



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1167207
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: _____



1167207

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: <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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|

| | |
|-----------|--------------------------|
| Form | ACO1 - Well Completion |
| Operator | H & C Oil Operating Inc. |
| Well Name | Billips 19-1 |
| Doc ID | 1167207 |

Tops

| Name | Top | Datum |
|----------------|------|-------|
| Top Anhydrite | 1691 | +444 |
| Base Anhydrite | 1722 | +413 |
| Topeka | 3101 | -966 |
| Heebner | 3318 | -1183 |
| Toronto | 3341 | -1206 |
| LKC | 3356 | -1221 |
| BKC | 3360 | -1225 |
| Arbuckle | 3710 | -1575 |



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Billips #19-1

19-8s-21w Graham KS

Start Date: 2013.11.02 @ 02:26:00

End Date: 2013.11.02 @ 12:21:00

Job Ticket #: 54492 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.06 @ 14:39:33



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc
PO Box 86
Plainville KS 67663
ATTN: Marc Downing

19-8s-21w Graham KS

Billips #19-1

Job Ticket: 54492

DST#: 1

Test Start: 2013.11.02 @ 02:26:00

GENERAL INFORMATION:

Formation: **LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:18:15
 Time Test Ended: 12:21:00
 Interval: **3348.00 ft (KB) To 3384.00 ft (KB) (TVD)**
 Total Depth: 3384.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Cody Bloedorn
 Unit No: 53
 Reference Elevations: 2130.00 ft (KB)
 2125.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6799

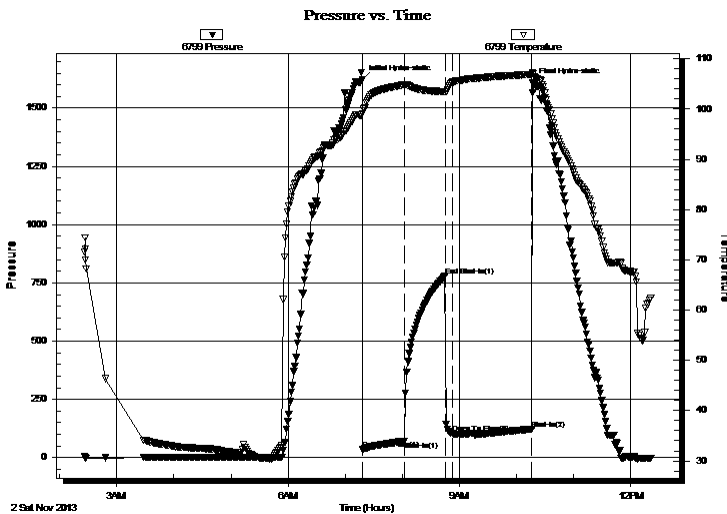
Inside

Press @ Run Depth: 71.47 psig @ 3349.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.02 End Date: 2013.11.02 Last Calib.: 2013.11.02
 Start Time: 02:26:05 End Time: 12:21:00 Time On Btm: 2013.11.02 @ 07:17:45
 Time Off Btm: 2013.11.02 @ 10:16:45

TEST COMMENT: 45 - IF- B.O.B. in 24 Minutes
 45 - IS- No return
 30 - FF- 1 1/2" blow
 60 - FS- No return for 10 minutes, 1 1/2" return

PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1623.59 | 99.03 | Initial Hydro-static |
| 1 | 34.53 | 99.08 | Open To Flow (1) |
| 45 | 71.47 | 104.88 | Shut-In(1) |
| 87 | 778.16 | 103.47 | End Shut-In(1) |
| 95 | 102.89 | 105.31 | Open To Flow (2) |
| 178 | 122.57 | 106.87 | Shut-In(2) |
| 179 | 1610.43 | 107.30 | Final Hydro-static |



Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------------|--------------|
| 62.00 | Mud - w ith oil spots, 100%M | 0.87 |
| 248.00 | WM - w ith oil spots, 20%W, 80%M | 3.48 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54492

DST#: 1

ATTN: Marc Downing

Test Start: 2013.11.02 @ 02:26:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|-----------------------------------|
| Drill Pipe: | Length: 3345.00 ft | Diameter: 3.80 inches | Volume: 46.92 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: lb |
| | | | <u>Total Volume: 46.92 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 18.00 ft | | | String Weight: Initial lb |
| Depth to Top Packer: | 3348.00 ft | | | Final lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 36.00 ft | | | |
| Tool Length: | 57.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments: Driller turned tool too many times bc table kept spinning. We lost count of turns bc of it.

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 3328.00 | |
| Shut In Tool | 5.00 | | | 3333.00 | |
| Hydraulic tool | 5.00 | | | 3338.00 | |
| Packer | 5.00 | | | 3343.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3348.00 | |
| Stubb | 1.00 | | | 3349.00 | |
| Recorder | 0.00 | 6799 | Inside | 3349.00 | |
| Recorder | 0.00 | 8648 | Outside | 3349.00 | |
| Perforations | 32.00 | | | 3381.00 | |
| Bullnose | 3.00 | | | 3384.00 | 36.00 Bottom Packers & Anchor |
| Total Tool Length: | 57.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54492

DST#: 1

ATTN: Marc Downing

Test Start: 2013.11.02 @ 02:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------------|---------------|
| 62.00 | Mud - with oil spots, 100%M | 0.870 |
| 248.00 | WM - with oil spots, 20%W, 80%M | 3.479 |

Total Length: 310.00 ft

Total Volume: 4.349 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

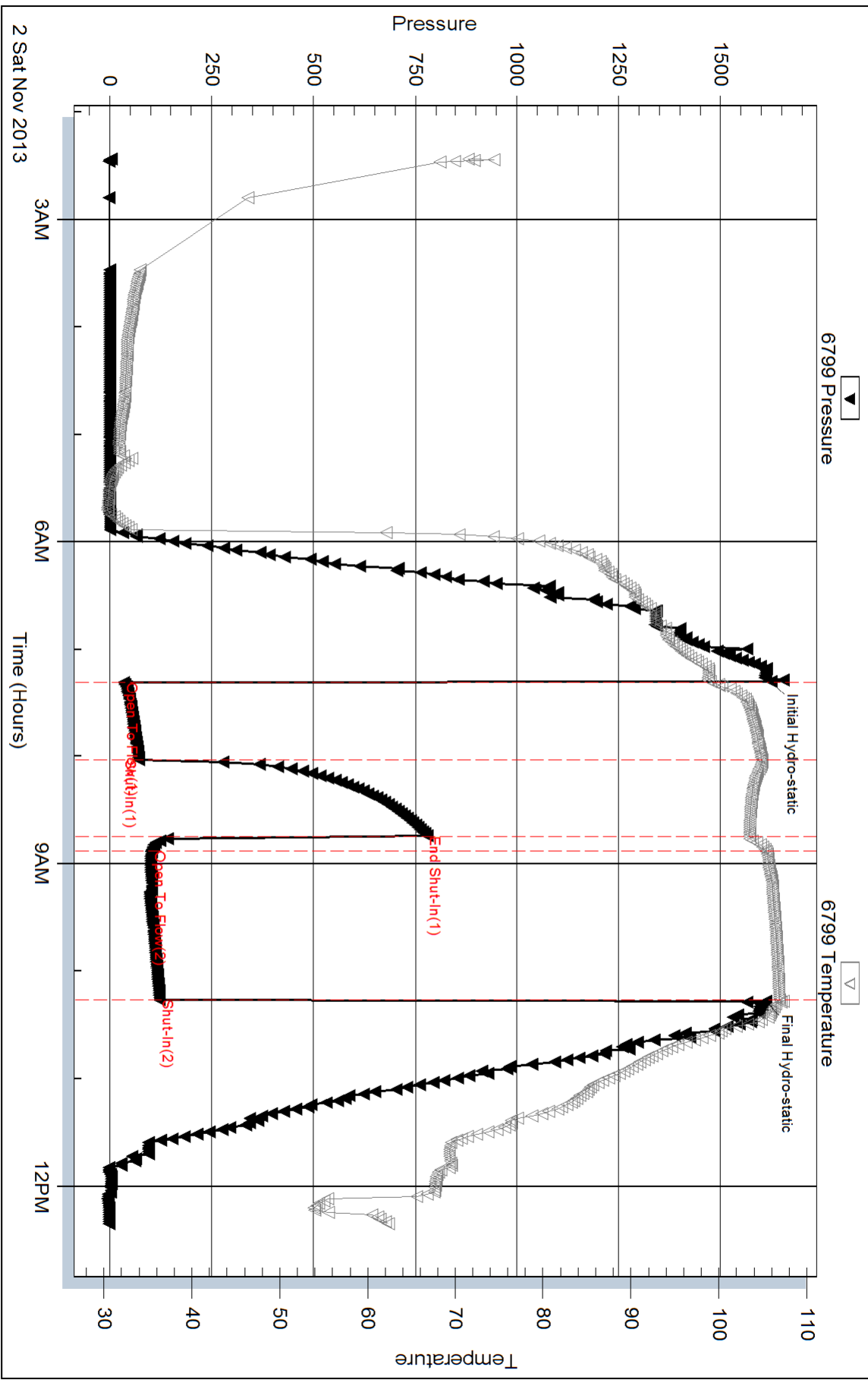
Serial #:

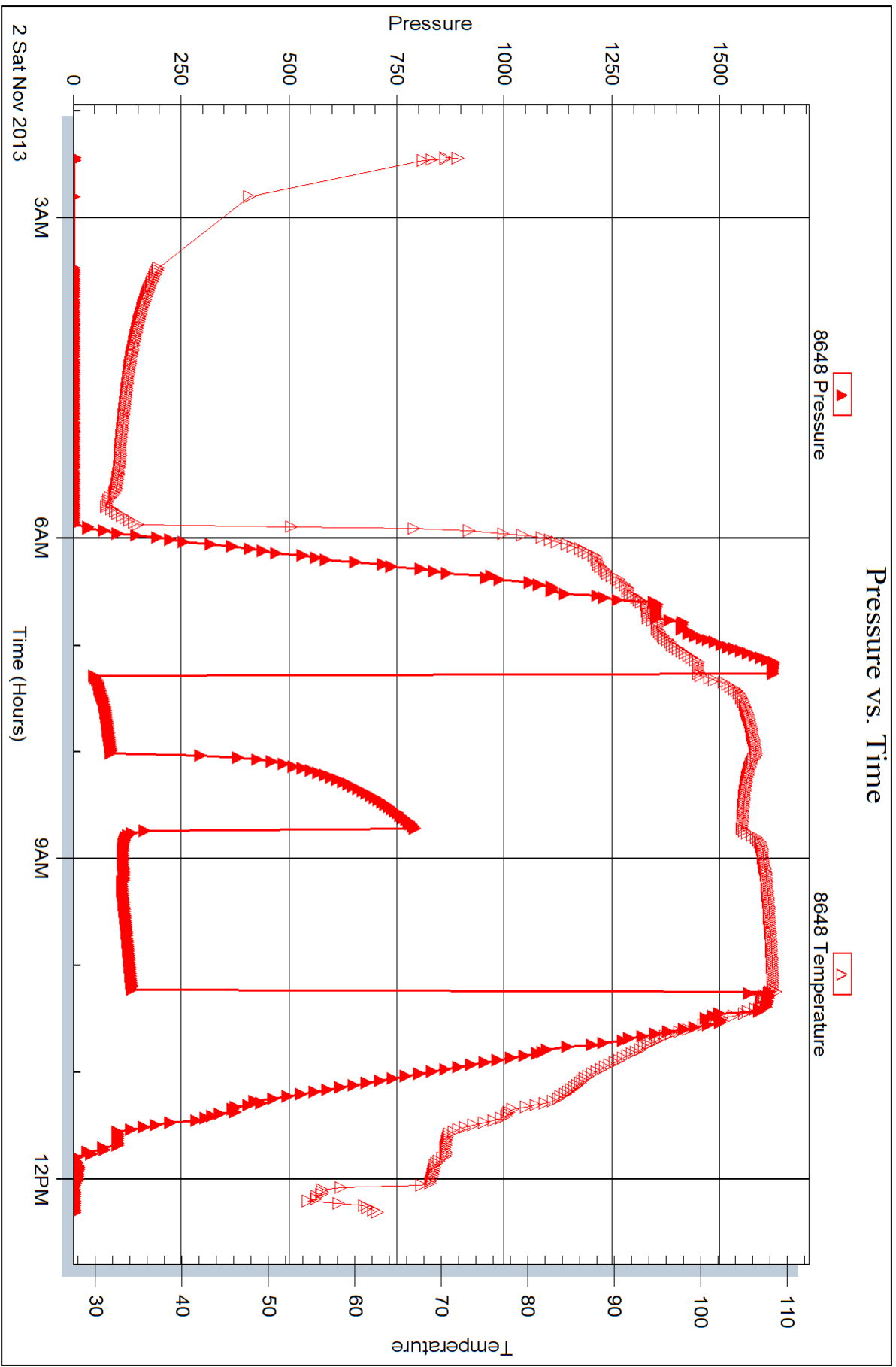
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Billips #19-1

19-8s-21w Graham KS

Start Date: 2013.11.02 @ 18:50:00

End Date: 2013.11.03 @ 01:03:15

Job Ticket #: 54493 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.06 @ 14:38:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc
 PO Box 86
 Plainville KS 67663
 ATTN: Marc Downing

19-8s-21w Graham KS

Billips #19-1

Job Ticket: 54493

DST#: 2

Test Start: 2013.11.02 @ 18:50:00

GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:04:30
 Tester: Cody Bloedorn
 Time Test Ended: 01:03:15
 Unit No: 53
 Interval: **3379.00 ft (KB) To 3407.00 ft (KB) (TVD)**
 Reference Elevations: 2130.00 ft (KB)
 Total Depth: 3407.00 ft (KB) (TVD)
 2125.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

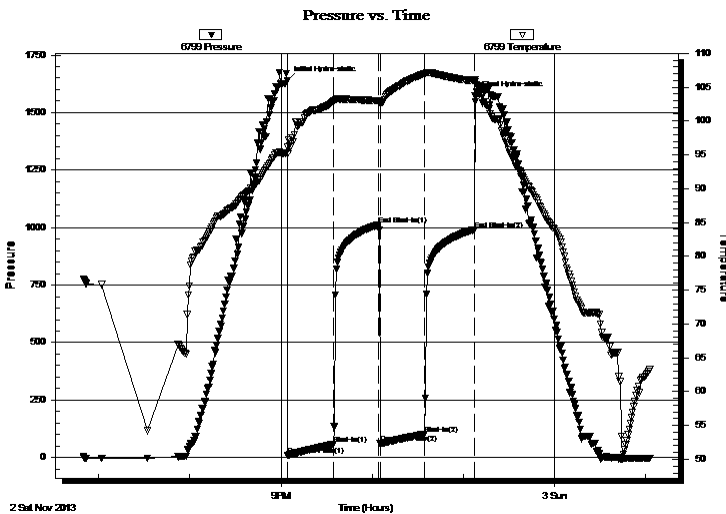
Serial #: 6799

Inside

Press @ Run Depth: 101.75 psig @ 3380.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.02 End Date: 2013.11.03 Last Calib.: 2013.11.03
 Start Time: 18:50:05 End Time: 01:03:14 Time On Btm: 2013.11.02 @ 21:04:15
 Time Off Btm: 2013.11.02 @ 23:07:45

TEST COMMENT: 30 - IF- 1/4" blow
 30 - IS- No return
 30 - FF- Surged and died
 30 - FS- No return

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1639.75 | 96.13 | Initial Hydro-static |
| 1 | 10.10 | 95.13 | Open To Flow (1) |
| 31 | 57.38 | 102.90 | Shut-In(1) |
| 61 | 1012.47 | 102.97 | End Shut-In(1) |
| 61 | 60.19 | 102.57 | Open To Flow (2) |
| 90 | 101.75 | 106.96 | Shut-In(2) |
| 123 | 991.50 | 105.96 | End Shut-In(2) |
| 124 | 1571.92 | 106.14 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 62.00 | Mud, 100%M | 0.87 |
| 124.00 | MW - show of oil, 10%M, 90%W | 1.74 |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54493

DST#: 2

ATTN: Marc Downing

Test Start: 2013.11.02 @ 18:50:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3376.00 ft | Diameter: 3.80 inches | Volume: 47.36 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: 42000.00 lb |
| | | | <u>Total Volume: 47.36 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 18.00 ft | | | String Weight: Initial 38000.00 lb |
| Depth to Top Packer: | 3379.00 ft | | | Final 38000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 28.00 ft | | | |
| Tool Length: | 49.00 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 | | | 3359.00 | |
| Shut In Tool | 5.00 | | | 3364.00 | |
| Hydraulic tool | 5.00 | | | 3369.00 | |
| Packer | 5.00 | | | 3374.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3379.00 | |
| Stubb | 1.00 | | | 3380.00 | |
| Recorder | 0.00 | 6799 | Inside | 3380.00 | |
| Recorder | 0.00 | 8648 | Outside | 3380.00 | |
| Perforations | 24.00 | | | 3404.00 | |
| Bullnose | 3.00 | | | 3407.00 | 28.00 Bottom Packers & Anchor |
| Total Tool Length: | 49.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54493

DST#: 2

ATTN: Marc Downing

Test Start: 2013.11.02 @ 18:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------------|---------------|
| 62.00 | Mud, 100%M | 0.870 |
| 124.00 | MW - show of oil, 10%M, 90%W | 1.739 |

Total Length: 186.00 ft Total Volume: 2.609 bbl

Num Fluid Samples: 0

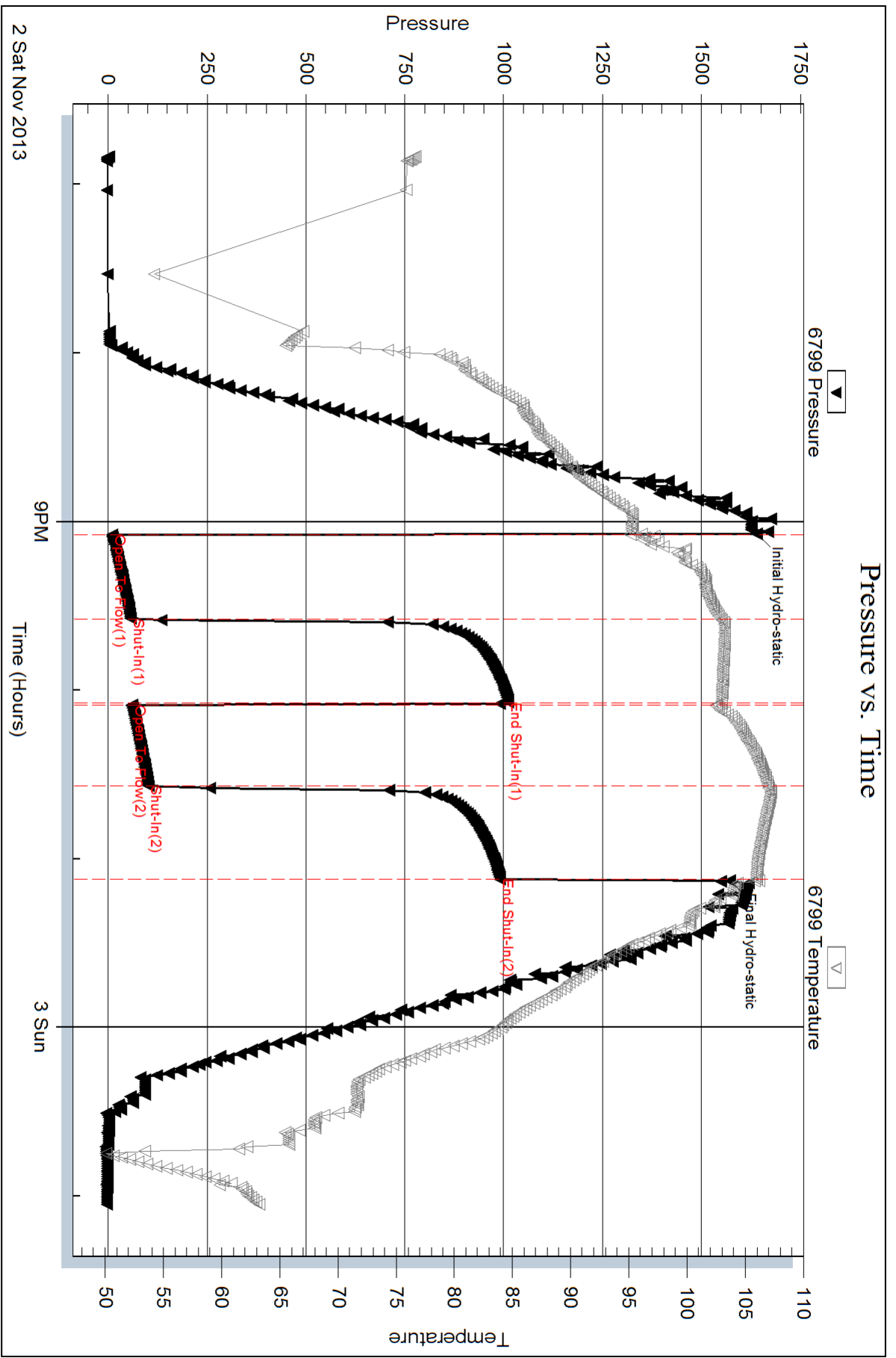
Num Gas Bombs: 0

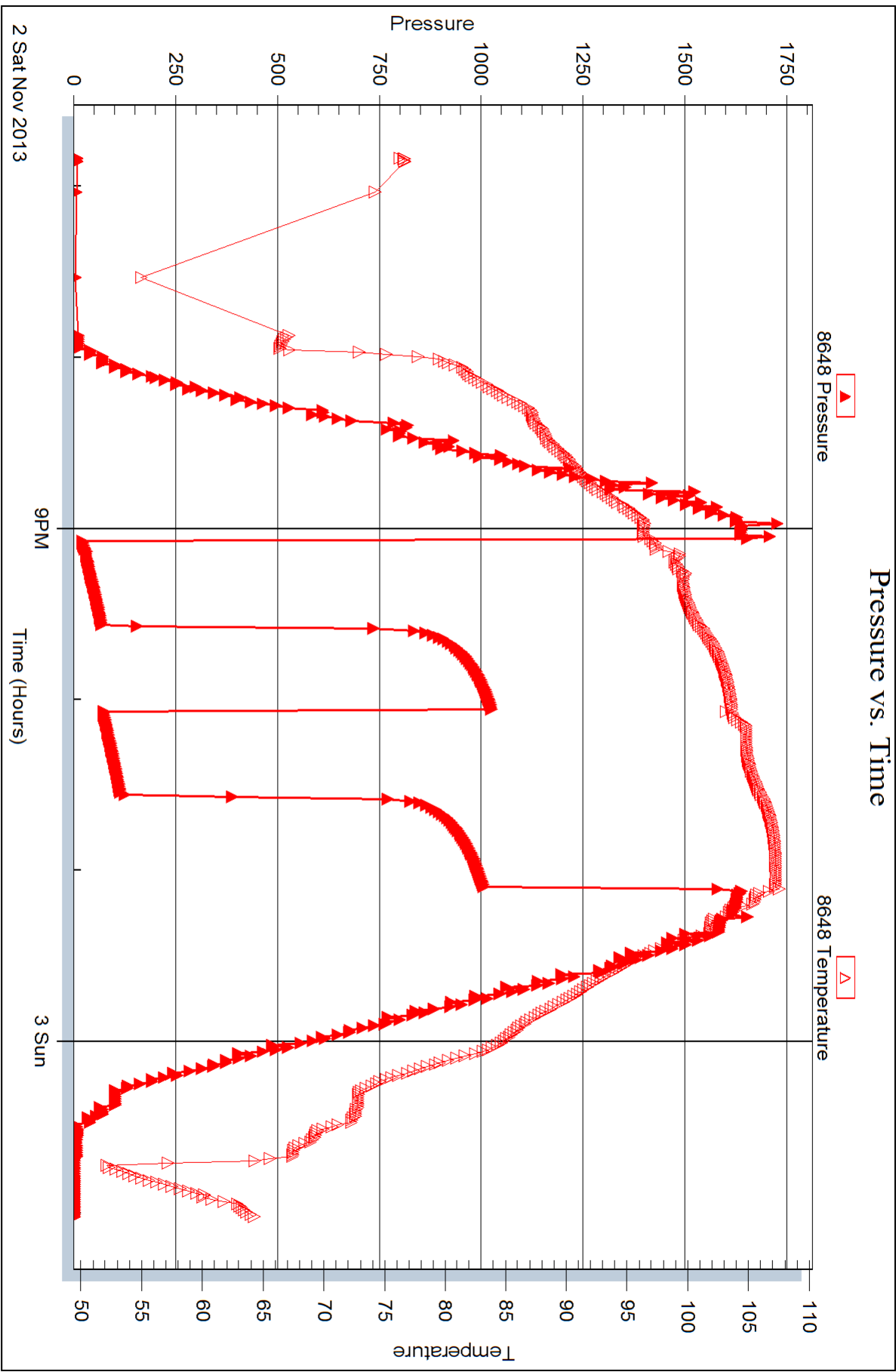
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .26 @ 60 Degrees = 30000







DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Billips #19-1

19-8s-21w Graham KS

Start Date: 2013.11.03 @ 09:40:00

End Date: 2013.11.03 @ 16:33:00

Job Ticket #: 54494 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.06 @ 14:38:31

H&C Oil Operating, Inc
19-8s-21w Graham KS
Billips #19-1
DST # 3
LKC "D-F"
2013.11.03



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54494

DST#: 3

ATTN: Marc Downing

Test Start: 2013.11.03 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC "D-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:25:00

Time Test Ended: 16:33:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 53

Interval: 3402.00 ft (KB) To 3446.00 ft (KB) (TVD)

Reference Elevations: 2130.00 ft (KB)

Total Depth: 3446.00 ft (KB) (TVD)

2125.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ RunDepth: 11.67 psig @ 3438.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.03

End Date:

2013.11.03

Last Calib.:

2013.11.03

Start Time: 09:40:05

End Time:

16:32:59

Time On Btm:

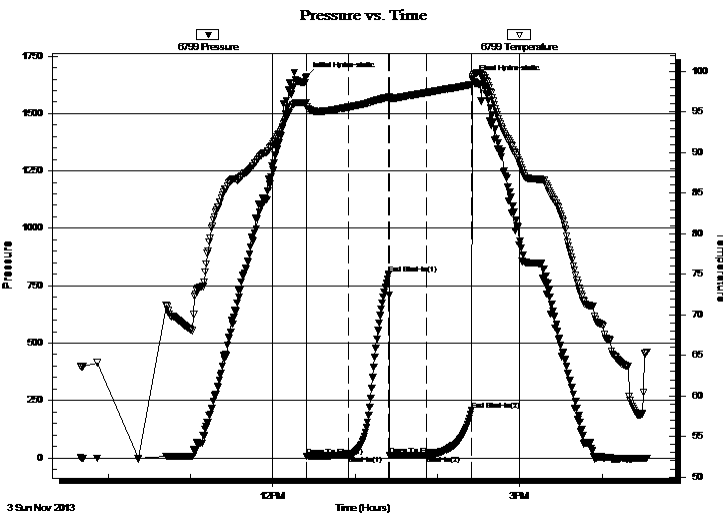
2013.11.03 @ 12:24:45

Time Off Btm:

2013.11.03 @ 14:25:30

TEST COMMENT: 30 - IF- 1/4" blow
30 - IS- No return
30 - FF- 1/4" blow
30 - FS- No return

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1660.09 | 96.17 | Initial Hydro-static |
| 1 | 7.75 | 95.71 | Open To Flow (1) |
| 31 | 9.95 | 95.60 | Shut-In(1) |
| 60 | 800.99 | 96.85 | End Shut-In(1) |
| 61 | 10.53 | 96.69 | Open To Flow (2) |
| 88 | 11.67 | 97.40 | Shut-In(2) |
| 121 | 208.11 | 98.40 | End Shut-In(2) |
| 121 | 1647.76 | 99.14 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------|--------------|
| 15.00 | VSOCM, 5%O, 95%M | 0.21 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54494

DST#: 3

ATTN: Marc Downing

Test Start: 2013.11.03 @ 09:40:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3407.00 ft | Diameter: 3.80 inches | Volume: 47.79 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: 44000.00 lb |
| | | | <u>Total Volume: 47.79 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 26.00 ft | | | String Weight: Initial 40000.00 lb |
| Depth to Top Packer: | 3402.00 ft | | | Final 40000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 44.00 ft | | | |
| Tool Length: | 65.00 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 | | | 3382.00 | |
| Shut In Tool | 5.00 | | | 3387.00 | |
| Hydraulic tool | 5.00 | | | 3392.00 | |
| Packer | 5.00 | | | 3397.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3402.00 | |
| Stubb | 1.00 | | | 3403.00 | |
| Perforations | 2.00 | | | 3405.00 | |
| Change Over Sub | 1.00 | | | 3406.00 | |
| Drill Pipe | 31.00 | | | 3437.00 | |
| Change Over Sub | 1.00 | | | 3438.00 | |
| Recorder | 0.00 | 6799 | Inside | 3438.00 | |
| Recorder | 0.00 | 8648 | Outside | 3438.00 | |
| Perforations | 5.00 | | | 3443.00 | |
| Bullnose | 3.00 | | | 3446.00 | 44.00 Bottom Packers & Anchor |

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54494

DST#: 3

ATTN: Marc Downing

Test Start: 2013.11.03 @ 09:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------|---------------|
| 15.00 | VSOCM, 5%O, 95%M | 0.210 |

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

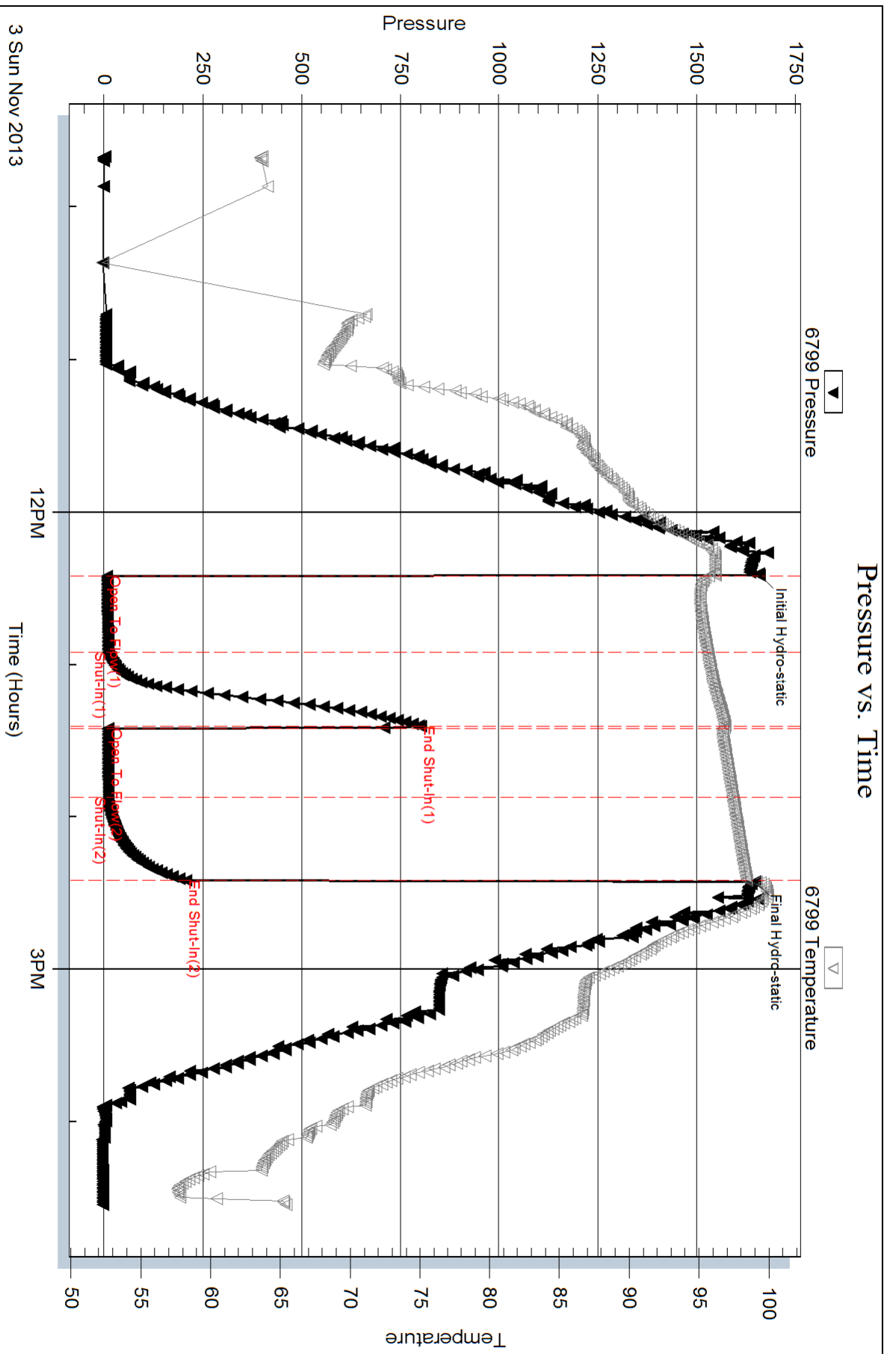
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

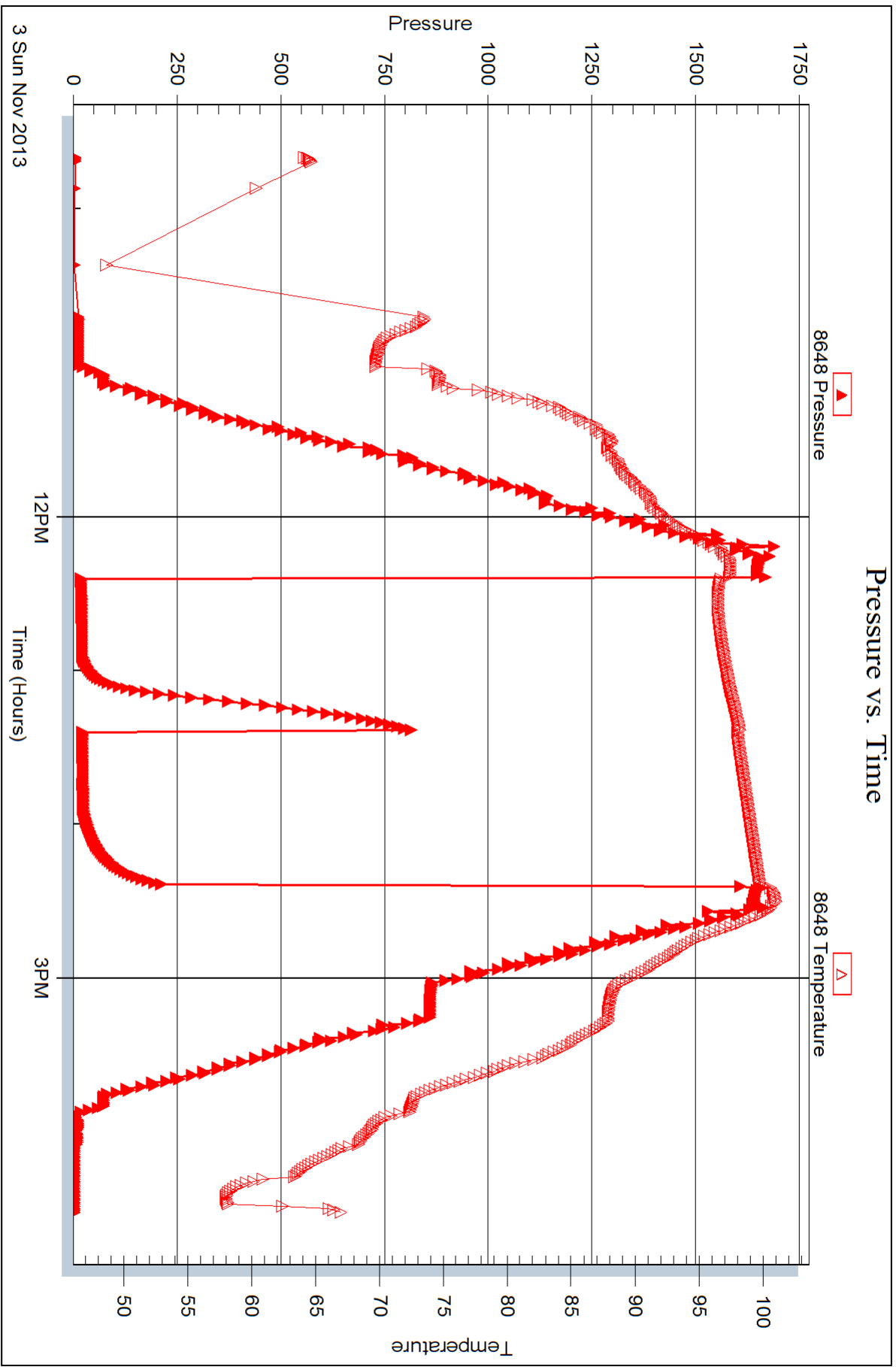


Serial #: 8648

Outside H&C Oil Operating, Inc

Billips #19-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54494

Printed: 2013.11.06 @ 14:38:34



DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Billips #19-1

19-8s-21w Graham KS

Start Date: 2013.11.04 @ 02:53:00

End Date: 2013.11.04 @ 10:00:30

Job Ticket #: 54495 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.06 @ 14:37:51



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54495

DST#: 4

ATTN: Marc Downing

Test Start: 2013.11.04 @ 02:53:00

GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:47:45

Time Test Ended: 10:00:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 53

Interval: 3498.00 ft (KB) To 3533.00 ft (KB) (TVD)

Reference Elevations: 2130.00 ft (KB)

Total Depth: 3533.00 ft (KB) (TVD)

2125.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 7.41 psig @ 3499.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.04

End Date: 2013.11.04

Last Calib.: 2013.11.04

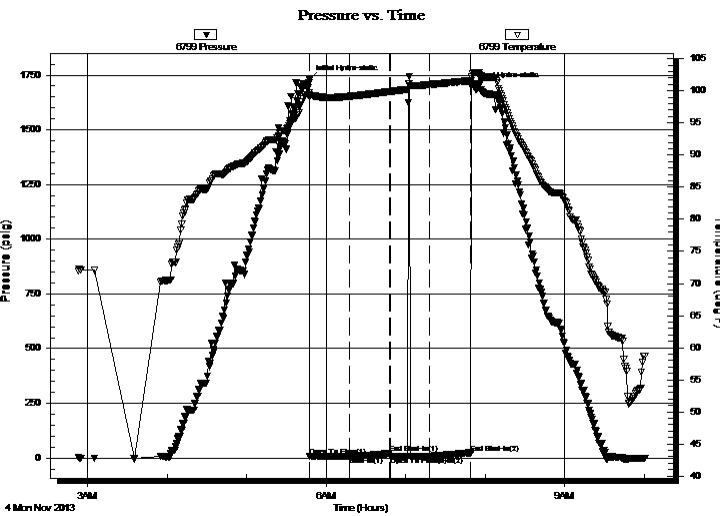
Start Time: 02:53:05

End Time: 10:00:29

Time On Btm: 2013.11.04 @ 05:47:30

Time Off Btm: 2013.11.04 @ 07:49:45

TEST COMMENT: 30 - IF- 3/4" blow
30 - IS- No return
30 - FF- No blow for 10 minutes. Flushed tool. Surged and died
30 - FS- No return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1727.39 | 99.74 | Initial Hydro-static |
| 1 | 6.06 | 99.29 | Open To Flow (1) |
| 30 | 6.33 | 99.12 | Shut-In(1) |
| 61 | 20.81 | 99.88 | End Shut-In(1) |
| 61 | 6.14 | 99.89 | Open To Flow (2) |
| 91 | 7.41 | 100.97 | Shut-In(2) |
| 122 | 21.75 | 101.59 | End Shut-In(2) |
| 123 | 1696.60 | 102.18 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 2.00 | Mud, spots of oil, 100%M | 0.03 |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54495

DST#: 4

ATTN: Marc Downing

Test Start: 2013.11.04 @ 02:53:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3501.00 ft | Diameter: 3.80 inches | Volume: 49.11 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: 44000.00 lb |
| | | | <u>Total Volume: 49.11 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 24.00 ft | | | String Weight: Initial 40000.00 lb |
| Depth to Top Packer: | 3498.00 ft | | | Final 40000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 35.00 ft | | | |
| Tool Length: | 56.00 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 | | | 3478.00 | |
| Shut In Tool | 5.00 | | | 3483.00 | |
| Hydraulic tool | 5.00 | | | 3488.00 | |
| Packer | 5.00 | | | 3493.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3498.00 | |
| Stubb | 1.00 | | | 3499.00 | |
| Recorder | 0.00 | 6799 | Inside | 3499.00 | |
| Recorder | 0.00 | 8648 | Outside | 3499.00 | |
| Perforations | 31.00 | | | 3530.00 | |
| Bullnose | 3.00 | | | 3533.00 | 35.00 Bottom Packers & Anchor |
| Total Tool Length: | 56.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc

19-8s-21w Graham KS

PO Box 86
Plainville KS 67663

Billips #19-1

Job Ticket: 54495

DST#: 4

ATTN: Marc Downing

Test Start: 2013.11.04 @ 02:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------------------|---------------|
| 2.00 | Mud, spots of oil, 100%M | 0.028 |

Total Length: 2.00 ft Total Volume: 0.028 bbl

Num Fluid Samples: 0

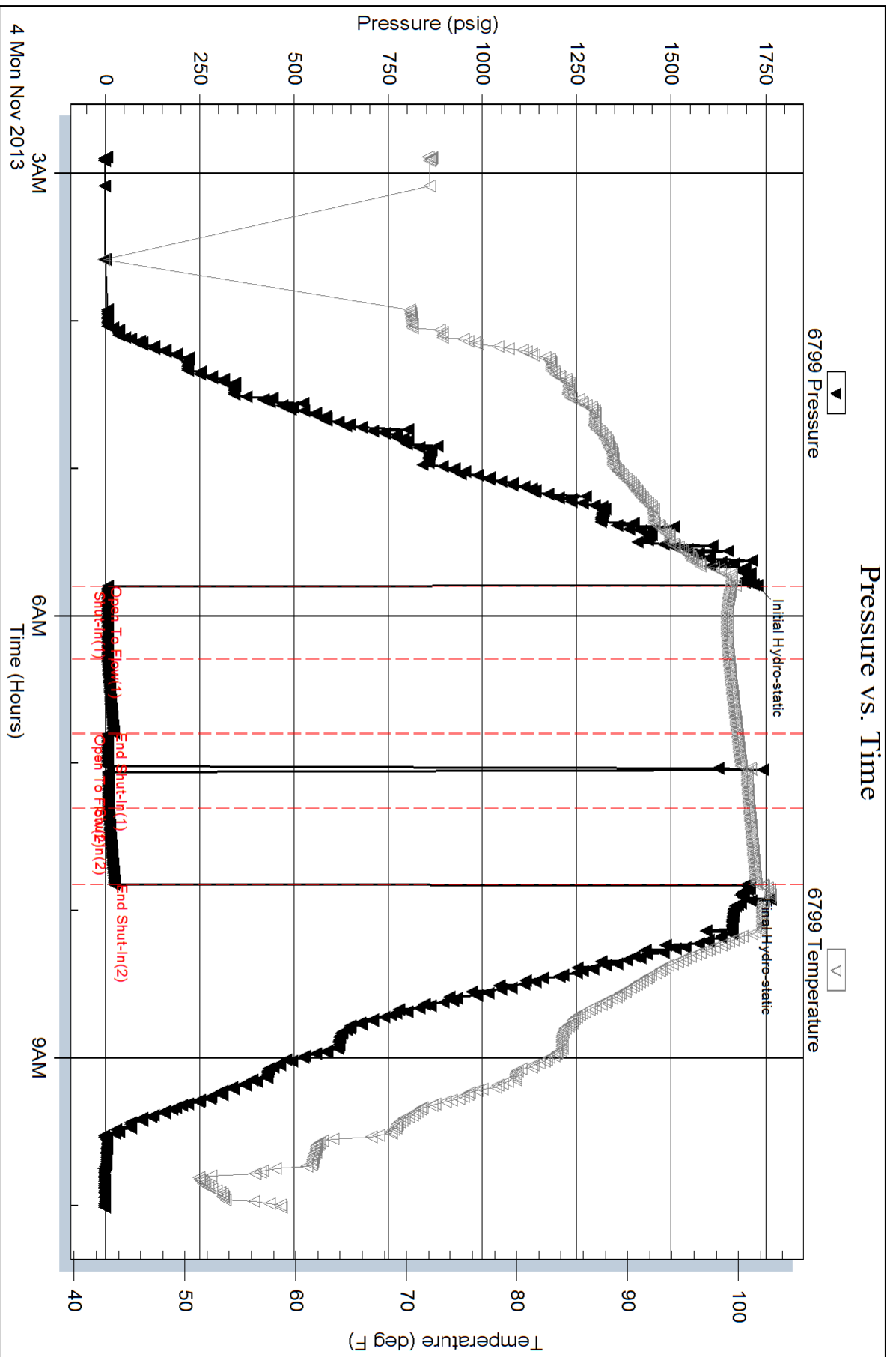
Num Gas Bombs: 0

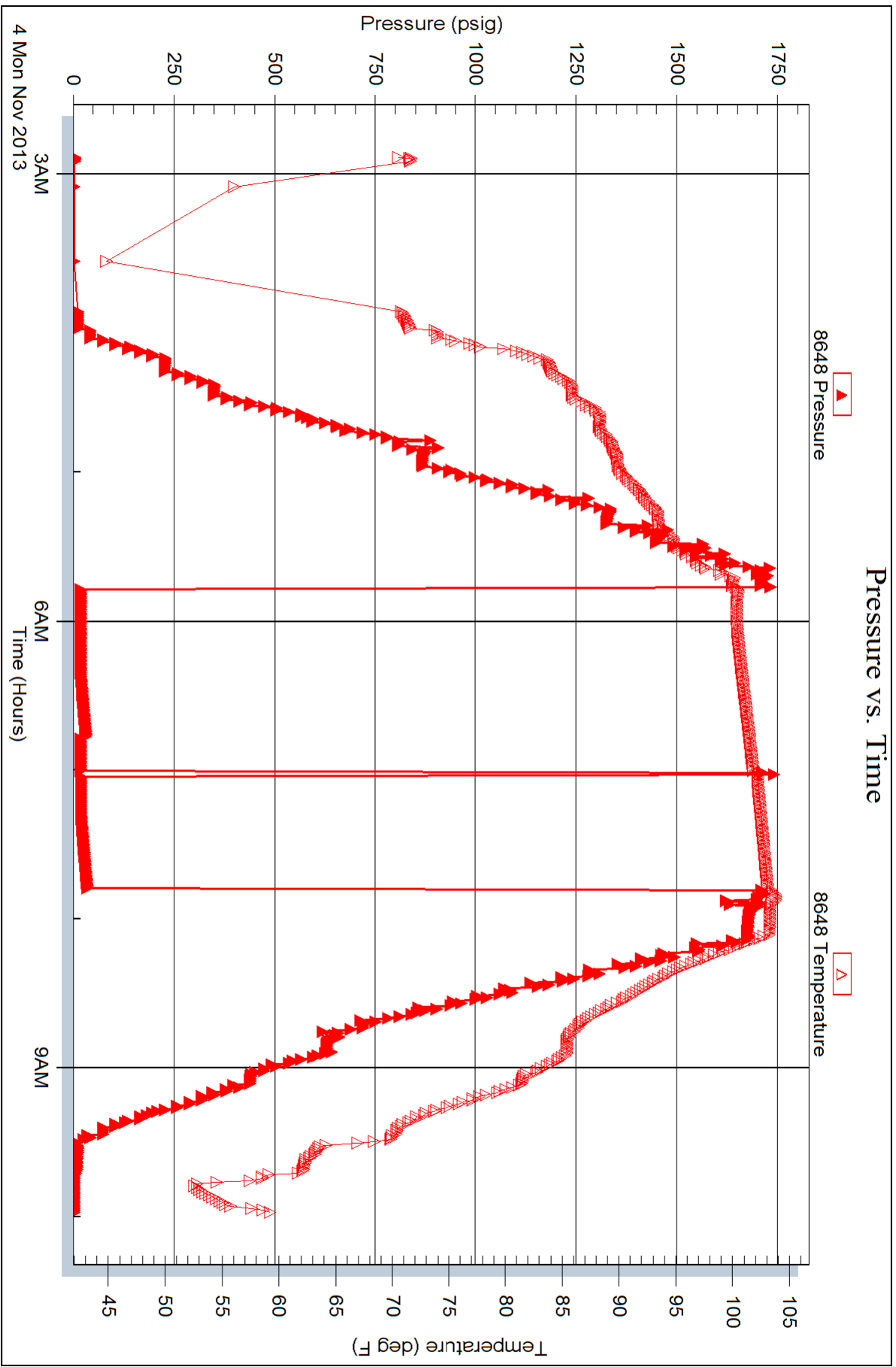
Serial #:

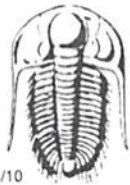
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54492**

Well Name & No. ~~#8000~~ **Billips 19-1** Test No. **1** Date **11-2-13**
 Company **H+C oil operating Inc** Elevation **2130** KB **2125** GL
 Address **Po Box 86, Plainville KS, 67663**
 Co. Rep / Geo. **Marc Downing** Rig **American Eagle #3**
 Location: Sec. **19** Twp. **8s** Rge. **21w** Co. **Graham** State **KS**

Interval Tested **3348-3384** Zone Tested **LKC "A"**
 Anchor Length **36'** Drill Pipe Run **3345'** Mud Wt. **8.6**
 Top Packer Depth **3343** Drill Collars Run **—** Vis **50**
 Bottom Packer Depth **3348** Wt. Pipe Run **—** WL **5.4**
 Total Depth **3384** Chlorides **1200** ppm System LCM **—**

Blow Description **IF- B.O.B. in 24 minutes**
ISI- No return
FF- 1 1/2" blow
FSI- No return for 10 minutes 1 1/2" return

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|---------------------------|------|-----------|------------|------|
| 62 | Mud with oil spots | | | 100 | |
| 248 | WM- oil spots | | 20 | 80 | |
| | | | | | |
| | | | | | |
| | | | | | |

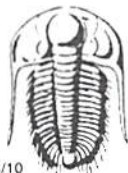
Rec Total **310'** BHT **106°** Gravity **—** API RW **—** @ **—** °F Chlorides **—** ppm

(A) Initial Hydrostatic **1623** Test **950** T-On Location **1:20am**
 (B) First Initial Flow **34** Jars **—** T-Started **2:26am**
 (C) First Final Flow **71** Safety Joint **—** T-Open **7:15am**
 (D) Initial Shut-In **778** Circ Sub **—** T-Pulled **10:15am**
 (E) Second Initial Flow **102** Hourly Standby **—** T-Out **12:21pm**
 (F) Second Final Flow **122** Mileage **122R** 189.10 Comments **No 2nd shut in**
 (G) Final Shut-In **—** Sampler **—** **tool turned too many times**
 (H) Final Hydrostatic **1610** Straddle **—** **by rig.** Ruined Shale Packer **—**
 Shale Packer **—** Ruined Packer **—**
 Extra Packer **—** Extra Copies **—**

Initial Open **45**
 Initial Shut-In **45**
 Final Flow **45**
 Final Shut-In **45**
 Sub Total **1139.10**
 Total **1139.10**
 MP/DST Disc't **—**

Approved By _____ Our Representative **Cody [Signature]**

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54493

Well Name & No. Billips 19-1 Test No. 2 Date 11-2-13
 Company H&C Oil Operating Inc Elevation 2130 KB 2125 GL
 Address Po Box 86, Plainville KS, 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 19 Twp. 8S Rge. 21W Co. Graham State KS

Interval Tested 3379 - 3407 Zone Tested LKC "C"
 Anchor Length 28' Drill Pipe Run 3376' Mud Wt. 9.0
 Top Packer Depth 3374 Drill Collars Run — Vis 60
 Bottom Packer Depth 3379 Wt. Pipe Run — WL 5.4
 Total Depth 3407 Chlorides 1200 ppm System LCM —

Blow Description IF - 1/4" blow died in 17 minutes
ISI - No return
FF - Surged & died
FSI - No return

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|-------------------------|------|-----------|------------|------|
| <u>124</u> | <u>MW - show of oil</u> | | <u>90</u> | <u>10</u> | |
| <u>62</u> | <u>Mud</u> | | | <u>100</u> | |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 186 BHT 105° Gravity — API RW .26 @ 60° F Chlorides 30,000 ppm

| | | |
|-------------------------------------|-------------------------------------------------------------------------|------------------------------|
| (A) Initial Hydrostatic <u>1639</u> | <input checked="" type="checkbox"/> Test <u>1150</u> | T-On Location <u>6:24 pm</u> |
| (B) First Initial Flow <u>10</u> | <input type="checkbox"/> Jars | T-Started <u>6:50 pm</u> |
| (C) First Final Flow <u>57</u> | <input type="checkbox"/> Safety Joint | T-Open <u>9:05 pm</u> |
| (D) Initial Shut-In <u>1012</u> | <input type="checkbox"/> Circ Sub | T-Pulled <u>11:05 pm</u> |
| (E) Second Initial Flow <u>60</u> | <input type="checkbox"/> Hourly Standby | T-Out <u>1:04 am</u> |
| (F) Second Final Flow <u>101</u> | <input checked="" type="checkbox"/> Mileage <u>122 RT</u> <u>189.10</u> | Comments |
| (G) Final Shut-In <u>991</u> | <input type="checkbox"/> Sampler | |
| (H) Final Hydrostatic <u>1571</u> | <input type="checkbox"/> Straddle | |

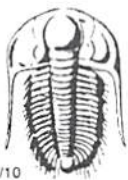
Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1339.10
 MP/DST Disc't

Sub Total 1339.10

Approved By _____ Our Representative Cody Bell

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54494

Well Name & No. Billips 19-1 Test No. 3 Date 11-3-13
 Company H&C Oil Operating Inc Elevation 2130 KB 2125 GL
 Address Po Box 86, Plainville KS, 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 19 Twp. 8s Rge. 21w Co. Graham State KS

Interval Tested 3402 - 3446 Zone Tested LKC "D-F"
 Anchor Length 44' Drill Pipe Run 3407' Mud Wt. 9.1
 Top Packer Depth 3997 Drill Collars Run — Vis 57
 Bottom Packer Depth 3402 Wt. Pipe Run — WL 5.8
 Total Depth 3446 Chlorides 1,300 ppm System LCM —

Blow Description IF - 1/4" blow
ISI - No return
FF - 1/4" blow
FSI - No return

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|--------------|----------|------|-----------|------|
| <u>15</u> | <u>VSCCM</u> | <u>5</u> | | <u>95</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 15' BHT 98° Gravity — API RW — @ — °F Chlorides — ppm

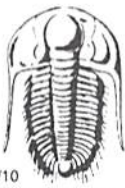
| | | |
|-------------------------------------|------------------------------------------------------------------|------------------------------|
| (A) Initial Hydrostatic <u>1660</u> | <input checked="" type="checkbox"/> Test <u>1150</u> | T-On Location <u>9:14 am</u> |
| (B) First Initial Flow <u>7</u> | <input type="checkbox"/> Jars | T-Started <u>9:40 am</u> |
| (C) First Final Flow <u>9</u> | <input type="checkbox"/> Safety Joint | T-Open <u>12:24 pm</u> |
| (D) Initial Shut-In <u>800</u> | <input type="checkbox"/> Circ Sub | T-Pulled <u>2:24 pm</u> |
| (E) Second Initial Flow <u>10</u> | <input type="checkbox"/> Hourly Standby | T-Out <u>4:32 pm</u> |
| (F) Second Final Flow <u>11</u> | <input checked="" type="checkbox"/> Mileage <u>122 RT</u> 189.10 | Comments |
| (G) Final Shut-In <u>208</u> | <input type="checkbox"/> Sampler | |
| (H) Final Hydrostatic <u>1647</u> | <input type="checkbox"/> Straddle | |

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

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1339.10
 MP/DST Disc't

Approved By _____ Our Representative Cody B. [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54495

Well Name & No. Billips 19-1 Test No. 4 Date 11-4-13
 Company H&C Oil Operating INC Elevation 2130 KB 2125 GL
 Address Po BOX 86, Plainville KS, 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 19 Twp. 8s Rge. 2/w Co. Graham State KS

Interval Tested 3498 - 3533 Zone Tested LKC "I & J"
 Anchor Length 35' Drill Pipe Run 3501 Mud Wt. 9.1
 Top Packer Depth 3493 Drill Collars Run — Vis 57
 Bottom Packer Depth 3498 Wt. Pipe Run — WL 5.8
 Total Depth 3533 Chlorides 1300 ppm System LCM —

Blow Description IF - 3/4" blow
IST - No return
FF - No blow for 10 min. Flushed tool. Surged & died
FSI - No return

| Rec | Feet of | %gas | %oil | %water | %mud |
|----------|---------------------------|------|------|------------|------|
| <u>2</u> | <u>Mud - Spots of oil</u> | | | <u>100</u> | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 2' BHT 101° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1727 Test 1150 T-On Location 2:29 am
 (B) First Initial Flow 6 Jars — T-Started 2:53 am
 (C) First Final Flow 6 Safety Joint — T-Open 5:47 am
 (D) Initial Shut-In 20 Circ Sub — T-Pulled 7:47 am
 (E) Second Initial Flow 6 Hourly Standby — T-Out 10:00 am
 (F) Second Final Flow 7 Mileage 122RT 378.20
 (G) Final Shut-In 21 Sampler —
 (H) Final Hydrostatic 1696 Straddle —

Initial Open 30 Shale Packer — Ruined Shale Packer —
 Initial Shut-In 30 Extra Packer — Ruined Packer —
 Final Flow 30 Extra Recorder — Sub Total 0
 Final Shut-In 30 Day Standby — Total 1528.20
 Accessibility — MP/DST Disc't —

Sub Total 1528.20

Approved By _____ Our Representative Cody Bloodorn

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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

November 06, 2013

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

Re: ACO1
API 15-065-23983-00-00
Billips 19-1
SE/4 Sec.19-08S-21W
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,
Charles Ramsay

COMPANY H+C Oil Operating, Inc.

WELL B-11:ps #19-1

FIELD W-1:sdcat

LOCATION 12S8 ECL + 17S6 FEL

SEC. 19 TWP. 4S RGE. 21W

COUNTY Graham

STATE Kansas

OPERATOR H+C Oil Operating, Inc.

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

CONTRACTOR American Energy, Rig #3

| PRODUCTION | KB | 2135 |
|------------|-------|------|
| ELEVATION | DF | 2130 |
| SEC. | TWP. | RGE. |
| COUNTY | STATE | |

| FORMATION | SAMPLE NO. | ELECTRIC LOG | SUBSEA POSITION | STRUCTURAL POSITION |
|----------------|------------|--------------|-----------------|---------------------|
| Top Anhydrite | 1746 | 1791 | +444 | +3 |
| Base Anhydrite | 1743 | 1722 | +413 | NA |
| Tapeka | 3105 | 3101 | -964 | +9 |
| Heebner | 3320 | 3318 | -1193 | +8 |
| Toronto | 3343 | 3341 | -1204 | +8 |
| LKC | 3359 | 3358 | -1221 | +9 |
| BKC | 3565 | 3564 | -1225 | +1 |
| Marmaton | 3640 | 3639 | -1518 | -22 |
| Arbuckle | 3718 | 3716 | -1583 | -22 |

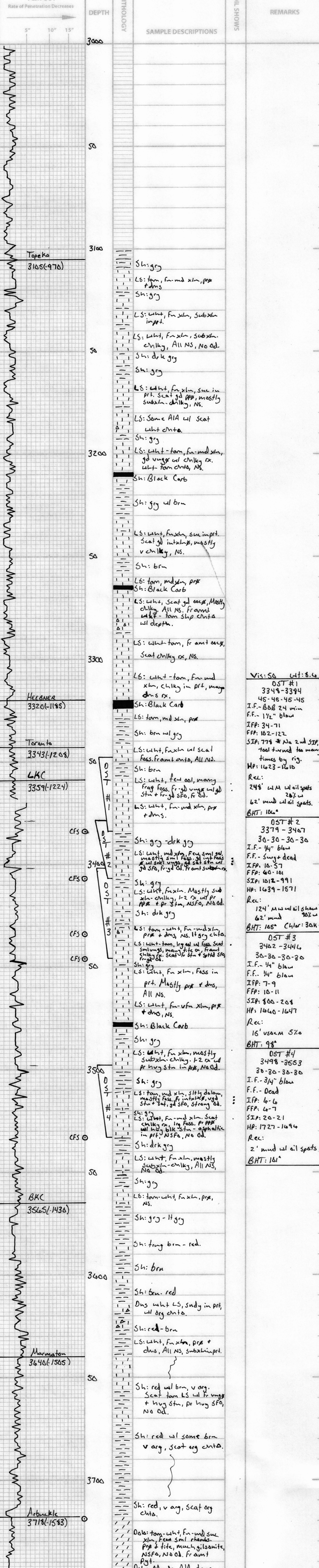
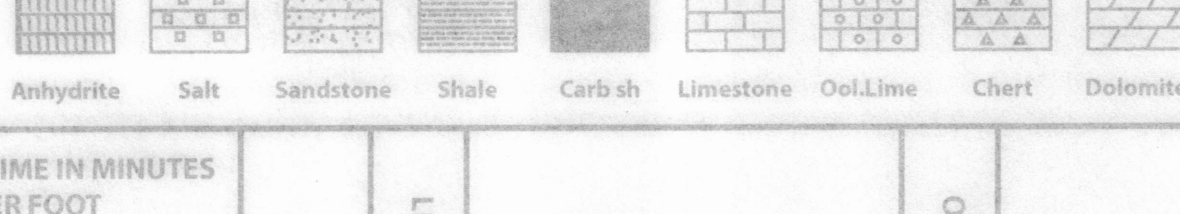
REFERENCE WELL FOR STRUCTURE N-B Ca., Inc. Sec. 19-8-21W
Doral/Idogy #1 SW-SW-NE

DRILL STEM TESTS

| No. | Interval | IFP/Time | ISIP/Time | FFP/Time | FSIP/Time | HP/FP | RECOVERY |
|-----|----------|----------|-----------|----------|-----------|-------|----------|
| | | | | | | | |

REMARKS AND RECOMMENDATIONS
Due to DST recovery + log evaluation, it was decided to plug + abandon the well.

LEGEND



Marc Downing

RTD: 3765(1630)
LTD: 3762(1627)

QUALITY OILWELL CEMENTING, INC.

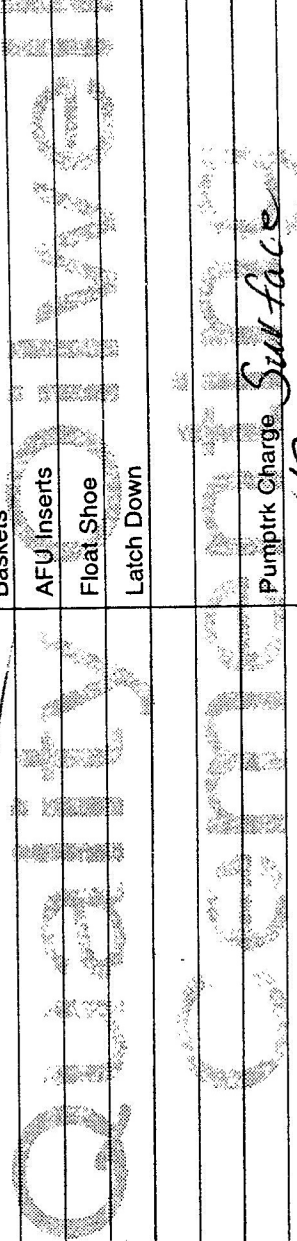
Federal Tax I.D.# 20-2886107

No. 7461

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665
 Cell 785-324-1041

| | | | | | | | |
|------------------------------------------------|----------------|---------------|-----------------|-----------------------------------------|-----------------|-------------|----------------------|
| Date <u>10-29-13</u> | Sec. <u>19</u> | Twp. <u>8</u> | Range <u>21</u> | County <u>Crawford</u> | State <u>KS</u> | On Location | Finish <u>3:45AM</u> |
| Well No. <u>19-1</u> | | | | Location <u>Boyer 1/2s R/O in White</u> | | | |
| Lease <u>Billips</u> | | | | | | | |
| Contractor <u>American Drilling</u> | | | | | | | |
| Type Job <u>Surface</u> | | | | | | | |
| Hole Size <u>12 1/4</u> T.D. <u>224</u> | | | | | | | |
| Csg. <u>8 5/8</u> Depth <u>222</u> | | | | | | | |
| Tbg. Size _____ Depth _____ | | | | | | | |
| Tool _____ Depth _____ | | | | | | | |
| Cement Left in Csg. <u>15</u> Shoe Joint _____ | | | | | | | |
| Meas Line _____ Displace <u>133C</u> | | | | | | | |
| EQUIPMENT | | | | | | | |
| Pumptrk | No. | Cementer | | | | | |
| <u>16</u> | | <u>Spax</u> | | | | | |
| Bulktrk | No. | Helper | | | | | |
| | | <u>Cozy</u> | | | | | |
| Bulktrk | No. | Driver | | | | | |
| <u>4</u> | | <u>David</u> | | | | | |
| Bulktrk | No. | Driver | | | | | |
| | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | |
| Remarks: | | | | | | | |
| Rat Hole _____ | | | | | | | |
| Mouse Hole _____ | | | | | | | |
| Centralizers _____ | | | | | | | |
| Baskets _____ | | | | | | | |
| DNV or Port Collar _____ | | | | | | | |
| <u>8 5/8 on bottom Est. Circulation</u> | | | | | | | |
| <u>Mix 1 SPK & Displace</u> | | | | | | | |
| <u>Cement Circulation</u> | | | | | | | |
| FLOAT EQUIPMENT | | | | | | | |
| Guide Shoe _____ | | | | | | | |
| Centralizer _____ | | | | | | | |
| Baskets _____ | | | | | | | |
| AFU Inserts _____ | | | | | | | |
| Float Shoe _____ | | | | | | | |
| Latch Down _____ | | | | | | | |
| Pumptrk Charge <u>Surface</u> | | | | | | | |
| Mileage <u>43</u> | | | | | | | |
| Tax _____ | | | | | | | |
| Discount _____ | | | | | | | |
| Total Charge _____ | | | | | | | |

X Signature [Signature]



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. 7233

| | | | | | | | | | | | | | |
|--------------------------------------------------|---------|------|----------|--------|---|-------|----|--------|--------|-------|----|-------------|--------|
| Date | 11-5-13 | Sec. | 19 | Twp. | 8 | Range | 12 | County | Graham | State | KS | On Location | Finish |
| Location | | | | | | | | | | | | 7:00 | |
| Boye 5 to O Rd 1w | | | | | | | | | | | | | |
| Well No. 19-1 | | | | | | | | | | | | | |
| Lease Billias | | | | | | | | | | | | | |
| Contractor American Eagle | | | | | | | | | | | | | |
| Type Job Plug | | | | | | | | | | | | | |
| Hole Size 7 7/8 | | | | | | | | | | | | | |
| T.D. | | | | | | | | | | | | | |
| Depth | | | | | | | | | | | | | |
| Depth | | | | | | | | | | | | | |
| Depth | | | | | | | | | | | | | |
| Shoe Joint | | | | | | | | | | | | | |
| Cement Left in Csg. | | | | | | | | | | | | | |
| Cement Amount Ordered 230 60/40 4% ogel 1/4 Flow | | | | | | | | | | | | | |
| Meas Line | | | | | | | | | | | | | |
| Displace | | | | | | | | | | | | | |
| EQUIPMENT | | | | | | | | | | | | | |
| Pumptrk | 15 | No. | Cementer | | | | | | | | | | |
| | | | Helper | Tomlew | | | | | | | | | |
| Bulktrk | 9 | No. | Driver | Doug | | | | | | | | | |
| Bulktrk | PH | No. | Driver | FRAY'S | | | | | | | | | |
| JOB SERVICES & REMARKS | | | | | | | | | | | | | |
| Remarks: | | | | | | | | | | | | | |
| Rat Hole | | | | | | | | | | | | | |
| Mouse Hole | | | | | | | | | | | | | |
| Centralizers | | | | | | | | | | | | | |
| Baskets | | | | | | | | | | | | | |
| D/V or Port Collar | | | | | | | | | | | | | |
| 25 SX at 3705 | | | | | | | | | | | | | |
| 25 SX at 1730 | | | | | | | | | | | | | |
| 100 SX at 875 | | | | | | | | | | | | | |
| 40 SX at 275 | | | | | | | | | | | | | |
| 10 SX at 40 with wood Plug | | | | | | | | | | | | | |
| 30 SX Rat | | | | | | | | | | | | | |
| FLOAT EQUIPMENT | | | | | | | | | | | | | |
| Guide Shoe | | | | | | | | | | | | | |
| Centralizer | | | | | | | | | | | | | |
| Baskets | | | | | | | | | | | | | |
| AFU Inserts | | | | | | | | | | | | | |
| Float Shoe | | | | | | | | | | | | | |
| Latch Down | | | | | | | | | | | | | |
| 1 wood Plug | | | | | | | | | | | | | |
| Pumptrk Charge | | | | | | | | | | | | | |
| Mileage 43 | | | | | | | | | | | | | |
| Tax | | | | | | | | | | | | | |
| Discount | | | | | | | | | | | | | |
| Total Charge | | | | | | | | | | | | | |

X Signature *Ruby R*

