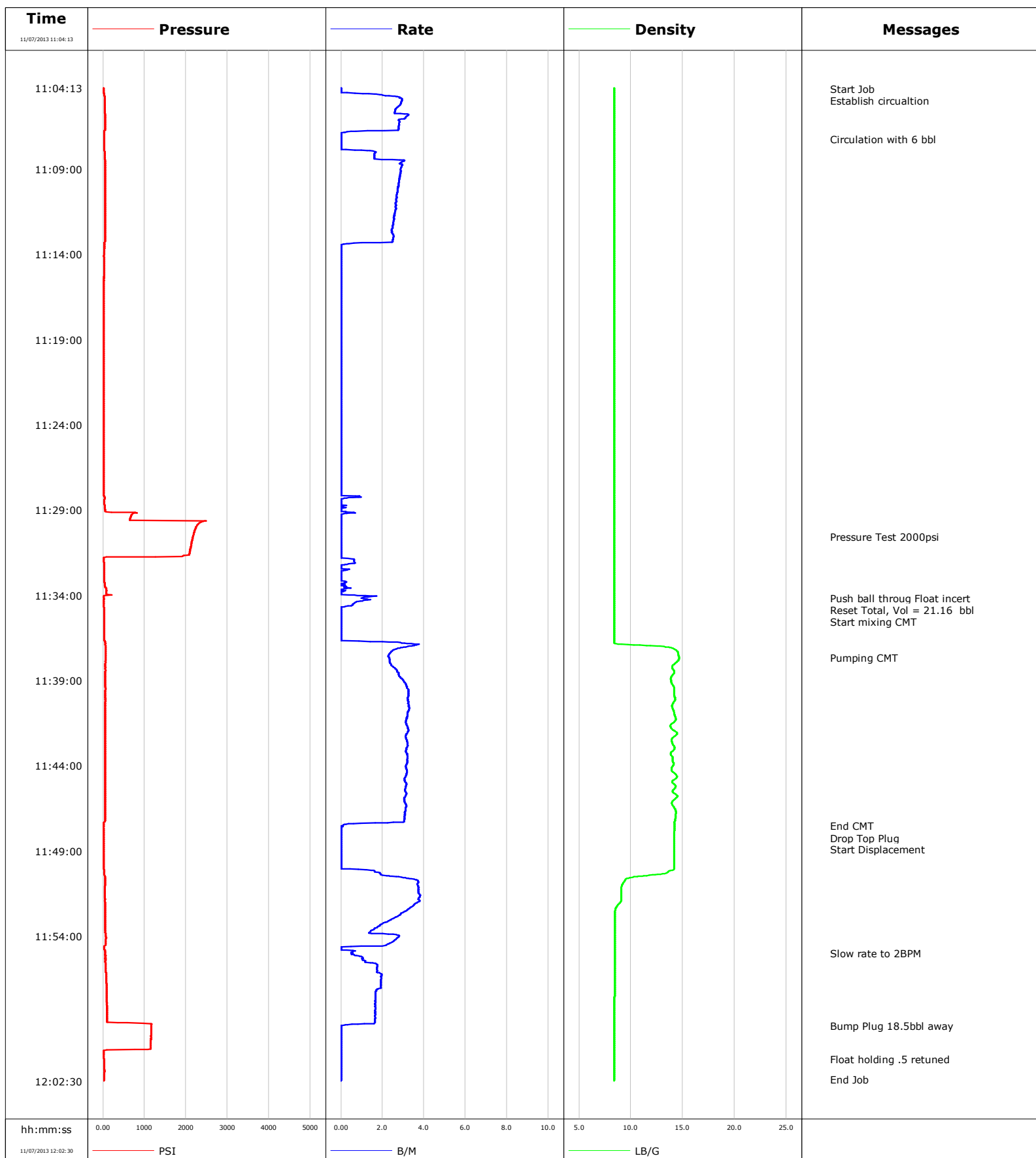


Well Big Sky 14-11
Field Wildcat
Engineer Chris Valerio
Country United States

Client Nighthawk
SIR No. CPU7-00009
Job Type Surface
Job Date 11-07-2013



Cementing Service Report

| | | | | | | | | | |
|---|--|--|-------------------------------------|--------------------------|-----------------------|--------------------------------|--------------------------|--------------------------|--|
| | | | | Customer Nighthawk | | | Job Number CPU7-00009 | | |
| Well Big Sky 14-11 14-11 | | | Location (legal) | | Schlumberger Location | | | Job Start Nov/07/2013 | |
| Field Wildcat | | Formation Name/Type Clean-Sandstone | | Deviation deg | Bit Size 12.3 in | | Well MD 330.0 ft | | |
| County Lincoln | | State/Province Colorado | | BHP psi | BHST 84 degF | | BHCT 80 degF | | |
| Well Master | | API/UWI | | | | Pore Press. Gradient lb/gal | | | |
| Rig Name Spud Rig | Drilled For Oil | | Service Via Land | Casing/Liner | | | | | |
| | Depth, ft | Size, in | Weight, lb/ft | Grade | Thread | | | | |
| Offshore Zone | Well Class New | | Well Type Development | 330.0 | 8.6 | 24.0 | J55 | 8RD | |
| | 0.0 | 0.0 | 0.0 | | | | | | |
| Drilling Fluid Type Other | | Max. Density lb/gal | Plastic Viscosity cP | Tubing/Drill Pipe | | | | | |
| T/D | Depth, ft | Size, in | Weight, lb/ft | Grade | Thread | | | | |
| Service Line Cementing | Job Type Surface | | | | | | | | |
| | | | | | | | | | |
| Max. Allowed Tub. Press 1000 psi | Max. Allowed Ann. Press psi | | WH Connection Single Cement head | Perforations/Open Hole | | | | | |
| | Top, ft | Bottom, ft | shot/ft | No. of Shots | Total Interval ft | | | | |
| | ft | ft | | | | | | | |
| | ft | ft | | | Diameter in | | | | |
| | Treat Down Casing | Displacement 18.4 bbl | | Packer Type | | Packer Depth ft | | | |
| | Tubing Vol. bbl | Casing Vol. 21.0 bbl | | Annular Vol. 18.4 bbl | | Openhole Vol. bbl | | | |
| Casing/Tubing Secured <input checked="" type="checkbox"/> | 1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/> | | Casing Tools | | | Squeeze Job | | | |
| Lift Pressure 68 psi | Shoe Type Guide | | Squeeze Type | | | | | | |
| Pipe Rotated <input type="checkbox"/> | Pipe Reciprocated <input type="checkbox"/> | | Shoe Depth 330.0 ft | | | Tool Type | | | |
| No. Centralizers | Top Plugs 1 | Bottom Plugs | Stage Tool Type | | | Tool Depth ft | | | |
| Cement Head Type Single | Stage Tool Depth ft | | Tail Pipe Size in | | | | | | |
| Job Scheduled For Nov/07/2013 10:00 | Arrived on Location Nov/07/2013 10:00 | | Leave Location Nov/07/2013 13:00 | Collar Type Float | | Tail Pipe Depth ft | | | |
| | | | | Collar Depth 289.0 ft | | Sqz. Total Vol. bbl | | | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | | | |
| 11/07/2013 | 11:04:13 | 18 | 0.0 | 8.41 | 0.0 | Started Acquisition | | | |
| 11/07/2013 | 11:04:17 | 18 | 0.0 | 8.41 | 0.0 | Start Job | | | |
| 11/07/2013 | 11:04:33 | 23 | 0.7 | 8.41 | 0.0 | Establish circulation | | | |
| 11/07/2013 | 11:07:15 | 25 | 0.0 | 8.41 | 6.1 | Circulation with 6 bbl | | | |
| 11/07/2013 | 11:09:13 | 56 | 2.9 | 8.41 | 9.3 | | | | |
| 11/07/2013 | 11:14:13 | 29 | 0.0 | 8.41 | 20.1 | | | | |
| 11/07/2013 | 11:19:13 | 23 | 0.0 | 8.41 | 20.1 | | | | |
| 11/07/2013 | 11:24:13 | 21 | 0.0 | 8.41 | 20.1 | | | | |
| 11/07/2013 | 11:29:13 | 721 | 0.2 | 8.41 | 20.3 | | | | |
| 11/07/2013 | 11:30:34 | 2169 | 0.0 | 8.41 | 20.3 | Pressure Test 2000psi | | | |
| 11/07/2013 | 11:34:11 | 25 | 1.0 | 8.41 | 20.9 | Push ball throug Float incert | | | |
| 11/07/2013 | 11:34:13 | 28 | 1.2 | 8.41 | 20.9 | | | | |
| 11/07/2013 | 11:34:27 | 23 | 0.7 | 8.41 | 21.2 | Reset Total, Vol = 21.16 bbl | | | |
| 11/07/2013 | 11:34:53 | 27 | 0.0 | 8.41 | 21.3 | Start mixing CMT | | | |
| 11/07/2013 | 11:37:39 | 64 | 2.3 | 14.63 | 23.8 | Pumping CMT | | | |
| 11/07/2013 | 11:39:13 | 58 | 3.1 | 13.99 | 28.0 | | | | |
| 11/07/2013 | 11:44:13 | 55 | 3.2 | 13.91 | 44.0 | | | | |
| 11/07/2013 | 11:47:32 | 12 | 0.0 | 14.20 | 53.8 | End CMT | | | |
| 11/07/2013 | 11:47:39 | 12 | 0.0 | 14.20 | 53.8 | Drop Top Plug | | | |
| 11/07/2013 | 11:47:41 | 13 | 0.0 | 14.20 | 53.8 | Start Displacement | | | |
| 11/07/2013 | 11:49:13 | 17 | 0.0 | 14.16 | 53.8 | | | | |

| Well | | | Field | | Job Start | Customer | Job Number |
|---------------------|------------------|-----------------------|---------------|--------------|-------------|--------------------------|------------|
| Big Sky 14-11 14-11 | | | Wildcat | | Nov/07/2013 | Nighthawk | CPU7-00009 |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | |
| 11/07/2013 | 11:55:00 | 48 | 0.5 | 8.45 | 66.8 | Slow rate to 2BPM | |
| 11/07/2013 | 11:59:13 | 1166 | 0.2 | 8.42 | 73.6 | | |
| 11/07/2013 | 11:59:16 | 1163 | 0.0 | 8.42 | 73.6 | Bump Plug 18.5bbl away | |
| 11/07/2013 | 12:01:13 | 24 | 0.0 | 8.42 | 73.6 | Float holding .5 retuned | |

Post Job Summary

| Average Pump Rates, bbl/min | | | | | Volume of Fluid Injected, bbl | | | | | | |
|---|------------------------------------|----------------|--|---------------------------|---|---|---|----|--|--|--|
| Slurry 2.5 | N2 | Mud | Maximum Rate 3.8 | | Total Slurry 33.0 | Mud 0.0 | Spacer 20.0 | N2 | | | |
| Treating Pressure Summary, psi | | | | | Breakdown Fluid | | | | | | |
| Maximum 1163 | Final 31 | Average 155 | Bump Plug to 600 | Breakdown | Type | Volume bbl | Density lb/gal | | | | |
| Avg. N2 Percent % | Designed Slurry Volume 33.4 bbl | | Displacement 18.5 bbl | Mix Water Temp 60 degF | Cement Circulated to Surface? <input checked="" type="checkbox"/> | | Volume 2.0 bbl | | | | |
| | | | | | Washed Thru Perfs <input type="checkbox"/> | | To ft | | | | |
| Customer or Authorized Representative Jim Weir | | | Schlumberger Supervisor Chris Valerio | | | Circulation Lost <input type="checkbox"/> | Job Completed <input checked="" type="checkbox"/> | | | | |
| | | | | | | - | - | | | | |