



US Treatment Report

Customer: PDC Energy		Job #: JOB00083649	
Rep: Brandon Young		Job Date: May 23 @ 00:00	
Supervisor: Travis Tolman		Rig: Precision 462	Time Requested: May 23 @ 03:00
		Well: 10 of 12 Lincoln State 1N-17C-M	
Job Type: US Primary		UWI: Lincoln State 1N-17C-M	Time Arrived: May 23 @ 03:00
Casing-Production		Surface: SHL: 1152'FNL, 2451'FWL - Sec 18	Time Released: May 23 @ 15:00

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

925.2 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 = 252.11bbls Mix Water: 7.72 gal/sk = 7142.39gal

1544 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 = 371.23bbls Mix Water: 6.40gal/sack = 9881.6gal

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)	15457	Funnel Vis (sec/qt)	65	Hole Size (in)	8.5
Max Csg Pressure (psi)	12640	Max Pressure (psi)	3500	Mud Density (lb/gal)	10.8
Mud Type	OBM	Plug Size (in)	5.5	Plug Type	Rig Supplie d
TMD (ft)	15489	TVD (ft)	7189		

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: 3

Displace: 10bbls Sugar Water & 332.8bbls Fresh Water

Slurry Temp: Bulk Sample: Yes

Water Temp: 63 Water Sample: Yes

Bulk Temp: 68 Slurry Sample: Yes

Slurry Returns: 10 Plug Bumped: Yes Pump Out Lines: Yes Float Held: Yes

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/mi n	Treatment Detail
03:00	0.00					Arrive on Location - On location time of 0300
09:45	0.00					Safety Meeting - Safety meeting with company man rig hands and crew, went back up to hook up head at 1930
10:06	0.00					Drop Plug - Drop first bottom plug

10:10	126.00		5	5	2	Fill Lines - Load lines with fresh water
10:15	4,700.00					Start Pressure Test - Pressure test with fresh water
10:22	542.00		38	38	5	Pump Preflush - Pump MAG Sweep H+MAG Clean 1 at 11.5#
10:30	392.00		19	19	5	Pump Preflush - Pump MAG Sweep H at 12#
10:34	200.00		19	19	3.5	Pump Scavenger - Pump scavenger at 12.5#-1.68 Y
10:39	0.00					Drop Plug - Drop second bottom plug
10:40	800.00		252	252	7	Pump Slurry - Pump lead cement at 12.9#-1.53Y-7.72 gps, est top of lead at 460'
11:22	839.00		371	371	7	Pump Slurry - Pump tail cement at 13.7#-1.35Y-6.4gps est top of tail at 6397'
12:18	0.00					Stop Pumping
12:20	0.00					Pump Out Treating Lines
12:26	0.00					Drop Plug - Drop top plug, witnessed by company man
12:31	3,200.00		160	160	10	Displace - Displace with fresh water, first 10bbbls with sugar, rest with Bio-cide, calculated displacement 342.8bbbls
12:49	3,100.00		60	60	9	Decrease Rate - Slow rate per company man
12:55	2,790.00		100	100	8	Decrease Rate - Slowed rate, had issues getting water
13:08	2,391.00		23	23	5	Decrease Rate - Slow rate to land plug
13:13	2,900.00					Bump Plug - Land plug, actual displacement 343bbbls, got 57bbbls of pre-flush and 10bbbls of scavenger back to surface
13:16	3,300.00				1	Pressure up to shift tool
13:17	2,212.00		5	5	4	Displace - Pump wet shoe
13:18	0.00					Stop Pumping
13:19	0.00					Check Floats - Check float, got 2.5bbbls back
13:30	0.00					Wash Up Truck
14:00	0.00					Rig Out
15:00	0.00					Leave Location

--