MI SWACO
A Schlumberger Company

# WATER-BASED MUD REPORT No.5

| | | | | | |
|---|---|---|---|---|---|
| **Operator :** | **University of Texas** | **Field/Area :** | Green Canyon | **Depth/TVD :** | 8185 ft/8185 ft |
| **Report For :** | Tom Pettigrew | **Description :** | Block 955 | **Date :** | **20-May-17** |
| **Well Name :** | OCS-G 30344 Hole H005 | **Location :** | Offshore | **Spud Date :** | |
| **Contractor/Rig:** | Helix/Q4000 | **Water Depth :** | 6664 | **Mud Type :** | WBM Other (M-I SWACO) |
| **Report For :** | David Cobb | **Log-It # :** | | **Activity :** | Coring |

| DRILLING ASSEMBLY | CASING | MUD VOLUME (bbl) | | CIRCULATION DATA | | |
|---|---|---|---|---|---|---|
| 7982 ft, 5.875 in Bit | | Hole | Active Pits | Pump Make | NOV HEX II | NOV HEX II |
| 2 ft, 8.5 in Sub | | 298.7 | | Pump Liner x Stk | 4.5x11.8in | 4.5x11.8in |
| 120 ft, 8.5 in Drill Collar | | Total Circulating Volume | | Pump Capacity | 4.87 gal/stk | 4.87 gal/stk |
| 3 ft, 8.5 in Stabilizer | | 298.6 | | Pump stk/min | @100% | @100% |
| 30 ft, 8.5 in Drill Collar | | Depth Drilled Last 24 hr | | Flow Rate | gal/min | |
| 3 ft, 8.5 in Stabilizer | | 34 ft | | Pump Pressure | psi | |
| Nozzles 5x20 / x 1/32" | | Volume Drilled Last 24 hr | | Bottoms Up | 0 min/ 0 stk | |
| 9.875in | | 3.38 bbl | | Total Circulation | 0 min/ 0stk | |

**MUD PROPERTIES**

| Sample From | | Pit #5 @ 22:00 | Pit #5 @ 09:30 | Pit #5 @ 03:00 | |
|---|---|---|---|---|---|
| FlowLine Temp | °F | | | | |
| Depth/TVD | ft | 8185 / 8185 | 8161 / 8161 | 8151 / 8151 | |
| Mud Weight /Temp | lb/gal @ °F | 10.5 @ 80 | 10.5 @ 84 | 9.5 @ 80 | |
| Funnel Viscosity | sec/qt | 50 | 45 | 43 | |
| Rheology Temp | °F | 80 | 80 | 80 | |
| R600/R300 | | 31 / 23 | 28 / 20 | 24 / 17 | |
| R200/R100 | | 18 / 14 | 16 / 12 | 13 / 9 | |
| R6/R3 | | 8 / 6 | 5 / 4 | 4 / 3 | |
| PV | cP | 8 | 8 | 7 | |
| YP | lbf/100ft² | 15 | 12 | 10 | |
| 10s/10m/30m Gel | | 7 / 15 / | 5 / 14 / | 5 / 9 / | |
| API Fluid Loss | cc/30min | 9.8 | 10 | 10.6 | |
| HTHP Fluid Loss | cc/30min | | | | |
| Cake APT/HT | 1/32" | 1 / | 1 / | 1 / | |
| Solids | %vol | 10 | 10 | 7 | |
| Oil/Water | %vol | 0/90 | 0/90 | 0/93 | |
| Sand | %vol | 0.1 | 0.1 | 0.1 | |
| MBT | lb/bbl | 7.5 | 7.5 | 5 | |
| pH / Temp | | 8.5 @ 80 | 8.5 @ 84 | 8.4 @ 80 | |
| Alkal Mud (Pm) | | 0.3 | 0.2 | 0.3 | |
| Pf/Mf | | 0.2 / 0.7 | 0.2 / 0.4 | 0.3 / 0.7 | |
| Chlorides | mg/L | 18000 | 18000 | 18500 | |
| Hardness (Ca++) | | 2400 | 2400 | 2350 | |

**PRODUCTS USED Last 24 hr**

| Products | Size | Amount |
|---|---|---|
| Drilling Fluids Supervisor | | 1.0 |
| Drilling Fluids Supervisor | | 1.0 |

**SOLIDS CONTROL EQUIPMENT Last 24 hr**

| Type | Model/Size | Hrs Used |
|---|---|---|
| | | |

| MUD PROPERTY SPECS min-max | | Actual |
|---|---|---|
| | - | |
| | - | |
| | - | |

**REMARKS AND TREATMENT**

Rebuilt prehydrated Gel and sweeps as required. Adding Lime and PolyPlus and 16.0 ppg. mud to the 10.5 HI Vis Sweeps. Building Prehydrated Gel with Bulk Gel, Caustic Soda, and fresh water. Building 10.5 ppg. mud using the Hi Side Blender. Built 11.5 Hi Vis Sweep to pump before the cement spacer.

**REMARKS**

Performed core #9 from 8,141'-8,151' using 9.5 Pad Mud and 9.5 Hi Vis Sweeps. Switched over to 10.5 ppg WBM and proceeded with core #10, #11, #12 from 8,151-8,185'.

| TIME DISTRIBUTION Last 24 hrs | | MUD VOL ACCTG (bbl) | | SOLIDS ANALYSIS | | | RHEOLOGY & HYDRAULICS | |
|---|---|---|---|---|---|---|---|---|
| Drilling | 4 | Water Added | 68.5 | NaCl | %vol / lb/bbl | 0.81 / 9.43 | n | |
| Coring Operations | 9 | Mud Received | | KCl | %vol / lb/bbl | 0 / 0 | k | |
| Circulating / Hole C | 3 | Mud Returned | | Low Gravity | % / lb/bbl | 3.04 / 27.64 | Tauy | |
| Rig Up / Tear Down | 8 | Other Subsurface | 173 | Bentonite | % / lb/bbl | 0.79 / 7.22 | Bit loss/%, psi/% | |
| | | Other Subsurface | 19 | Drill Solids | % / lb/bbl | 2.49 / 22.66 | Bit HHP/HIS | |
| | | Other Subsurface | 9 | Weight Material | % / lb/bbl | 6.15 / 88.31 | Jet Velocity, ft/s | |
| | | Other Subsurface | 57 | Chemical Conc | lb/bbl | | Va Pipe, ft/min | |
| | | Other Subsurface | 490 | Inert/React | | 2.7 | Va Collars, ft/min | |
| | | | | Average SG Solids | | 3.6 | CVa Pipe, ft/min | |
| | | | | | | | CVa Collars, ft/min | |
| | | | | | | | ECD at Shoe, lb/gal | |
| | | | | | | | ECD at TD, lb/gal | |

| M-I Engineer | Phone | email | Whse Phone | Rig Phone | Daily cost | Cumulative Cost |
|---|---|---|---|---|---|---|
| Begona Sanchez | 281-942-4001 | GLopez27@slb.com | 985-303-6218 | 281-942-4001 | | |
| Karey Louviere | 281-942-4001 | klouviere@slb.com | | | | |