



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1203757
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: _____



1203757

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

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

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

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

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

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

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

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

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

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

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

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

| | |
|-----------|---------------------------|
| Form | ACO1 - Well Completion |
| Operator | Grady Bolding Corporation |
| Well Name | Grizzell 27 |
| Doc ID | 1203757 |

All Electric Logs Run

| |
|---------------------------------|
| |
| Dual Induction Log |
| Dual Receiver Cement Bond Log |
| Microsensitivity Log |
| Compensated Density/Neutron Log |

| | |
|-----------|---------------------------|
| Form | ACO1 - Well Completion |
| Operator | Grady Bolding Corporation |
| Well Name | Grizzell 27 |
| Doc ID | 1203757 |

Tops

| Name | Top | Datum |
|------------|------|-------|
| Heebner | 2836 | 1038 |
| Toronto | 2853 | 1055 |
| Douglas | 2864 | 1066 |
| Brown Lime | 2948 | 1150 |
| Lansing | 2964 | 1166 |
| BKC | 3230 | 1432 |
| Arbuckle | 3251 | 1453 |
| RTD | 3312 | 1514 |
| LTD | 3310 | 1512 |

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. 7189

| | | | | | | | | | | | | | | | |
|------|---------|------|----|------|----|-------|----|--------|-----------|-------|----|-------------|--|--------|---------|
| Date | 3-29-14 | Sec. | 31 | Twp. | 17 | Range | 10 | County | Ellsworth | State | Ks | On Location | | Finish | 1:15 AM |
|------|---------|------|----|------|----|-------|----|--------|-----------|-------|----|-------------|--|--------|---------|

Lease Grizzell Well No. 27 Location Clafin Ks - E to 1st Rd, 3/4 N Owner WINTS

Contractor Southwind # 1 To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
cementer and helper to assist owner or contractor to do work as listed.

Type Job Surface Charge To Geady Bolding

Hole Size 12 1/4" T.D. 314' Street

Csg. 8 5/8" Depth 314' City

Tbg. Size Depth State

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

Cement Left in Csg. Shoe Joint Cement Amount Ordered 180 sx Common 8 5/8"

Meas Line Displace 19 BLS 2 1/2 Gel Common 180

EQUIPMENT Poz. Mix

| | | | | | | | |
|---------|--------------|-----|----------|---------------|----------|--|--|
| Pumptrk | 16 | No. | Cementer | <u>Billy</u> | | | |
| | | | Helper | | | | |
| Bulktrk | 19 | No. | Driver | <u>Lonnie</u> | <u>M</u> | | |
| | | | Driver | | | | |
| Bulktrk | <u>pi.u.</u> | No. | Driver | <u>Rick</u> | | | |
| | | | Driver | | | | |

JOB SERVICES & REMARKS Hulls

Remarks: Cement did Circulate Salt

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Handling 139 Mileage

FLAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFI Inserts

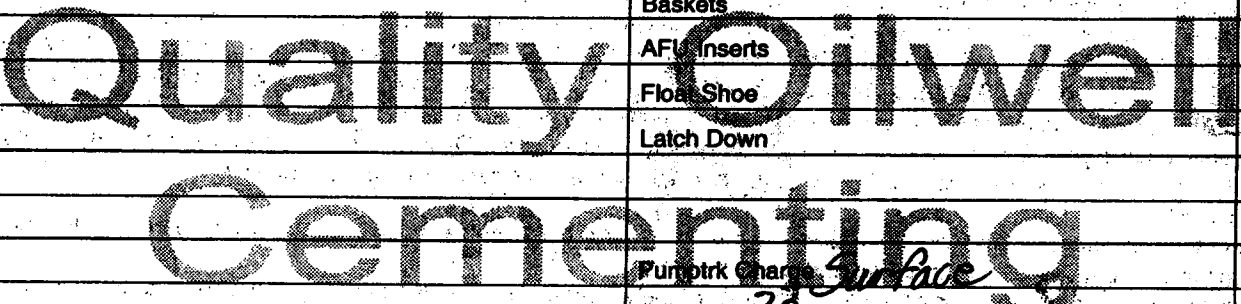
Float Shoe

Latch Down

Pumptrk Charge Surface Mileage 30

Signature K. L. Thompson Tax

Discount Total Charge



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7145

| | | | | | | | |
|--------------------|----------------|----------------|-----------------|---|-----------------|-------------|-----------------------|
| Date <u>4-3-14</u> | Sec. <u>31</u> | Twp. <u>17</u> | Range <u>10</u> | County <u>Ellsworth</u> | State <u>KS</u> | On Location | Finish <u>12:45pm</u> |
| | | | | Location <u>Clafin E to CL, 3/4 N, En 2</u> | | | |

| | | |
|--------------------------------|-------------------------|--|
| Lease <u>Grizzell</u> | Well No. <u>27</u> | Owner |
| Contractor <u>Southwind #1</u> | | To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Type Job <u>long string</u> | | |
| Hole Size <u>7 7/8</u> | T.D. <u>3312</u> | Charge To <u>Grady Bolding</u> |
| Csg. <u>5 1/2 #14</u> | Depth <u>3307</u> | Street |
| Tbg. Size | Depth | City |
| Tool | Depth | State |
| Cement Left in Csg. | Shoe Joint <u>42.12</u> | The above was done to satisfaction and supervision of owner agent or contractor. |
| Meas Line | Displace <u>79.666l</u> | Cement Amount Ordered <u>180 sx A pro-c, 10% salt,</u> |
| EQUIPMENT | | <u>5% Gilsanite, 20 bbl KCL, 4 gal KCL</u> |

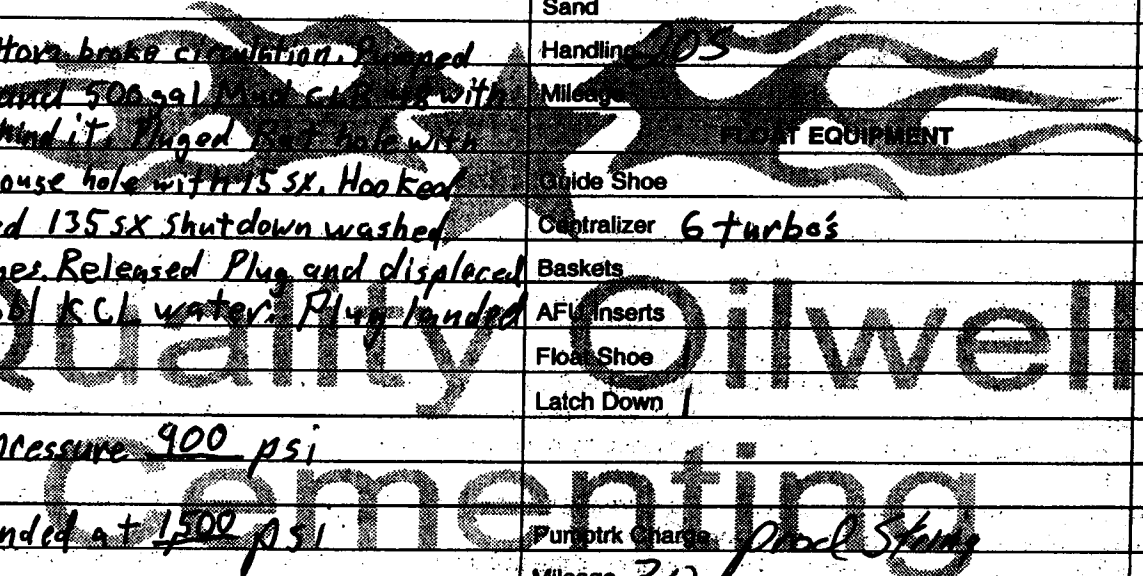
| | | | |
|-------------------|-----|----------------------|---------------------------|
| Pumptrk <u>17</u> | No. | Cementor | Common <u>180 A pro-c</u> |
| | | Helper <u>Nick</u> | Poz. Mix |
| Bulktrk <u>3</u> | No. | Driver | Gel. |
| | | Driver <u>Claton</u> | Calcium |
| Bulktrk <u>Pu</u> | No. | Driver | |
| | | Driver <u>Travis</u> | |

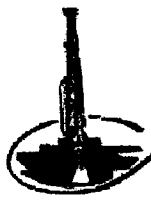
| | | |
|--------------------------------------|--|---------------------------|
| JOB SERVICES & REMARKS | | Wells <u>KCL 5 gal</u> |
| Remarks: | | Salt <u>16</u> |
| Rat Hole <u>30 sx</u> | | Flowseal |
| Mouse Hole <u>15 sx</u> | | Kol-Seal <u>900#</u> |
| Centralizers <u>1, 2, 5, 6, 7, 8</u> | | Mud CLR 48 <u>500 gal</u> |
| Baskets | | CFL-117 or CD110 CAF 38 |
| D/V or Port Collar | | Sand |

Pipe on bottom broke circulation. Pumped 20 bbl KCL and 500 gal Mud Gilsanite with 56 bbl pw behind it. Plugged rat hole with 30 sx and Mouse hole with 15 sx. Hooked to 5 1/2 Mixed 135 sx. Shutdown washed pump and lines. Released Plug and displaced with 79.6 bbl KCL water. Plug landed and held.

lift pressure 900 psi
Plug landed at 1500 psi

| | | |
|--------------------------------|----------------------------------|--------------|
| X Signature <u>[Signature]</u> | Pumptrk Charge <u>Good Start</u> | Tax |
| | Mileage <u>30</u> | Discount |
| | | Total Charge |





Musgrove

NOTES

Company: Grady Bolding Corporation
 Lease: Grizzell #27
 Field: Bloomer
 Location: NW-SW-SE-NE (1996' FNL& 1131' FEL)
 Sec: 31 Twsp: 17S Rge: 10W
 County: Ellsworth State: Kansas
 KB: 1798' GL: 1788'
 API #: 15-053-21308-00-00
 Contractor: Southwind Drilling Inc. (Rig #1)
 Spud: 03/29/2014 Comp: 04/03/2014
 RTD: 3312' LTD: 3310'
 Mud Up: 2700' Type Mud: Chemical
 Samples Saved From: 2700' to RTD
 Drilling Time Kept From: 2700' to RTD
 Samples Examined From: 2700' to RTD
 Geological Supervision from: 2700' to RTD
 Geologist on Well: Wyatt Urban
 Surface Casing: 8 5/8 @ 312'

Electronic Surveys: Logged by Nabors Completion Services CDL/CNL MEL DIL

Grady Bolding Corporation Well Comparison

| Formation | Grady Bolding Corp-Grizzell NW-SW-SE-NE 31-17S-10W 1798'KB | | | | Grady Bolding Corp- #24 Grizzell C-W/2-SW-NE 31-17S-10W 1803'KB | | | | Gulf Oil Corp- #15-31 Grizzell SW-NE-SW-NE 23-32S-37W 1807'KB | | | |
|------------|---|-------|------|-------|--|-------|-----|-----|--|-------|----|-----|
| | | | | | Structural Relationship | | | | Structural Relationship | | | |
| | 2834 | -1036 | 2836 | -1038 | 2840 | -1037 | -1 | -1 | 2847 | -1040 | 4 | 2 |
| Toronto | 2848 | -1050 | 2853 | -1055 | 2859 | -1056 | -6 | 1 | 2864 | -1057 | 7 | 2 |
| Douglas | 2860 | -1062 | 2864 | -1066 | 2866 | -1062 | 1 | -3 | | | | |
| Brown Lime | 2945 | -1147 | 2948 | -1150 | 2955 | -1152 | 5 | 2 | | | | |
| Lansing | 2961 | -1163 | 2964 | -1166 | 2970 | -1167 | 4 | 1 | 2976 | -1169 | 6 | 3 |
| BKC | 3228 | -1430 | 3230 | -1432 | 3238 | -1432 | 2 | 0 | 3240 | -1433 | 3 | 1 |
| Arbuckle | 3245 | -1447 | 3251 | -1453 | 3242 | -1439 | -8 | -14 | 3246 | -1439 | -8 | -14 |
| RTD | 3312 | -1514 | 3312 | -1514 | 3248 | -1445 | -69 | -69 | 3350 | -1543 | 29 | 29 |
| LTD | 3310 | -1512 | 3310 | -1512 | | | | | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Grady Bolding Corporation

31-17s-10w- Ellsworth Co.

114 N Main St
Ellsworth KS 67526

Grizzell #27

Job Ticket: 57552

DST#: 1

ATTN: Wyatt Urban

Test Start: 2014.03.31 @ 13:15:04

GENERAL INFORMATION:

Formation: Lans. A-F

Time Tool Opened: 17:03:04

Time Test Ended: 20:52:04

Interval: 2952.00 ft (KB) To 3050.00 ft (KB) (TVD)

Total Depth: 3050.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Tester: Tate Lang

Unit No: 49

Reference Elevations: 1788.00 ft (KB)

1788.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8898

Outside

Press@RunDepth: 173.43 psig @ 2953.00 ft (KB)

Start Date: 2014.03.31

Start Time: 13:15:05

End Date:

End Time:

2014.03.31

20:52:04

Capacity:

8000.00 psig

Last Call:

2014.03.31

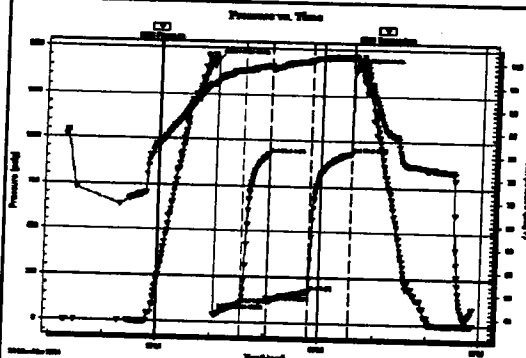
Time On Btm:

2014.03.31 @ 16:03:14

Time Off Btm:

2014.03.31 @ 18:34:13

TEST COMMENT: B.O.B. in 2 mins
Fair blow back built to 4 in died back to 3 in
B.O.B. in 2 mins
Weak blow back built to 3 in



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1434.83 | 95.69 | Initial Hydro-static |
| 1 | 40.10 | 95.26 | Initial Hydro-static |
| 31 | 102.34 | 96.02 | Shut-in(1) |
| 60 | 923.11 | 99.09 | End Shut-in(1) |
| 60 | 115.35 | 96.72 | Open To Flow (1) |
| 105 | 173.43 | 100.31 | Shut-in(2) |
| 151 | 933.33 | 101.11 | End Shut-in(2) |
| 151 | 1399.82 | 101.32 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------|--------------|
| 120.00 | 50% G 40% O 5% W 5% M | 1.66 |
| 180.00 | 50% G 10% O 40% M | 2.52 |
| 60.00 | 5% G 5% O 90% M | 0.84 |
| 0.00 | 100% GP | 0.00 |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (MCFG) |
|----------------|-----------------|-----------------|
| | | |



TRIOBITE TESTING, INC

DRILL STEM TEST REPORT

Grady Bolding Corporation

114 N Main St
Elinwood KS 67526

ATTN: Wyatt Urban

31-17a-10w - Ellsworth Co.

Grizzell #27

Job Ticket: 57553

DST#: 2

Test Start: 2014.04.01 @ 15:03:14

GENERAL INFORMATION:

Formation: Arbuckle

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:12:44

Time Test Ended: 21:53:14

Test Type: Conventional Bottom Hole (Resal)

Tester: Tate Lang

Unit No: 49

Interval: 3196.00 ft (KB) To 3235.00 ft (KB) (TVD)

Total Depth: 3235.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1788.00 ft (KB)

1788.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8898

Outside

Press@RunDepth: 36.40 psig @ 3191.00 ft (KB)

Start Date: 2014.04.01

Start Time: 15:03:15

End Date:

End Time:

2014.04.01

21:53:14

Capacity:

8000.00 psig

Last Call:

2014.04.01

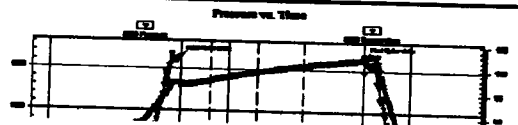
Time On Btm:

2014.04.01 @ 17:12:24

Time Off Btm:

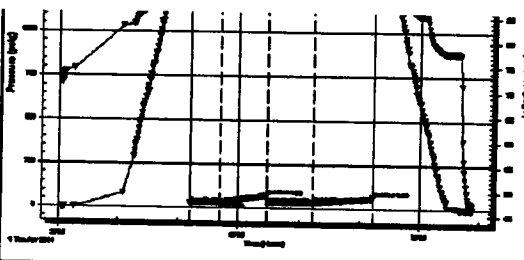
2014.04.01 @ 20:14:34

TEST COMMENT: Fair blow built to 6 in
Dead no blow back
Weak surface blow built to 1 3/4 in
Dead no blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1571.61 | 96.89 | Initial Hydro-static |
| 1 | 26.53 | 96.50 | Open To Flow (1) |



| | | | |
|-----|---------|--------|--------------------|
| 77 | 72.89 | 99.24 | End Shut-in(1) |
| 77 | 29.35 | 99.25 | Open To Flow(2) |
| 121 | 36.40 | 100.63 | Shut-in(2) |
| 182 | 69.47 | 102.06 | End Shut-in(2) |
| 183 | 1580.28 | 102.82 | Final Hydro-static |

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 40.00 | 10%G 10%O 80%M | 0.56 |
| 0.00 | 20 GP | 0.00 |
| | | |
| | | |
| | | |

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

Grady Bolding Corporation
 114 N Main St
 Ellwood KS 67526
 ATTN: Wyatt Urban

31-17a-10w- Ellsworth Co.
 Grizzell #27
 Job Ticket: 57554 DST#: 3
 Test Start: 2014.04.02 @ 08:10:46

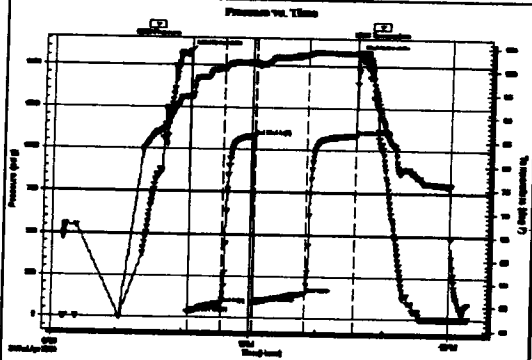
GENERAL INFORMATION:

Formation: Arbuckle
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 08:04:58
 Time Test Ended: 12:17:38
 Interval: 3198.00 ft (KB) To 3252.00 ft (KB) (TVD)
 Total Depth: 3247.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches-Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)
 Tester: Tate Lang
 Unit No: 49
 Reference Elevations: 1798.00 ft (KB)
 1788.00 ft (CF)
 KB to GRVCF: 10.00-ft

Serial #: 8898 Outside
 Press@RunDepth: 147.35 psig @ 3198.00 ft (KB)
 Start Date: 2014.04.02 End Date: 2014.04.02
 Start Time: 08:10:47 End Time: 12:17:38
 Capacity: 8000.00 psig
 Last Calc.: 2014.04.02
 Time On Blm: 2014.04.02 @ 08:04:38
 Time Off Blm: 2014.04.02 @ 10:35:25

TEST COMMENT: B.O.B. in 12 mins
 Weak surface blow back
 B.O.B. in 11 mins
 Weak surface blow built to 2 in



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1581.56 | 94.44 | Initial Hydro-static |
| 1 | 28.83 | 94.14 | Open To Flow(1) |
| 31 | 83.63 | 100.36 | Shut-in(1) |
| 59 | 1061.55 | 101.78 | End Shut-in(1) |
| 60 | 89.04 | 101.48 | Open To Flow(2) |
| 106 | 147.35 | 103.34 | Shut-in(2) |
| 150 | 1084.98 | 103.73 | End Shut-in(2) |
| 151 | 1582.56 | 104.01 | Final Hydro-static |

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 60.00 | 10%G 10%O 5%W 75%M | 0.84 |
| 120.00 | 45%G 30%O 5%W 20%M | 1.68 |
| 60.00 | 30%G 35%O 35%M | 0.84 |
| 40.00 | 10%G 30%O 80%M | 0.56 |
| 0.00 | 440 GP | 0.00 |

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

* Recovery from multiple tests

ROCK TYPES

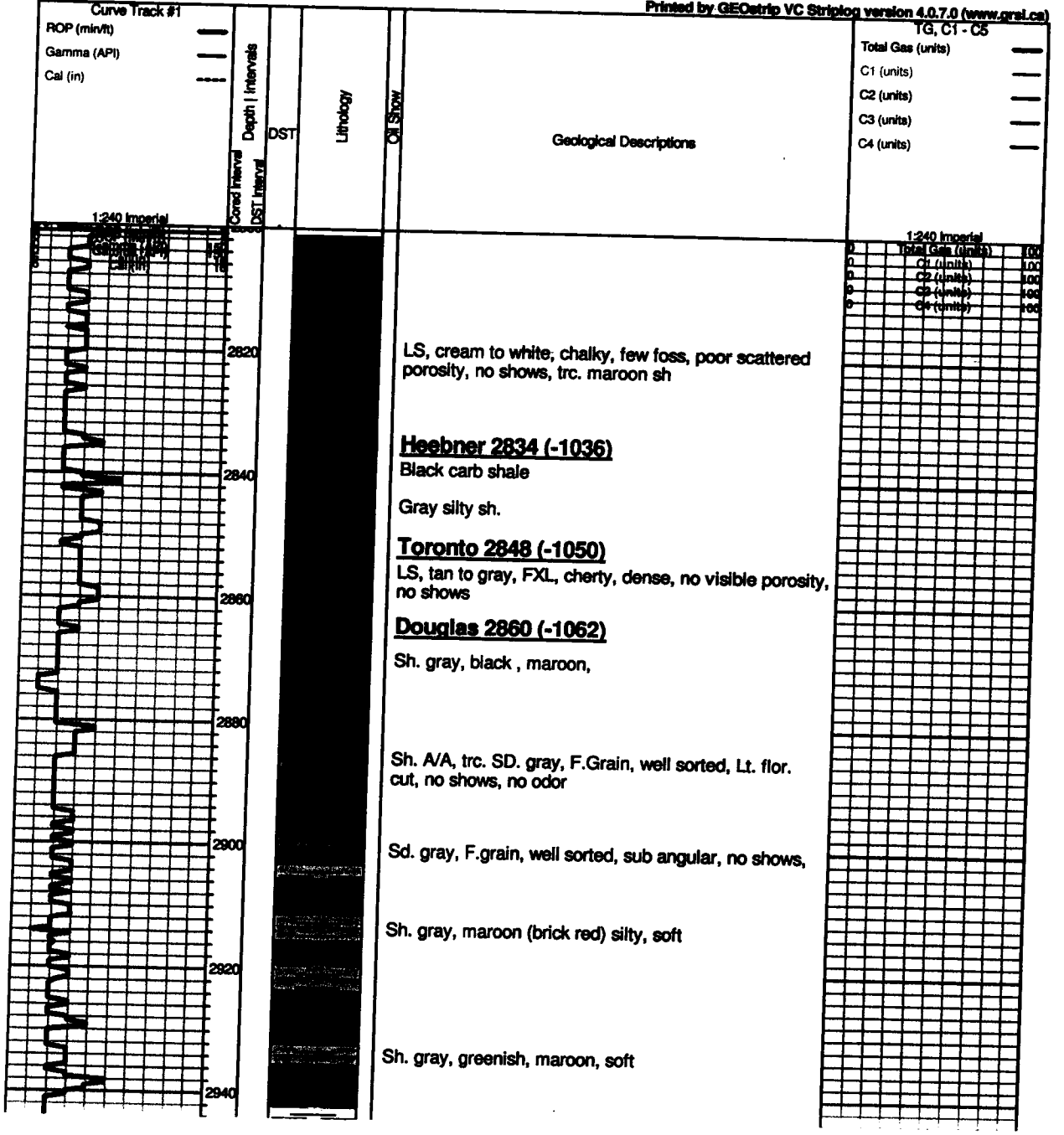
| | | | |
|-----------|------------|------------|----|
| Chicongl | Lmst fw7> | Carbon Sh | Ss |
| Dolprim | shale, gm | shale, red | |
| Lmst fw<7 | shale, gry | Shool | |

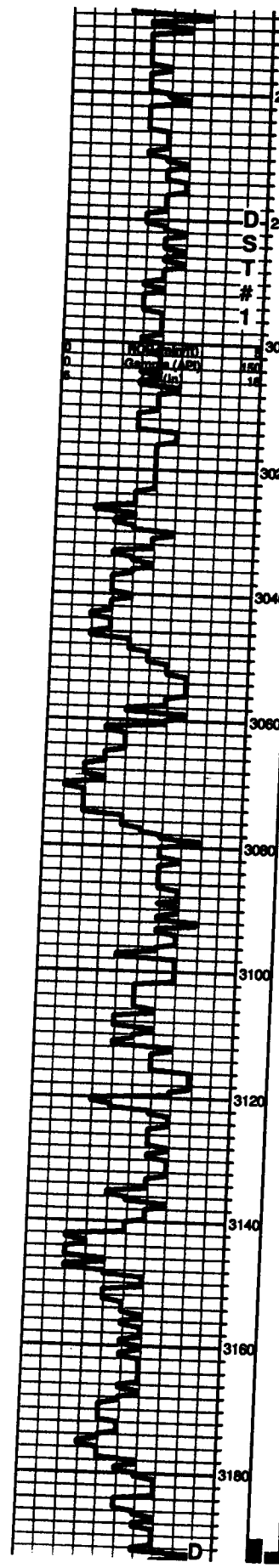
ACCESSORIES

| | | | |
|---------------------------|---|-------------------------------|--|
| MINERAL • Sandy | FOSSIL ◊ Oolite ◊ Oomoldic | STRINGER ■ Dolomite | TEXTURE C Chalky FX Finegrn |
|---------------------------|---|-------------------------------|--|

OTHER SYMBOLS

| | |
|---|--|
| Oil Show ● Good Show ● Fair Show ● Poor Show ○ Spotted or Trace ○ Questionable Str D Dead Oil Str ■ Fluorescence * Gas | DST ■ DST Int ■ DST alt ■ Core tail pipe |
|---|--|





Brown Lime 2945 (-1147)

LS, tan to brown, FXL, cherty, no visible porosity, NSFO

Lansing 2961 (-1163)

LS, tan, ool, poorly developed, poor visible porosity, SFO, Lt. odor, Lt. black stain

LS, cream to white, chalky, few ool, poor oom porosity, SFO, odor, Lt. golden brown stain

LS, cream to tan, FXL, V. chalky, poor visible porosity, Lt. black stain, Trc. SFO, odor

LS, tan to gray, FLX, foss, poor visible porosity, SFO, odor???

Sh. gray, silty, trc. pyrite

LS, cream to white, ool, poor to fair oom porosity, SFO, Lt. golden brown stain, fair odor

LS, tan to brown, FXL, ool, poor scattered porosity, NSFO, no odor

LS, white to cream, oom, good vuggy porosity, barren

LS, cream to gray, FXL, dense, poor visible porosity, foss, no shows, trace black carb sh.

LS, cream to gray, FXL, dns, few foss, chalky in parts, poor visible porosity, no shows

LS, cream to white, chalky, poor scattered porosity, no shows

Black carb SH.

LS, cream to white, ool, foss, chalky, poor scattered porosity, dense, trc. SFO, odor???, trc. blk stain

LS, tan, ool, fair oom porosity, chalky, trc. Lt. spotty SFO, odor, SH. greenish, maroon, black,

LS, cream to white, chalky, poor visible porosity no shows

LS, tan ool, FXL, poor visible porosity, dense, no shows



Musgrove

PETROLEUM CORPORATION
Clafin, Kansas

NOTES

Company: Grady Bolding Corporation

Lease: Grizzell #27

Field: Bloomer

Location: NW-SW-SE-NE (1996' FNL& 1131' FEL)

Sec: 31 Twsp: 17S Rge: 10W

County: Ellsworth State: Kansas

KB: 1798' GL: 1788'

API #: 15-053-21308-00-00

Contractor: Southwind Drilling Inc. (Rig #1)

Spud: 03/29/2014 Comp: 04/03/2014

RTD: 3312' LTD: 3310'

Mud Up: 2700' Type Mud: Chemical

Samples Saved From: 2700' to RTD
 Drilling Time Kept From: 2700' to RTD
 Samples Examined From: 2700' to RTD
 Geological Supervision from: 2700' to RTD
 Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@ 312'

Electronic Surveys: Logged by Nabors Completion Services CDL/CNL, MEL, DIL

Grady Bolding Corporation Well Comparison

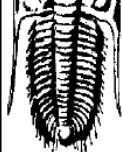
| Formation | DRILLING WELL | | | | COMPARISON WELL | | | | COMPARISON WELL | | | |
|------------|-----------------------------|-------|---------|-------|----------------------------------|--------|-----|-----|--------------------------------|--------|-----|-----|
| | Grady Bolding Corp-Grizzell | | | | Grady Bolding Corp- #24 Grizzell | | | | Gulf Oil Corp- #15-31 Grizzell | | | |
| | NW-SW-SE-NE 31-17S-10W | | | | C-W/2-SW-NE 31-17S-10W | | | | SW-NE-SW-NE 23-32S-37W | | | |
| | 1798 KB | | | | 1803 KB | | | | 1807 KB | | | |
| Sample | Sub-Sea | Log | Sub-Sea | Log | Sub-Sea | Sample | Log | Log | Sub-Sea | Sample | Log | |
| Heebner | 2834 | -1036 | 2836 | -1038 | 2840 | -1037 | -1 | -1 | 2847 | -1040 | 4 | 2 |
| Toronto | 2848 | -1050 | 2853 | -1055 | 2859 | -1056 | -6 | 1 | 2864 | -1057 | 7 | 2 |
| Douglas | 2860 | -1062 | 2864 | -1066 | 2866 | -1063 | 1 | -3 | | | | |
| Brown Lime | 2945 | -1147 | 2948 | -1150 | 2955 | -1152 | 5 | 2 | | | | |
| Lansing | 2961 | -1163 | 2964 | -1166 | 2970 | -1167 | 4 | 1 | 2976 | -1169 | 6 | 3 |
| BRC | 3228 | -1430 | 3230 | -1432 | 3235 | -1432 | 2 | 0 | 3240 | -1433 | 3 | 1 |
| Arbuckle | 3245 | -1447 | 3249 | -1451 | 3242 | -1439 | -8 | -12 | 3246 | -1439 | -8 | -12 |
| RTD | 3312 | -1514 | 3312 | -1514 | 3248 | -1445 | -69 | -69 | 3350 | -1543 | 29 | 29 |
| LTD | 3310 | -1512 | 3310 | -1512 | | | | | | | | |



DRILL STEM TEST REPORT

Grady Bolding Corporation

31-17S-10W, Ellsworth Co., Kansas



TESTING, INC

Grady Bolding Corporation
114 N Main St
Ellinw ood KS 67526
ATTN: Wyatt Urban

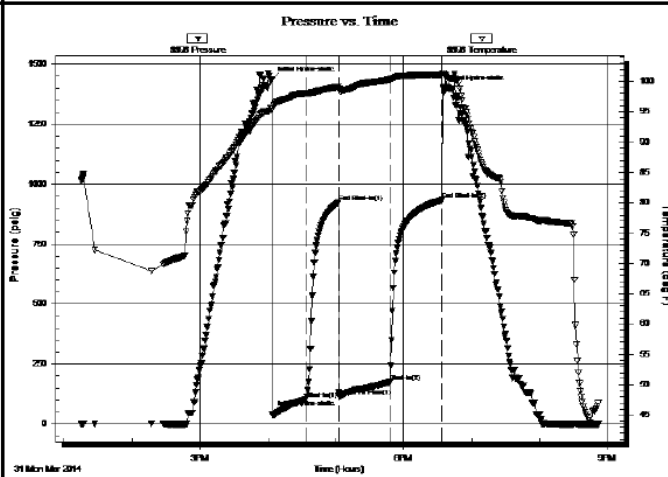
31-17s-10w- Ellsworth Co.
Grizzell #27
Job Ticket: 57552 **DST#: 1**
Test Start: 2014.03.31 @ 13:15:04

GENERAL INFORMATION:

Formation: **Lans. A-F**
Deviated: No Whipstock: ft (KB)
Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 17:03:04
Tester: Tate Lang
Time Test Ended: 20:52:04
Unit No: 49
Interval: 2952.00 ft (KB) To 3050.00 ft (KB) (TVD)
Reference Elevations: 1798.00 ft (KB)
Total Depth: 3050.00 ft (KB) (TVD) 1788.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8898 Outside
Press@RunDepth: 173.43 psig @ 2953.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.03.31 End Date: 2014.03.31 Last Calib.: 2014.03.31
Start Time: 13:15:05 End Time: 20:52:04 Time On Btm: 2014.03.31 @ 16:03:14
Time Off Btm: 2014.03.31 @ 18:34:13

TEST COMMENT: B.O.B. in 2 mins
Fair blow back built to 4 in died back to 3 in
B.O.B. in 2 mins
Weak blow back built to 3 in



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1434.93 | 95.63 | Initial Hydro-static |
| 1 | 40.10 | 95.26 | Initial Hydro-static |
| 31 | 102.34 | 98.02 | Shut-in(1) |
| 60 | 923.11 | 99.09 | End Shut-in(1) |
| 60 | 115.35 | 98.72 | Open To Flow (1) |
| 105 | 173.43 | 100.31 | Shut-in(2) |
| 151 | 933.33 | 101.11 | End Shut-in(2) |
| 151 | 1399.82 | 101.32 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------|--------------|
| 120.00 | 50%G 40%O 5%W 5%M | 1.68 |
| 180.00 | 50%G 10%O 40%M | 2.52 |
| 60.00 | 5%G 5%O 90%M | 0.84 |
| 0.00 | 1080 GP | 0.00 |
| | | |
| | | |

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Grady Bolding Corporation
114 N Main St
Ellinw ood KS 67526
ATTN: Wyatt Urban

31-17s-10w- Ellsworth Co.
Grizzell #27
Job Ticket: 57553 **DST#: 2**
Test Start: 2014.04.01 @ 15:03:14

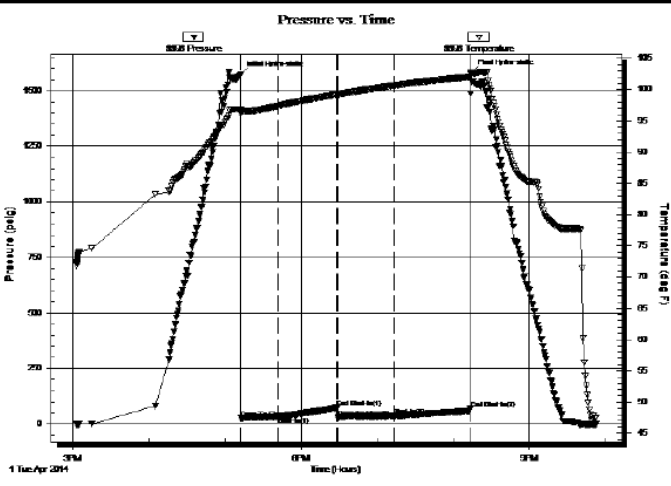
GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 17:12:44
Tester: Tate Lang
Time Test Ended: 21:53:14
Unit No: 49
Interval: 3190.00 ft (KB) To 3235.00 ft (KB) (TVD)
Reference Elevations: 1798.00 ft (KB)

Total Depth: 3235.00 ft (KB) (TVD) 1788.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8898 Outside
 Press@RunDepth: 36.40 psig @ 3191.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.01 End Date: 2014.04.01 Last Calib.: 2014.04.01
 Start Time: 15:03:15 End Time: 21:53:14 Time On Btm: 2014.04.01 @ 17:12:24
 Time Off Btm: 2014.04.01 @ 20:14:34

TEST COMMENT: Fair blow built to 6 in
 Dead no blow back
 Weak surface blow built to 1 3/4 in
 Dead no blow back



| PRESSURE SUMMARY | | | |
|------------------|-----------------|--------------|----------------------|
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
| 0 | 1571.61 | 96.89 | Initial Hydro-static |
| 1 | 26.53 | 96.50 | Open To Flow (1) |
| 30 | 33.16 | 97.38 | Shut-in(1) |
| 77 | 72.89 | 99.24 | End Shut-in(1) |
| 77 | 29.35 | 99.25 | Open To Flow (2) |
| 121 | 36.40 | 100.63 | Shut-in(2) |
| 182 | 69.47 | 102.06 | End Shut-in(2) |
| 183 | 1580.28 | 102.52 | Final Hydro-static |

| Recovery | | |
|-------------|----------------|--------------|
| Length (ft) | Description | Volume (bbl) |
| 40.00 | 10%G 10%O 80%M | 0.56 |
| 0.00 | 20 GP | 0.00 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Grady Bolding Corporation 31-17s-10w- Ellsworth Co.
 114 N Main St Grizzell #27
 Ellinwood KS 67526 Job Ticket: 57554 DST#: 3
 ATTN: Wyatt Urban Test Start: 2014.04.02 @ 06:10:46

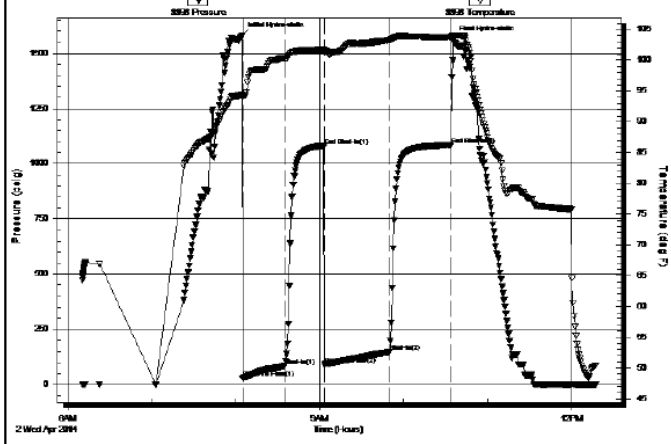
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 08:04:56 Tester: Tate Lang
 Time Test Ended: 12:17:36 Unit No: 49
 Interval: 3190.00 ft (KB) To 3252.00 ft (KB) (TVD) Reference Elevations: 1798.00 ft (KB)
 Total Depth: 3247.00 ft (KB) (TVD) 1788.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8898 Outside
 Press@RunDepth: 147.35 psig @ 3196.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.02 End Date: 2014.04.02 Last Calib.: 2014.04.02
 Start Time: 06:10:47 End Time: 12:17:36 Time On Btm: 2014.04.02 @ 08:04:36
 Time Off Btm: 2014.04.02 @ 10:35:25

TEST COMMENT: B.O.B. in 12 mins
 Weak surface blow back
 B.O.B. in 11 mins
 Weak surface blow built to 2 in

Pressure vs. Time



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1581.56 | 94.44 | Initial Hydro-static |
| 1 | 28.93 | 94.14 | Open To Flow (1) |
| 31 | 83.63 | 100.36 | Shut-h(1) |
| 59 | 1081.55 | 101.76 | End Shut-h(1) |
| 60 | 89.04 | 101.48 | Open To Flow (2) |
| 106 | 147.35 | 103.34 | Shut-h(2) |
| 150 | 1084.98 | 103.73 | End Shut-h(2) |
| 151 | 1562.56 | 104.01 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------|--------------|
| 60.00 | 10%G 10%O 5%W 75%M | 0.84 |
| 120.00 | 45%G 30%O 5%W 20%M | 1.68 |
| 60.00 | 30%G 35%O 35%M | 0.84 |
| 40.00 | 10%G 30%O 60%M | 0.56 |
| 0.00 | 440 GIP | 0.00 |

* Recovery from multiple tests

Gas Rates

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

ROCK TYPES

| | | | |
|-----------|------------|------------|----|
| Chtcongl | Lmst fw7> | Carbon Sh | Ss |
| Dolprim | shale, grn | shale, red | |
| Lmst fw<7 | shale, gry | Shcol | |

ACCESSORIES

| | | | |
|---------------------------|---|-------------------------------|--|
| MINERAL • Sandy | FOSSIL ○ Oolite ⊕ Oomoldic | STRINGER ▨ Dolomite | TEXTURE C Chalky FX Finexln |
|---------------------------|---|-------------------------------|--|

OTHER SYMBOLS

| | |
|---|--|
| Oil Show ● Good Show ● Fair Show ● Poor Show ○ Spotted or Trace ○ Questionable Stn D Dead Oil Stn ■ Fluorescence * Gas | DST ■ DST Int ■ DST alt ■ Core tail pipe |
|---|--|

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

| Curve Track #1 | Depth Intervals | DST | Lithology | Oil Show | Geological Descriptions | TG, C1 - C5 |
|---|--------------------------------|-----|-----------|----------|---|---|
| ROP (min/ft) — Gamma (API) — Cal (in) - - - | Cored Interval DST Interval | | | | | Total Gas (units) — C1 (units) — C2 (units) — C3 (units) — C4 (units) — |
| 1:240 Imperial ROP (min/ft) Gamma (API) Cal (in) | 2800 2820 | | | | | 1:240 Imperial 0 Total Gas (units) 100 0 C1 (units) 100 0 C2 (units) 100 0 C3 (units) 100 0 C4 (units) 100 |
| | | | | | LS, cream to white, chalky, few foss, poor scattered porosity, no shows, trc. maroon sh | |

2840
2860
2880
2900
2920
2940
2960
2980
3000
3020
3040

Heebner 2834 (-1036)

Black carb shale

Gray silty sh.

Toronto 2848 (-1050)

LS, tan to gray, FXL, cherty, dense, no visible porosity, no shows

Douglas 2860 (-1062)

Sh. gray, black, maroon,

Sh. A/A, trc. SD. gray, F.Grain, well sorted, Lt. flor. cut, no shows, no odor

Sd. gray, F.grain, well sorted, sub angular, no shows,

Sh. gray, maroon (brick red) silty, soft

Sh. gray, greenish, maroon, soft

Brown Lime 2945 (-1147)

LS, tan to brown, FXL, cherty, no visible porosity, NSFO

Lansing 2961 (-1163)

LS, tan, ool, poorly developed, poor visible porosity, SFO, Lt. odor, Lt. black stain

LS, cream to white, chalky, few ool, poor oom porosity, SFO, odor, Lt. golden brown stain

LS, cream to tan, FXL, V. chalky, poor visible porosity, Lt. black stain, Trc. SFO, odor

LS, tan to gray, FLX, foss, poor visible porosity, SFO, odor???

Sh. gray, silty, trc. pyite

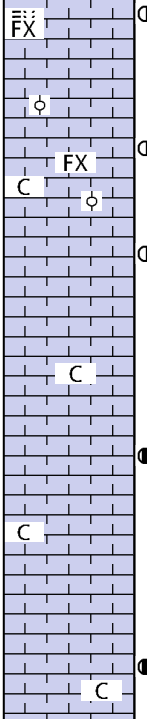
LS, cream to white, ool, poor to fair oom porosity, SFO, Lt. golden brown stain, fair odor

D
S
T

1

ROP (min/ft) 5
Gamma (API) 150
C (in) 16

0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100



strong odor, golden brown stain

3280

Dol, white, M-FXLN, fair scattered porosity, Lt. SFO, faint odor, Lt. brown stain

FX

3300

Dol. white, FXLN dense, poor to none visible porosity, no shows,

FX

3320

Dol, white, FXLN, dense, poor visible porosity, no shows, odor???

3340

CFS 20-40-60

RTD 3312'