

APOLLO OPERATING
1538 WAZEE ST #200
DENVER, Colorado

E.L. Minch
E.L. Minch 35-4D

Ensign/Ensign/55

Post Job Summary

Cement Production Casing

Date Prepared: 04/17/12
Version: 1

Service Supervisor: WHEELER, JUSTIN

Submitted by: MCKAY , ADAM

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Wellbore Geometry

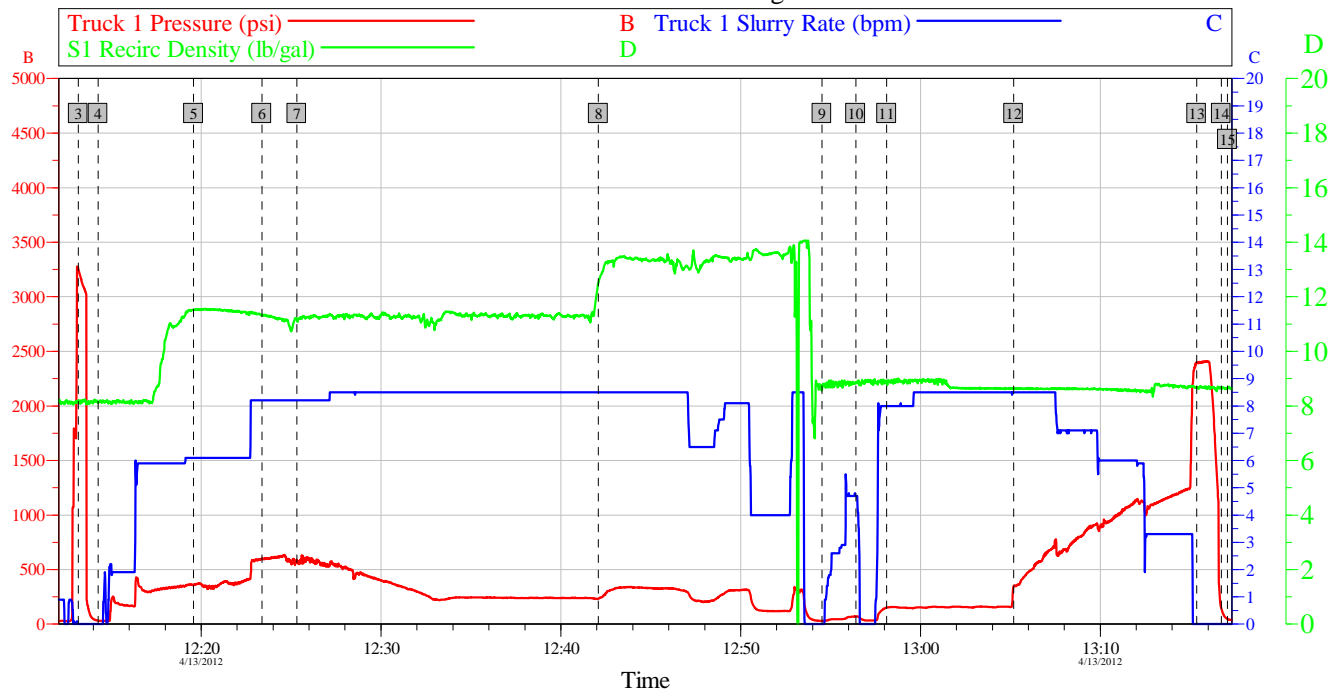
Job Tubulars					MD		TVD		Excess %	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft		
Casing	Surface Casing	8.63	8.097	24.00	0.00	700.00				
Open Hole Section	Open Hole		7.875		700.00	7,606.00				
Casing	Production Casing	4.50	4.000	11.60	0.00	7,606.00				15.00

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	2.00	20.0 bbl	20.0 bbl
1	2	Spacer	MUD FLUSH III	8.40	6.00	24.0 bbl	24.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	8.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	Extendacem 11.3#	11.30	6.00	310.0 sacks	310.0 sacks
1	5	Cement Slurry	FracCem B2 13.5#	13.50	6.00	250.0 sacks	250.0 sacks
1	6	Spacer	ClayWeb III	8.33	7.00	117.7 bbl	117.7 bbl

Data Acquisition

Apollo - E.L. Minch 35-4D
4 1/2" Production Casing



Global Event Log														
Intersection			TIP	TISR	Intersection			TIP	TISR	Intersection			TIP	TISR
3	Test Lines	12:13:10	3255	0.000	4	Pump Fresh Water	12:14:16	32.25	0.000	5	Pump Mud Flush	12:19:34	357.0	6.100
6	Pump Fresh Water	12:23:22	599.4	8.200	7	Pump Lead Cement	12:25:19	583.6	8.200	8	Pump Tail Cement	12:42:05	232.5	8.500
9	Clean Lines	12:54:32	31.00	0.000	10	Drop Top Plug	12:56:24	71.00	4.700	11	Pump Displacement	12:58:08	152.6	8.000
12	Displ Reached Cmmt	13:05:11	348.5	8.500	13	Bump Plug	13:15:22	2391	0.000	14	Check Floats	13:16:44	142.3	0.000
15	End Job	13:17:05	46.31	0.000										

Customer: Apollo
Well Description: E.L. Minch 35-4D

Job Date: 13-Apr-2012
UWI:

Sales Order #: 9434858

OptiCem v6.4.9
13-Apr-12 13:47

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
04/13/2012 09:00		Depart from Service Center or Other Site					
04/13/2012 10:00		Arrive At Loc					
04/13/2012 11:00		Safety Meeting - Pre Rig-Up					Water Provided By Rig, Tested Ok for Mixing Cement
04/13/2012 12:13		Pump Displacement - End	3	117.7		1245.0	Good Returns Throughout Job
04/13/2012 12:13		Test Lines					Pressure Test lines to 3000 PSI
04/13/2012 12:14		Pump Spacer	2	20		100.0	Pump Fresh Water
04/13/2012 12:19		Pump Spacer	6	24		355.0	Pump Mud Flush
04/13/2012 12:23		Pump Spacer	8	10		600.0	Pump Fresh Water
04/13/2012 12:25		Pump Lead Cement	8	135.8		585.0	Mix and Pump 310 sks ExtendaCem Cement @ 11.3 lb/gal (All Densities Verified By Pressurized Scales)
04/13/2012 12:42		Pump Tail Cement	8	77		230.0	Mix and Pump 250 sks FracCem Cement @ 13.5 lb/gal
04/13/2012 12:54		Clean Lines		10			Wash Pumps and Lines to Pit
04/13/2012 12:56		Drop Top Plug					Shut-Down, Drop Top Plug (Plug Pre-Loaded in Plug Container, Witnessed By Customer Rep.)
04/13/2012 12:58		Pump Displacement - Start	8	0		150.0	Pump ClayWeb Water Displacement
04/13/2012 13:15		Bump Plug	3	117.7		2500.0	Bump Plug to 2500 PSI
04/13/2012 13:16		Check Floats					Floats Holding
04/13/2012 13:17		End Job					
04/13/2012 13:30		Safety Meeting - Pre Rig-Down					Wet and Dry Samples of Cement Left on Location
04/13/2012 14:00		Safety Meeting - Departing Location					

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The Road to Excellence Starts with Safety

Sold To #: 353960		Ship To #: 2921311		Quote #:		Sales Order #: 9434858	
Customer: APOLLO OPERATING				Customer Rep: Libhart, Don			
Well Name: E.L. Minch			Well #: 35-4D			API/UWI #: 05-123-33659	
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: WHEELER, JUSTIN			MBU ID Emp #: 196470	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BOURGEOIS, KEVIN Paul	0.0	459092	IPSON, TIMOTHY J	0.0	485018	KUNERT, RANDY Joe	0.0	477850
WHEELER, JUSTIN W	0.0	196470						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10857012C	27 mile	10972458	27 mile	11605599	27 mile	11748359	27 mile
11812069C	27 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 Times			
Formation Depth (MD)	Top		Bottom		Called Out	Date	Time	Time Zone
Form Type			BHST		On Location	13 - Apr - 2012	04:00	MST
Job depth MD	7606. ft		Job Depth TVD	7606. ft	Job Started	13 - Apr - 2012	10:00	MST
Water Depth			Wk Ht Above Floor		Job Completed	13 - Apr - 2012	12:12	MST
Perforation Depth (MD)	From		To		Job Completed	13 - Apr - 2012	13:17	MST
					Departed Loc	13 - Apr - 2012	14:00	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.	7606.		
Production Casing	Unknown		4.5	4.	11.6			.	7606.		
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			

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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)			310.0	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)			250.0	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	15 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											