

US Treatment Report



Customer: PDC Energy
Rep: Jeremy Stoltz
Supervisor: Travis Tolman
Job Type: US Primary
 Casing-Production

Rig: Ensign 162
Well: Ferguson 23F-202
UWI: Ferguson 23F-202
Surface: 2214' FNL, 421'FWL, Sec 23

Job #: JOB00081652
Job Date: Mar 20 2020
Time Requested: 3:00
Time Arrived: 3:00
Time Released: Mar 20 2020 13:00

Scavenger

55.29 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: 12lb/gal

Yield: 1.93 ft³/sk = 19bbls Mix Water: 10.71 gal/sk = 592.08 gal

959.7 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 = 261.51bbls Mix Water: 7.72 gal/sk = 7408.96gal

1483 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 = 356.57bbls Mix Water: 6.40gal/sack = 9491.2gal

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)	15353	Funnel Vis (sec/qt)	55	Hole Size (in)	8.5
Max Csg Pressure (psi)	12640	Max Pressure (psi)	4000	Mud Density (lb/gal)	10.6
Mud Type	OBM	Plug Size (in)	5.5	Plug Type	Rig Supplied
TMD (ft)	15386	TVD (ft)	6550		

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: 4.5
 Slurry Temp: 75 Bulk Sample: Yes
 Water Temp: 60 Water Sample: Yes
 Bulk Temp: 68 Slurry Sample: Yes
 Slurry Returns: Plug Bumped: Yes Pump Out Lines: Yes Float Held: Yes

Displace: 10bbls Sugar Water & 330.5bbls Fresh Water

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/min	Treatment Detail
03:00	0.00					Arrive on Location - On location time of 0300
07:00	0.00					Safety Meeting - Safety meeting with company man rig hands and crew
07:48	0.00					Drop Plug - Drop first bottom plug
07:51	284.00		5	5	2	Fill Lines - Load lines with fresh water

07:54	4,800.00					Start Pressure Test - Pressure test with fresh water
07:58	500.00		38	38	4	Pump Preflush - Pump MAG Sweep H+MAG Clean 1 at 11#
08:08	536.00		19	19	4	Pump Preflush - Pump MAG Sweep H at 11.5#
08:12	459.00		19	19	4	Pump Scavenger - Pump scavenger at 12#-1.93 Y
08:16	0.00					Drop Plug - Drop second bottom plug
08:17	1,000.00		261	261	7	Pump Slurry - Pump lead cement at 12.9#-1.53Y-7.72 gps, est top of lead at 468'
08:57	678.00		356	356	7	Pump Slurry - Pump tail cement at 13.7#-1.35Y-6.4gps est top of tail at 6668'
09:51	0.00					Stop Pumping
09:55	0.00					Pump Out Treating Lines
09:58	0.00					Drop Plug - Drop top plug, witnessed by tool hand
10:16	3,000.00		320	320	10.5	Displace - Displace with fresh water, first 10bbbls with sugar, rest with Bio-cide, calculated displacement 340.5bbbls
10:47	1,800.00		20	20	4	Decrease Rate - Slow rate to land plug
10:51	2,500.00					Bump Plug - Land plug, actual displacement 340bbbls, got 50bbbls of pre-flush back to surface
10:54	4,169.00					Pressure up to shift tool
10:55	1,910.00		5	5	4	Displace - Pump wet shoe
10:56	0.00					Stop Pumping
10:58	0.00					Check Floats - Check float, got 2bbbls back
11:00	0.00					Wash Up Truck
11:20	0.00					Rig Out
13:00	0.00					Leave Location