

## Cement Lab Weigh-Up Sheet, Apr 13, 2010 - Req/Slurry: US-73909/1



Request Id	73909	Rig	TRANSOCEAN HORIZON	Engineer	Jesse Gagliano
Slurry No.	1	Customer	BP	Request Type	Operation
Job	Production Casing	Well	Mississippi Canyon 252	Request Date	12.04.2010
Pipe Size	7	Location	Mississippi Cny	Required By	13.04.2010
Hole Size	8.875	Slurry Type	Primary	TradeMark	
Plant Name	Fourchon-C-Port I, La,			Slurry Name	

## Test Conditions

BHST	99 °C / 210 °F	Batch Mix	0 min	MD	5596 m / 18360	Pressure	997 bar / 14458 psi
BHCT	57 °C / 135 °F	Heating time	83 min	TVD	5596 m / 18360	Mud Density	1.89 SG / 14.1 PPG

## Slurry Details

Density	2.006 S.G.	Water Req.	43.84 L/100kg	Yield	90.77 L/100kg	Total liquid	44.55 L/100kg
	16.741 PPG		4.94 gal/sack		1.37 ft <sup>3</sup> /sack		5.02 gal/sack
Pycnometer	35.000 %	Chloride conc.	0 PPM	Blend Weight	808.98 g	Sack Weight	94.00 lbs

## Materials

Concentration	Lab	Material	Test Amount	Source	Lot No.	Date	Sample Id
100.00 % BWOC	(US-LFT)	Lafarge Class H	880.98 g	TRANSOCEAN	Tank # 8	05.04.10	67314
0.070 % BWOC	(US-LFT)	EZ-FLO	0.46 g	BLEND			
0.250 % BWOC	(US-LFT)	D-Air 3000	1.05 g				
1.880 lb/sk	(US-LFT)	KCl (Potassium Chloride)	43.22 g				
20.000 % BWOC	(US-LFT)	SSA-1 (Silica Flour) - PB	432.20 g				
15.000 % BWOC	(US-LFT)	SSA-2 (100 Mesh) - PB	99.16 g				
0.200 % BWOC	(US-LFT)	SA-541	1.52 g				
0.110 gps	(US-LFT)	ZoneSealant 2000	6.88 g				
0.080 gps	(US-LFT)	SCR-100L	5.45 g		6264		
4.94 gps	(US-LFT)	Fresh Water	289.18 g	TRANSOCEAN		05.04.10	67315

## Foam Details

Final Foam Density	1.737 S.G.	Calc. Downstream Density	1.996 S.G.	Blender volume	1170 ml	Quality	12.98 %
	14.496 PPG		16.657 PPG				
Base Slurry Weight	2020.74 g	Base Slurry Total Weight	2032.29 g				

## Foam Mixing

Lab	Material	Unfoamed Slurry Prep.	Unfoamed Slurry
(US-LFT)	Lafarge Class H	1220.70 g	1678.69
(US-LFT)	EZ-FLO	0.85 g	
(US-LFT)	D-Air 3000	3.05 g	
(US-LFT)	KCl (Potassium Chloride) Salt	24.41 g	
(US-LFT)	SSA-1 (Silica Flour) - PB	244.14 g	
(US-LFT)	SSA-2 (100 Mesh) - PB	183.10 g	
(US-LFT)	SA-541	2.44 g	
(US-LFT)	ZoneSealant 2000		11.55 g
(US-LFT)	SCR-100L	10.06 g	
(US-LFT)	Fresh Water	534.05 g	

## Test Results

Mixability (0 - 5) - 0 is not mixable	Mud Balance Density
Mixability rating (0 - 5)	Density (SG)
5.75	Density (ppg)
	16.7 Tps

Foam Mix and Stability (Foamed to 14.5 ppg) 180 Pump 1.5 hrs

Sink [mm]	Time to Foam	Average Mix	Foam Density [SG]	SG top	SG bot.	Conditioning time
				1.88 (15.1)	1.82 (15.1)	

Thickening Time (Need 4 1/2 - 5 1/2 Hrs., SCR-100L Lot #6264) at 135 deg F 2:09A - 9/14

Temp (°F)	Pressure	Batch Mix	Reached	Start BC	30 Bc	40 Bc	50 Bc	70 Bc	100 Bc	Termination	Termination
135	14458	0	83	8:55	5:30	5:30	5:30	5:30	(BL)		

UCA Comp. Strength (Un-foamed UCA for 12, 24, & 48 Hrs, Circulate before pouring C.S. for 3 Hrs) at 210 deg F V-7 In

End Temp	Pressure	50 psi	500 psi	8 hr CS	12 hr CS	16 hr CS	24 hr CS	48 hr CS	End CS	End Time	Crush CS
210	14458	5:54	6:19		2143		2526	2641			

Crush Compressive Strength (12, 24, & 48 Hrs Crush, Foamed to 14.5 ppg) at 210 deg F 180 Pump 1.5 hrs

Condition	Curing	Curing	Time 1	Strength 1	Time 2	Strength 2	Time 3	Strength 3	Time 4	Strength 4	Foam
	210	-	12	8	24	0	48	1590			

Non API Rheology at 80 deg F

Test temp	600	300	200	100	60	30	20	10	6	3	Condition
80	48	48	28	14	13	8	8	4	4	2	(M)
150	84	56	28	28	26	8	6	4	2	2	(M)

Non API Rheology at 135 deg F

Test temp	600	300	200	100	60	30	20	10	6	3	Condition
135	65	58	28	18	16	8	3	4	4	2	(M)
130	56	40	20	10	10	8	6	4	4	2	(M)

FYSA Viscosity Profile & Gel Strength (Foamed to 14.5 ppg) at 80 deg F

Test	600	300	200	100	60	30	6	3	3D-3	6D-6	Condit	Gel 10	Gel 30	K1	K2
80	14	7	5	3	1	1	1	1	1	1					

Request/Project Comments

Use location Blend and Rig water in lab  
Use SCR-100L LOT#:6264

Required Tests

Test Id	Test Type	Test Temp (F)	Conditions / Req. Properties
806067	Thickening Time	135	Need 4 1/2 - 5 1/2 Hrs., SCR-100L Lot #6264
806068	UCA Comp. Strength	210	Un-foamed UCA for 12, 24, & 48 Hrs, Circulate before pouring C.S. for
806069	Crush Compressive Strength	210	12, 24, & 48 Hrs Crush, Foamed to 14.5 ppg
806071	Mixability (0 - 5) - 0 is not mixable		
806072	Foam Mix and Stability		Foamed to 14.5 ppg
806074	FYSA Viscosity Profile & Gel Strength	80	Foamed to 14.5 ppg
806075	Non API Rheology	80	
806076	Non API Rheology	135	
806078	Mud Balance Density		

Slurry Specific Comments

Use location Blend and Rig water in lab  
Use SCR-100L LOT#:6264

In Hbr on Bot

Top 41.56 78.97 1.88 15.7 #/gal

Bot 43.6 79.82 1.82 15.1 #/gal

87