



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1150724  
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<br>Recompletion Date | Date Reached TD | Completion Date or<br>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: \_\_\_\_\_



1150724

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

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

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

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

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

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

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

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

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

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

|           |  |
|-----------|--|
| Form      | ACO1 - Well Completion                           |
| Operator  | Werth, Aaron J. dba Blackhawk Production Company |
| Well Name | Carol 1  |
| Doc ID    | 1150724  |

Tops

| Name          | Top  | Datum |
|---------------|------|-------|
| ANHYDRITE     | 1263 | +800  |
| TOPEKA        | 3015 | -952  |
| HEEBNER SHALE | 3302 | -1239 |
| TORONTO       | 3321 | -1258 |
| LKC           | 3348 | -1285 |
| BKC           | 3591 | -1528 |
| ARBUCKLE      | NONE |       |
| REAGAN SAND   | NONE |       |
| LTD           | 3700 | -1637 |

**OPERATOR**

Company: BLACKHAWK PRODUCTION COMPANY  
 Address: 1607 OAKMONT  
 HAYS, KANSAS 67601

Contact Geologist: AARON J. WERTH  
 Contact Phone Nbr: 785-650-1782  
 Well Name: CAROL #1  
 Location: SE NE NW NE Sec10-16S-19W      API: 15-165-22,035-00-00  
 Pool: WILDCAT      Field: UNNAMED  
 State: KANSAS      Country: USA

**Scale 1:240 Imperial**

Well Name: CAROL #1  
 Surface Location: SE NE NW NE Sec10-16S-19W  
 Bottom Location:  
     API: 15-165-22,035-00-00  
 License Number: 32504  
 Spud Date: 6/28/2013      Time: 12:15 PM  
 Region: RUSH COUNTY  
 Drilling Completed: 7/4/2013      Time: 10:46 AM  
 Surface Coordinates: 335' FNL & 1594' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2055.00ft  
 K.B. Elevation: 2063.00ft  
 Logged Interval: 2900.00ft      To: 3700.00ft  
 Total Depth: 3700.00ft  
 Formation: CONGLOMERATE SAND  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: W-99 24' 24.444"      Latitude: N38 40' 59.777"  
 N/S Co-ord: 335' FNL  
 E/W Co-ord: 1594' FEL

**LOGGED BY**

Company: SOLUTIONS CONSULTING, INC  
 Address: 108 W 35TH  
 HAYS, KS 67601

Phone Nbr: (785) 639-1337  
 Logged By: Geologist      Name: HERB DEINES/STEVE REED

**CONTRACTOR**

Contractor: DISCOVERY DRILLING  
 Rig #: 1  
 Rig Type: MUD ROTARY  
 Spud Date: 6/28/2013      Time: 12:15 PM  
 TD Date: 7/4/2013      Time: 10:46 AM  
 Rig Release: 7/5/2013      Time: 12:15 AM

**ELEVATIONS**

K.B. Elevation: 2063.00ft      Ground Elevation: 2055.00ft  
 K.B. to Ground: 8.00ft

**NOTES**

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF THREE DST'S AND LACK OF RESERVOIR DEVELOPMENT IN LKC ZONES AND SANDS.

OPEN HOLE LOGGING BY GEMINI WIRELINE: DUAL INDUCTION, COMPENSATED DENSITY NEUTRON LOG, MICRO RESISTIVITY LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: 3 OPEN HOLE TESTS WERE RUN

#### FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

|                         | <b>CAROL # 1</b>                      |                        | <b>SEELYE # 1</b>      |
|-------------------------|---------------------------------------|------------------------|------------------------|
|                         | <b>335' FNL &amp; 1594' FEL, NE/4</b> |                        | <b>NW SW SE</b>        |
|                         | <b>Sec. 10-16s-19w</b>                |                        | <b>Sec 3-16s-19w</b>   |
|                         | <b>2055' GL 2063' KB</b>              |                        | <b>Reference Well</b>  |
| <b><u>FORMATION</u></b> | <b><u>SAMPLE TOPS</u></b>             | <b><u>LOG TOPS</u></b> | <b><u>LOG TOPS</u></b> |
| <b>Anhydrite</b>        | 1256+ 807                             | <b>1263+ 800</b>       | + 803                  |
| <b>B-Anhydrite</b>      | 1297+ 766                             | <b>1294+ 769</b>       | + 773                  |
| <b>Topeka</b>           | 3015- 952                             | <b>3015- 952</b>       |                        |
| <b>Heebner Shale</b>    | 3305-1242                             | <b>3302-1239</b>       | -1240                  |
| <b>Toronto</b>          | 3325-1262                             | <b>3321-1258</b>       | -1260                  |
| <b>LKC</b>              | 3348-1285                             | <b>3348-1285</b>       | -1285                  |
| <b>BKC</b>              | 3592-1529                             | <b>3591-1528</b>       | -1531                  |
| <b>Marmaton</b>         | 3627-1564                             | <b>3612-1549</b>       | -1561                  |
| <b>Arbuckle</b>         | NOT REACHED                           |                        |                        |
| <b>Reagan Sand</b>      | NOT REACHED                           |                        |                        |
| <b>RTD</b>              | 3700-1637                             |                        |                        |
| <b>LTD</b>              |                                       | <b>3700-1637</b>       |                        |

#### SUMMARY OF DAILY ACTIVITY

6-28-13 RU, spud 12:15 PM,  
 6-29-13 1226', drilling, set 8 5/8" surface pipe to 1271' w/ 450 sxs common  
 2% gel, 3% CC, plug down 1:30 PM, slope 1 degree, WOC 12hrs  
 6-30-13 1604', drill plug at 1:30AM  
 7-01-13 2666', drilling,  
 7-02-13 3371', CFS@3380', CFS@3544', short trip 18 stds, CCH, TOWB,  
 DST # 1 3496'-3544' "I" & "J" LKC, slope 1 degree  
 7-03-13 3565', finish DST #1, TIWB, drilling, CFS 3640', TOWB, DST # 2 3635'-  
 3640', Congl Sand, TIWB, CFS@ 3645', CFS 3650', TOWB, DST # 3





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Blackhawk Prod. Co

10-16s-19w Rush Co.

1607 Oakmont  
Hays, KS 67601

Carol #1

Job Ticket: 52335

DST#: 2

ATTN: Steve Reed

Test Start: 2013.07.03 @ 12:41:47

**GENERAL INFORMATION:**

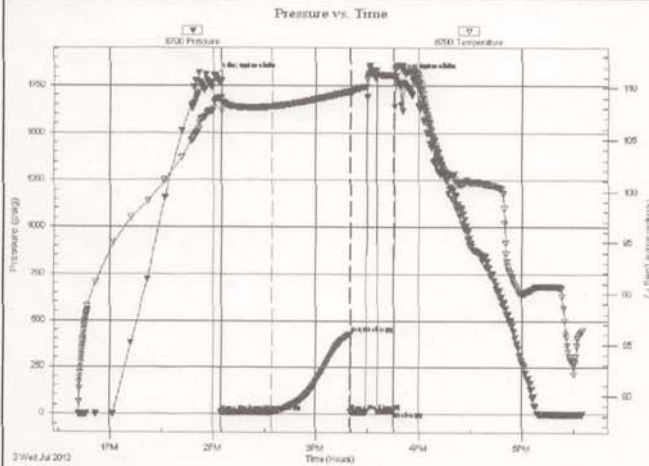
Formation: Cong. Sand  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 14:04:47  
 Time Test Ended: 17:35:47  
 Interval: 3635.00 ft (KB) To 3640.00 ft (KB) (TVD)  
 Total Depth: 3640.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 48  
 Reference Elevations: 2063.00 ft (KB)  
 2055.00 ft (CF)  
 KB to GR/CF: 8.00 ft

Serial #: 8790

Inside

Press@RunDepth: 12.42 psig @ 3636.00 ft (KB)  
 Start Date: 2013.07.03 End Date: 2013.07.03  
 Start Time: 12:41:47 End Time: 17:35:47  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.07.03  
 Time On Btm: 2013.07.03 @ 14:00:47  
 Time Off Btm: 2013.07.03 @ 15:46:17

TEST COMMENT: IF: Weak blow. Surf. - Dead @ 15min.  
 IS: No blow  
 FF: No blow (Fishd tool 15min. into) No blow  
 No FSI.



**PRESSURE SUMMARY**

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1801.36         | 108.67       | Initial Hydro-static |
| 4           | 9.32            | 107.78       | Open To Flow (1)     |
| 34          | 12.42           | 108.18       | Shut-In(1)           |
| 79          | 428.73          | 109.64       | End Shut-In(1)       |
| 80          | 13.26           | 109.46       | Open To Flow (2)     |
| 105         | 15.08           | 111.26       | Shut-In(2)           |
| 106         | 1803.88         | 111.99       | Final Hydro-static   |

**Recovery**

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 1.00        | Clean oil 100%oil  | 0.01         |
| 3.00        | OCM 15%oil, 85%mud | 0.04         |
|             |                    |              |
|             |                    |              |
|             |                    |              |

\* Recovery from multiple tests

**Gas Rates**

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

Trilobite Testing, Inc

Ref. No: 52335

Printed: 2013.07.03 @ 17:44:47





**TRILOBITE TESTING, INC**

## DRILL STEM TEST REPORT

Blackhawk Prod. Co  
 1607 Oakmont  
 Hays, KS 67601  
 ATTN: Steve Reed

10-16s-19w Rush Co.  
**Carol #1**  
 Job Ticket: 52336      DST#: 3  
 Test Start: 2013.07.04 @ 00:33:38

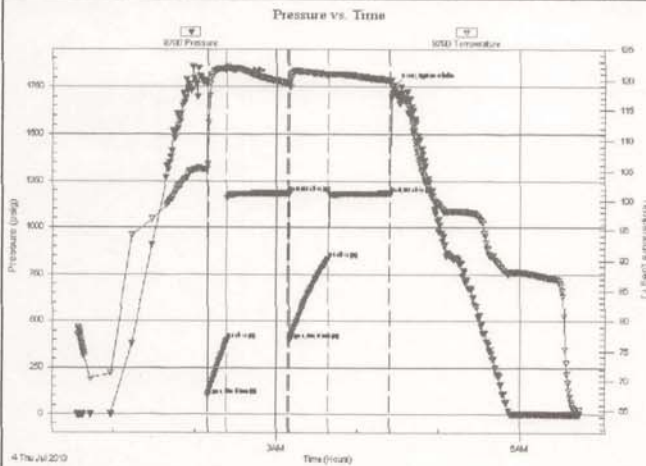
### GENERAL INFORMATION:

Formation: Congl. Sand  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 02:09:38  
 Time Test Ended: 06:44:38  
 Interval: 3635.00 ft (KB) To 3650.00 ft (KB) (TVD)  
 Total Depth: 3650.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 48  
 Reference Elevations: 2063.00 ft (KB)  
 2055.00 ft (CF)  
 KB to GR/CF: 8.00 ft

### Serial #: 8790

Inside  
 Press@RunDepth: 832.02 psig @ 3636.00 ft (KB)  
 Start Date: 2013.07.04 End Date: 2013.07.04  
 Start Time: 00:33:38 End Time: 06:44:38  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.07.04  
 Time On Btm: 2013.07.04 @ 02:07:08  
 Time Off Btm: 2013.07.04 @ 04:26:53

TEST COMMENT: IF: Strong blow . BOB @ 2min.  
 IS: No blow  
 FF: Strong blow . BOB @ 2min.  
 FS: No blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1785.71         | 105.32       | Initial Hydro-static |
| 3           | 101.35          | 106.10       | Open To Flow (1)     |
| 17          | 398.85          | 121.78       | Shut-In(1)           |
| 62          | 1185.17         | 119.50       | End Shut-In(1)       |
| 63          | 398.81          | 119.07       | Open To Flow (2)     |
| 92          | 832.02          | 120.90       | Shut-In(2)           |
| 137         | 1184.28         | 119.95       | End Shut-In(2)       |
| 140         | 1758.74         | 118.26       | Final Hydro-static   |

### Recovery

| Length (ft) | Description                      | Volume (bbl) |
|-------------|----------------------------------|--------------|
| 1870.00     | GMCW 5%gas, 5%mud, 90%w tr       | 26.23        |
| 0.00        | 130' GIP (Spts oil in hyd. tool) | 0.00         |
|             |                                  |              |
|             |                                  |              |
|             |                                  |              |

\* Recovery from multiple tests

### Gas Rates

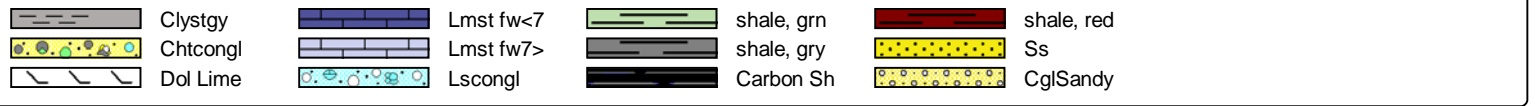
|  | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
|  |                |                 |                  |

Trilobite Testing, Inc

Ref. No: 52336

Printed: 2013.07.04 @ 06:55:10





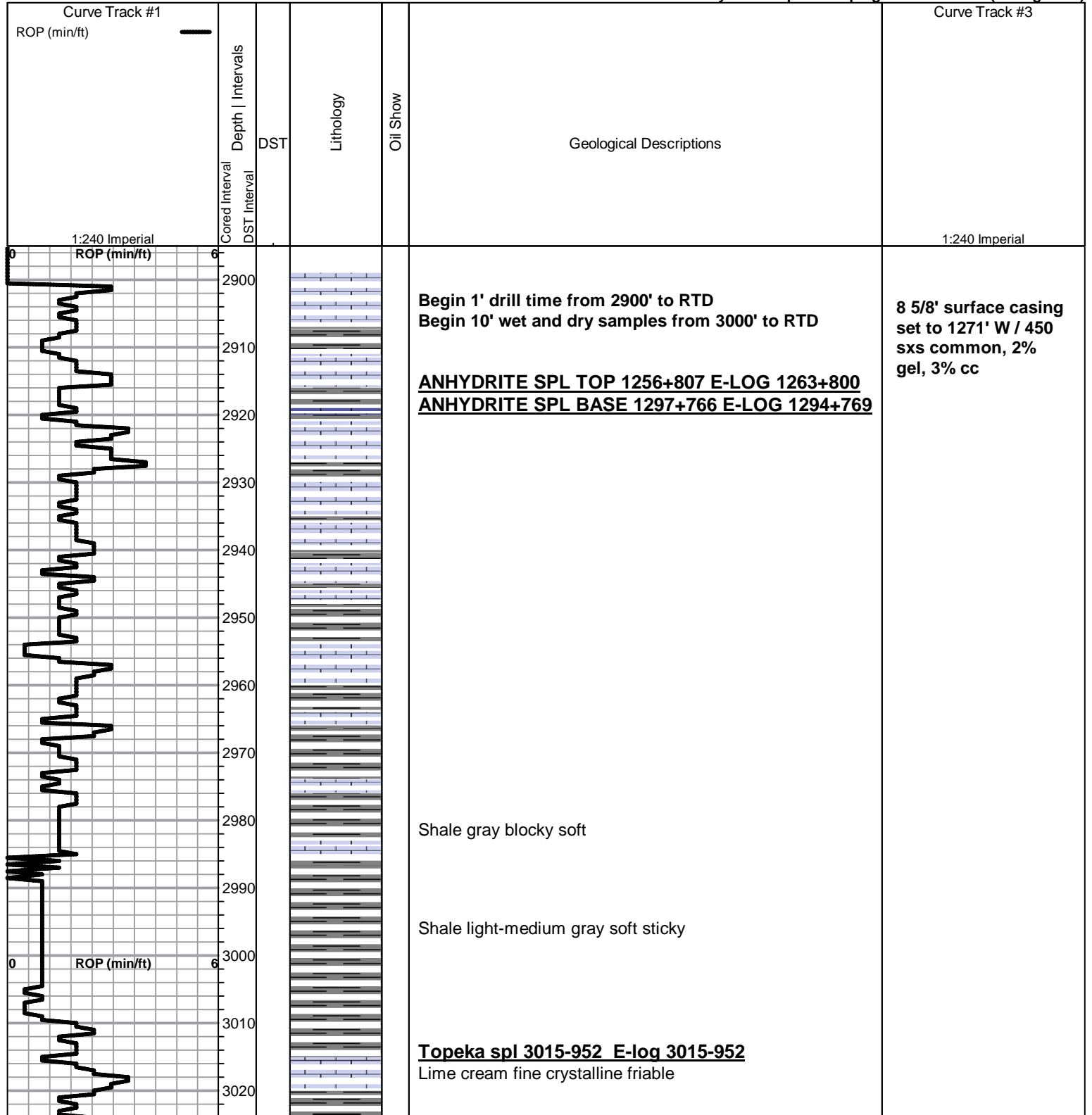
**ACCESSORIES**

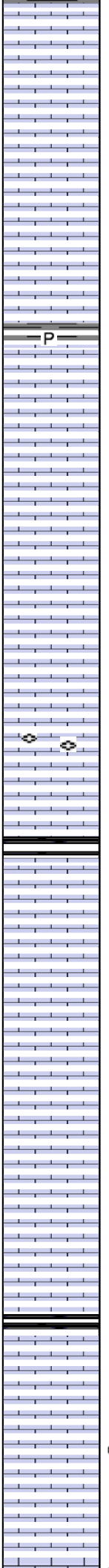
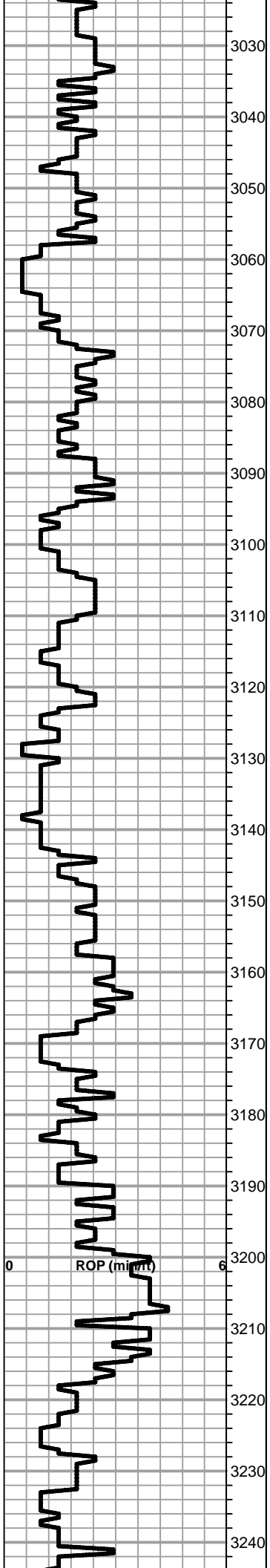
- MINERAL**
- Glauconite
  - Pyrite
  - Chert White
- FOSSIL**
- Brachiopod
  - Oolite
  - Oomoldic
  - Fussilinid

**OTHER SYMBOLS**

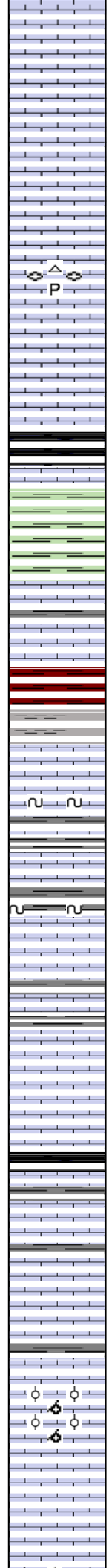
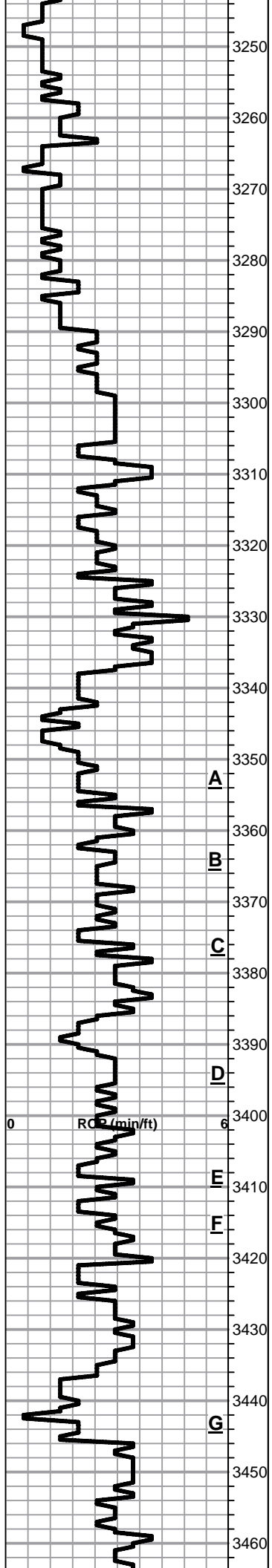
- DST**
- DST Int
  - DST alt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





- Lime tan-light brown fine crystalline
- Lime light brown-gray fine crystalline dense brittle
- Lime light brown fine crystalline chalky in part
- Lime light brown-gray medium xln
- Lime Medium-Dark brown fnxln fossiliferous, dense
- Lime light gray fnxln
- Shale medium gray blocky soft
- Shale friable gray with black specks
- Pyrite clusters
- Lime light tan fnxln slightly fossiliferous
- Lime cream fnxln soft easily broken
- Lime light gray- cream fnxln
- Lime cream- light brown fine to medium xln, granular in part, slightly fossiliferous
- Lime light- medium brown fn-medxln chalky in part, fusulinids
- Shale black carbonaceous
- Lime cream-light brown granular friable
- Lime cream fnxln dense slightly fossiliferous, slight chalk in part
- Lime tan-light brown fine to medium crystalline
- Lime cream fnxln
- Lime tan fine to medium crystalline
- Shale black carbonaceous
- Lime tan granular slight odor NSFO chalk in part
- Lime light brown granular slight odor, slight stain, slight pinpoint porosity
- Lime tan fine crystalline
- Lime cream intercrystalline porosity, slight odor, slight



staining, Free oil upon breakage. Few chips

Lime tan fine crystalline

Lime light gray-brown granular NSFO

Lime tan fine crystalline  
Chert white, fusulinids, pyrite

Lime tan fine crystalline

**Heebner Shale spl 3305-1242 E-log 3302-1239**  
Shale black carbonaceous fissile  
Lime light brown fine crystalline

Shale greenish gray blocky

**Toronto spl 3325-1262 E-log 3321-1258**  
Lime cream bright clean fine crystalline friable

Shale maroon blocky

**LKC spl 3348-1285 E-log 3348-1285**  
Lime tan-light brown fine crystalline

Lime medium brown medium crystalline some glauconitic stain in a few

Shale gray sticky clumps

Lime tan-light brown fine intercrystalline porosity glauconitic stain, no free oil, no odor

Lime cream medium granular pinpoint porosity, fossiliferous, light oil stain, no free oil, slight odor

Lime cream fine intercrystalline porosity, slight stain, slight odor, no free oil

Shale black carbonaceous blocky

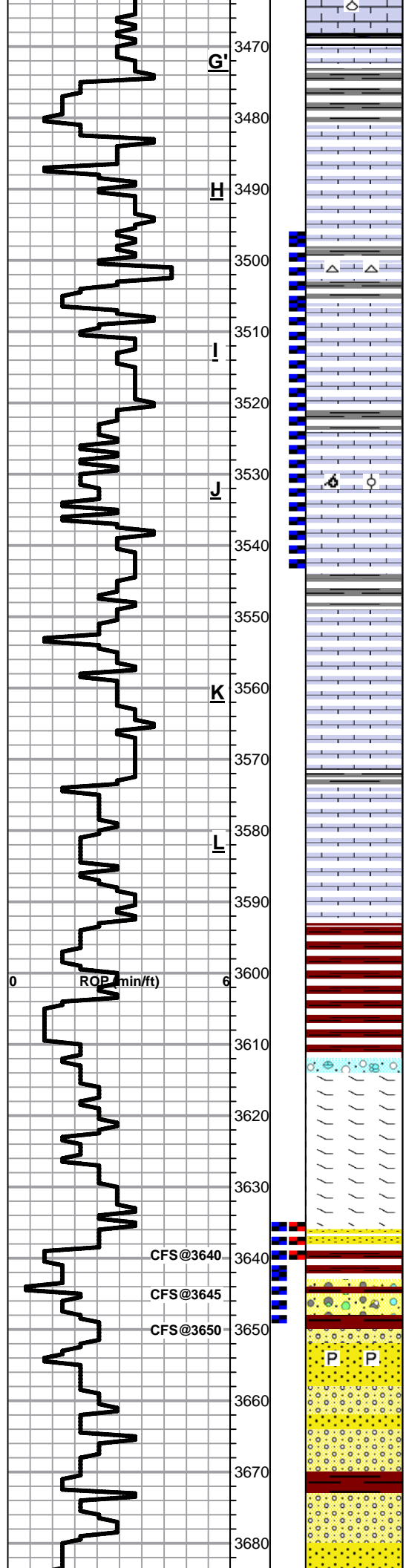
Lime cream-light brown fine crystalline

Lime cream fine intercrystalline porosity, slight staining, no odor

Lime cream fine crystalline some oolitic chips

Lime light brown fine crystalline oomoldic in some

Lime tan-light brown fine crystalline dense  
fossile brachiopod



possible brachiopod

Lime light brown fine to very fine crystalline

Lime cream- light brown fine crystalline

Shale gray soft and blocky

Lime cream-tan fine crystalline friable

Lime light gray- light brown fine crystalline  
chert white

Lime cream fine crystalline pinpoint porosity, show of free oil

Lime tan oomoldic fine crystalline no show, no odor

Lime fine crystalline cream-tan dense

Lime intercrystalline porosity, slight odor, slight stain.  
no show of free oil

Lime cream-light brown fine crystalline some oolitic, low porosity

Lime oolitic and oomoldic fine crystalline, slight staining, no odor

Lime light brown- gray fine crystalline

Lime cream-medium brown fine crystalline

**BKC spl 3592-1529 E-log 3591 -1528**

Shale maroon soft and blocky, red wash

**Marmaton E-log 3612-1549**

Lime reddish brown fine crystalline  
very fine sand grains of varying colors in bottom of tray

Cherts of various colors: orange, white, tan, brown

Lime cream to buff with rough texture medium crystalline dolomitic

Sand clusters, hard on crush, strong odor, free oil, good florescence under UV light

Shale brown fissile, earthy

Cherts of varying colors

**D**

Sandstone clusters with gilsonitic residue, hard on crush, quartz, fair sorting

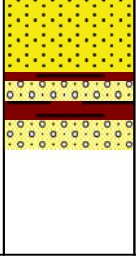
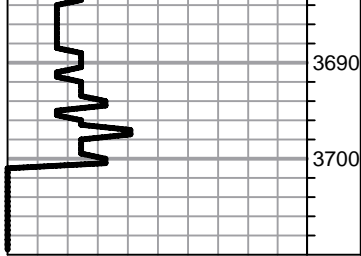
Various sand clusters with numerous types of reworked material

DST # 13496' TO 3544' SEE  
HEADER FOR TEST  
SUMMARY

DST # 2 3635' to 3640' SEE  
HEADER FOR TEST  
SUMMARY

DST #3 3635' TO 3650' SEE  
HEADER FOR TEST  
SUMMARY

NOTED A LOT OF HARD  
SAND CLUSTERS WITH  
STAINING AND ODOR BUT  
MICROLOG SHOWED POOR  
DEVELOPMENT AND LACK  
OF PERMEABILITY THRU  
INTERVAL OF INTEREST



Reworked limestones, quartz, and shales of varying colors  
some well rounded some angular, no odor, no hydrocarbon  
staining or free oil

**RTD 3700-1637 LTD 3700-1637**



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Blackhawk Prod. Co  
 1607 Oakmont  
 Hays, KS 67601  
 ATTN: Steve Reed

**10-16s-19w Rush Co.**  
**Carol #1**  
 Job Ticket: 52334      **DST#: 1**  
 Test Start: 2013.07.02 @ 22:11:43

## GENERAL INFORMATION:

Formation: **I & J**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 00:12:58  
 Time Test Ended: 03:19:13  
 Interval: **3496.00 ft (KB) To 3544.00 ft (KB) (TVD)**  
 Total Depth: 3544.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ryan Reynolds  
 Unit No: 48  
 Reference Elevations: 2063.00 ft (KB)  
 2055.00 ft (CF)  
 KB to GR/CF: 8.00 ft

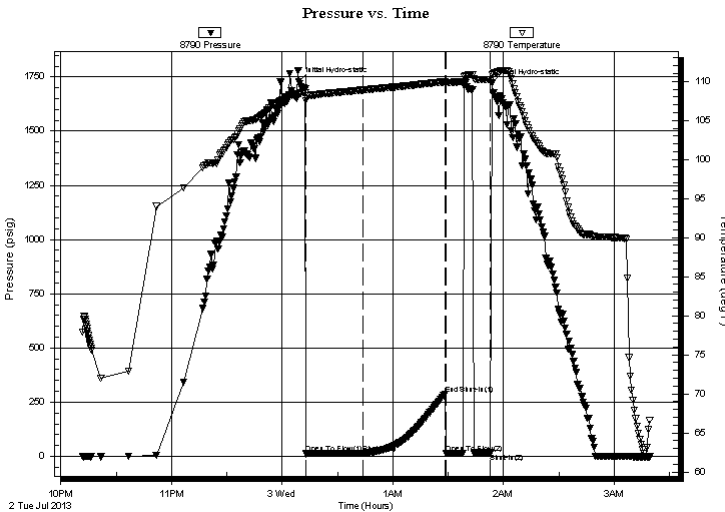
## Serial #: 8790

Inside

Press@RunDepth: 13.82 psig @ 3497.00 ft (KB)  
 Start Date: 2013.07.02 End Date: 2013.07.03  
 Start Time: 22:11:48 End Time: 03:19:12  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.07.03  
 Time On Btm: 2013.07.03 @ 00:08:58  
 Time Off Btm: 2013.07.03 @ 01:53:43

TEST COMMENT: IF: Weak blow . surf. - dead @ 16min.  
 IS: No blow  
 FF: No blow . (fishd tool 10min. into) No blow  
 No FSI.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1727.83         | 108.44       | Initial Hydro-static |
| 4           | 12.03           | 107.50       | Open To Flow (1)     |
| 35          | 13.82           | 108.89       | Shut-In(1)           |
| 80          | 287.97          | 109.94       | End Shut-In(1)       |
| 80          | 14.39           | 109.79       | Open To Flow (2)     |
| 104         | 16.14           | 110.25       | Shut-In(2)           |
| 105         | 1721.53         | 110.90       | Final Hydro-static   |

## Recovery

| Length (ft) | Description      | Volume (bbl) |
|-------------|------------------|--------------|
| 2.00        | Drig mud 100%mud | 0.03         |
|             |                  |              |
|             |                  |              |
|             |                  |              |
|             |                  |              |

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Blackhawk Prod. Co

**10-16s-19w Rush Co.**

1607 Oakmont  
Hays, KS 67601

**Carol #1**

Job Ticket: 52334

**DST#: 1**

ATTN: Steve Reed

Test Start: 2013.07.02 @ 22:11:43

## 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:

3100 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description      | Volume<br>bbl |
|--------------|------------------|---------------|
| 2.00         | Drig mud 100%mud | 0.028         |

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

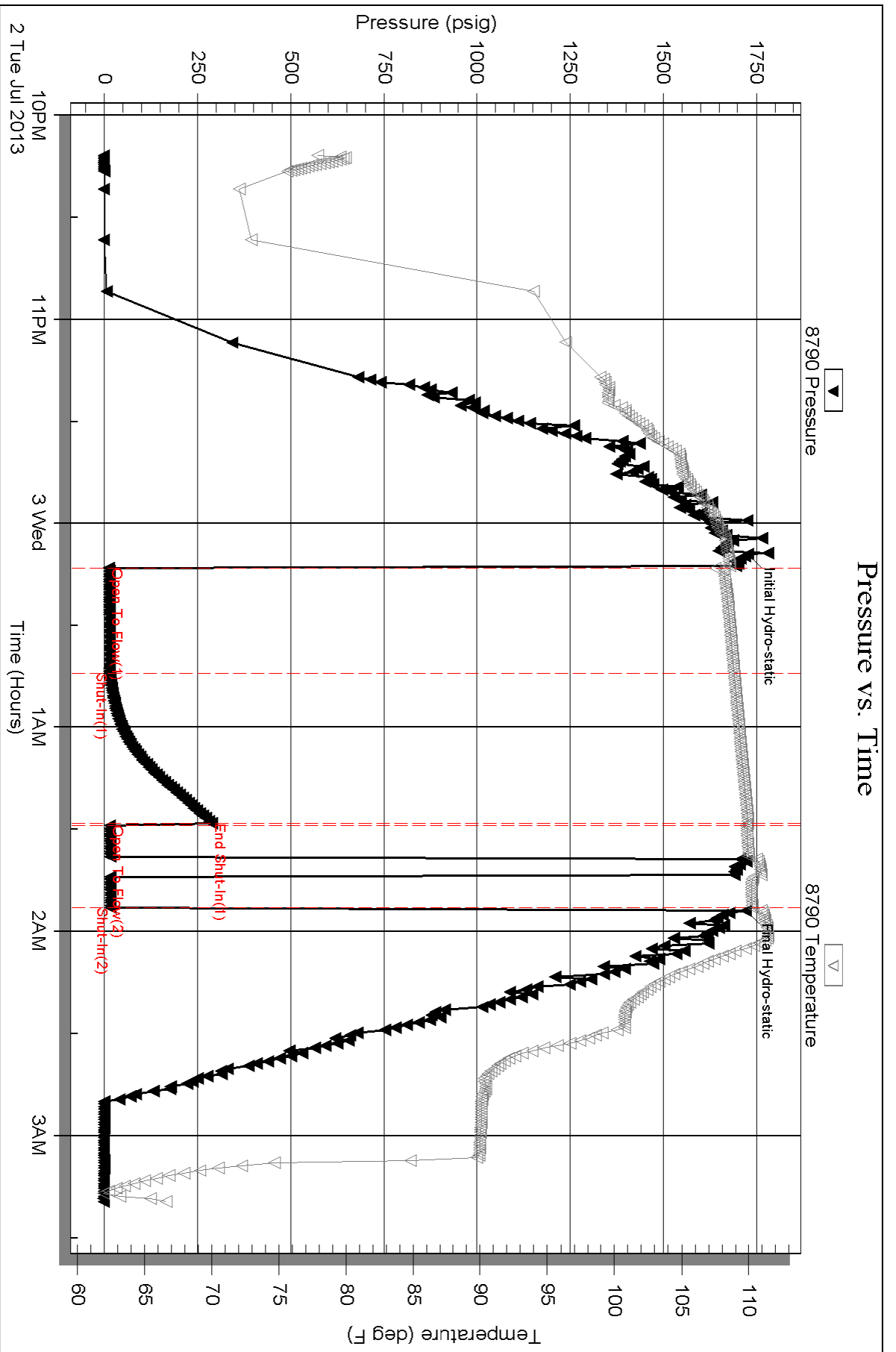
Serial #: 8790

Inside

Blackhawk Prod. Co

Carol #1

DST Test Number: 1





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Blackhawk Prod. Co  
 1607 Oakmont  
 Hays, KS 67601  
 ATTN: Steve Reed

**10-16s-19w Rush Co.**  
**Carol #1**  
 Job Ticket: 52335      **DST#: 2**  
 Test Start: 2013.07.03 @ 12:41:47

## GENERAL INFORMATION:

Formation: **Cong. Sand**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 14:04:47  
 Time Test Ended: 17:35:47  
 Interval: **3635.00 ft (KB) To 3640.00 ft (KB) (TVD)**  
 Total Depth: 3640.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 48  
 Reference Elevations: 2063.00 ft (KB)  
 2055.00 ft (CF)  
 KB to GR/CF: 8.00 ft

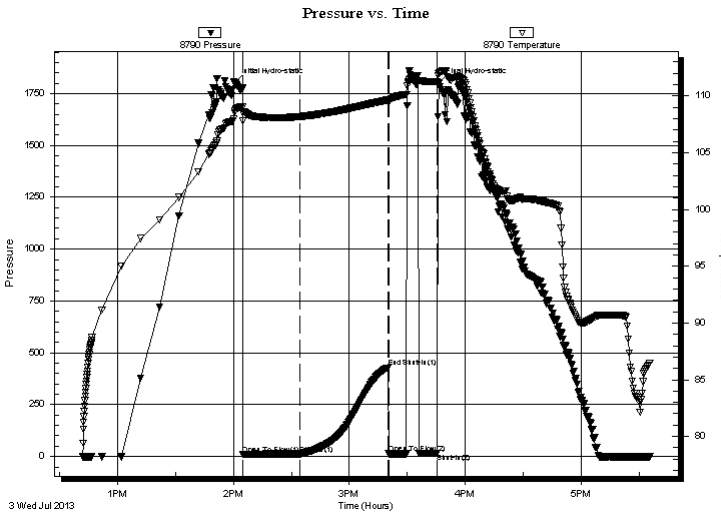
## Serial #: 8790

Inside

Press @ Run Depth: 12.42 psig @ 3636.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.07.03      End Date: 2013.07.03      Last Calib.: 2013.07.03  
 Start Time: 12:41:52      End Time: 17:35:46      Time On Btm: 2013.07.03 @ 14:00:47  
 Time Off Btm: 2013.07.03 @ 15:46:17

TEST COMMENT: IF: Weak blow . Surf. - Dead @ 15min.  
 IS: No blow  
 FF: No blow (Fishd tool 10min. into) No blow  
 No FSI.

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1801.36         | 108.67       | Initial Hydro-static |
| 4           | 9.32            | 107.78       | Open To Flow (1)     |
| 34          | 12.42           | 108.18       | Shut-In(1)           |
| 79          | 428.73          | 109.64       | End Shut-In(1)       |
| 80          | 13.26           | 109.46       | Open To Flow (2)     |
| 105         | 15.08           | 111.26       | Shut-In(2)           |
| 106         | 1803.88         | 111.99       | Final Hydro-static   |

## Recovery

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 1.00        | Clean oil 100%oil  | 0.01         |
| 3.00        | OCM 15%oil, 85%mud | 0.04         |
|             |                    |              |
|             |                    |              |
|             |                    |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Blackhawk Prod. Co

**10-16s-19w Rush Co.**

1607 Oakmont  
Hays, KS 67601

**Carol #1**

Job Ticket: 52335

**DST#: 2**

ATTN: Steve Reed

Test Start: 2013.07.03 @ 12:41:47

## 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:

3100 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description        | Volume<br>bbbl |
|--------------|--------------------|----------------|
| 1.00         | Clean oil 100%oil  | 0.014          |
| 3.00         | OCM 15%oil, 85%mud | 0.042          |

Total Length: 4.00 ft      Total Volume: 0.056 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8790

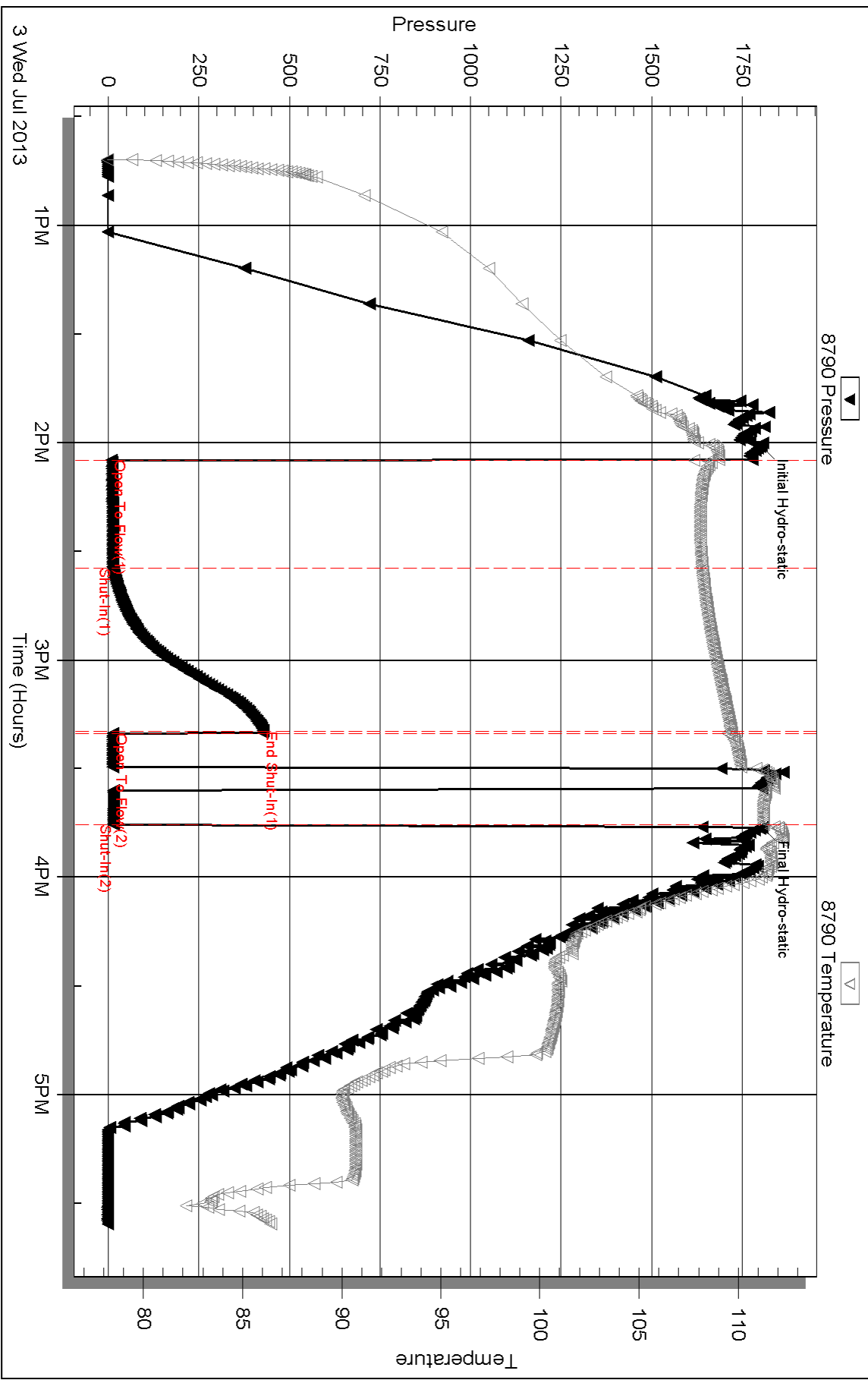
Inside

Blackhawk Prod. Co

Carol #1

DST Test Number: 2

### Pressure vs. Time



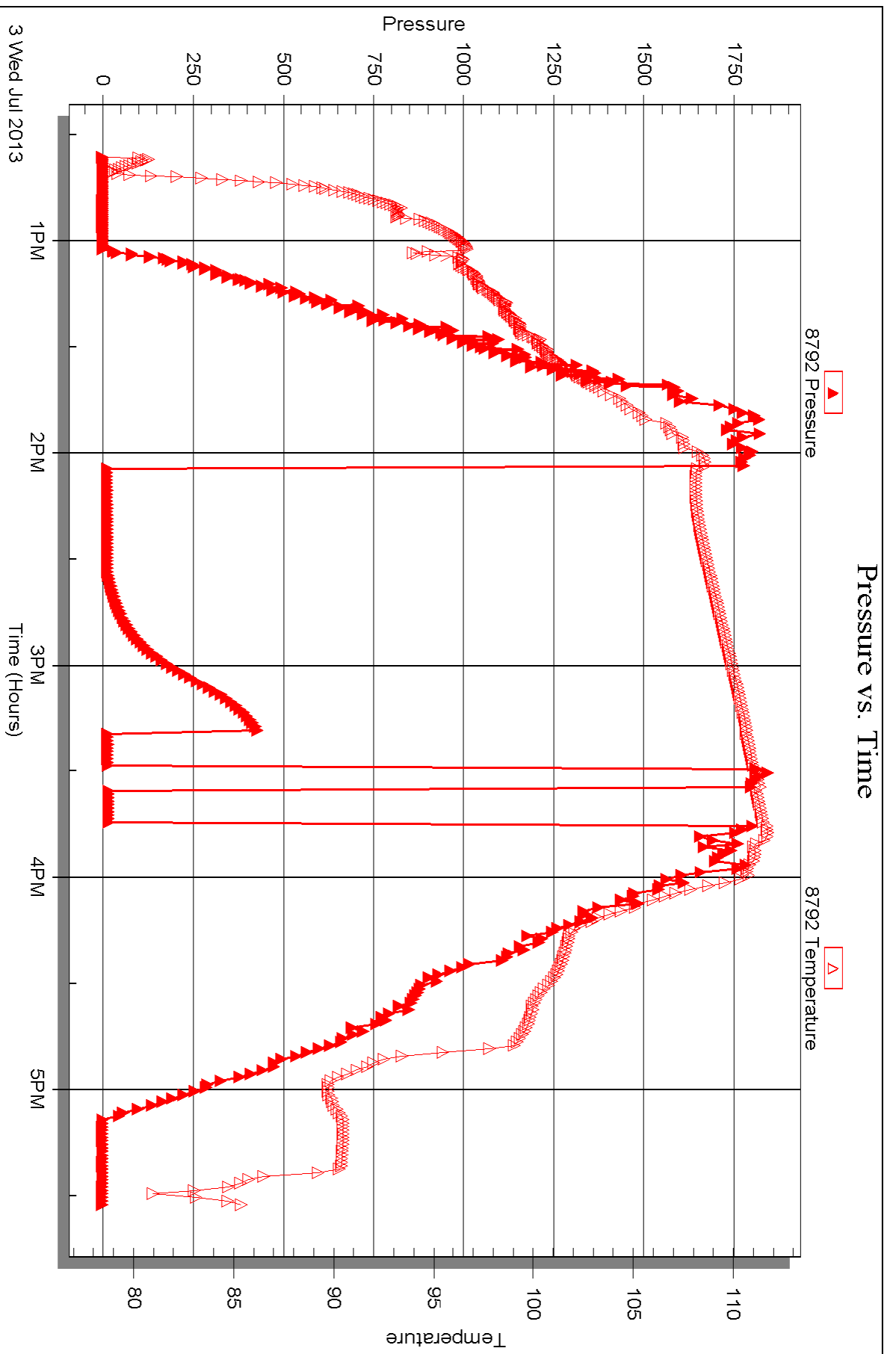


Serial #: 8792

Outside Blackhawk Prod. Co

Carol #1

DST Test Number: 2





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Blackhawk Prod. Co  
 1607 Oakmont  
 Hays, KS 67601  
 ATTN: Steve Reed

**10-16s-19w Rush Co.**  
**Carol #1**  
 Job Ticket: 52336 **DST#: 3**  
 Test Start: 2013.07.04 @ 00:33:38

## GENERAL INFORMATION:

Formation: **Congl. Sand**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 02:09:38  
 Time Test Ended: 06:44:38  
 Interval: **3635.00 ft (KB) To 3650.00 ft (KB) (TVD)**  
 Total Depth: 3650.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Reynolds  
 Unit No: 48  
 Reference Elevations: 2063.00 ft (KB)  
 2055.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8790

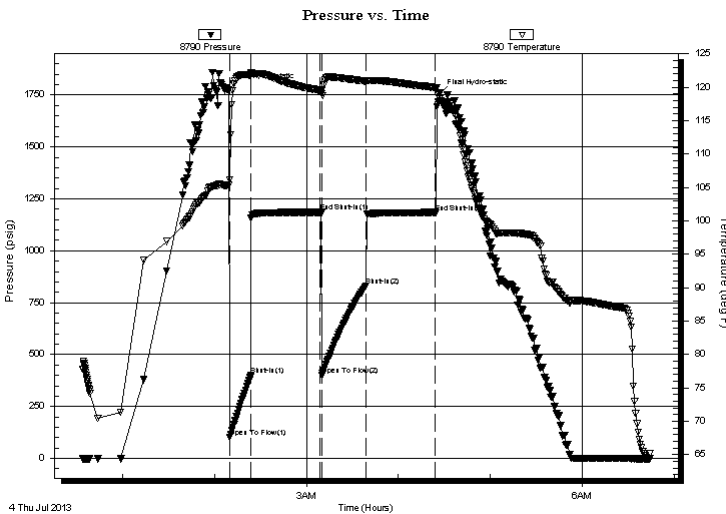
Inside

Press @ Run Depth: 832.02 psig @ 3636.00 ft (KB)  
 Start Date: 2013.07.04 End Date: 2013.07.04  
 Start Time: 00:33:43 End Time: 06:44:37  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.07.04  
 Time On Btm: 2013.07.04 @ 02:07:08  
 Time Off Btm: 2013.07.04 @ 04:26:53

TEST COMMENT: IF: Strong blow . BOB @ 2min.  
 IS: No blow  
 FF: Strong blow . BOB @ 2min.  
 FS: No blow

## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1785.71         | 105.32       | Initial Hydro-static |
| 3           | 101.35          | 106.10       | Open To Flow (1)     |
| 17          | 398.85          | 121.78       | Shut-In(1)           |
| 62          | 1185.17         | 119.50       | End Shut-In(1)       |
| 63          | 398.81          | 119.07       | Open To Flow (2)     |
| 92          | 832.02          | 120.90       | Shut-In(2)           |
| 137         | 1184.28         | 119.95       | End Shut-In(2)       |
| 140         | 1758.74         | 118.26       | Final Hydro-static   |



## Recovery

| Length (ft) | Description                      | Volume (bbl) |
|-------------|----------------------------------|--------------|
| 1870.00     | GMCW 5%gas, 5%mud, 90%w tr       | 26.23        |
| 0.00        | 130' GIP (Spts oil in hyd. tool) | 0.00         |
|             |                                  |              |
|             |                                  |              |
|             |                                  |              |

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Blackhawk Prod. Co

**10-16s-19w Rush Co.**

1607 Oakmont  
Hays, KS 67601

**Carol #1**

Job Ticket: 52336

**DST#: 3**

ATTN: Steve Reed

Test Start: 2013.07.04 @ 00:33:38

## 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:

61000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description                      | Volume<br>bbl |
|--------------|----------------------------------|---------------|
| 1870.00      | GMCW 5%gas, 5%mud, 90%w tr       | 26.231        |
| 0.00         | 130' GIP (Spts oil in hyd. tool) | 0.000         |

Total Length: 1870.00 ft      Total Volume: 26.231 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

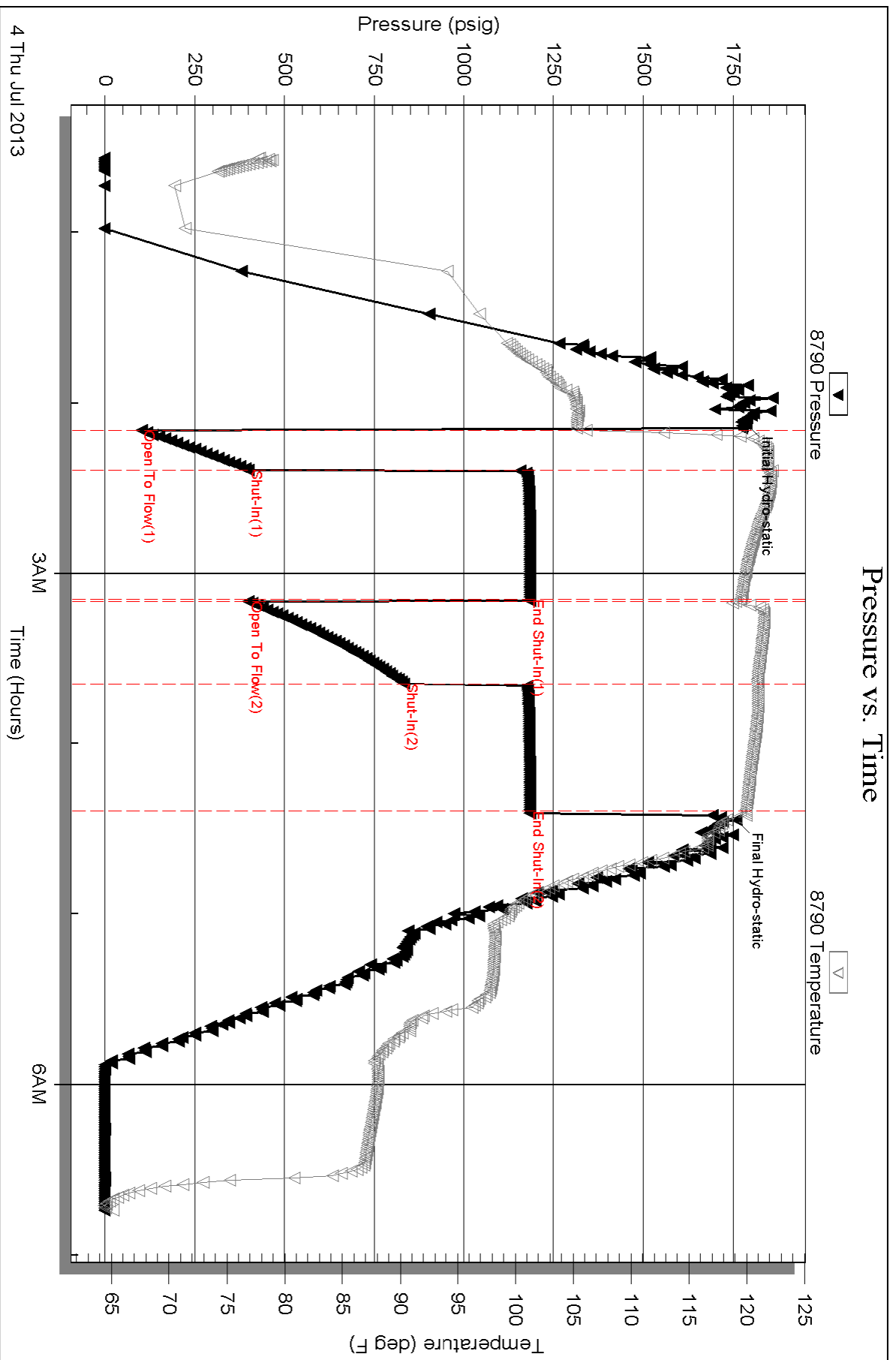
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

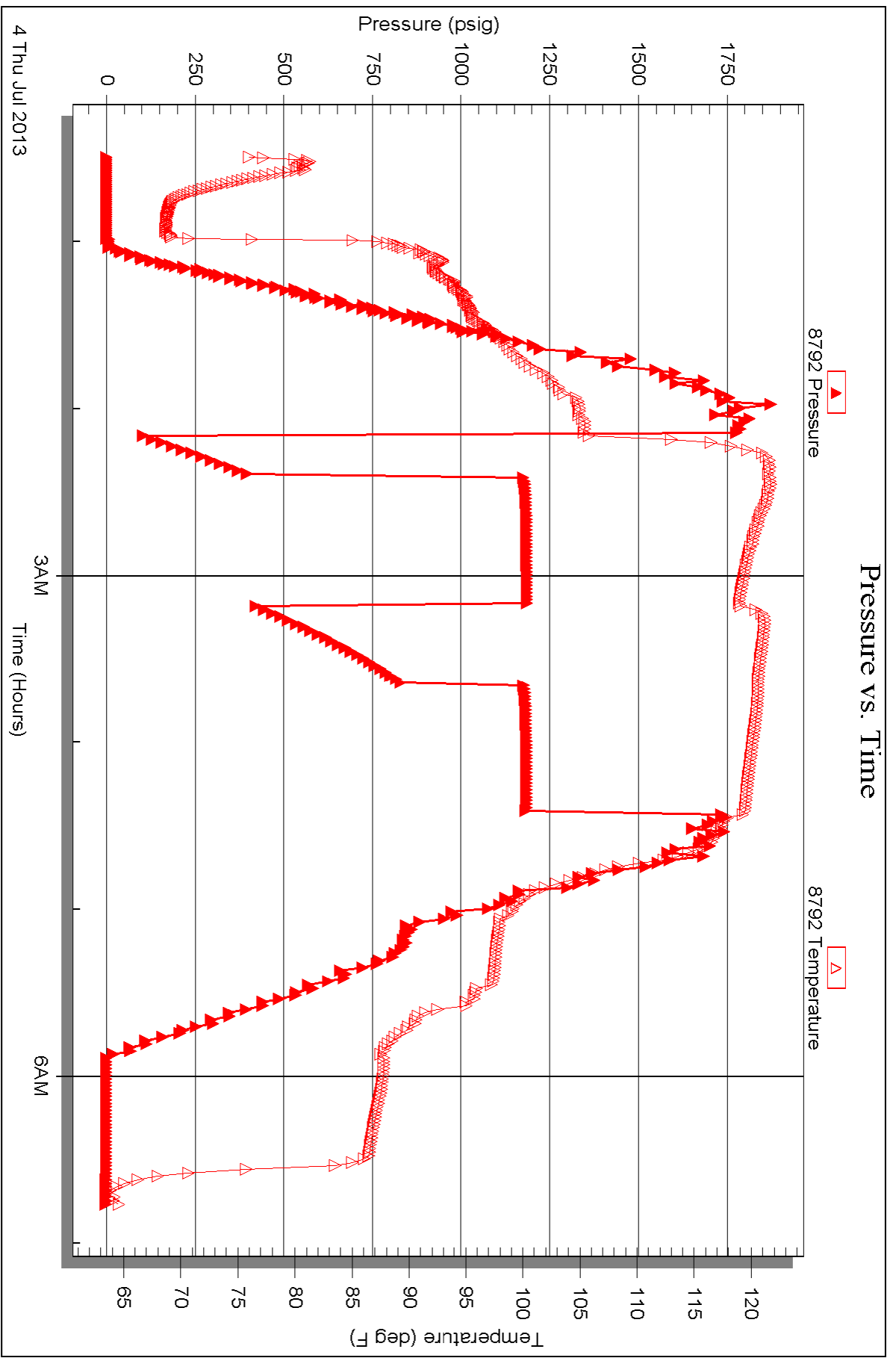


Serial #: 8792

Outside Blackhawk Prod. Co

Carol #1

DST Test Number: 3





Billed



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

Date: 6/29/2013  
Invoice # 7963  
P.O.#:  
Due Date: 7/29/2013  
Division: Russell

# Invoice

**Contact:**  
Blackhawk Production Company  
**Address/Job Location:**  
Blackhawk Production Company  
1607 Oakmont  
Hays Ks 67601

*Pd  
7-30-13  
ck# 1595  
\$ 9589.73  
Carol #1  
Drilling*

**Reference:**  
CAROL 1

**Description of Work:**  
LONG SURFACE JOB

**Services / Items Included:**

|  | Quantity | Price       | Taxable | Item                          | Quantity | Price    | Taxable |
|--|----------|-------------|---------|-------------------------------|----------|----------|---------|
| Labor  |          | \$ 1,020.55 | No      |                               |          |          |         |
| Common-Class A                               | 450      | \$ 6,306.88 | Yes     | Baffle Plate Aluminum, 8 5/8" | 1        | \$100.59 | Yes     |
| Bulk Truck Matl-Material Service Charge      | 475      | \$ 1,061.76 | No      |                               |          |          |         |
| Calcium Chloride                             | 16       | \$ 852.27   | Yes     |                               |          |          |         |
| 8 5/8" Basket                                | 1        | \$ 353.18   | Yes     |                               |          |          |         |
| Flo Seal                                     | 112      | \$ 250.35   | Yes     |                               |          |          |         |
| Pump Truck Mileage-Job to Nearest Camp       | 22       | \$ 245.39   | No      |                               |          |          |         |
| Premium Gel (Bentonite)                      | 9        | \$ 163.76   | Yes     |                               |          |          |         |
| 8 5/8" Centralizer                           | 2        | \$ 143.06   | Yes     |                               |          |          |         |
| Bulk Truck Mileage-Job to Nearest Bulk Plant | 22       | \$ 143.60   | No      |                               |          |          |         |
| 8 5/8" Top Rubber Plug                       | 1        | \$ 118.47   | Yes     |                               |          |          |         |

**Invoice Terms:**

Net 30

SubTotal: \$ 10,759.86  
Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,613.98)

|                                 |                    |
|---------------------------------|--------------------|
| SubTotal for Taxable Items:     | \$ 7,045.28        |
| SubTotal for Non-Taxable Items: | \$ 2,100.60        |
| <b>Total:</b>                   | <b>\$ 9,145.88</b> |
| <b>Tax:</b>                     | <b>\$ 443.85</b>   |
| <b>Amount Due:</b>              | <b>\$ 9,589.73</b> |
| <b>Applied Payments:</b>        |                    |
| <b>Balance Due:</b>             | <b>\$ 9,589.73</b> |

6.30% Rush County Sales Tax

**Thank You For Your Business!**

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



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7963

| Date    | Sec. | Twp. | Range | County | State | On Location | Finish    |
|---------|------|------|-------|--------|-------|-------------|-----------|
| 6-29-13 | 10   | 16   | 19    | Rosh   | KS    |             | 1:30 p.m. |

Location HAYS S Co. Line 1.5' SW S10

|                                  |  |  |
|----------------------------------|--|--|
| Lease <u>Carol</u>               | Well No. <u>1</u>  | Owner  |
| Contractor <u>D. Saveny #1</u>   | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |  |
| Type Job <u>Surface</u>          | Charge To <u>Black Hawk</u>  |  |
| Hole Size <u>12 1/4</u>          | T.D. <u>1271</u>   | Street   |
| Csg. <u>8 5/8</u>                | Depth <u>1270</u>  | City   |
| Tbg. Size                        | Depth  | State  |
| Tool                             | Depth  | The above was done to satisfaction and supervision of owner agent or contractor. |
| Cement Left in Csg. <u>23.96</u> | Shoe Joint <u>23.96</u>  | Cement Amount Ordered <u>450 lbm 3 1/2 CC 2 1/2 BEL</u>                          |
| Meas Line                        | Displace <u>79 1/2 B C</u>   | <u>1/4 P 10</u>  |

**EQUIPMENT**

|                       |                            |                   |
|-----------------------|----------------------------|-------------------|
| Pumptrk <u>17</u> No. | Cement Helper <u>Graig</u> | Common <u>450</u> |
| Bulktrk               | Driver <u>Cody</u>         | Poz. Mix          |
| Bulktrk <u>19</u> No. | Driver <u>Heath</u>        | Gel. <u>9</u>     |
|                       |                            | Calcium <u>16</u> |

**JOB SERVICES & REMARKS**

|   |                         |
|---|-------------------------|
| Remarks:                                  | Hulls                   |
| Rat Hole                                  | Salt                    |
| Mouse Hole                                | Flowseal <u>112#</u>    |
| Centralizers                              | Kol-Seal                |
| Baskets                                   | Mud CLR 48              |
| D/V or Port Collar                        | CFL-117 or CD110 CAF 38 |
| <u>8 5/8 on bottom. Est. Circulation.</u> | Sand                    |
| <u>Mix 450 SK &amp; Displace Plug</u>     | Handling <u>475</u>     |
|   | Mileage                 |

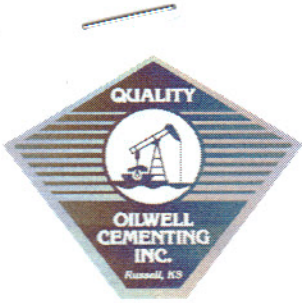
**FLOAT EQUIPMENT**

|                            |                                |
|----------------------------|--------------------------------|
| <u>Cement Circulated.</u>  | Guide Shoe <u>8 5/8</u>        |
| <u>Plug landed @ 1000'</u> | Centralizer <u>2</u>           |
| <u>Shut in 700'</u>        | Baskets <u>1</u>               |
|                            | AFU Inserts <u>Rubber Plug</u> |
|                            | Float Shoe <u>Baffle Plate</u> |
|                            | Latch Down                     |

Pumptrk Charge Long Surface  
Mileage 22

|                                    |              |
|------------------------------------|--------------|
| X<br>Signature <u>Cody Mappell</u> | Tax          |
|                                    | Discount     |
|                                    | Total Charge |





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

*Billed*

Date: 7/4/2013  
 Invoice # 7972

P.O.#:

Due Date: 8/3/2013

Division: *Russell*

# Invoice

*pd*  
*7-30-13*  
*CG#1603*  
*\$ 3913.73*  
*Carol #1*  
*Drilling*

**Contact:**  
 Blackhawk Production Company  
**Address/Job Location:**  
 Blackhawk Production Company  
 1607 Oakmont  
 Hays Ks 67601

**Reference:**  
 TUZIKA 1-12

**Description of Work:**  
 PLUG JOB

| Services / Items Included:                   | Quantity | Price       | Taxable | Item | Quantity | Price | Taxable |
|--|----------|-------------|---------|------|----------|-------|---------|
| Labor  |          | \$ 1,020.55 | Yes     |      |          |       |         |
| Common-Class A                               | 126      | \$ 1,765.93 | Yes     |      |          |       |         |
| Bulk Truck Matl-Material Service Charge      | 217      | \$ 485.06   | Yes     |      |          |       |         |
| POZ Mix-Standard                             | 84       | \$ 431.86   | Yes     |      |          |       |         |
| Pump Truck Mileage-Job to Nearest Camp       | 22       | \$ 245.39   | Yes     |      |          |       |         |
| Bulk Truck Mileage-Job to Nearest Bulk Plant | 22       | \$ 143.60   | Yes     |      |          |       |         |
| Premium Gel (Bentonite)                      | 7        | \$ 127.37   | Yes     |      |          |       |         |
| Flo Seal                                     | 50       | \$ 111.76   | Yes     |      |          |       |         |

**Invoice Terms:**

Net 30

SubTotal: \$ 4,331.51  
 Discount Available ONLY if Invoice is Paid & Received  
 within listed terms of invoice: \$ (649.73)

|                                 |             |
|---------------------------------|-------------|
| SubTotal for Taxable Items:     | \$ 3,681.78 |
| SubTotal for Non-Taxable Items: | \$ -        |
| Total:                          | \$ 3,681.78 |
| Tax:                            | \$ 231.95   |

6.30% Rush County Sales Tax

**Thank You For Your Business!**

**Amount Due: \$ 3,913.73**  
**Applied Payments:**  
**Balance Due: \$ 3,913.73**

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



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

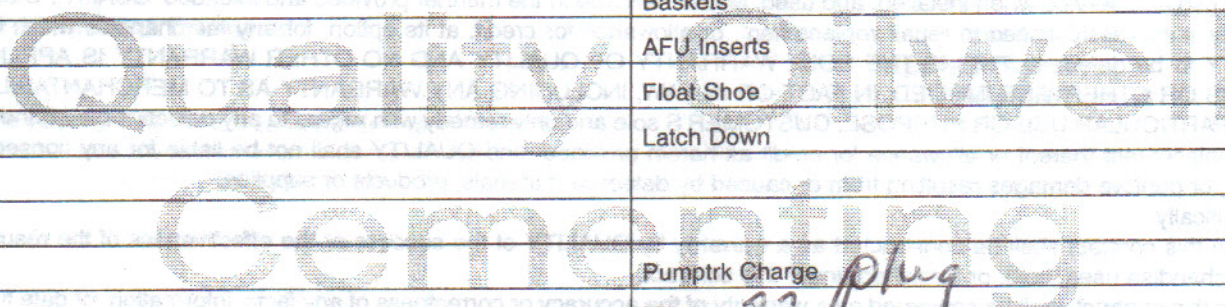
785-483-2025

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

No. 7972

785-324-1041

|                        |        |      |    |      |    |       |    |  |      |                                    |    |             |  |        |           |
|------------------------|--------|------|----|------|----|-------|----|--|------|------------------------------------|----|-------------|--|--------|-----------|
| Date                   | 7-4-13 | Sec. | 10 | Twp. | 16 | Range | 19 | County   | Rush | State                              | KS | On Location |  | Finish | 12:00A.M. |
| Lease                  |        |      |    |      |    |       |    | Well No. 1   |      | Location Nays S Coline 13 5W Sinto |    |             |  |        |           |
| Contractor             |        |      |    |      |    |       |    | Owner  |      |                                    |    |             |  |        |           |
| Type Job               |        |      |    |      |    |       |    | To Quality Oilwell Cementing, Inc.   |      |                                    |    |             |  |        |           |
| Hole Size              |        |      |    |      |    |       |    | You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |      |                                    |    |             |  |        |           |
| Csg.                   |        |      |    |      |    |       |    | Charge To  |      |                                    |    |             |  |        |           |
| Tbg. Size              |        |      |    |      |    |       |    | To   |      |                                    |    |             |  |        |           |
| Tool                   |        |      |    |      |    |       |    | Street   |      |                                    |    |             |  |        |           |
| Cement Left in Csg.    |        |      |    |      |    |       |    | City   |      |                                    |    |             |  |        |           |
| Meas Line              |        |      |    |      |    |       |    | State  |      |                                    |    |             |  |        |           |
| Displace               |        |      |    |      |    |       |    | Depth  |      |                                    |    |             |  |        |           |
| EQUIPMENT              |        |      |    |      |    |       |    | The above was done to satisfaction and supervision of owner agent or contractor.   |      |                                    |    |             |  |        |           |
| Pumptrk                |        |      |    |      |    |       |    | Cement Amount Ordered  |      |                                    |    |             |  |        |           |
| Bulktrk                |        |      |    |      |    |       |    | 210 <sup>00</sup> /40 4 1/2 1/2 1/4 1/10   |      |                                    |    |             |  |        |           |
| Bulktrk                |        |      |    |      |    |       |    | Common   |      |                                    |    |             |  |        |           |
| No. Cementer           |        |      |    |      |    |       |    | 126  |      |                                    |    |             |  |        |           |
| No. Helper             |        |      |    |      |    |       |    | 84   |      |                                    |    |             |  |        |           |
| No. Driver             |        |      |    |      |    |       |    | 7  |      |                                    |    |             |  |        |           |
| No. Driver             |        |      |    |      |    |       |    | Gel.   |      |                                    |    |             |  |        |           |
| No. Driver             |        |      |    |      |    |       |    | Calcium  |      |                                    |    |             |  |        |           |
| No. Driver             |        |      |    |      |    |       |    | Hulls  |      |                                    |    |             |  |        |           |
| JOB SERVICES & REMARKS |        |      |    |      |    |       |    | Salt   |      |                                    |    |             |  |        |           |
| Remarks:               |        |      |    |      |    |       |    | Flowseal   |      |                                    |    |             |  |        |           |
| Rat Hole               |        |      |    |      |    |       |    | 50#  |      |                                    |    |             |  |        |           |
| Mouse Hole             |        |      |    |      |    |       |    | Kol-Seal   |      |                                    |    |             |  |        |           |
| Centralizers           |        |      |    |      |    |       |    | Mud CLR 48   |      |                                    |    |             |  |        |           |
| Baskets                |        |      |    |      |    |       |    | CFL-117 or CD110 CAF 38  |      |                                    |    |             |  |        |           |
| D/V or Port Collar     |        |      |    |      |    |       |    | Sand   |      |                                    |    |             |  |        |           |
| 1st 3620 50SK          |        |      |    |      |    |       |    | Handling   |      |                                    |    |             |  |        |           |
| 2nd 1330 50SK          |        |      |    |      |    |       |    | 217  |      |                                    |    |             |  |        |           |
| 3rd 550 40SK           |        |      |    |      |    |       |    | Mileage  |      |                                    |    |             |  |        |           |
| 4th 60 20SK            |        |      |    |      |    |       |    | FLOAT EQUIPMENT  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Guide Shoe   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Centralizer  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Baskets  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | AFU Inserts  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Float Shoe   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Latch Down   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Pumptrk Charge   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Mileage  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | plug   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | 22   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Tax  |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Discount   |      |                                    |    |             |  |        |           |
|                        |        |      |    |      |    |       |    | Total Charge   |      |                                    |    |             |  |        |           |
| X Signature            |        |      |    |      |    |       |    |  |      |                                    |    |             |  |        |           |



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

August 13, 2013

AARON WERTH  
Werth, Aaron J. dba Blackhawk Production  
Company  
1607 OAKMONT  
HAYS, KS 67601

Re: ACO1  
API 15-165-22035-00-00  
Carol 1  
NE/4 Sec.10-16S-19W  
Rush County, Kansas

Dear Production Department:

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

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
AARON WERTH