

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1247662
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: _____

1247662

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

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

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

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

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

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

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type 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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

Tapstone
Mark 25-34-9 1H
API# 15-077-22113-01-00

Vertical Section Azimuth @ 359.19 Degrees

| Depth | Inc | Azm | TVD | N/-S | E/-W | VS | DLS |
|---------|------|--------|---------|--------|-------|--------|------|
| 816.00 | 0.52 | 64.49 | 815.99 | 1.61 | 3.37 | 1.56 | 0.06 |
| 833.00 | 0.6 | 71.07 | 832.99 | 1.67 | 3.52 | 1.62 | 0.57 |
| 864.00 | 0.66 | 46.8 | 863.99 | 1.84 | 3.81 | 1.79 | 0.87 |
| 896.00 | 1.23 | 34.24 | 895.98 | 2.25 | 4.13 | 2.19 | 1.87 |
| 927.00 | 1.72 | 25.65 | 926.97 | 2.95 | 4.52 | 2.88 | 1.74 |
| 959.00 | 2.13 | 21.69 | 958.95 | 3.93 | 4.95 | 3.86 | 1.36 |
| 990.00 | 2.64 | 15.82 | 989.93 | 5.15 | 5.36 | 5.08 | 1.81 |
| 1022.00 | 2.95 | 16.57 | 1021.89 | 6.65 | 5.79 | 6.57 | 0.98 |
| 1053.00 | 3.27 | 16.05 | 1052.84 | 8.27 | 6.26 | 8.18 | 1.02 |
| 1085.00 | 3.52 | 15.68 | 1084.79 | 10.09 | 6.78 | 9.99 | 0.79 |
| 1116.00 | 3.76 | 12.85 | 1115.72 | 11.99 | 7.26 | 11.89 | 0.98 |
| 1148.00 | 3.84 | 8.06 | 1147.65 | 14.08 | 7.65 | 13.97 | 1.02 |
| 1180.00 | 4.16 | 8.72 | 1179.58 | 16.29 | 7.97 | 16.17 | 1.02 |
| 1211.00 | 4.56 | 11.8 | 1210.49 | 18.6 | 8.4 | 18.48 | 1.5 |
| 1275.00 | 5.34 | 12.32 | 1274.25 | 24.01 | 9.55 | 23.87 | 1.22 |
| 1369.00 | 5.36 | 15.71 | 1367.84 | 32.51 | 11.67 | 32.34 | 0.34 |
| 1463.00 | 5.2 | 11.43 | 1461.44 | 40.91 | 13.71 | 40.71 | 0.45 |
| 1558.00 | 4.56 | 11.83 | 1556.09 | 48.82 | 15.33 | 48.6 | 0.68 |
| 1652.00 | 4.03 | 10.54 | 1649.83 | 55.72 | 16.7 | 55.48 | 0.57 |
| 1748.00 | 4.19 | 18.23 | 1745.58 | 62.36 | 18.42 | 62.1 | 0.6 |
| 1843.00 | 3.82 | 20 | 1840.35 | 68.64 | 20.58 | 68.34 | 0.41 |
| 1936.00 | 3.94 | 12.09 | 1933.14 | 74.67 | 22.31 | 74.35 | 0.59 |
| 2030.00 | 3.74 | 9.27 | 2026.93 | 80.85 | 23.48 | 80.51 | 0.29 |
| 2125.00 | 3.52 | 8.57 | 2121.74 | 86.79 | 24.42 | 86.44 | 0.24 |
| 2219.00 | 2.79 | 9.48 | 2215.6 | 91.9 | 25.22 | 91.54 | 0.78 |
| 2313.00 | 2.5 | 6.05 | 2309.5 | 96.19 | 25.82 | 95.82 | 0.35 |
| 2408.00 | 1.68 | 354.76 | 2404.43 | 99.63 | 25.91 | 99.26 | 0.96 |
| 2501.00 | 1.29 | 327.79 | 2497.4 | 101.87 | 25.22 | 101.51 | 0.85 |
| 2595.00 | 0.58 | 297.27 | 2591.39 | 102.99 | 24.24 | 102.64 | 0.9 |
| 2690.00 | 0.68 | 273.67 | 2686.38 | 103.25 | 23.24 | 102.91 | 0.29 |
| 2783.00 | 0.73 | 265.4 | 2779.38 | 103.23 | 22.1 | 102.91 | 0.12 |
| 2877.00 | 0.6 | 275.52 | 2873.37 | 103.23 | 21.01 | 102.93 | 0.19 |
| 2971.00 | 0.33 | 83.53 | 2967.37 | 103.31 | 20.79 | 103.01 | 0.98 |
| 3064.00 | 0.22 | 79.62 | 3060.37 | 103.37 | 21.23 | 103.06 | 0.12 |
| 3158.00 | 0.34 | 99.76 | 3154.37 | 103.36 | 21.69 | 103.04 | 0.17 |
| 3250.00 | 0.38 | 109.03 | 3246.36 | 103.21 | 22.25 | 102.88 | 0.08 |
| 3345.00 | 0.47 | 90.37 | 3341.36 | 103.1 | 22.93 | 102.77 | 0.17 |

| | | | | | | | |
|---------|-------|--------|---------|--------|-------|--------|-------|
| 3440.00 | 0.41 | 74.75 | 3436.36 | 103.19 | 23.65 | 102.85 | 0.14 |
| 3534.00 | 0.39 | 75.51 | 3530.36 | 103.36 | 24.28 | 103.01 | 0.03 |
| 3628.00 | 0.5 | 63.64 | 3624.35 | 103.62 | 24.96 | 103.26 | 0.15 |
| 3721.00 | 0.61 | 58.76 | 3717.35 | 104.05 | 25.74 | 103.68 | 0.13 |
| 3814.00 | 0.53 | 58.45 | 3810.35 | 104.53 | 26.52 | 104.15 | 0.09 |
| 3877.00 | 0.52 | 54.47 | 3873.34 | 104.85 | 27 | 104.46 | 0.06 |
| 3908.00 | 0.9 | 48.63 | 3904.34 | 105.1 | 27.3 | 104.7 | 1.23 |
| 3940.00 | 3.94 | 26.16 | 3936.31 | 106.25 | 27.97 | 105.84 | 9.78 |
| 3972.00 | 7.53 | 19.92 | 3968.14 | 109.21 | 29.17 | 108.78 | 11.36 |
| 4003.00 | 10.32 | 18.7 | 3998.77 | 113.75 | 30.76 | 113.3 | 9.05 |
| 4035.00 | 12.94 | 17.62 | 4030.11 | 119.88 | 32.76 | 119.4 | 8.2 |
| 4066.00 | 14.98 | 16.64 | 4060.19 | 127.03 | 34.96 | 126.52 | 6.63 |
| 4098.00 | 16.69 | 15.74 | 4090.97 | 135.41 | 37.39 | 134.87 | 5.39 |
| 4129.00 | 19.06 | 13.69 | 4120.48 | 144.61 | 39.79 | 144.04 | 7.91 |
| 4160.00 | 21.94 | 10.45 | 4149.51 | 155.23 | 42.04 | 154.62 | 9.98 |
| 4192.00 | 24.67 | 8.26 | 4178.9 | 167.72 | 44.09 | 167.08 | 8.96 |
| 4224.00 | 26.91 | 6.44 | 4207.71 | 181.53 | 45.86 | 180.86 | 7.41 |
| 4256.00 | 28.94 | 3.17 | 4235.98 | 196.46 | 47.1 | 195.77 | 7.95 |
| 4287.00 | 30.69 | 359.72 | 4262.88 | 211.86 | 47.48 | 211.17 | 7.92 |
| 4318.00 | 32.16 | 357.83 | 4289.33 | 228.02 | 47.13 | 227.33 | 5.68 |
| 4349.00 | 33.53 | 357.87 | 4315.38 | 244.82 | 46.5 | 244.13 | 4.43 |
| 4380.00 | 35.57 | 358.19 | 4340.91 | 262.38 | 45.89 | 261.71 | 6.6 |
| 4412.00 | 38.69 | 357.97 | 4366.42 | 281.69 | 45.24 | 281.02 | 9.76 |
| 4443.00 | 41.06 | 357.6 | 4390.21 | 301.54 | 44.47 | 300.88 | 7.67 |
| 4474.00 | 43.04 | 357.58 | 4413.23 | 322.29 | 43.6 | 321.64 | 6.39 |
| 4506.00 | 45.35 | 356.89 | 4436.17 | 344.56 | 42.52 | 343.93 | 7.38 |
| 4537.00 | 47.62 | 356 | 4457.51 | 367 | 41.13 | 366.38 | 7.62 |
| 4567.00 | 49.78 | 356.02 | 4477.31 | 389.48 | 39.56 | 388.89 | 7.2 |
| 4599.00 | 51.75 | 356.83 | 4497.55 | 414.22 | 38.01 | 413.64 | 6.45 |
| 4631.00 | 54.15 | 357.44 | 4516.83 | 439.73 | 36.74 | 439.16 | 7.68 |
| 4663.00 | 56.19 | 357.35 | 4535.1 | 465.97 | 35.55 | 465.42 | 6.36 |
| 4694.00 | 58.63 | 357.1 | 4551.8 | 492.05 | 34.28 | 491.52 | 7.91 |
| 4725.00 | 61.41 | 356.53 | 4567.29 | 518.86 | 32.78 | 518.34 | 9.1 |
| 4757.00 | 62.93 | 356.02 | 4582.23 | 547.1 | 30.95 | 546.61 | 4.94 |
| 4788.00 | 63.21 | 355.59 | 4596.27 | 574.66 | 28.93 | 574.19 | 1.53 |
| 4819.00 | 63.32 | 355.49 | 4610.22 | 602.26 | 26.77 | 601.82 | 0.47 |
| 4850.00 | 63.59 | 355.43 | 4624.07 | 629.91 | 24.58 | 629.5 | 0.88 |
| 4882.00 | 63.88 | 355.66 | 4638.23 | 658.52 | 22.35 | 658.14 | 1.12 |
| 4914.00 | 63.86 | 355.81 | 4652.33 | 687.17 | 20.22 | 686.81 | 0.41 |
| 4946.00 | 64.85 | 356.14 | 4666.18 | 715.94 | 18.19 | 715.61 | 3.23 |
| 4977.00 | 67.95 | 357.54 | 4678.59 | 744.3 | 16.63 | 743.99 | 10.84 |
| 5009.00 | 70.33 | 358.43 | 4689.98 | 774.18 | 15.58 | 773.89 | 7.88 |
| 5041.00 | 72.85 | 359.45 | 4700.08 | 804.54 | 15.02 | 804.25 | 8.43 |
| 5072.00 | 75.33 | 0.07 | 4708.58 | 834.35 | 14.89 | 834.06 | 8.23 |
| 5104.00 | 78.11 | 359.81 | 4715.93 | 865.49 | 14.86 | 865.19 | 8.71 |
| 5134.00 | 80.08 | 359.75 | 4721.6 | 894.95 | 14.75 | 894.65 | 6.57 |
| 5220.00 | 85.01 | 359.02 | 4732.75 | 980.19 | 13.83 | 979.9 | 5.79 |

| | | | | | | | |
|---------|-------|--------|---------|---------|--------|---------|-------|
| 5251.00 | 88.52 | 358.3 | 4734.5 | 1011.13 | 13.11 | 1010.84 | 11.57 |
| 5283.00 | 90.4 | 358.1 | 4734.81 | 1043.11 | 12.11 | 1042.83 | 5.91 |
| 5314.00 | 90.06 | 357.45 | 4734.68 | 1074.08 | 10.91 | 1073.82 | 2.36 |
| 5346.00 | 90.09 | 357.49 | 4734.64 | 1106.05 | 9.49 | 1105.81 | 0.15 |
| 5378.00 | 90.37 | 357.78 | 4734.51 | 1138.03 | 8.18 | 1137.8 | 1.25 |
| 5440.00 | 90.65 | 358.3 | 4733.96 | 1199.99 | 6.06 | 1199.78 | 0.95 |
| 5504.00 | 90.65 | 357.78 | 4733.23 | 1263.94 | 3.87 | 1263.76 | 0.82 |
| 5567.00 | 90.68 | 357.92 | 4732.51 | 1326.9 | 1.5 | 1326.74 | 0.23 |
| 5661.00 | 90.74 | 359.29 | 4731.34 | 1420.86 | -0.79 | 1420.73 | 1.46 |
| 5756.00 | 90.06 | 359.36 | 4730.68 | 1515.85 | -1.91 | 1515.72 | 0.72 |
| 5846.00 | 90.09 | 358.91 | 4730.56 | 1605.84 | -3.27 | 1605.72 | 0.5 |
| 5935.00 | 89.97 | 359.23 | 4730.51 | 1694.83 | -4.71 | 1694.72 | 0.39 |
| 6025.00 | 90.4 | 358.62 | 4730.22 | 1784.81 | -6.4 | 1784.72 | 0.83 |
| 6115.00 | 90.31 | 357.7 | 4729.66 | 1874.76 | -9.29 | 1874.7 | 1.03 |
| 6206.00 | 90.34 | 358.29 | 4729.15 | 1965.7 | -12.48 | 1965.68 | 0.65 |
| 6296.00 | 90.62 | 356.73 | 4728.4 | 2055.61 | -16.39 | 2055.64 | 1.76 |
| 6385.00 | 90.15 | 358.95 | 4727.8 | 2144.54 | -19.74 | 2144.61 | 2.55 |
| 6475.00 | 90.06 | 358.44 | 4727.63 | 2234.52 | -21.79 | 2234.6 | 0.58 |
| 6565.00 | 90.8 | 357.93 | 4726.96 | 2324.47 | -24.64 | 2324.58 | 1 |
| 6657.00 | 89.97 | 0.27 | 4726.34 | 2416.45 | -26.08 | 2416.57 | 2.71 |
| 6747.00 | 91.51 | 0.19 | 4725.18 | 2506.44 | -25.72 | 2506.55 | 1.72 |
| 6837.00 | 90.28 | 1.18 | 4723.77 | 2596.42 | -24.63 | 2596.51 | 1.76 |
| 6928.00 | 90.06 | 1.79 | 4723.5 | 2687.38 | -22.27 | 2687.43 | 0.7 |
| 7018.00 | 89.88 | 0.41 | 4723.55 | 2777.37 | -20.55 | 2777.38 | 1.54 |
| 7109.00 | 90.28 | 359.62 | 4723.43 | 2868.37 | -20.53 | 2868.37 | 0.98 |
| 7199.00 | 90.12 | 0.24 | 4723.12 | 2958.36 | -20.63 | 2958.36 | 0.72 |
| 7289.00 | 90.15 | 1.11 | 4722.9 | 3048.36 | -19.57 | 3048.33 | 0.97 |
| 7379.00 | 90.86 | 359.23 | 4722.1 | 3138.35 | -19.3 | 3138.31 | 2.24 |
| 7470.00 | 90.31 | 359.31 | 4721.17 | 3229.34 | -20.46 | 3229.3 | 0.62 |
| 7561.00 | 91.11 | 359.45 | 4720.04 | 3320.32 | -21.44 | 3320.29 | 0.89 |
| 7655.00 | 91.17 | 358.67 | 4718.17 | 3414.29 | -22.98 | 3414.27 | 0.82 |
| 7749.00 | 90.62 | 357.9 | 4716.71 | 3508.24 | -25.8 | 3508.25 | 1.02 |
| 7749.00 | 90.62 | 357.9 | 4716.71 | 3508.24 | -25.8 | 3508.25 | 1.02 |
| 7844.00 | 90.62 | 357.43 | 4715.69 | 3603.15 | -29.66 | 3603.21 | 0.49 |
| 7938.00 | 88.71 | 357.52 | 4716.24 | 3697.05 | -33.8 | 3697.16 | 2.04 |
| 8033.00 | 89.26 | 358.29 | 4717.93 | 3791.97 | -37.27 | 3792.12 | 0.99 |
| 8128.00 | 91.48 | 357.07 | 4717.31 | 3886.89 | -41.12 | 3887.08 | 2.67 |
| 8222.00 | 89.08 | 356.6 | 4716.86 | 3980.74 | -46.31 | 3980.99 | 2.6 |
| 8317.00 | 90.55 | 358.85 | 4717.16 | 4075.65 | -50.08 | 4075.95 | 2.83 |
| 8412.00 | 90.4 | 359.34 | 4716.37 | 4170.64 | -51.58 | 4170.95 | 0.55 |
| 8506.00 | 91.14 | 359.46 | 4715.11 | 4264.62 | -52.56 | 4264.94 | 0.8 |
| 8600.00 | 90.43 | 358.91 | 4713.82 | 4358.6 | -53.91 | 4358.93 | 0.96 |
| 8695.00 | 91.42 | 357.66 | 4712.28 | 4453.54 | -56.76 | 4453.9 | 1.67 |
| 8789.00 | 91.48 | 356.7 | 4709.91 | 4547.4 | -61.38 | 4547.81 | 1.02 |
| 8883.00 | 91.48 | 358.44 | 4707.48 | 4641.28 | -65.37 | 4641.74 | 1.84 |
| 8978.00 | 90.31 | 357.74 | 4706 | 4736.21 | -68.54 | 4736.71 | 1.43 |
| 9072.00 | 90.62 | 359.25 | 4705.24 | 4830.17 | -71.01 | 4830.7 | 1.64 |

| | | | | | | | |
|---------|-------|--------|---------|---------|--------|---------|------|
| 9167.00 | 89.94 | 359.50 | 4704.78 | 4925.17 | -72.04 | 4925.69 | 0.76 |
| 9262.00 | 90.43 | 359.93 | 4704.48 | 5020.16 | -72.52 | 5020.69 | 0.69 |
| 9339.00 | 90.43 | 0.25 | 4703.9 | 5097.16 | -72.4 | 5097.68 | 0.42 |
| 9392.00 | 90.43 | 0.25 | 4703.5 | 5150.16 | -72.16 | 5150.67 | 0.01 |

Motor Yield

14.88
11.36
10.35
10.48
9.32
7.85
11.14
12.89
11.01
12.9
13.1
12.4
8.99
8.7
11.5
11.8
10.35
9
14.74
11.34
12
10.88
12.88
12.56
13
15.1
8.2
N/A
N/A
N/A
N/A
N/A
N/A
11.56
9
15
13.42
16
13.8

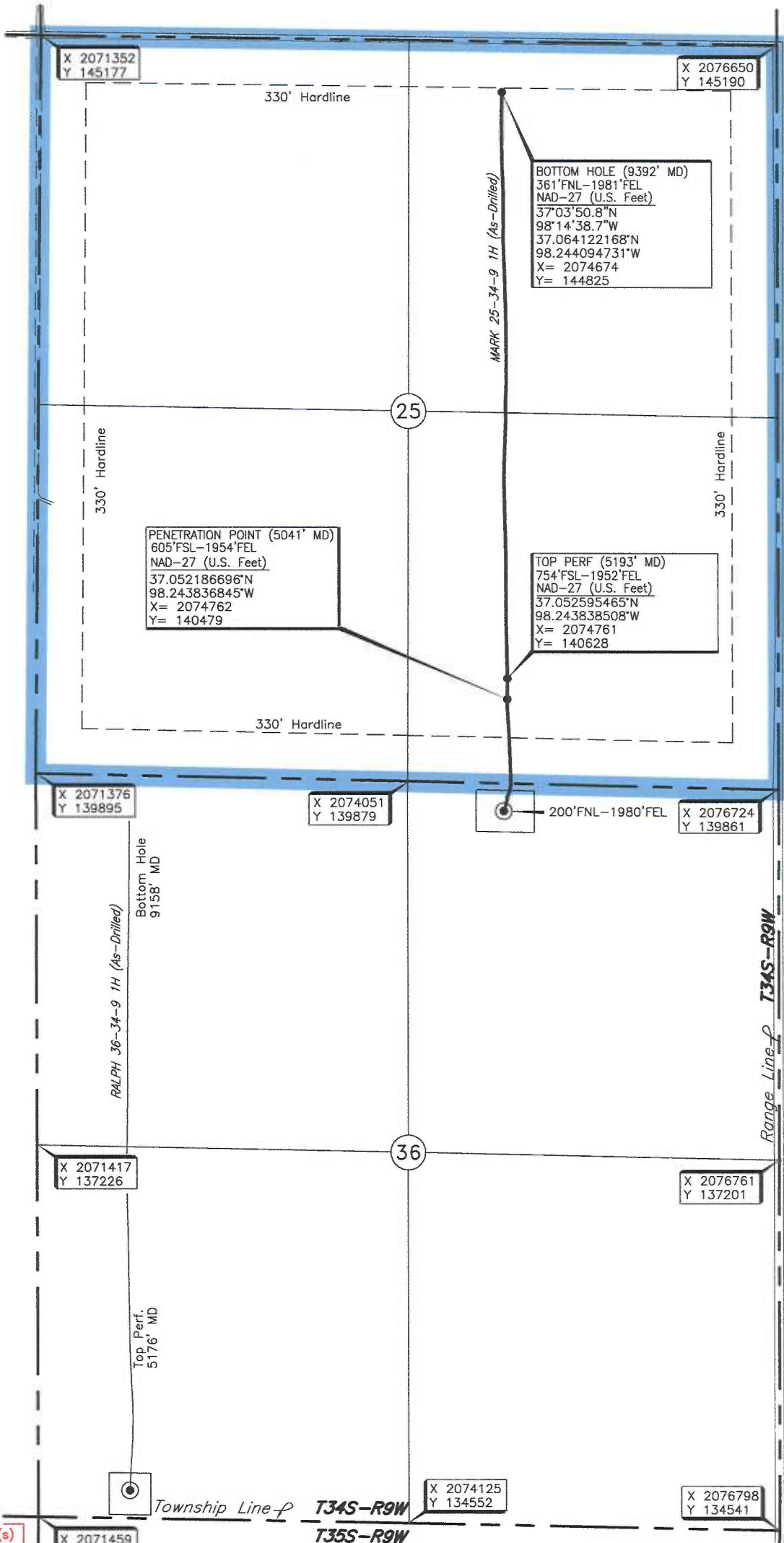
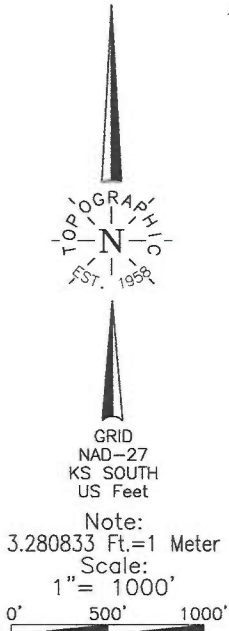
TOPOGRAPHIC LAND SURVEYORS

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
 Certificate of Authorization No. LS-99, Exp. Dec. 31, 2015

HARPER

County, Kansas

200'FNL-1980'FEL Section 36 Township 34S Range 9W P.M.



Operator: TAPSTONE ENERGY
 Lease Name: MARK 25-34-9
 Topography & Vegetation Location fell in pasture on small sandy hill.
 Good Drill Site? Yes
 Reference Stakes or Alternate Location None
 Best Accessibility to Location From County road east of well location.
 Distance & Direction From Waldron, KS, go ±4.5 miles North, then ±3 miles, West then ±1.0 miles South to the Northeast Corner of Section 36, T34S-R9W.
 Well No.: 1H
 ELEVATION: 1273' Gr. at Stake

A boundary survey of the said section(s) shown hereon was not performed per the request of the operator shown hereon.

This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy.
 DATUM: NAD-27
 LAT: 37°02'59.9"N
 LONG: 98°14'38.0"W
 LAT: 37.049977136°N
 LONG: 98.243895871°W
 STATE PLANE COORDINATES: (US Feet)
 ZONE: KS SOUTH
 X: 2074747
 Y: 139674

Invoice # 238563 Date Staked: Oct. 9, 2014
 Jan. 05, 2015

FINAL AS-DRILLED PLAT

AS-DRILLED INFORMATION
 FURNISHED BY TAPSTONE ENERGY

HALLIBURTON

iCem[®] Service

For:

Date: Saturday, December 12, 2014

tapstone mark 9.625 Surface

Case 1

Sincerely,

1.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | DS Pump Press (psi) | Comb Pump Rate (bb/min) | DH Density (ppg) | Comment |
|-------|----------|--|--|------------|----------|--------|---------------------|-------------------------|------------------|---|
| Event | 1 | Call Out | Call Out | 12/12/2014 | 00:00:00 | USER | | | | REQUESTED TIME TO BE ON LOCATION 210;00 12/12/14 |
| Event | 2 | Crew Leave Yard | Crew Leave Yard | 12/12/2014 | 05:25:00 | USER | | | | JM / NOTIFY BY E MAIL |
| Event | 3 | Arrive at Location from Service Center | Arrive at Location from Service Center | 12/12/2014 | 11:00:00 | USER | | | | HAVE LIMITED INTERNET CONNECTION/ CLOSE JM / JD STATUS TO OJS, RIG LAYING DOWN D.C. BEFORE THEY RUN CASING |
| Event | 4 | Comment | Comment | 12/12/2014 | 11:05:00 | USER | | | | GET WOC & MSDS SIGNED, GO OVER WELL & CEMENT INFORMATION WITH CUSTOMER BUCK FOGLE, / TOLD HIM WE HAD HEVY FOG CONDITIONS & CEMENT WILL BE 2-3 HRS BEHIND ME / IT SHOULD ALL WORK OUT OKAY |
| Event | 5 | Other | Other | 12/12/2014 | 12:07:38 | USER | | | | LOAD EQUIPMENT / MATERIALS FOR JOB |
| Event | 6 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 12/12/2014 | 12:08:09 | USER | | | | DISCUSS WEATHER CONDITIONS AS HEAVY FOG WHICH WE WILL BE DRIVING IN, TRAFFIC, WILDLIFE, FATIGUE, EMERGENCY CONTACTS |
| Event | 7 | Comment | Comment | 12/12/2014 | 13:30:00 | USER | | | | RIG CASING CREW UP |
| Event | 8 | Comment | Comment | 12/12/2014 | 13:52:08 | USER | | | | CEMENT ARRIVED ON LOCATION @13;30 |
| Event | 9 | Comment | Comment | 12/12/2014 | 13:52:55 | USER | | | | START RUNNING 9 5/8 CASING & FLOAT EQUIPMENT |
| Event | 10 | Casing on Bottom | Casing on Bottom | 12/12/2014 | 15:58:52 | USER | 1.00 | 0.00 | 8.34 | RAN 802 FT. OF 9 5/8 33# / RIG CASING CREW DOWN |

| | | | | | | | | | | |
|-------|----|--------------------------------|--------------------------------|------------|----------|------|--------|------|-------|---|
| Event | 11 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 12/12/2014 | 16:20:00 | USER | 0.00 | 0.00 | 8.31 | DISCUSS JOB & SAFETY PROCERDURES |
| Event | 12 | Start Job | Start Job | 12/12/2014 | 16:45:46 | COM5 | 0.00 | 0.00 | 8.24 | |
| Event | 13 | Test Lines | Test Lines | 12/12/2014 | 16:46:13 | COM5 | 0.00 | 0.00 | 8.33 | TEST PUMP & LINES TO 2500# |
| Event | 14 | Pump Spacer 1 | Pump Spacer 1 | 12/12/2014 | 16:51:08 | COM5 | -1.00 | 0.00 | 8.25 | PUMP 10 BBLs. F/W SPACER @4 BPM @135#PSI |
| Event | 15 | Pump Cement | Pump Cement | 12/12/2014 | 16:55:31 | COM5 | 124.00 | 4.00 | 14.90 | START MIXING 475 SKS CEMENT =111 BBLs. CEMENT SLURRY @15.0#/GAL |
| Event | 16 | Drop Top Plug | Drop Top Plug | 12/12/2014 | 17:19:08 | COM5 | 7.00 | 0.00 | 11.59 | VERIFIED PLUG LEFT HEAD |
| Event | 17 | Pump Displacement | Pump Displacement | 12/12/2014 | 17:19:11 | COM5 | 7.00 | 0.00 | 11.56 | START PUMPING F/W DISPLACEMENT (WASH uP ON TOP)100# PSI @4 BPM |
| Event | 18 | Displ Reached Cmnt | Displ Reached Cmnt | 12/12/2014 | 17:30:33 | COM5 | 265.00 | 4.10 | 8.33 | |
| Event | 19 | Cement Returns to Surface | Cement Returns to Surface | 12/12/2014 | 17:30:34 | USER | 266.00 | 4.10 | 8.31 | HAVE 36 BBLs. OUT / HAVE GOOD CEMENT RETURNS TO SURFACE |
| Event | 20 | Check Floats | Check Floats | 12/12/2014 | 17:32:00 | USER | 297.00 | 4.10 | 8.24 | GOT 1/2 BBL BACK / FLOATS HOLDING |
| Event | 21 | Bump Plug | Bump Plug | 12/12/2014 | 17:36:04 | COM5 | 987.00 | 0.00 | 8.34 | MAX LIFT PRESSURE BEFORE LANDING PLUG WAS 310# , PRESSURE UP 500# OVER PLP TO 900# |
| Event | 22 | End Job | End Job | 12/12/2014 | 17:38:34 | COM5 | 0.00 | 0.00 | 8.23 | |
| Event | 23 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 12/12/2014 | 17:38:35 | USER | -1.00 | 0.00 | 8.23 | DISCUSS LIFTING, PINCH POINTS, EYES ON TASK |
| Event | 24 | Comment | Comment | 12/12/2014 | 17:38:36 | USER | -1.00 | 0.00 | 8.23 | CIRCUYLATED 23 BBLs. CEMENT TO SURFACE |

HALLIBURTON

iCem® Service

LUCAS MITCHELL

For:

Date: Saturday, December 20, 2014

tapstone mark 7 inch

Case 1

Sincerely,

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HALLIBURTON

Table of Contents

To Generate a Table of Contents, right click here. Click "Update Field." If prompted, select "Entire Table."

2.0 Temperature Modeling

3.0 Real-Time Job Summary

3.1 Stage Summary - Liquid Volume, Density, & Design Shutdown

3.2 Stage Summary - Pump Pressure & ECD

3.3 Stage Summary - Pump Rate & Nitrogen Rate

3.4 Shutdown Summary

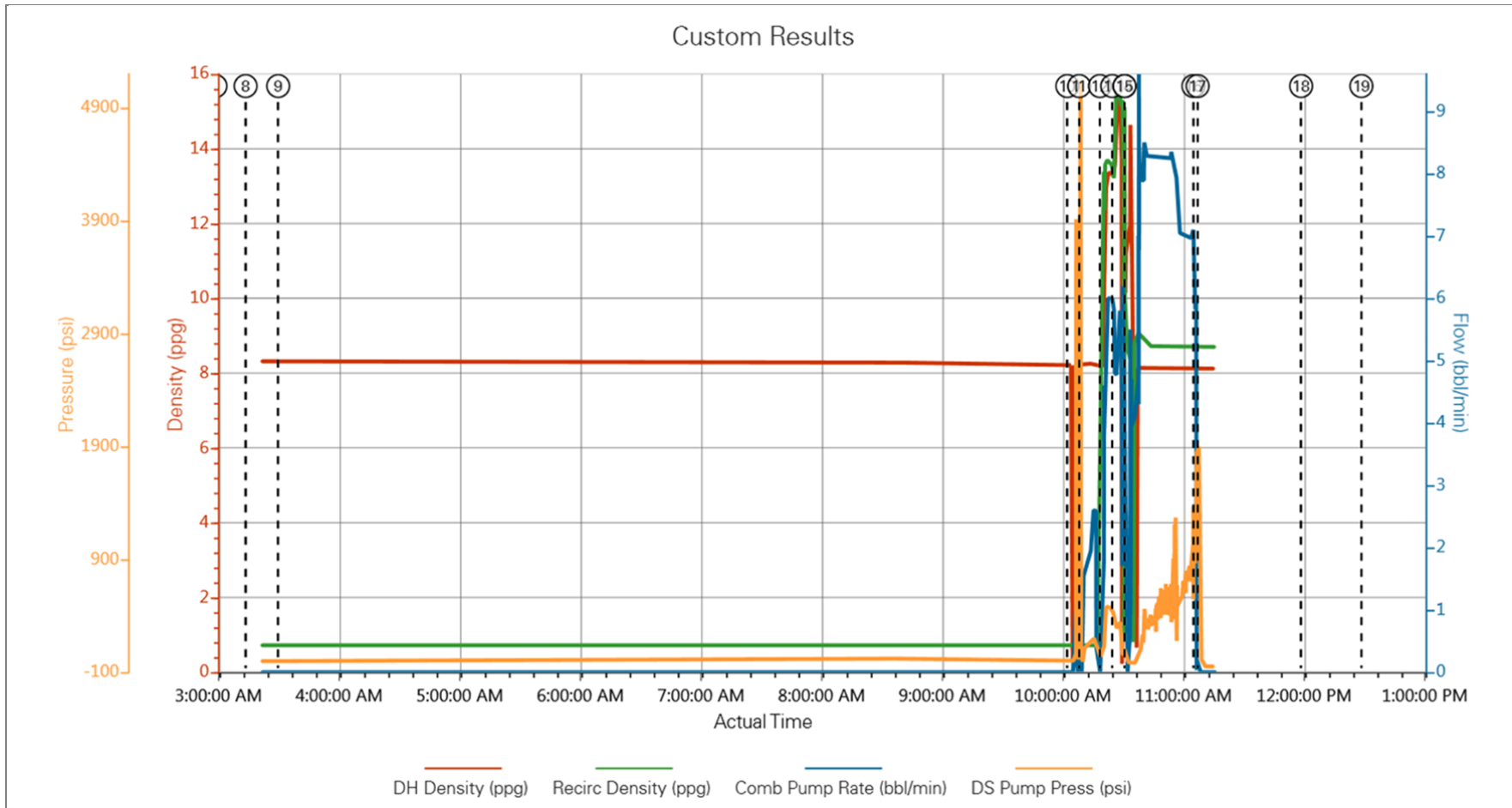
3.5 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | Downhole Density (ppg) | Recirc Density (ppg) | Combined Pump Rate (bbl/min) | Driv-Side Pump Pressure (psi) | Comments |
|-------|----------|--|--|------------|----------|--------|------------------------|----------------------|------------------------------|-------------------------------|--|
| Event | 1 | Call Out | Call Out | 12/19/2014 | 21:30:00 | USER | | | | | |
| Event | 2 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 12/19/2014 | 22:30:00 | USER | | | | | discuss route to be taken, safe driving at night |
| Event | 3 | Depart Dock for Rig | depart yard | 12/19/2014 | 23:00:00 | USER | | | | | |
| Event | 4 | Arrive At Loc | Arrive At Loc | 12/20/2014 | 01:30:00 | USER | | | | | customer running casing, all equipment on location on time |
| Event | 5 | Assessment Of Location Safety Meeting | Assessment Of Location Safety Meeting | 12/20/2014 | 01:45:00 | USER | | | | | check location for safety issues, go over job numbersf with company man, locate and test water, supply |
| Event | 6 | Wait on Customer or Customer Sub-Contractor Equip - Start Time | Wait on Customer or Customer Sub-Contractor Equip - Start Time | 12/20/2014 | 02:00:00 | USER | | | | | customer running casing, rigging down casing crew |
| Event | 7 | Pre-Rig Up Safety Meeting | pre rig up meeting | 12/20/2014 | 03:00:00 | USER | | | | | discuss task to be done, discuss safety concerns and issues, make sure all hands understand what is to be done and the safe ways of doing the task, go over proper ppe |
| Event | 8 | Rig-Up Equipment | rig up equipment | 12/20/2014 | 03:15:00 | USER | | | | | rig up hes hard lines, water lines, |
| Event | 9 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 12/20/2014 | 03:31:11 | USER | 8.34 | 0.72 | 0.00 | -1.00 | discuss task with all hands, go over job numbers and process witha ll hands, discuss any safety issues, that may arrise |
| Event | 10 | Test Lines | Test Lines | 12/20/2014 | 10:03:42 | COM7 | 8.19 | 0.72 | 0.00 | 3.00 | test hes lines to 5000psi |

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | Downhole Density (ppg) | Recirc Density (ppg) | Combined Pump Rate (bbl/min) | Driv-Side Pump Pressure (psi) | Comments |
|-------|----------|-----------------------------|-----------------------------|------------|----------|--------|------------------------|----------------------|------------------------------|-------------------------------|--|
| Event | 11 | Pump Spacer 1 | Pump Spacer 1 | 12/20/2014 | 10:09:36 | COM7 | 8.23 | 0.72 | 0.00 | -15.00 | |
| Event | 12 | Pump Lead Cement | Pump Lead Cement | 12/20/2014 | 10:19:54 | COM7 | 8.17 | 13.39 | 0.00 | 36.00 | pump 140sk cmt mixed @ 13.6 totalling 37bbl |
| Event | 13 | Pump Tail Cement | Pump Tail Cement | 12/20/2014 | 10:26:02 | COM7 | 14.48 | 15.56 | 4.80 | 277.00 | pump 90sk cmt mixed @ 15.6 totalling 19bbl |
| Event | 14 | Drop Top Plug | Drop Top Plug | 12/20/2014 | 10:32:10 | COM7 | 11.62 | 8.68 | 0.00 | -22.00 | |
| Event | 15 | Pump Displacement | Pump Displacement | 12/20/2014 | 10:32:12 | COM7 | 11.62 | 8.72 | 0.00 | -23.00 | pumped 194rig supplied fresh water returns threw out job |
| Event | 16 | Bump Plug | Bump Plug | 12/20/2014 | 11:06:24 | COM7 | | | | 1000.00 | bumped plug @ 1000psi took over to 1850psi |
| Event | 17 | Other | check floats | 12/20/2014 | 11:08:31 | COM7 | | | | | floats held 1.5 bbl back to truck when released |
| Event | 18 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 12/20/2014 | 12:00:00 | USER | | | | | discuss task to be done, safe workf actions and proper ppe |
| Event | 19 | Rig-Down Equipment | Rig-Down Equipment | 12/20/2014 | 12:30:00 | USER | | | | | rig down hes hard lines, water lines, cmt head |
| Event | 20 | Pre-Convoy Safety Meeting | pre convoy safety meeting | 12/20/2014 | 14:00:00 | USER | | | | | discuss routes to be taken and safe driving practices |
| Event | 21 | Depart Location | Depart Location | 12/20/2014 | 14:30:00 | USER | | | | | |

4.0 Custom Graphs

4.1 Custom Graph



5.0 Appendix

5.1 One-Minutes Real-Time Data Listing
