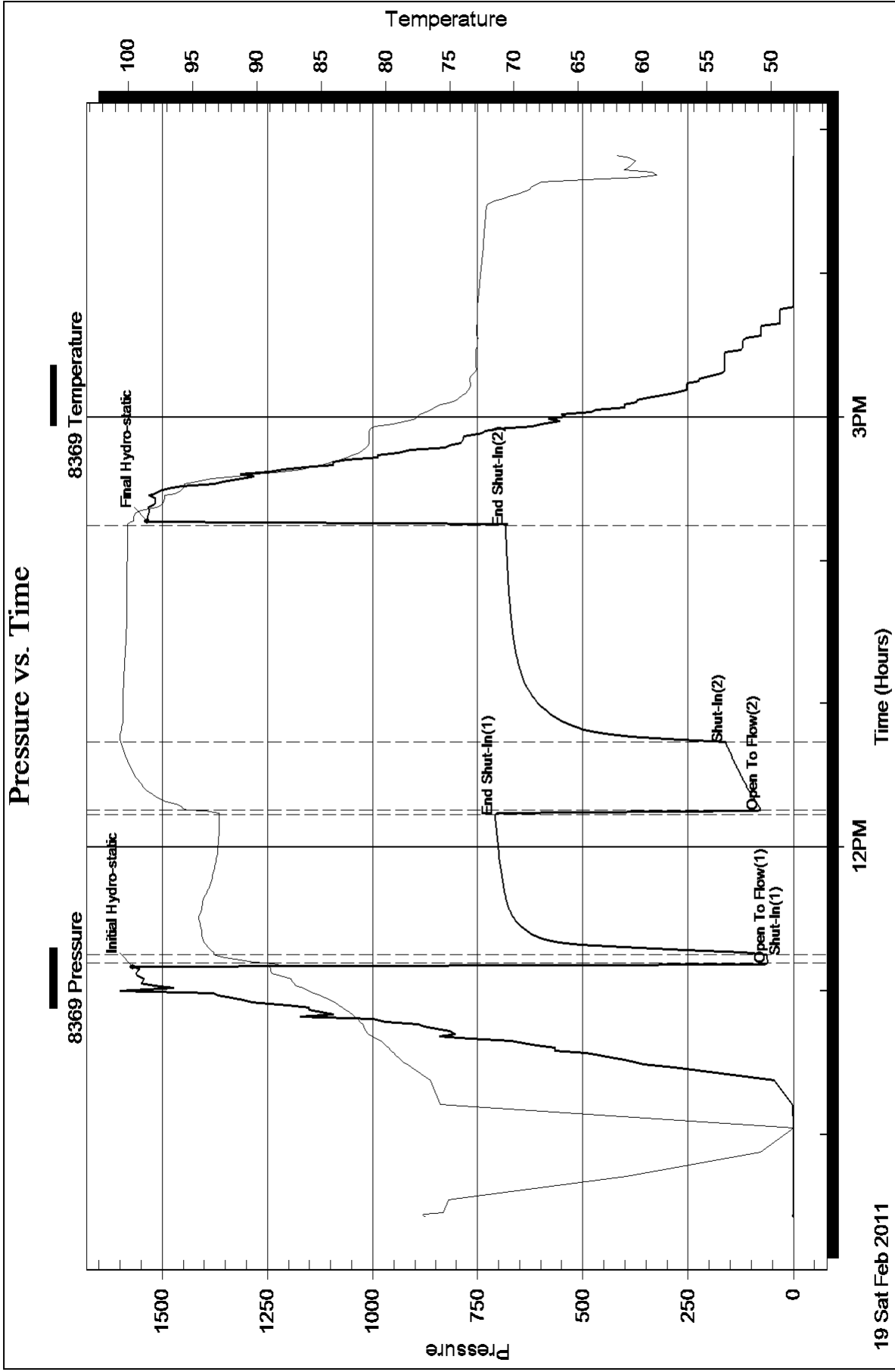
Num Gas Bombs: 0

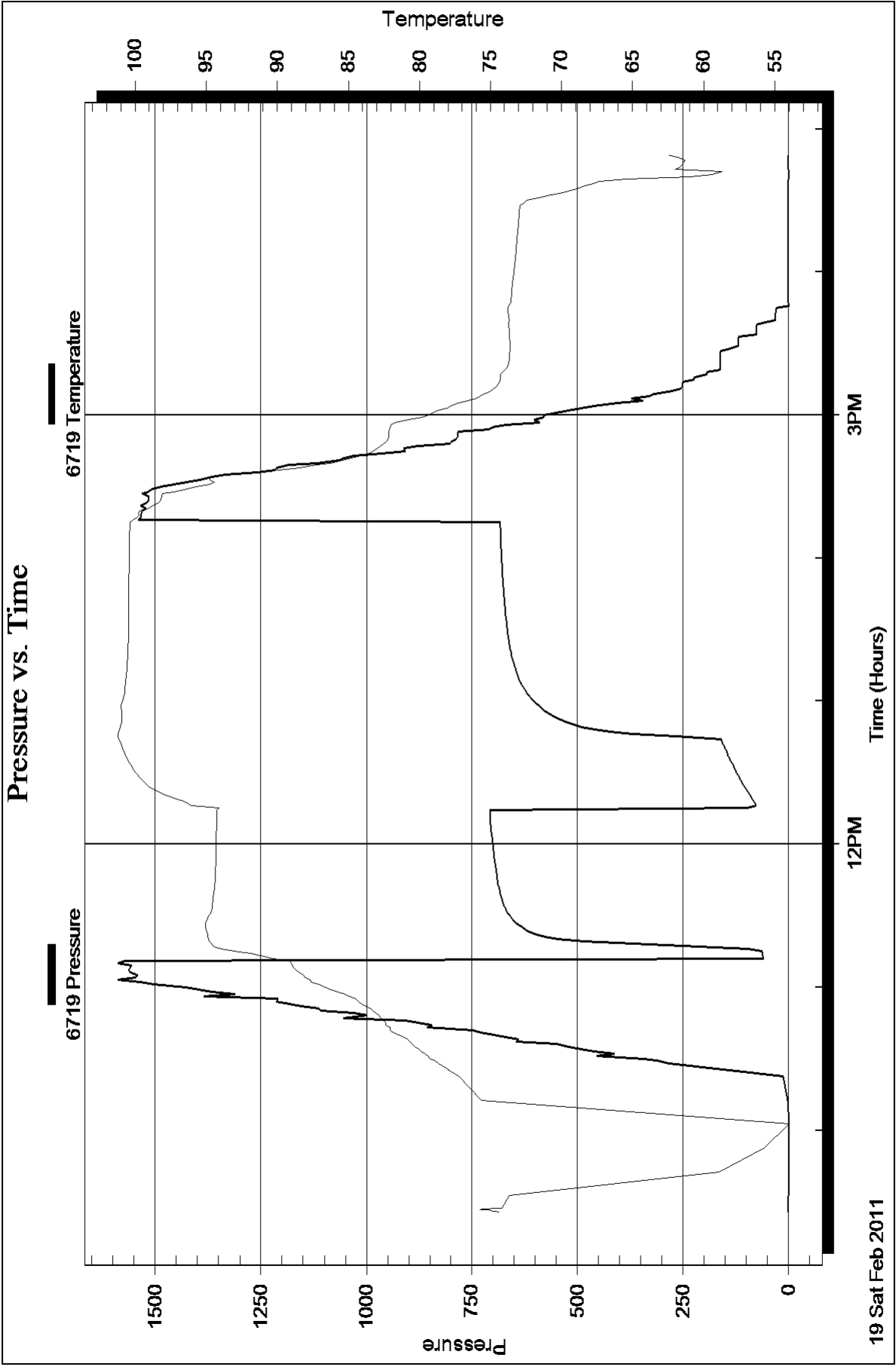
Serial #:

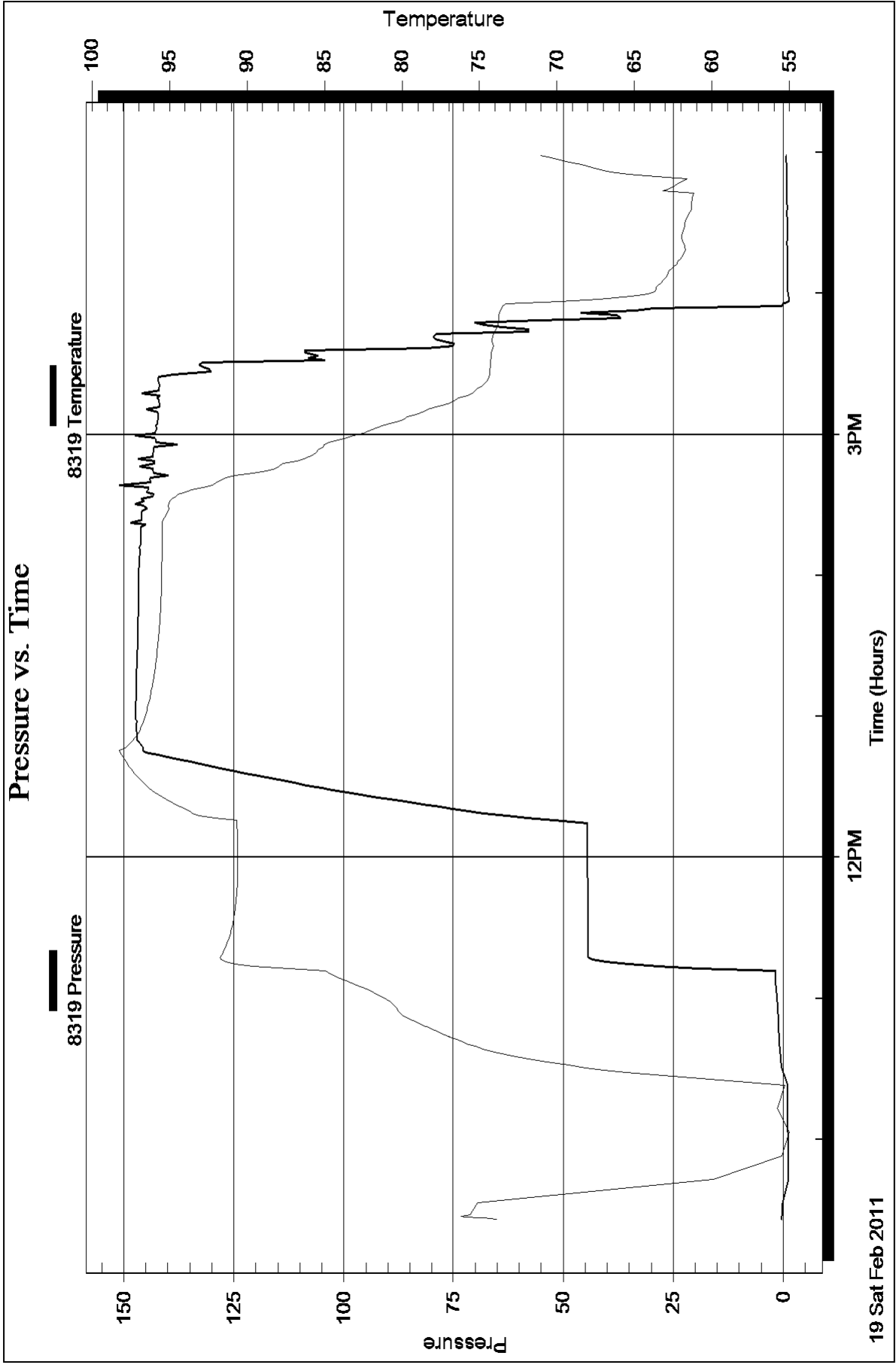
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data: Gas 1300ml: Oil 2200ml: Water 50ml; .08 @ 60dgr Chlorides

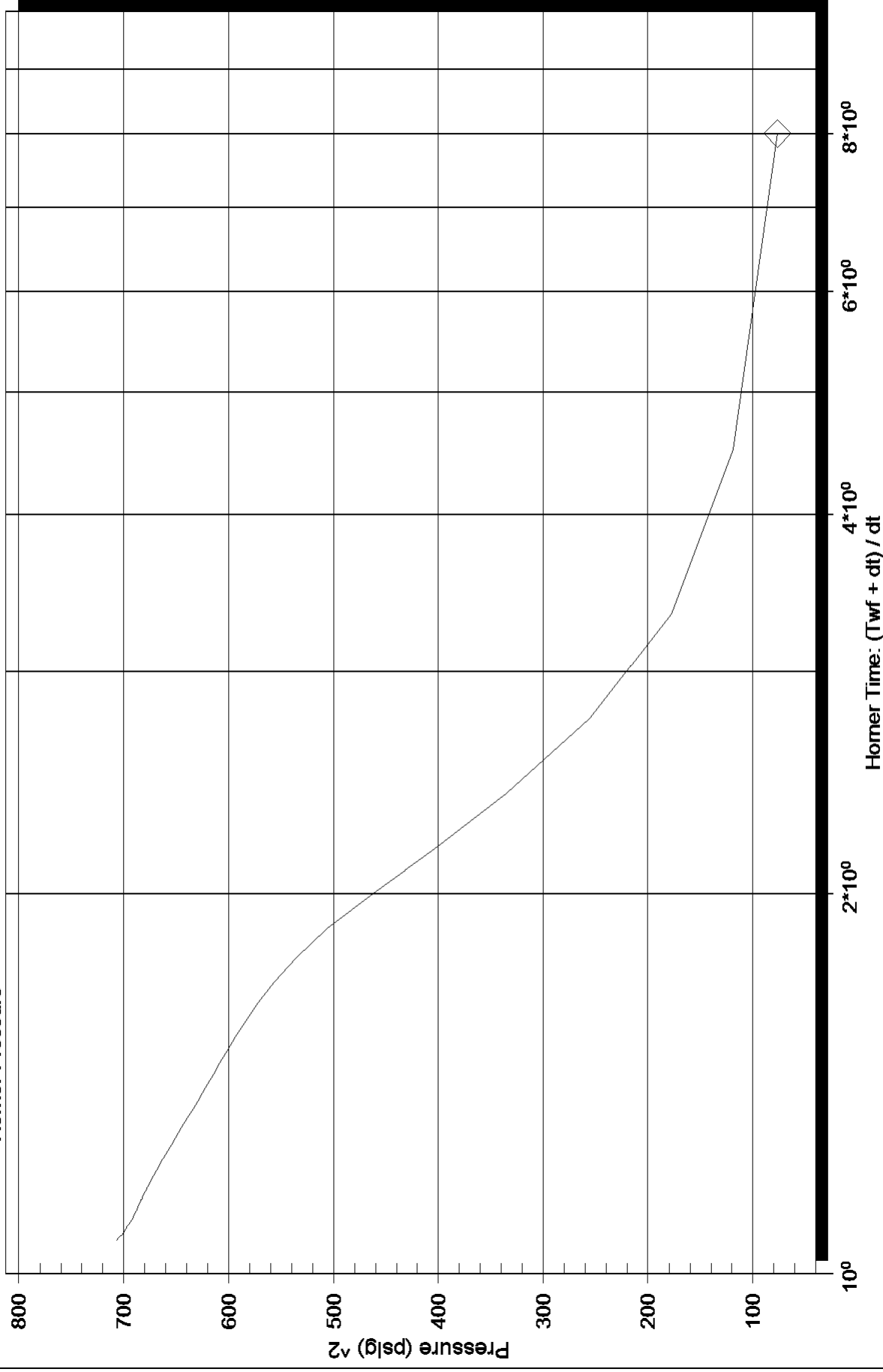






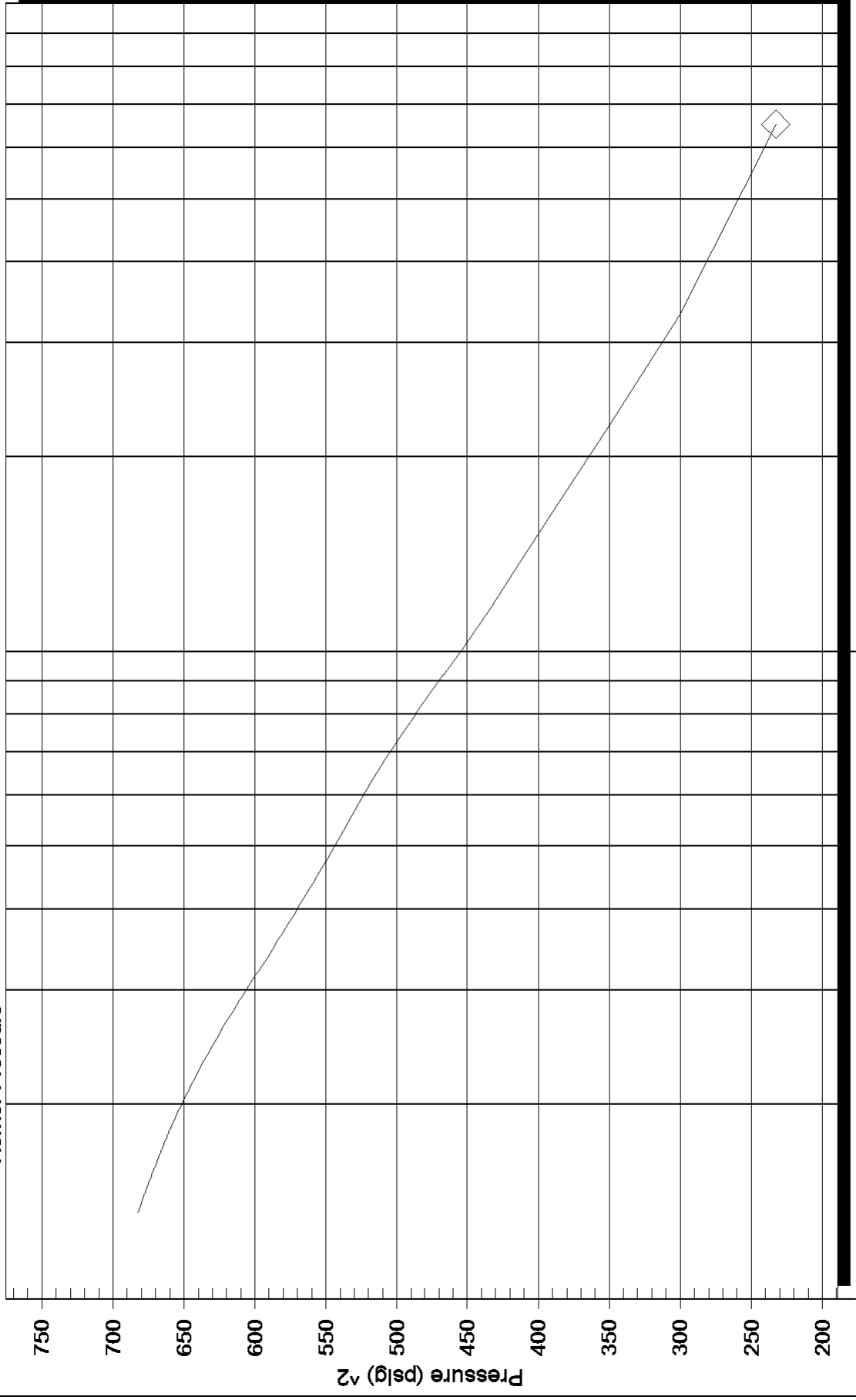
### Homer Plot

Homer Pressure



### Homer Plot

Homer Pressure



10<sup>0</sup>

10<sup>1</sup>

Homer Time: (Twf + dt) / dt

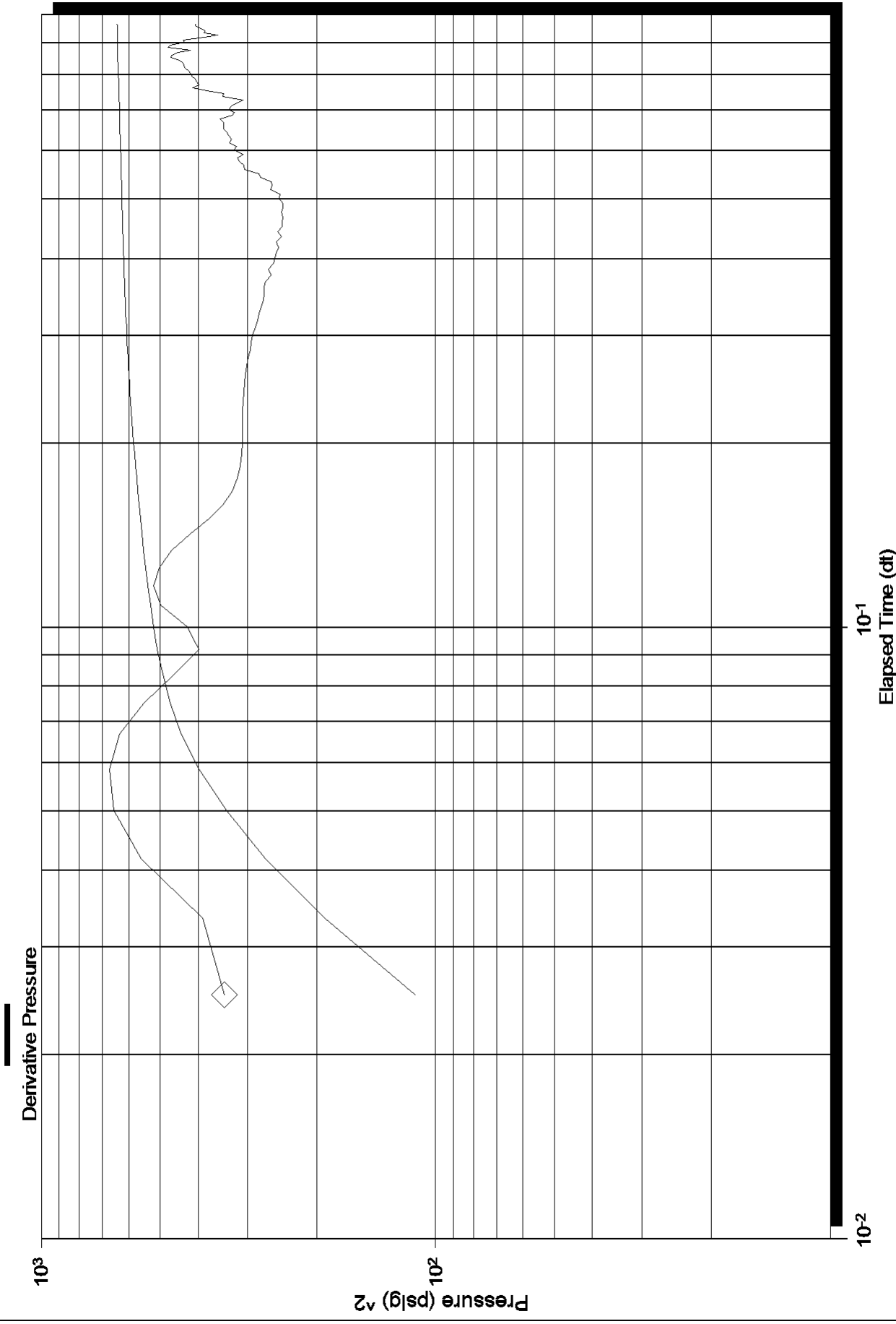
Serial Number: 8369 (Outside)

P\* : Slope (m) : kpa/log cycle

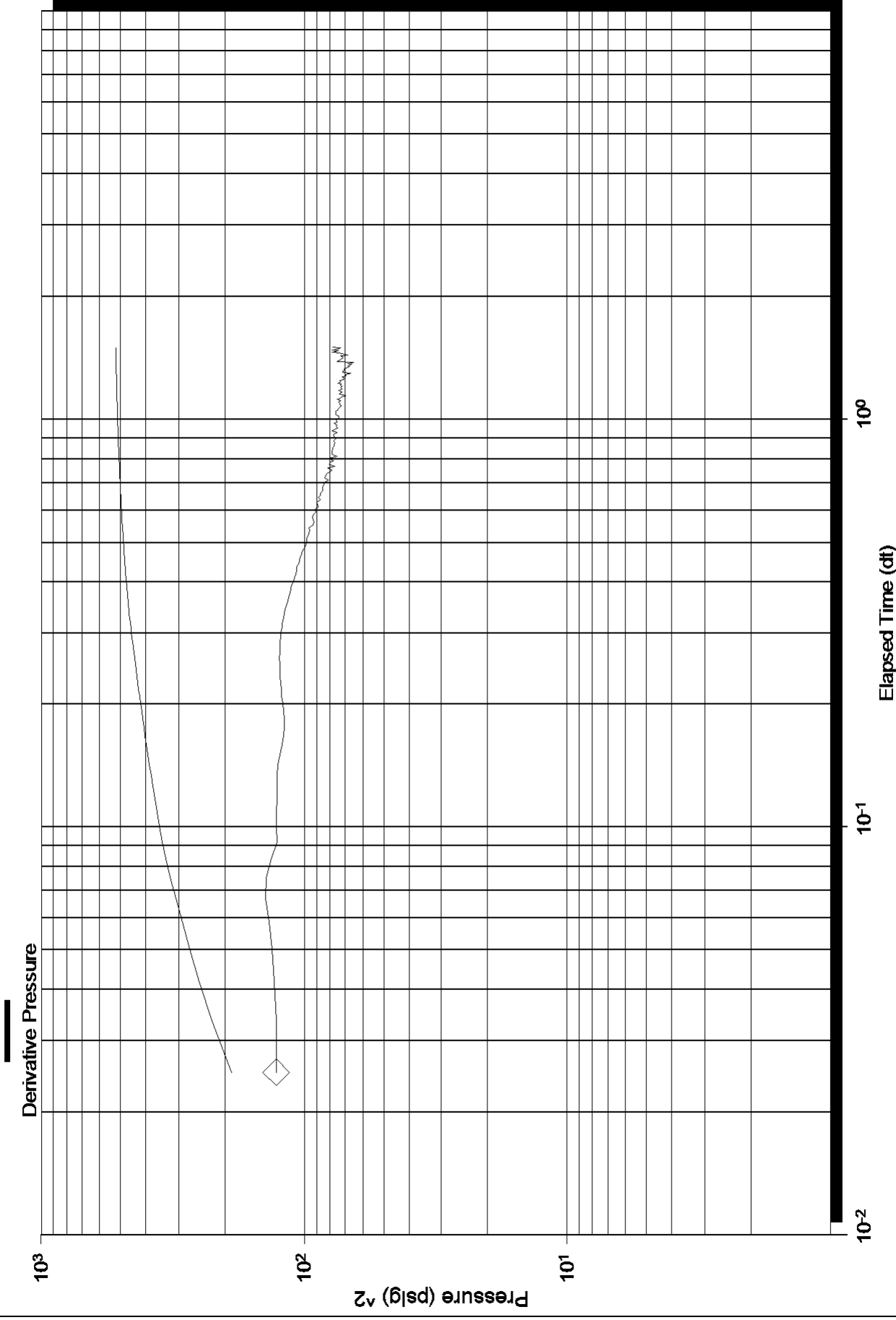
Flow Cycle: 2



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **SamGary Jr. Associates**

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**1-16-16, Rush Ks**

**Wagner Trust 3-1**

Start Date: 2011.02.20 @ 01:45:00

End Date: 2011.02.20 @ 09:18:00

Job Ticket #: 41922                      DST #: 3

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41922

**DST#: 3**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 01:45:00

## GENERAL INFORMATION:

Formation: **KC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:31:30

Time Test Ended: 09:18:00

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3366.00 ft (KB) To 3378.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3378.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369 Outside**

Press @ RunDepth: 28.26 psig @ 3375.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20 End Date: 2011.02.20

Last Calib.: 2011.02.20

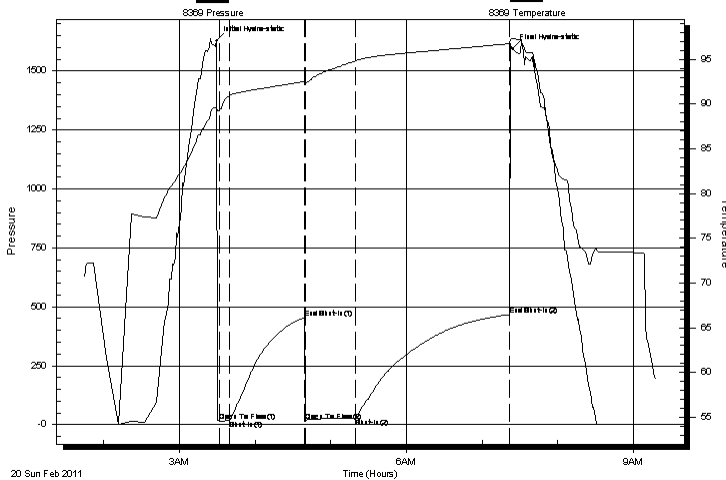
Start Time: 01:45:05 End Time: 09:17:59

Time On Btm: 2011.02.20 @ 03:29:30

Time Off Btm: 2011.02.20 @ 07:24:00

**TEST COMMENT:** IF 8 MIN-4.5in blow  
ISI 60 MIN-No blow  
FF 40 MIN-BOB in 6min  
FSI 120 MIN-No blow

Pressure vs. Time



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1628.26         | 89.56        | Initial Hydro-static |
| 2           | 13.68           | 89.30        | Open To Flow (1)     |
| 10          | 17.71           | 90.94        | Shut-In(1)           |
| 70          | 453.92          | 92.52        | End Shut-In(1)       |
| 71          | 14.44           | 92.44        | Open To Flow (2)     |
| 110         | 28.26           | 94.81        | Shut-In(2)           |
| 233         | 467.13          | 96.76        | End Shut-In(2)       |
| 235         | 1593.76         | 97.32        | Final Hydro-static   |

## Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 80.00       | SGOCM 5%G 45%O 50%M | 0.85         |
| 0.00        | 180ft GIP           | 0.00         |
|             |                     |              |
|             |                     |              |
|             |                     |              |

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**Wagner Trust 3-1**

**1-16-16, Rush Ks**

Job Ticket: 41922

**DST#: 3**

Test Start: 2011.02.20 @ 01:45:00

## GENERAL INFORMATION:

Formation: **KC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:31:30

Time Test Ended: 09:18:00

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3366.00 ft (KB) To 3378.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3378.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6719 Inside**

Press @ Run Depth: psig @ 3375.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20

End Date: 2011.02.20

Last Calib.: 2011.02.20

Start Time: 01:45:57

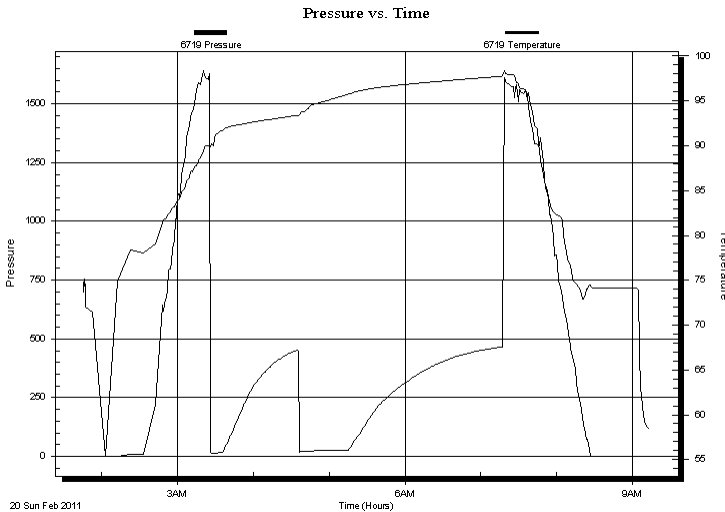
End Time: 09:13:21

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF 8 MIN-4.5in blow  
ISI 60 MIN-No blow  
FF 40 MIN-BOB in 6min  
FSI 120 MIN-No blow

## PRESSURE SUMMARY



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

## Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 80.00       | SGOCM 5%G 45%O 50%M | 0.85         |
| 0.00        | 180ft GIP           | 0.00         |
|             |                     |              |
|             |                     |              |
|             |                     |              |
|             |                     |              |

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41922

**DST#: 3**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 01:45:00

## Tool Information

|                           |                    |                       |                            |                                    |
|---------------------------|--------------------|-----------------------|----------------------------|------------------------------------|
| Drill Pipe:               | Length: 3326.00 ft | Diameter: 3.80 inches | Volume: 46.66 bbl          | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: ft         | Diameter: 2.70 inches | Volume: - bbl              | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl           | Weight to Pull Loose: 55000.00 lb  |
|                           |                    |                       | <u>Total Volume: - bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 26.00 ft           |                       |                            | String Weight: Initial 47000.00 lb |
| Depth to Top Packer:      | 3366.00 ft         |                       |                            | Final 48000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                            |                                    |
| Interval between Packers: | 12.00 ft           |                       |                            |                                    |
| Tool Length:              | 48.00 ft           |                       |                            |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                            |                                    |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3331.00    |                               |
| Recorder         | 0.00        | 8319       | Fluid    | 3331.00    |                               |
| Drill Pipe       | 5.00        |            |          | 3336.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3341.00    |                               |
| Sampler          | 3.00        |            |          | 3344.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3349.00    |                               |
| Jars             | 5.00        |            |          | 3354.00    |                               |
| Safety Joint     | 3.00        |            |          | 3357.00    |                               |
| Packer           | 4.00        |            |          | 3361.00    | 36.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3366.00    |                               |
| Stubb            | 1.00        |            |          | 3367.00    |                               |
| Perforations     | 8.00        |            |          | 3375.00    |                               |
| Recorder         | 0.00        | 8369       | Outside  | 3375.00    |                               |
| Recorder         | 0.00        | 6719       | Inside   | 3375.00    |                               |
| Bullnose         | 3.00        |            |          | 3378.00    | 12.00 Bottom Packers & Anchor |

**Total Tool Length: 48.00**



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41922

**DST#: 3**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 01:45:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description         | Volume<br>bbbl |
|--------------|---------------------|----------------|
| 80.00        | SGOCM 5%G 45%O 50%M | 0.849          |
| 0.00         | 180ft GIP           | 0.000          |

Total Length: 80.00 ft      Total Volume: 0.849 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

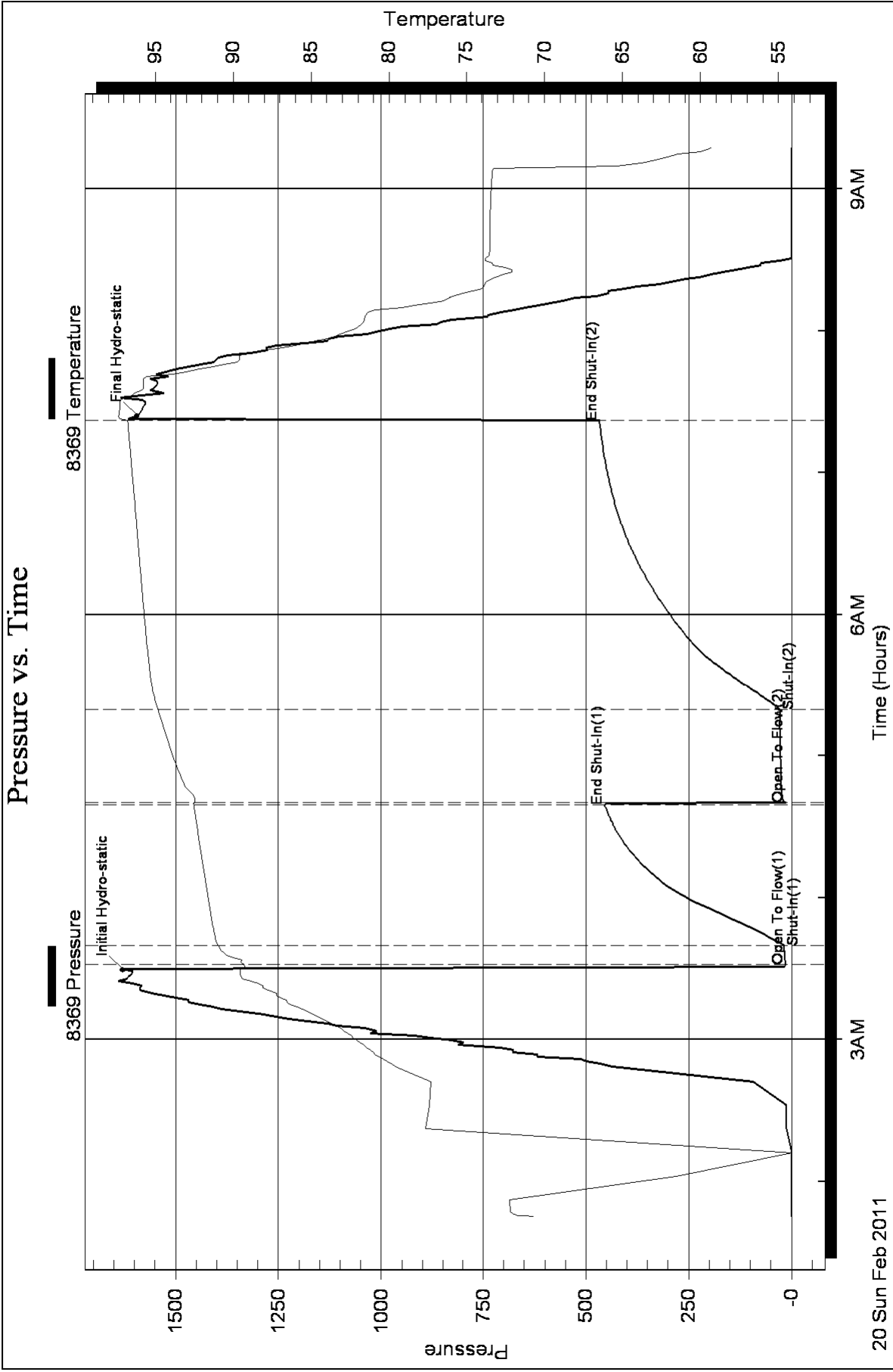
Serial #:

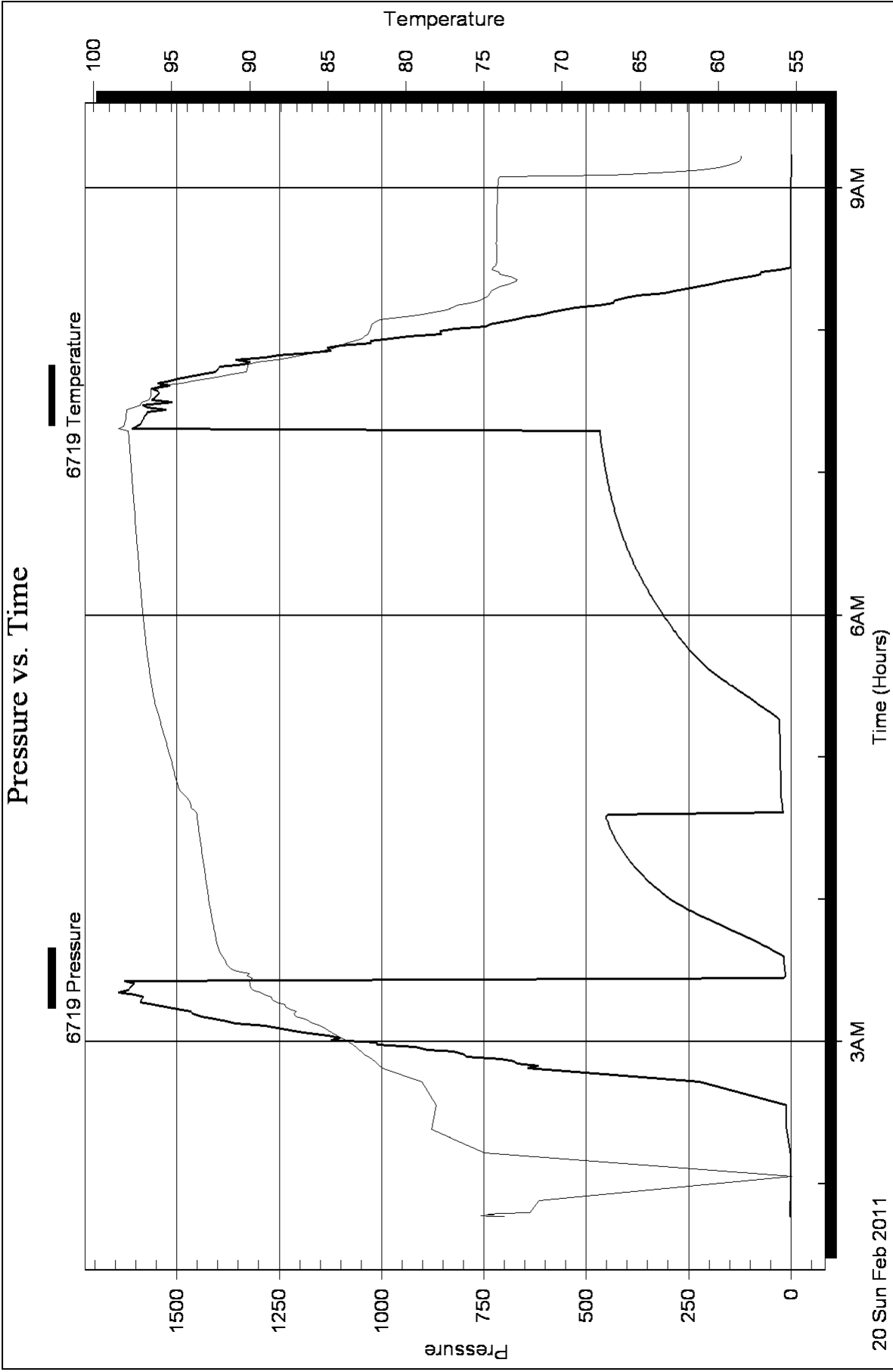
Laboratory Name:

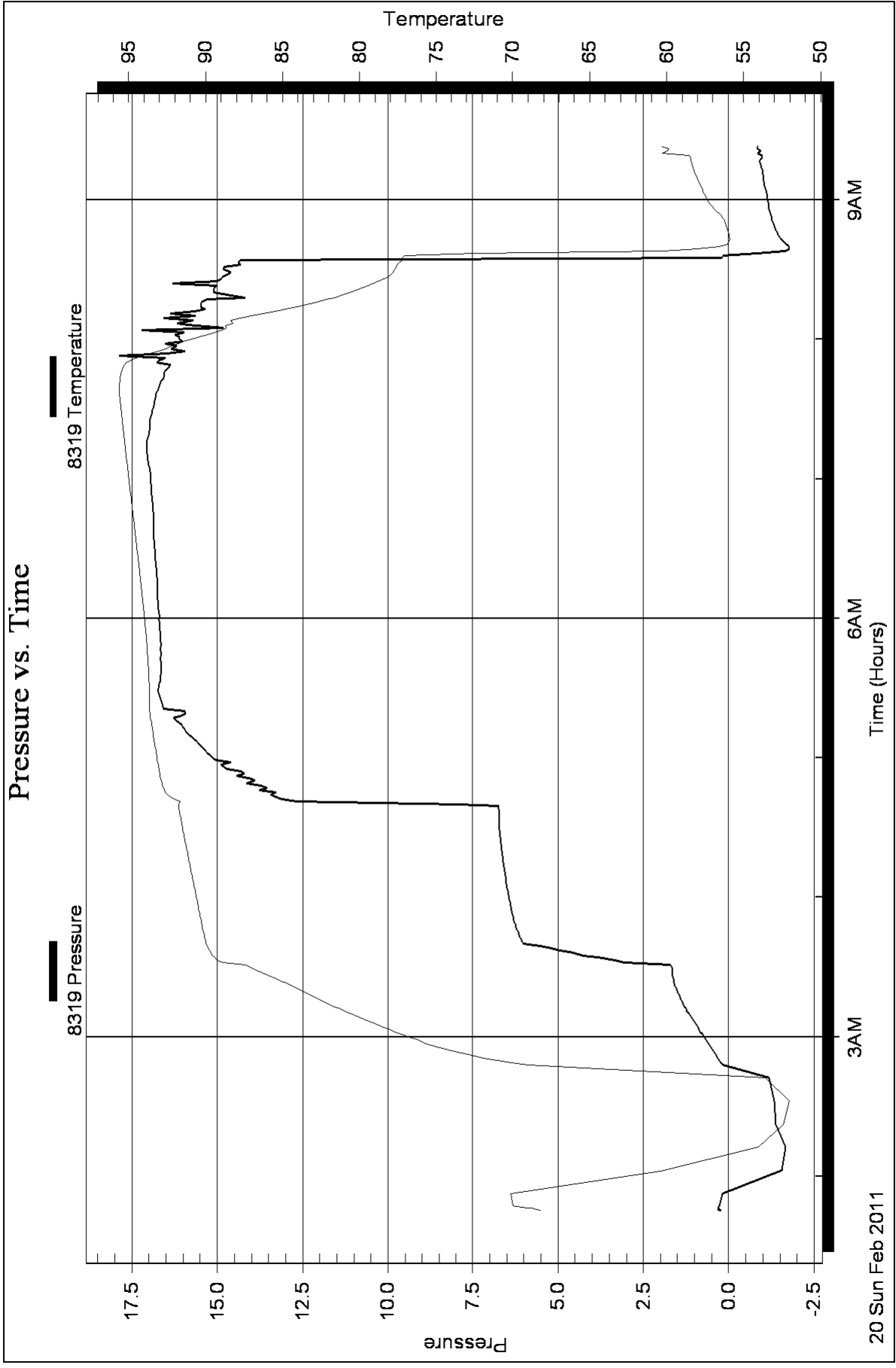
Laboratory Location:

Recovery Comments: Sampler Data, Gas 1250 ml, Oil 2750 ml, 125 psi

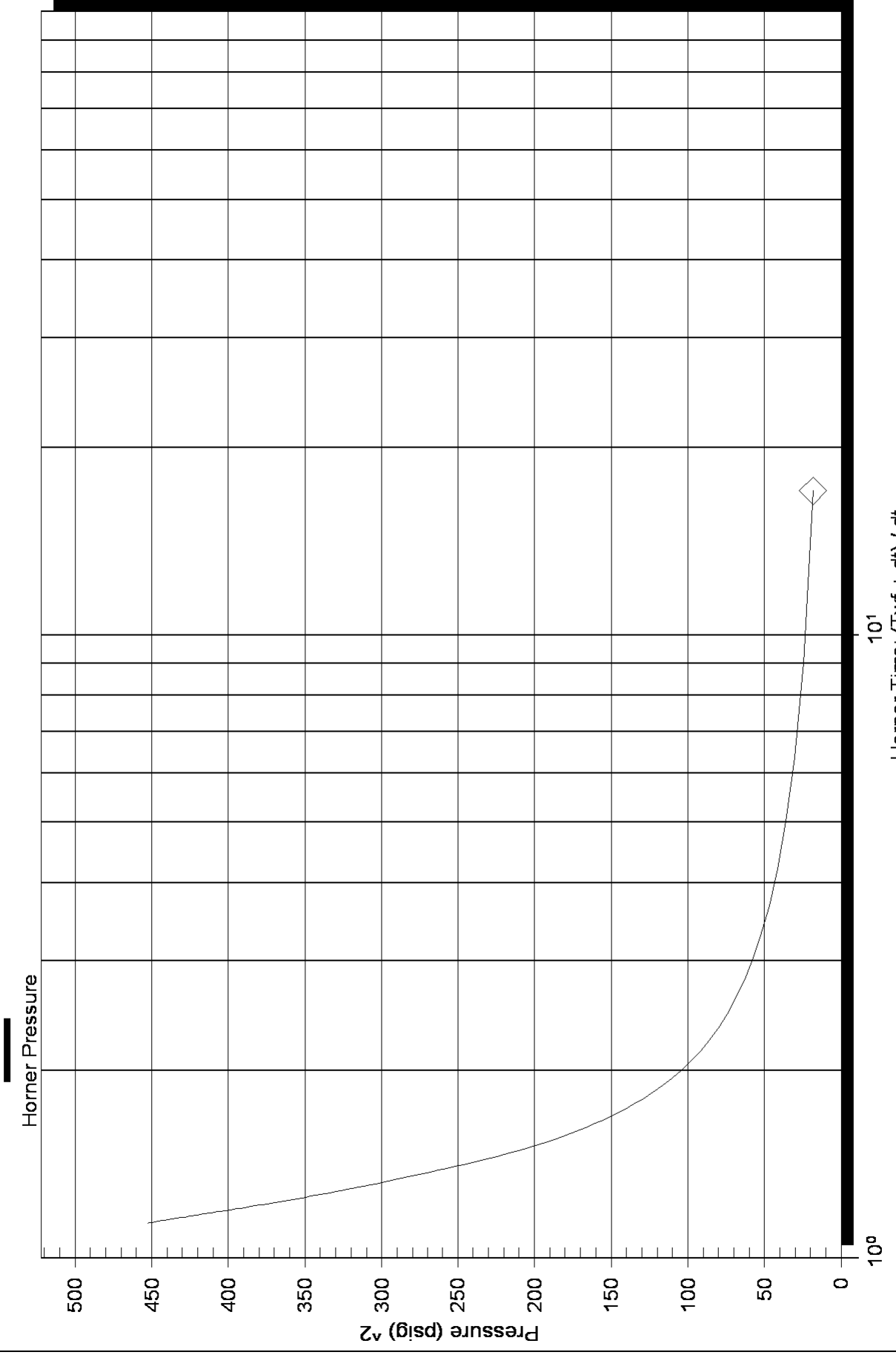




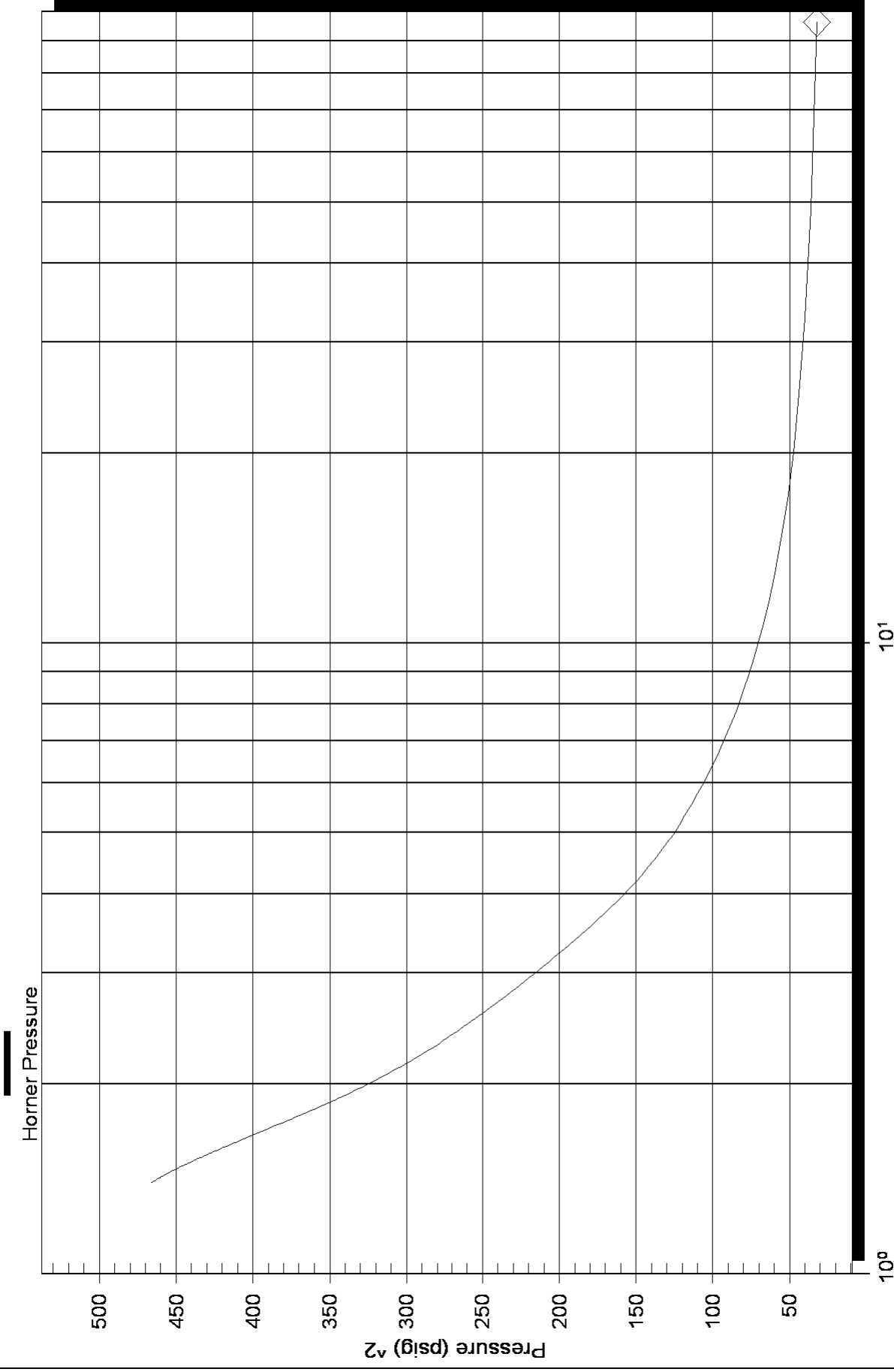




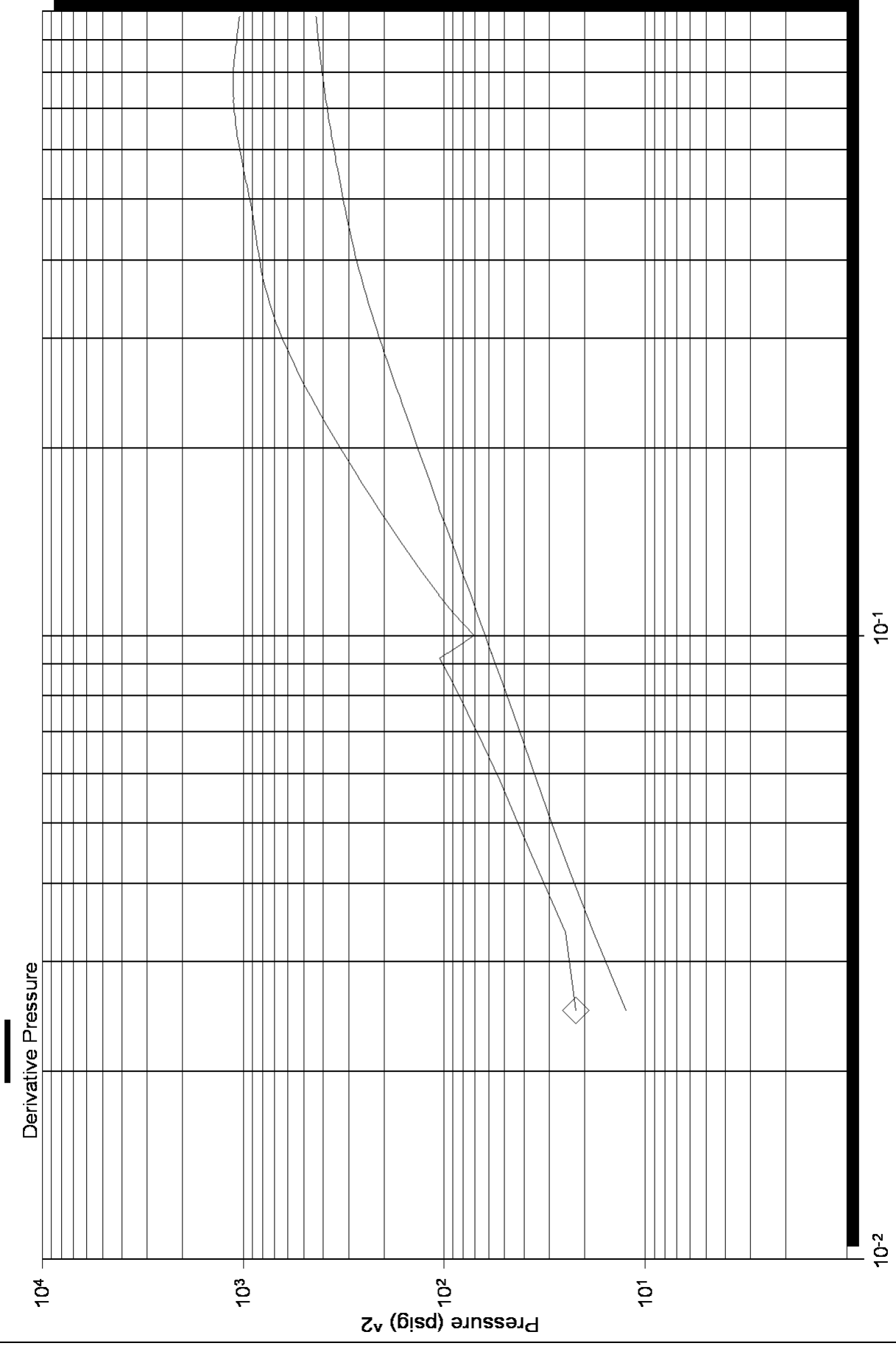
### Homer Plot



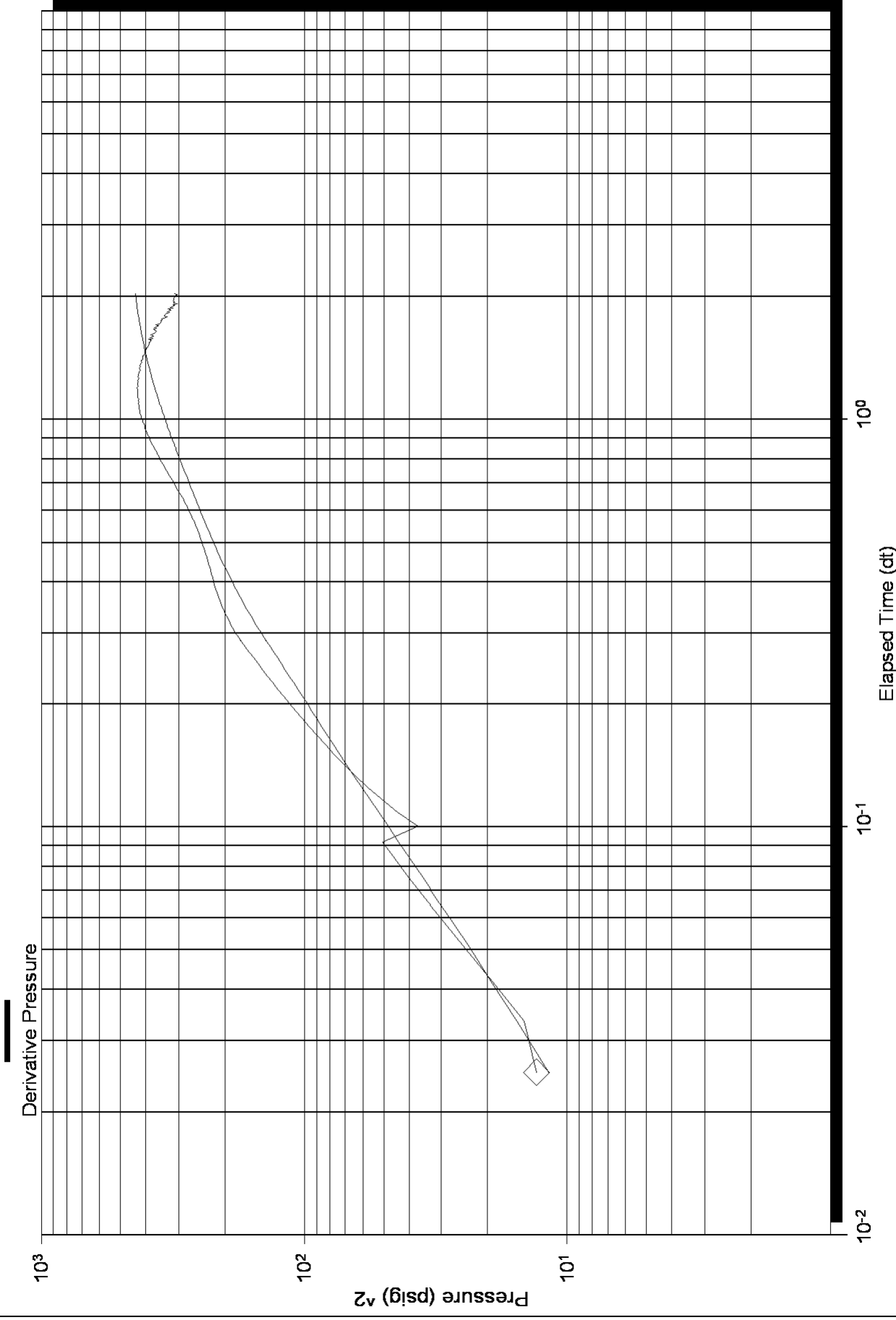
### Homer Plot



# Log-Log and Pseudo-Log-Derivative



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **SamGary Jr. Associates**

1515 Wynkoop STE 700  
Denver Co

ATTN: Cloayton Camozzi

**1-16-16, Rush Ks**

**Wagner Trust 3-1**

Start Date: 2011.02.20 @ 16:40:26

End Date: 2011.02.20 @ 23:33:26

Job Ticket #: 41923                      DST #: 4

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





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41923

**DST#: 4**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

## GENERAL INFORMATION:

Formation: **KC "J,K,L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:14:26

Time Test Ended: 23:33:26

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3378.00 ft (KB) To 3421.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8319 Outside**

Press @ RunDepth: 59.82 psig @ 3383.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20 End Date: 2011.02.20

Last Calib.: 2011.02.20

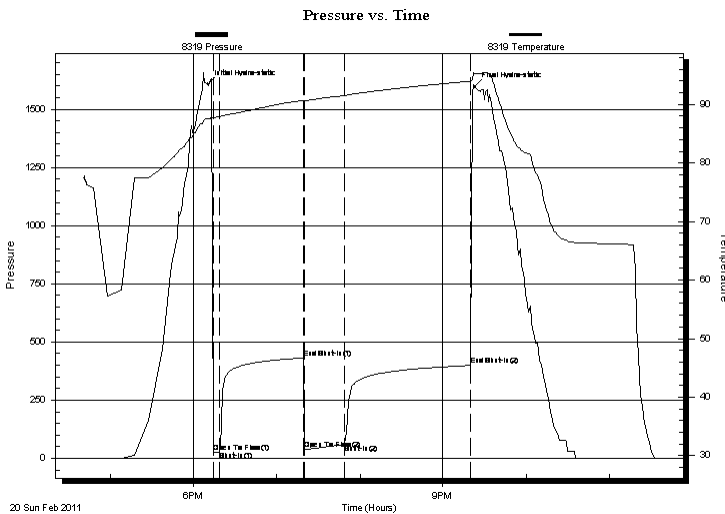
Start Time: 16:40:31 End Time: 23:33:25

Time On Btm: 2011.02.20 @ 18:09:56

Time Off Btm: 2011.02.20 @ 21:22:56

**TEST COMMENT:** IF 5 MIN-BOB in 1min  
ISI 60 MIN-No blow  
FF 30 MIN-BOB in 2.5min  
FSI 90 MIN-No blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1607.58         | 87.51        | Initial Hydro-static |
| 5           | 24.03           | 87.68        | Open To Flow (1)     |
| 9           | 28.51           | 87.92        | Shut-In(1)           |
| 69          | 432.59          | 90.67        | End Shut-In(1)       |
| 70          | 37.27           | 90.65        | Open To Flow (2)     |
| 99          | 59.82           | 91.52        | Shut-In(2)           |
| 190         | 399.36          | 93.96        | End Shut-In(2)       |
| 193         | 1595.64         | 95.30        | Final Hydro-static   |

## Recovery

| Length (ft) | Description          | Volume (bbl) |
|-------------|----------------------|--------------|
| 60.00       | GO 35%G 65%O         | 0.57         |
| 65.00       | SGMCO 10%G 80%O 10%M | 0.91         |
| 0.00        | 240ft GIP            | 0.00         |
|             |                      |              |
|             |                      |              |

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41923

**DST#: 4**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

## GENERAL INFORMATION:

Formation: **KC "J,K,L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:14:26

Time Test Ended: 23:33:26

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

**Interval: 3378.00 ft (KB) To 3421.00 ft (KB) (TVD)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6719 Inside**

Press @ Run Depth: psig @ 3383.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.20

End Date:

2011.02.20

Last Calib.:

2011.02.20

Start Time: 16:36:01

End Time:

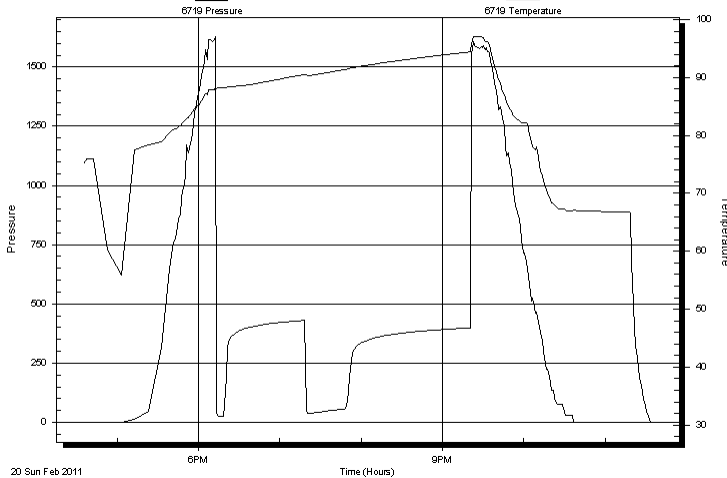
23:33:25

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF 5 MIN-BOB in 1min  
ISI 60 MIN-No blow  
FF 30 MIN-BOB in 2.5min  
FSI 90 MIN-No blow

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

| Length (ft) | Description          | Volume (bbl) |
|-------------|----------------------|--------------|
| 60.00       | GO 35%G 65%O         | 0.57         |
| 65.00       | SGMCO 10%G 80%O 10%M | 0.91         |
| 0.00        | 240ft GIP            | 0.00         |
|             |                      |              |
|             |                      |              |

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41923

**DST#: 4**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

## Tool Information

|                           |                    |                       |                            |                                    |
|---------------------------|--------------------|-----------------------|----------------------------|------------------------------------|
| Drill Pipe:               | Length: 3316.00 ft | Diameter: 3.80 inches | Volume: 46.51 bbl          | Tool Weight: 2500.00 lb            |
| Heavy Wt. Pipe:           | Length: ft         | Diameter: 2.70 inches | Volume: - bbl              | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl           | Weight to Pull Loose: 50000.00 lb  |
|                           |                    |                       | <u>Total Volume: - bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 4.00 ft            |                       |                            | String Weight: Initial 48000.00 lb |
| Depth to Top Packer:      | 3378.00 ft         |                       |                            | Final 50000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                            |                                    |
| Interval between Packers: | 43.00 ft           |                       |                            |                                    |
| Tool Length:              | 79.00 ft           |                       |                            |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                            |                                    |

Tool Comments:

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

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 3343.00 |                               |
| Recorder        | 0.00  | 8369 | Fluid   | 3343.00 |                               |
| Drill Pipe      | 5.00  |      |         | 3348.00 |                               |
| Shut In Tool    | 5.00  |      |         | 3353.00 |                               |
| Sampler         | 3.00  |      |         | 3356.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 3361.00 |                               |
| Jars            | 5.00  |      |         | 3366.00 |                               |
| Safety Joint    | 3.00  |      |         | 3369.00 |                               |
| Packer          | 4.00  |      |         | 3373.00 | 36.00 Bottom Of Top Packer    |
| Packer          | 5.00  |      |         | 3378.00 |                               |
| Stubb           | 1.00  |      |         | 3379.00 |                               |
| Perforations    | 3.00  |      |         | 3382.00 |                               |
| Change Over Sub | 1.00  |      |         | 3383.00 |                               |
| Recorder        | 0.00  | 8319 | Outside | 3383.00 |                               |
| Recorder        | 0.00  | 6719 | Inside  | 3383.00 |                               |
| Blank Spacing   | 32.00 |      |         | 3415.00 |                               |
| Change Over Sub | 1.00  |      |         | 3416.00 |                               |
| Perforations    | 2.00  |      |         | 3418.00 |                               |
| Bullnose        | 3.00  |      |         | 3421.00 | 43.00 Bottom Packers & Anchor |

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

SamGary Jr. Associates

**Wagner Trust 3-1**

1515 Wynkoop STE 700  
Denver Co

**1-16-16, Rush Ks**

Job Ticket: 41923

**DST#: 4**

ATTN: Cloayton Camozzi

Test Start: 2011.02.20 @ 16:40:26

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description          | Volume<br>bbbl |
|--------------|----------------------|----------------|
| 60.00        | GO 35%G 65%O         | 0.568          |
| 65.00        | SGMCO 10%G 80%O 10%M | 0.912          |
| 0.00         | 240ft GIP            | 0.000          |

Total Length: 125.00 ft      Total Volume: 1.480 bbl

Num Fluid Samples: 0

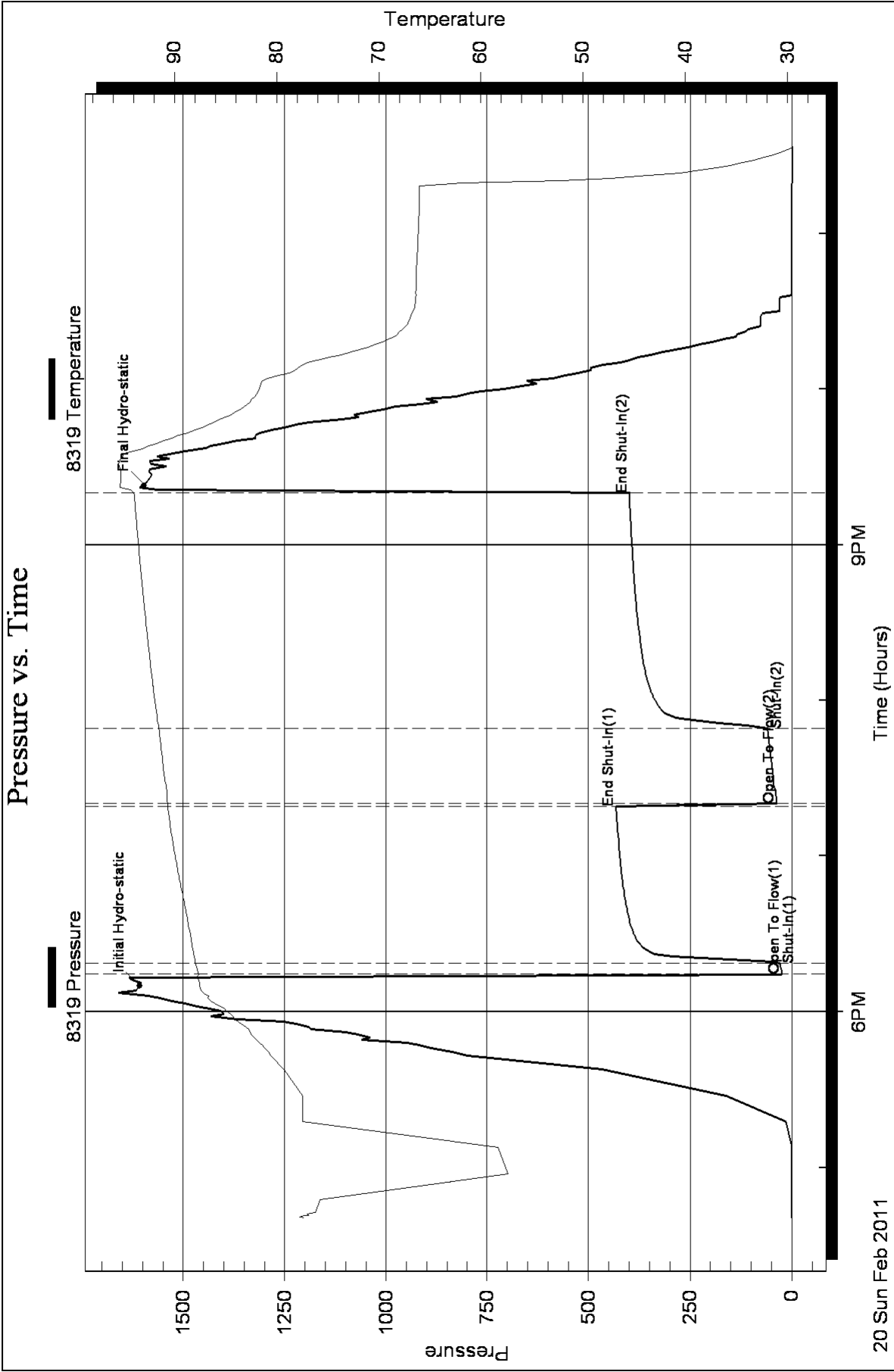
Num Gas Bombs: 0

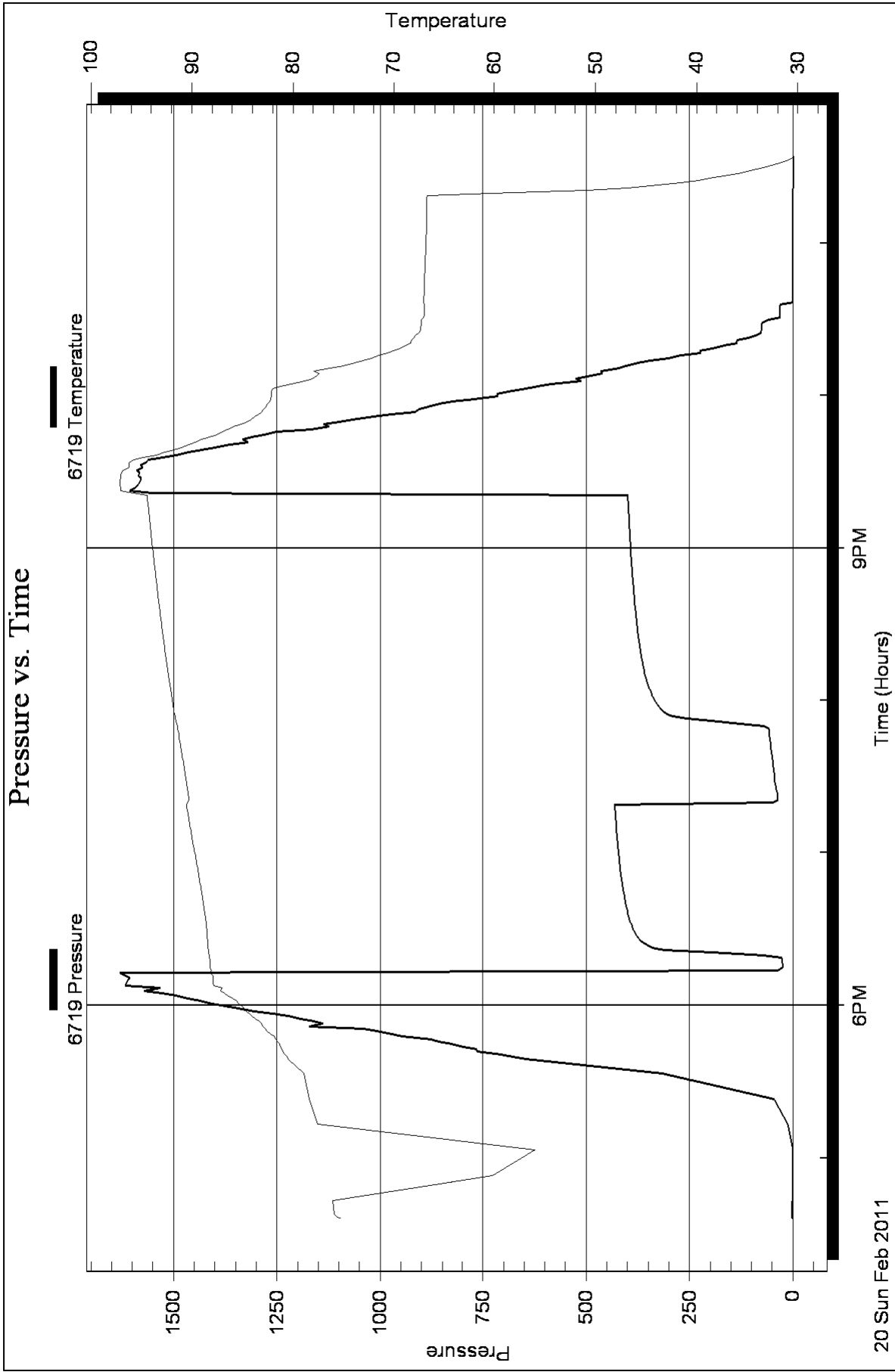
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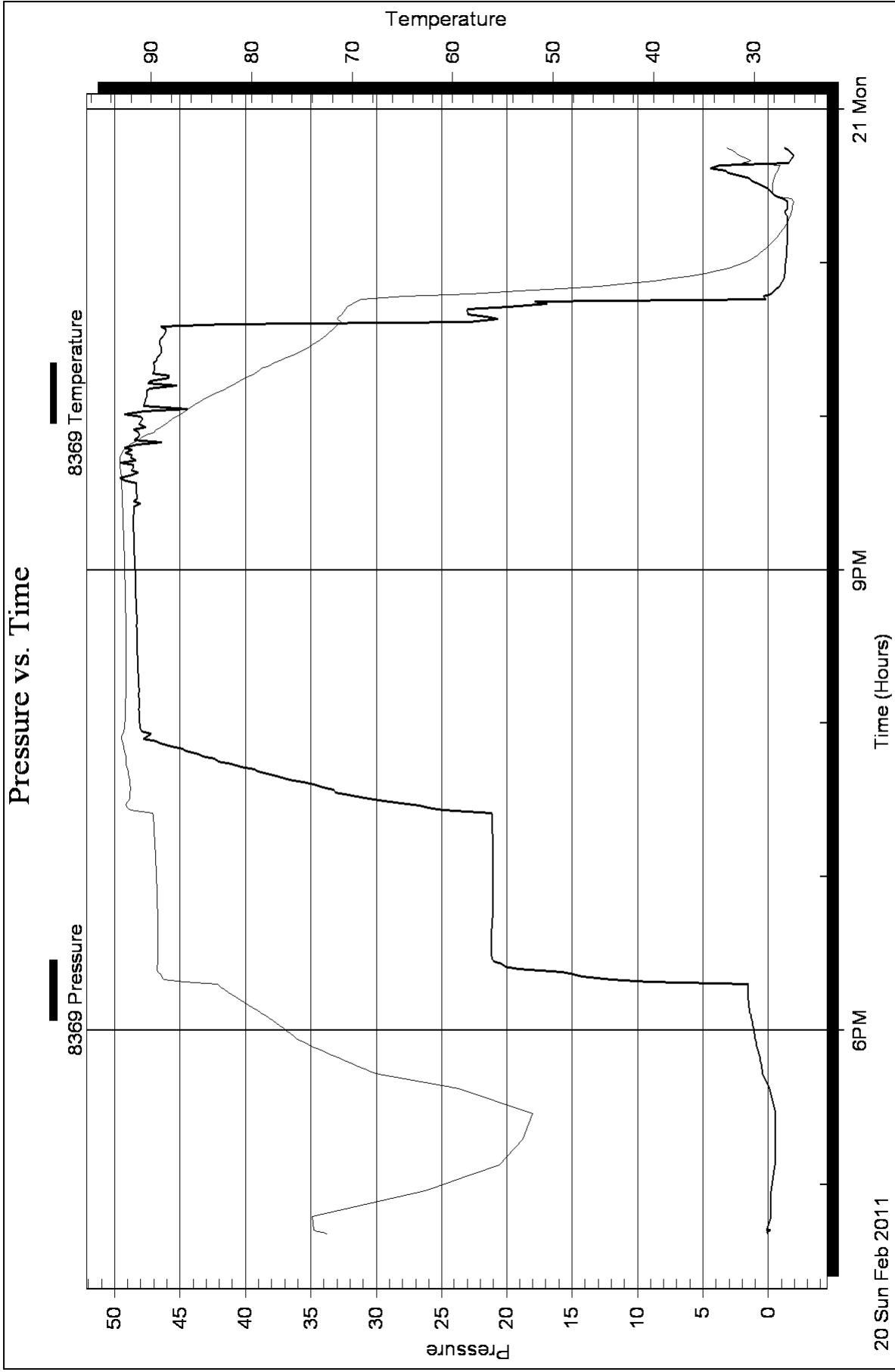
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data, Gas 1200ml, Oil 2800ml, 175 PSI



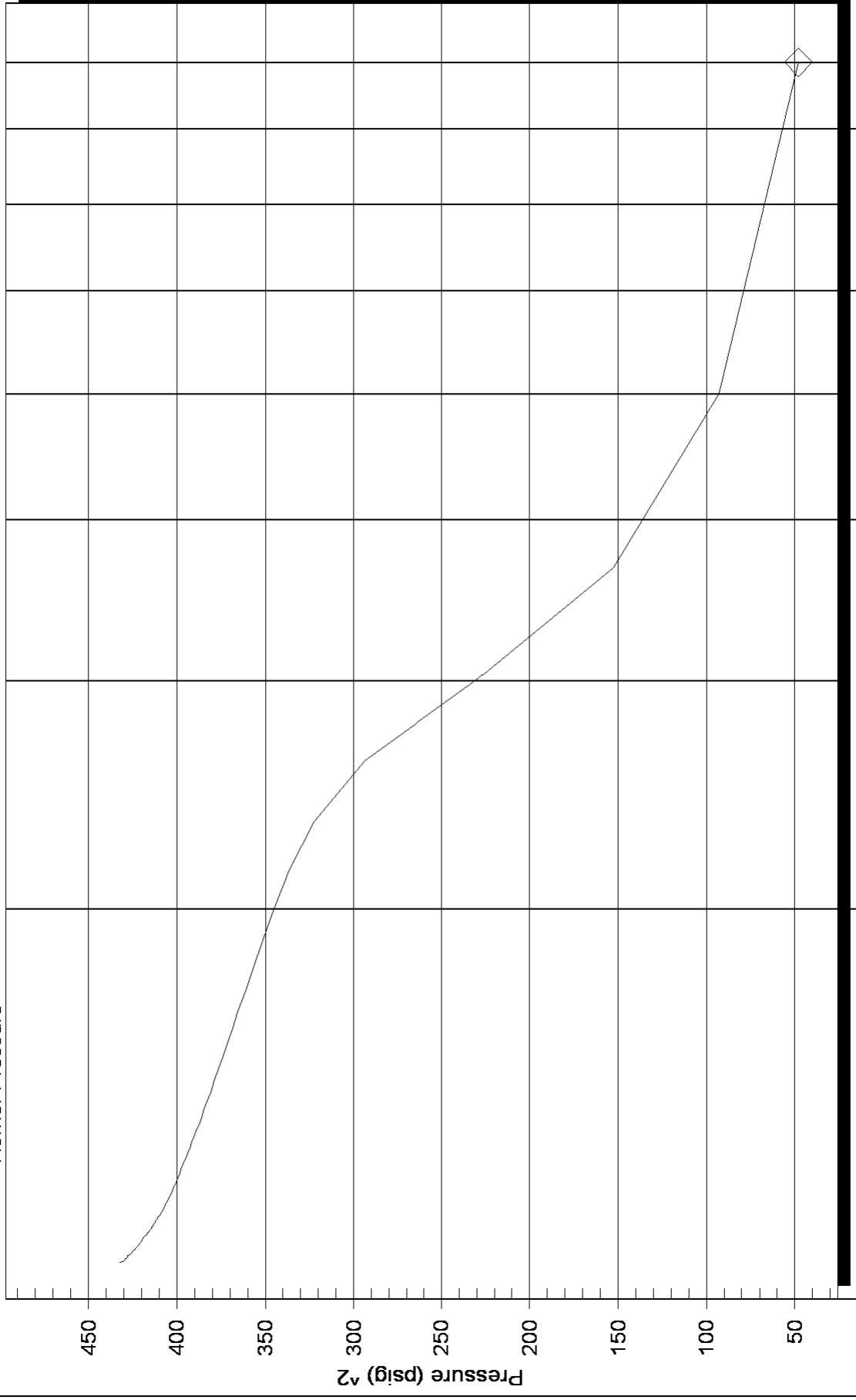






### Homer Plot

Horner Pressure



10<sup>0</sup>

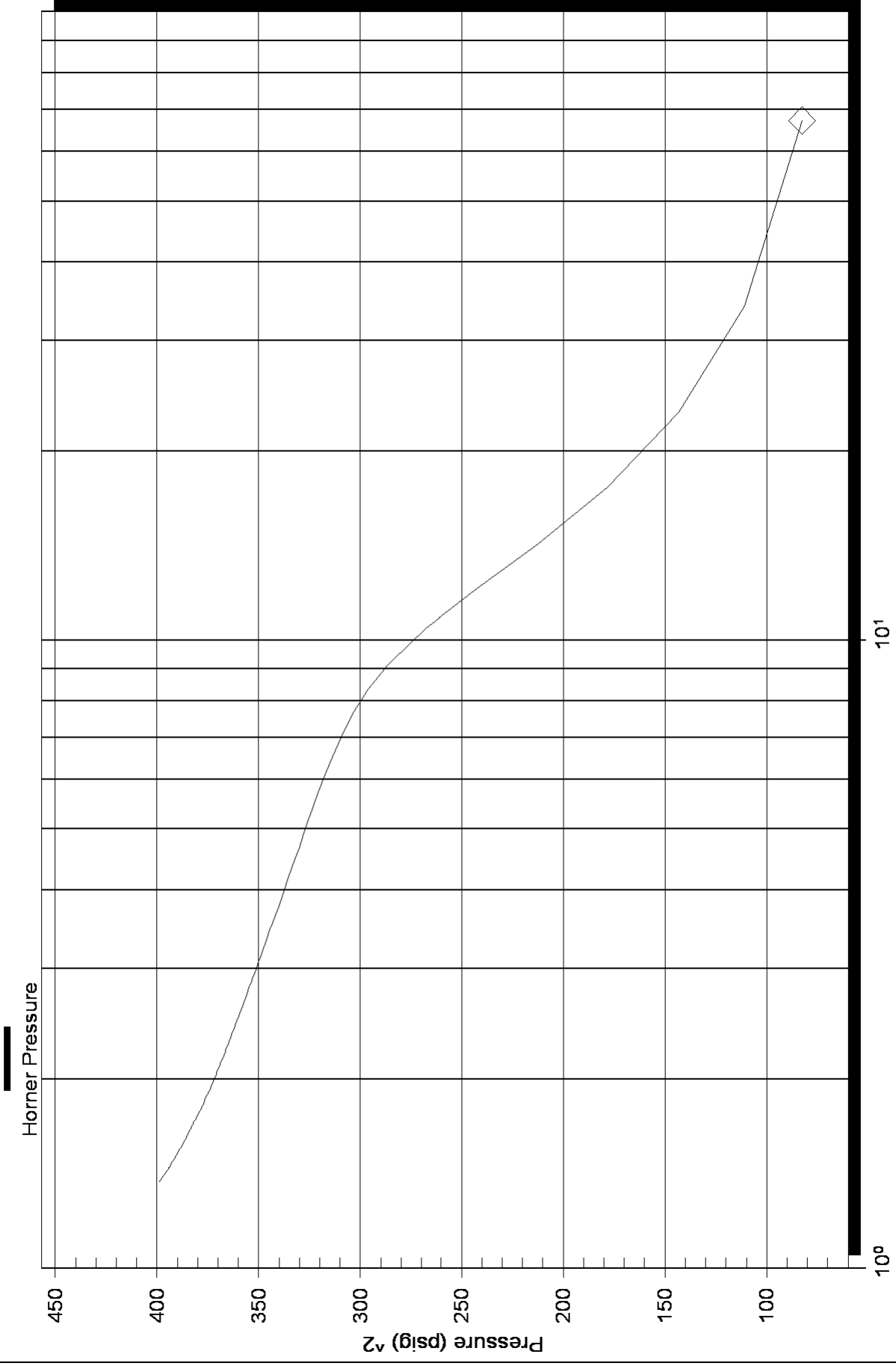
2\*10<sup>0</sup>

4\*10<sup>0</sup>

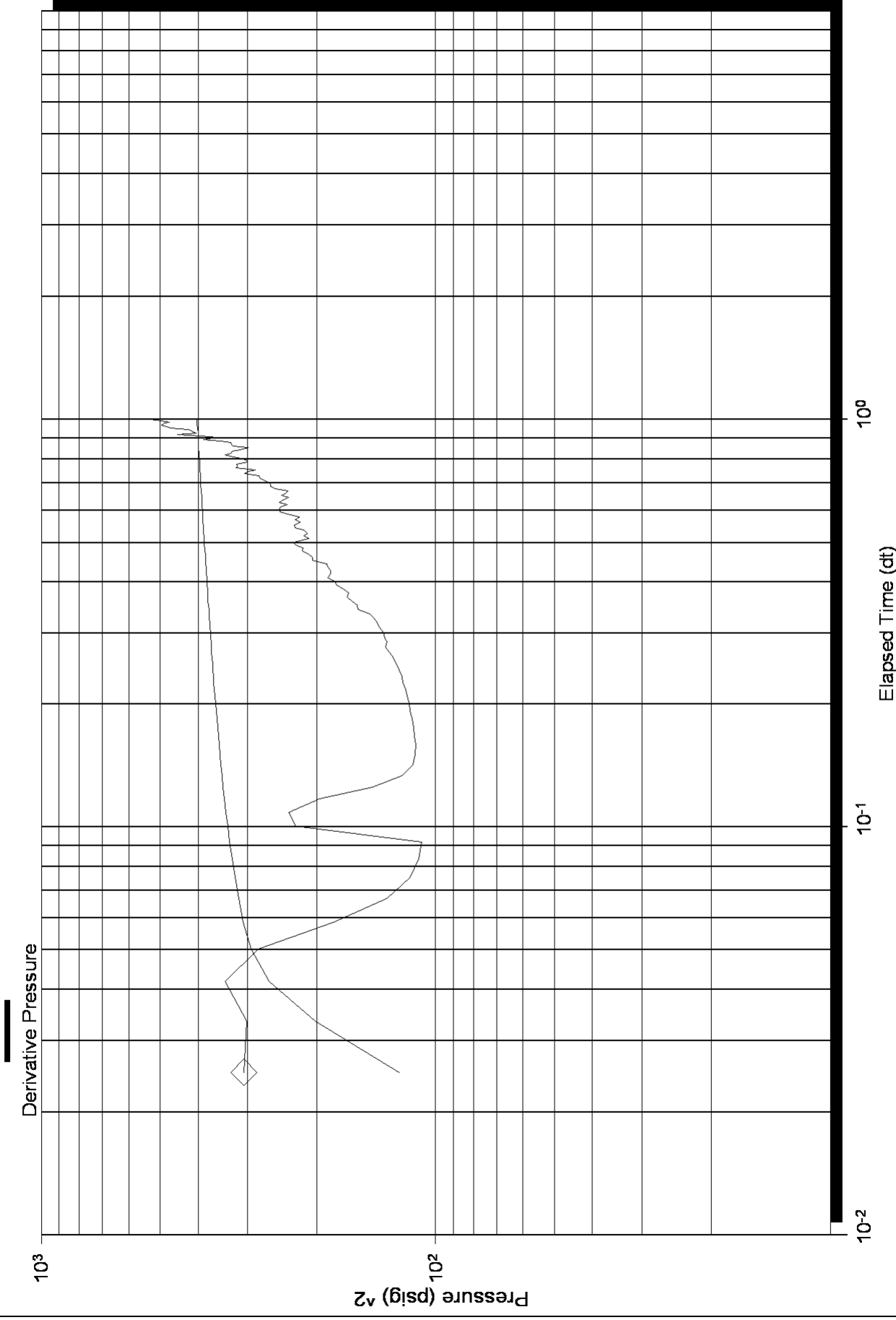
6\*10<sup>0</sup>

8\*10<sup>0</sup>

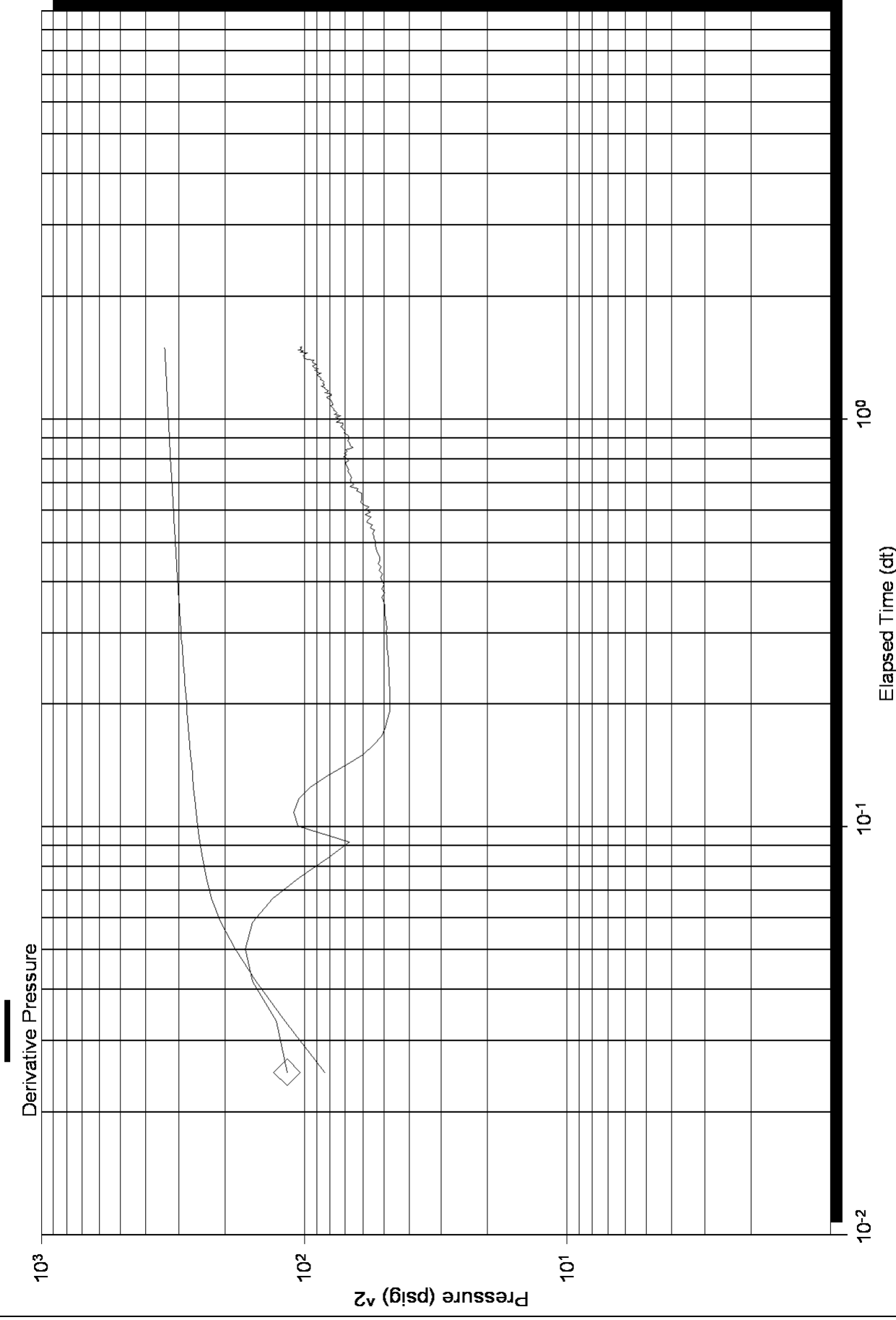
### Homer Plot



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative





Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: WAGNER TRUST # 3-1  
Location: Sec 1 16s 16w, Rush, Kansas  
License Number: 15-165-21914-0000  
Spud Date: 2/14/2011  
Surface Coordinates: 1833' Fnl & 1478' Fwl

Region: Beeching East  
Drilling Completed: 2/21/2011

Bottom Hole Coordinates:

Ground Elevation (ft): 1930'                      K.B. Elevation (ft): 1938'  
Logged Interval (ft): 1700'                      To: 3600'                      Total Depth (ft): 3600'  
Formation: Lansing/ Arbuckle  
Type of Drilling Fluid:

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Sam Gary Jr. & Associates  
Address: 1515 Wynkoop St., # 700  
Denver, Colo. 80202  
Geo: Clayton Camozz

GEOLOGIST

Name: Tim Hedrick  
Company: Earth Tech OGL, Inc.  
Address: PO Box 683  
Hooker, Okla. 73945  
off-888-543-8378 Cell: 620-482-0035

DSTs

DST#3- 3366- 3378 10 60 40 120  
IF- 4.25" BLO, ISI- NO BLO, FF- BOB 6 MIN., FSI- NO BLOW  
IH- 1628, FH- 1593/ IF-13 TO 17, FF- 14 TO 28/ ISI-453, FSI-467  
Recov.- 180' GIP, 80' SGOCM, 5% G, 45% O., 50% M.  
BHT- 96 DEG. GR. 39 NO RW LISTED/ PIT CHL 7400

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DST #4 3378- 3421' 5 60 30 90  
IF- BOB 1 MIN, /ISI-NO BLOW/ FF- BOB 2.5 MIN/FSI-NO BLO  
IH-1607, FH-1595/ IF- 24 TO 28, FF-37 TO 59/ ISI-432,FSI-399  
Recov.- 240' GIP, 125' TF, 60' GO, 35% G., 65% O., / 65' SGMCO, 10%G, 80% O., , 10% M, NO BHT LOGGED/ GR 38  
W/ NO RW LOGGED/ PIT CHL- 8500

### ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst

- Coal
- Congl
- Dol
- Gyp
- Igne

- Lmst
- Meta
- Mrlst
- Salt
- Shale

- Shcol
- Shgy
- Sltst
- Ss
- Till

### ACCESSORIES

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral

- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol

- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

#### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

### OTHER SYMBOLS

#### POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

#### SORTING

- Well
- Moderate
- Poor

#### ROUNDING

- Rounded
- Subrnd
- Subang

- Angular

#### OIL SHOW

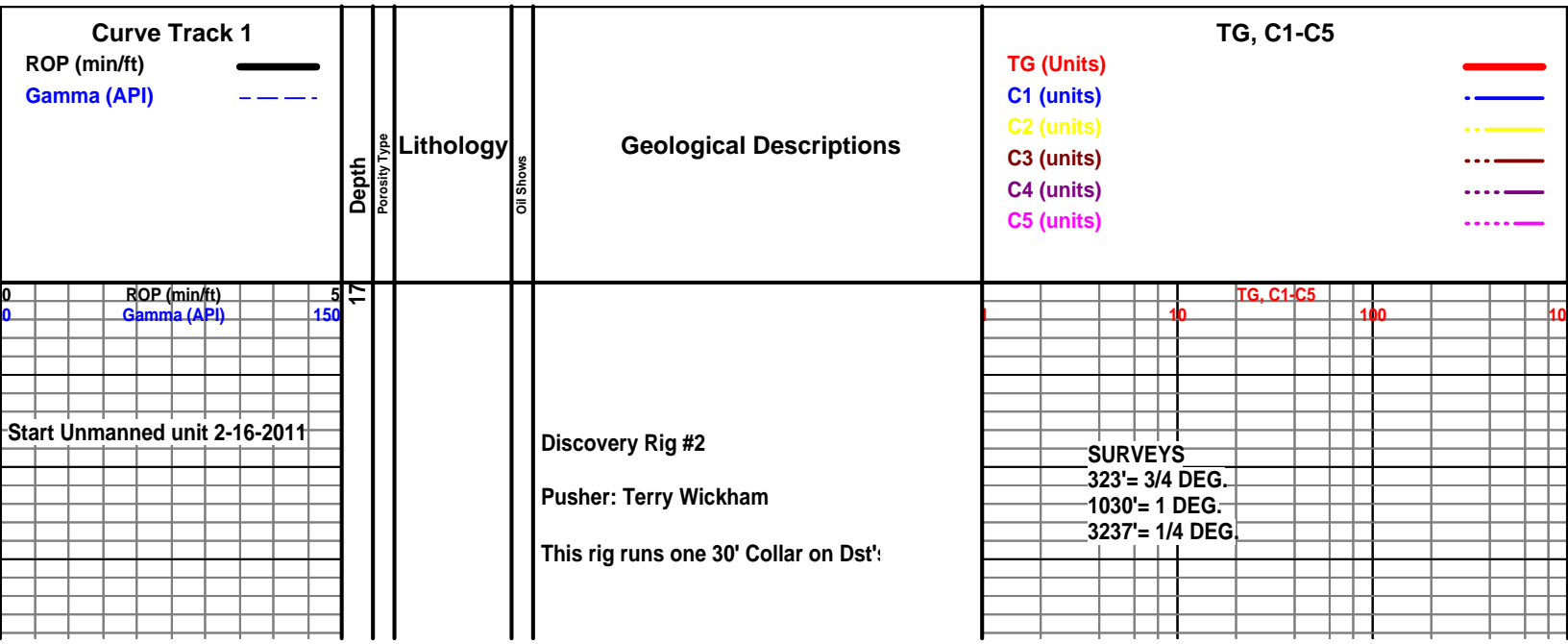
- Even
- Spotted
- Ques
- Dead

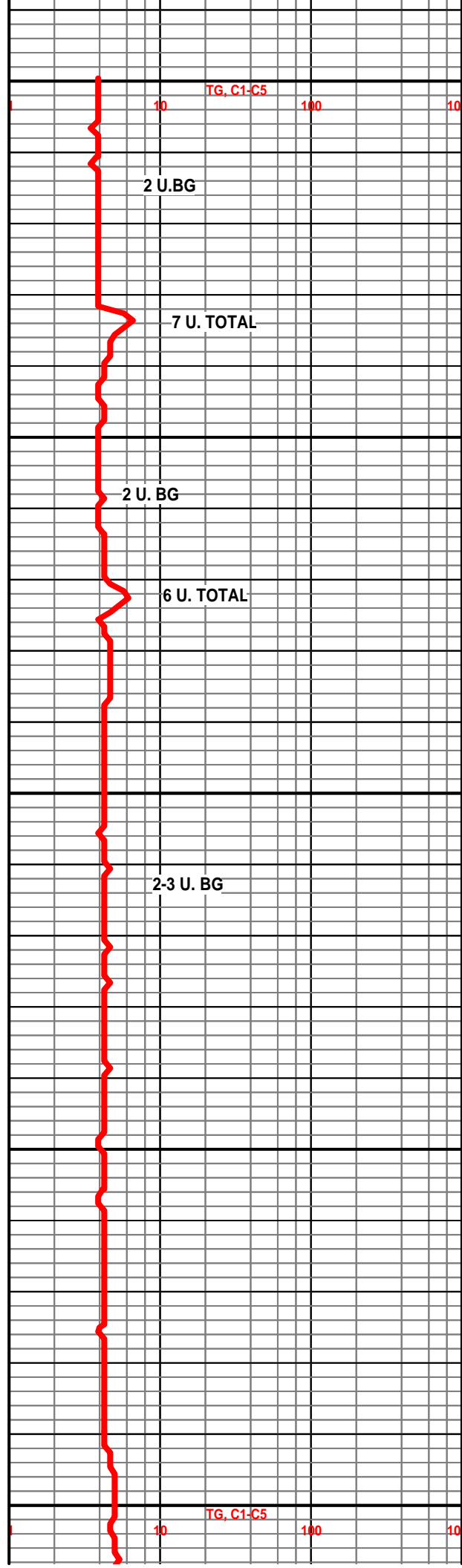
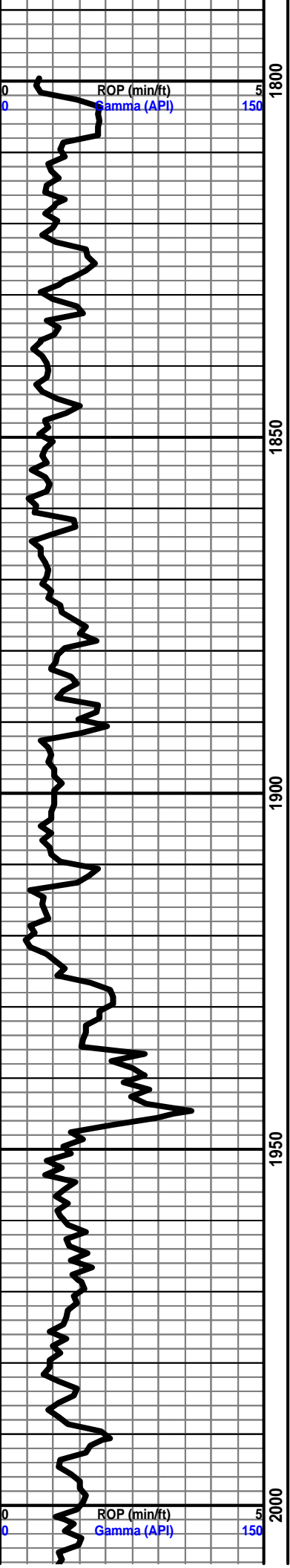
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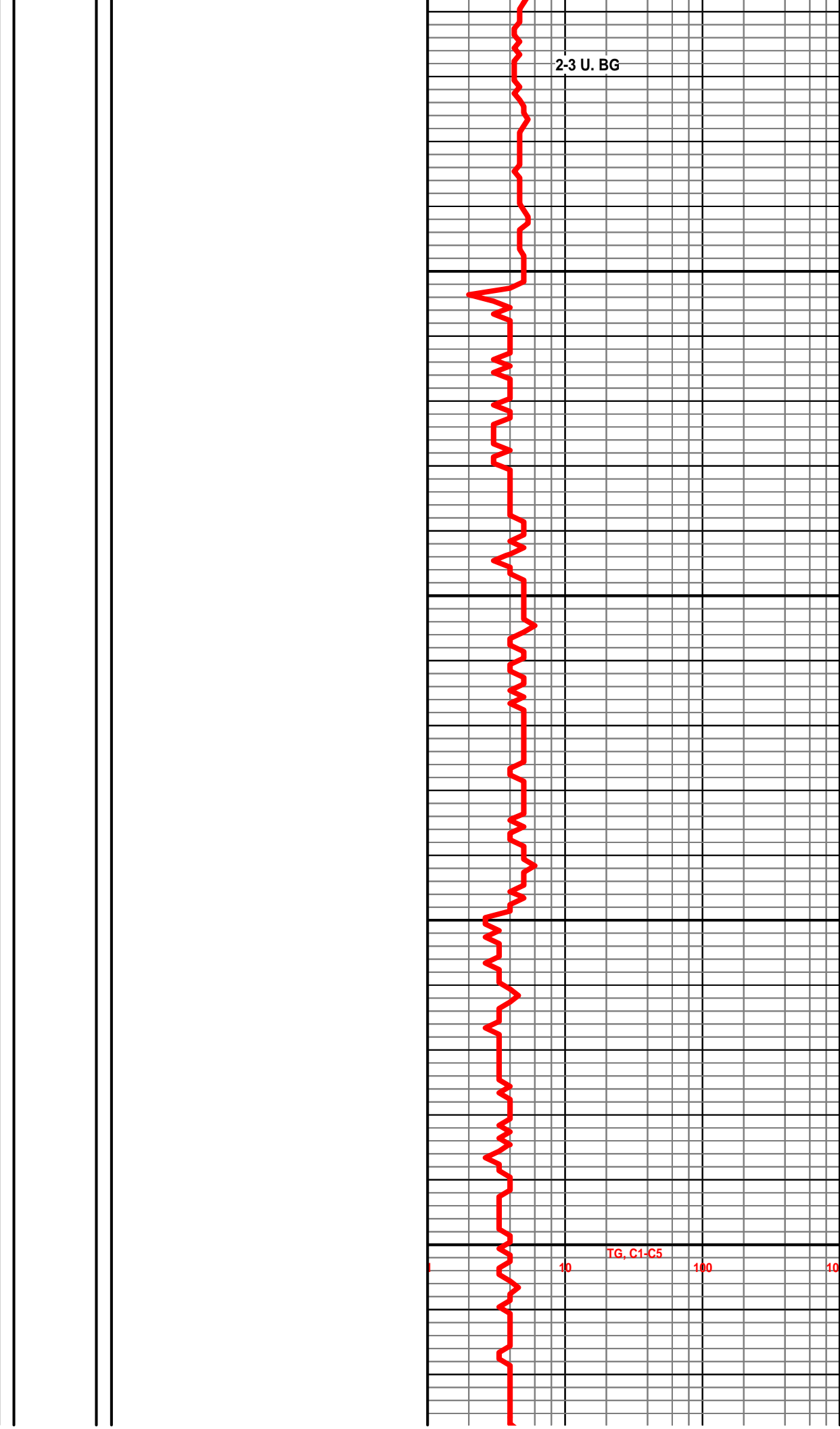
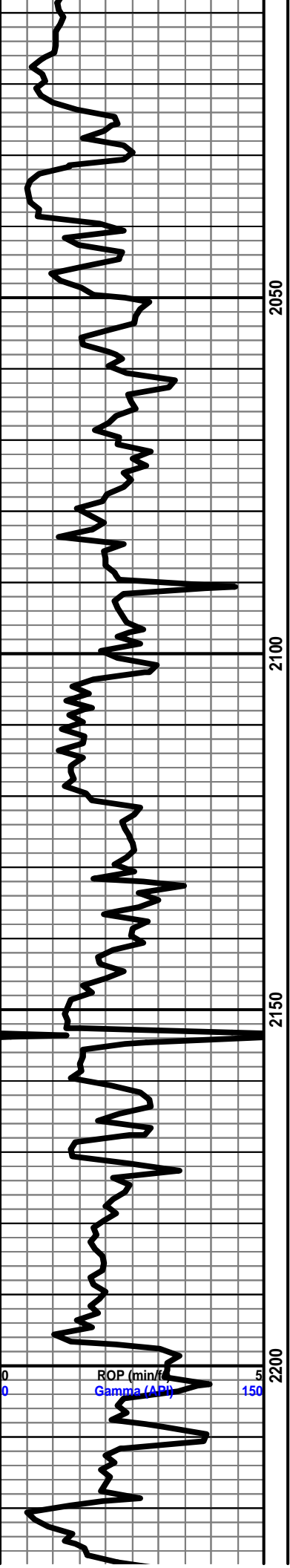
- Core
- Dst

#### EVENT

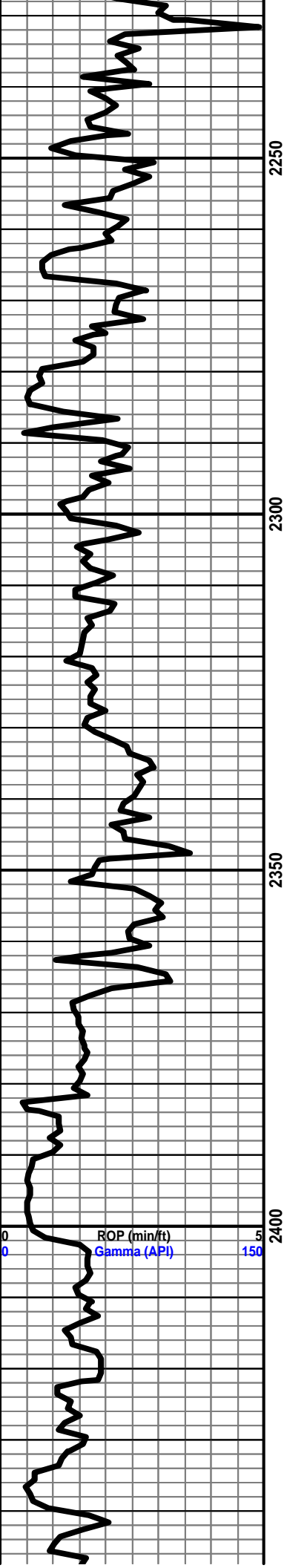
- Rft
- Sidewall











2250

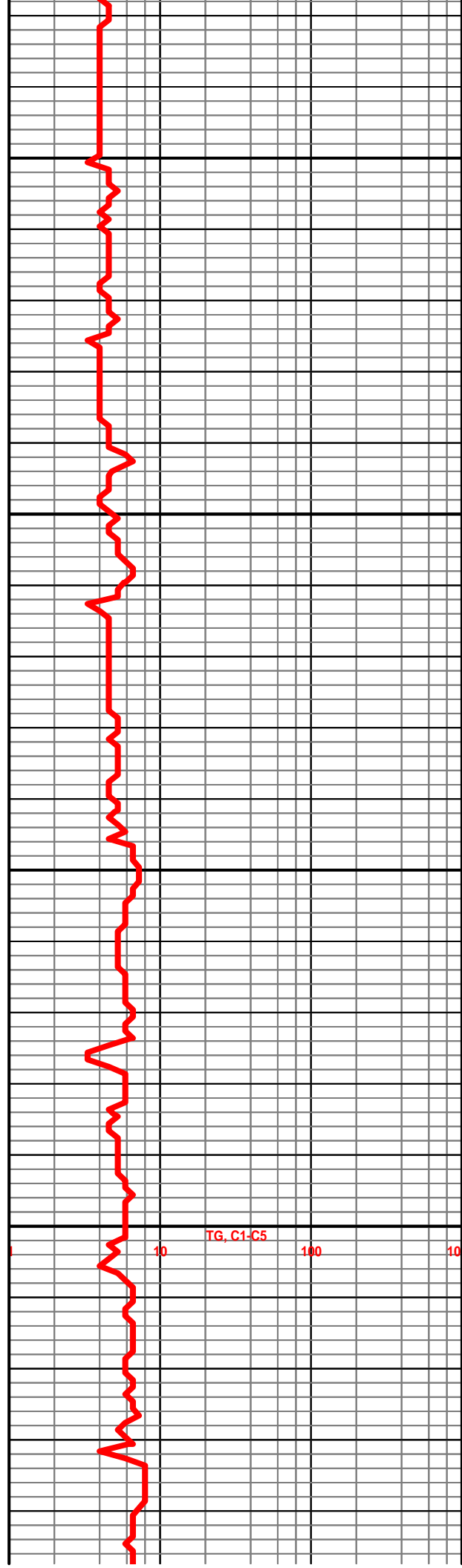
2300

2350

2400

ROP (min/ft)  
Gamma (API)

5  
150

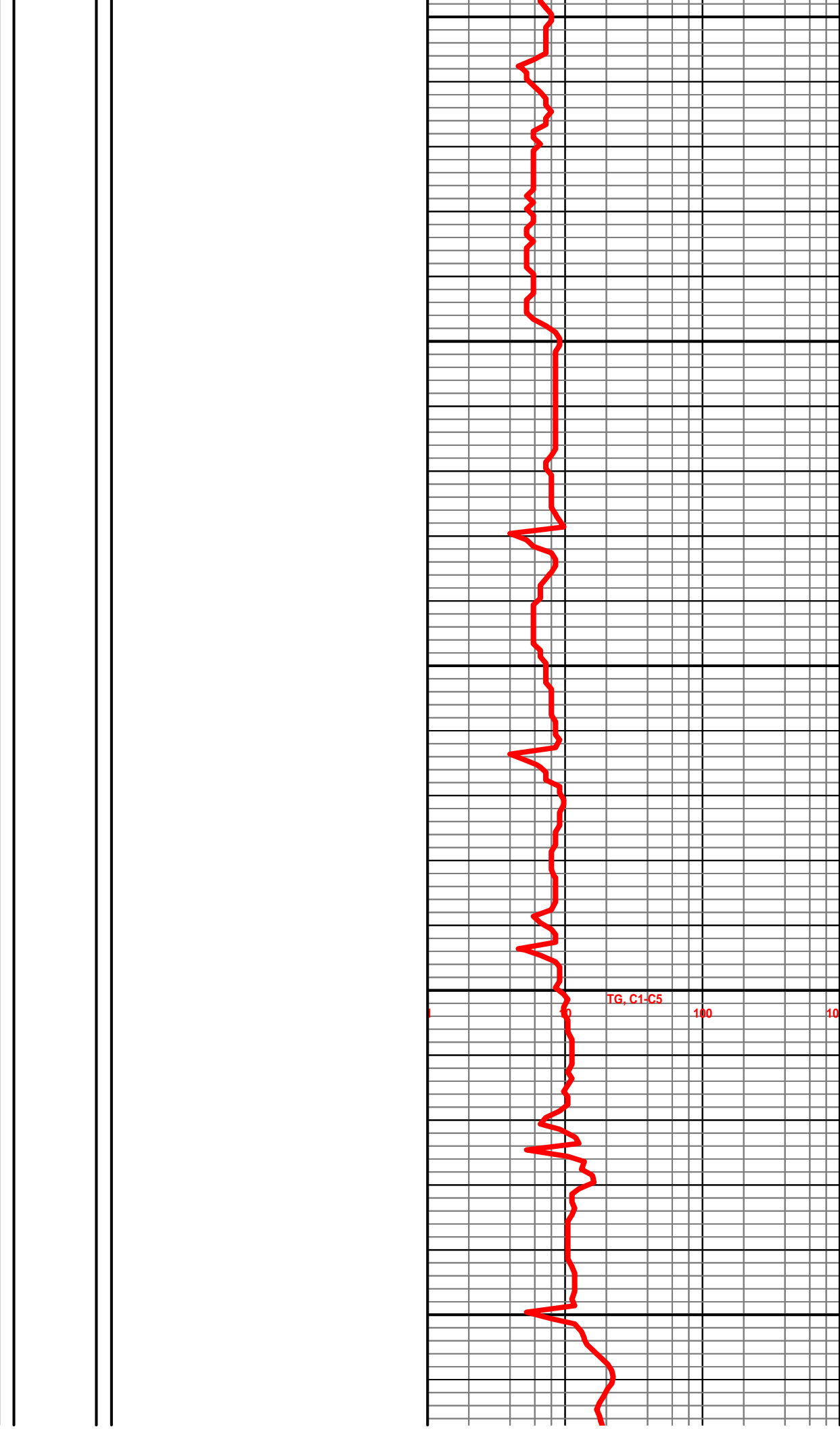
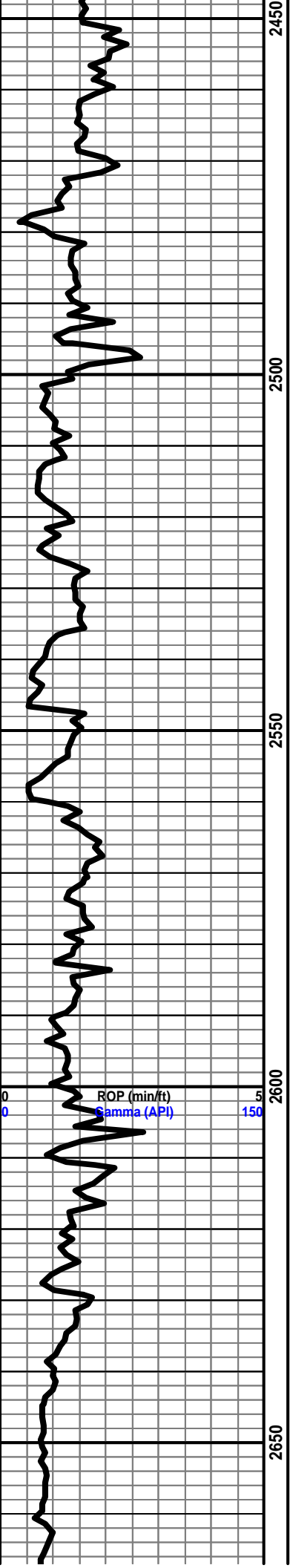


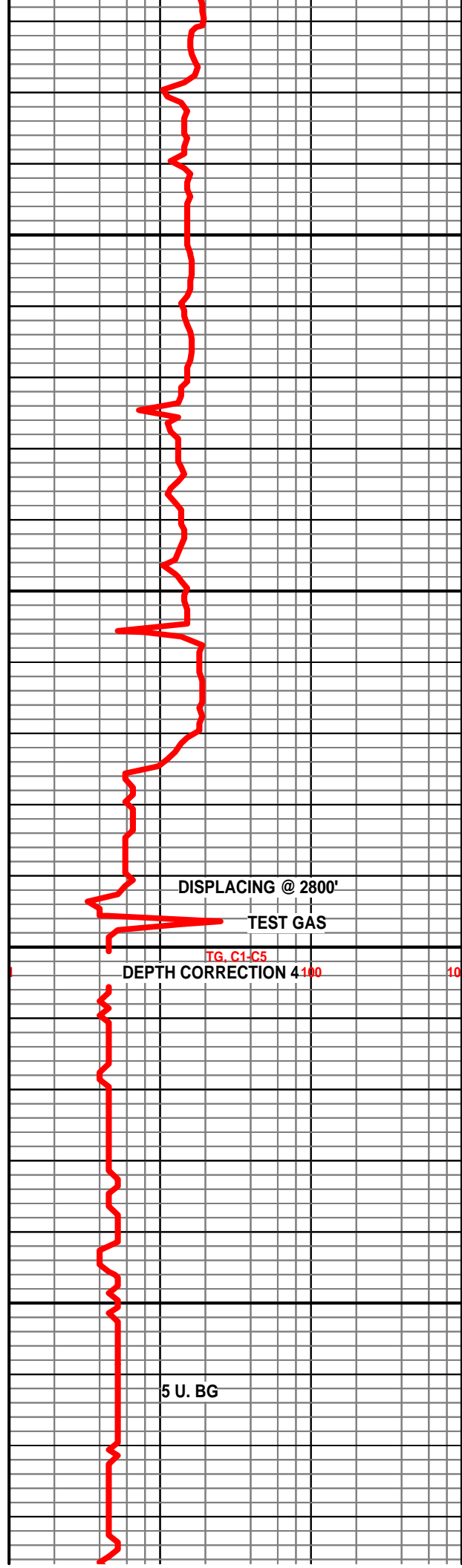
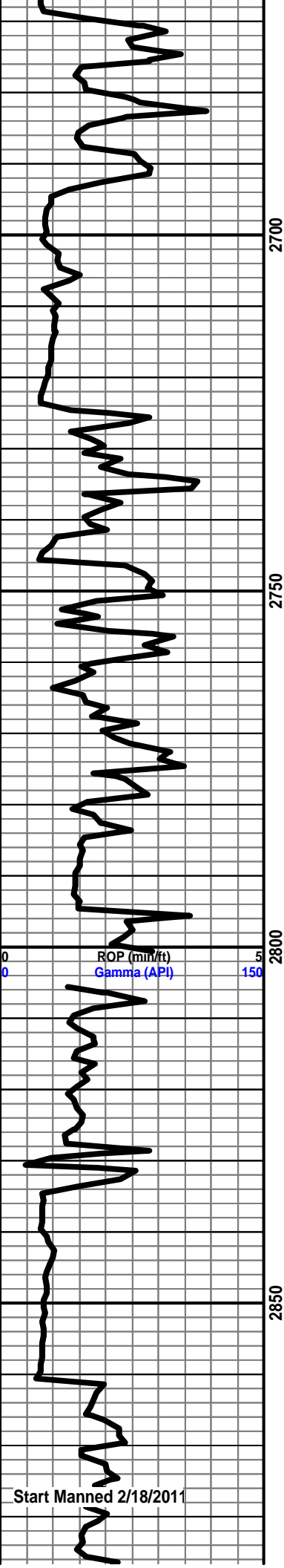
10

TG, C1-C5

100

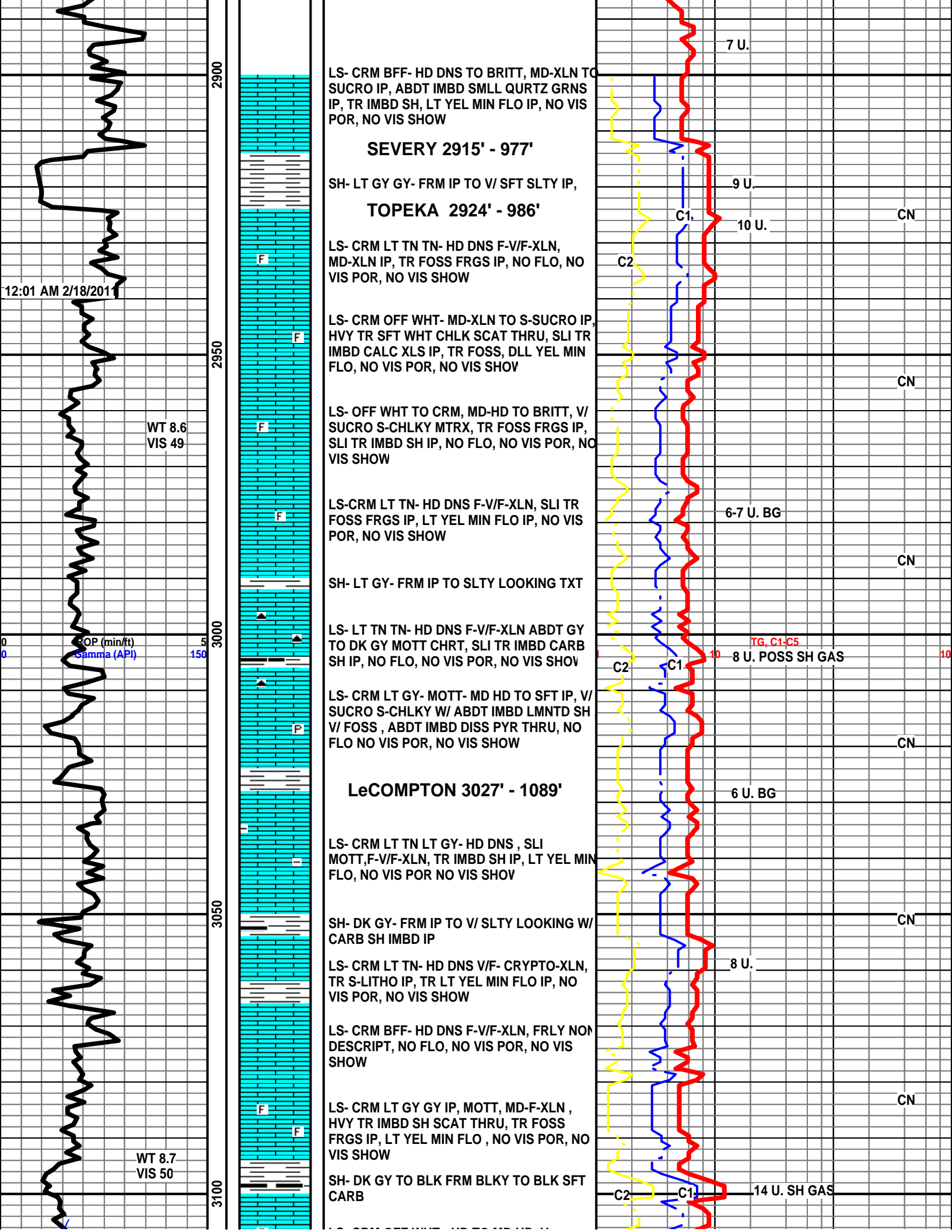
1000





HOWARD 2861' - 923'

Start Manned 2/18/2011



12:01 AM 2/18/2011

WT 8.6  
VIS 49

ROP (min/ft)  
Gamma (API)

5  
150

WT 8.7  
VIS 50

LS- CRM BFF- HD DNS TO BRITT, MD-XLN TO SUCRO IP, ABDT IMBD SMLL QURTZ GRNS IP, TR IMBD SH, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

**SEVERY 2915' - 977'**

SH- LT GY GY- FRM IP TO V/ SFT SLTY IP,  
**TOPEKA 2924' - 986'**

LS- CRM LT TN TN- HD DNS F-V/F-XLN, MD-XLN IP, TR FOSS FRGS IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- CRM OFF WHT- MD-XLN TO S-SUCRO IP, HVY TR SFT WHT CHLK SCAT THRU, SLI TR IMBD CALC XLS IP, TR FOSS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, MD-HD TO BRITT, V/ SUCRO S-CHLKY MTRX, TR FOSS FRGS IP, SLI TR IMBD SH IP, NO FLO, NO VIS POR, NO VIS SHOW

LS-CRM LT TN- HD DNS F-V/F-XLN, SLI TR FOSS FRGS IP, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

SH- LT GY- FRM IP TO SLTY LOOKING TXT

LS- LT TN TN- HD DNS F-V/F-XLN ABDT GY TO DK GY MOTT CHRT, SLI TR IMBD CARB SH IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- CRM LT GY- MOTT- MD HD TO SFT IP, V/ SUCRO S-CHLKY W/ ABDT IMBD LMNTD SH V/ FOSS , ABDT IMBD DISS PYR THRU, NO FLO NO VIS POR, NO VIS SHOW

**LeCOMPTON 3027' - 1089'**

LS- CRM LT TN LT GY- HD DNS , SLI MOTT,F-V/F-XLN, TR IMBD SH IP, LT YEL MIN FLO, NO VIS POR NO VIS SHOW

SH- DK GY- FRM IP TO V/ SLTY LOOKING W/ CARB SH IMBD IP

LS- CRM LT TN- HD DNS V/F- CRYPTO-XLN, TR S-LITHO IP, TR LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

LS- CRM BFF- HD DNS F-V/F-XLN, FRLY NON DESCRIPT, NO FLO, NO VIS POR, NO VIS SHOW

LS- CRM LT GY GY IP, MOTT, MD-F-XLN , HVY TR IMBD SH SCAT THRU, TR FOSS FRGS IP, LT YEL MIN FLO , NO VIS POR, NO VIS SHOW

SH- DK GY TO BLK FRM BLKY TO BLK SFT CARB

7 U.

9 U.

10 U.

6-7 U. BG

8 U. POSS SH GAS

6 U. BG

8 U.

14 U. SH GAS

CN

CN

CN

CN

CN

CN

C1

C2

C2

C1

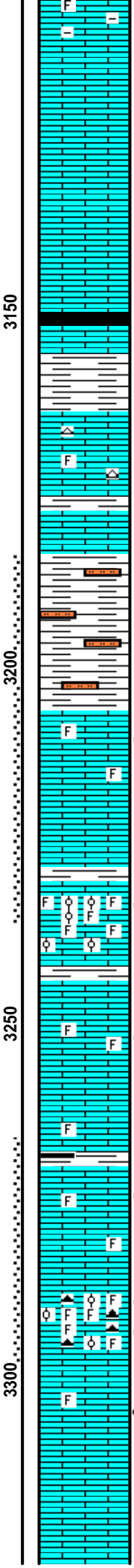
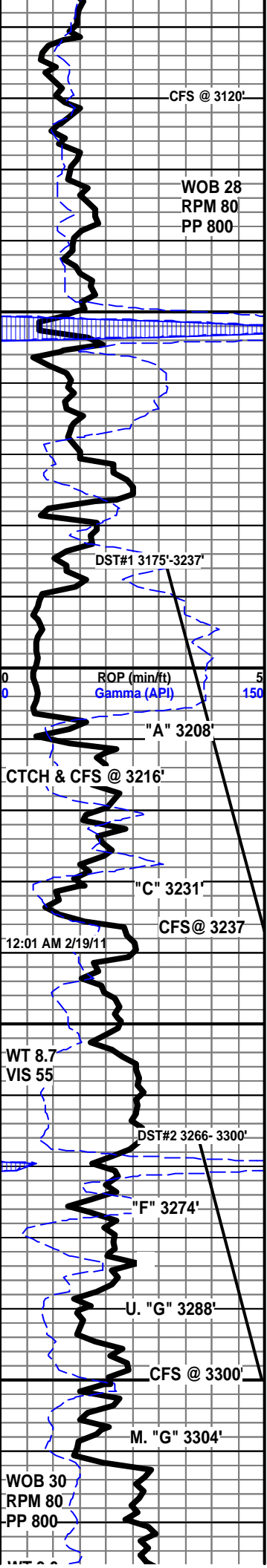
C2

C1

TG. C1-C5

10

2900  
2950  
3000  
3050  
3100



LS- CRM OFF WHT TO MD HD, V, SUCRO S-CHLKY MTRX TR MD-XLN IP, SCAT IMBD DISS SH IP, TR PHNTM FOSS, V/ LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM BFF- MD HD TO SFT IP, MD-XLN TO V/ SUCRO S-CHLKY MTRX, TO ABDT CHLK IP, V/ LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

**HEEBNER 3150' - 1212'**

SH- BLK SFT CARE

LS- OFF WHT TO WHT TR CRM- F-XLN SLI RE-XLN MTRX IP, TR FOSS FRGS, ABDT WHT CHLK IP, TR WHT CHRT, LT BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY- FRM IP TO V/ SFT SLTY

**LANSING 3208' - 1270**

3208' - 3210' LS- OFF WHT TO CRM- HD DNS TO BRITT I V/ TT SUCRO MTRX , TR S-CHLKY IP, SLI TR FOSS FRG IP, SCAT BRIT YEL GLD FLO IN 10%, SLI TR MICRO PP POR IN 10%, NO FLSH CUT , V/ WK SLO STRM CUT IN LESS THAN 10% ,FLEETING OIL ODOR , NO STN

3231' - 3236' LS- CRM LT TN TN - HD V/ BRITT, MD-F-XLN RE-XLN MTRX , V/ FOSS, ABDT IMBD MD OOL SCAT THRU, TR FREE FOSS, HVY TR ABDT SFT WHT CHLK, BRIT YEL GLD FLO IN 60%, TO NO FLO IN 40%, FR TO GD VIS SCAT INTER OOL AND FR INTER FOSS POR IN 60%, FR OIL ODOR, LT TN STN IN 40%, GD FLSH CUT TO FR TO GD SLO STRM CUT

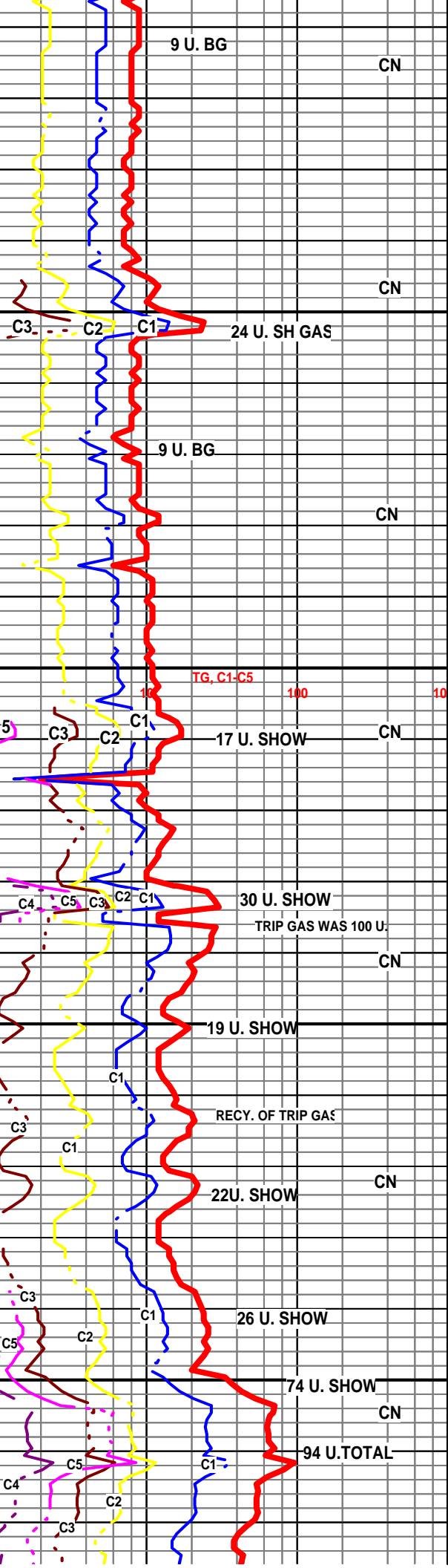
3252-3253' LS OFF WHT CRM V/DK BRN DUE TO TAR STN, ONE ROCK, HD DNS BRITT, MD-XLN RE-XLN MTRX TR FOSS IMBD, NO FLO, V/ PR SCAT MICRO VUG POR, NO ODOR, EXCELLANT FLSH TO V. GD SLO STRM CUT

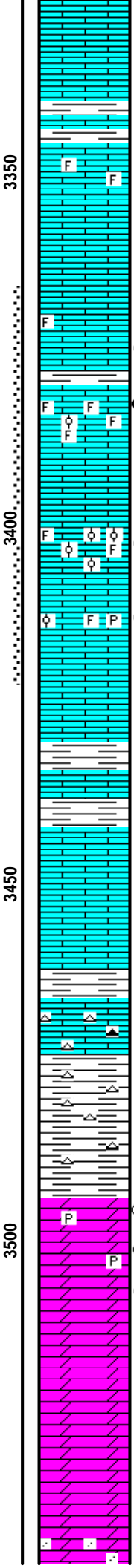
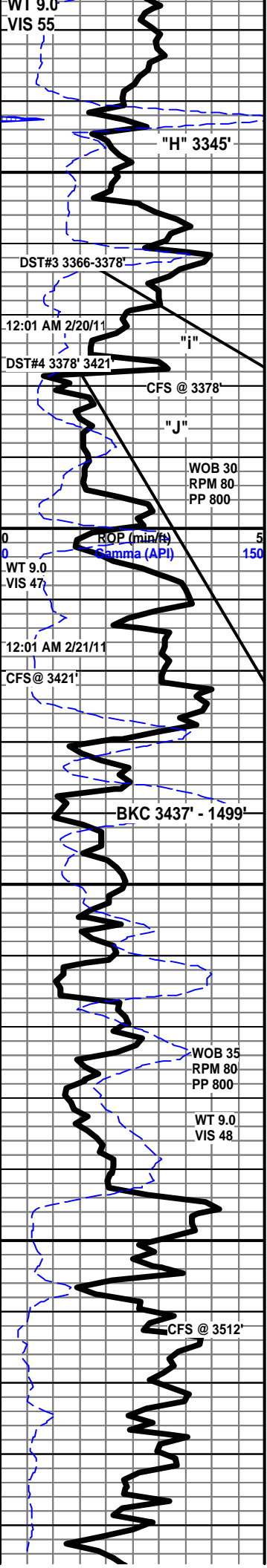
LS- OFF WHT TO CRM, HD DNS F-V/F-XLN , TR S-SUCRO IP, SLI TR FOSS , NO FLO, NO VIS POR, NO VIS SHOW

3274 - 3276 LS- CRM LT TN HD DNS( TWO ROCKS) F-MD-XLN RE-XLN MTRX ABDT IMBD CALC XLS THRU, TR FOSS FRGS IMBD IP, HVY TR LRG CALC XLS W/ LV OIL STN, DLL YEL GLD FLO THRU, FR FLSH CUT TO GD SLO STRM CUT OF CALC XLS, GD OIL ODOR

3288- 3294' LS- LT TN TN ( DUE TO DK TN STN IN 80%) HD V/ BRITT, MD-XLN , V/ RE-XLN, V/ FOSS, HVY TR FOSS HASH IP, SCAT IMBD MD OOL THRU, ABDT LT GY TO GY CHRT, HVY TR SFT WHT CHLK IP BUT NOT IMBEDDED, DLL YEL GLD TO BRIT YEL GLD FLO IN 70%, NO FLO N 30%, GD OIL ODOR, PR TO GD TO V/GD INTER-FOSS POR, PR TO FR INTER OOL POR, PR SCAT VUG POR, V/GD FLSH CUT TO V/ GD SLO STRM CUT IN 70%, LT TN STN ON DISH

3304 - 3311' LS- OFF WHT CRM TR LT TN ( LT TN STN IN 5%), SUCRO TO SUCRO S-CHLKY, MD-XLN IP, ABDT FRM TO SFT CHLK THRU, SLI TR FOSS IP, SLI TR SMLL OOL IP, BRIT YEL GLD FLO IN 5%, DLL YEL GLD FLO IN 15%, NO FLO IN 85%, SLI TR PR INTER-XLN PP POR, NO FLSH CUT TO V/ PR SLO STRM CUT IN 20%, NO ODOR





LS- LT TN TN- HD DNS F-V/F-XLN TR RE-XLN IP, FRLY NON DESCRIPT, NO FLO, NO VIS POR, NO VIS SHOW

SH- LT GRN TO LT GY- FRM BLKY SLI SPLNTY IP

**LANSING "H" 3345' - 1407'**

LS- CRM LT TN- HD DNS TO BRITT IP, MD-F-XLN, SUCRO S-CHLKY IP, TR SCAT IMBD FOSS FRGS IP, HD MD HD TO SFT WHT CHLK IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- TN DK TN- HD DNS V/F-CRYPTO-XLN, SLI TR S-LITHO IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM DK BRN, (DK BRN TO BLK OIL STN, POSS DOS IN 80%), HD DV/ BRITT, MD-XLN RE-XLN MTRX, ABDT IMBD CALC XLS, TR FOSS SCAT IP, SLI TR IMBD CHLK IP, DLL YEL GLD FLO THRU, BRIT YEL GLD FLO IN 30-40%, FR TO GD MICRO VUG TO VUG POR, PR VIS INTER-XLN FOSS POR, FR OIL ODOR, V/ G FLSH CUT TO V/ GD SLO STRM MLKY BLU CUT

3380 TO 3385' LS LT TN TN ( EVEN BRN STN THRU), HD V/ BRITT, MD-XLN, V/ RE-XLN MTRX, V/ FOSS, ABDT IMBD SMLL TO MD CALC XLS IP, TR IMBD SMLL OOL IP BRIT YEL GLD FLO IN 100%, DLL YEL GLD FLO IP, GD VIS MICRO VUG POR IN 70% TO GD VIS INTER FOSS POR IN 30%, GD STRNG OIL ODOR, V/GD FLSH CUT TO EXCEL SLO STRM MLKY BLUE CUT, SMLL FLAKES OF OIL SOAKED ROCK FLOATING IN DISH, BRN OIL STN ON DISH

3400-3404'- LS OFF WHT CRM DK TN( SCAT BRN OIL STN IN 40%) HD DNS TO BRITT, MD-F-XLN, RE-XLN MTRX, V/ MICRO OOL THRU, SCAT FOSS FRGS IP, S-CHLKY IP, 50%, BRIT YEL GLD FLO IN 30%, DLL YEL GLD FLO IN 40%, NO FLO IN 30%, PR SCAT MICROVUG POR IN 50%, PR SCAT INTER-XLN FOSS POR IN 10%, TR PR SCAT MICRO PP POR, FR FLSH CUT TO GD SLO STRM CUT IN 30-40%, FR OIL ODOR

3411' TO 3414 LS-OFF WHT WHT LT TN IP( SCAT V/ LT TN STN IN POR SCAT THRU) HD DNS , TR BRITT, F-XLN, RE-XLN MTRX, S-CHLKY THRU HVY TR SCAT MICRO OOL, FOSS FRGS IP, SLI TR DISS PYR IP, DLL YEL GLD FLO SCAT IN 70%, NO FLO IN 30%, PR SCAT MICROVUG TO PR SCAT MICRO PP POR SCAT IN 50%, WK FLSH CUT TO FR SLO STRM CUT IN 50%, LT OIL ODOR

LS- CRM LT TN HD DNS TR BRITT, F-V/F-XLN TR SUB-SUCRO IP, NO FLO, NO VIS POR, NO VIS SHOW

SH- RD DK RED, FRM BLKY W/ GRNY TX

LS- OFF WHT CRM HD DNS IP TO V/ TT SUCRO IP, ABDT TRNSLCNT YELLOW CHRT, NO FLO , NO VIS POR, NO VIS SHOW

SH- RED V/ SFT GMMY TXT TO FRM BLKY GRNY IP, W/ IMBD WHT RD ORNG CHR'

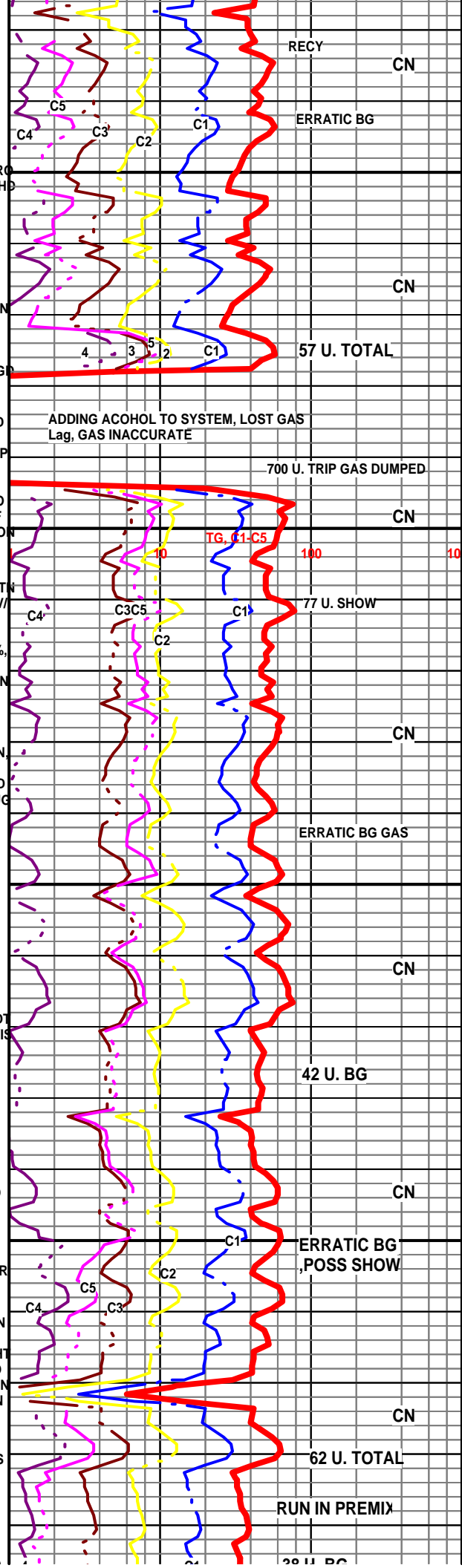
**ARBUCKLE 3493' - 1555'**

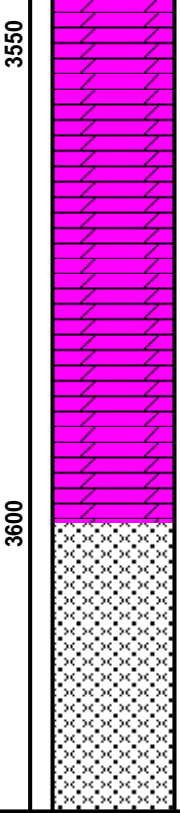
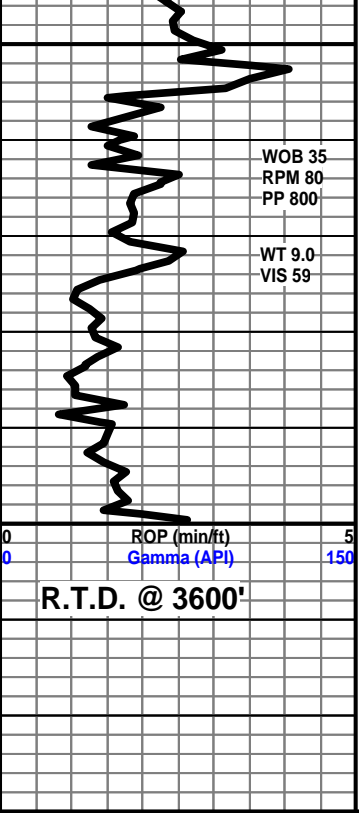
3500- 3504 DOLO- DK TN BRN( TN OIL STN IN 50%) HD TT V/ TT SUCRO MTRX, SME IMBD ANG DOLO GRNS SCAT THRU, HVY TR SFT WHT CHLK IMBD IP, HVY TR SCAT DISS PYR IP, DLL YEL GLD FLO THRU , TR BRIT YEL GLD SPTTD FLO, NO POR TO TR INTER-XLN POR FR FLSH CUT, TO GD SLO STRM CUT IN 70%, NO ODOR

3504' - 3512 DOLO- OFF WHT WHT TO LT TN( TN STN IN 30%) HD DNS TO TR BRITT, V/ SUCRO MTRX, ABDT IMBD MD ANG DOLO GRNS THRU, ABDT IMBD SFT WHT CHLK IP, DLL YEL GLD FLO IN 30%, BRIT YEL MIN FLO THRU, PR VI INTER-GRN POR IN PART, GD FLSH CUT IN 40% TO GD SLO STRM CUT IN 40% , NO CUT IN 60%, N ODOR, TN STN ON DISH

3530 DOLO - WHT OFF WHT- HD DNS TO BRITT, V/ CRS SUCRO MTRX TO F-XLN IP, ABDT IMBD ANG DOLO GRNS THRU, S-CHLKY IP, DLL YEL MIN FLO, TR PR INTER-XLN POR , NO VIS SHOW OR CUT

3542- DOLO OFF WHT TO WHT- HD DNS TO BRITT, V/ CRS SUCRO MTRX TO F-XLN IP, ABDT IMBD ANG DOLO





CRS SUCRO MTRX TO F-XLN IP, ABDT IMBD ANG DOLO GRNS THRU, S-CHLKY IP TO ABDT SFT CHLK IP W/ SMLL S-RND QURTZ GRNS IMBD IP, DLL YEL MIN FLO, TR PR INTER-XLN POR, NO VIS SHOW OR CUT

3550-3570- DOLO- OFF WHT TO WHT- HD DNS TO TR BRITT, F-XLN IP TO V/ CR SUCRO MTRX, SCAT IMBD MD ANG DOLO GRNS IP, SCAT IMBD SFT WHT CHLK IP, DLL YEL MIN FLO, FR TO GD VIS INTER-XLN POR, AND P POR IP, NO VIS SHOW

3570-3590- CRM OFF WHT- HD V/ BRITT, V/ CRS SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU, TR SCAT SFT WHT CHLK, LT YEL MIN FLO, PR FR TO GD INTER-XLN POR, NO VIS CUT OR SHOW

3590-3600 CRM OFF WHT- HD V/ BRITT, V/ CRS SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU, ABD SCAT SFT WHT CHLK, LT YEL MIN FLO, PR FR TO GD INTER-XLN POR, NO VIS CUT OR SHOW

R.T.D. @ 9:48 AM 2/21/2011

CTCH & CFS 1.0 HR

DROP SURVEY @ 10: 48 AM

TRIP OUT F/ LOGS

WEATHERFORD /LIBERAL, KANSAS

