



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1230694  
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: \_\_\_\_\_



1230694

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

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

|           |                        |
|-----------|------------------------|
| Form      | ACO1 - Well Completion |
| Operator  | American Warrior, Inc. |
| Well Name | Flying V 3-5 Twin      |
| Doc ID    | 1230694                |

Tops

| Name          | Top   | Datum |
|---------------|-------|-------|
| Lansing       | 4209' | -440  |
| Marmaton      | 4558' | -789  |
| Pawnee        | 4652' | -883  |
| Cherokee      | 4707' | -938  |
| Morrow Shale  | 4949' | -1180 |
| Morrow Sand   | 4955' | -1186 |
| Morrow Lime   | 5037' | -1268 |
| Mississippian | 5108' | -1339 |

Date 10/10/2014 District Liberal # 21 Ticket No. 61660  
 Company American Warrior Rig Duke # 9  
 Lease FLYING V Well No 3-5 TWIN  
 County WALLACE State KS  
 Location \_\_\_\_\_  
 Field \_\_\_\_\_  
 Casing Data  Conductor  PTA  Squeeze  Misc.  
 Surface  Intermediate  Production  Liner  
 Size 8 5/8 Type \_\_\_\_\_ Weight 24 Collar \_\_\_\_\_

### CEMENT DATA

Spacer Type 20 BBL LC SPACER  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG  
 LEAD: Time \_\_\_\_\_ hrs. Type CLASS A  
65/35, 6%GEL, 3%BWOC CC, 1/4 FLOSEAL Excess \_\_\_\_\_  
 Amt. 675 Sks Yield 2 ft<sup>3</sup>/sk Density 12.47 PPG  
 TAIL: Time \_\_\_\_\_ hrs. Type CLASS A  
3%cc, 1/4 floeal Excess \_\_\_\_\_  
 Amt. 200 Sks Yield 1.2 ft<sup>3</sup>/sk Density 15.63 PPG  
 WATER Lead 10.9 Gal/sk Tail 5.2 Gal/sk Total \_\_\_\_\_ BBLs

Casing Depths Top \_\_\_\_\_ Bottom 1845.41

Pump Trucks Used: 903-501  
 Bulk Equipment 562-568

Drill Pipe: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Open Hole: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Capacity Factors: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Casing BBLs/LIN. FT 0.0637 LIN. FT/BBL \_\_\_\_\_  
 Open Holes BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Drill Pipe BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Annulus BBLs/LIN. FT 0.0735 LIN. FT/BBL 13.6037  
 BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Perforations From \_\_\_\_\_ ft to \_\_\_\_\_ ft Amt \_\_\_\_\_

994-642  
 Float Equipment: Manufacturer WEATHERFORD  
 Shoe: Type GUIDE SHOE Depth 1845.41  
 Float: Type AFU Insert Valve Depth 1802.24  
 Centralizers: Quantity 3 Plugs Top 1 Bottom \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equipment 1 Cement Basket @ 900 ft  
 Disp: Fluid Type H2O Amt 115 bbls Weight 8.34 PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_ CEMENTER CESAR PAVIA

| TIME   | PRESSURES PSI |                   | FLUID PUMPED DATA |             |                        | REMARKS  |
|--------|---------------|-------------------|-------------------|-------------|------------------------|--|
|        | AM/PM         | DRILL PIPE CASING | ANNULUS           | TOTAL FLUID | PUMPED PER TIME PERIOD |  |
| 900PM  |               |                   |                   |             |                        | ARRIVE TO LOCATION – RUN FLOAT EQUIPMENT           |
| 930PM  |               |                   |                   |             |                        | CASING ON BOTTOM                                   |
| 1000PM |               |                   |                   |             |                        | RIG UP   |
| 1030PM |               |                   |                   |             |                        | SAFETY MEETING                                     |
| 1040PM |               | 2000              |                   |             |                        | PRESSURE TEST                                      |
| 1043PM |               | 80                |                   | 20          | 5                      | 20 BBL LC SPACER                                   |
| 1047PM |               | 200               |                   | 260.4       | 5                      | PUMP 240.4 BBL OF LEAD SLURRY CEMENT               |
| 1140PM |               | 120               |                   | 303.14      | 5                      | PUMP 42.74 BBL OF TAIL SLURRY CEMENT               |
| 1200AM |               |                   |                   |             | 5                      | RELEASE PLUG- START DISPLACEMENT, LOST CIRCULATION |
| 1210AM |               | 60                |                   | 323.14      | 5                      | 20 BBL GONE  |
| 1220AM |               | 80                |                   | 343.14      | 5                      | 40 BBL GONE  |
| 1226AM |               | 120               |                   | 363.14      | 5                      | 60BBLGONE 58 BBL CATCH CEMENT                      |
| 1232AM |               | 300               |                   | 383.14      | 5                      | 80 BBL GONE  |
| 1240AM |               | 350               |                   | 403.14      | 3                      | 100 BBL GONE SLOW DOWN TO 3 BPM                    |
| 1246AM |               | 600               |                   | 418.14      | 3                      | BUMP PLUG  |
| 1251AM |               | 1200              |                   |             |                        | RELEASE PRESSURE, CHECK FLOATS                     |
|        |               |                   |                   |             |                        | DID NOT CIRCULATE TO SURFACE                       |
|        |               |                   |                   |             |                        | RUN 1" LINE WAIT FOR CEMENT                        |
| 700AM  |               |                   |                   |             |                        | PUMP 32 BBL OF SLURRY, CEMENT FALL AGAIN 153SK     |
| 1047AM |               |                   |                   |             |                        | PUMP 21 BBL OF SLURRY TO GET TO SURFACE 100SK      |
| 1126AM |               |                   |                   |             |                        | THIS TIME IT HELD                                  |
| 1200PM |               |                   |                   |             |                        | WATCH CEMENT FOR ONE HOUR                          |
| 100PM  |               |                   |                   |             |                        | RIG DOWN   |
| 400PM  |               |                   |                   |             |                        | LEAVE LOCATION                                     |

FINAL DISP. PRESS. 600 PSI BUMP PLUG TO 1200 PSI BLEEDBACK 0.5 BBLs THANK YOU

# ALLIED OIL & GAS SERVICES, LLC 064290

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Oakley KS

|                         |                        |                |   |            |                               |                            |                             |
|-------------------------|------------------------|----------------|---|------------|-------------------------------|----------------------------|-----------------------------|
| DATE <u>10-17-14</u>    | SEC. <u>5</u>          | TWP. <u>15</u> | RANGE <u>41</u>                                     | CALLED OUT | ON LOCATION <u>12:00 p.m.</u> | JOB START <u>1:30 p.m.</u> | JOB FINISH <u>2:30 p.m.</u> |
| LEASE <u>Flying V</u>   | WELL # <u>3-5 twin</u> |                | LOCATION <u>Sharon Springs 5 to</u>                 |            | COUNTY <u>Wallace</u>         | STATE <u>KS</u>            |                             |
| OLD OR NEW (Circle one) |                        |                | <u>Gooseberry Rd. W to Rd 10, 1 S, 1/2 W, Ninto</u> |            |                               |                            |                             |

CONTRACTOR Duke 9

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 5300'

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH 2770'

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

OWNER Same

CEMENT

AMOUNT ORDERED 225 sks Lite

60/40 4' gel 1/4" Flo-seal

DISPLACEMENT 5 H<sub>2</sub>O / 27 bbl mud

EQUIPMENT \_\_\_\_\_

|                 |                              |       |              |                |
|-----------------|------------------------------|-------|--------------|----------------|
| COMMON          | _____                        | @     | _____        | _____          |
| POZMIX          | _____                        | @     | _____        | _____          |
| GEL             | _____                        | @     | _____        | _____          |
| CHLORIDE        | _____                        | @     | _____        | _____          |
| ASC             | _____                        | @     | _____        | _____          |
| <u>Lite</u>     | <u>225 sks</u>               | @     | <u>18.95</u> | <u>4263.75</u> |
| <u>Flo-seal</u> | <u>56 #</u>                  | @     | <u>2.97</u>  | <u>166.32</u>  |
| _____           | _____                        | @     | _____        | _____          |
| _____           | _____                        | @     | _____        | _____          |
| _____           | _____                        | @     | _____        | _____          |
| _____           | _____                        | @     | _____        | _____          |
| _____           | _____                        | @     | _____        | _____          |
| HANDLING        | <u>241.65 ft<sup>3</sup></u> | @     | <u>2.48</u>  | <u>599.29</u>  |
| MILEAGE         | <u>10.09 ton x 70 mi x</u>   | @     | <u>2.75</u>  | <u>1942.33</u> |
| TOTAL           | _____                        | _____ | _____        | _____          |

PUMP TRUCK # 422 CEMENTER Paul Beaver

BULK TRUCK # \_\_\_\_\_ HELPER Tyler Flipse / Branden Wilkinson

BULK TRUCK # \_\_\_\_\_ DRIVER \_\_\_\_\_

BULK TRUCK # 890/241 DRIVER Wayne Messelle

**REMARKS:**

mix 50 sks @ 2770', Displace w/ mud  
mix 120 sks @ 1895', Displace w/ water  
mix 120 sks @ 40' w/ plug  
mix 30 sks in RH, mix 15 sks in M.H

Thank You!  
Paul + Crew

CHARGE TO: American Warrior

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

|                    |           |                             |
|--------------------|-----------|-----------------------------|
| DEPTH OF JOB       | _____     | <u>2770'</u>                |
| PUMP TRUCK CHARGE  | _____     | <u>2483.59</u>              |
| EXTRA FOOTAGE      | _____     | @ _____                     |
| MILEAGE <u>MHV</u> | <u>70</u> | @ <u>7.70</u> <u>539.00</u> |
| MANIFOLD           | _____     | @ _____                     |
| <u>MILV</u>        | <u>70</u> | @ <u>4.40</u> <u>308.00</u> |
| _____              | _____     | @ _____                     |
| TOTAL              | _____     | _____                       |

**PLUG & FLOAT EQUIPMENT**

|                          |       |               |
|--------------------------|-------|---------------|
| <u>8 5/8 wooden plug</u> | @     | <u>110.00</u> |
| _____                    | @     | _____         |
| _____                    | @     | _____         |
| _____                    | @     | _____         |
| _____                    | @     | _____         |
| TOTAL                    | _____ | _____         |

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Emigdio Rojas

SIGNATURE Emigdio Rojas

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

**OPERATOR**

Company: American Warrior, Inc.  
 Address: 3118 Cummings Rd  
 PO BOX 399  
 Garden City, Ks 67846  
 Contact Geologist: Kevin Wiles  
 Contact Phone Nbr: 620-271-4407  
 Well Name: Flying V #3-5 Twin  
 Location: Sec. 5 - T15S - R41W  
 API: 15-199-20425-00-00  
 Pool:  
 State: Kansas  
 Field: Okeson Northwest  
 Country: USA

## Scale 1:240 Imperial

Well Name: Flying V #3-5 Twin  
 Surface Location: Sec. 5 - T15S - R41W  
 Bottom Location:  
 API: 15-199-20425-00-00  
 License Number: 5929  
 Spud Date: 10/8/2014 Time: 2:00 PM  
 Region: Wallace  
 Drilling Completed: 10/16/2014 Time: 8:04 PM  
 Surface Coordinates: 337' FSL & 2550' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 3756.00ft  
 K.B. Elevation: 3769.00ft  
 Logged Interval: 4000.00ft To: 5300.00ft  
 Total Depth: 5300.00ft  
 Formation: Morrow  
 Drilling Fluid Type: Chemical/Fresh Water Gel

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 Latitude:  
 N/S Co-ord: 337' FSL  
 E/W Co-ord: 2550' FEL

**LOGGED BY**

***Keith Reavis***  
*Consulting Geologist*

Company: Keith Reavis, Inc.  
 Address: 3420 22nd Street  
 Great Bend, KS 67530  
 Phone Nbr: 620-617-4091  
 Logged By: Logan Walker Name: Logan Walker

**CONTRACTOR**

Contractor: Druke Drilling CO., Inc.  
 Rig #: 9  
 Rig Type: mud rotary  
 Spud Date: 10/8/2014 Time: 2:00 PM  
 TD Date: 10/16/2014 Time: 8:04 PM  
 Rig Release: Time:

**ELEVATIONS**

K.B. Elevation: 3769.00ft Ground Elevation: 3756.00ft  
 K.B. to Ground: 13.00ft

**NOTES**

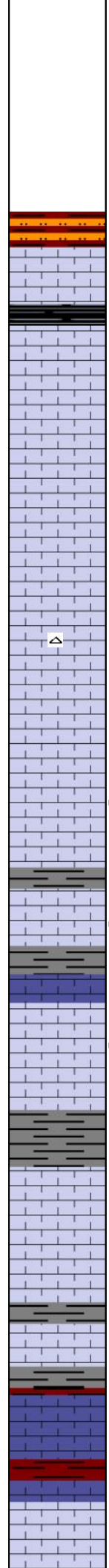
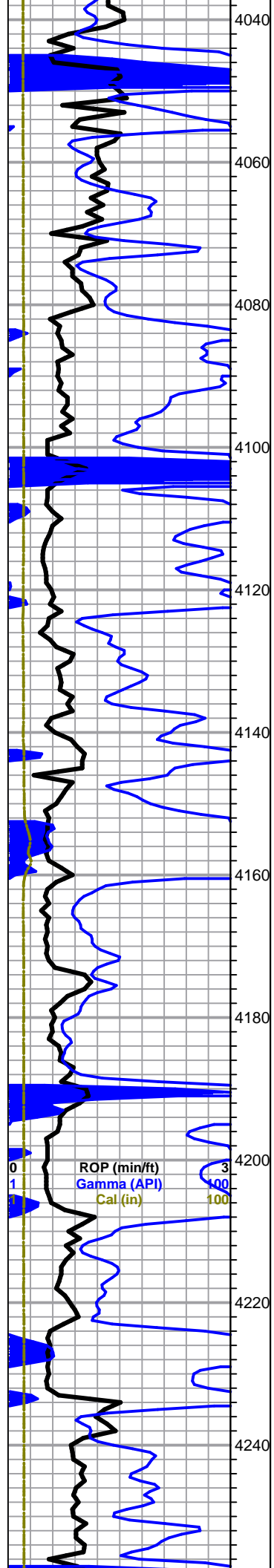
@4700' changed from a PDC bit to a Button Bit

A Bloodhound gas detector operated by Bluestem Environmental was employed on the well. ROP & Gas curves were imported into the log as well as GAMMA-Caliper from E-log suite.









shale red wash, siltstone

Shale, Black carbonaceous

Limestone, white, microcrystalline, bioclastic, fossiliferous, pyritic, weatherd, soft, no shows

Limestone, white to light gray, same as above

Limestone, white to cream to light gray, microcrystalline, bioclastic, fossiliferous, pyritic, white chert weatherd, soft, no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, sub oolitic, pyritic, surface etching, pin hole vugs, slight staining, spotted free oil on break, weatherd, soft, chalky, fleeting odor

Limestone, same as above

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, sub oolitic, pyritic, surface etching, pin hole vugs, slight staining, spotted free oil on break, weatherd, soft to dense, sub chalky, fleeting odor

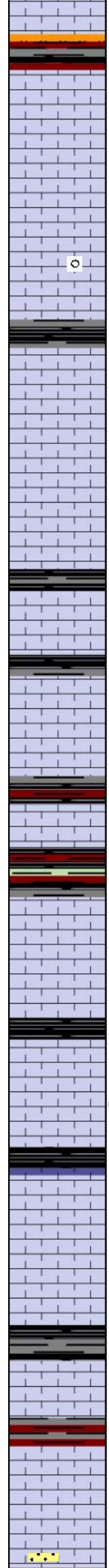
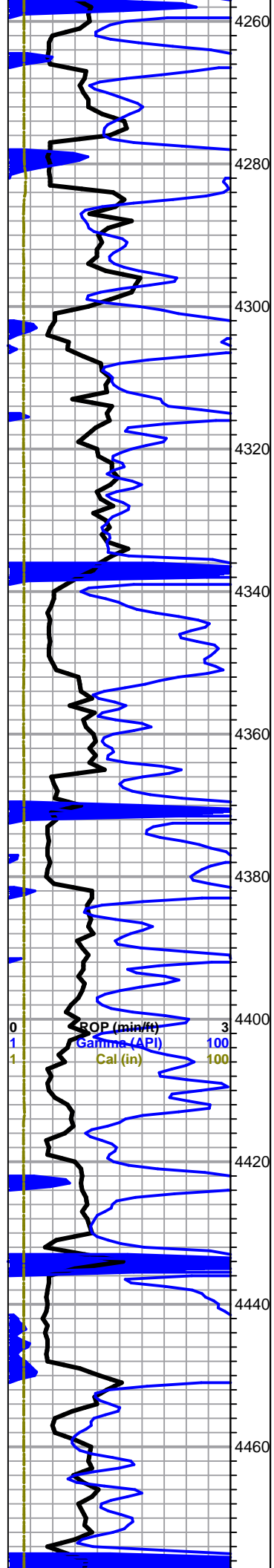
**Lansing 4208 -439**

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, sub oolitic, pyritic, surface etching, weathered, soft, no shows

Limestone, same as above

Limestone, cream, microcrystalline, fossiliferous, sub weathered, dense, no shows

Limestone, cream to light gray, microcrystalline, sub bioclastic, fossiliferous, sub weathered, dense, no shows



Limestone, same as above

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, oolitic, pyritic, weathered, soft to dense, chalky, no shows

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, opaque chert, pyritic, weathered, soft to dense, no shows

Limestoe, same as above

Limestoe, same as above

Shale, red to gray to black carbonaceous, silty

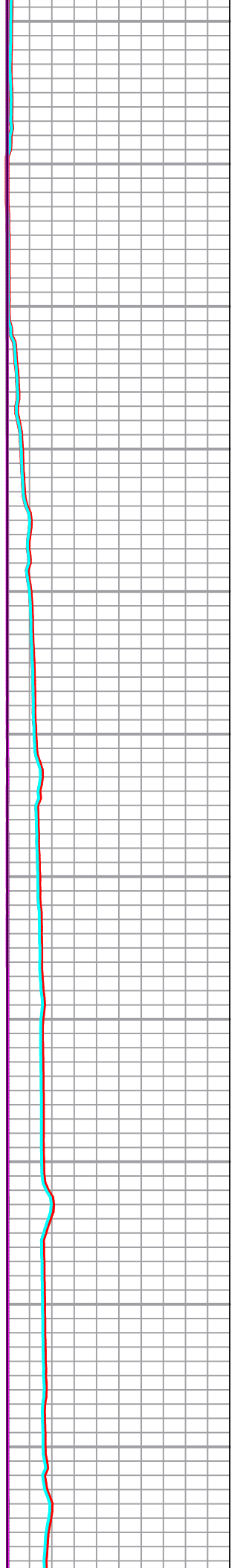
Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, weathered, soft to dense, sub chalky, no shows

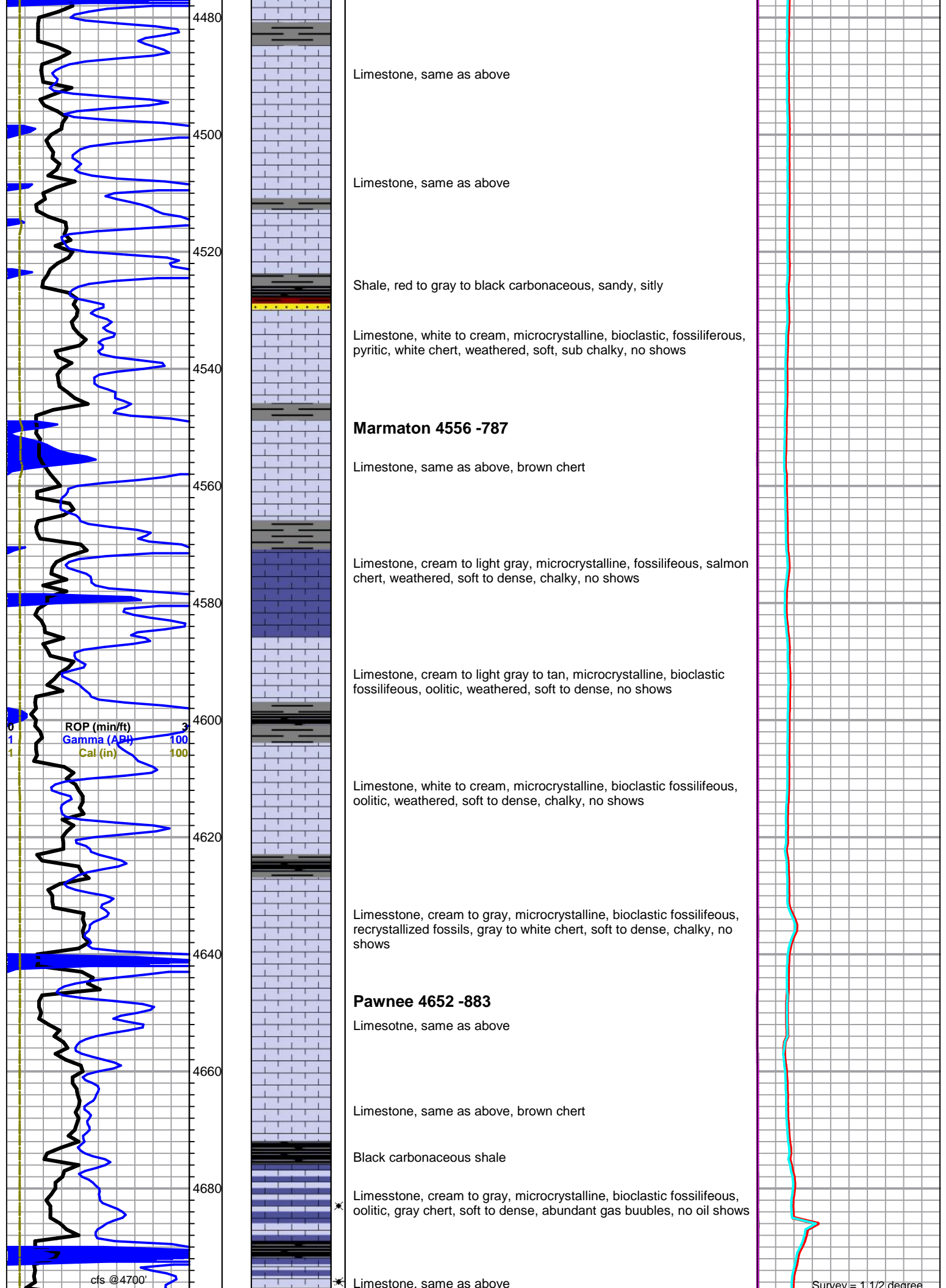
Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, oolitic, pyritic, pin hole vugs, weathered, soft to dense, chalky, slight staining, questionable show

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, pyritic, weathered, soft, abundant chalky, no shows

Limesotne, same as above

Limestone, cream, microcrystalline, bioclastic, fossiliferous, oolitic pyritic, white chert, weathered, soft, sub chalky, no shows





Limestone, same as above

Limestone, same as above

Shale, red to gray to black carbonaceous, sandy, silty

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, pyritic, white chert, weathered, soft, sub chalky, no shows

**Marmaton 4556 -787**

Limestone, same as above, brown chert

Limestone, cream to light gray, microcrystalline, fossiliferous, salmon chert, weathered, soft to dense, chalky, no shows

Limestone, cream to light gray to tan, microcrystalline, bioclastic fossiliferous, oolitic, weathered, soft to dense, no shows

Limestone, white to cream, microcrystalline, bioclastic fossiliferous, oolitic, weathered, soft to dense, chalky, no shows

Limestone, cream to gray, microcrystalline, bioclastic fossiliferous, recrystallized fossils, gray to white chert, soft to dense, chalky, no shows

**Pawnee 4652 -883**

Limestone, same as above

Limestone, same as above, brown chert

Black carbonaceous shale

\* Limestone, cream to gray, microcrystalline, bioclastic fossiliferous, oolitic, gray chert, soft to dense, abundant gas bubbles, no oil shows

\* Limestone, same as above

ROP (min/ft) 3  
Gamma (API) 100  
Cal (in) 100

cfs @ 4700'

Survey = 1 1/2 degree

# Short trip, Bit change

## Cherokee 4707 -938

Limestone, white to cream to light gray, microcrystalline to cryptocrystalline, bioclastic fossiliferous, pyritic, opaque chert weathered, soft to dense, gassy

Limestone, same as above, no shows

Limestone, white to cream, microcrystalline, bioclastic fossiliferous, oolitic, white to brown chert, pin hole vugs, soft to dense, chalky, no shows

Limestone, white to gray, cryptocrystalline, bioclastic fossiliferous, oolitic, pyritic, brown to opaque chert, surface etching, soft to dense, abundant chalky, no shows

Limestone, same as above

Limestone, cream to tan, microcrystalline, fossiliferous, pyritic, opaque chert, dense, no shows

Limestone, cream, microcrystalline, bioclastic, fossiliferous, pyritic, brown chert, weathered, soft to dense, chalky, no shows

Limestone, cream to light gray, sub bioclastic, fossiliferous, crown chert, weathered, sub chalky, dense no shows

Limestone, same as above

Limestone, same as above

Limestone, light gray to gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, salmon chert, chalky, dense, no shows

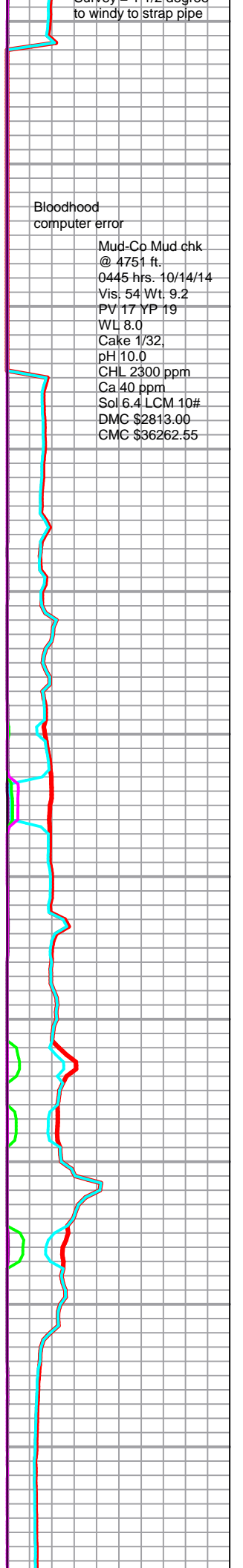
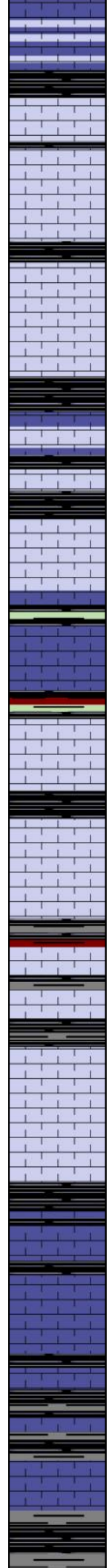
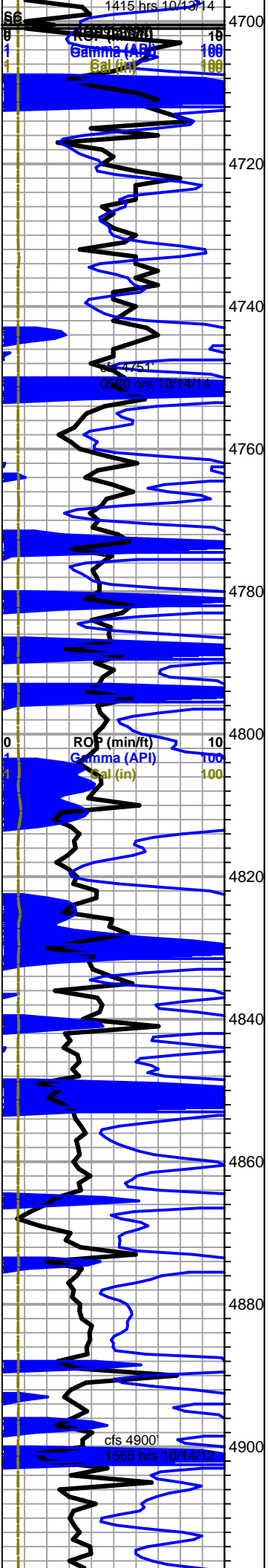
Limestone, cream to tan to light gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, calcite crystals, sub chalky, soft to dense, no shows

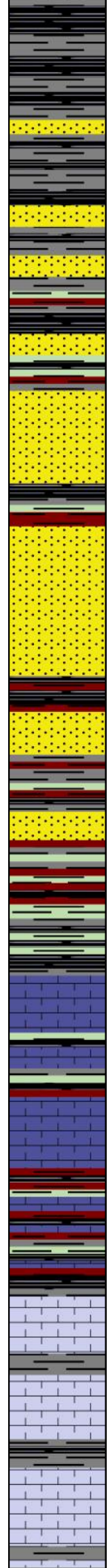
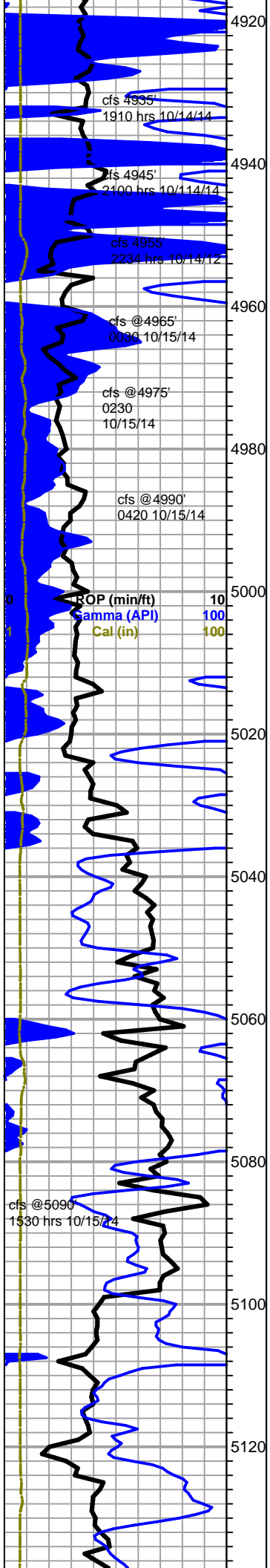
Limestone, same as above, brown chert

to windy to strap pipe

Bloodhood  
computer error

Mud-Co Mud chk  
@ 4751 ft.  
0445 hrs. 10/14/14  
Vis: 54 Wt: 9.2  
PV 17 YP 19  
WL 8.0  
Cake 1/32,  
pH 10.0  
CHL 2300 ppm  
Ca 40 ppm  
Sol 6.4 LCM 10#  
DMC \$2813.00  
CMC \$36262.55





Sandstone, clear to cloudy, sub rounded sub angular, well cemented, fair sorting, no shows

**Morrow Shale 4944 -1175**

Sandstone, cloudy, sub rounded sub angular, well cemented, fair sorting, pyritic glauconite, dirty with fragments, no shows

**Morrow sand 4965 -1196**

Sandstone, clear to cloudy, sub rounded sub angular, well cemented, fair sorting, pyritic glauconite, dirty with fragments, no shows

Sandstone, clear to cloudy to gray, sub rounded sub angular, well cemented, fair sorting, pyritic glauconite, dirty with fragments, no shows

Sandstone, clear to cloudy to gray, sub rounded, sub angular, well cemented, fair sorting, pyritic glauconite, dirty with fragments, no shows

**Morrow Lime 5052 -1283**

Limestone, white to cream, cryptocrystalline to microcrystalline, sub bioclastic, fossiliferous, sub oolitic, glauconite, pyritic, surface etching, soft to dense, chalky, no shows

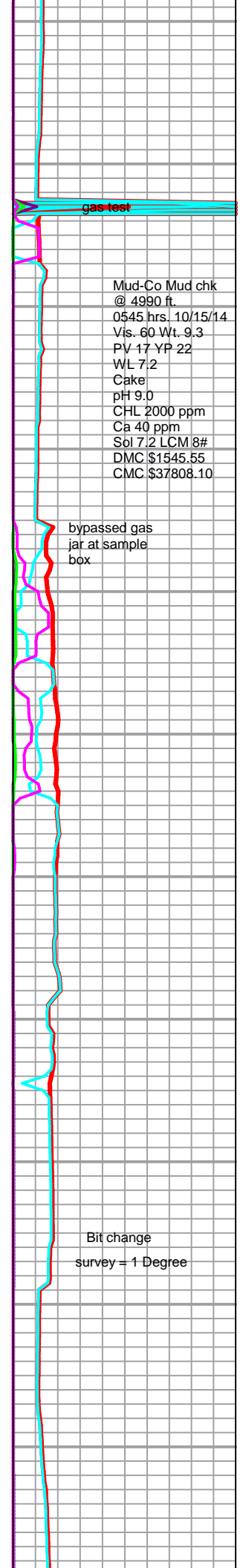
Limestone, white, cryptocrystalline, fossiliferous, pyritic, weathered, soft to dense, chalky, no shows

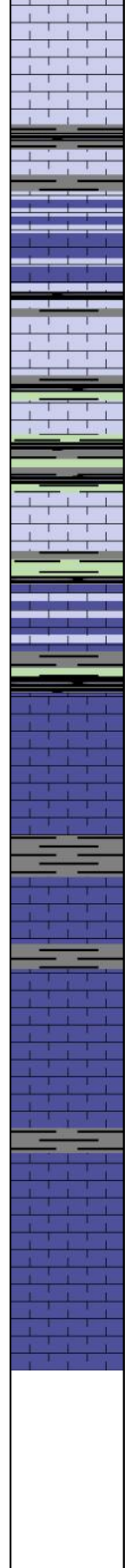
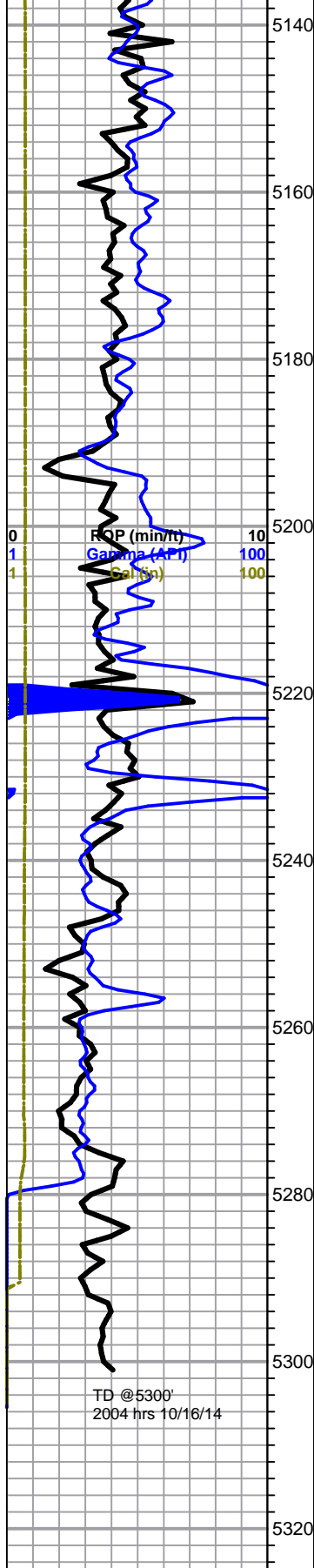
**Mississippian Lime 5099 -1330**

Limestone, cream, cryptocrystalline to microcrystalline, bioclastic, fossiliferous, pyritic, glauconite, brown chert, weathered, soft to dense, sub chalky, no shows

Limestone, same as above, oolitic

Limestone, cream, microcrystalline, bioclastic, fossiliferous, oolitic, pyritic, glauconite, brown to white chert, weathered, soft to dense, sub chalky, no shows





Limestone, cream, microcrystalline, sub bioclastic, fossiliferous, pyritic, glauconite, white to orange chert, soft to dense, sub chalky, no shows

Limestone, same as above, sub oolitic

Limestone, white to cream, cryptocrystalline to microcrystalline, sub bioclastic, fossiliferous, sub oolitic, pyritic, glauconite, white to opaque chert, weathered, soft to dense, sub chalky, sharp, no shows

Limestone, cream to tan, cryptocrystalline, sub bioclastic, fossiliferous, pyritic, white chert, soft to dense, sub chalky, sharp, no shows

Limestone, cream to tan, microcrystalline, sub bioclastic, fossiliferous, sub oolitic pyritic, opaque to white chert, weathered, soft to dense, sub chalky, sharp, no shows

Limestone, light gray to tan, microcrystalline, fossiliferous, oolitic, gray to opaque to white chert, pyritic, surface etching, dense, no shows

**St.Louis 5222 -1453**

Limestone, cream to light gray to tan, microcrystalline, fossiliferous, oolitic, oolitic chert, opaque to white chert, pyritic, glauconite, calcite crystals, surface etching, soft to dense, no shows

Limestone, cream to light gray to tan, microcrystalline, fossiliferous, oolitic, white chert, pyritic, calcite crystals, surface etching, dense, no shows

Limestone, same as above

Limestone, tan, microcrystalline, fossiliferous, oolitic, white chert, pyritic, calcite crystals, surface etching, dense, no shows

Limestone, same as above

Limestone, tan to gray, microcrystalline, fossiliferous, oolitic, white chert, cubic pyritic, calcite crystals, surface etching, dense, no shows

**TD @5300 2004 hrs**  
**Logged TD @5300**

loggers offsite 0630 hrs 10/17/14  
 Geologist offsite 0630 hrs 10/17/14

