

APOLLO OPERATING
1538 WAZEE ST #200
DENVER, Colorado

Hoagland
Hoagland 45-4D

Ensign/Ensign/55

Post Job Summary

Cement Production Casing

Date Prepared: 5/26/12
Version: 1

Service Supervisor: OZBUN, RYAN

Submitted by: FRY, DOMINIK

HALLIBURTON

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	20.0 bbl	20.0 bbl
1	2	Spacer	MUD FLUSH III	8.40	5.00	24.0 bbl	24.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	7.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	Extendacem 11.3#	11.30	6.00	315.0 sacks	315.0 sacks
1	5	Cement Slurry	FracCem B2 13.5#	13.50	6.00	200.0 sacks	200.0 sacks
1	6	Spacer	ClayWeb III	8.33	7.00	6.0 Gal	6.0 Gal

Job Summary

Job Information

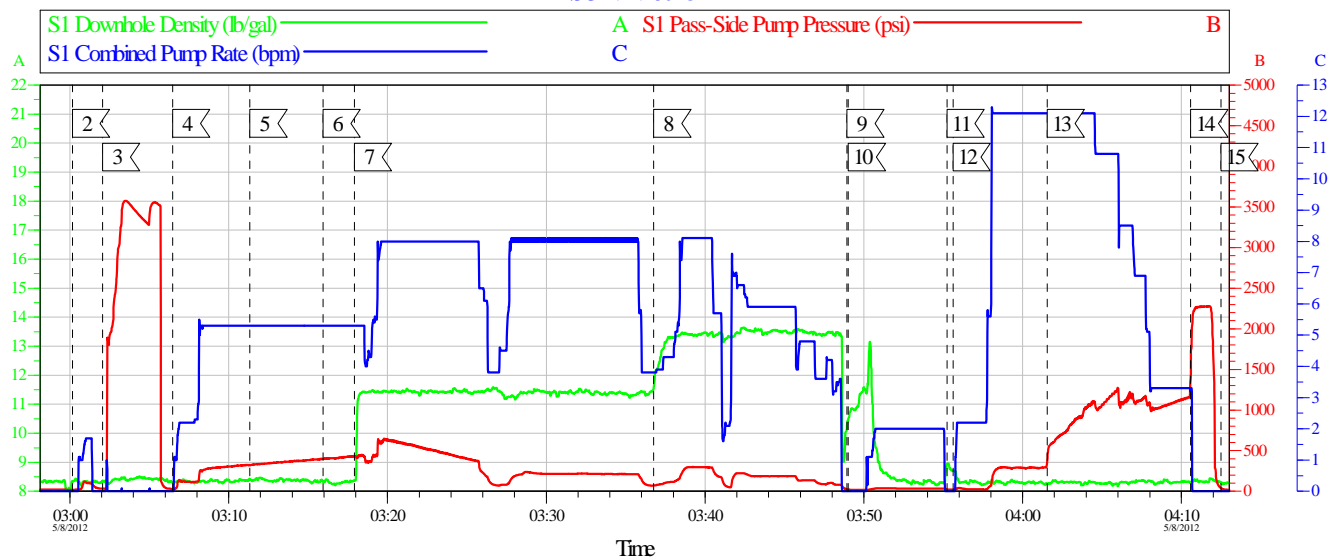
Job Start Date	5/8/2012 3:00:00 AM	Actual Mud Density	10 lbm/gal
Job MD	7,813.0 ft	Time From End Mud Circ. to Job Start	15.00 minute
Job TVD	7,813.0 ft	Pipe Movement During Cementing	None
Height of Plug Container/Swage Above Rig Floor	3.0 ft	Job Displaced by (rig/halco)	Cement Unit HP Pumps
Surface Temperature at Time of Job	45 degF	Annular flow Before Job? (Water/Gas)	Yes
Mud Type	Water Based Mud	Annular flow After Job? (Water/Gas)	No

Cementing Equipment

Pipe Centralization	Through Entire Cement Column		
Brand of Float Equipment Used	HALLIBURTON	Did Plugs Bump?	Yes
Did Float Equipment Hold?	Yes		

Data Acquisition

APOLLO OPERATING LLC
HOAGLAND 45-4D 4.5 PRODUCTION
SO# 9496043



Global Event Log					
Intersection	SPPP	Intersection	SPPP	Intersection	SPPP
2 Start Job	03:00:09 19.00	3 Test Lines	03:02:03 32.00	4 Pump 20 H2O	03:06:28 30.00
5 Pump Mud Flush	03:11:20 321.0	6 Pump 10 H2O	03:15:56 401.0	7 Pump Extendacem 11.3#	03:17:55 430.0
8 Pump Fracem 13.5#	03:36:46 72.00	9 Shutdown	03:48:56 24.00	10 Clean Lines	03:49:01 21.00
11 Drop Top Plug	03:55:14 23.00	12 Pump Displacement	03:55:37 23.00	13 Displ Reached Cmrt	04:01:32 378.1
14 Bump Plug	04:10:35 1396	15 End Job	04:12:29 38.00		

Customer: APOLLO OPERATING KKC	Job Date: 08-May-2012	Sales Order #: 9496043
Well Description: PRODUCTION	Job Type: PRODUCTION	ADC Used: YES
Company Rep: DON LIBHART	Cement Supervisor: RYAN OZBUN	Service Operator: RICHARD DIRKS

HALLIBURTON
OptiCemv6.4.10
08-May-12 04:28

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
05/07/2012 00:10		Pre-Convoy Safety Meeting					
05/07/2012 01:00		Arrive at Location from Service Center					
05/07/2012 01:25		Pre-Rig Up Safety Meeting					
05/07/2012 01:35		Rig-Up Equipment					
05/07/2012 02:35		Pre-Job Safety Meeting					
05/07/2012 03:02		Test Lines	2	2		3500.0	TEST LINES TO 3500 PSI CHECK FOR VISIBLE LEAKS AND PRESSURE LOSS
05/07/2012 03:06		Pump Spacer	7	20			PUMP 20 BBL RIG WATER
05/07/2012 03:11		Pump Spacer 1	7	24			PUMP PUMP 24 BBL MUDFLUSH MIXED WITH RIG WATER
05/07/2012 03:15		Pump Spacer 2	7	10			PUMP 10 BBL RIG WATER
05/07/2012 03:17		Pump Lead Cement	7	138			PUMP 315 SKS OF EXTENDCEM @ 11.3 PPG (138 BBL) 2.46 YEILD 14.17 GAL/SK
05/07/2012 03:36		Pump Tail Cement	7	62			PUMP 200 SKS OF FRACCEM @ 13.5 PPG (61.6 BBL) 1.73 YEILD 8.24 GAL/SK
05/07/2012 03:49		Clean Lines	5	10			WASH LINES WITH FRESH WATER
05/07/2012 03:55		Drop Top Plug					PLUG LOADED DURING SHUTDOWN PLUG LEFT CEMENT HEAD
05/07/2012 03:55		Pump Displacement	12	117			PUMP 117 BBL OF RIG WATER WITH CLAY WEB FOR DISPLACMENT
05/07/2012 04:10		Bump Plug	3				BUMPED PLUG @ 117 BBL PUMPED PRESSURED UP 1000 PSI OVER LIFT PRESSURE
05/07/2012 04:12		Release Casing Pressure	0			.0	RELEASE PRESSURE
05/07/2012 04:12		Check Floats	0			.0	CHECK FLOATS 1 BBL BACK FLOATS HELD
05/07/2012 04:12		End Job					
05/07/2012 04:15		Pre-Rig Down Safety Meeting					
05/07/2012 04:25		Rig-Down Equipment					
05/07/2012 06:00		Depart Location Safety Meeting					
05/07/2012 06:00		Depart Location for Service Center or Other Site					
05/07/2012 22:00		Call Out					

The Road to Excellence Starts with Safety

Sold To #: 353960	Ship To #: 2925717	Quote #:	Sales Order #: 9496043
Customer: APOLLO OPERATING		Customer Rep:	
Well Name: Hoagland		Well #: 45-4D	API/UWI #:
Field: WATTENBURG	City (SAP): MEAD	County/Parish: Weld	State: Colorado
Contractor: Ensign		Rig/Platform Name/Num: Ensign 55	
Job Purpose: Cement Production Casing			
Well Type: Development Well		Job Type: Cement Production Casing	
Sales Person: FLING, MATTHEW		Srvc Supervisor: OZBUN, RYAN	MBU ID Emp #: 475709

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CARPENTER, JACOB Paul	0.0	499500	DIRKS, RICHARD E	0.0	485940	OZBUN, RYAN Jacob	0.0	475709
ROMERO, JOSEPH Michael	0.0	512137	SALINAS, JOSE R	0.0	100319			

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
11036298	26 mile	11360865C	26 mile	11398490	26 mile	11566182	26 mile
11605597	26 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL	Total is the sum of each column separately							

Job

Job Times

Formation Name					Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom		Called Out	07 - May - 2012	22:00 MST
Form Type	BHST				On Location	08 - May - 2012	01:00 MST
Job depth MD	7813. ft	Job Depth TVD	7813. ft	Job Started	08 - May - 2012	03:00	MST
Water Depth		Wk Ht Above Floor	3. ft	Job Completed	08 - May - 2012	04:11	MST
Perforation Depth (MD)	From		To	Departed Loc	08 - May - 2012	06:00	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				7.875				700.	7813.		
Production Casing	Unknown		4.5	4.	11.6			.	7813.		
Surface Casing	Unknown		8.625	8.097	24.		J-55	.	700.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
SHOE,FLT,4-1/2 8RD,2-3/4 SSII	1	EA		
CENTRALIZER ASSY - API - 4-1/2 CSG X	30	EA		
CLAMP - LIMIT - 4-1/2 - HINGED -	1	EA		
KIT,HALL WELD-A	1	EA		
CLR,FLT,4-1/2 LG 8RD 9.5-13.5,2-3/4 SSII	1	EA		

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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		
1	Fresh Water Spacer				20.00	bbl	8.33	.0	.0	.0			
2	MUD FLUSH III	MUD FLUSH III - SBM (528788)			24.00	bbl	8.4	.0	.0	.0			
3	Fresh Water Spacer				10.00	bbl	8.33	.0	.0	.0			
4	Extendacem 11.3#	EXTENDACEM (TM) SYSTEM (452981)			315.0	sacks	11.3	2.46	14.17	6.0	14.17		
14.17 Gal		FRESH WATER											
5	FracCem B2 13.5#	FRACCEM (TM) SYSTEM (452963)			200.0	sacks	13.5	1.73	8.24	6.0	8.24		
8.24 Gal		FRESH WATER											
6	ClayWeb III				6.00	Gal	8.33	.0	.0	.0			
2.5 gal/Mgal		CLA-WEB - TOTE (101985045)											
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	14 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								

