

## Depend on US

# Post Job Report

## **Merit Energy**

Longbow 2-10 9/3/2016 5.5" 2-Stage Production Casing Grant County, KS





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Merit Energy Longbow 2-10 Grant County, KS

#### 1.0 Executive Summary

Allied Oil & Gas Services would like to thank you for the award of the provision of cementing products and services on the well Longbow 2-10 intermediate casing.

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 3000 psi. After a successful test we began the job by plugging the rat hole and mouse hole with 85 sacks and then began pumping 12 bbls of HiVis Sweep spacer. We then mixed and pumped the following cements:

1<sup>st</sup> Stage:

5.0 lb Kol-Seal

0.25 lb Cellophane Flake

| 21.77 bbl                | 75 Sacks of 13.6 ppg  |
|--------------------------|-----------------------|
| 50/50:Class H Slurry -   | 1.63 Yield            |
| 10.0% Salt               |                       |
| 5.0% Gypsum              |                       |
| 2.0% Gel                 |                       |
| 0.5% CFL-210             |                       |
| 0.2% CD-100              |                       |
| 5.0 lb Kol-Seal          |                       |
| 0.25 lb Cellophane Flake |                       |
| 2 <sup>nd</sup> Stage:   |                       |
| 82.07 bbl                | 240 Sacks of 13.6 ppg |
| Class A Slurry -         | 1.92 Yield            |
| 10.0% Salt               |                       |
| 6.0% Gypsum              |                       |
| 2.0% Gel                 |                       |
| 0.5% CFL-210             |                       |

The first stage was displaced with 136 bbl. The plug bumped and was pressured to 1200 psi. Upon release the floats held. The opening tool was dropped, and Allied waited 30 minutes before opening the tool. The second stage was displaced with 128.9 bbl.

All real time data can be view in the Job Summary section.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.



### Cement Job Summary

| Job Number: | LIK1609040135 Job Purp | ose 02 Production | n/Long String |            |           |            |
|-------------|------------------------|-------------------|---------------|------------|-----------|------------|
| Customer:   | MERIT ENERGY COMPAN    | IY                | _             |            | Date:     | 9/3/2016   |
| Well Name:  | Longbow                |                   | Number:       | 2-10       | API/UWI:  |            |
| County:     | Grant                  | City:             |               |            | State:    | KS         |
| Cust. Rep:  |                        | Phone:            |               | Rig Phone: |           |            |
| Legal Desc: |                        |                   |               | Rig Name:  | DUKE      | DRILLING#9 |
| Distance    | 50 miles (one way)     |                   | Supervisor    | Ler        | nny Baeza |            |

| Employees: | Emp. ID: | Employees: | Emp. ID: |
|------------|----------|------------|----------|
| Lenny B.   |          | Carlos I   |          |
| Victor G.  |          | Hector E.  |          |
| Kenny B.   | #N/A     |            |          |
| Equipment: |          |            |          |
| 903-541    |          | 1080-842   |          |
|            |          |            |          |
|            |          |            |          |

|                 |                   | Well Info    | ormation    |             |             |             |  |
|-----------------|-------------------|--------------|-------------|-------------|-------------|-------------|--|
|                 | Open Hole Section |              |             |             |             |             |  |
| Description:    | Size (in):        | Excess       | Top MD (ft) | Btm MD (ft) |             |             |  |
| OPEN HOLE       | 7 7/8             | 30%          | 5416.8      | 5,909       |             |             |  |
| OPEN HOLE       | 7 7/8             |              |             | 5,417       |             |             |  |
| OPEN HOLE       | 7 7/8             |              | 0           |             |             |             |  |
| OPEN HOLE       | 7 7/8             |              |             |             |             |             |  |
|                 |                   | Tub          | ulars       |             |             |             |  |
| Description:    | Size (in):        | Wgt. (lb/ft) | ID (in)     | Grade:      | Top MD (ft) | Btm MD (ft) |  |
| PREVIOUS CASING | 8 5/8             | 24           | 8.097       | J-55        | 0           | 1,480       |  |
| TOTAL CASING    | 5 1/2             | 17           | 4.892       | J55         | 0           | 5,909       |  |
| STAGE TOOL      | 5 1/2             | 17           | 4.892       | J55         |             | 5,417       |  |
| SHOE            | 5 1/2             | 17           | 4.892       | J55         | 5,865       | 5,909       |  |

|                | Materials - Pu                        | umping Schedule |               |             |                |
|----------------|---------------------------------------|-----------------|---------------|-------------|----------------|
|                | STA                                   | GE #1           |               |             |                |
| Fluid Name     | Description                           | Rqstd Qty       | Density       | Yield       | Water (gal/sk) |
| Spacer 1       | HIVIS SWEEP                           | 12              | 8.40          | n/a         | n/a            |
| Fluid Name     | Description                           | Rqstd Qty       | Density       | Yield       | Water (gal/sk) |
| Tail 1         | ALLIED 50/50 POZ BLEND - CLASS H      | 160             | 13.60         | 1.63        | 7.46           |
| Addl. Additive | Description                           | Conc. (lb/sk)   | Determined by | Load Volume | UOM            |
| CFL-210        | FLUID LOSS ADDITIVE - LOW TEMP        | 0.42            | % BWOC        | 67.2        | lbm            |
| CLC-KOL        | KOL-SEAL                              | 5               | lb/sk         | 800.0       | lbm            |
| CLC-CPF        | CELLOPHANE FLAKES                     | 0.25            | lb/sk         | 40.0        | lbm            |
| CA-500         | GYPSUM                                | 4.2             | % BWOC        | 672.0       | lbm            |
| CA-200         | SODIUM CHLORIDE                       | 6.21418         | % BWOW        | 994.3       | lbm            |
| CGEL           | GEL - BENTONITE                       | 1.68            | % BWOC        | 268.8       | lbm            |
| CD-100         | CEMENT DISPERSANT                     | 0.168           | % BWOC        | 26.9        | lbm            |
| Fluid Name     | Description                           | Rqstd Qty       | Density       | Yield       | Water (gal/sk) |
| Disp. 3        | Displacement                          | 136.3422111     | 0.00          | n/a         | n/a            |
|                | STA                                   | GE #2           |               |             |                |
| Fluid Name     | Description                           | Rqstd Qty       | Density       | Yield       | Water (gal/sk) |
| Stg 2 Spacer 1 | HIVIS SWEEP                           | 12              | 8.40          | n/a         | n/a            |
| Fluid Name     | Description                           | Rqstd Qty       | Density       | Yield       | Water (gal/sk) |
| Stg 2 Tail 1   | ALLIED SPECIAL BLEND CEMENT - CLASS A | 240             | 13.60         | 1.92        | 9.56           |



Cement Job Summary

| and the second se |                                |               |               |             |                |  |  |  |  |
|---|--------------------------------|---------------|---------------|-------------|----------------|--|--|--|--|
| Addl. Additive  | Description                    | Conc. (lb/sk) | Determined by | Load Volume | UOM            |  |  |  |  |
| CFL-210   | FLUID LOSS ADDITIVE - LOW TEMP | 0.47          | % BWOC        | 112.8       | lbm            |  |  |  |  |
| CLC-KOL   | KOL-SEAL                       | 5             | lb/sk         | 1200.0      | lbm            |  |  |  |  |
| CLC-CPF   | CELLOPHANE FLAKES              | 0.25          | lb/sk         | 60.0        | lbm            |  |  |  |  |
| Fluid Name  | Description                    | Rqstd Qty     | Density       | Yield       | Water (gal/sk) |  |  |  |  |
| Stg 2 Disp. 1   | Displacement                   | 125.9200103   | 0.00          | n/a         | n/a            |  |  |  |  |

| Job Number: | LIK1609040135 | Job Purpose    | 02 Production | /Long String |                                       |                                 |  |
|-------------|---------------|----------------|---------------|--------------|---------------------------------------|---------------------------------|--|
| Customer:   | MERIT ENERGY  | COMPANY        |               |              |                                       | Date: 9/3/2016                  |  |
| Well Name:  | Longbow       |                |               | Number:      | 2-10                                  | API/UWI:                        |  |
| County:     | Grant         |                | City:         |              |                                       | State: KS                       |  |
| Cust. Rep:  |               |                | Phone:        |              | Rig Phone:                            |                                 |  |
| Distance    | 50            | miles (one way | /)            |              | Supervisor                            | Lenny Baeza                     |  |
| TIME        | PRESSU        | RE - (PSI)     | FLUID PU      | MPED DATA    |                                       | COMMENTS                        |  |
| AM/PM       | CASING        | ANNULUS        | VOLUME        | RATE (BPM)   |                                       | COMMENTS                        |  |
| 9/3/2016    | Î             |                | 1             |              | Or                                    | location @5:00pm                |  |
| 5:30pm      |               |                |               |              | Rig                                   | ging up to well head            |  |
| 6:45pm      |               |                |               |              | Safety meet                           | ing with crew/ company man      |  |
| 7:11pm      | 180           |                | 12            | 4            | Pumping 1                             | 12bbls of super flush ahead     |  |
| 7:18pm      | 110           |                | 20            | 3            | Swapping va                           | alves to plug mouse/ rat hole   |  |
|             |               |                | 25            | 3            | Plugged rat/n                         | nouse hole swapping valves to   |  |
|             |               |                |               |              |                                       | well head                       |  |
| 7:31pm      | 230           |                | 46            | 5            | Pum                                   | ping 75sk (21.5 slurry)         |  |
|             |               |                |               |              |                                       |                                 |  |
| 7:49pm      | 80            |                |               | 5            | Plug left head and doing displacement |                                 |  |
| 7:41pm      | 210           |                | 76            | 6            | 30 bbls gone                          |                                 |  |
| 7:56pm      | 380           |                | 166           | 6            | 110bbls gone                          |                                 |  |
| 8:10pm      | 265           |                | 176           | 3            | 120bbls gone slowing down for DV tool |                                 |  |
| 8:15pm      | 1200          |                | 192           | 3            | 136bbls go                            | one and landed plug 1200psi     |  |
|             |               |                |               |              | Pressure hold                         | ling and release and had 1bbls  |  |
|             |               |                |               |              | to the truck g                        | oing up stairs to drop opening  |  |
|             |               |                |               |              | to                                    | ol and preload plug             |  |
| 0021        | 100           |                | 81.9          | 9            | Pumpi                                 | ing 240 sacks of tail ASC       |  |
| 0050        | 0             |                | 10            | 5            | Shut Do                               | own wash pumping lines          |  |
| 0054        | 100           |                | 0             | 9            | D                                     | rop plug start disp             |  |
| 0101        | 380           |                | 65            | 9            |                                       | Cought Cement                   |  |
| 0105        | 650           |                | 80            | 9            |                                       | 80 bbls gone                    |  |
| 0110        | 850           |                | 100           | 9            |                                       | 100 bbls gone                   |  |
| 0115        | 2500          |                | 128.9         | 6            |                                       | Landed plug                     |  |
| 0116        | 2500          |                |               |              | Test casi                             | ing for 15 min at 2500 PSI      |  |
| 0135        | 0             |                |               |              | Released Pres                         | ss and check floats got 1/2 bbl |  |
| 0136        |               |                |               |              | Crew                                  | rig down and released           |  |
|             |               |                |               |              |                                       |                                 |  |
|             |               |                |               |              |                                       |                                 |  |
|             |               |                |               |              |                                       |                                 |  |







CEMENT MIXING WATER GUIDELINES

| Company Name: | MERIT ENERGY COMPANY |              |                                |  |  |  |  |
|---------------|----------------------|--------------|--------------------------------|--|--|--|--|
| Lease Name:   |                      |              | escal economic printingene con |  |  |  |  |
|               |                      | Longbow # 2- | -10                            |  |  |  |  |
| County        |                      | State        |                                |  |  |  |  |
|               | Grant                |              | KS                             |  |  |  |  |
| Water Source: |                      |              |                                |  |  |  |  |
|               |                      | TANK         |                                |  |  |  |  |
| Submitted By: |                      | Date:        |                                |  |  |  |  |
|               | Lenny Baeza          |              | 9/3/2016                       |  |  |  |  |
|               |                      |              |                                |  |  |  |  |
| pH Level      | 7                    |              | Must be less than 8.5          |  |  |  |  |
| Sulfates      | 400                  |              | Must be less than 1,000 PPM    |  |  |  |  |
| Chlorides     | 0                    |              | Must be less than 3,000 PPM    |  |  |  |  |
| Temperature   | 72                   |              |                                |  |  |  |  |

COMMENTS

Customer Signature

Jack

Thank You

| Customer:      | MERIT ENERGY COMPANY         |
|----------------|------------------------------|
| Date:          | Saturday, September 03, 2016 |
| Well Name:     | Longbow # 2-10               |
| Well Location: |                              |
| Supervisor:    | Lenny Baeza                  |



Equipment Operators: Lenny B. - Carlos I - Victor G. - Hector E. - Kenny B.

| Performance   | Cust  | omer |
|---|-------|------|
| Was the appearance of the personnel and equipment satisfactory? | Yes   | No   |
| Was the job performed in a professional manner?                 | Yes   | No   |
| Were the calculations prepared and explained properly?          | Yes   | No   |
| Were the correct services dispatched to the job site?           | Yes   | No   |
| Were the services performed as requested?                       | Yes   | No   |
| Did the job site environment remain unchanged?                  | Yes   | No   |
| Did the equipment perform in the manner expected?               | Yes   | No   |
| Did the materials meet your expectations?                       | Yes   | No   |
| Was the crew prepared for the job?                              | Yes   | No   |
| Was the crew prompt in the rig-up and actual job?               | Yes   | No   |
| Were reasonable recommendations given, as requested?            | Yes   | No   |
| Did the crew perform safely?                                    | Yes   | No   |
| Was the job performed to your satisfaction?                     | Yes   | No   |
| Customer Signature:<br>Additional Comments: Date:               | 9-3-1 | 6    |
|   |       |      |
| - ()  |       |      |
| CRAI JUV.   |       |      |