

APOLLO OPERATING  
1538 WAZEE ST #200  
DENVER, Colorado

Hoagland  
Hoagland 34-4D

Midcontinent/55

## Post Job Summary

# Cement Production Casing

Date Prepared: 05/30/2012  
Version: 1

Service Supervisor: SALINAS, JOSE

Submitted by: MCKAY, ADAM

HALLIBURTON

# HALLIBURTON

## ***Wellbore Geometry***

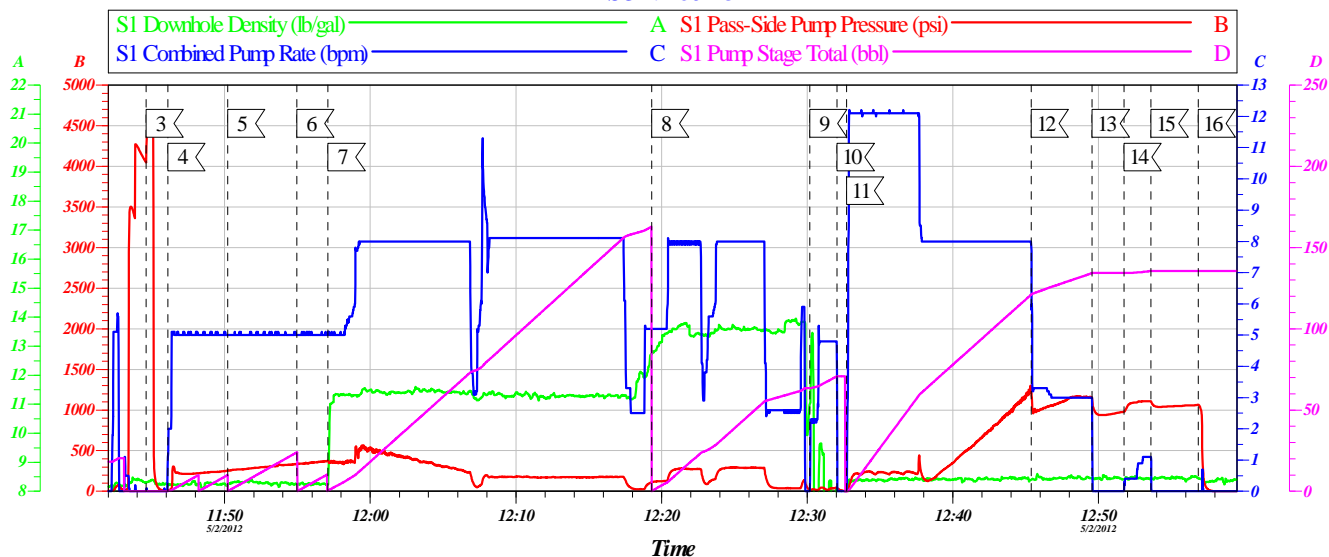
Job Tubulars					MD		TVD		Excess %	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft		
Casing	Surface Casing	8.63	8.097	24.00	0.00	700.00				
Open Hole Section	Open Hole		7.875		700.00	7,813.00				
Casing	Production Casing	4.50	4.000	11.60	0.00	7,813.00				14.00

## ***Pumping Schedule***

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	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	5.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	Extendacem 11.3#	11.30	8.00	325.0 sacks	325.0 sacks
1	5	Cement Slurry	FracCem B2 13.5#	13.50	8.00	200.0 sacks	200.0 sacks
1	6	Spacer	ClayWeb III	8.33	8.00	118 bbl	118 bbl

## Data Acquisition

APOLLO OPERATIONS  
HOAGLAND 34-4D 4.5 PRODUCTION  
SO# 9486113



Global Event Log					
Intersection	SPPP	Intersection	SPPP	Intersection	SPPP
3 Test Lines	11:44:36 4053	4 Pump Spacer 1	11:46:06 9.000	5 Pump Spacer 2	11:50:12 254.0
6 Pump Spacer 1	11:54:57 335.7	7 Pump Lead Cement	11:57:06 372.0	8 Pump Tail Cement	12:19:19 111.0
9 Clean Lines	12:30:10 17.47	10 Drop Top Plug	12:32:03 44.48	11 Pump Displacement	12:32:42 3.000
12 Slow Rate	12:45:23 1220	13 Shut Down	12:49:34 1137	14 Pressure Up Well	12:51:45 980.6
15 Shut Down	12:53:36 1107	16 Release Casing Pressure	12:56:51 1065		

Customer:	Job Date: 02-May-2012	Sales Order #: 9486113
Well Description:	Job Type:	ADC Used:
Company Rep:	Cement Supervisor:	Elite #:

HALLIBURTON  
OptiCemv64.10  
02-May-12 13:11

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
05/02/2012 05:00		Call Out					
05/02/2012 07:30		Pre-Convoy Safety Meeting					
05/02/2012 09:30		Arrive at Location from Service Center					
05/02/2012 10:00		Pre-Rig Up Safety Meeting					
05/02/2012 10:20		Rig-Up Equipment					
05/02/2012 11:15		Pre-Job Safety Meeting					
05/02/2012 11:44		Test Lines	2	2		3500.0	TEST LINES WITH FRESH WATER
05/02/2012 11:46		Pump Spacer	5	20		9.0	PUMP WATER SPACER @ 8.3 PPG
05/02/2012 11:50		Pump Spacer 1	5	24		2225.0	PUMP MUDFLUSH SPACER @ 8.3 PPG
05/02/2012 11:54		Pump Spacer 2	5	10		335.0	PUMP WATER SPACER @ 8.3 PPG
05/02/2012 11:57		Pump Lead Cement	8	142.3		372.0	PUMP 325 SKS OF ECONOCEM @ 12.5 PPG (142.3 BBL)
05/02/2012 12:19		Pump Tail Cement	8	61.6		111.0	PUMP 200 SKS OF FRACCCEM @ 13.5 PPG ( 61.6 BBL)
05/02/2012 12:30		Clean Lines	5	10		87.0	WASH LINES WITH FRESH WATER
05/02/2012 12:32		Drop Top Plug	0	0		.0	PLUG LEFT CMT HEAD
05/02/2012 12:33		Pump Displacement	8			9.0	PUMP 118.3 BBL OF FRESH WATER FOR DISPLACEMENT
05/02/2012 12:45		Other	3			1220.0	SLOW RATE DOWN TO BUMP PLUG
05/02/2012 12:49		Other	3	122		1137.0	DID NOT BUMP PLUG SHUT DOWN
05/02/2012 12:53		Pressure Up Well	1	2		980.0	PSI UP ON WELL
05/02/2012 12:56		Release Casing Pressure	0	0		.0	RELEASE PSI
05/02/2012 12:59		Pre-Rig Down Safety Meeting					
05/02/2012 12:59		Release Casing Pressure	0	0		.0	RELEASE PSI
05/02/2012 13:10		Rig-Down Equipment					
05/02/2012 14:15		Depart Location Safety Meeting					
05/02/2012 14:30		Depart Location for Service Center or Other Site					

# HALLIBURTON

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 353960	<b>Ship To #:</b> 2925020	<b>Quote #:</b>	<b>Sales Order #:</b> 9486113
<b>Customer:</b> APOLLO OPERATING		<b>Customer Rep:</b>	
<b>Well Name:</b> Hoagland		<b>Well #:</b> 34-4D	<b>API/UWI #:</b> 05-123-33881
<b>Field:</b> WATTENBURG	<b>City (SAP):</b> MEAD	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Contractor:</b> Midcontinent		<b>Rig/Platform Name/Num:</b> 55	
<b>Job Purpose:</b> Cement Production Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Production Casing	
<b>Sales Person:</b> FLING, MATTHEW		<b>Srvc Supervisor:</b> SALINAS, JOSE	<b>MBU ID Emp #:</b> 100319

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CARPENTER, JACOB P	0.0	499500	IOERGER, TODD A	0.0	485941	OTERI, VAUGHN Steeves	0.0	443828
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
10248062C	25 mile	11605597	25 mile	11667703C	25 mile	11808819C	25 mile
11923776C	25 mile						

### 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						Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom			Called Out	02 - May - 2012 05:00	MST
Form Type		BHST				On Location	02 - May - 2012 09:00	MST
Job depth MD	7813. ft	Job Depth TVD	7813. ft			Job Started	02 - May - 2012 11:44	MST
Water Depth		Wk Ht Above Floor	3. ft			Job Completed	02 - May - 2012 12:56	MST
Perforation Depth (MD)	From		To			Departed Loc	03 - May - 2012 14:30	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				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/3<sup>rd</sup> 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			

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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	6.0	
2	MUD FLUSH III	MUD FLUSH III - SBM (528788)	24.00	bbl	8.4	.0	.0	6.0	
3	Fresh Water Spacer		10.00	bbl	8.33	.0	.0	6.0	
4	Extendacem 11.3#	EXTENDACEM (TM) SYSTEM (452981)	325.0	sacks	11.3	2.46	14.17	8.0	14.17
	14.17 Gal	FRESH WATER							
5	FracCem B2 13.5#	FRACCEN (TM) SYSTEM (452963)	200.0	sacks	13.5	1.73	8.24	8.0	8.24
	8.24 Gal	FRESH WATER							
6	ClayWeb III		5.00	Gal	8.33	.0	.0	8.0	
	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 # 4 @	ID

The Information Stated Herein Is Correct	Customer Representative Signature
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