



## US Treatment Report

|                                   |  |  |                                       |
|-----------------------------------|--|--|---------------------------------------|
| <b>Customer:</b> PDC Energy       |  | <b>Job #:</b> JOB00083650                        |                                       |
| <b>Rep:</b> Brandon Young         |  | <b>Job Date:</b> May 27 @ 00:00                  |                                       |
| <b>Supervisor:</b> Stephen Cardos |  | <b>Rig:</b> Precision 462                        | <b>Time Requested:</b> May 27 @ 00:00 |
|                                   |  | <b>Well:</b> 11 of 12 Lincoln State 26N-17B-M    |                                       |
| <b>Job Type:</b> US Primary       |  | <b>UWI:</b> Lincoln State 26N-17B-M              | <b>Time Arrived:</b> May 28 @ 01:00   |
| Casing-Production                 |  | <b>Surface:</b> SHL: 1152'FNL, 2451'FWL - Sec 18 | <b>Time Released:</b> May 28 @ 09:00  |

### Scavenger

62.82 sk MAG EV 12.9 + 0.80% MCR-3 + 0.50% MCR-1 + 0.70% MCFL-7 + 1.00% MCFW-1 + 0.50% MCGC-1 + 0.20% MCDF-P  
Weight: 12.5lb/gal

Yield: 1.7 ft3/sk = 19bbls      Mix Water: 8.98 gal/sk = 564.02 gal

919.2 sk MAG EV 12.9 + 0.80% MCR-3 + 0.50% MCR-1 + 0.70% MCFL-7 + 1.00% MCFW-1 + 0.50% MCGC-1 + 0.20% MCDF-P

Yield: 1.53 ft3/sk = 250.47bbls      Mix Water: 7.72 gal/sk = 7096.07gal

1538 sk MAG EV 13.7 + 0.50% MCA-2 + 0.35% MCR-H + 0.30% MCI-2 + 0.80% MCFL-7 + 0.30% MCFR-2 + 0.50% MCFW-1 + 0.50% MCGC-1 + 0.20% MCDF-P

Yield: 1.35ft3/sack = 369.79bbls      Mix Water: 6.40gal/sack = 9843.2gal

|                        |       |                         |      |                             |                  |
|------------------------|-------|-------------------------|------|-----------------------------|------------------|
| BHCT (F)               | 235   | BHST (F)                | 235  | Casing 1 Casing Size (in)   | 9.625            |
| Casing 1 Grade         | J-55  | Casing 1 Weight (lb/ft) | 36   | Casing 2 Casing Size (in)   | 5.5              |
| Casing 2 Grade         | P-110 | Casing 2 Weight (lb/ft) | 20   | Collapse Csg Pressure (psi) | 11080            |
| Float Depth (ft)       | 15399 | Funnel Vis (sec/qt)     | 65   | Hole Size (in)              | 8.5              |
| Max Csg Pressure (psi) | 12640 | Max Pressure (psi)      | 3500 | Mud Density (lb/gal)        | 10.5             |
| Mud Type               | OBM   | Plug Size (in)          | 5.5  | Plug Type                   | Rig Supplie<br>d |
| TMD (ft)               | 15431 | TVD (ft)                | 7117 |                             |                  |

Treatment Info:      Sacks Used: 0      Sacks Not Used: 0

Preflush: 5bbls Fresh Water & 38bbls MAG Sweep-H + MAG Clean-1 & 19bbls MAG Sweep -H

Circulation Time: 4

Slurry Temp: 73      Bulk Sample: Yes

Displace: 10bbls Sugar Water & 332bbls Fresh Water

Water Temp: 60      Water Sample: Yes

Bulk Temp: 68      Slurry Sample: Yes

Slurry Returns:      Plug Bumped: Yes      Pump Out Lines: Yes      Float Held: Yes

| Time  | Pressure<br>psi | Annular<br>Pressure<br>psi | Volume<br>Per<br>Stage<br>bbls | Total<br>Stage<br>Volume<br>bbls | Rate<br>bbls/mi<br>n | Treatment Detail  |
|-------|-----------------|----------------------------|--------------------------------|----------------------------------|----------------------|---|
| 01:00 | 0.00            |                            |                                |                                  |                      | Arrive on Location - On location time of 01:00  |
| 03:30 | 0.00            |                            |                                |                                  |                      | Safety Meeting - Safety meeting with company man rig hands and crew, went back up to hook up head at 1930 |
| 04:09 | 0.00            |                            |                                |                                  |                      | Drop Plug - Drop first bottom plug  |

|       |          |  |     |     |     |  |
|-------|----------|--|-----|-----|-----|--|
| 04:12 | 300.00   |  | 5   | 5   | 2   | Fill Lines - Load lines with fresh water   |
| 04:14 | 4,800.00 |  |     |     |     | Start Pressure Test - Pressure test with fresh water   |
| 04:19 | 665.00   |  | 38  | 38  | 5   | Pump Preflush - Pump MAG Sweep H+MAG Clean 1 at 11.5#  |
| 04:27 | 650.00   |  | 19  | 19  | 5   | Pump Preflush - Pump MAG Sweep H at 12#  |
| 04:31 | 320.00   |  | 19  | 19  | 3.5 | Pump Scavenger - Pump scavenger at 12.5#-1.68 Y  |
| 04:37 | 0.00     |  |     |     |     | Drop Plug - Drop second bottom plug  |
| 04:38 | 780.00   |  | 250 | 250 | 7   | Pump Slurry - Pump lead cement at 12.9#-1.53Y-7.72 gps, est top of lead at 473'  |
| 05:20 | 930.00   |  | 370 | 370 | 7   | Pump Slurry - Pump tail cement at 13.7#-1.35Y-6.4gps est top of tail at 6373'  |
| 06:23 | 0.00     |  |     |     |     | Stop Pumping   |
| 06:25 | 0.00     |  |     |     |     | Pump Out Treating Lines  |
| 06:36 | 0.00     |  |     |     |     | Drop Plug - Drop top plug, witnessed by company man  |
| 06:37 | 3,200.00 |  | 170 | 170 | 10  | Displace - Displace with fresh water, first 10bbbs with sugar, rest with Bio-cide, calculated displacement 342 bbbs            |
| 06:59 | 3,200.00 |  | 40  | 40  | 9   | Decrease Rate - Slow rate per company man  |
| 07:03 | 2,800.00 |  | 110 | 110 | 8   | Decrease Rate - Slowed rate, had issues getting water  |
| 07:20 | 2,400.00 |  | 22  | 22  | 4   | Decrease Rate - Slow rate to land plug   |
| 07:22 | 2,900.00 |  |     |     |     | Bump Plug - Land plug, actual displacement 342bbbs, got 57bbbs of pre-flush and 19bbbs of scavenger back to surface, no cement |
| 07:27 | 4,118.00 |  |     |     | 1   | Pressure up to shift tool  |
| 07:28 | 2,500.00 |  | 5   | 5   | 4   | Displace - Pump wet shoe   |
| 07:29 | 0.00     |  |     |     |     | Stop Pumping   |
| 07:33 | 0.00     |  |     |     |     | Check Floats - Check float, got 2.5bbbs back   |
| 07:40 | 0.00     |  |     |     |     | Rig Out  |
| 08:00 | 0.00     |  |     |     |     | Wash Up Truck  |
| 09:00 | 0.00     |  |     |     |     | Leave Location   |