



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1228964  
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: \_\_\_\_\_



1228964

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<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: <input type="checkbox"/> Yes <input type="checkbox"/> No |
|----------------|-------|---------|------------|---|

|   |  |
|---|--|
| Date of First, Resumed Production, SWD or ENHR. | Producing Method:<br><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 |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
|                                   |           |         |             |               |         |

|  |   |   |
|--|---|---|
| <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><i>(Submit ACO-4)</i> | <b>PRODUCTION INTERVAL:</b><br>_____<br>_____ |
|--|---|---|

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Great Plains Energy, Inc. |
| Well Name | Applegate 1-30            |
| Doc ID    | 1228964                   |

All Electric Logs Run

|       |
|-------|
|       |
| Sonic |
| CD/NL |
| Micro |
| DIL   |

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Great Plains Energy, Inc. |
| Well Name | Applegate 1-30            |
| Doc ID    | 1228964                   |

Tops

| Name        | Top  | Datum |
|-------------|------|-------|
| Anhydrite   | 1999 | +438  |
| Base Anhyd. | 2028 | +409  |
| Topeka      | 3742 | -805  |
| Heebner     | 3417 | -980  |
| Toronto     | 3449 | -1012 |
| Lansing     | 3461 | -1024 |
| BKC         | 3643 | -1206 |
| Marmaton    | 3683 | -1246 |
| Granite     | 3704 | -1267 |

# GEOLOGICAL REPORT

## DRILLING TIME AND SAMPLE LOG

|   |                                  |
|---|----------------------------------|
| COMPANY <u>Great Plains Energy Inc.</u>         | ELEVATION                        |
| LEASE <u>Applegate # 1-30</u>                   | KB <u>2437</u>                   |
| FIELD <u>Oronoque Northeast</u>                 | DF <u>2435</u>                   |
| LOCATION <u>1485' FSL + 660' FWL</u>            | GL <u>2429</u>                   |
| SEC <u>30</u> TWSP <u>25</u> RGE <u>23W</u>     | Depths Measured From             |
| COUNTY <u>Norton</u> STATE <u>Kansas</u>        | Log <u>KB</u> Drilling <u>KB</u> |
| CONTRACTOR <u>WW Drilling Rig #12</u>           | CASING                           |
| SPUD <u>8-27-14</u> COMP <u>9-4-14</u>          | Surface <u>8 5/8" @ 261'</u>     |
| SAMPLES SAVED FROM <u>3200</u> TO <u>R.T.D.</u> | Production <u>none</u>           |
| ELECTRIC LOGS                                   |                                  |
| <u>Nabors</u>                                   |                                  |

### FORMATION TOPS AND STRUCTURAL POSITION

| FORMATION        | SAMPLE | E. LOG | DATUM <sup>E. log</sup> | A      | B | C | D |
|------------------|--------|--------|-------------------------|--------|---|---|---|
| Anhydrite        | 1998   | 1999   | + 438                   | + 442  |   |   |   |
| Base Anhydrite   | 2027   | 2028   | + 409                   | + 414  |   |   |   |
| Tapoka           | 3241   | 3242   | - 805                   | - 796  |   |   |   |
| Heebner          | 3417   | 3417   | - 980                   | - 974  |   |   |   |
| Taranto          | 3448   | 3449   | - 1012                  | - 1004 |   |   |   |
| Lansing          | 3461   | 3461   | - 1024                  | - 1016 |   |   |   |
| Base Kansas City | 3643   | 3643   | - 1206                  | - 1200 |   |   |   |
| Marmaton         | 3683   | 3683   | - 1246                  | - 1241 |   |   |   |
| Granite Wash     | 3692   | 3692   | - 1255                  |        |   |   |   |
| Granite          | 3703   | 3704   | - 1267                  | - 1268 |   |   |   |
| Total Depth      | 3725   | 3725   | - 1288                  | - 1321 |   |   |   |

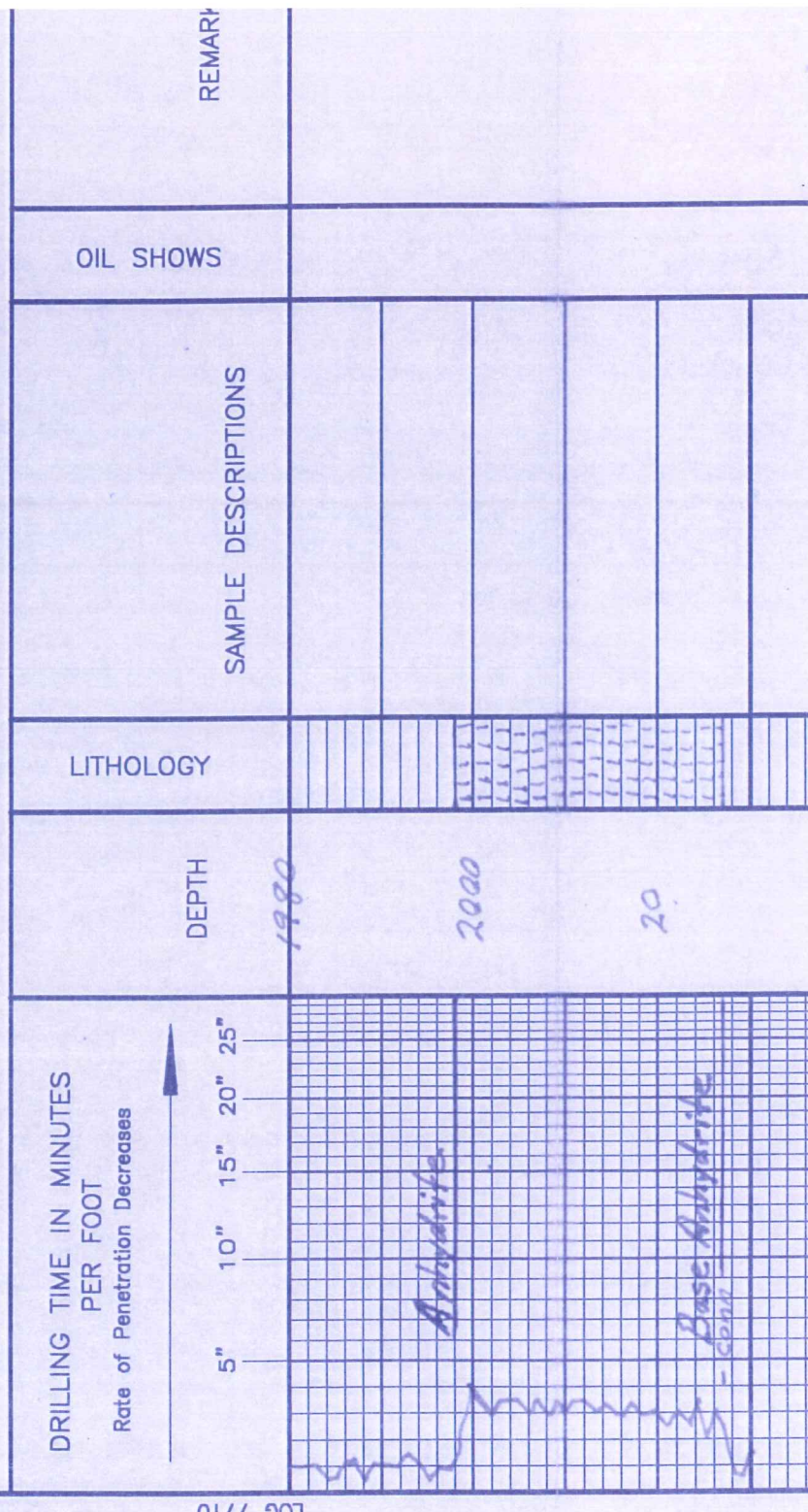
### REFERENCE WELLS

|   |
|---|
| A <u>G.P.E. Inc. Braun #1-25, SE-SE-SE, 25-25-24W</u> |
| B   |
| C   |
| D   |

REMARKS  
 This well ran 8 feet lower on the Lansing top than the nearby producer.  
 Due to the low structural position it was decided no further testing was warranted and the well was plugged and abandoned.  
 Richard B. Bodd  
 9-4-14

### LEGEND

- Dolomite
- Chert
- Ool. Lime
- Limestone
- Carb sh
- Shale
- Sandstone
- Salt
- Anhydrite



Base Abundrite  
-cm

-cm

-cm

-cm

Topoka

-cm

-cm

-cm

-cm

3150

3200

20

40

60

80

3300

20

40

60

LS: wh-tn-lt. gry fslf dns  
N.S.O.

LS: a.a. incr. cky

Sh: gry + brn

LS: wh-tn-lt. gry cky-  
fslf dns N.S.O.

Sh: brn sly

LS: tn-lt. brn -yel fslf  
dns N.S.O.

Sh: brn sly + gry

LS: wh-tn-gry sli. cky -fslf  
dns

LS: wh-tn sli. cky -fxln -  
sli. fslf Tr. pp N.S.O.

LS: wh-tn-lt. gry cky -fslf  
pp N.S.O.

Sh: brn

LS: a.a

Sh: brn sly

Tr. SS: wh-clr V. fn. gn  
Consol. in gran. N.S.O.

Sh: brn + gry

LS: wh-tn cky -fxln sli. ool  
w/ foss. incl. pp N.S.O.

LS: wh-tn cky -fxln ool  
pp N.S.O.

LS: wh-tn cky -fxln ool  
pp N.S.O.

LS: wh-tn fxln dns

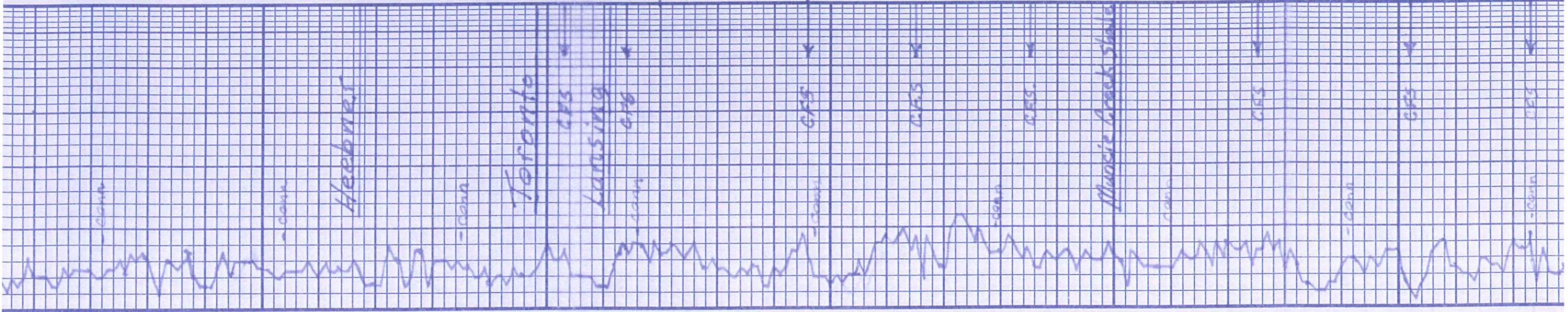
Sh: blk carb

LS: tn. gry fslf dns

Sh: gry + brn

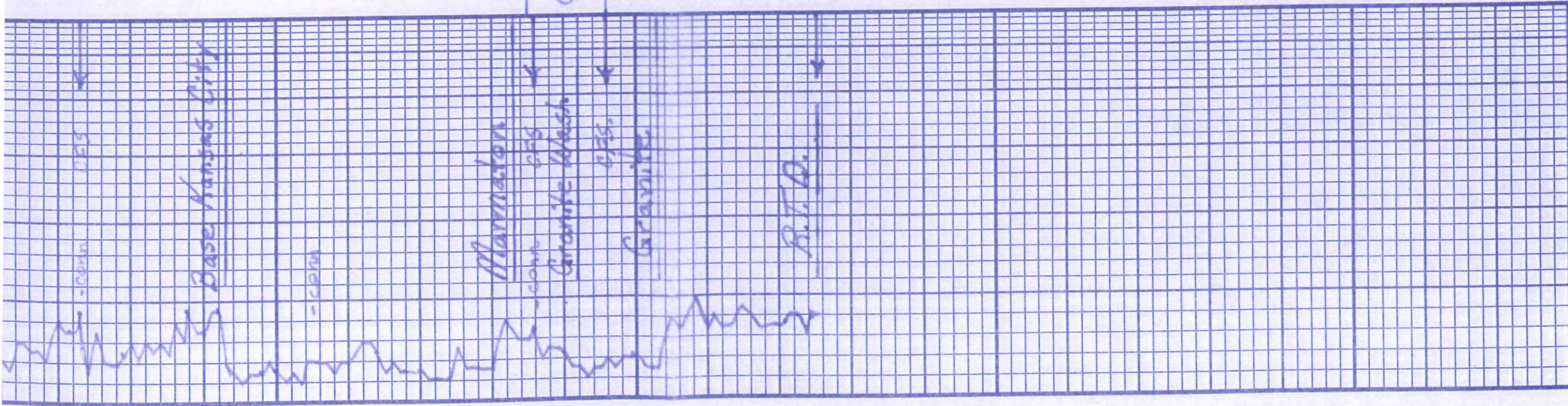
LS: wh-tn cky -fxln ool  
pp Tr. V. pp N.S.O.

Samples are  
good Sam



|       |   |
|-------|---|
| 60    | LS: wh-tn cky-fxln oöl pp φ N.S.O. Sh: brn slty   |
| 80    | LS: wh-tn fsif dns N.S.O.   |
| 3400  | LS: wh-tn cky-fxln oöl pp φ N.S.O. LS: a. inc. foss inclus mostly sh  |
| 20    | LS: tn-lt. gry-fxln-fsif dns Sh: Bk Carb  |
| 40    | Sh: brn + gry Sh: a. wht gry  |
| 60    | LS: wh-tn slicky-fsif oöl w/ foss inclus pp φ sh vgy φ Lt. sph. o. sh. F.P. on crushing. Phos. + glau. Sp. No odor  |
| 80    | LS: wh-tn fxln oöl pp φ N.S.O. No carb LS: wh-tn fxln dns Sh: brn slty  |
| 3500  | LS: wh-tn fxln-fsif oöl w/ abund foss inclus pp φ vgy φ Lt rainbow s.o. Lt. o. sh. floating F.P. gd odor  |
| 20    | LS: wh-tn fxln oöl. In part φ Lt. fr. o. sh. Lt. rainbow s.o. Tr. floating F.P. fr. odor Sh: brn LS: yellow fsif dns                                      |
| 40    | LS: wh-tn fxln-fsif tr pr. pp φ Tr. sph. o. sh. N.F.a. No odor LS: wh-tn fxln dns Tr. blk carb. sh Sh: brn + gry  |
| 60    | LS: wh-lt. gry fsif pr. pp φ Tr. Lt. sph. o. sh. Lt. sh. diss on crushing No odor Sh: brn, gry, grn   |
| 80    | LS: wh-tn sli. cky-fsif Tr. pr. pp φ Sph. Lt. fr. o. sh. Tr. pp. F.P. gd odor 2 pcs. 55 v. fr. gn consol friable drk o. sh. N.F.a. No odor gd sat Sh: brn |
| 13600 | LS: wh-tn-vel sli. cky-fxln Tr. fsif w/ isol v. g. pr. Lt. sph. o. sh. N.F.a. Sh: brn   |

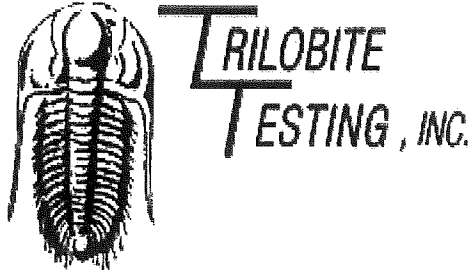
Strap 3  
 Board 3  
 Diff.  
 Incline @ 3  
 Trilobite 7  
 DST # 134  
 30-60-  
 IF: 8.0.B.in  
 ISI: No blo  
 FF: B.O.B. i  
 FSI: No blo  
 Recovery: 8  
 95' acmw 11  
 126' MW 807  
 441' MW 902  
 126' MW 902  
 32' wtr  
 Hyd: 1691-  
 FP: 23-195-  
 BHP: 1086-  
 BHT: 96°F  
 DST # 23  
 75-30-  
 Drive Chain b  
 open is long  
 IF: 27 min  
 FF: No blo  
 Recovery: 50  
 Hyd: 1709-  
 FP: 17-18/1  
 BHP: 38-3  
 BHTemp: 97  
 DST # 33  
 45-45-42  
 IF: wk blow i  
 FF: wk blow i  
 Recovery: 63  
 Hyd: 1781-  
 FP: 16-30-  
 BHP: 1059-  
 BHTemp: 97



|       |   |
|-------|---|
| 20' K | LS: wh-tn-yel sli. cky-feln<br>Tr fslf w/isol v. g.s pr. kt.<br>Spd 0 stn N.F.O.  |
| 40' L | Sh: brn<br>LS: wh-tn-yel fxl n-<br>microXln dns N.S.O.  |
| 60    | Sh: brn<br>Tr. S.S. wh. v. fn gn. Consol.<br>ingran. φ N.S.O.   |
| 80    | LS: wh-brn-yel fslf sli.<br>shly dns<br>Sh: brn<br>Shly Lm: wh-brn  |
| 3700  | LS: wh-tn fxl n - v. sli. fslf<br>dns N.S.O.<br>SS: wh-clr. md. gn. Consol.<br>Tr. coarse gn uncol. frosted<br>Sli: rd Lt. O Str. F.G.<br>fragor v. min. Qtz, biot,<br>felds<br>Qtz, biotite, feldspar<br>Quartz, biotite, feldspar |
| 20    |   |
| 40    |   |

DST#4  
3a-60-4  
IF: wk blow  
ISI: No blow  
FF: wk blow  
FSI: No blow  
Recovery: 92%  
HYd: 1835-  
FP: 18-55/  
BHP: 950-  
BHTemp: 9  
Chlorides:





## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B  
Lincoln, NE 68516

ATTN: Richard Bell

### **Applegate #1-30**

### **30-2s-23w Norton,KS**

Start Date: 2014.09.01 @ 05:43:00

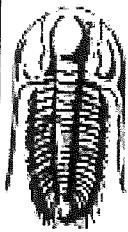
End Date: 2014.09.01 @ 13:58:15

Job Ticket #: 60136                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:44:37

Great Plains Energy, Inc.    30-2s-23w Norton,KS    Applegate #1-30    DST # 1    LKC "C"    2014.09.01



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Great Plains Energy, Inc.

6121 S 58th ST, STE B  
Lincoln, NE 68516

ATTN: Richard Bell

30-2s-23w Norton, KS

Applegate #1-30

Job Ticket: 60136

DST#: 1

Test Start: 2014.09.01 @ 05:43:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:57:45

Time Test Ended: 13:58:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Donovan Baumann

Unit No: 54

Interval: **3470.00 ft (KB) To 3496.00 ft (KB) (TVD)**

Total Depth: 3496.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2437.00 ft (KB)

2427.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8368

Inside

Press@RunDepth: psig @ 3471.00 ft (KB)

Start Date: 2014.09.01

End Date:

2014.09.01

Capacity: 8000.00 psig

Last Calib.:

2014.09.01

Start Time: 05:43:05

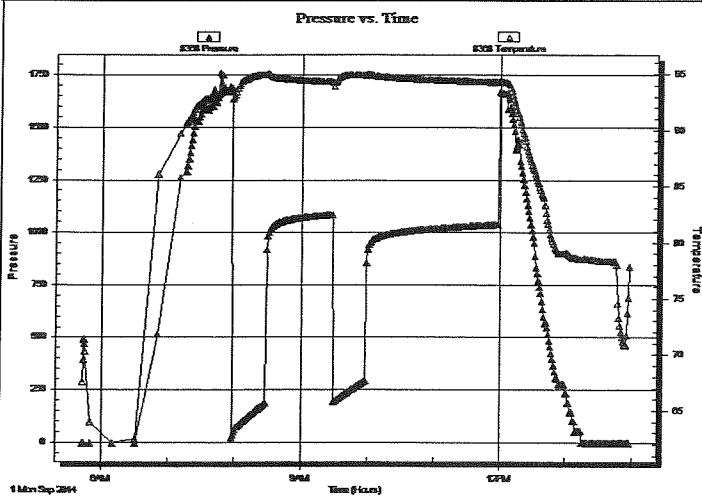
End Time:

13:58:14

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to BOB in 8 min.  
60 - ISI - No return  
30 - FF - Surface blow built to BOB in 20 min.  
120 - FSI - No return



## PRESSURE SUMMARY

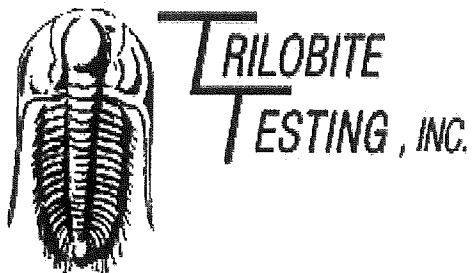
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |    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

## Recovery

| Length (ft) | Description           | Volume (bbl) |
|-------------|-----------------------|--------------|
| 126.00      | MW - 20M - 80W        | 0.67         |
| 126.00      | MW - 5M - 95W         | 1.77         |
| 441.00      | MW - 10M - 90W        | 6.19         |
| 95.00       | OCMW - 5M - 10o - 85W | 1.33         |
| 32.00       | W - 100W              | 0.45         |
|             |                       |              |

## Gas Rates

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



## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B  
Lincoln, NE 68516

ATTN: Richard Bell

### **Applegate #1-30**

### **30-2s-23w Norton,KS**

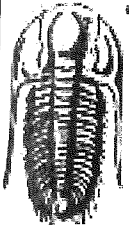
Start Date: 2014.09.01 @ 20:06:00

End Date: 2014.09.02 @ 02:20:30

Job Ticket #: 60137                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:43:23



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Great Plains Energy, Inc.

**30-2s-23w Norton,KS**

6121 S 58th ST, STE B  
Lincoln, NE 68516

**Applegate #1-30**

Job Ticket: 60137

**DST#: 2**

ATTN: Richard Bell

Test Start: 2014.09.01 @ 20:06:00

## GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:59:45

Time Test Ended: 02:20:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Donovan Baumann

Unit No: 54

Interval: **3494.00 ft (KB) To 3515.00 ft (KB) (TVD)**

Total Depth: 3515.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2437.00 ft (KB)

2427.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6753**

Inside

Press@RunDepth: 19.08 psig @ 3495.00 ft (KB)

Start Date: 2014.09.01

End Date:

2014.09.02

Capacity: 8000.00 psig

Last Calib.: 2014.09.02

Start Time: 20:06:05

End Time:

02:20:29

Time On Btm: 2014.09.01 @ 21:59:30

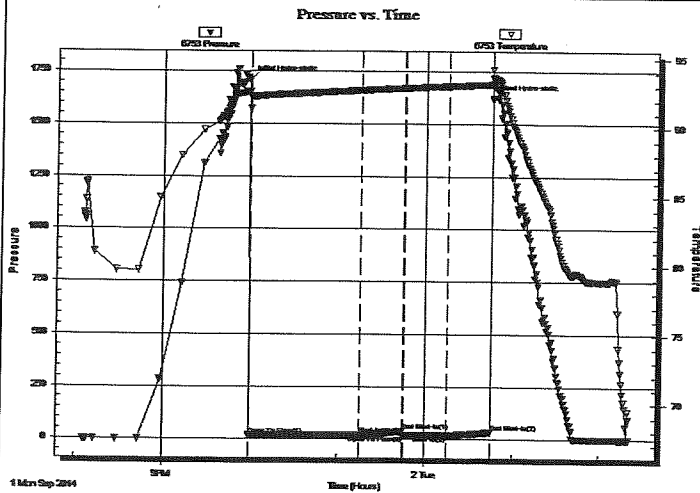
Time Off Btm: 2014.09.02 @ 00:45:15

TEST COMMENT: 75 - IF - Weak surface blow dead in 27 min.

30 - ISI - No return

30 - FF - No surface blow

30 - FSI - No return



## PRESSURE SUMMARY

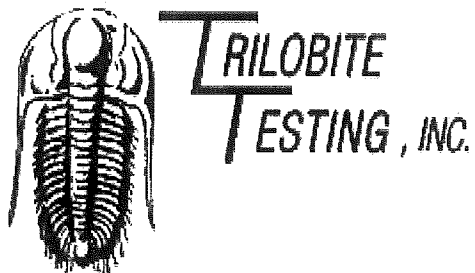
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1708.59         | 92.64        | Initial Hydro-static |
| 1           | 16.77           | 91.44        | Open To Flow (1)     |
| 76          | 18.13           | 92.74        | Shut-In(1)           |
| 106         | 37.75           | 92.91        | End Shut-In(1)       |
| 106         | 18.36           | 92.91        | Open To Flow (2)     |
| 136         | 19.08           | 93.06        | Shut-In(2)           |
| 166         | 31.90           | 93.19        | End Shut-In(2)       |
| 166         | 1621.34         | 93.62        | Final Hydro-static   |

## Recovery

| Length (ft) | Description     | Volume (bbl) |
|-------------|-----------------|--------------|
| 2.00        | MCO - 50M - 50o | 0.01         |
|             |                 |              |
|             |                 |              |
|             |                 |              |
|             |                 |              |

## Gas Rates

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



## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B  
Lincoln, NE 68516

ATTN: Richard Bell

### **Applegate #1-30**

### **30-2s-23w Norton,KS**

Start Date: 2014.09.02 @ 14:20:00

End Date: 2014.09.02 @ 21:36:00

Job Ticket #: 60111                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:43:09

Great Plains Energy, Inc.

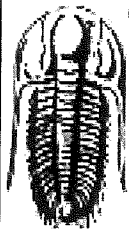
30-2s-23w Norton,KS

Applegate #1-30

DST # 3

LKC - 'H & J'

2014.09.02



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Great Plains Energy, Inc.

**30-2s-23w Norton,KS**

6121 S 58th ST, STE B  
Lincoln, NE 68516

**Applegate #1-30**

Job Ticket: 60111

**DST#: 3**

ATTN: Richard Bell

Test Start: 2014.09.02 @ 14:20:00

**GENERAL INFORMATION:**

Formation: **LKC - 'H & J'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:04:15

Time Test Ended: 21:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: **3577.00 ft (KB) To 3602.00 ft (KB) (TVD)**

Reference Elevations: 2437.00 ft (KB)

Total Depth: 3602.00 ft (KB) (TVD)

2427.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8368**

Press@RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.09.02 End Date: 2014.09.02

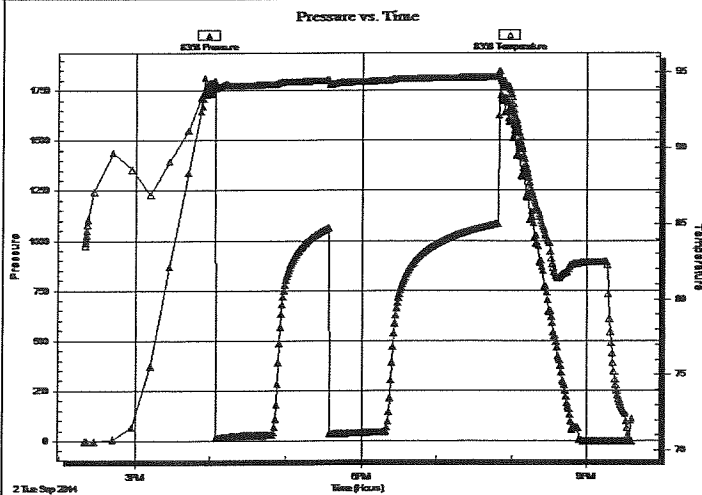
Last Calib.: 2014.09.02

Start Time: 14:20:05 End Time: 21:35:59

Time On Btm:

Time Off Btm:

**TEST COMMENT:**  
45 - IF - Surface blow slowly built to 3/4"  
45 - ISI - No Return  
45 - FF - Surface blow built to 1/4"  
90 - FSI - No Return



**PRESSURE SUMMARY**

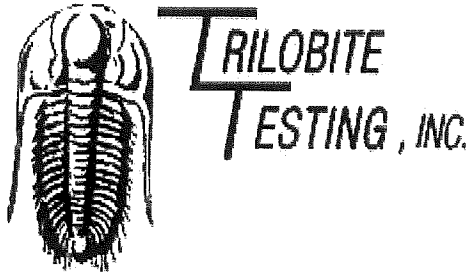
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|             |                 |              |            |
|             |                 |              |            |
|             |                 |              |    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

**Recovery**

| Length (ft) | Description            | Volume (bbl) |
|-------------|------------------------|--------------|
| 65.00       | OSM - 100M - Oil spots | 0.32         |
|             |                        |              |
|             |                        |              |
|             |                        |              |
|             |                        |              |

**Gas Rates**

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



## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc.**

6121 S 58th ST, STE B  
Lincoln, NE 68516

ATTN: Richard Bell

### **Applegate #1-30**

#### **30-2s-23w Norton,KS**

Start Date: 2014.09.03 @ 08:20:00

End Date: 2014.09.03 @ 16:11:30

Job Ticket #: 60112                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.09.05 @ 08:42:53



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Great Plains Energy, Inc.

30-2s-23w Norton, KS

6121 S 58th ST, STE B  
Lincoln, NE 68516

Applegate #1-30

Job Ticket: 60112

DST#: 4

ATTN: Richard Bell

Test Start: 2014.09.03 @ 08:20:00

### GENERAL INFORMATION:

Formation: **Granite Wash**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:19:00

Time Test Ended: 16:11:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: **3685.00 ft (KB) To 3696.00 ft (KB) (TVD)**

Total Depth: 3696.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2437.00 ft (KB)

2427.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: **6753**

Inside

Press@RunDepth: 86.59 psig @ 3686.00 ft (KB)

Start Date: 2014.09.03

End Date:

2014.09.03

Capacity: 8000.00 psig

Last Calib.: 2014.09.03

Start Time: 08:20:05

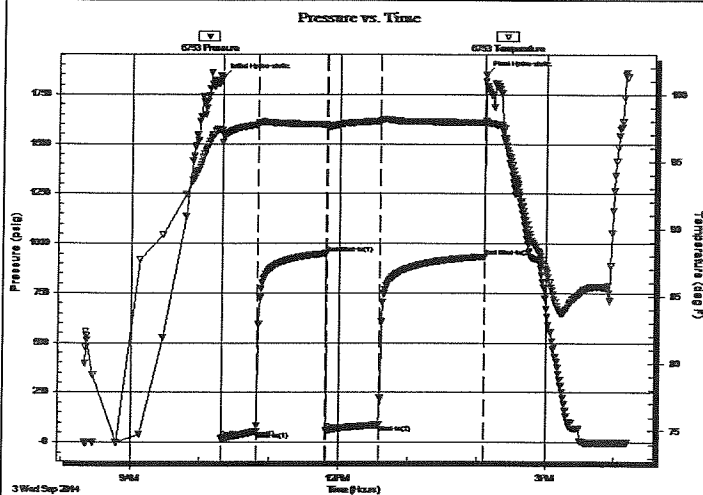
End Time:

16:11:29

Time On Btm: 2014.09.03 @ 10:18:45

Time Off Btm: 2014.09.03 @ 14:06:30

TEST COMMENT: 30 - IF - Surface blow built to 3"  
60 - IS - No Return  
45 - FF - Surface blow built to 3 3/4"  
90 - FSI - No Return



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1835.54         | 97.33        | Initial Hydro-static |
| 1           | 18.53           | 96.44        | Open To Flow (1)     |
| 31          | 55.18           | 97.74        | Shut-In(1)           |
| 90          | 950.42          | 97.75        | End Shut-In(1)       |
| 91          | 57.23           | 97.47        | Open To Flow (2)     |
| 137         | 86.59           | 98.00        | Shut-In(2)           |
| 228         | 935.31          | 97.90        | End Shut-In(2)       |
| 228         | 1849.33         | 98.08        | Final Hydro-static   |

### Recovery

| Length (ft) | Description   | Volume (bbl) |
|-------------|---------------|--------------|
| 150.00      | MW - 8M - 92W | 1.00         |
|             |               |              |
|             |               |              |
|             |               |              |
|             |               |              |

### Gas Rates

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



# GLOBAL CEMENTING, L.L.C.

1437

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell KS

|                         |                     |          |       |            |                         |                 |            |
|-------------------------|---------------------|----------|-------|------------|-------------------------|-----------------|------------|
| DATE <u>8-27-04</u>     | SEC.                | TWP.     | RANGE | CALLED OUT | ON LOCATION             | JOB START       | JOB FINISH |
| LEASE <u>Applegate</u>  | WELL #. <u>1-30</u> | LOCATION |       |            | COUNTY <u>Montezuma</u> | STATE <u>KS</u> |            |
| OLD OR NEW (CIRCLE ONE) |                     |          |       |            |                         |                 |            |

CONTRACTOR W.W. Downing Rig #12

TYPE OF JOB Surface

HOLE SIZE 12 3/4 T.D. 261 ft

CASING SIZE 8 3/8 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS

DISPLACEMENT

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 200 sacks Cem 3 1/2" (2 bags)

COMMON \_\_\_\_\_ @ \_\_\_\_\_

POZMIX \_\_\_\_\_ @ \_\_\_\_\_

GEL \_\_\_\_\_ @ \_\_\_\_\_

CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_

ASC \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

EQUIPMENT

PUMP TRUCK # 101 CEMENTER Cooley

BULK TRUCK # BB HELPER Brad

BULK TRUCK # BB DRIVER Payton

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

REMARKS:

Run 6 joints 8 3/8 casing + landing joint  
EST circulation hooked up pumped 200 sacks  
circulation cement displaced 15 1/2 hrs  
1700 psi 200 psi

CHARGE TO: Calvin Platts Energy

STREET \_\_\_\_\_

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

Global Cementing, L.L.C.,  
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 Calvin Platts Energy

SIGNATURE Calvin Platts Energy

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

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

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

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

# GLOBAL CEMENTING, L.L.C.

1432

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell, KS

|  |                    |               |                 |            |                      |                          |                           |
|--|--------------------|---------------|-----------------|------------|----------------------|--------------------------|---------------------------|
| DATE <u>9-4-14</u>                                       | SEC. <u>30</u>     | TWP. <u>2</u> | RANGE <u>23</u> | CALLED OUT | ON LOCATION          | JOB START <u>10:15am</u> | JOB FINISH <u>11:15am</u> |
| LEASE <u>AD/legate</u>                                   | WELL # <u>1-30</u> | LOCATION      |                 |            | COUNTY <u>Norton</u> | STATE <u>KS</u>          |                           |
| OLD OR <input checked="" type="radio"/> NEW (CIRCLE ONE) |                    |               |                 |            |                      |                          |                           |

CONTRACTOR WV Drilling #12

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8 T.D.

CASING SIZE DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS

DISPLACEMENT

OWNER

CEMENT AMOUNT ORDERED 290sx 60/40 4% gel

1/4 # F10

COMMON \_\_\_\_\_ @ \_\_\_\_\_

POZMIX \_\_\_\_\_ @ \_\_\_\_\_

GEL \_\_\_\_\_ @ \_\_\_\_\_

CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_

ASC \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

EQUIPMENT

PUMP TRUCK CEMENTER Heath

# B1 HELPER Braed

BULK TRUCK DRIVER Mark

# B1 DRIVER

REMARKS:

1st Plug @ 3703 = 50sx

2nd Plug @ 2012 = 50sx

3rd Plug @ 1327 = 100sx

4th Plug @ 310' = 50sx Come out of hole and push wiper plug = 10sx RH = 30sx

CHARGE TO: Great Plains

STREET \_\_\_\_\_

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

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 43x2 @ \_\_\_\_\_

MANIFOLD @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

Global Cementing, L.L.C.,  
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.

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

8 5/8 dry hole plug @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

PRINTED NAME Calvin Pfannenstiel

SIGNATURE Calvin Pfannenstiel

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

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

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