



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1095388
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

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

API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1095388

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

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

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

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

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

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

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

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

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

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

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

| | | | | |
|----------------|-------|---------|------------|---|
| TUBING RECORD: | Size: | Set At: | Packer At: | Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No |
|----------------|-------|---------|------------|---|

| | |
|---|--|
| Date of First, Resumed Production, SWD or ENHR. | Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____ |
|---|--|

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

| | | |
|--|---|---|
| DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i> | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

| | |
|-----------|------------------------------------|
| Form | ACO1 - Well Completion |
| Operator | Samuel Gary Jr. & Associates, Inc. |
| Well Name | ROSENBOOM ET AL 1-18 |
| Doc ID | 1095388 |

All Electric Logs Run

| |
|-----------------|
| |
| ARRAY INDUCTION |
| DEN-NEUT |
| MICRO |
| SONIC |
| SPECTRAL GR |

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
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

October 01, 2012

TOM FERTAL
Samuel Gary Jr. & Associates, Inc.
1515 WYNKOOP, STE 700
DENVER, CO 80202

Re: ACO1
API 15-051-26322-00-00
ROSENBOOM ET AL 1-18
NE/4 Sec.18-14S-17W
Ellis 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.

Respectfully,
TOM FERTAL



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: 6/16/2012
 Invoice # 867

P.O.#:
 Due Date: 7/16/2012
 Division: Russell

Invoice

Contact:
 Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 1815 11th Street
 Great Bend, KS 67530

DRLG COMP W/O LOE GG

| | |
|---------------|----------|
| Account | 8200-138 |
| Well/Prospect | |
| Deck | |
| AFE | |
| Approval | |
| Description | |

Reference:
 ROSENBOOM ET AL 1-18

Description of Work:
 LONG SURFACE JOB

| Services / Items Included: | Quantity | Price | Taxable | Item | Quantity | Price | Taxable |
|--|----------|-------------|---------|------|----------|-------|---------|
| Labor | | \$ 963.85 | No | | | | |
| Common-Class A | 400 | \$ 5,151.11 | Yes | | | | |
| 8 5/8" Basket | 3 | \$ 1,000.67 | Yes | | | | |
| Bulk Truck Matl-Material Service Charge | 422 | \$ 890.89 | No | | | | |
| Calcium Chloride | 14 | \$ 556.53 | Yes | | | | |
| 8 5/8" Centralizer | 3 | \$ 202.67 | Yes | | | | |
| Premium Gel (Bentonite) | 8 | \$ 137.48 | Yes | | | | |
| 8 5/8" Top Rubber Plug | 1 | \$ 111.89 | Yes | | | | |
| Baffle Plate Aluminum, 8 5/8" | 1 | \$ 95.00 | Yes | | | | |
| Pump Truck Mileage-Job to Nearest Camp | 6 | \$ 63.21 | No | | | | |
| Bulk Truck Mileage-Job to Nearest Bulk Plant | 6 | \$ 36.99 | No | | | | |

Invoice Terms:

Net 30

SubTotal: \$ 9,210.27
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,381.54)

| | |
|---------------------------------|--------------------|
| SubTotal for Taxable Items: | \$ 6,167.04 |
| SubTotal for Non-Taxable Items: | \$ 1,661.69 |
| Total: | \$ 7,828.73 |
| Tax: | \$ 388.52 |

6.30% Ellis County Sales Tax

Thank You For Your Business!

Amount Due: \$ 8,217.25
Applied Payments:
Balance Due: \$ 8,217.25

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
 ©2008-2013 Straker Investments, LLC. All rights reserved.

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. 867

| | | | | | | | | | | | | | | | | |
|---------------------|----------------|------|----|------------|---------|-------|----|--|-----------------------------------|-------|--------|-------------|-----------|--------|----------|--|
| Date | 6-12-12 | Sec. | 18 | Twp. | 14 | Range | 17 | County | ELLIS | State | KANSAS | On Location | | Finish | 11:00 AM | |
| Lease | ROSENZON ET AL | | | Well No. | 1-18 | | | Location | TOWSON ELEV. - 1 1/2 S - W - INFO | | | | | | | |
| Contractor | DISCOVERY #2 | | | | | | | Owner | SAM GARY JR. | | | | | | | |
| Type Job | L. SURFACE | | | | | | | To Quality Oilwell Cementing, Inc. 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' | | | Charge To | SAM GARY JR. | | | | | | | |
| Csg. | 8 7/8" | | | Depth | 1030' | | | Street | 1515 WYNKOOP | | | | | | | |
| Tbg. Size | | | | Depth | | | | City | DENVER | | | State | KS, 80202 | | | |
| Tool | | | | Depth | | | | The above was done to satisfaction and supervision of owner agent or contractor. | | | | | | | | |
| Cement Left in Csg. | | | | Shoe Joint | 42.36' | | | Cement Amount Ordered | 400000 3% - 2% GEL | | | | | | | |
| Meas Line | | | | Displace | 6.3 BLS | | | | | | | | | | | |

EQUIPMENT

| | | | | | |
|-------------|-----|---------------|-------|----------|-----|
| Pumptrk #5 | No. | Cement Helper | BEETT | Common | 400 |
| Bulktrk # | No. | Driver | DOUG | Poz. Mix | |
| Bulktrk P/U | No. | Driver | CISCO | Gel. | 8 |

JOB SERVICES & REMARKS

| | |
|------------------------|-------------------------|
| Remarks: | Hulls |
| Rat Hole | Salt |
| Mouse Hole | Flowseal |
| Centralizers | Kol-Seal |
| Baskets | Mud CLR 48 |
| D/V or Port Collar | CFL-117 or CD110 CAF 38 |
| CEMENT DID CIRCULATE ✓ | Sand |
| | Handling 472 |
| | Mileage |

FLOAT EQUIPMENT

| | |
|----------------|-------------------------|
| Guide Shoe | |
| Centralizer | 3 - 8 5/8" |
| Baskets | 3 - 8 5/8" |
| AFU Inserts | |
| Float Shoe | |
| Latch Down | |
| | 1 - 8 5/8" BAFFLE PLATE |
| | 1 - 8 5/8" RUBBER PLATE |
| Pumptrk Charge | Long Surface Job |
| Mileage | 6 |

THANK YOU

X Signature

[Handwritten 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. 686

| | | | | | | | | | | | | | | | |
|-------|------------|----------|------|------|----|----------------------------------|----|--------|-------|-------|----|-------------|--|--------|-------|
| Date | 6-17-12 | Sec. | 18 | Twp. | 14 | Range | 17 | County | Ellis | State | KS | On Location | | Finish | 6:5AM |
| Lease | Rosen Boom | Well No. | 1-18 | | | Location: toulon old 40 15 Winto | | | | | | | | | |

| | | | |
|--|----------|--|------------------------------------|
| Contractor | Sam Gary | Owner | To Quality Oilwell Cementing, Inc. |
| Type Job | plug | 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 | | T.D. | 3670 |
| Csg. | | Depth | |
| Tbg. Size | | Depth | |
| Tool | | Depth | |
| Cement Left in Csg. | | Shoe Joint | |
| Meas Line | | Displace | |
| | | Charge To | Samel Gary SR9 ASSOCIATE INC |
| | | Street | 1515 WYNHOOP STE |
| | | City | Denver |
| | | State | CO |
| The above was done to satisfaction and supervision of owner agent or contractor. | | | |
| | | Cement Amount Ordered | 230 4/40 4/40 1/40 1/40 1/40 |

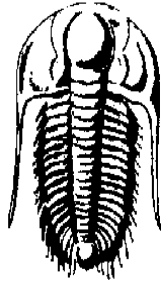
| EQUIPMENT | | | |
|-----------|-----|---------------|----------|
| Pumptrk # | No. | Cement Helper | Common |
| Bulktrk # | No. | Driver | Poz. Mix |
| Bulktrk # | No. | Driver | Gel. |

Pumptrk #8 No. 138 Cement Helper *Matt*
 Bulktrk #8 No. 92 Driver *Doug*
 Bulktrk #8 No. 8 Driver

| JOB SERVICES & REMARKS | |
|------------------------|------------------------|
| Remarks: | Calcium |
| Rat Hole | Hulls |
| Mouse Hole | Salt |
| Centralizers | Flowseal <i>50#</i> |
| Baskets | Kol-Seal |
| D/V or Port Collar | Mud CLR 48 |
| 1st plug 3560 255H | GF-117 or CD110 CAF 38 |
| 2nd 700 50-5H | Sand |
| 3rd 550 100-5H | Handling <i>238</i> |
| 4th 40 10-5H | Mileage |

| FLOAT EQUIPMENT | |
|------------------|--------------------------------------|
| Ret hole 30-5H | Guide Shoe |
| mouse hole 15-5H | Centralizer <i>8 5/8 wooden Plug</i> |
| | Baskets |
| | AFU Inserts |
| | Float Shoe |
| | Latch Down |
| | Pumptrk Charge <i>plug</i> |
| | Mileage <i>8</i> |

| | |
|-----------------------------|--------------|
| X Signature <i>Sam Gary</i> | Tax |
| | Discount |
| | Total Charge |



TRILOBITE
TESTING, INC.

DRILL STEMTEST REPORT

Prepared For: **S Gary Jr & Assoc inc**

1515 wynkoop
STE 700
Denver Co 80202

ATTN: Tom Fetal

Rosenboom et al 1-18

18-14s-17wEllis

Start Date: 2012.06.15 @ 13:16:05

End Date: 2012.06.15 @ 19:27:09

Job Ticket #: 47878 DST #: 1

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

Printed: 2012.06.15 @ 21:07:34



TRILOBITE TESTING, INC.

DRILL STEMTEST REPORT

S Gary Jr & Assoc inc

18-14s-17w Elis

1515 wynkoop
STE 700
Denver Co 80202
ATTN TomFertal

Rosenboom et al 1-18

Job Ticket: 47878 **DST#: 1**

Test Start: 2012.06.15 @ 13:16:05

GENERAL INFORMATION:

Formation: **LKC'E mid G'**

Deviated: Nb Whipstock ft (KB)

Time Tool Opened: 15:02:30

Time Test Ended: 19:27:09

Test Type: Conventional BottomHble (Initial)

Tester: Andy Carreira

Unit Nr: 39

Interval: **3323.00 ft (KB) To 3368.00 ft (KB) (TVD)**

Reference Elevations: 1985.00 ft (KB)

Total Depth: 3368.00 ft (KB) (TVD)

1977.00 ft (CF)

Hble Diameter: 7.88 inches Hble Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8372 Outside

Press@RunDepth: 29.69 psig @ 3330.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.15 End Date: 2012.06.15

Last Calib.: 2012.06.15

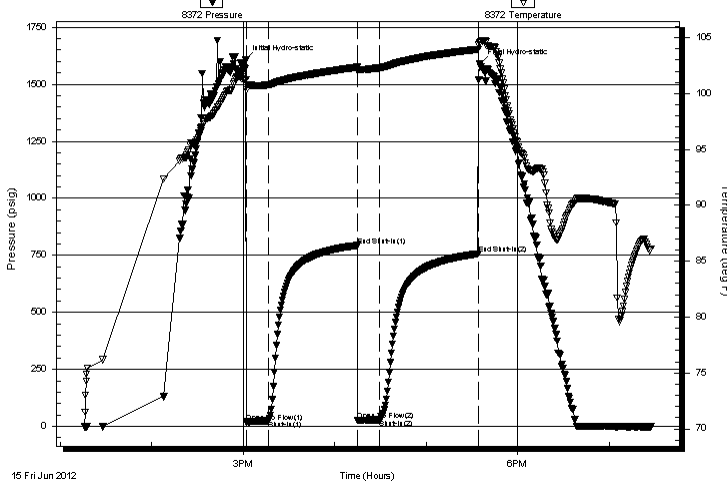
Start Time: 13:16:05 End Time: 19:27:10

Time On Btm: 2012.06.15 @ 15:01:50

Time Off Btm: 2012.06.15 @ 17:35:20

TEST COMMENT: IF:(10min) Surface Blow
IS:(60min) Nb Return
FF:(10min) Nb Blow
FS:(60min) Nb Return

Pressure vs. Time



PRESSURE SUMMARY

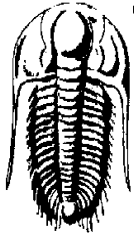
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1606.58 | 101.22 | Initial Hydro-static |
| 1 | 18.38 | 100.32 | Open To Flow(1) |
| 15 | 24.98 | 100.78 | Shut-In(1) |
| 73 | 793.10 | 102.35 | End Shut-In(1) |
| 74 | 26.13 | 102.05 | Open To Flow(2) |
| 88 | 29.69 | 102.30 | Shut-In(2) |
| 153 | 756.83 | 103.94 | End Shut-In(2) |
| 154 | 1588.52 | 104.57 | Final Hydro-static |

Recovery

| Length (ft) | Description | Vdume (bbl) |
|-------------|--------------------------|-------------|
| 20.00 | Mud w/ oil splks in Tool | 0.28 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEMTEST REPORT

TOOL DIAGRAM

S Gary Jr & Assoc inc

18-14s-17w Elis

1515 wynkoop
STE 700
Denver Co 80202
ATTN TomFertal

Rosenboom et al 1-18

Job Ticket: 47878

DST#: 1

Test Start: 2012.06.15 @ 13:16:05

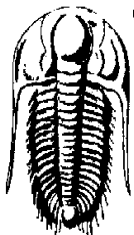
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3312.00 ft | Diameter: 3.80 inches | Volume: 46.46 bbl | Tool Weight: 2500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 inches | Volume: 0.00 bbl | Weight set on Packer: 22000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 2.25 inches | Volume: 0.00 bbl | Weight to Pull Loose: 50000.00 lb |
| | | | <u>Total Volume: 46.46 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 24.00 ft | | | String Weight: Initial 44000.00 lb |
| Depth to Top Packer: | 3323.00 ft | | | Final 44000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 45.00 ft | | | |
| Tool Length: | 80.00 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 | | | 3289.00 | |
| Recorder | 0.00 | 8647 | Fluid | 3289.00 | |
| Blank Spacing | 5.00 | | | 3294.00 | |
| Shut In Tool | 5.00 | | | 3299.00 | |
| Sampler | 2.00 | | | 3301.00 | |
| Hydraulic tool | 5.00 | | | 3306.00 | |
| Jars | 5.00 | | | 3311.00 | |
| Safety Joint | 3.00 | | | 3314.00 | |
| Packer | 5.00 | | | 3319.00 | 35.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3323.00 | |
| Stubb | 1.00 | | | 3324.00 | |
| Perforations | 5.00 | | | 3329.00 | |
| Change Over Sub | 1.00 | | | 3330.00 | |
| Recorder | 0.00 | 8017 | Inside | 3330.00 | |
| Recorder | 0.00 | 8372 | Outside | 3330.00 | |
| Drill Pipe | 31.00 | | | 3361.00 | |
| Change Over Sub | 1.00 | | | 3362.00 | |
| Perforations | 3.00 | | | 3365.00 | |
| Bullnose | 3.00 | | | 3368.00 | 45.00 Bottom Packers & Anchor |

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC.**

DRILL STEMTEST REPORT

FLUID SUMMARY

S Gary Jr & Assoc inc

18-14s-17w Elis

1515 wynkoop
STE 700
Denver Co 80202
ATTN TomFertal

Rosenboom et al 1-18

Job Ticket: 47878 **DST#: 1**
Test Start: 2012.06.15 @ 13:16:05

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: 63.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 8.79 cm ³ | Gas Cushion Type: | | |
| Resistivity: ohmm | Gas Cushion Pressure: psig | | |
| Salinity: 5200.00 ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------------|---------------|
| 20.00 | Mud w/ oil spls in Tool | 0.281 |

Total Length: 20.00ft Total Volume: 0.281 bbl

NumFluid Samples: 0 NumGas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

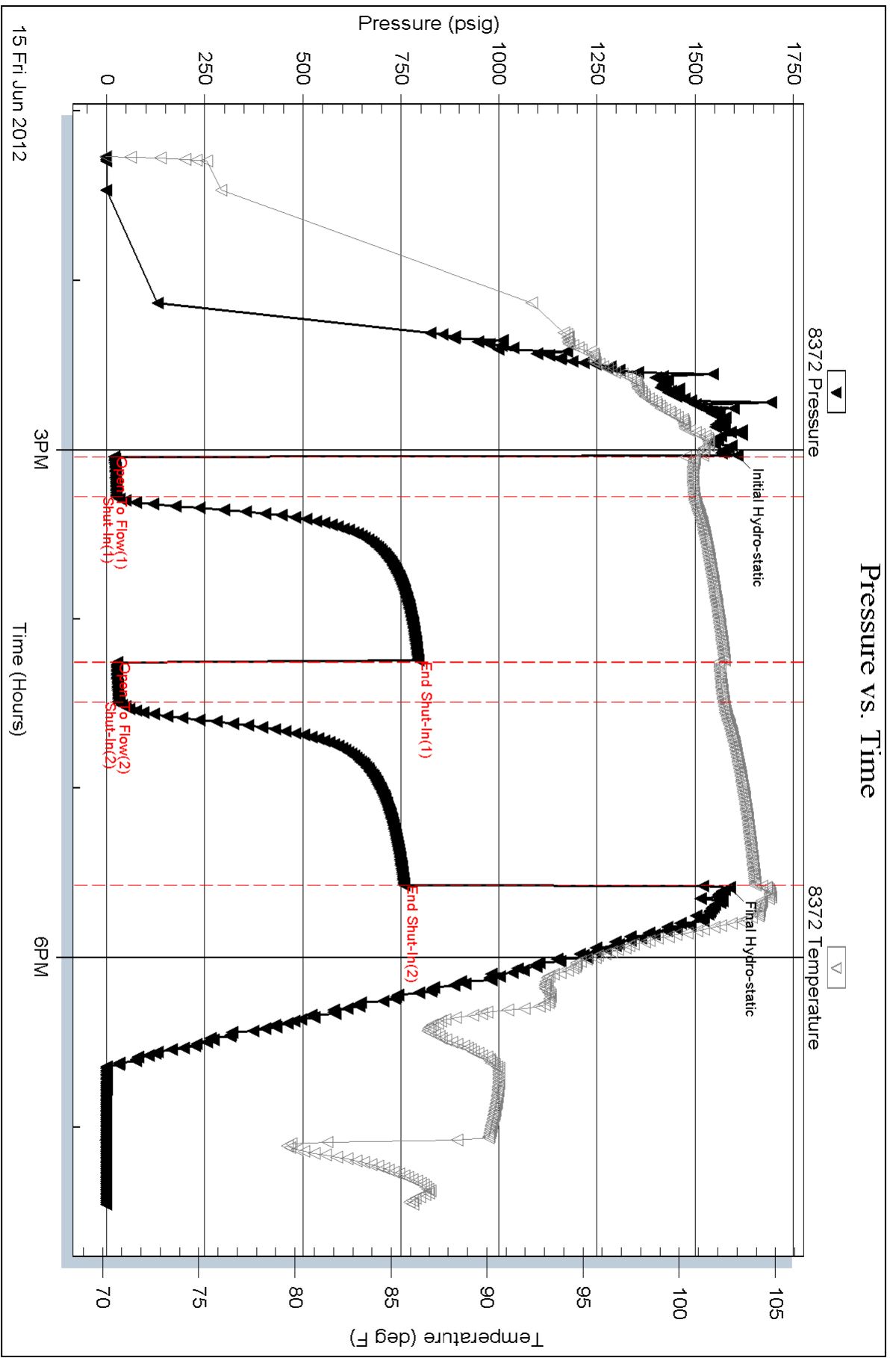
Recovery Comments: Sampler Data- oil=trace mud=3000ml pressure=40lbs

Serial # 8372

Outside S Gary J & Assoc inc

Rosenboom et al 1-18

DST Test Number: 1



Tridette Testing, Inc

Ref. No: 47878

Printed: 2012.06.15 @21:07:36

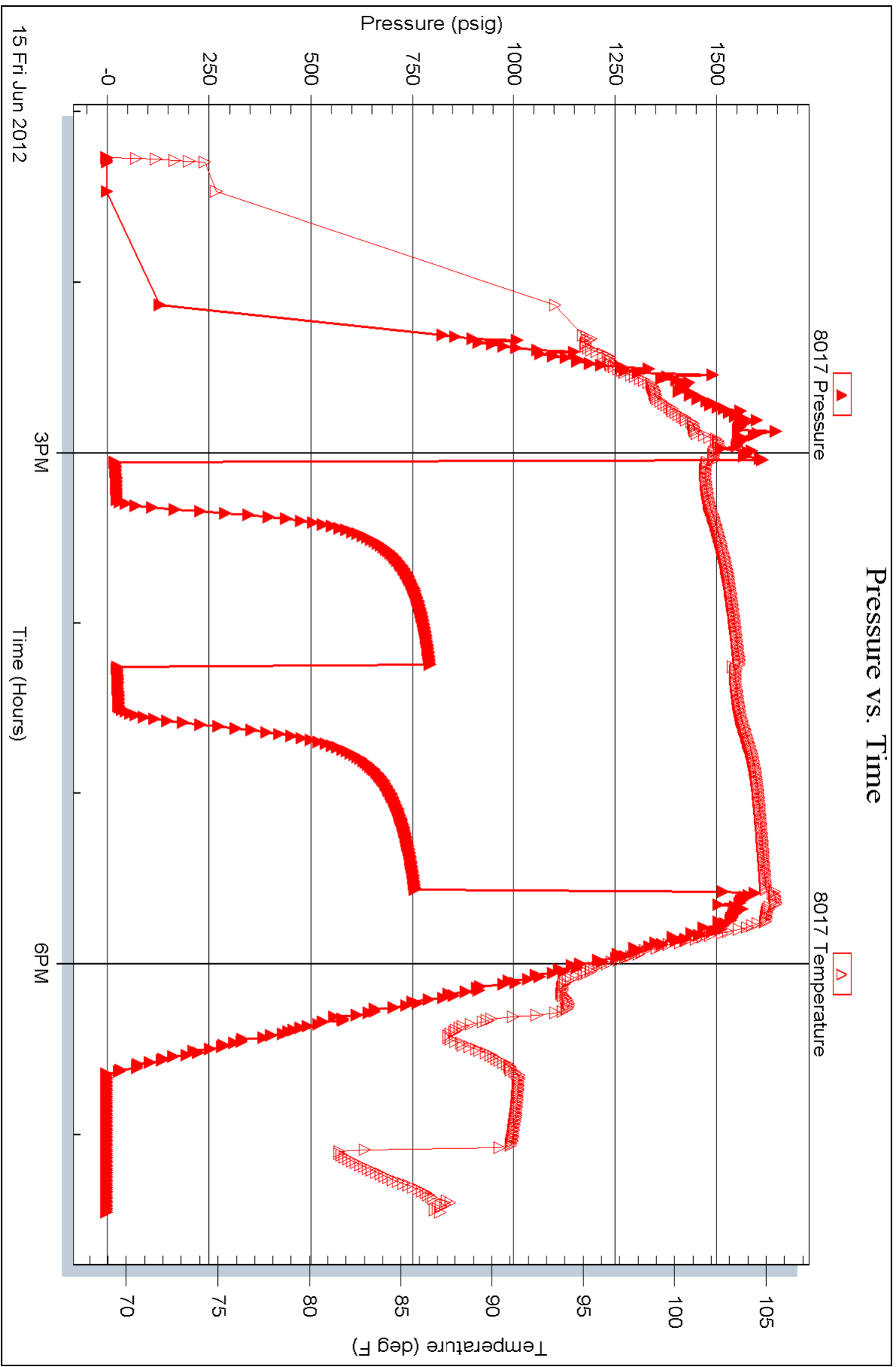
Serial # 8017

Inside

S Gary J & Assoc Inc

Rosenboom at 1-18

DST Test Number: 1



Thiokol Testing, Inc

Ref. No: 47878

Printed: 2012.06.15 @21:07:36

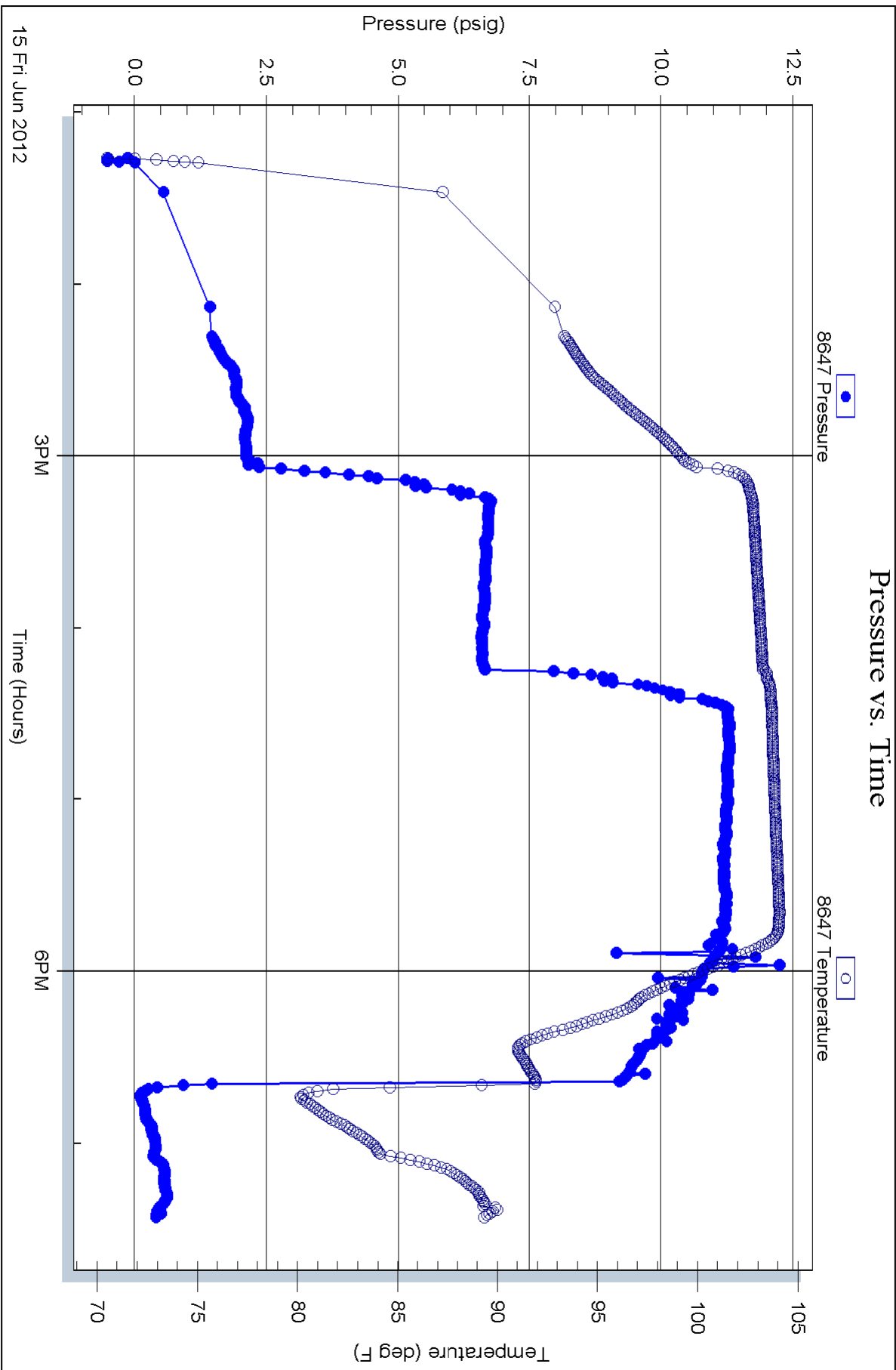
Serial # 8647

Fluid

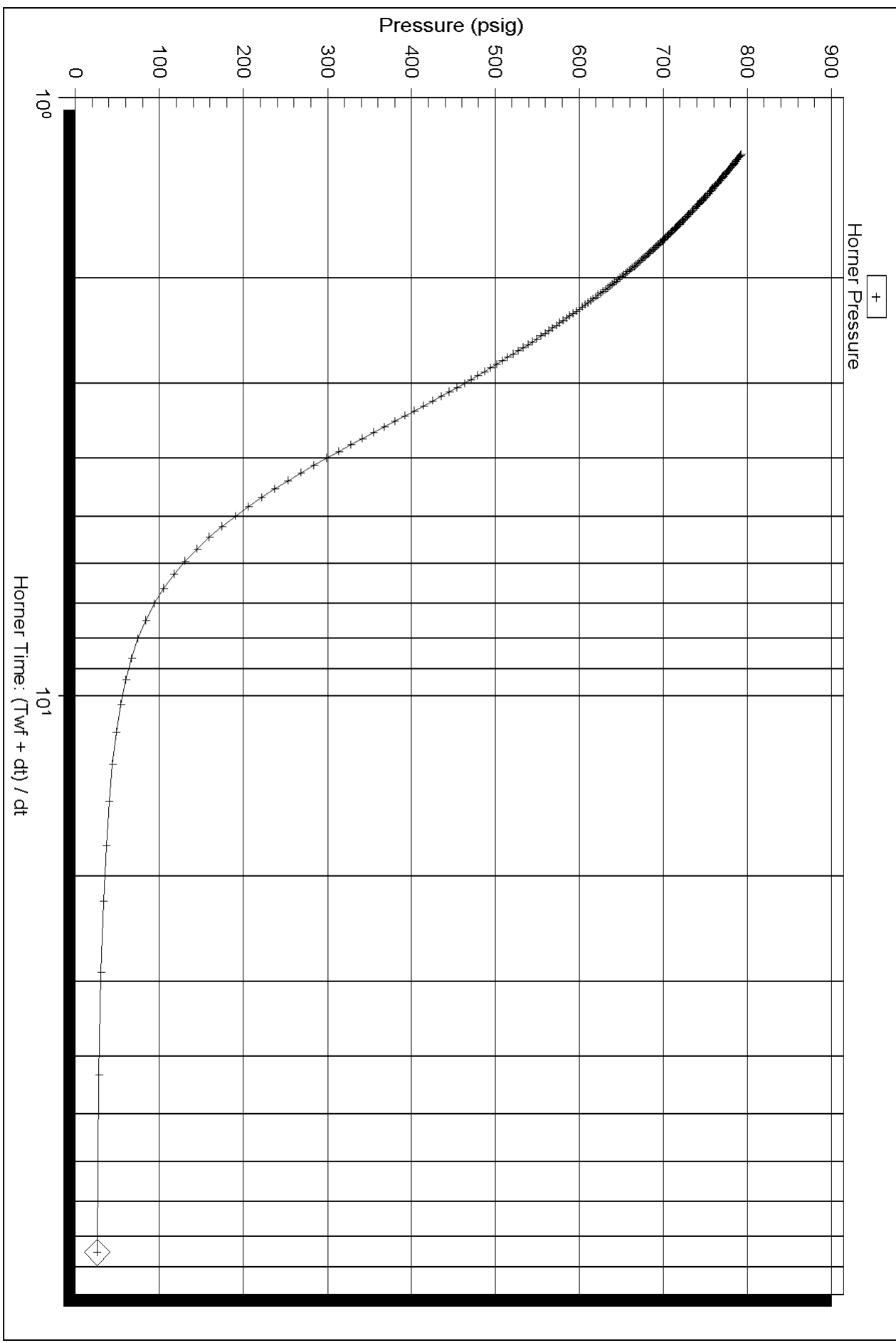
S Gary J & Assoc inc

Rosenboomd at 1-18

DST Test Number: 1



Horner Plot



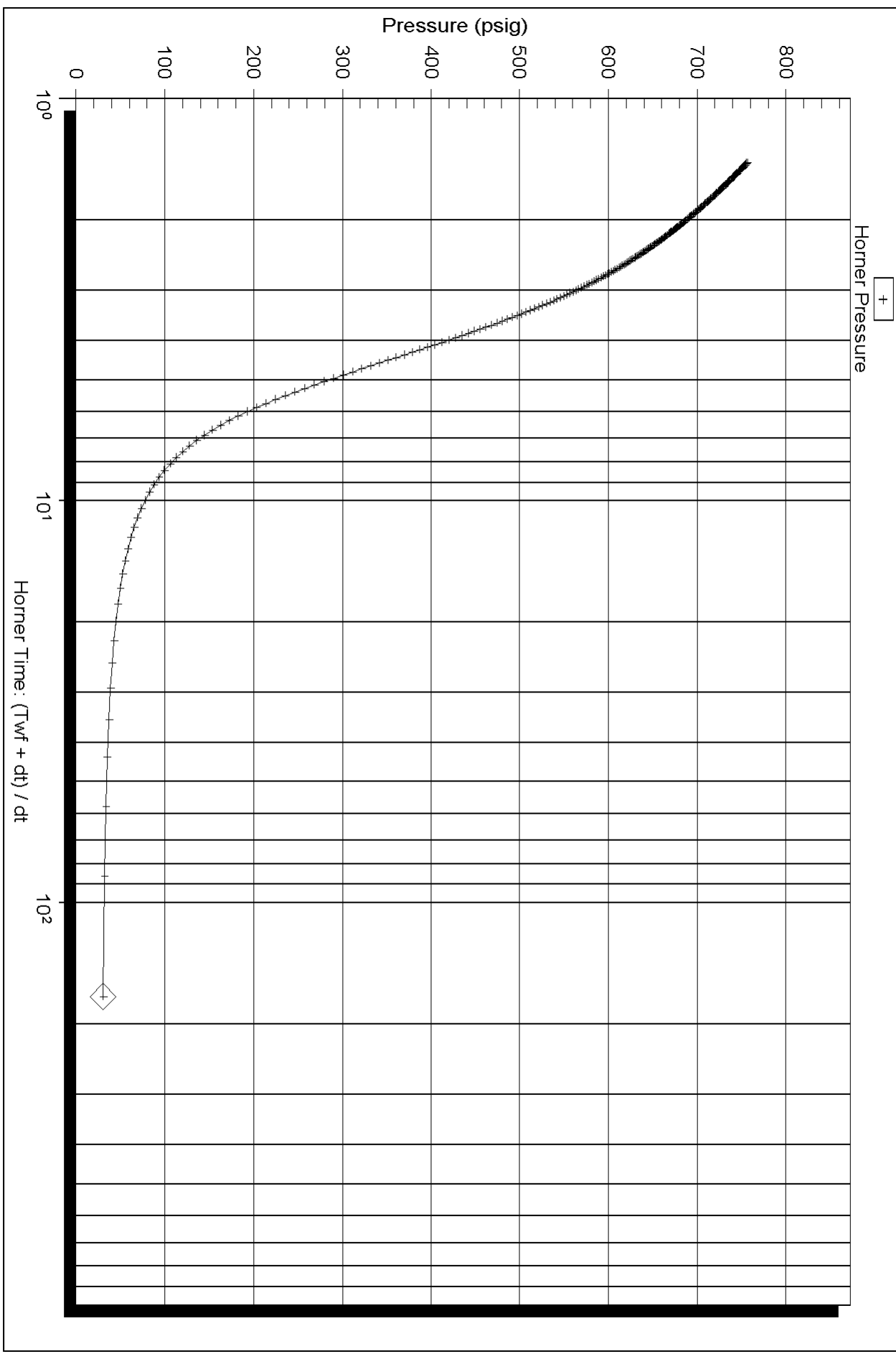
Serial Number: 8372 (Outside)

Pr :

Slope (m) : kpa/log cycle

Flow/Cycle: 1

Horner Plot



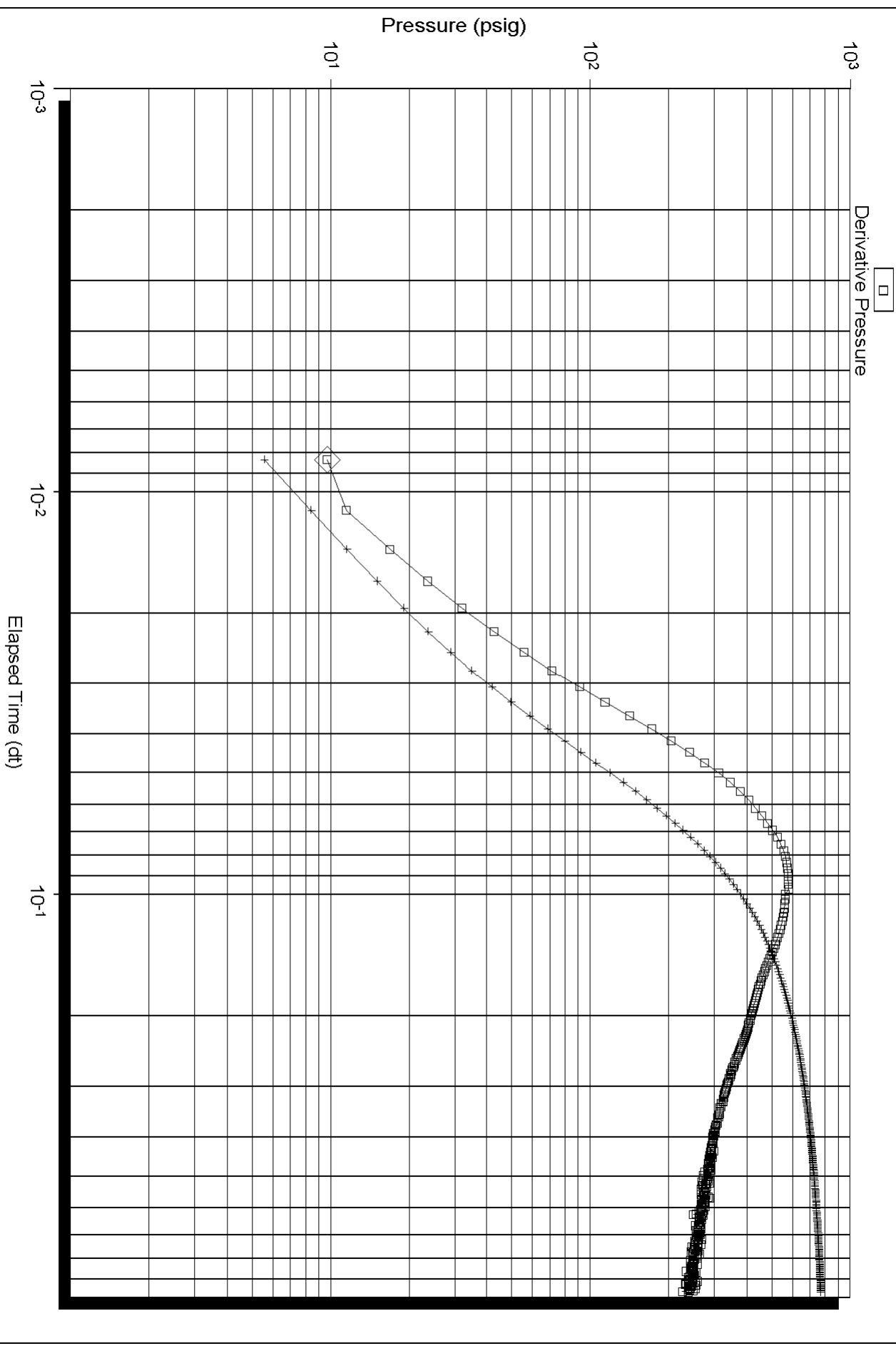
Serial Number: 8372 (Outside)

Pr :

Slope (m) : kpa/log cycle

Flow/Cycle: 2

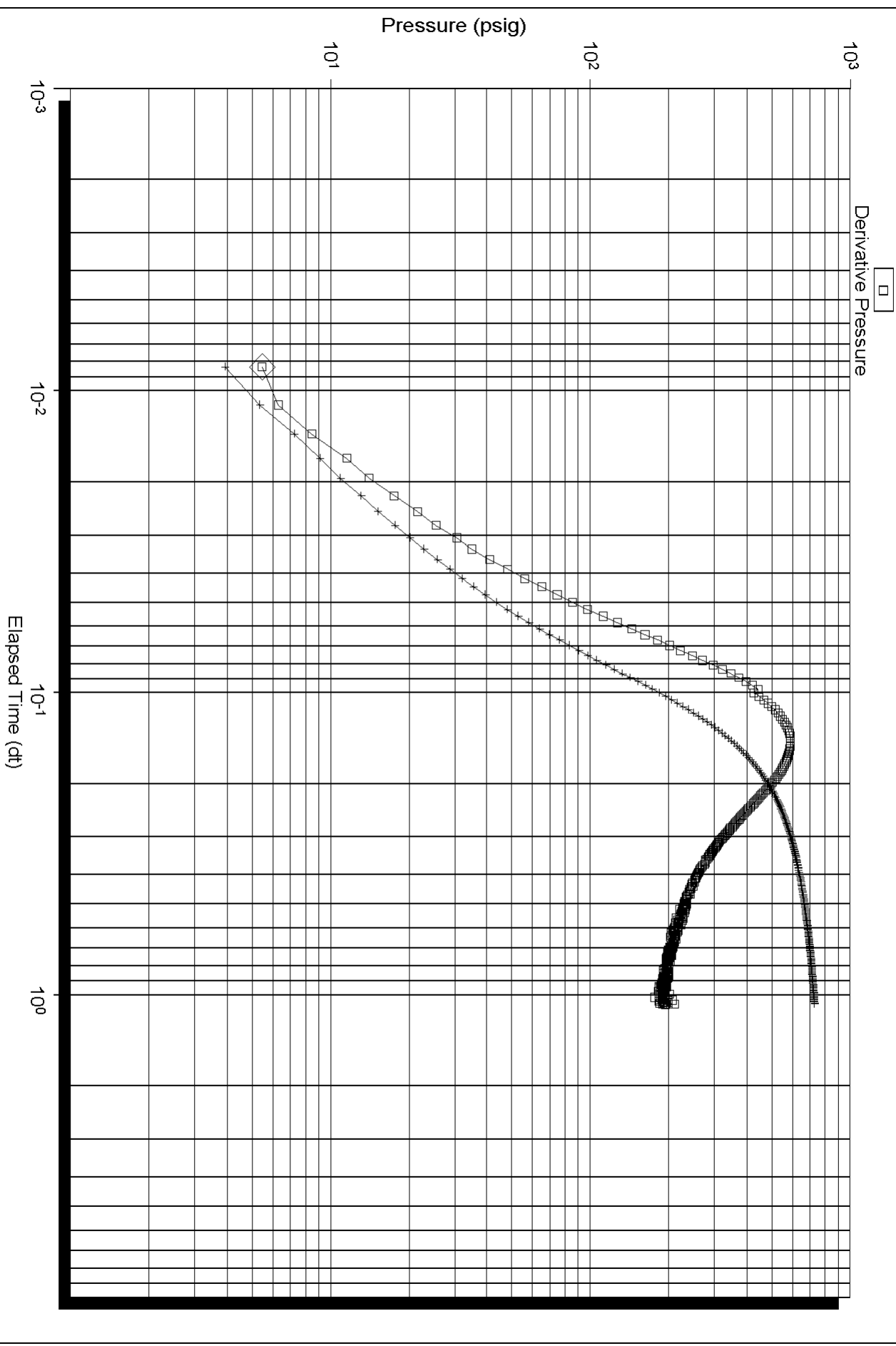
Log-Log and Pseudo-Derivative



Serial Number: 8372 (Outside)

Flow Cycle: 1

Log-Log and Pseudo-Derivative



Serial Number: 8372 (Outside)

Flow Cycle: 2



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

Well Name: ROSENBOOM ET AL 1-18
 Location: Sec. 18 - 14S - 17W, Ellis County, Kansas
 License Number: 15-051-26322-0000
 Spud Date: Region: Wildcat
 Surface Coordinates: 2300' FNL & 160' FEL Drilling Completed: 6/16/12

Bottom Hole Coordinates:
 Ground Elevation (ft): 1977' K.B. Elevation (ft): 1985'
 Logged Interval (ft): 2900' To: 3670' Total Depth (ft): 3670'
 Formation: Lansing Kansas City
 Type of Drilling Fluid:

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

OPERATOR

Company: Samuel Gary Jr. & Associates
 Address: 1515 Wynkoop, # 700
 Denver, Co. 80202
 Co. Geo: Chris Mitchell

GEOLOGIST

Name: Aaron Suelter
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla. 73945
 888-543-8378 Cell: 580-754-0062

DST's Report

DST#1 3323'-3368' 10 60 10 60
 IF-SURFACE BLOW/ ISI-NR/ FF-NB/ FSI- NR
 IH-1606, FH-1588/ IF-18 TO 26/ FF-24 TO 29/ ISI-793, FSI-756
 RECOVERED-20' MUD W/ OIL SPKS IN TOOL
 BHT 103 DEG./ CHLORIDES 5200

DST's Report

ROCK TYPES

| | | | |
|-------|-------|---------|----------|
| Anhy | Gyp | Shgy | Sandy |
| Bent | Igne | Siltst | Shale |
| Brec | Lmst | Ss | Siltstn |
| Cht | Meta | Till | Shlyslts |
| Clyst | Mrlst | Carb sh | Siltysh |
| Coal | Salt | Dol | Lms |
| Congl | Shale | Dtd | |
| Dol | Shcol | Gry sh | |

ACCESSORIES

| | | | |
|----------------|---------------|-----------------|----------------|
| MINERAL | Salt | Fossil | Clystn |
| Anhy | Sandy | Gastro | Dol |
| Arggrn | Silt | Oolite | Grysh |
| Arg | Sil | Ostra | Gryslt |
| Bent | Sulphur | Pelec | Lms |
| Bit | Tuff | Pellet | Sandy lms |
| Brecfrag | Chlorite | Pisolite | Sh |
| Calc | Dol | Plant | Siltstn |
| Carb | Sand | Strom | |
| Chtdk | Silty | Fuss | |
| Chtlt | | Oomold | |
| Dol | FOSSIL | STRINGER | TEXTURE |
| Feldspar | Algae | Anhy | Boundst |
| Ferrpel | Amph | Arg | Chalky |
| Ferr | Belm | Bent | Cryxln |
| Glau | Bioclst | Coal | Earthy |
| Gyp | Brach | Dol | Finexln |
| Hvymin | Bryozoa | Gyp | Grainst |
| Kaol | Cephal | Ls | Lithogr |
| Marl | Coral | Mrst | Microxln |
| Minxl | Crin | Siltstrg | Mudst |
| Nodule | Echin | Ssstrg | Packst |
| Phos | Fish | Carbsh | Wackest |
| Pyr | Foram | | |

OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- B Fenest
- F Fracture
- X Inter
- A Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- r Subrnd
- a Subang

- A Angular

OIL SHOWS

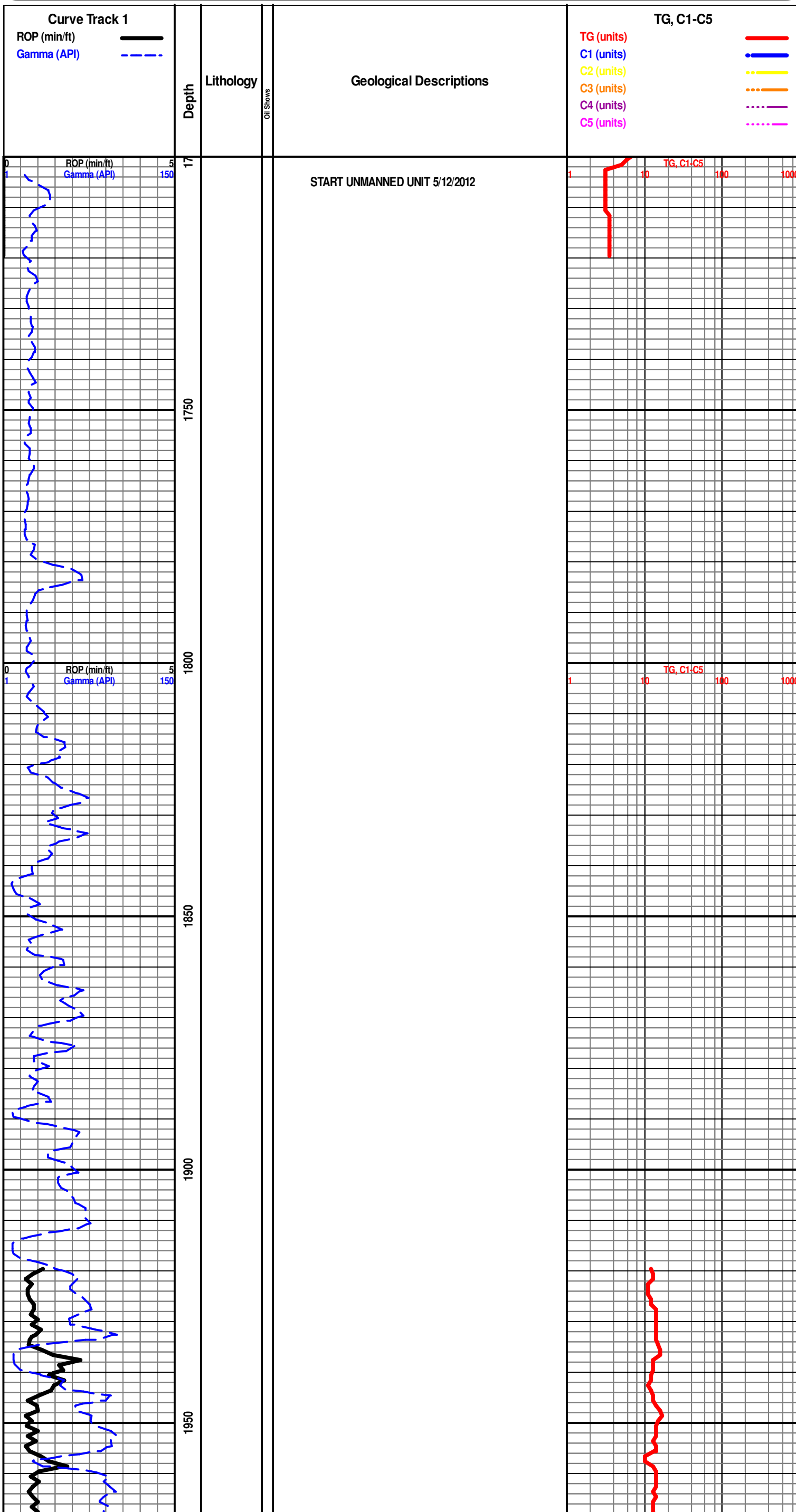
- Even
- ◐ Spotted
- ◑ Ques
- ◒ Dead
- ⊠ Gas show

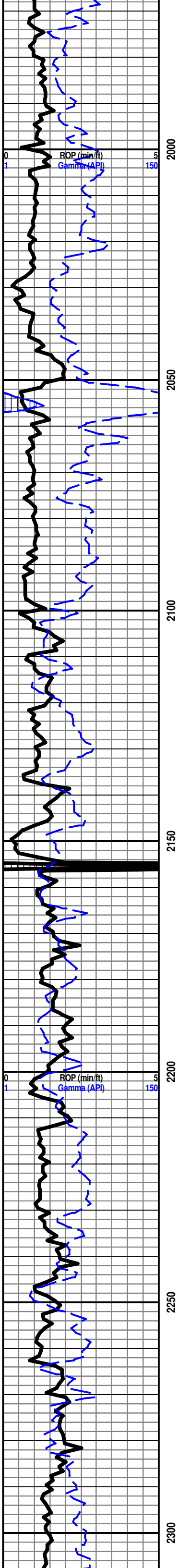
INTERVALS

- Core
- Dst
- Dst

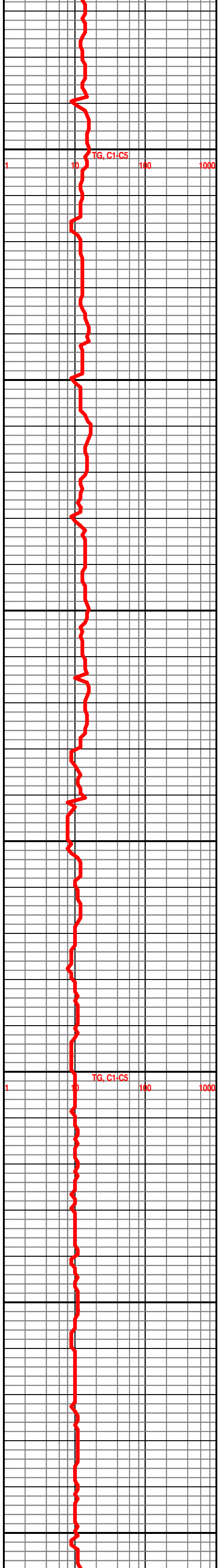
EVENTS

- ▤ Rft
- ▥ Sidewall

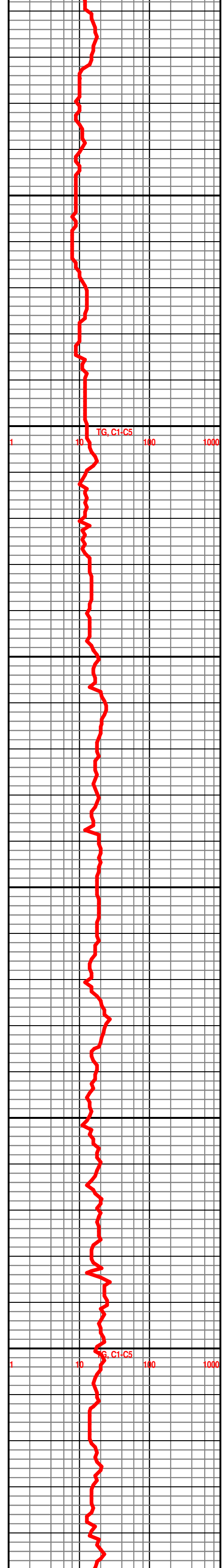
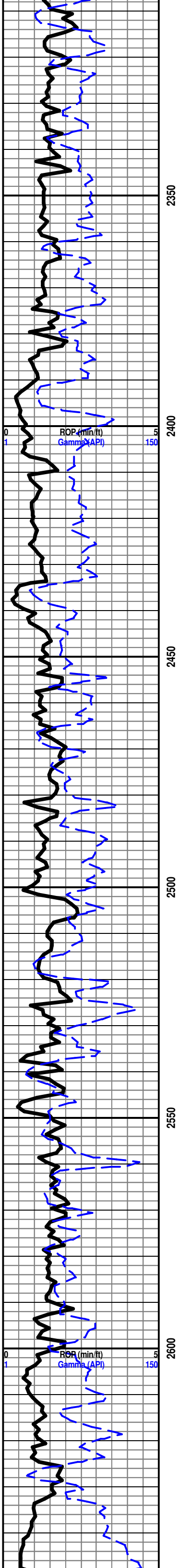


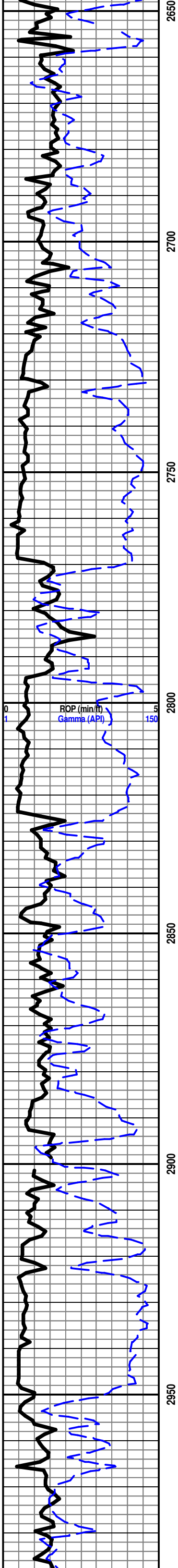


2000 2050 2100 2150 2200 2250 2300



2000 2050 2100 2150 2200 2250 2300

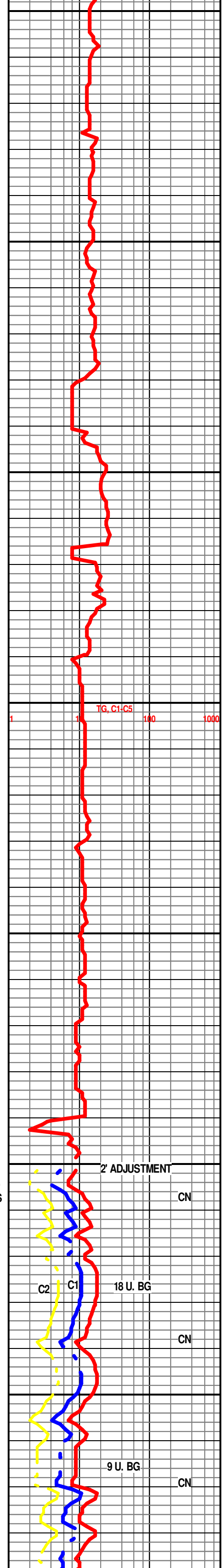




2650
2700
2750
2800
2850
2900
2950

ROP (min/ft)
Gamma (API)

BRS 2769'-794'



TG, C1-C5

START 24 HOUR MANNED UNIT 6/14/12

LS- TN BUFF TO GY, HD DNS TO V/BRIT, V/F TO F SUCRO MTRX, ABDT IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- LT GY TO GY, SFT GMMY, SLTY TXT

SH- GY, FRM BLKY TO SFT SPLNTY, SMTH TXT

HOWARD 2949'-964'

LS- TN TO GY, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, S-SUCRO IP, ABDT IMBD FOSS FRGS, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, F XLN MTRX, IMBD FOSS FRG THRU, ABDNT SCAT LG FREE FOSS IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- BUFF TO LT GY, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, SCAT IMBD FOSS FRGS,

2' ADJUSTMENT

CN

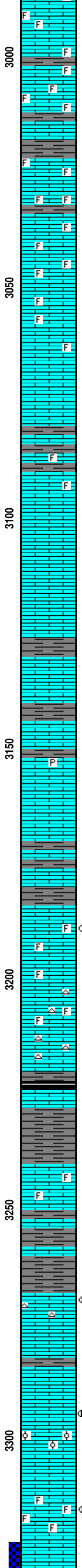
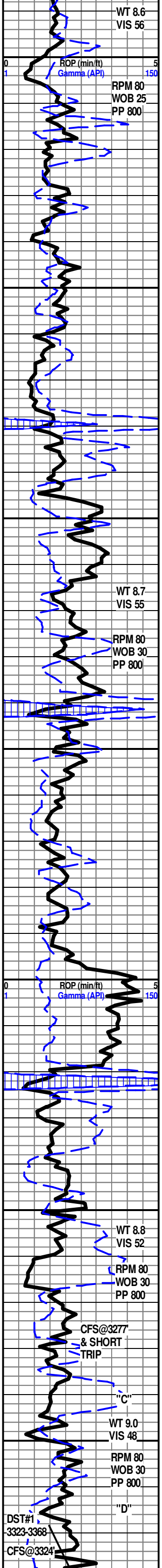
C2 C1

18 U. BG

CN

9 U. BG

CN



FREE FLO IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

TOPEKA 2999'-1014'

LS- LT TN TO GY, HD DNS TO V/BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY, SCAT IMBD FOSS FRG, TR SCAT SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS CUT OR SHOW

SH- GY, FRM BLKY, SLTY TXT

LS- TN, HD DNS TO BRIT IP, F XLN MTRX, SCAT IMBD FOSS FRG, SCAT IMBD GY SH, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- TN TO GY, HD DNS TO V/BRIT, F TO MD XLN MTRX, S-SUCRO IP, SCAT IMBD MD FOSS FRG, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS-LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO IP, TR SCAT IMBD FOSS FRG, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- TN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH - DK GY, FRM BLKY, SMTH TXT

LS- LT TN TO TN, HD DNS TO BRIT, MD XLN RE-XLN MTRX, S-SUCRO, TR SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LE COMPTON 3102'-1117'

LS- OFF WHT TO LT TN, HD DNS, V/F TO CRYPTO XLN MTRX, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT TN, HD DNS, V/F TO CRYPTO XLN MTRX, S-SUCRO NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- TN TO LT TN, FRM DNS TO BRIT, V/F TO F XLN CHLKY MTRX, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- DK GY, SFT GMMY, TR CARB

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, F XLN SUCRO MTRX, TR SCAT IMBD GY SH IP, SLI TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT GY, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO, ABDT CALC XLS ON ONE FACES, NO VIS FLO, POSS FRACT POR, NO VIS SHOW

3188'-3190' LS- CRM W/ TN OIL STN IN 5%, DOS IN 10%, HD DNS TO BRIT, F XLN RE-XLN MTRX, S-SUCRO, S-CHLKY IP, SLI TR IMBD FOSS FRG IP, DUL YEL GLD FLO IN 5%, V/ PR PP POR IN 5%, POSS FRACT POR, NO FLSH CUT, FR SLW STRM IN 5%,

LS- CRM LT TN, HD DNS, V/F TO F XLN MTRX, TR IMBD FOSS FRG IP, ABDT TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

HEEBNER 3221'-1237'

SH- SFT BLCK CARB

SH- GY GRN TO BRWN MOTT, FRM BLKY SMTH TXT

LS - TN TO BUFF, HD DNS, F XLN RE-XLN MTRX, S-SUCRO IP, TR SCAT IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

DOUGLAS 3356'-1271'

SH- DK GY TO DK GRN, SFT GMMY TO FRM BLKY IP, SMTH TXT

LANSING 3267'-1282'

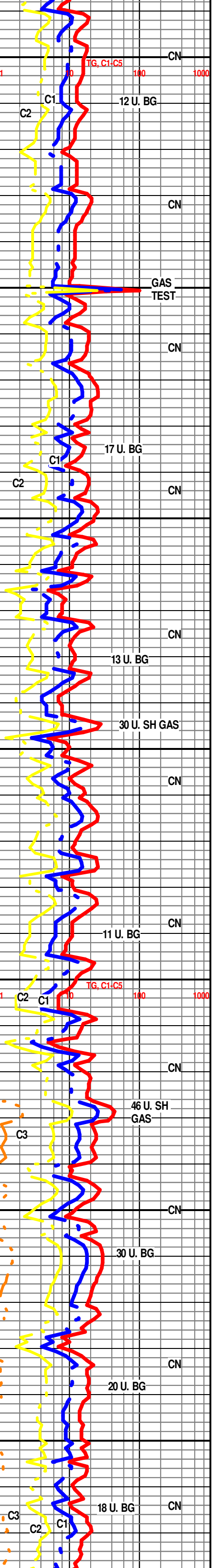
3268'-3270' LS- OFF WHT TO CRM W/ LT TN OIL STN ON 15%, HD DNS, V/F TO F XLN MTRX, RE-XLN IP, S-SUCRO IP, TR IMBD CALC XLS IP, IMBD CHRT IP, V- DUL YEL GLD FLO IN 10%, V/PR INTR XLN POR IN 5%, POSS FRACT POR, PR TO FR FLSH CUT IN 20%, FR SLW STRM CUT IN 20%, V/ LT TN LCH ON DISH, FLEETING OIL ODOR

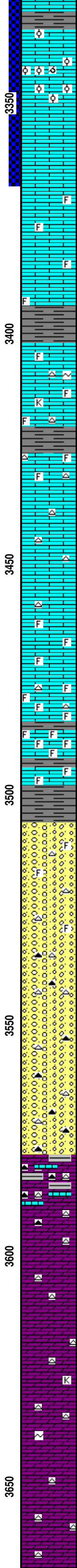
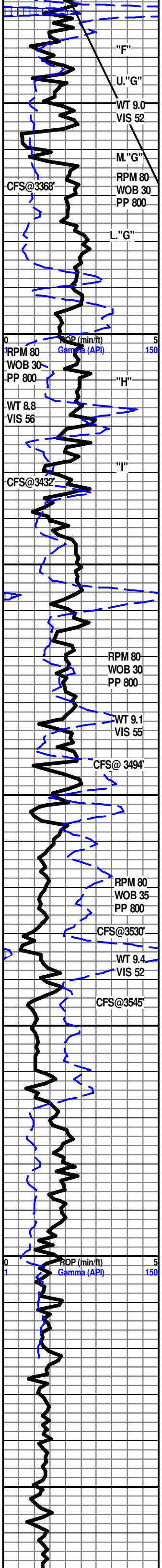
LANSING "C" 3288'-1303'

3294'-3295' LS- CRM W/ TN OIL STN IN 40%, HD DNS TO BRIT, F XLN SUCRO MTRX, TR IMBD CALC XLS IP, DUL YEL GLD FLO IN 60%, BRT YEL GLD FLO IN 15%, GD VUG POR IN 10%, WK TO FR FLSH CUT IN 60%, FR SLW STRM IN 35%, LT TN LCH ON DISH, SLI OIL ODOR

LS- CRM TO LT TN, FRM DNS TO BRIT, V/F TO F XLN CHLKY MTRX, S-SUCRO IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

3314'-3317' LS- OFF WHT TO CRM W/ V LT TN STN IN 20%, HD DNS TO BRIT, F XLN SUCRO MTRX, RE-XLN IP, IMBD FOSS FRG THRU, SLI TR IMBD CALC XLS IP, SLI TR SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 45%, FR MICRO VUG POR IN 10%, PR INTR XLN POR IN 5%, V/ PR FLSH CUT IN 40%, PR TO FR SLW STRM CUT IN 35%





LANSING "F" 3337'-1352'

3344'-3346' LS- OFF WHT TO CRM W/ TN OIL STN IN 60%, HD DNS TO V/BRIT, F XLN RE-XLN MTRX, S-SUCRO, ABDT IMBD OOL THRU, SLI TR OOLMLDC IP, TR IMBD PYR IP, DUL YEL GLD FLO IN 80%, PR INTR OOL POR IN 25%, TR PR OOLMLDC POR, FR FLSH CUT IN 75%, GASSY SLW STRM CUT, DK TN LCH ON DISH, FR OIL ODOR

LS- OFF WHT TO CRM, FRM DNS TO V/V/BRIT, V/F TO F XLN CHLKY MTRX, S-SUCRO IP, SCAT SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT, VF TO CRYPTO XLN, S-SUCRO, S-CHLKY IP, TR IMBD FOSS FRG IP, SLI TR CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LANSING "H" 3402'-1417'

LS- OFF WHT CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO IP, SLI TR IMBD FOSS FRG IP, TR IMBD GLAUC OR KAOL, SLI TR WHT CHRT IN TRAY, SLI TRY SFT WHT CHLK IN TRAY NO VIS FLO, NO VIS POR, NO VIS SHOW

3398'-3400' LS- CRM TO LT TN W/ TN OIL STN IN 80%, HD DNS TO V/BRIT, VF/ TO F XLN RE-XLN MTRX, S-SUCRO, SLI TR IMBD FOSS FRG IP, BRT YEL GLD FLO IN 70%, NO FLO IN 30%, V/V/ PR INTR XLN POR IN 10%, WK TO FR FLSH CUT IN 80%, GD TO FR SLW STRM IN 70%, LT TN LCH ON DISH, SLI OIL ODOR

LS- CRM TO LT TN, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO IP, ABDT SFT WHT CHLK IN TRAY, TR WHT TO ORNG CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS-CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO, S-CHLKY IP, TR WHT CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS, V/F TO F XLN MTRX, TR SCAT IMBD FOSS FRG IP, SCAT SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS, V/F TO F XLN MTRX, SCAT IMBD FOSS FRG IP, TR WHT TO TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CR, HD DNS TO BRIT IP, F XLN MTRX, ABDT IMBD FOSS FRG THRU, SCAT IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

BKC 3502'-1517'

SH- DK GY TO RED BRWN, SFT GMMY, SMTH TXT

CONG- LS-CRM LT TN, HD DNS, V/F TO F CRYPTO XLN, TR IMBD FOSS FRG IP, SH-GY BRWN GRN YEL SFT GMMY TO FRM BLKY, CHRT WHT TN YEL ORNG, LS & SH LMNTD IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

CONG- LS-CRM LT TN, HD DNS, V/F TO F CRYPTO XLN, TR IMBD FOSS FRG IP, SH-GY BRWN GRN YEL SFT GMMY TO FRM BLKY, ABDT CHRT WHT TN YEL ORNG RED, LS & SH LMNTD IP, TR QRTZ XLS, NO VIS FLO, NO VIS POR, NO VIS SHOW

CONG- LS-CRM LT TN, HD DNS, V/F TO F CRYPTO XLN, SH-GY BRWN GRN YEL SFT GMMY TO FRM BLKY, ABDT CHRT WHT TN YEL ORNG RED, LS & SH LMNTD IP, TR QRTZ XLS, NO VIS FLO, NO VIS POR, NO VIS SHOW

ARBUCKLE 3580'-1595'

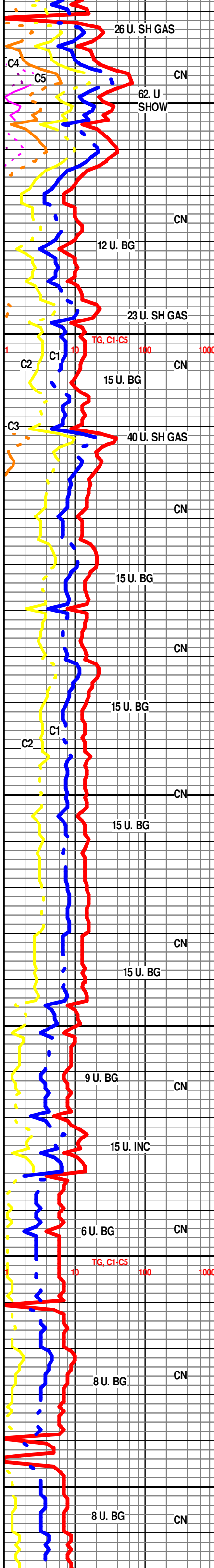
DOLO- OFF WHT CRM, HD DNS TO V/BRIT, F XLN SUCRO MTRX, SM S-ANG DOLO GRNS IMBD THRU, ABDT CONGLOM THRU, NO VIS FLO, V/PR INTR GRN POR, NO VIS SHOW

DOLO- OFF WHT TO CRM, HD DNS TO V/BRIT, F XLN RE-XLN MTRX, S-SUCRO, SM TO MD S-ANG DOLO GRNS IMBD THRU, SCAT WHT TO TN CHRT IN TRAY, NO VIS FLO, PR TO FR INTR GRN POR IN 30%, NO VIS CUT OR SHOW

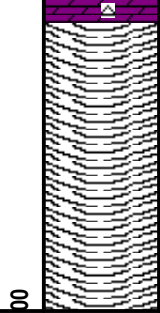
DOLO- WHT OFF WHT TO CRM, HD DNS TO V/BRIT, V/F TO F XLN RE-XLN MTRX, S-SUCRO, SM S-RND DOLO GRNS IMBD THRU, SCAT WHT TO TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

DOLO- OFF WHT TO CRM, HD DNS TO V/BRIT, V/F TO F XLN SUCRO MTRX, SM S-ANG OLO GRNS IMBD THRU, SLI TR IMBD GLAUC OR KAOL, SCAT WHT TO TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

DOLO- CRM, HD DNS TO BRIT, V/F TO F XLN RE-XLN MTRX, S-SUCRO, SM S-ANG DOLO GRNS IMBD IP, SCAT WHT TO TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW



CFS@3670'
30,60
TD@3670'
CTCH 1.5 HOURS



RTD@ 1:15 PM 6/16/12

DROP SURVEY

TOFL @ 2:45 PM

WEATHERFORD/LIBERAL

TD@3670'
SAMPLES WILL BE DELIVERED TO KGS
THANK YOU FOR CHOOSING EARTH TECH
AARON SUELTER