

**ENSIGN UNITED STATES DRILLING  
PO BOX 17805  
DENVER, Colorado**

Phelps A-32NHZX

/Ensign/17

## **Post Job Summary** **Plug to Abandon Service**

Date Prepared: 06/17/2014  
Version: 1

Service Supervisor: SMITH, AARON

Submitted by: MCKAY, ADAM

# HALLIBURTON

## Wellbore Geometry

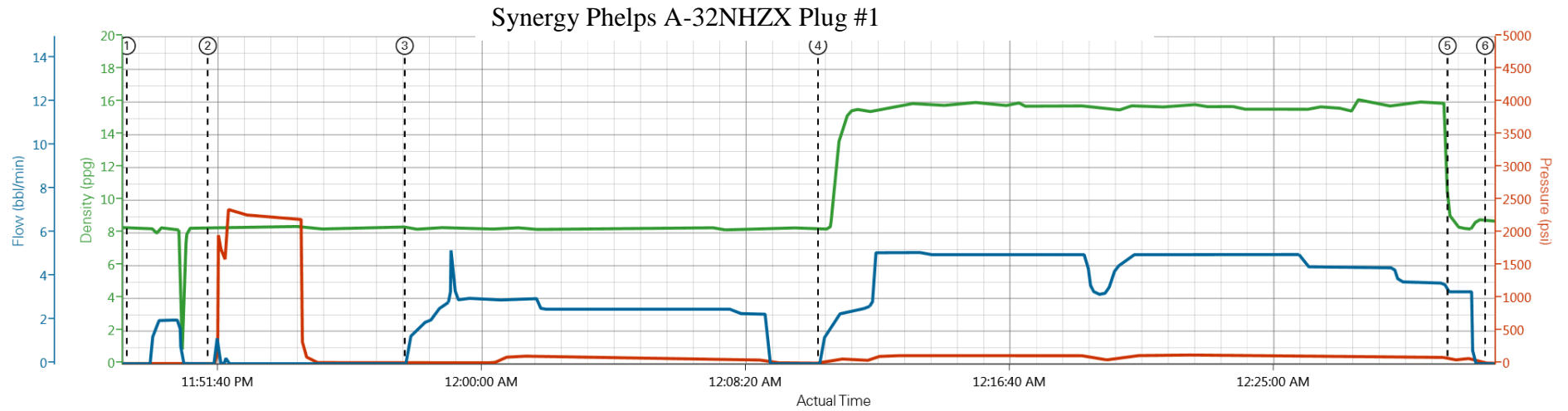
Job Tubulars					MD		TVD		Excess %
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	
Open Hole Section	13-1/2" Open Hole		13.500		0.00	675.00	0.00	580.00	20.00
Cement Plug	Cement Plug				275.00	675.00			

## Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	Water Spacer	8.33	2.00	10.0 bbl	10.0 bbl
1	2	Cement Slurry	HalCem	15.80	4.00	415.0 sacks	415.0 sacks
2	1	Spacer	Water Spacer	8.33	2.00	10.0 bbl	10.0 bbl
2	2	Cement Slurry	PlugCem	15.20	4.00	143.0 sacks	143.0 sacks

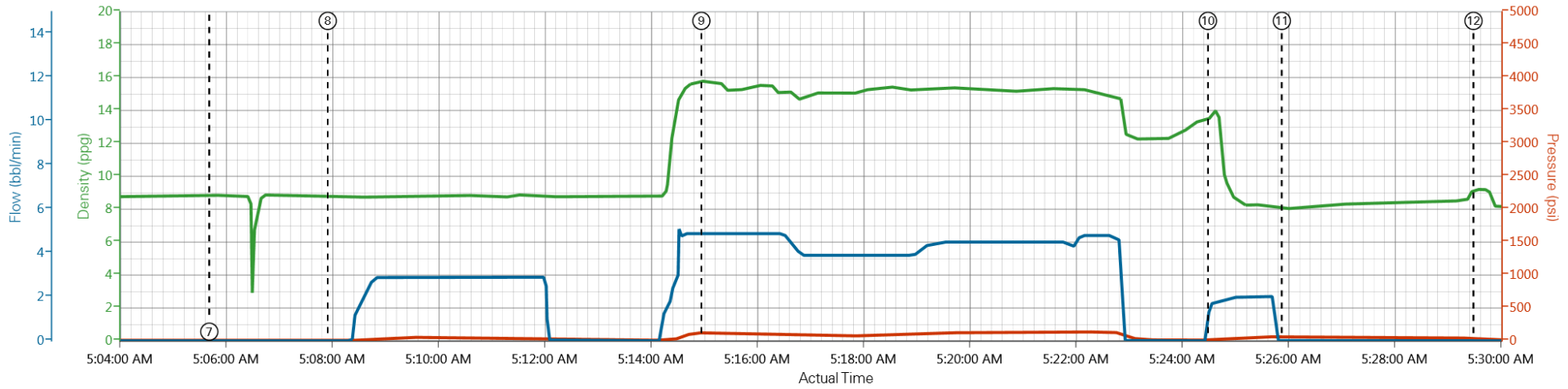


## Data Acquisition



- ① Start Job 8.31;1;0      ④ Pump Cement 8.24;9;0
- ② Test Lines 8.31;2;0      ⑤ Pump Displacement 9.02;64;3.3
- ③ Pump Spacer 1 8.33;0;0    ⑥ Shutdown 8.67;9;0

## Synergy Phelps A-32NHZX Plug #2



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

- |                           |                                 |                             |                                  |
|---------------------------|---------------------------------|-----------------------------|----------------------------------|
| ① Start Job 8.31;1;0      | ④ Pump Cement 8.24;17;1.2       | ⑦ Next stage 8.82;9;0       | ⑩ Pump Displacement 13.56;21;1.7 |
| ② Test Lines 8.29;185;1.1 | ⑤ Pump Displacement 9.02;64;3.3 | ⑧ Pump Spacer 1 8.79;8;0    | ⑪ Shutdown 8;50;0                |
| ③ Pump Spacer 1 8.33;1;0  | ⑥ Shutdown 8.82;42;0            | ⑨ Pump Cement 15.77;122;4.9 | ⑫ End Job 9.2;22;0               |

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
11/08/2013 22:00		Arrive at Location from Service Center							WITH ALL EQUIPMENT AND MATERIALS, DID NOT HAVE 4.5 XHOLE DRILL PIPE PIN IN HEAD ROOM
11/08/2013 22:10		Assessment Of Location Safety Meeting							
11/08/2013 22:15		Pre-Rig Up Safety Meeting							RIG UP JSA
11/08/2013 22:20		Rig-Up Equipment							
11/08/2013 22:45		Rig-Up Completed							
11/08/2013 23:20		Pre-Job Safety Meeting							WITH CUSTOMER REP AND RIG CREW
11/08/2013 23:48		Start Job							
11/08/2013 23:51		Test Lines					2000.0		FRESH WATER WITH NO ADDITIVES
11/08/2013 23:57		Pump Spacer 1	3	28.3			125.0		FRESH WATER WITH NO ADDITIVES
11/09/2013 00:10		Pump Cement	5	85			125.0		415 SKS G-CEMENT @ 15.8 PPG, 1.72 YIELD, 5.02 GAL/SK
11/09/2013 00:30		Pump Displacement	3	2.3			60.0		FRESH WATER WITH NO ADDITIVES,
11/09/2013 00:31		Shutdown							
11/09/2013 00:40		Comment							POOH, DRILL PIPE PULLED DRY
11/09/2013 04:45		Pre-Job Safety Meeting							WITH CUSTOMER REP AND RIG CREW
11/09/2013 05:05		Next Stage							
11/09/2013 05:07		Pump Spacer 1	3	10					FRESH WATER WITH NO ADDITIVES
11/09/2013 05:14		Pump Cement	5	32					143 SKS PLUGCEM @ 15.2 PPG, 1.27 YIELD, 5.77 GAL/SK
11/09/2013 05:21		Cement Returns to Surface		30					@30 BBLS INTO CEMENT 2 BBLS DAMNED OFF IN CELLAR.
11/09/2013 05:24		Pump Displacement	3	2					FRESH WATER WITH NO ADDITIVES, DISPLACED DRILL PIPE
11/09/2013 05:25		Shutdown							RIG CREW PULLED PIPE, DRILL PIPE PULLED DRY
11/09/2013 05:29		End Job							RIG DOWN JSA, JOURNEY MANAGEMENT, THANKS AARON SMITH AND CREW.

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 301256		<b>Ship To #:</b> 2998551		<b>Quote #:</b>		<b>Sales Order #:</b> 900886786	
<b>Customer:</b> ENSIGN UNITED STATES DRILLING				<b>Customer Rep:</b> Pouling, Dave			
<b>Well Name:</b> Phelps		<b>Well #:</b> A-32NHZX		<b>API/UWI #:</b> 05-123-37688			
<b>Field:</b> EATON		<b>City (SAP):</b> EATON		<b>County/Parish:</b> Weld		<b>State:</b> Colorado	
<b>Legal Description:</b> Section 1 Township 6N Range 66W							
<b>Lat:</b> N 40.518 deg. OR N 40 deg. 31 min. 4.753 secs.				<b>Long:</b> W 104.721 deg. OR W -105 deg. 16 min. 44.537 secs.			
<b>Job Purpose:</b> Plug to Abandon Service							
<b>Well Type:</b> Development Well				<b>Job Type:</b> Plug to Abandon Service			
<b>Sales Person:</b> PLIENESS, RYAN				<b>Srvc Supervisor:</b> SMITH, AARON		<b>MBU ID Emp #:</b> 518187	

Job Personnel								
HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DODSON, RICHARD Bryan	8.5	518192	SMITH, AARON David	8.5	518187	TORREY, SPENCER Kenneth	8.5	549837

Equipment							
HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

Job Hours								
Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			Total is the sum of each column separately					

Job					Job Times			
Formation Name	Top	Bottom	Form Type	Job depth MD	Water Depth	Perforation Depth (MD)	From	To
			BHST	600. ft				

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
13-1/2" Open Hole				13.5				.	675.	.	580.
Cement Plug	Unknown							275.	675.		

Tools and Accessories													
Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials													
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%						
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty							

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Water Spacer		10.00	bbl	8.33			2	
2	HalCem	CMT - CLASS G, 94 LB (100064007)	415.0	sacks	15.8	1.17	5.02	4	5.02
94 lbm		CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
5.019 Gal		FRESH WATER							
Stage/Plug #: 2									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom
1	Water Spacer		10.00	bbl	8.33			2	
2	PlugCem	CMT - STANDARD TYPE I / II CEMENT (101439798)	143.0	sacks	15.2	1.27	5.78	4	5.78
94 lbm		TYPE I / II CEMENT, BULK (101439798)							
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
5.78 Gal		FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	0 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					