

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

INSTRUCTIONS: Show important tops 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 Geologist Report / Mud Logs <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 | | | | |
| | | | | |

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

| | | | | |
|---|--|---------|-------------|-----------------------|
| Date of first Production/Injection or Resumed Production/Injection: | 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> | PRODUCTION INTERVAL: Top Bottom |
|---|---|------------------------------------|

| Shots Per Foot | Perforation Top | Perforation Bottom | Bridge Plug Type | Bridge Plug Set At | Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i> |
|----------------|-----------------|--------------------|------------------|--------------------|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | |
|----------------|-------|---------|------------|--|
| TUBING RECORD: | Size: | Set At: | Packer At: | |
|----------------|-------|---------|------------|--|

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Griffin, Charles N. |
| Well Name | SPRINGER 2 |
| Doc ID | 1316526 |

All Electric Logs Run

| |
|-----------------------------------|
| |
| Dual Induction Log |
| Compensated Neutron Log |
| Compensated Formation Density Log |
| Gamma Ray Log |

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Griffin, Charles N. |
| Well Name | SPRINGER 2 |
| Doc ID | 1316526 |

Tops

| Name | Top | Datum |
|---------------|------|-------|
| Lecompton | 3399 | -1882 |
| Elgin | 3431 | -1914 |
| Heebner | 3607 | -2090 |
| Lansing | 3807 | -2290 |
| Stark | 4188 | -2671 |
| Hush | 4218 | -2701 |
| Base KC | 4274 | -2757 |
| Mississippian | 4362 | -2845 |
| Kinderhook | 4559 | -3042 |
| Viola | 4664 | -3147 |
| Simpson Sand | 4757 | -3240 |

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Griffin, Charles N. |
| Well Name | SPRINGER 2 |
| Doc ID | 1316526 |

Perforations

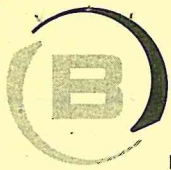
| Shots Per Foot | Perforation Record | Material Record | Depth |
|----------------|--------------------|-------------------------|-------|
| 2 | 4791.5 - 4793.5 | 250 gal 7.5% HCL MCA | |

| | | |
|---------------------------------------|-----------------------------|--------------------------------------|
| Customer <i>Griffin Management</i> | Lease No. | Date <i>8/5/2016</i> |
| Lease <i>Springer</i> | Well # <i>2</i> | |
| Field Order # <i>13854</i> | Station <i>Pratt, KS</i> | Casing <i>8 5/8</i> |
| | | Depth <i>259</i> |
| Type Job <i>CNW/8 5/8 SUCSIS</i> | Formation <i>TD-259</i> | County <i>Berbar</i> |
| | | State <i>KS</i> |
| | | Legal Description <i>34-32-12</i> |

| PIPE DATA | | PERFORATING DATA | | FLUID USED | | TREATMENT RESUME | | |
|-----------------------|--------------|------------------|----|-------------------------|------------|------------------|------------------|--|
| Casing Size | Tubing Size | Shots/Ft | | Acid | RATE | PRESS | ISIP | |
| <i>8 5/8</i> | | | | | | | | |
| Depth <i>259</i> | Depth | From | To | Pre Pad | Max | | 5 Min. | |
| Volume | Volume | From | To | Pad | Min | | 10 Min. | |
| Max Press | Max Press | From | To | Frac | Avg | | 15 Min. | |
| Well Connection | Annulus Vol. | From | To | | HHP Used | | Annulus Pressure | |
| Plug Depth <i>239</i> | Packer Depth | From | To | Flush <i>Freshwater</i> | Gas Volume | | Total Load | |

| | | |
|--|---|----------------------------------|
| Customer Representative <i>WG17</i> | Station Manager <i>Kevin Gardner</i> | Treater <i>Darin Franklin</i> |
| Service Units <i>92911 33708 20920 77686 73786</i> | | |
| Driver Names <i>Darin McGrew McGrew McGrew McGrew</i> | | |

| Time | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|---------------|-----------------|-----------------|--------------|----------|--|
| <i>8:30pm</i> | | | | | <i>on location / safety meeting</i> |
| | | | | | <i>2591 8 5/8 casing</i> |
| | | | | | <i>180 SK Common, 29%ac, 1/4 H Cellulose</i> |
| | | | | | <i>15.6 pps, 1.20 velle, 5.23 water</i> |
| <i>9:15pm</i> | <i>100</i> | | <i>3</i> | <i>5</i> | <i>Pump 3 bbls water</i> |
| | <i>100</i> | | <i>60</i> | <i>5</i> | <i>mix 180sk cement</i> |
| | <i>100</i> | | <i>15</i> | <i>5</i> | <i>Displace water</i> |
| <i>9:45pm</i> | | | | | <i>Shut in</i> |
| | | | | | <i>Cement did Circulate</i> |
| | | | | | <i>Job complete / Down & crew</i> |
| | | | | | <i>Thank you!!!</i> |



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET

1718 13821 A

DATE _____ TICKET NO. _____

| DATE OF JOB 8/10/16 | DISTRICT | NEW WELL <input checked="" type="checkbox"/> | OLD WELL <input type="checkbox"/> | PROD <input type="checkbox"/> | INJ <input type="checkbox"/> | WDW <input type="checkbox"/> | CUSTOMER ORDER NO.: | | |
|--------------------------------|--------------------------------------|--|-----------------------------------|-------------------------------|------------------------------|------------------------------|---------------------|-------|-------|
| CUSTOMER Gulfina Management | LEASE Springer | WELL NO. 2 | | | | | | | |
| ADDRESS | COUNTY Barber | STATE KS | | | | | | | |
| CITY | STATE | SERVICE CREW Scott, Dawn, Mike | | | | | | | |
| AUTHORIZED BY Chuck Griffin | JOB TYPE: 4 1/2 longstring - (NW) | | | | | | | | |
| EQUIPMENT# | HRS | EQUIPMENT# | HRS | EQUIPMENT# | HRS | TRUCK CALLED | DATE | AM PM | TIME |
| 86779 | 175 | | | | | ARRIVED AT JOB | 8/10/16 | AM PM | 5:30 |
| 21010 | 75 | | | | | START OPERATION | 8/10/16 | AM PM | 16:30 |
| | | | | | | FINISH OPERATION | 8/10/16 | AM PM | 11:15 |
| | | | | | | RELEASED | 8/10/16 | AM PM | 11:50 |
| | | | | | | MILES FROM STATION TO WELL | | | 35 |

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

| ITEM/PRICE REF. NO. | MATERIAL, EQUIPMENT AND SERVICES USED | UNIT | QUANTITY | UNIT PRICE | \$ AMOUNT | |
|-----------------------|---------------------------------------|------|----------|---------------------|------------|-----------|
| CP105 | AA2 Cement | SK | 175 | | 2975.00 | |
| CP103 | 60/100 POT | SK | 30 | | 360.00 | |
| CC102 | Cellulose | lb | 44 | | 167.80 | |
| CC111 | Sulf | lb | 823 | | 411.50 | |
| CC117 | Cement Friction Reducer | lb | 83 | | 498.00 | |
| CC116 | Mag Chem 100R | lb | 495 | | 1336.50 | |
| CC701 | Subsante | lb | 875 | | 586.25 | |
| CF600 | Latch down Plug + Baffle | ea | 1 | | 370.00 | |
| CF1750 | Auto fill float shoe 4 1/2 | ea | 1 | | 330.00 | |
| CF1650 | Turbolizers 4 1/2 | ea | 12 | | 1070.00 | |
| CF1400 | 4 1/2 Basket | ea | 1 | | 270.00 | |
| C704 | Clay mud lost Substitute | gal | 4 | | 140.00 | |
| CC151 | Mud flush | gal | 500 | | 750.00 | |
| E100 | Unit Mixture Charge Pickups | MI | 35 | | 157.50 | |
| E101 | Heavy Equipment Mixture | MI | 70 | | 525.00 | |
| E113 | Prop & Baffle Delivery To Well | TR | 334 | | 835.63 | |
| CE705 | Depth Charge 4000-5000' | lbs | 1 | | 2520.00 | |
| CE710 | Blending & mixing Charge | SK | 205 | | 287.00 | |
| CE504 | Drug Container | job | 1 | | 250.00 | |
| 5003 | Service Supervisor | ea | 1 | | 175.00 | |
| | | | | | SUB-TOTAL | 13966.18 |
| CHEMICAL / ACID DATA: | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | SERVICE & EQUIPMENT | %TAX ON \$ | |
| | | | | MATERIALS | %TAX ON \$ | |
| | | | | | TOTAL | 166421.68 |

SERVICE REPRESENTATIVE: *[Signature]* THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. _____

| | | |
|---------------------------------------|-----------------------------|--------------------------------------|
| Customer <i>Griffin Management</i> | Lease No. | Date <i>8/10/16</i> |
| Lease <i>Springer</i> | Well # <i>2</i> | |
| Field Order # <i>13871A</i> | Station <i>Pratt, KS</i> | Casing <i>4 1/2</i> |
| | | Depth <i>4879</i> |
| Type Job <i>4 1/2 Longstring</i> | Formation <i>cnw</i> | County <i>Barber</i> |
| | | State <i>KS</i> |
| | | Legal Description <i>34-32-12</i> |

| PIPE DATA | | PERFORATING DATA | | FLUID USED | TREATMENT RESUME | | |
|-----------------|--------------|------------------|----|------------|------------------|-------|------------------|
| Casing Size | Tubing Size | Shots/Ft | | Acid | RATE | PRESS | ISIP |
| <i>4 1/2</i> | | | | | | | |
| Depth | Depth | From | To | Pre Pad | Max | | 5 Min. |
| <i>4879</i> | | | | | | | |
| Volume | Volume | From | To | Pad | Min | | 10 Min. |
| <i>75.62</i> | | | | | | | |
| Max Press | Max Press | From | To | Frac | Avg | | 15 Min. |
| <i>2000</i> | | | | | | | |
| Well Connection | Annulus Vol. | From | To | | HHP Used | | Annulus Pressure |
| <i>4 1/2</i> | | | | | | | |
| Plug Depth | Packer Depth | From | To | Flush | Gas Volume | | Total Load |
| | | | | | | | |

| | | |
|---|---|--------------------------------|
| Customer Representative <i>Andy</i> | Station Manager <i>Kevin Cradley</i> | Treater <i>Scott Graves</i> |
| Service Units <i>38950 78982 86779 19959 21010</i> | | |
| Driver Names <i>Scott Dorin Mike</i> | | |

| Time | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|--------------|-----------------|-----------------|--------------|------------|--|
| <i>5:30</i> | | | | | <i>On Location Safety Meeting Reg</i> |
| <i>8:15</i> | | | | | <i>Run Flow Equipment Junk #1</i> |
| | | | | | <i>Tubes 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23</i> |
| <i>9:30</i> | | | | | <i>Break Circulation 1 hour</i> |
| <i>10:32</i> | <i>150</i> | | | <i>6</i> | <i>Pump H₂O Spacer</i> |
| <i>10:34</i> | <i>200</i> | | <i>5</i> | <i>6</i> | <i>Pump Mud Flush</i> |
| <i>10:36</i> | <i>200</i> | | <i>12</i> | <i>6</i> | <i>Pump H₂O Spacer</i> |
| <i>10:37</i> | <i>300</i> | | <i>5</i> | <i>6.5</i> | <i>Mix 175 sks AA2 15.3 ppq</i> |
| <i>10:44</i> | <i>0</i> | | <i>42.4</i> | | <i>Shut down</i> |
| | | | | | <i>Wash pump + lines clean</i> |
| <i>10:46</i> | | | | <i>7</i> | <i>Release Plug start displacement</i> |
| <i>10:54</i> | | | <i>55</i> | <i>7</i> | <i>lift pressure</i> |
| <i>10:57</i> | <i>550</i> | | <i>10</i> | <i>3.5</i> | <i>Reduce Rate</i> |
| <i>11:00</i> | <i>700</i> | | <i>10.5</i> | <i>3.5</i> | <i>Plug landed</i> |
| <i>11:00</i> | <i>1500</i> | | | | <i>Pressure up on Plug Held</i> |
| <i>11:01</i> | <i>0</i> | | | | <i>Release Pressure NO Returns</i> |
| <i>11:10</i> | <i>0</i> | | <i>8</i> | <i>3</i> | <i>Plug out 30 sks 60/40 POT</i> |
| | | | | | <i>Job Complete</i> |

OPERATOR

Company: Charles N. Griffin
 Address: PO Box 347
 Pratt, KS 67124

Contact Geologist:
 Contact Phone Nbr: 15-007-24307

Well Name: #2 Springer
 Surface Location: Section 34-32S-12W
 Bottom Location:
 License Number: API: 15-007-24307
 Spud Date: 8/5/2016 Region: Barber County Time: 3:45 PM
 Drilling Completed: 8/9/2016 Time: 5:15 PM
 Surface Coordinates: 638 FSL & 1680 FWL
 Bottom Hole Coordinates: 1512.00ft
 Ground Elevation: 1517.00ft
 K.B. Elevation: 1517.00ft
 Logged Interval: 3300.00ft To: 4880.00ft
 Total Depth: 4880.00ft
 Formation:
 Drilling Fluid Type: Chemical (MudCo)

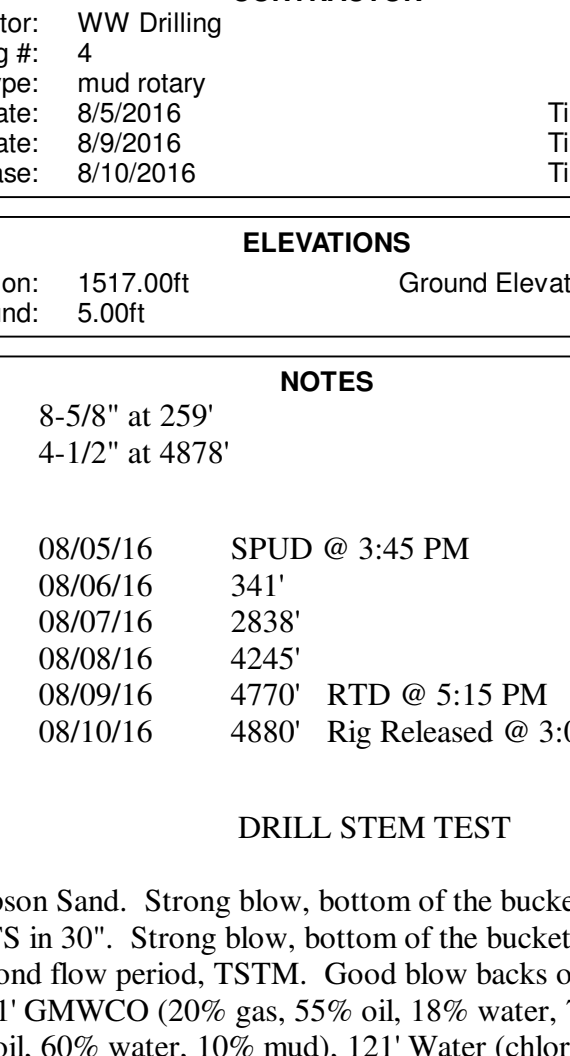
Scale 1:240 Imperial

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 K.B. Elevation: 1517.00ft
 Logged Interval: 3300.00ft To: 4880.00ft
 Total Depth: 4880.00ft
 Formation:
 Drilling Fluid Type: Chemical (MudCo)

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 638 FSL
 E/W Co-ord: 1680 FWL

LOGGED BY



TERRATECH
ENERGY SERVICE, LLC

Company: TerraTech Energy Service LLC.
 Address: 1632 S. West St. Suite 12
 Wichita, KS 67208

Phone Nbr: 316-617-3959
 Logged By: Geologist Name: Bruce Reed

CONTRACTOR

Contractor: WW Drilling
 Rig #/ Type: 4 / mud rotary
 Spud Date: 8/5/2016 Time: 3:45 PM
 TD Date: 8/9/2016 Time: 5:15 PM
 Rig Release: 8/10/2016 Time: 3:00 PM

ELEVATIONS

K.B. Elevation: 1517.00ft Ground Elevation: 1512.00ft
 K.B. to Ground: 5.00ft

NOTES

Surface Casing: 8-5/8" at 259'
 Production Casing: 4-1/2" at 4878'

Daily Penetration:
 08/05/16 SPUD @ 3:45 PM
 08/06/16 341'
 08/07/16 2838'
 08/08/16 4245'
 08/09/16 4770' RTD @ 5:15 PM
 08/10/16 4880' Rig Released @ 3:00 PM

DRILL STEM TEST

DST #1 4742'-4770': Simpson Sand. Strong blow, bottom of the bucket in 1 minute during the initial flow period, with GTS in 30".
 Strong blow, bottom of the bucket in 30 seconds, with GTS immediately during the second flow period. TSTM. Good blow backs on both shut in periods.
 Recovered: 4075' GIP, 341' GMWCO (20% gas, 55% oil, 18% water, 7% mud), 186' GOMCW (10% gas, 20% oil, 60% water, 10% mud), 121' Water (chlorides 84,000 ppm).
 IFP/30" 161-189#, ISIP/45" 1481#, IFP/30" 206-288#, FSP/60" 1475#

FORMATION TOPS

| Formation | Log Top | Datum | Sample Top | Datum | Comparison* |
|---------------|---------|-------|------------|-------|-------------|
| Lecompton | 3399' | -1882 | 3400' | -1883 | +5 |
| Elgin | 3431' | -1914 | 3434' | -1917 | +6 |
| Heebner | 3607' | -2090 | 3607' | -2090 | +10 |
| Lansing | 3807' | -2290 | 3809' | -2292 | +5 |
| Stark | 4188' | -2671 | 4190' | -2673 | +1 |
| Hush | 4218' | -2701 | 4218' | -2701 | +1 |
| Base KC | 4274' | -2757 | 4273' | -2756 | -1 |
| Mississippian | 4362' | -2845 | 4365' | -2848 | -1 |
| Kinderhook | 4559' | -3042 | 4560' | -3043 | flat |
| Viola | 4664' | -3147 | 4662' | -3145 | -1 |
| Simpson Sand | 4757' | -3240 | 4756' | -3239 | -1 |

*Reference well: Charles N. Griffin, #1 Springer, 846' FSL / 2504' FWL
 Section 34-32S-12W, Barber County, Kansas

ROCK TYPES

shale, gray
 Carbon Sh
 Lmst fw7>

ACCESSORIES

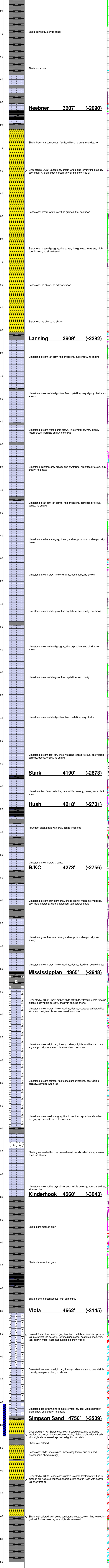
MINERAL
 Dk Mtlc
 Chert White

OTHER SYMBOLS

Oil Show
 Good Show
 Fair Show
 Poor Show
 Spotted or Trace
 Questionable Sin
 Dead Oil Sin
 Fluorescence
 Gas

DST
 DST Int
 DST alt
 Core
 tail pipe

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



MINERAL
 Dk Mtlc
 Chert White

OTHER SYMBOLS

Oil Show
 Good Show
 Fair Show
 Poor Show
 Spotted or Trace
 Questionable Sin
 Dead Oil Sin
 Fluorescence
 Gas

DST
 DST Int
 DST alt
 Core
 tail pipe

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



DRILL STEM TEST REPORT

Prepared For: **Charles N Griffin**

PO Box 347
Pratt, KS 67124

ATTN: Bruce Reed

Springer #2

34-32s-12w Barber,KS

Start Date: 2016.08.09 @ 02:42:48

End Date: 2016.08.09 @ 10:41:33

Job Ticket #: 55406 DST #: 1

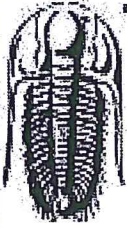
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.08.09 @ 16:34:55

Charles N Griffin 34-32s-12w Barber,KS Springer #2 DST # 1 Simpson 2016.08.09



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Charles N Griffin

34-32s-12w Barber,KS

PO Box 347
Pratt, KS 67124

Springer #2

Job Ticket: 55406

DST#: 1

ATTN: Bruce Reed

Test Start: 2016.08.09 @ 02:42:48

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:53:03
 Time Test Ended: 10:41:33

Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74

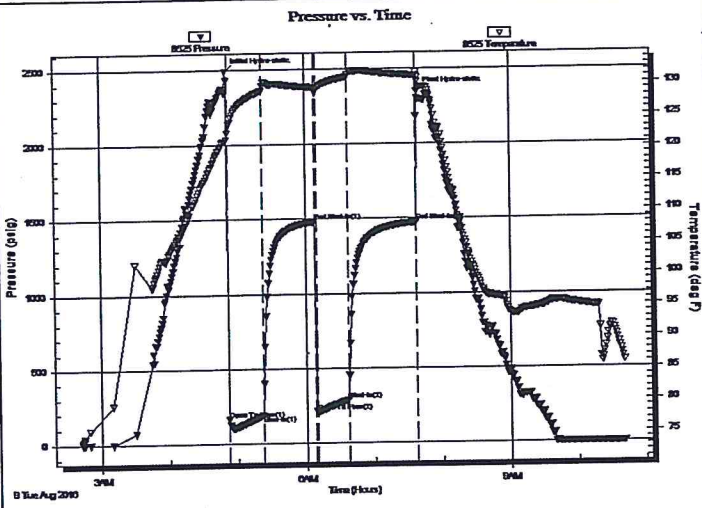
Interval: **4742.00 ft (KB) To 4770.00 ft (KB) (TVD)**
 Total Depth: 4770.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1517.00 ft (KB)
 1512.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: **8525** Inside
 Press@RunDepth: 288.36 psig @ 4743.00 ft (KB)
 Start Date: 2016.08.09 End Date: 2016.08.09
 Start Time: 02:42:49 End Time: 10:41:33

Capacity: 8000.00 psig
 Last Calib.: 2016.08.09
 Time On Btm: 2016.08.09 @ 04:51:03
 Time Off Btm: 2016.08.09 @ 07:38:48

TEST COMMENT: IF: Strong Blow, BOB in 1 minute, GTS in 30 minutes
 IS: Blow Back Built to 6 inches
 FF: Strong Blow, BOB in 30 seconds, GTS immediately, TSTM
 FS: Blow Back Built to BOB in 22 minutes



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2490.99 | 120.89 | Initial Hydro-static |
| 2 | 161.08 | 122.25 | Open To Flow (1) |
| 31 | 188.99 | 128.85 | Shut-In(1) |
| 77 | 1480.76 | 129.38 | End Shut-In(1) |
| 79 | 206.17 | 128.78 | Open To Flow (2) |
| 107 | 288.36 | 131.03 | Shut-In(2) |
| 167 | 1474.67 | 131.22 | End Shut-In(2) |
| 168 | 2349.09 | 130.81 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
| 0.00 | 4075 GIP | 0.00 |
| 121.00 | Water | 0.60 |
| 186.00 | GOMCW 10%G 10%M 20%O 60%W | 2.61 |
| 247.00 | GMWCO 20%G 6%M 24%W 50%O | 3.46 |
| 94.00 | GMWCO 20%G 10%M 10%W 60%O | 1.32 |

Gas Rates

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



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Job Ticket: 55406

DST#: 1

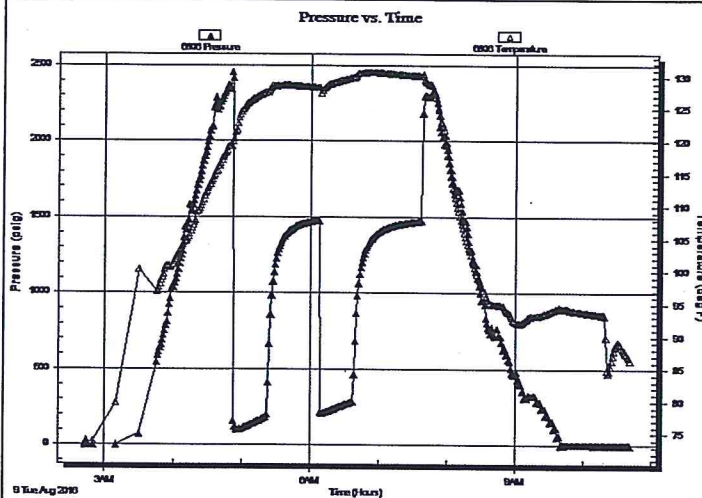
Test Start: 2016.08.09 @ 02:42:48

GENERAL INFORMATION:

| | | |
|---|--|---|
| Formation: Simpson | | Test Type: Conventional Bottom Hole (Initial) |
| Deviated: No Whipstock: ft (KB) | | Tester: Leal Cason |
| Time Tool Opened: 04:53:03 | | Unit No: 74 |
| Time Test Ended: 10:41:33 | | |
| Interval: 4742.00 ft (KB) To 4770.00 ft (KB) (TVD) | | Reference Elevations: 1517.00 ft (KB) |
| Total Depth: 4770.00 ft (KB) (TVD) | | 1512.00 ft (CF) |
| Hole Diameter: 7.88 inches Hole Condition: Good | | KB to GR/CF: 5.00 ft |

| | | | | |
|--|----------------------|-------------------------|--|--|
| Serial #: 6806 | Outside | | | |
| Press@RunDepth: psig @ 4743.00 ft (KB) | | Capacity: 8000.00 psig | | |
| Start Date: 2016.08.09 | End Date: 2016.08.09 | Last Calib.: 2016.08.09 | | |
| Start Time: 02:42:49 | End Time: 10:41:33 | Time On Btm: | | |
| | | Time Off Btm: | | |

TEST COMMENT: IF: Strong Blow, BOB in 1 minute, GTS in 30 minutes
 IS: Blow Back Built to 6 inches
 FF: Strong Blow, BOB in 30 seconds, GTS immediately, TSTM
 FSI: Blow Back Built to BOB in 22 minutes



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
| 0.00 | 4075 GIP | 0.00 |
| 121.00 | Water | 0.60 |
| 186.00 | GOMCW 10%G 10%M 20%O 60%W | 2.61 |
| 247.00 | GMWCO 20%G 6%M 24%W 50%O | 3.46 |
| 94.00 | GMWCO 20%G 10%M 10%W 60%O | 1.32 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Charles N Griffin

34-32s-12w Barber,KS

PO Box 347
Pratt, KS 67124

Springer #2

Job Ticket: 55406

DST#: 1

ATTN: Bruce Reed

Test Start: 2016.08.09 @ 02:42:48

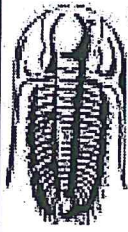
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4602.00 ft | Diameter: 3.80 inches | Volume: 64.55 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 121.00 ft | Diameter: 2.25 inches | Volume: 0.60 bbl | Weight to Pull Loose: 90000.00 lb |
| | | | <u>Total Volume: 65.15 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 7.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 4742.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 28.00 ft | | | |
| Tool Length: | 54.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool | 5.00 | | | 4721.00 | |
| Hydraulic tool | 5.00 | | | 4726.00 | |
| Jars | 5.00 | | | 4731.00 | |
| Safety Joint | 2.00 | | | 4733.00 | |
| Packer | 5.00 | | | 4738.00 | 26.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4742.00 | |
| Stubb | 1.00 | | | 4743.00 | |
| Recorder | 0.00 | 8525 | Inside | 4743.00 | |
| Recorder | 0.00 | 6806 | Outside | 4743.00 | |
| Perforations | 24.00 | | | 4767.00 | |
| Bullnose | 3.00 | | | 4770.00 | 28.00 Bottom Packers & Anchor |

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Charles N Griffin

34-32s-12w Barber,KS

PO Box 347
Pratt, KS 67124

Springer #2

Job Ticket: 55406

DST#: 1

ATTN: Bruce Reed

Test Start: 2016.08.09 @ 02:42:48

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:

84000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------|---------------|
| 0.00 | 4075 GIP | 0.000 |
| 121.00 | Water | 0.595 |
| 186.00 | GOMCW 10%G 10%M 20%O 60%W | 2.609 |
| 247.00 | GMWCO 20%G 6%M 24%W 50%O | 3.465 |
| 94.00 | GMWCO 20%G 10%M 10%W 60%O | 1.319 |

Total Length: 648.00 ft Total Volume: 7.988 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .1 @ 66 degrees

Serial #: 8525

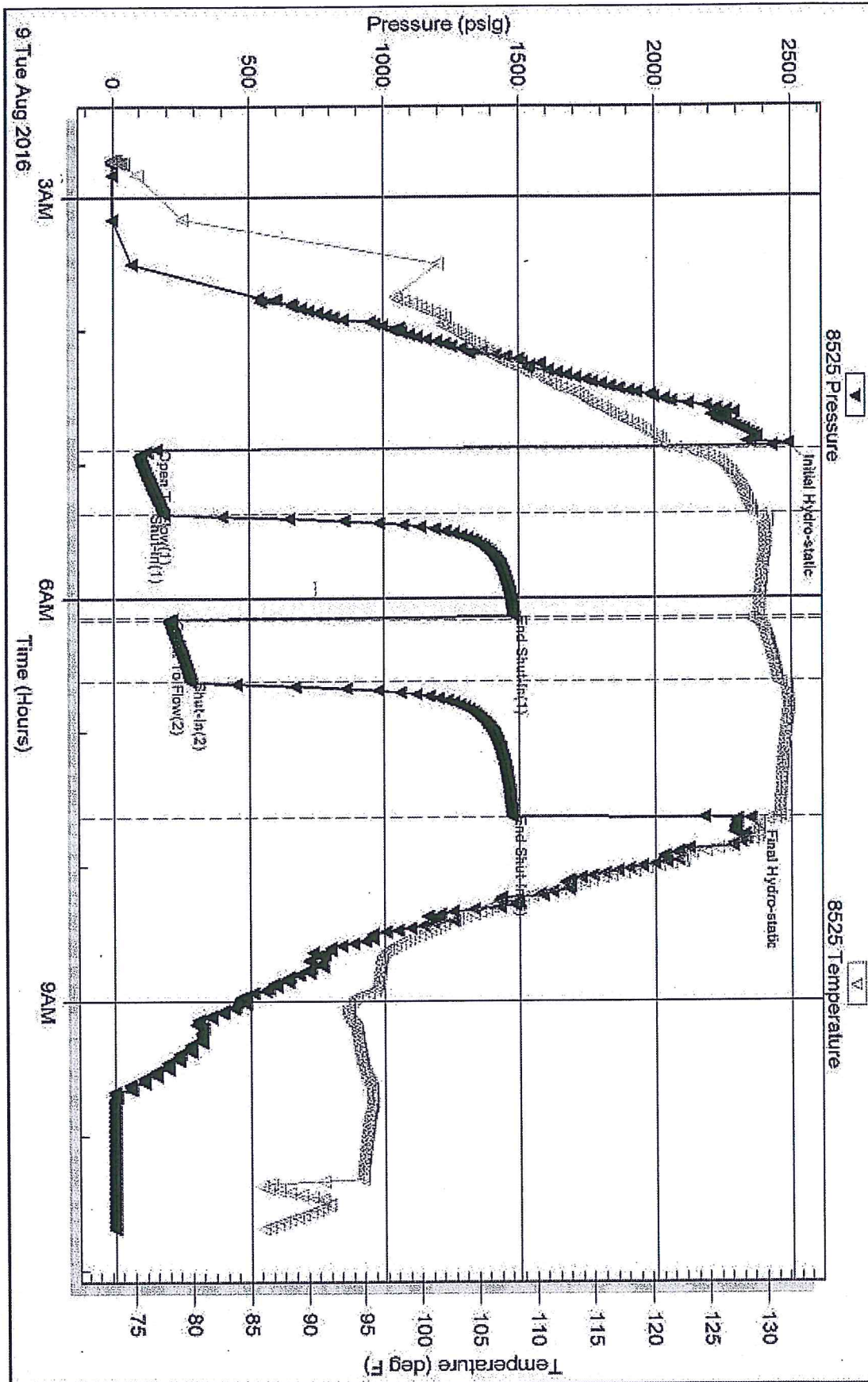
Inside

Charles N Griffin

Springer #2

DST Test Number: 1

Pressure vs. Time



Trioble Testing, Inc

Ref. No: 55406

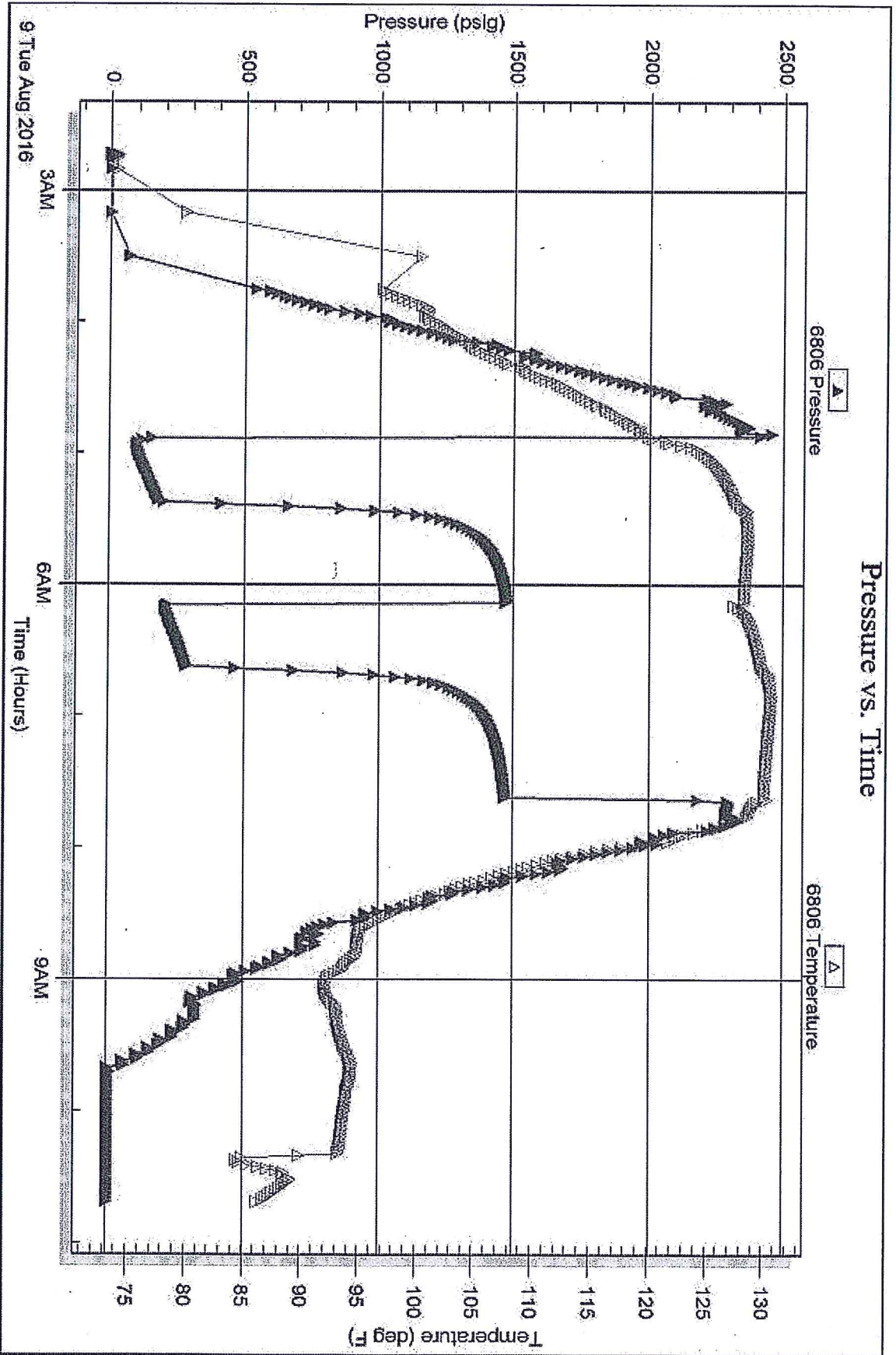
Printed: 2016.08.09 @ 16:34:57

Serial #: 6806

Outside Charles N Griffin

Springer #2

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55406

Well Name & No. Springer 2 Test No. 1 Date 08/09/16
 Company Charles M. Griffin Elevation 1517 KB 1512 GL
 Address PO Box 347 Pratt, KS 67124
 Co. Rep / Geo. Bruce Reed Rig WW 4
 Location: Sec. 34 Twp. 32S Rge. 12W Co. Barber State KS

Interval Tested 4742 - 4770 Zone Tested Simpson
 Anchor Length 28 Drill Pipe Run 4602 Mud Wt. 9.3
 Top Packer Depth 4737 Drill Collars Run 121 Vis 54
 Bottom Packer Depth 4742 Wt. Pipe Run 0 WL 9.2
 Total Depth 4770 Chlorides 4000 ppm System LCM 1

Blow Description IF: Strong Blow, BOB in 1 minute, GTS in 30 minutes
ISI: Blow Back Built to 6 inches
FF: Strong Blow, BOB in 30 seconds, GTS immediate, TSTM
FSI: Blow Back Built to BOB in 22 minutes

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|--------------|-----------|-----------|-----------|-----------|
| <u>4075</u> | <u>GIP</u> | | | | |
| <u>94</u> | <u>GMWCO</u> | <u>20</u> | <u>60</u> | <u>10</u> | <u>10</u> |
| <u>247</u> | <u>GMWCO</u> | <u>20</u> | <u>50</u> | <u>24</u> | <u>6</u> |
| <u>186</u> | <u>GOMCW</u> | <u>10</u> | <u>20</u> | <u>60</u> | <u>10</u> |
| <u>121</u> | <u>Water</u> | | | | |

Rec Total 648 BHT 131 Gravity NIC API RW .1 @ 66 °F Chlorides 84000 ppm

(A) Initial Hydrostatic 2490 Test 1150 T-On Location 00:15
 (B) First Initial Flow 161 Jars 250 T-Started 02:42
 (C) First Final Flow 139 Safety Joint 75 T-Open 04:53
 (D) Initial Shut-In 1481 Circ Sub _____ T-Pulled 07:37
 (E) Second Initial Flow 206 Hourly Standby _____ T-Out 10:41
 (F) Second Final Flow 238 Mileage 842 63 Comments _____
 (G) Final Shut-In 1475 Sampler _____
 (H) Final Hydrostatic 2349 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1538
 Total 1538
 MP/DST Disc't

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 60

Approved By Bruce Reed Our Representative [Signature]

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