

**APOLLO OPERATING
1538 WAZEE ST #200
DENVER, Colorado**

E.L. Minch
E.L. Minch 25-9D

Ensign/Ensign/55

Post Job Summary **Cement Production Casing**

Date Prepared: 04/01/2012
Version: 1

Service Supervisor: PICKELL, CHRISTOPHER

Submitted by: BORDEN, RYAN

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	0.00	20.0 bbl	20.0 bbl
1	2	Spacer	MUD FLUSH III	8.40	0.00	24.0 bbl	24.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	0.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	ExtendaCem 11.3#	11.30	6.00	350.0 sacks	350.0 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	0.00		200.0 sacks

Job Summary

Job Information

Job Start Date	3/26/2012 7:38:00 PM	Actual Mud Density	9 lbm/gal
Job MD	753,000.0 ft	Pipe Movement During Hole Circulation	None
Job TVD	75,350.0 ft	Time From End Mud Circ. to Job Start	15.00 minute
Height of Plug Container/Swage Above Rig Floor	5.0 ft	Pipe Movement During Cementing	None
Surface Temperature at Time of Job	65 degF	Calculated Displacement	116.20 bbl
Mud Type	Water Based Mud	Job Displaced by (rig/halco)	Cement Unit HP Pumps
		Length of Rat Hole	22.00 ft

Cementing Equipment

Number of Centralizers Used	30	Plug set used?	Yes
Pipe Centralization	Through Entire Cement Column	Brand of Plug set used?	Halliburton
Brand of Float Equipment Used	Halliburton	Did Plugs Bump?	Yes
Did Float Equipment Hold?	Yes	Calculated Pressure to Bump Plugs	1,026.0 psig

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
03/26/2012 19:38		Start Job							
03/26/2012 19:38		Test Lines	1					3500.0	PRESSURE TEST LINES TO 3500 PSI. CHECK FOR VISIBLE LEAKS AND PRESSURE LOSS
03/26/2012 19:41		Pump Spacer 1	4.5	20				210.0	PUMP RIG WATER W/CLAYWEB
03/26/2012 19:46		Pump Spacer 2	4.5	24				265.0	PUMP MUDFLUSH
03/26/2012 19:52		Pump Spacer 1	4.5	10				280.0	PUMP RIG WATER W/CLAYWEB
03/26/2012 19:54		Pump Lead Cement	8	153.3				133.0	PUMP EXTENDACEM 350 SKS 11.3 PPG 2.46 CUFT/SK 14.17 GAL/SK MIXED WITH RIG WATER
03/26/2012 20:14		Pump Tail Cement	7	61.6				80.0	PUMP FRACCEM 200 SKS 13.5 PPG 1.73 CUFT/SK 8.24 GAL/SK MIXED WITH RIG WATER
03/26/2012 20:27		Shutdown							
03/26/2012 20:29		Clean Lines							WASH PUMPS AND LINES
03/26/2012 20:31		Drop Top Plug							LOADED LATCH DOWN PLUG WHILE WASHING PUMPS AND LINES
03/26/2012 20:32		Pump Displacement	8	116.2				1100.0	PUMP DISPLACEMENT USING RIG WATER
03/26/2012 20:40		Displ Reached Cmmt							DISPLACEMENT REACHED CEMENT WITH 58 BBL AWAY
03/26/2012 20:50		Bump Plug	3.5					1120.0	CALCULATED PRESSURE TO LAND WAS 1026. ACTUAL LAND PRESSURE 1120 PSI GOING UP TO 2500 PSI
03/26/2012 20:51		Check Floats							FLOATS HELD. 1 BBL BACK
03/26/2012 20:52		End Job							

The Road to Excellence Starts with Safety

Sold To #: 353960	Ship To #: 2917475	Quote #:	Sales Order #: 9387004
Customer: APOLLO OPERATING		Customer Rep: LIBHART, DON	
Well Name: E.L. Minch		Well #: 25-9D	API/UWI #:
Field: WATTENBURG	City (SAP): MEAD	County/Parish: Weld	State: Colorado
Lat: N 40.246 deg. OR N 40 deg. 14 min. 44.88 secs.		Long: W 105.011 deg. OR W -106 deg. 59 min. 22.056 secs.	
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: PICKELL, CHRISTOPHER	MBU ID Emp #: 396838

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	FLYNN, SHAD Michael	0.0	476484	PICKELL, CHRISTOPHER Lee	0.0	396838
ROMERO, JOSEPH Michael	0.0	512137						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10977079C	30 mile	11064046C	30 mile	11488570C	30 mile	11562544C	30 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							
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Job

Formation Name	Job				Job Times			
Formation Depth (MD)	Top	Bottom			Called Out	Date	Time	Time Zone
Form Type	BHST				On Location	26 - Mar - 2012	17:00	MST
Job depth MD	753000. ft				Job Started	26 - Mar - 2012	19:38	MST
Water Depth	Wk Ht Above Floor 5. ft				Job Completed	26 - Mar - 2012	20:52	MST
Perforation Depth (MD)	From	To			Departed Loc	26 - Mar - 2012	22:00	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.	7650.		
Production Casing	Unknown		4.5	4.	11.6			.	7650.		
Surface Casing	Unknown		8.625	8.097	24.		J-55	.	700.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
CMT CASING EQUIPMENT BOM	1	JOB		
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		
Description	Qty	Qty uom	Depth	Supplier

KIT,HALL WELD-A	1	EA		
CLR,FLT,4-1/2 LG 8RD 9.5-13.5,2-3/4 SSII	1	EA		
MILEAGE FOR CEMENTING CREW,ZI	60	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	60	MI		

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)	350.0	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			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

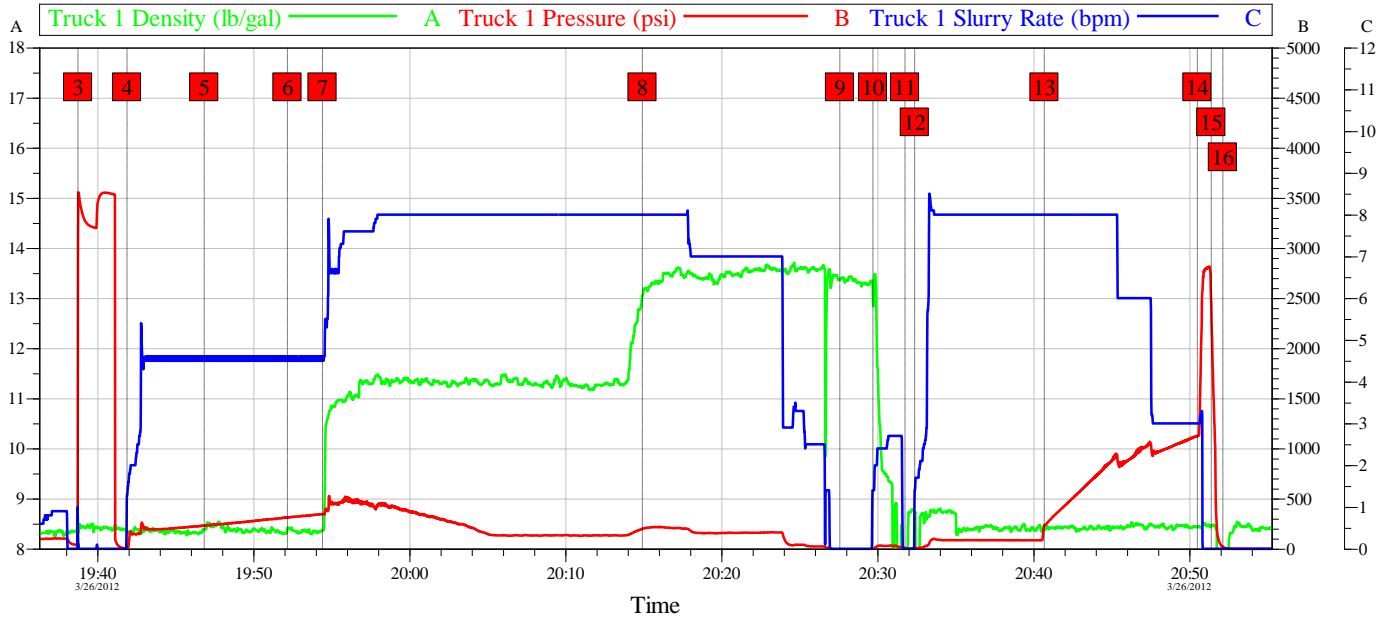
Circulating		Mixing		Displacement		Avg. Job	
Cement Left In Pipe	Amount	14 ft	Reason	Shoe Joint			
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID

The Information Stated Herein Is Correct	Customer Representative Signature
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HALLIBURTON

Data Acquisition

E.L MINCH 25-9D
APOLLO



Global Event Log

Intersection	T1P	Intersection	T1P	Intersection	T1P
3 Test Lines	19:38:45 3070	4 Pump Water W/Clayweb	19:41:54 4.000	5 Pump Mudflush	19:46:51 230.4
6 Pump Water W/Clayweb	19:52:11 311.4	7 Pump Lead Cement	19:54:26 345.2	8 Pump Tail Cement	20:14:56 197.4
9 Shutdown	20:27:35 -4.000	10 Clean Lines	20:29:43 -3.433	11 Drop Top Plug	20:31:46 7.000
12 Pump Displacement	20:32:23 3.000	13 Displ Reached Cmmt	20:40:42 236.6	14 Bump Plug	20:50:30 1120
15 Check Floats	20:51:24 2463	16 End Job	20:52:09 20.16		

Customer: APOLLO
Well Description: E.L MINCH 25-9D
SERVICE SUPERVISOR CHRISTOPHER PICKELL

Job Date: 26-Mar-2012
UWI: 05-123-33642-00
SERVICE OPERATOR SHAD FLYNN

Sales Order #: 9387004

OptiCem v6.4.10
26-Mar-12 21:01