



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1104252
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: _____



1104252

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

| | |
|-----------|--------------------------|
| Form | ACO1 - Well Completion |
| Operator | H & C Oil Operating Inc. |
| Well Name | Fowler 14-1 |
| Doc ID | 1104252 |

All Electric Logs Run

| |
|-------------------------------|
| |
| Microresistivity log |
| Dual compensated Porosity log |
| Dual induction |
| Sonic Cement Bond log |

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

December 10, 2012

Charlie Ramsay
H & C Oil Operating Inc.
PO BOX 86
PLAINVILLE, KS 67663-0086

Re: ACO1
API 15-065-23788-00-00
Fowler 14-1
NW/4 Sec.14-07S-23W
Graham 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,
Charlie Ramsay

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. 6209

| | | | | | | | | | |
|---|---------------|--------|----------|------|-------|--------|-------|-------------|--------|
| Date | 11/19/12 | Sec. | | Twp. | Range | County | State | On Location | Finish |
| Lease | FALLER FAVOR | | Well No. | 1 | | | | | |
| Contractor | CITOLS | | | | | | | | |
| Type Job | Squeeze | | | | | | | | |
| Hole Size | 7 7/8 | | | | | | | | |
| Csg. | 5 1/2 15.500# | | | | | | | | |
| Tbg. Size | 2 7/8 | | | | | | | | |
| Tool | Cannards | | | | | | | | |
| Cement Left in Csg. | Shoe Joint | | | | | | | | |
| Meas Line | Displace | | | | | | | | |
| EQUIPMENT | | | | | | | | | |
| Pumptrk | No. | Cement | | | | | | | |
| | 9 | Helper | C.M.S. | | | | | | |
| Bulktrk | No. | Driver | Cody | | | | | | |
| Bulktrk | No. | Driver | Heath | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | | |
| Remarks: | | | | | | | | | |
| Rat Hole | | | | | | | | | |
| Mouse Hole | | | | | | | | | |
| Centralizers | | | | | | | | | |
| Baskets | | | | | | | | | |
| D/A or Port Collar | | | | | | | | | |
| Plus set @ 3220 - Test to 1500#. Put sand @ 3695. Pkts 3679-83 Rate 4B 10 Booth - Pack set to Squeeze @ 3569 - Mix 250SK Squeeze to 1500#. Release Pressure Wash around Top. Pressure back UP to 1000* Full 3 joints Shut in @ 500# | | | | | | | | | |
| Cement Amount Ordered | 250 gal 2 bbl | | | | | | | | |
| Common | 250 | | | | | | | | |
| Poz. Mix | | | | | | | | | |
| Gel. | | | | | | | | | |
| Calcium | 5 | | | | | | | | |
| Hulls | | | | | | | | | |
| Salt | | | | | | | | | |
| Flowseal | | | | | | | | | |
| Kol-Seal | | | | | | | | | |
| Mud CLR | 48 | | | | | | | | |
| CFL-117 or CD110 CAF | 38 | | | | | | | | |
| Sand | 2 | | | | | | | | |
| Handling | | | | | | | | | |
| Mileage | | | | | | | | | |
| FLOAT EQUIPMENT | | | | | | | | | |
| Guide Shoe | | | | | | | | | |
| Centralizer | | | | | | | | | |
| Baskets | | | | | | | | | |
| AFU Inserts | | | | | | | | | |
| Float Shoe | | | | | | | | | |
| Latch Down | | | | | | | | | |
| Pumptrk Charge | Squeeze | | | | | | | | |
| Mileage | 39 | | | | | | | | |
| Tax | | | | | | | | | |
| Discount | | | | | | | | | |
| Total Charge | | | | | | | | | |
| Signature <i>Sten Skudler</i> | | | | | | | | | |

2:30pm

Graham KS
Location: Hill City Cen tower 1/2 W. Sinto

Owner
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
cement and helper to assist owner or contractor to do work as listed.
Charge To *AKC*

Street
City
State

The above was done to satisfaction and supervision of owner agent or contractor.

Common 250
Poz. Mix
Gel.
Calcium 5
Hulls
Salt
Flowseal
Kol-Seal
Mud CLR 48
CFL-117 or CD110 CAF 38
Sand 2
Handling
Mileage

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge Squeeze
Mileage 39

Tax
Discount
Total Charge

Signature *Sten Skudler*

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. 6043

| | | | | | | | | | | | | | |
|-----------------------------------|--|--------|-----------|------|---|-------|----|--------|--------|-------|----|-------------|---------|
| Date | 10-11-13 | Sec. | 14 | Twp. | 7 | Range | 23 | County | Coloan | State | KS | On Location | 6:30 AM |
| Lease | Buyse | | | | | | | | | | | | |
| Contractor | American Eagle #3 | | | | | | | | | | | | |
| Type Job | Surface | | | | | | | | | | | | |
| Hole Size | 12 1/4 | | | | | | | | | | | | |
| Csg. | 8 5/8 | | | | | | | | | | | | |
| Tbg. Size | | | | | | | | | | | | | |
| Tool | | | | | | | | | | | | | |
| Cement Left in Csg. | 15' | | | | | | | | | | | | |
| Meas Line | Displace 13 1/3 B/L | | | | | | | | | | | | |
| EQUIPMENT | | | | | | | | | | | | | |
| Pumptrk | No. | Cement | | | | | | | | | | | |
| | 16 | Helper | | | | | | | | | | | |
| Bulktrk | No. | Driver | 1 x 2 1/2 | | | | | | | | | | |
| Bulktrk | 1 | Driver | North | | | | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | | | | | | |
| Remarks: | | | | | | | | | | | | | |
| Rat Hole | | | | | | | | | | | | | |
| Mouse Hole | | | | | | | | | | | | | |
| Centralizers | | | | | | | | | | | | | |
| Baskets | | | | | | | | | | | | | |
| D/V or Port Collar | | | | | | | | | | | | | |
| | 8 5/8 on bottom Est Circulation - Mix 1600 | | | | | | | | | | | | |
| | 4 Displace | | | | | | | | | | | | |
| | Cement Circulated: | | | | | | | | | | | | |
| | FLOAT EQUIPMENT | | | | | | | | | | | | |
| | Guide Shoe | | | | | | | | | | | | |
| | Centralizer | | | | | | | | | | | | |
| | Baskets | | | | | | | | | | | | |
| | AFU Inserts | | | | | | | | | | | | |
| | Float Shoe | | | | | | | | | | | | |
| | Latch Down | | | | | | | | | | | | |
| | Pumptrk Charge Surface | | | | | | | | | | | | |
| | Mileage 39 | | | | | | | | | | | | |
| | Tax | | | | | | | | | | | | |
| | Discount | | | | | | | | | | | | |
| | Total Charge | | | | | | | | | | | | |

Signature: *Robert Ramsey*
Robert Ramsey

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. 5243

| | | | | | | | | | | | | | | | |
|------------------------|--|------------------|--------------|----------|----|-------|-----|--------|----------|-------|----|-------------|--------------------|--------------|--------|
| Date | 10-18-12 | Sec. | 14 | Twp. | 75 | Range | 23W | County | 6 Graham | State | KS | On Location | | Finish | 9.45pm |
| Lease | Fowler | Well No. | 14-1 | Location | | | | | | | | | hill city N to WMD | 1 1/2 S into | |
| Contractor | American Eagle Rig 3 | | | | | | | | | | | | | | |
| Type Job | Long string | | | | | | | | | | | | | | |
| Hole Size | T.D. 3863 | | | | | | | | | | | | | | |
| Csg. | Depth 3861 | | | | | | | | | | | | | | |
| Tog. Size | Depth | | | | | | | | | | | | | | |
| Tool | Depth | | | | | | | | | | | | | | |
| Cement Left in Csg. | 18.93 | | | | | | | | | | | | | | |
| Meas Line | 14# Displace 9329 | | | | | | | | | | | | | | |
| EQUIPMENT | | | | | | | | | | | | | | | |
| Pumptrk | No. | Cementier/Helper | Matt | | | | | | | | | | | | |
| Bulktrk | No. | Driver | Frens | | | | | | | | | | | | |
| Bulktrk | No. | Driver | heath bennie | | | | | | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | | | | | | | | |
| Remarks: | Cement did Circulate | | | | | | | | | | | | | | |
| Rat Hole | 30 5/16 | | | | | | | | | | | | | | |
| Mouse Hole | 30 5/16 | | | | | | | | | | | | | | |
| Centralizers | 9 5/16 | | | | | | | | | | | | | | |
| Baskets | 6 5/16 | | | | | | | | | | | | | | |
| D/V or Port Collar | CFL-117 or CD110 CAF 38 | | | | | | | | | | | | | | |
| | Sand | | | | | | | | | | | | | | |
| | Handling 570 | | | | | | | | | | | | | | |
| | Mileage | | | | | | | | | | | | | | |
| | FLOAT EQUIPMENT | | | | | | | | | | | | | | |
| | Guide Shoe | | | | | | | | | | | | | | |
| | Centralizer # 2 # 8 # 42H48 # 67 # 79 | | | | | | | | | | | | | | |
| | Baskets # 2 # 3 # 5 # 7 # 20 # 41 # 50 # 69 # 77 | | | | | | | | | | | | | | |
| | AFU Inserts | | | | | | | | | | | | | | |
| | Float Shoe 1 | | | | | | | | | | | | | | |
| | Latch Down 1 | | | | | | | | | | | | | | |
| | Pumptrk Charge | | | | | | | | | | | | | | |
| | Mileage 390 | | | | | | | | | | | | | | |
| | Tax | | | | | | | | | | | | | | |
| | Discount | | | | | | | | | | | | | | |
| | Total Charge | | | | | | | | | | | | | | |

Quality Oilwell Cementing, Inc.
James L. ...



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations**

Box 86
Plainville KS 67663

ATTN: Charles Ramsey

Fowler #14-1

14-7s-25w Graham,KS

Start Date: 2012.10.15 @ 21:45:12

End Date: 2012.10.16 @ 04:36:36

Job Ticket #: 48665 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.18 @ 14:32:27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48665

DST#: 1

ATTN: Charles Ramsey

Test Start: 2012.10.15 @ 21:45:12

GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:52:37

Time Test Ended: 04:36:36

Test Type: Conventional Bottom Hole (Initial)

Tester: Paul Simpson

Unit No: 58

Interval: 3648.00 ft (KB) To 3670.00 ft (KB) (TVD)

Reference Elevations: 2353.00 ft (KB)

Total Depth: 3670.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8355 Outside

Press @ RunDepth: 32.29 psig @ 3649.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.15

End Date:

2012.10.16

Last Calib.: 2012.10.15

Start Time: 21:45:12

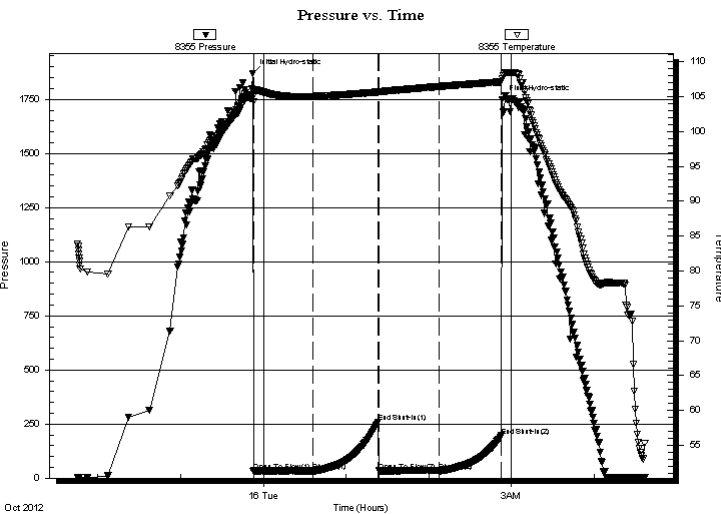
End Time:

04:36:36

Time On Btm: 2012.10.15 @ 23:52:22

Time Off Btm: 2012.10.16 @ 02:53:07

TEST COMMENT: Tool slid 8' w hen opening- lost 10' of mud IF slow bubbling 3" blow
ISI no blow
FF weak 1/2" blow decreasing to surface



PRESSURE SUMMARY

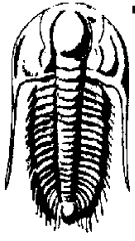
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1870.05 | 104.94 | Initial Hydro-static |
| 1 | 32.88 | 104.30 | Open To Flow (1) |
| 44 | 31.13 | 105.01 | Shut-In(1) |
| 91 | 258.58 | 105.65 | End Shut-In(1) |
| 92 | 33.44 | 105.67 | Open To Flow (2) |
| 135 | 32.29 | 106.43 | Shut-In(2) |
| 181 | 195.14 | 107.11 | End Shut-In(2) |
| 181 | 1748.90 | 107.52 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 30.00 | mud w ith oil specks in tool | 0.42 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48665

DST#: 1

ATTN: Charles Ramsey

Test Start: 2012.10.15 @ 21:45:12

GENERAL INFORMATION:

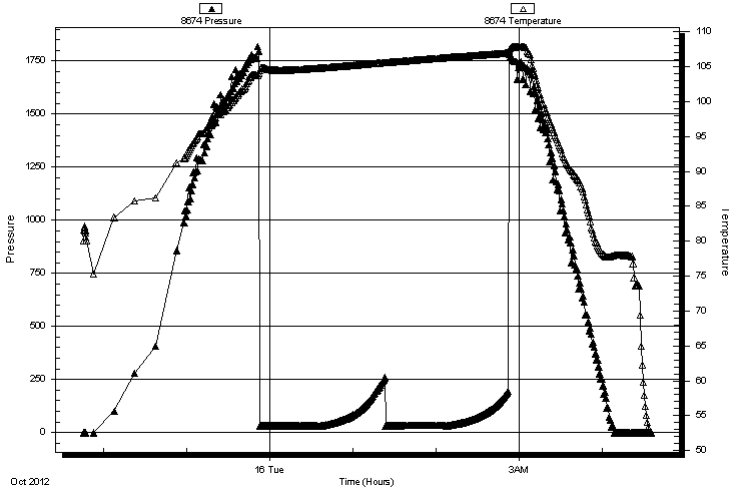
Formation: **Lansing**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:52:37
 Time Test Ended: 04:36:36
Interval: 3648.00 ft (KB) To 3670.00 ft (KB) (TVD)
 Total Depth: 3670.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Paul Simpson
 Unit No: 58
 Reference Elevations: 2353.00 ft (KB)
 2348.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8674 Inside

Press @ Run Depth: psig @ 3649.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.15 End Date: 2012.10.16 Last Calib.: 1899.12.30
 Start Time: 21:45:29 End Time: 04:34:53 Time On Btm:
 Time Off Btm:

TEST COMMENT: Tool slid 8' w hen opening- lost 10' of mud IF slow bubbling 3" blow
 ISI no blow
 FF weak 1/2" blow decreasing to surface

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 30.00 | mud w ith oil specks in tool | 0.42 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48665

DST#: 1

ATTN: Charles Ramsey

Test Start: 2012.10.15 @ 21:45:12

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3652.00 ft | Diameter: 3.80 inches | Volume: 51.23 bbl | Tool Weight: | 2200.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 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: | 60000.00 lb |
| | | | <u>Total Volume: 51.23 bbl</u> | Tool Chased | 8.00 ft |
| Drill Pipe Above KB: | 24.00 ft | | | String Weight: Initial | 42000.00 lb |
| Depth to Top Packer: | 3648.00 ft | | | Final | 42000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 22.00 ft | | | | |
| Tool Length: | 42.00 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 | | | 3629.00 | |
| Shut In Tool | 5.00 | | | 3634.00 | |
| Hydraulic tool | 5.00 | | | 3639.00 | |
| Packer | 5.00 | | | 3644.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3648.00 | |
| Stubb | 1.00 | | | 3649.00 | |
| Recorder | 0.00 | 8355 | Outside | 3649.00 | |
| Recorder | 0.00 | 8674 | Inside | 3649.00 | |
| Perforations | 18.00 | | | 3667.00 | |
| Bullnose | 3.00 | | | 3670.00 | 22.00 Bottom Packers & Anchor |
| Total Tool Length: | 42.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48665

DST#: 1

ATTN: Charles Ramsey

Test Start: 2012.10.15 @ 21:45:12

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------------|---------------|
| 30.00 | mud w ith oil specks in tool | 0.421 |

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

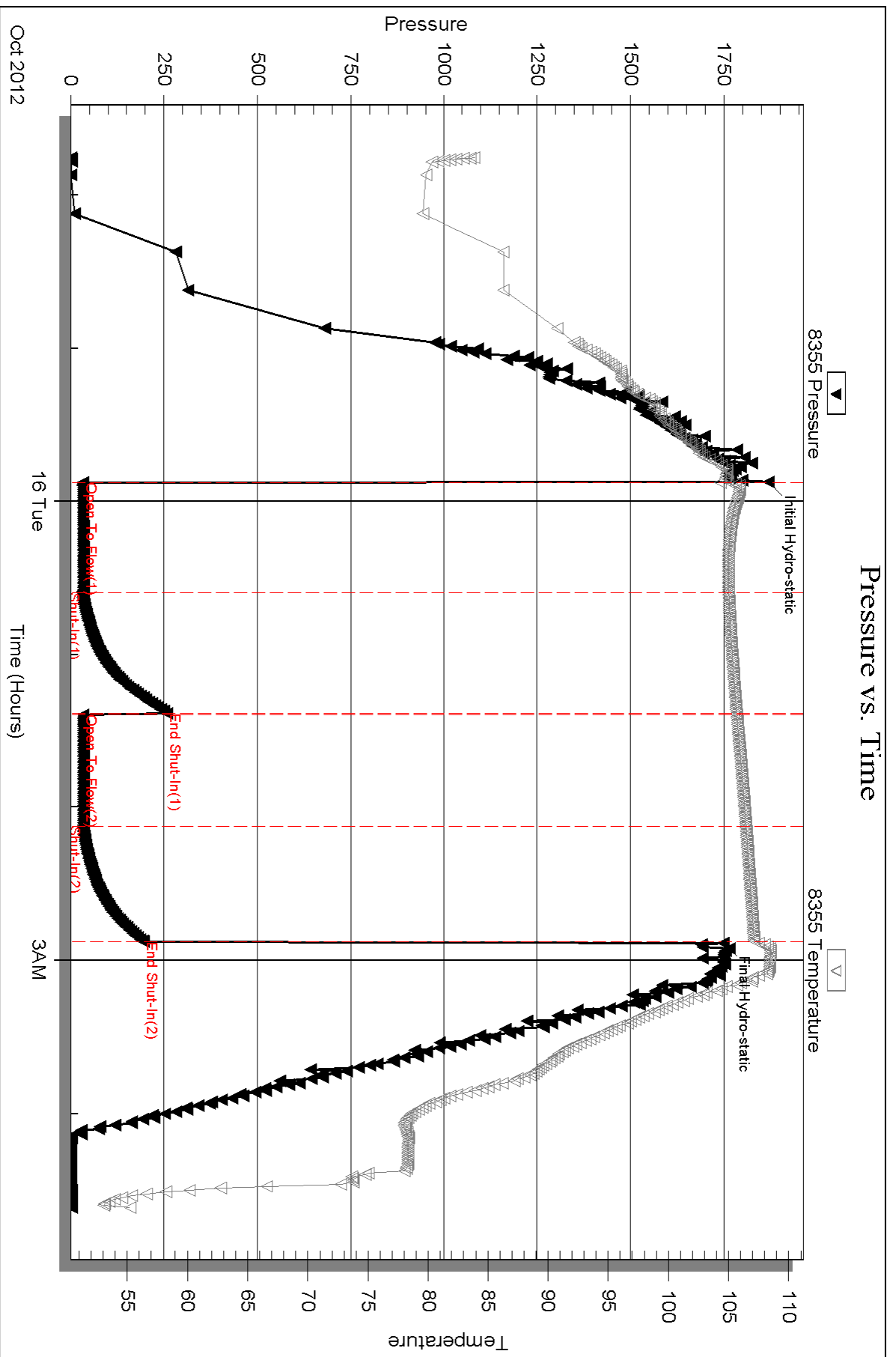
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



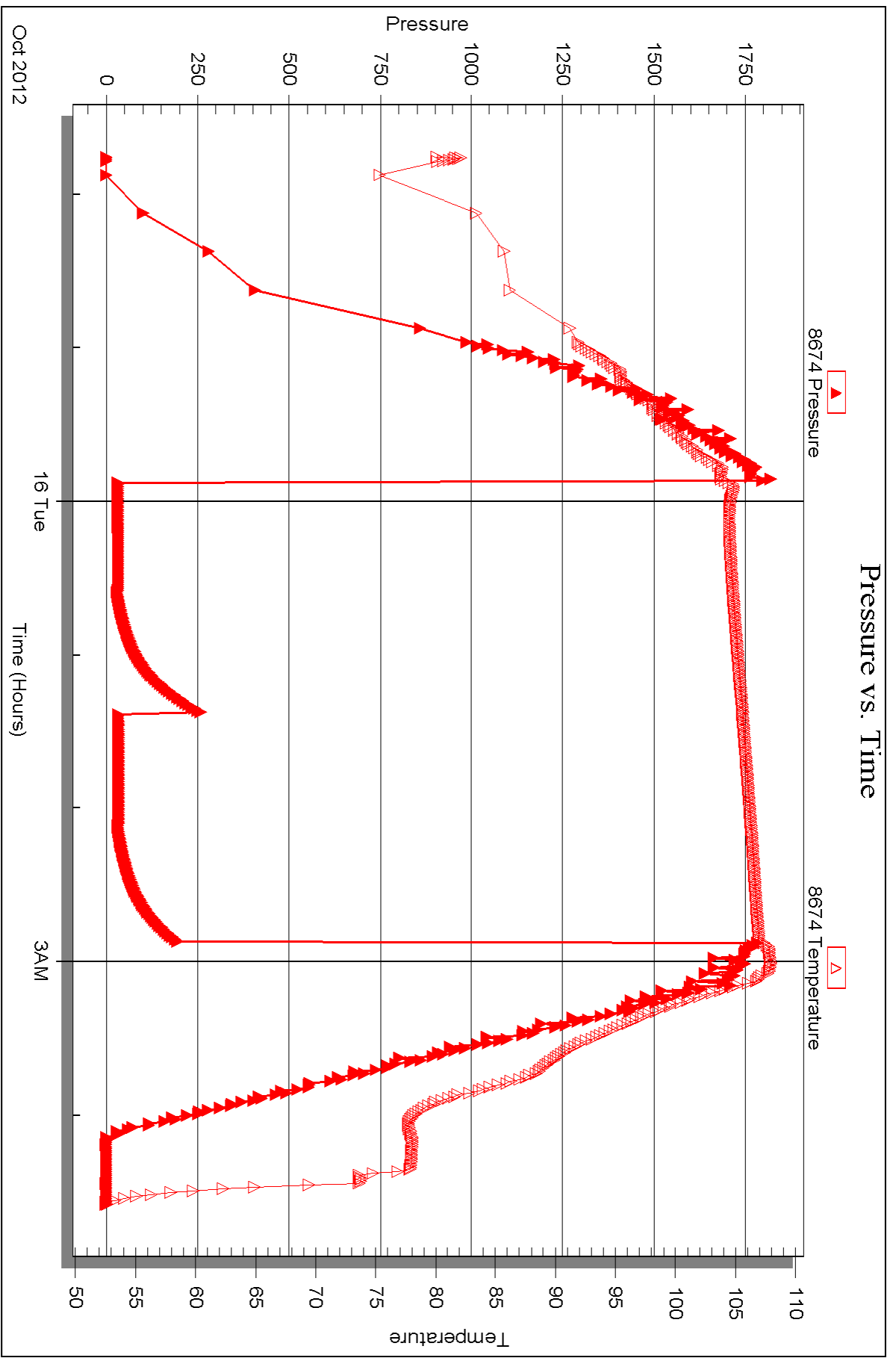
Serial #: 8674

Inside

H&C Oil Operations

Fowler #14-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48665

Printed: 2012.10.18 @ 14:32:32



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations**

Box 86
Plainville KS 67663

ATTN: Charles Ramsey

Fowler #14-1

14-7s-25w Graham,KS

Start Date: 2012.10.16 @ 12:27:19

End Date: 2012.10.16 @ 19:14:19

Job Ticket #: 48666 DST #: 2

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

Printed: 2012.10.18 @ 14:31:12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48666

DST#: 2

ATTN: Charles Ramsey

Test Start: 2012.10.16 @ 12:27:19

GENERAL INFORMATION:

Formation: **Lansing D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:27:19

Time Test Ended: 19:14:19

Test Type: Conventional Bottom Hole (Initial)

Tester: Paul Simpson

Unit No: 58

Interval: 3669.00 ft (KB) To 3691.00 ft (KB) (TVD)

Reference Elevations: 2353.00 ft (KB)

Total Depth: 3691.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8355 Outside

Press @ RunDepth: 50.09 psig @ 3670.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.16

End Date:

2012.10.16

Last Calib.:

2012.10.16

Start Time:

12:27:29

End Time:

19:14:19

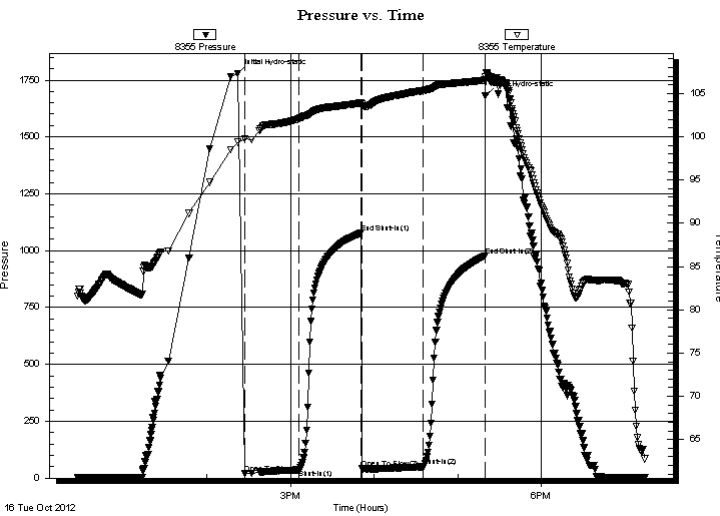
Time On Btm:

2012.10.16 @ 14:22:19

Time Off Btm:

2012.10.16 @ 17:19:49

TEST COMMENT: 45 IF w eal 1/2" blow building to 6"
45 no blow
45 w eak surface blow building to 1.5"
45 FSI no blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1779.68 | 99.36 | Initial Hydro-static |
| 5 | 19.65 | 99.81 | Open To Flow (1) |
| 44 | 36.55 | 102.08 | Shut-In(1) |
| 89 | 1077.25 | 103.90 | End Shut-In(1) |
| 89 | 42.29 | 103.76 | Open To Flow (2) |
| 133 | 50.09 | 105.32 | Shut-In(2) |
| 178 | 977.47 | 106.54 | End Shut-In(2) |
| 178 | 1682.28 | 106.95 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---|--------------|
| 40.00 | OCM 20% o 80@ muc | 0.56 |
| 80.00 | thick tarry oil unable to check gravity | 1.12 |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48666

DST#: 2

ATTN: Charles Ramsey

Test Start: 2012.10.16 @ 12:27:19

GENERAL INFORMATION:

Formation: **Lansing D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:27:19

Time Test Ended: 19:14:19

Test Type: Conventional Bottom Hole (Initial)

Tester: Paul Simpson

Unit No: 58

Interval: 3669.00 ft (KB) To 3691.00 ft (KB) (TVD)

Total Depth: 3691.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2353.00 ft (KB)

2348.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8674 Inside

Press @ Run Depth: psig @ 3670.00 ft (KB)

Start Date: 2012.10.16

End Date: 2012.10.16

Start Time: 12:27:23

End Time: 19:13:32

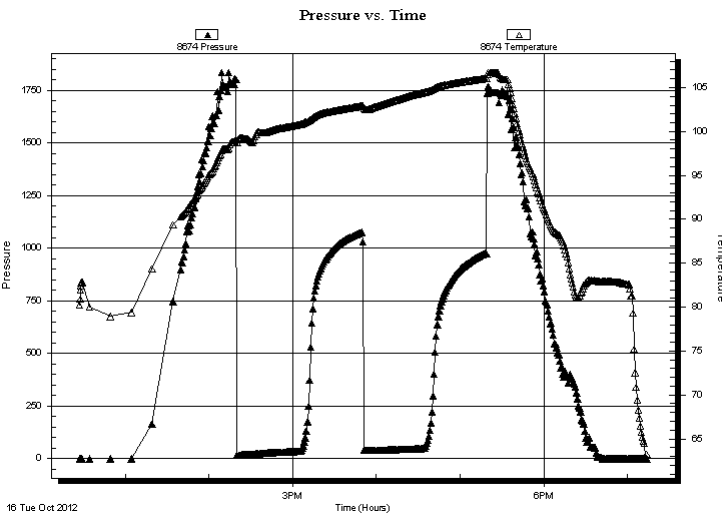
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: 45 IF w eal 1/2" blow building to 6"
45 no blow
45 w eak surface blow building to 1.5"
45 FSI no blow



PRESSURE SUMMARY

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

| Length (ft) | Description | Volume (bbl) |
|-------------|---|--------------|
| 40.00 | OCM 20% o 80@ muc | 0.56 |
| 80.00 | thick tarry oil unable to check gravity | 1.12 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48666

DST#: 2

ATTN: Charles Ramsey

Test Start: 2012.10.16 @ 12:27:19

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3680.00 ft | Diameter: 3.80 inches | Volume: 51.62 bbl | Tool Weight: 2200.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 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: 55000.00 lb |
| | | | <u>Total Volume: 51.62 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 31.00 ft | | | String Weight: Initial 42000.00 lb |
| Depth to Top Packer: | 3669.00 ft | | | Final 42000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 22.00 ft | | | |
| Tool Length: | 42.00 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 | | | 3650.00 | |
| Shut In Tool | 5.00 | | | 3655.00 | |
| Hydraulic tool | 5.00 | | | 3660.00 | |
| Packer | 5.00 | | | 3665.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3669.00 | |
| Stubb | 1.00 | | | 3670.00 | |
| Recorder | 0.00 | 8355 | Outside | 3670.00 | |
| Recorder | 0.00 | 8674 | Inside | 3670.00 | |
| Perforations | 18.00 | | | 3688.00 | |
| Bullnose | 3.00 | | | 3691.00 | 22.00 Bottom Packers & Anchor |
| Total Tool Length: | 42.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48666

DST#: 2

ATTN: Charles Ramsey

Test Start: 2012.10.16 @ 12:27:19

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|---|----------------|
| 40.00 | OCM 20% o 80@ muc | 0.561 |
| 80.00 | thick tarry oil unable to check gravity | 1.122 |

Total Length: 120.00 ft

Total Volume: 1.683 bbl

Num Fluid Samples: 0

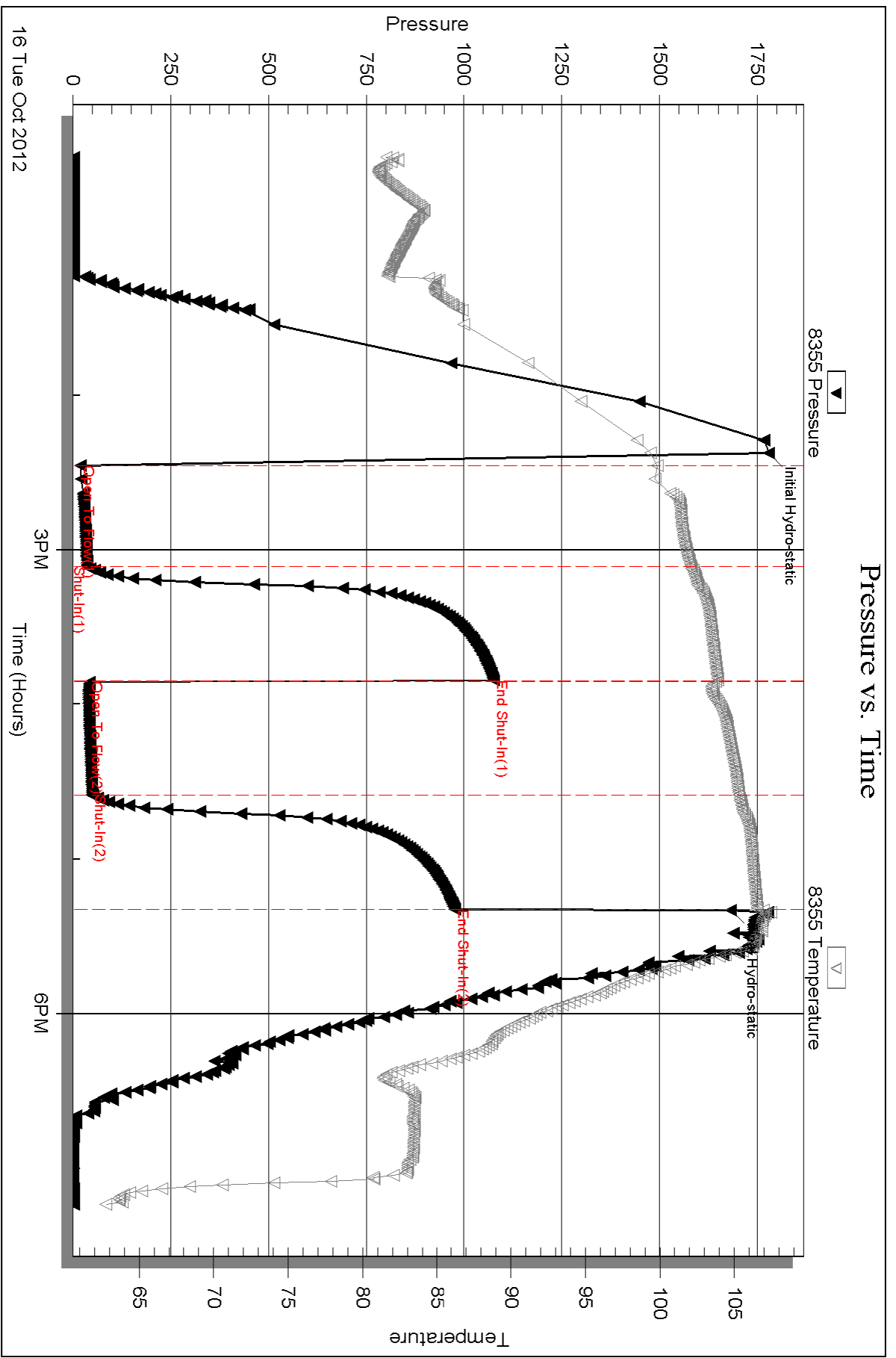
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



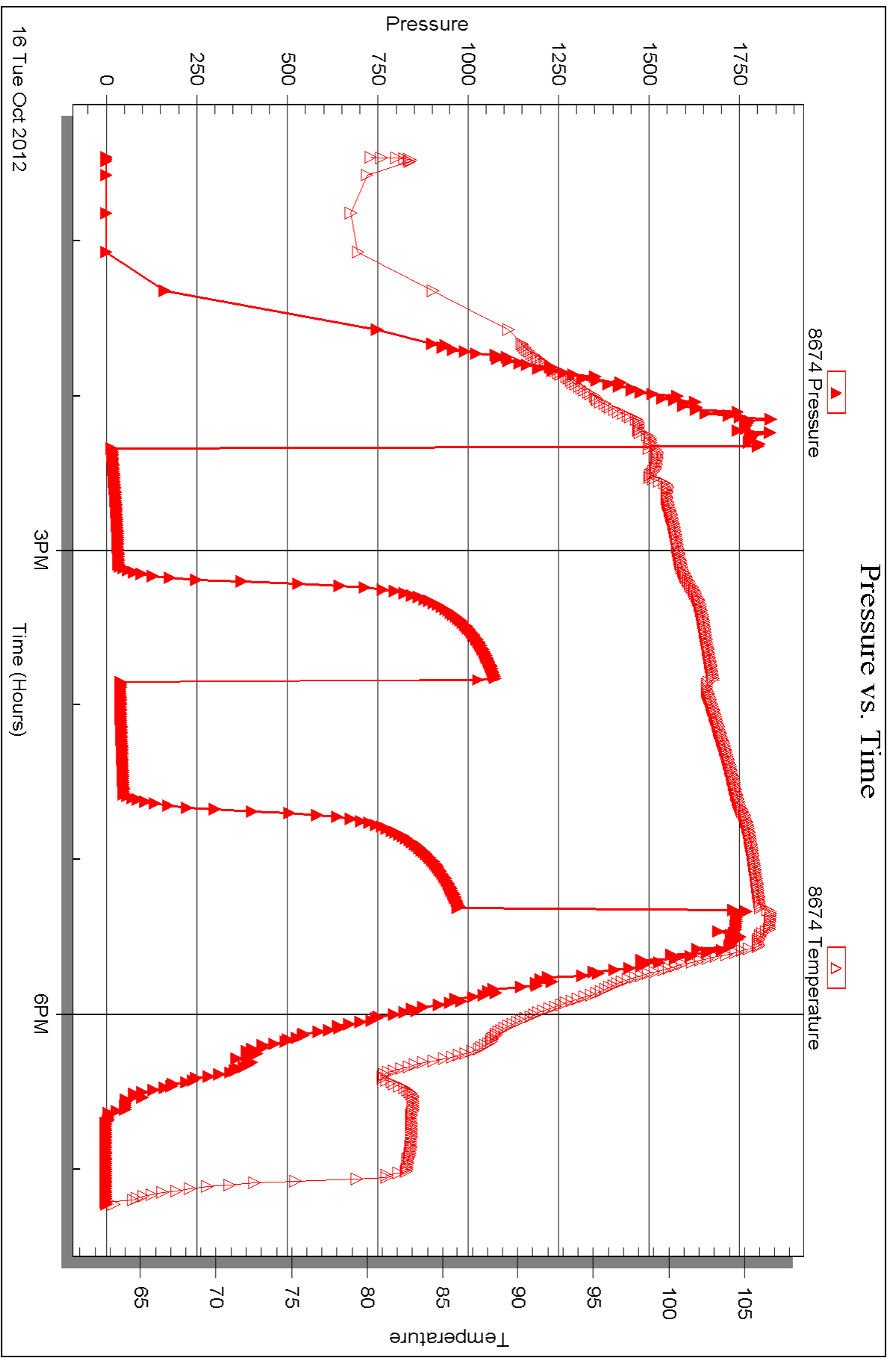
Serial #: 8674

Inside

H&C Oil Operations

Fowler #14-1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operations**

Box 86
Plainville KS 67663

ATTN: Charles Ramsey

Fowler #14-1

14-7s-25w Graham,KS

Start Date: 2012.10.17 @ 09:36:15

End Date: 2012.10.17 @ 17:09:15

Job Ticket #: 48667 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.18 @ 14:30:20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48667

DST#: 3

ATTN: Charles Ramsey

Test Start: 2012.10.17 @ 09:36:15

GENERAL INFORMATION:

Formation: **Lansing H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:26:45

Time Test Ended: 17:09:15

Test Type: Conventional Bottom Hole (Real-Time)

Tester: Paul Simpson

Unit No: 58

Interval: 3728.00 ft (KB) To 3798.00 ft (KB) (TVD)

Reference Elevations: 2353.00 ft (KB)

Total Depth: 3798.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8355 Outside

Press @ Run Depth: 503.05 psig @ 3733.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.17 End Date: 2012.10.17

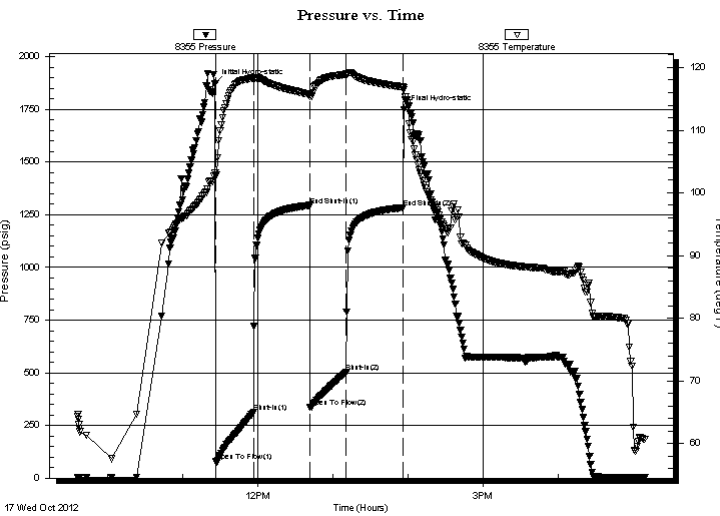
Last Calib.: 2012.10.17

Start Time: 09:36:20 End Time: 17:09:14

Time On Btm: 2012.10.17 @ 11:26:00

Time Off Btm: 2012.10.17 @ 13:56:45

TEST COMMENT: 30- IF 1" blow building to bottom of bucket in 4 minutes
45- ISI weak surface blow
30- FF surface blow building to bottom of bucket in 5 minutes
45- FSI surface blow built to 3/4"



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1871.95 | 103.22 | Initial Hydro-static |
| 1 | 78.66 | 102.75 | Open To Flow (1) |
| 31 | 314.31 | 118.28 | Shut-In(1) |
| 76 | 1295.21 | 115.71 | End Shut-In(1) |
| 76 | 335.55 | 115.36 | Open To Flow (2) |
| 105 | 503.05 | 118.83 | Shut-In(2) |
| 150 | 1284.29 | 116.88 | End Shut-In(2) |
| 151 | 1748.89 | 116.85 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------|--------------|
| 1240.00 | oil and water and mud | 17.39 |
| 0.00 | 300' gas in pipe | 0.00 |
| 0.00 | Rw .17 @ 62 = 52000ppm | 0.00 |
| 0.00 | gravity 31@60=31 | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48667

DST#: 3

ATTN: Charles Ramsey

Test Start: 2012.10.17 @ 09:36:15

GENERAL INFORMATION:

Formation: **Lansing H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:26:45

Time Test Ended: 17:09:15

Test Type: Conventional Bottom Hole (Real-Time)

Tester: Paul Simpson

Unit No: 58

Interval: 3728.00 ft (KB) To 3798.00 ft (KB) (TVD)

Reference Elevations: 2353.00 ft (KB)

Total Depth: 3798.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8674 Inside

Press @ Run Depth: psig @ 3733.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.17 End Date: 2012.10.17

Last Calib.: 1899.12.30

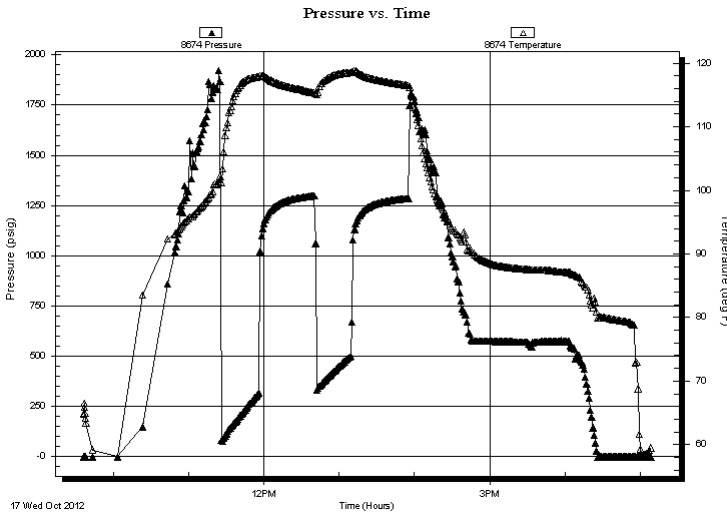
Start Time: 09:36:32 End Time: 17:08:11

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF 1" blow building to bottom of bucket in 4 minutes
45- ISI weak surface blow
30- FF surface blow building to bottom of bucket in 5 minutes
45- FSI surface blow built to 3/4"

PRESSURE SUMMARY



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

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------|--------------|
| 1240.00 | oil and water and mud | 17.39 |
| 0.00 | 300' gas in pipe | 0.00 |
| 0.00 | Rw .17 @ 62 = 52000ppm | 0.00 |
| 0.00 | gravity 31 @ 60 = 31 | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48667

DST#: 3

ATTN: Charles Ramsey

Test Start: 2012.10.17 @ 09:36:15

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3714.00 ft | Diameter: 3.80 inches | Volume: 52.10 bbl | Tool Weight: 2500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 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: 52.10 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 6.00 ft | | | String Weight: Initial 42000.00 lb |
| Depth to Top Packer: | 3728.00 ft | | | Final 49000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 100.00 ft | | | |
| Tool Length: | 120.00 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 | | | 3709.00 | |
| Shut In Tool | 5.00 | | | 3714.00 | |
| Hydraulic tool | 5.00 | | | 3719.00 | |
| Packer | 5.00 | | | 3724.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3728.00 | |
| Stubb | 1.00 | | | 3729.00 | |
| perforations | 3.00 | | | 3732.00 | |
| change Over Sub | 1.00 | | | 3733.00 | |
| Recorder | 0.00 | 8355 | Outside | 3733.00 | |
| Recorder | 0.00 | 8674 | Inside | 3733.00 | |
| Blank Spacing | 61.00 | | | 3794.00 | |
| Change Over Sub | 1.00 | | | 3795.00 | |
| perforations | 30.00 | | | 3825.00 | |
| Bullnose | 3.00 | | | 3828.00 | 100.00 Bottom Packers & Anchor |

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operations

14-7s-25w Graham,KS

Box 86
Plainville KS 67663

Fowler #14-1

Job Ticket: 48667

DST#: 3

ATTN: Charles Ramsey

Test Start: 2012.10.17 @ 09:36:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: lb/gal

Cushion Length:

ft

Water Salinity:

52000 ppm

Viscosity: sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------|---------------|
| 1240.00 | oil and water and mud | 17.394 |
| 0.00 | 300' gas in pipe | 0.000 |
| 0.00 | Rw .17 @ 62 = 52000ppm | 0.000 |
| 0.00 | gravity 31 @60=31 | 0.000 |

Total Length: 1240.00 ft Total Volume: 17.394 bbl

Num Fluid Samples: 0

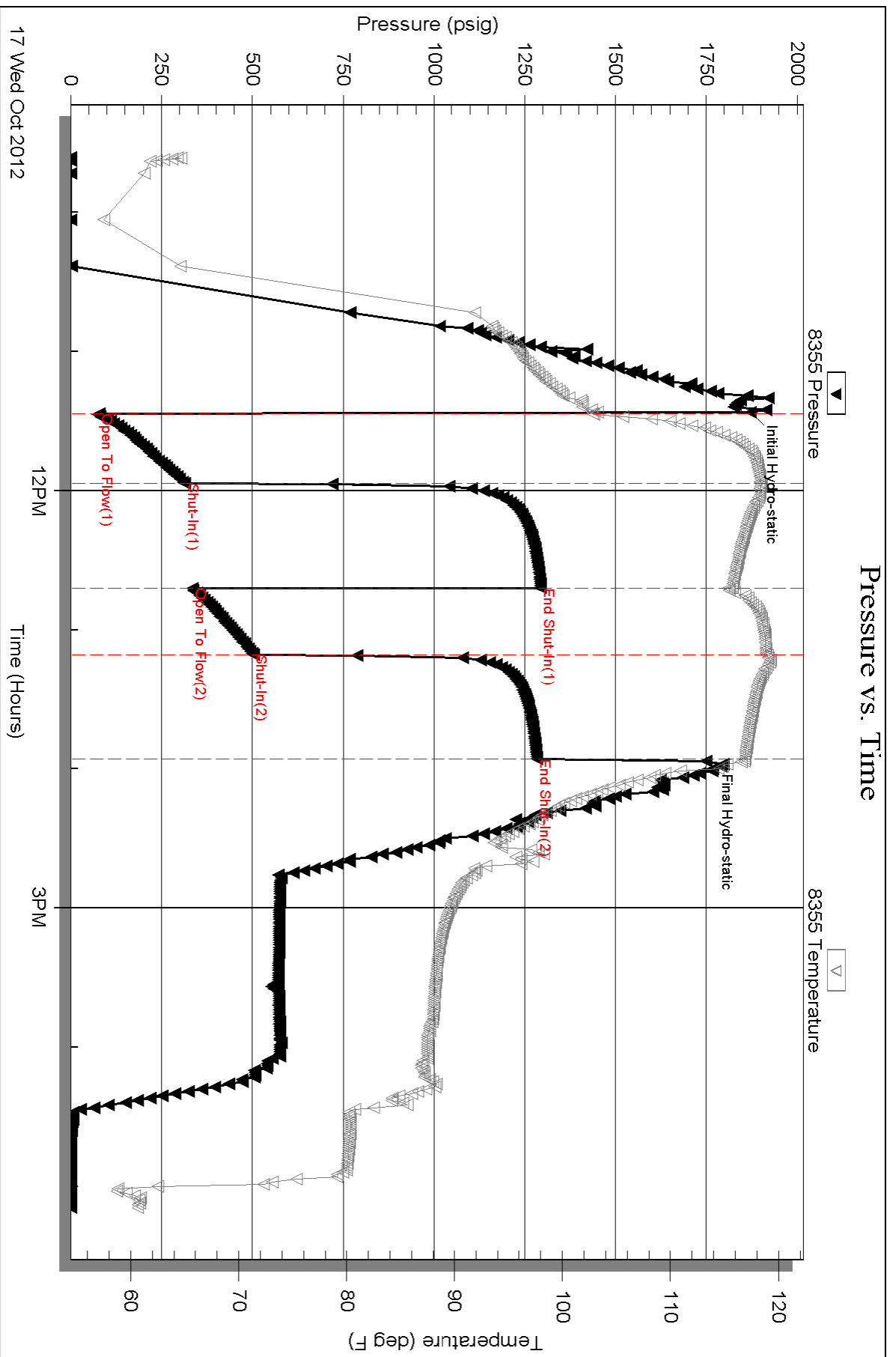
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: reversed out 12 bbl of fluid into water truck dumped approx 4 bbl of muddy water into pit. truck had 8 bbl of oil when it left location



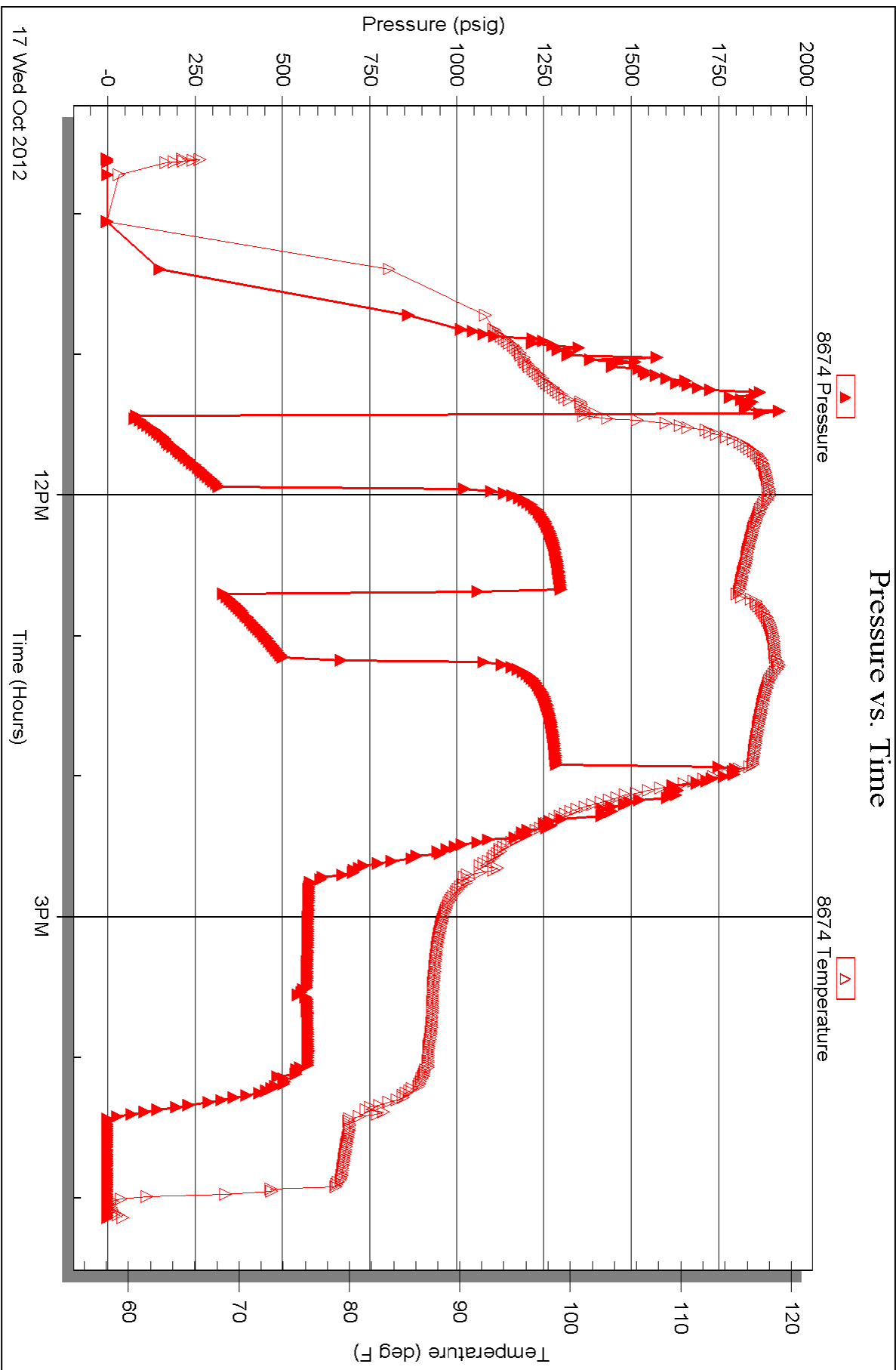
Serial #: 8674

Inside

H&C Oil Operations

Fowler #14-1

DST Test Number: 3





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48665

Well Name & No. Bangle 14-1 Test No. 1 Date 10/15/12
 Company _____ Elevation _____ KB _____ GL _____
 Address Box 86 Plainville Ks 67863
 Co. Rep / Geo. More Dawkins Rig Amerson Eagle #3
 Location: Sec. 14 Twp. 3s Rge. 25 W Co. Graham State Ks

Interval Tested 3648 - 3650 Zone Tested Lansing
 Anchor Length 22 Drill Pipe Run 3640 Mud Wt. 8.9
 Top Packer Depth 3643 Drill Collars Run _____ Vis 61
 Bottom Packer Depth 3648 Wt. Pipe Run _____ WL _____
 Total Depth 3650 Chlorides _____ ppm System LCM _____
 Blow Description Tool slip ft when opening 3" blow decreasing
to 3/4" ft - weak 3/4" blow

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|------------|------|------|--------|------|
| <u>30</u> | <u>Mud</u> | | | | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

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

(A) Initial Hydrostatic 1870 Test 1150 T-On Location 2100
 (B) First Initial Flow 33 Jars _____ T-Started 2145
 (C) First Final Flow 32 Safety Joint _____ T-Open 2358
 (D) Initial Shut-In 259 Circ Sub _____ T-Pulled 0253
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 0436
 (F) Second Final Flow 32 Mileage 126 RT 195.30 Comments _____
 (G) Final Shut-In 195 Sampler _____
 (H) Final Hydrostatic 1740 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 45 Shale Packer _____
 Initial Shut-In 45 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 45 Day Standby _____
 Accessibility _____
 Sub Total 1345.30 Total 1345.30 MP/DST Disc't _____

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48666

4/10

Well Name & No. Bangle 1-14 Test No. 2 Date 10/16/12
 Company ADC Oil Operators Elevation _____ KB _____ GL _____
 Address _____
 Co. Rep / Geo. Marc Downing Rig A E #3
 Location: Sec. _____ Twp. _____ Rge. _____ Co. _____ State _____

Interval Tested 3669-3691 Zone Tested KC D
 Anchor Length 22 Drill Pipe Run _____ Mud Wt. 9.3
 Top Packer Depth 3664 Drill Collars Run _____ Vis 21
 Bottom Packer Depth 3669 Wt. Pipe Run _____ WL 818
 Total Depth 3691 Chlorides _____ ppm System LCM 1

Blow Description Weak 1/2" blow buildy to 6"
IST NO blow
FF weak surface blow building to 1 1/2"
FSI - no blow

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|------------------------|------|------|--------|------|
| <u>40</u> | <u>OCM</u> | | | | |
| <u>80</u> | <u>thick heavy oil</u> | | | | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 120 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic Test 1150 T-On Location 1215
 (B) First Initial Flow Jars _____ T-Started 1220
 (C) First Final Flow Safety Joint _____ T-Open 1421
 (D) Initial Shut-In Circ Sub _____ T-Pulled 1721
 (E) Second Initial Flow Hourly Standby _____ T-Out _____
 (F) Second Final Flow Mileage 126 195.30 Comments _____
 (G) Final Shut-In Sampler _____
 (H) Final Hydrostatic Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Initial Open 45 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1345.30
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1345.30

Approved By _____ Our Representative Paul Simpson

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48667

Well Name & No. Bonsle 14-1 Test No. 3 Date 10/17/12
 Company H & C Elevation 2353 KB 2348 GL
 Address _____
 Co. Rep / Geo. Marc Powning Rig AK #3
 Location: Sec. _____ Twp. _____ Rge. _____ Co. _____ State _____

Interval Tested 3728-3798 Zone Tested LKC H-5

Anchor Length 70 Drill Pipe Run _____ Mud Wt. _____

Top Packer Depth 3723 Drill Collars Run _____ Vis _____

Bottom Packer Depth 3728 Wt. Pipe Run _____ WL _____

Total Depth 3798 Chlorides _____ ppm System LCM _____

Blow Description 1" blow building to bottom of bucket in 4 minutes

ISI - weak surface blow

FF - surface blow building to bottom of bucket in 5 minutes

FSI weak surface blow

Rec 1240 Feet of oil mud water %gas %oil %water %mud

Rec 300 Feet of GIP %gas %oil %water %mud

Rec _____ Feet of reversed into 1/4 %gas %oil %water %mud

Rec _____ Feet of dumped 4 BBL muddy water %gas %oil %water %mud

Rec _____ Feet of still had 8 BBL of oil %gas %oil %water %mud

Rec Total 1240 BHT _____ Gravity 31 API RW 17 @ 62 °F Chlorides _____ ppm

(A) Initial Hydrostatic 1851 Test 1150 T-On Location 0910

(B) First Initial Flow 79 Jars _____ T-Started 0936

(C) First Final Flow 314 Safety Joint _____ T-Open 1125

(D) Initial Shut-In 1295 Circ Sub _____ 50 T-Pulled 1355

(E) Second Initial Flow 335 Hourly Standby _____ T-Out _____

(F) Second Final Flow 503 Mileage 12.6 195.30 Comments _____

(G) Final Shut-In 1284 Sampler _____

(H) Final Hydrostatic 1748 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____

Initial Shut-In 45 Extra Packer _____ Extra Copies _____

Final Flow 30 Extra Recorder _____ Sub Total 0

Final Shut-In 45 Day Standby _____ Total 1395.30

Approved By _____ Our Representative Paul Singer

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

Marc Downing
Consulting Petroleum Geologist

1411 Washington Circle
Hays, KS 67601
Phone: 620-428-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY **H+C Oil Operations, Inc.**

WELL **Foster #14-1**

FIELD **Lislickat**

LOCATION **990 FNL + 99d Fur**

SEC. **14** TWP. **T5** RGE. **Z34**

COUNTY **Graham**

STATE **Kansas**

OPERATOR **H+C Oil Operations, Inc.**

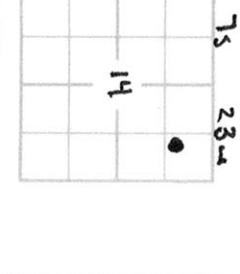
CONTRACTOR **American Eagle Rig #3**

DATE **10-12-12**

SURF. **4 1/2 @ 28d**

TOTAL DEPTH DRILLERS: **3863**

TOTAL DEPTH LOG: **3846**



PRODUCTION **LKC**

ELEVATION **DF 2353**

GL **2344**

Drilling Measured From: **K8**

Sample Speed From: **3350** to **TD**

Drilling Time From: **3250** to **TD**

Geological Supervision From: **3350** to **TD**

Wellbit Geologist: **None (Downing)**

Wellbit Survey: **Log-Tech (Frontier)**

CNL/CDL: **- OIL**

MEL: **- Source**

| FORMATION | SAMPLE TOP | ELECTRIC LOG TOP | SUB-SEA DATUM | STRUCTURAL POSITION |
|-----------|------------|------------------|---------------|---------------------|
| Topoka | 2034 | 2538 | 1283 | -1 |
| Heebner | 2073 | 2010 | | NA |
| Taranta | 3389 | 3386 | | NA |
| Heebner | 3599 | 3594 | | 4u |
| LKC | 3613 | 3612 | | 4T |
| LKC | 3629 | 3624 | | 4T |
| BKC | 3823 | 3823 | | NA |

REFERENCE WELL FOR STRUCTURE: **Imperial Oil of KS**
Hole 'B' #2 C-524-524 Sec. 11-T5-234

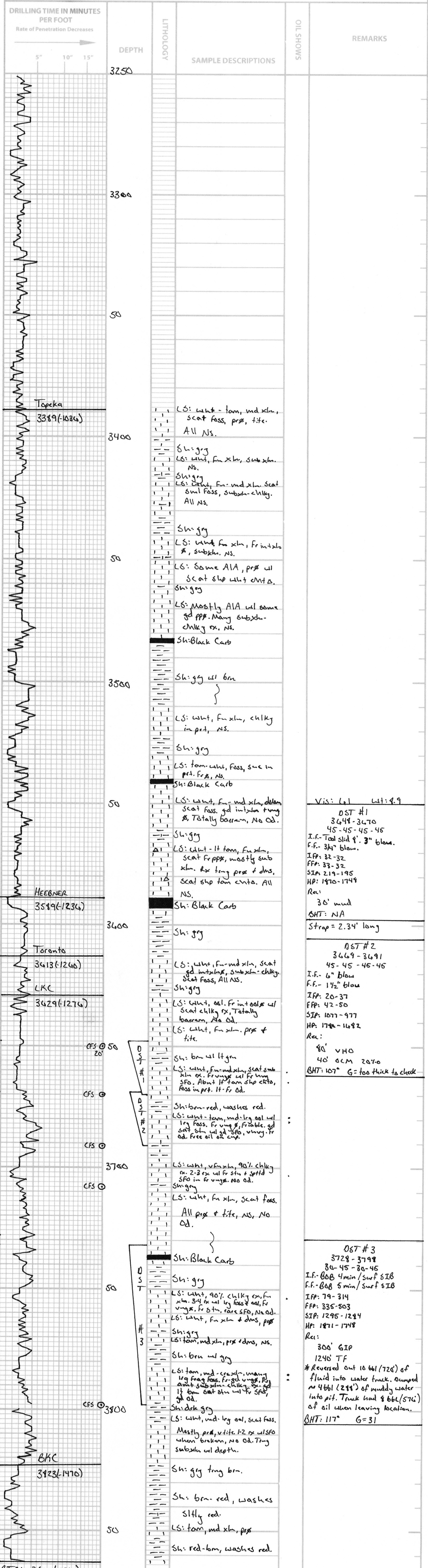
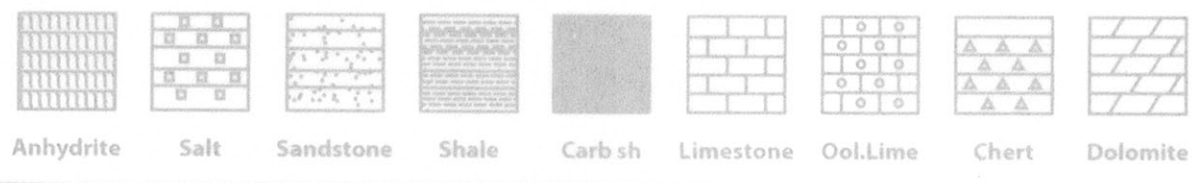
DRILL STEM TESTS

| No. | Interval | RP/Time | ISF/Time | FFP/Time | ESP/Time | HR-PP | RECOVERY |
|-----|----------|---------|----------|----------|----------|-------|----------|
| | | | | | | | |

REMARKS AND RECOMMENDATIONS:
Due to structural position, DST recovery & log evaluation, it was decided to set 5 1/2" production casing for completion.

Perforate:
LKC "K": 3184-89 (DST # 3)
LKC "D": 3619-83 (DST # 1)

LEGEND



Vis: Lcl Lst: 9.9

DST #1
3649-3670
45-45-45-45
I.F.- Tool slid 9". 3" blow.
F.F.- 3 1/2" blow.
IFP: 32-32
FFP: 33-32
SIP: 219-195
HP: 1470-1749
Rec:
30' mud
DST: NA
Strap = 2.34' long

DST #2
3669-3691
45-45-45-45
I.F.- 6" blow
F.F.- 1 1/2" blow
IFP: 20-37
FFP: 42-50
SIP: 1077-977
HP: 1780-1682
Rec:
40' vho
40' ccm 20%
BHT: 107" G= too thick to check

DST #3
3728-3798
80-45-80-45
I.F.- 80B 4min/Surf 81B
F.F.- 80B 5min/Surf 81B
IFP: 79-314
FFP: 335-503
SIP: 1295-1284
HP: 1871-1748
Rec:
300' GIP
1240' TF
* Reversed out 10 bbl (720') of fluid into water truck. Dumped no 4 bbl (294') of muddy water into pit. Truck had 8 bbl (576') of oil when leaving location.
BHT: 117" G= 31

Marc Downing