

CEMENTING TREATMENT REPORT



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|-------------------------------|--------------------------------------|
| TREATMENT NUMBER GH2013014 | DATE 8/3/2013 |
| STAGE 1 | JOB TYPE longstring longstring |

| | | | |
|-------------------------------------|---|--|-------------------------------|
| WELL NAME AND NO. Magnolia ATU 1 | LOCATION (LEGAL) 206 FNL & 208 FEL Sec 13, T31S, R 38W | RIG NAME: Trinidad drilling Rig 216 | CEMENT PUMPER: 23004 |
| FIELD | FORMATION | WELL DATA | FT TOP FT |
| COUNTY Grant Co | STATE KS | API NO. | |
| RIG FORMAN Dave Martinez | | BIT SIZE | CSG/Liner Size 5 1/2 |
| CEMENT SUPER Gary Hessling | | TOTAL DEPTH 3048 | WEIGHT 15.5 |
| | | MUD TYPE | FOOTAGE 3026 |
| | | <input type="checkbox"/> BHST | GRADE |
| | | <input type="checkbox"/> BHCT | THREAD |
| | | MUD DENSITY | LESS FOOTAGE (SEE NOTES) 41.9 |
| | | MUD VISC | Disp. Capacity 71 |
| | | | TOTAL: 71 |

| | | | | | | | | | |
|--|---|------|-------|------|-------|------|-------|------|-------|
| SPECIAL INSTRUCTIONS Cement production casing | Include Footage From Ground Level To Head In Disp. Capacity | | | | | | | | |
| | <table border="1"> <tr> <td>TYPE</td> <td>DEPTH</td> <td>TYPE</td> <td>DEPTH</td> </tr> <tr> <td>TYPE</td> <td>DEPTH</td> <td>TYPE</td> <td>DEPTH</td> </tr> </table> | TYPE | DEPTH | TYPE | DEPTH | TYPE | DEPTH | TYPE | DEPTH |
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|---------------------------------------|--|--|-------------|
| Head & Plugs | <input type="checkbox"/> FBG | <input checked="" type="checkbox"/> D.P. | SQUEEZE JOB |
| <input type="checkbox"/> Double Box 6 | WEIGHT | TOOL | TYPE |
| <input type="checkbox"/> Single | GRADE | DEPTH | DEPTH |
| <input type="checkbox"/> Swage | THREADS | TAIL PIPE: | SIZE DEPTH |
| <input type="checkbox"/> Knockout | <input type="checkbox"/> New <input type="checkbox"/> Used | TUBING VOLUME | BBLs |
| | DEPTH | CSG VOL BELOW TOOL | BBLs |
| | | TOTAL | BBLs |
| | | ANNULAR VOLUME | BBLs |
| | | WATER QUALITY: | pH SG TEMP |

| | | |
|-----------------------|------------------------|---------------------------|
| LIFT PRESSURE 750 psi | BUMP PLUG TO 1750 | CEMENT TEMPERATURE: |
| PRESSURE LIMIT | NO. of Centralizers 18 | ARRIVE ON LOCATION |
| | | TIME: 3:30 DATE: 8/3/2013 |
| | | RIG UP |
| | | TIME: 4:00 DATE: 8/3/2013 |
| | | LEFT LOCATION |
| | | I3 8:00 DATE: 8/3/2013 |

| TIME | PRESSURE | | VOLUME PUMPED | | JOB SCHEDULED FOR | | | ARRIVE ON LOCATION | | RIG UP | | LEFT LOCATION | | |
|--------------|----------|------|---------------|-------|-------------------|-------|----------|--------------------|-------|----------|-------|---------------|-------|--|
| | TBG | CSG | INCR | CUM | TIME: | DATE: | DENSITY | TIME: | DATE: | TIME: | DATE: | I3 | DATE: | |
| 0001 to 2400 | | | | | | 4:00 | 8/3/2013 | | 3:30 | 8/3/2013 | 4:00 | 8/3/2013 | 8:00 | 8/3/2013 |
| 3:30 | | | | | | | | | | | | | | Arrive on location |
| 4:00 | | | | | | | | | | | | | | Rig up pumps and bulk equipment |
| 5:15 | | | | | | | | | | | | | | Held safety meeting |
| 5:29 | 2000 | | 2 | | | | H2o | 8.34 | | | | | | Test pumps and lines to 2000 psi. Test good. |
| 5:33 | | 120 | 75 | | 4 | | H2o | 8.34 | | | | | | pumped 77 bbls H2o ahead. |
| 5:54 | | 250 | 131.5 | 205 | 4 | | Cmt | 12.5 | | | | | | Mix and pump 131 bbls (307 sks) 12.5 # lead cement |
| 6:42 | | 60 | 38.6 | 244.1 | 4 | | Cmt | 13.5 | | | | | | Mix and pump 38.6 bbls (134 sks) 13.5 tail cement |
| 6:59 | | | | | | | | | | | | | | Wash pumps and lines, drop plug and start displacement 71 bbls. |
| 7:00 | | 30 | 71 | 315.1 | 4 | | H2o | 8.24 | | | | | | Pump 5 bbls fresh water displacement/ then pump 66bbls KCL displacement for total of 71 bbls |
| | | | | | | | | | | | | | | Call outs 23 bbls away 4 bpm 250 psi. 46 away 4 bpm 550 psi 69 bbls away 2 bpm 750 psi |
| | | | | | | | | | | | | | | finale lift 800 sent 48 bbls good cement to pit |
| 7:22 | | 1580 | | | | | | | | | | | | Land plug at 1580 psi tested float, float held |
| 8:00 | | | | | | | | | | | | | | rigged down and left location |

| System Used | No. of Sacks | Yield ft ³ /sk | COMPOSITION OF SYSTEM | | SLURRY MIXED | |
|-------------|--------------|---------------------------|--|---------|--------------|------|
| | | | BBLs | DENSITY | | |
| Lead | 307 | 2.4 | 25/75 SDC blend 3% P20, 2% S1, 0.25#/sx P29, 0.25#/sx P46 @ 12.5 #/gal | | 131 | 12.5 |
| Surface Set | 134 | 1.61 | Surface set 25:75 (p/G) + 2% P20, 5 lb/sx p42, 2% S1, 0.25 #/sx P46, 15% p167, 2% p20 @ 13.5 # gal | | 38.6 | 13.5 |

| | | | | | | |
|--|---|------------------|-----|-------|------|-----|
| CIRCULATION <input type="checkbox"/> yes <input type="checkbox"/> no | WASHED CASING DOWN <input type="checkbox"/> yes <input type="checkbox"/> no | BREAKDOWN | PSI | FINAL | 1580 | PSI |
| DISPLACEMENT VOL. 71 BBLs | RETURNED TO SURFACE 48 | BEFORE PLUG BUMP | 800 | RATE | 2 | BPM |

