

**ENSIGN UNITED STATES DRILLING EBUSI  
PO BOX 17805 - DO NOT MAIL  
DENVER, Colorado**

Phelps 11-32NHZ

Ensign 17

## **Post Job Summary** **Cement Surface Casing**

Date Prepared: 11/17/2013  
Version: 1

Service Supervisor: SMITH, AARON

Submitted by: TRIER, DEREK

**HALLIBURTON**



## ***Wellbore Geometry***

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Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Open Hole Section	Open Hole		13.500		0.00	1,210.00	
Casing	Surface Casing	9.63	8.921	36.00	0.00	1,193.00	43.00



# HALLIBURTON

## Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	Fresh Water Spacer	8.33	5.00	10.0 bbl	10.0 bbl
1	2	Cement Slurry	SwiftCem B2	13.40	5.00	275.0 sacks	275.0 sacks
1	4	Cement Slurry	Top Out Cement	15.80	2.00	40.0 sacks	40.0 sacks

## Fluids Pumped

**Stage/Plug # 1      Fluid 1:**      Fresh Water Spacer  
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal  
Fluid Volume: 10.00 bbl  
Pump Rate: 5.00 bbl/min

**Stage/Plug # 1      Fluid 2:**      SwiftCem B2  
SWIFTCEN (TM) SYSTEM  
0.25 lbm      Poly-E-Flake

Fluid Weight: 13.40 lbm/gal  
Slurry Yield: 1.79 ft<sup>3</sup>/sack  
Total Mixing Fluid: 9.51 Gal  
Surface Volume: 275.0 sacks  
Sacks: 275.0 sacks

**Stage/Plug # 1      Fluid 4:**      Top Out Cement  
HALCEM (TM) SYSTEM

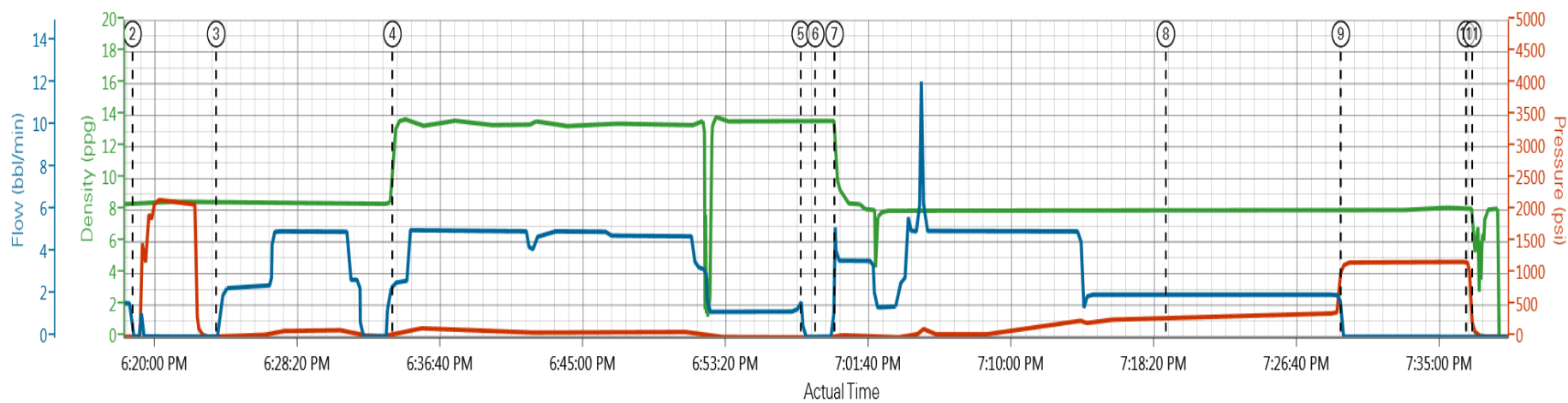
Fluid Weight: 15.80 lbm/gal  
Slurry Yield: 1.15 ft<sup>3</sup>/sack  
Total Mixing Fluid: 5.00 Gal  
Surface Volume: 40.0 sacks  
Sacks: 40.0 sacks  
Pump Rate: 5.00 bbl/min



# HALLIBURTON

## Data Acquisition

### ENSIGN UNITED STATES DRILLING PHELPS 11-32NHZ SURFACE



DH Density (ppg) PS Pump Press (psi) Comb Pump Rate (bbl/min)

- ① Start Job 0.02;-9;0    ④ Pump Cement 13.01;56;2.6    ⑦ Pump Displacement 9.91;36;3.6    ⑩ Check Floats 8.08;1062;0
- ② Test Lines 8.39;10;0    ⑤ Shutdown 13.75;-5;0    ⑧ Other 8;288;2    ⑪ End Job 5.46;62;0
- ③ Pump Spacer 18.44;-6;0    ⑥ Drop Top Plug 13.66;-10;0    ⑨ Bump Plug 8.1;1139;0

▼ HALLIBURTON | iCem® Service

Created: 2013-11-12 17:27:42, Version: 2.0.606

Edit

Customer: ENSIGN UNITED STATES DRILLING

Job Date: 11/12/2013 5:44:53 PM

Well: PHELPS 11-32NHZ

Representative: AARON SMITH

Sales Order #: 900893716

THANKS: AARON SMITH AND CREW



# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
11/12/2013 17:00		Arrive at Location from Service Center							WITH ALL EQUIPMENT AND MATERIALS,
11/12/2013 17:10		Pre-Rig Up Safety Meeting							RIG-UP JSA
11/12/2013 17:15		Rig-Up Equipment							
11/12/2013 17:45		Rig-Up Completed							
11/12/2013 17:50		Pre-Job Safety Meeting							WITH CUSTOMER REP AND RIG CREW
11/12/2013 18:17		Start Job							
11/12/2013 18:18		Test Lines					2000.0		FRESH WATER WITH NO ADDITIVES
11/12/2013 18:23		Pump Spacer 1	5	30			95.0		FRESH WATER NO ADDITIVES
11/12/2013 18:34		Pump Cement	5	88			125.0		275 SKS SWIFTCM B1 @ 13.4 PPG 1.79 YIELD, 9.51 GAL/SK
11/12/2013 18:57		Shutdown							
11/12/2013 18:58		Drop Top Plug							PRE-LOADED HWE TOP PLUG IN PLUG CONTAINER VERIFIED BY CUSTOMER REP
11/12/2013 18:59		Pump Displacement	5	89			375.0		FRESH WATER WITH NO ADDITIVES
11/12/2013 19:19		Cement Returns to Surface							@73 BBLS DISPLACEMENT, 15 BBLS TO THE PIT
11/12/2013 19:29		Bump Plug	2	89			1184.0		FINAL CIRCULATING PRESSURE 375, PSI TO LAND 303, PSI TO LIFT 499,
11/12/2013 19:36		Check Floats							FLOATS HELD, .5 BBLS BACK
11/12/2013 19:37		End Job							RIG DOWN JSA, JOURNEY MANAGMENT MEETING, THANKS AARON SMITH AND CREW
11/13/2013 04:00		Arrive at Location from Service Center							
11/13/2013 04:10		Pre-Rig Up Safety Meeting							
11/13/2013 04:15		Rig-Down Equipment							
11/13/2013 04:30		Rig-Up Completed							
11/13/2013 05:00		Start Job							
11/13/2013 05:07		Pump Cement	2	8					SKS TOP OUT CEMENT @ 15.8 PPG 1.15 YIELD, 5.00 GAL/SK 2% CALCIUM CHLORIDE
11/13/2013 06:02		End Job							



### The Road to Excellence Starts with Safety

Sold To #: 301256	Ship To #: 3117319	Quote #:	Sales Order #: 900893716
Customer: ENSIGN UNITED STATES DRILLING EBUSI		Customer Rep: Pouling, Dave	
Well Name: Phelps		Well #: 11-32NHZ	API/UWI #:
Field: WATTENBERG	City (SAP): LOCHBUIE	County/Parish: Weld	State: Colorado
Contractor: Ensign		Rig/Platform Name/Num: Ensign 17	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: FINK, JOHN		Srvc Supervisor: SMITH, AARON	MBU ID Emp #: 518187

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DODSON, RICHARD Bryan	6.0	518192	SMITH, AARON David	6.0	518187	TOWNSON, JUSTIN T	6.0	555407

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10857080C	5 mile	11064046C	5 mile	11488570C	5 mile	11633846C	5 mile
12010173	5 mile						

### Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To
				BHST	1210. ft	1210. ft				
							Wk Ht Above Floor			
							5. ft			

### Job Times

Called Out	Date	Time	Time Zone
	12 - Nov - 2013	14:00	MST
On Location	12 - Nov - 2013	17:00	MST
Job Started	12 - Nov - 2013	18:17	MST
Job Completed	12 - Nov - 2013	19:37	MST
Departed Loc	12 - Nov - 2013	20:30	MST

### Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Open Hole				13.5				.	1210.		
Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1193.		

### Fluid Data

Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		
1	Fresh Water Spacer		10.00	bbl	8.33			5.0			
2	SwiftCem B2	SWIFTCM (TM) SYSTEM (452990)	275.0	sacks	13.4	1.79	9.51	5.0	9.51		
	0.25 lbm	POLY-E-FLAKE (101216940)									
	9.51 Gal	FRESH WATER									
3	Displacement		89.0	bbl	8.33			5.0			
4	Top Out Cement	HALCEM (TM) SYSTEM (452986)	40.0	sacks	15.8	1.15	5.0	2.0	5.0		
	5 Gal	FRESH WATER									

### Calculated Values

### Pressures

### Volumes

Summit

Sunday, November 17, 2013 13:01:00

Version:



Displacement	89	Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns	15	Actual Displacement	89	Treatment	
Frac Gradient		15 Min		Spacers	10	Load and Breakdown		Total Job	
<b>Rates</b>									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	43 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @
The Information Stated Herein Is Correct				Customer Representative Signature					



