

APOLLO OPERATING
1538 WAZEE ST #200
DENVER, Colorado

Markham 33-32D

Midcontinent/226 #

Post Job Summary

Cement Production Casing

Date Prepared: 05/08/2013
Version: 1

Service Supervisor: LAVALLEY, LARRY

Submitted by: MCKAY, ADAM

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Wellbore Geometry

Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Casing	8 5/8" Surface Casing	8.63	8.097	24.00	0.00	690.00	
Open Hole Section	7 7/8" Open Hole Section		7.875		690.00	7,915.00	
Casing	4 1/2" Production Casing	4.50	4.000	11.60	0.00	7,914.00	45.00

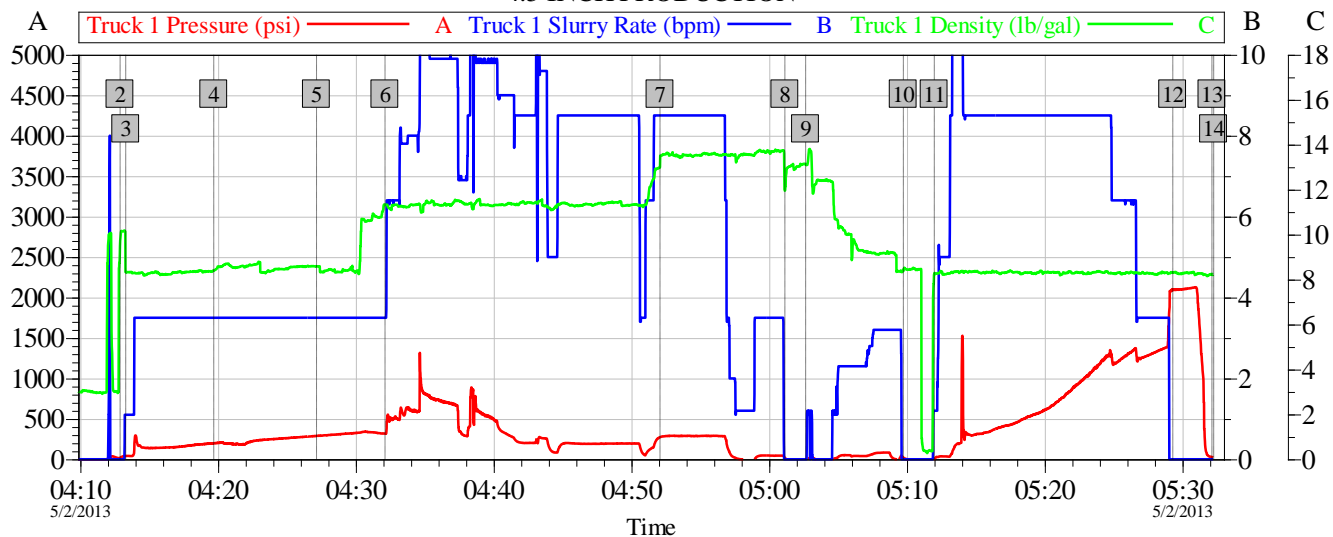
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Pumping Schedule

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	3.5	20.0 bbl	20.0 bbl
1	2	Spacer	Mud Flush III	8.40	3.5	24.0 bbl	24.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	3.5	10.0 bbl	10.0 bbl
1	4	Cement Slurry	EXTENDACEM B1	11.30	8.00	435.0 sacks	435.0 sacks
1	5	Cement Slurry	FracCem B2	13.50	8.00	175.0 sacks	175.0 sacks

Data Acquisition

APOLLO OPERATING MARKHAM 33-32D 4.5 INCH PRODUCTION



Global Event Log											
Intersection			TIP	TISR	TID	Intersection			TIP	TISR	TID
1	Starting Job	03:12:25	23.00	0.000	3.070	2	Start Job	04:12:53	18.55	0.000	9.549
3	Pump Spacer 1	04:13:18	42.00	1.100	8.330	4	Pump Spacer 2	04:19:41	198.7	3.500	8.401
5	Pump Spacer 1	04:27:09	289.8	3.500	8.580	6	Pump Lead Cement	04:32:07	318.9	3.500	11.33
7	Pump Tail Cement	04:52:05	272.8	8.500	13.00	8	Shutdown	05:01:09	17.91	0.000	11.96
9	Clean Lines	05:02:39	-12.00	0.000	13.14	10	Drop Top Plug	05:09:44	22.39	0.000	8.380
11	Pump Displacement	05:11:59	0.835	1.200	8.227	12	Bump Plug	05:29:18	2097	0.000	8.320
13	End Job	05:32:08	27.58	0.000	8.247	14	Ending Job	05:32:16	24.00	0.000	8.220

Customer: APOLLO OPERATING	Job Date: 01-May-2013	Sales Order #: 900410931
Well Description: 4.5 INCH PRODUCTION	THANKS LARRY LAVALLEY AND CREW	

OptiCem v6.4.10
02-May-13 05:33

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
05/02/2013 04:13		Pump Spacer 1	5	20			43.0	RIG WATER WITH NO ADDITIVES
05/02/2013 04:15		Start Job						
05/02/2013 04:15		Test Lines					3500.0	DID NOT TEST DUE TO TEMPATURE
05/02/2013 04:19		Pump Spacer 2	5	24			198.0	RIG WATER WITH MUDDLUSH III ADDED
05/02/2013 04:27		Pump Spacer 1	5	10			289.0	RIG WATER WITH NO ADDITIVES
05/02/2013 04:32		Pump Lead Cement	8	190			318.0	435 SKS EXTENDACEM B2 MIXED @ 11.3 PPG YIELD 2.46 FT3/SK AND 14.12 GAL/SK
05/02/2013 04:52		Pump Tail Cement	8	54			272.0	175 SKS FRACCEM MIXED @ 13.5 PPG YIELD 1.74 FT3/SK AND 8.30 GAL/SK
05/02/2013 05:01		Shutdown						
05/02/2013 05:02		Clean Lines						
05/02/2013 05:09		Drop Top Plug						PRELOADED HWE TOP PLUG
05/02/2013 05:11		Pump Displacement	8	122			1452.0	RIG WATER WITH NO ADDITIVES, CAUGHT CEMENT @ 14 BBLs AWAY
05/02/2013 05:29		Bump Plug	3				2097.0	CALCULATED PRESSURE TO LAND WAS 1580 PSI. FLOATS HELD 1 BBL BACK
05/02/2013 05:32		End Job						

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The Road to Excellence Starts with Safety

Sold To #: 353960	Ship To #: 2994983	Quote #:	Sales Order #: 900410931
Customer: APOLLO OPERATING		Customer Rep: Lunt, Mark	
Well Name: Markham	Well #: 33-32D	API/UWI #: 05-123-37071	
Field: WATTENBURG	City (SAP): MEAD	County/Parish: Weld	State: Colorado
Lat: N 40.266 deg. OR N 40 deg. 15 min. 58.14 secs.		Long: W 105.018 deg. OR W -106 deg. 58 min. 53.976 secs.	
Contractor: Midcontinent		Rig/Platform Name/Num: 226 #	
Job Purpose: Cement Production Casing			
Well Type: Development Well		Job Type: Cement Production Casing	
Sales Person: FLING, MATTHEW		Srvc Supervisor: LAVALLEY, LARRY	MBU ID Emp #: 419296

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
LAVALLEY, LARRY P	0.0	419296	MILLER, GEOFFREY Alan	0.0	460232	RICHEY, JESSICA L	0.0	525703
WILEY, JAMES A	0.0	440080						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10972458	28 mile	11019275	28 mile	11488570C	28 mile	11518549	28 mile
11748359	28 mile	NA	28 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	01 - May - 2013	18:30	MST
Form Type		BHST		On Location	01 - May - 2013	22:30	MST
Job depth MD	7915. ft	Job Depth TVD	7915. ft	Job Started	02 - May - 2013	04:15	MST
Water Depth		Wk Ht Above Floor	6. ft	Job Completed	02 - May - 2013	05:30	MST
Perforation Depth (MD)	From	To		Departed Loc	02 - May - 2013	06:20	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
7 7/8" Open Hole Section				7.875				690.	7915.		
4 1/2" Production Casing	Unknown		4.5	4.	11.6			.	7914.		
8 5/8" Surface Casing	Unknown		8.625	8.097	24.			.	690.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
SHOE,FLT,4-1/2 8RD,2-3/4 SSII	1	EA		
CLR,FLT,4-1/2 8RD,9.5-13.5PPF,2-3/4	1	EA		
Description	Qty	Qty uom	Depth	Supplier
CTRZR ASSY,TURBO,API,4 1/2 CSG X 7 7/8	30	EA		
CLAMP - LIMIT - 4-1/2 - HINGED -	3	EA		
PLUG,CMTG,TOP,4 1/2,HWE,3.65 MIN/4.14 MA	1	EA		

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KIT,HALL WELD-A	2	EA		
PLUG,CMTG,BOT,4 1/2,HWE,3.65 MIN/4.14 MA	1	EA		
BSKT,CEM,4 1/2 CSG X 6 1/4,8 3/4 H	2	EA		
MILEAGE FOR CEMENTING CREW,ZI	56	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	56	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		42.0	3.5	
2	Mud Flush III	MUD FLUSH III - SBM (528788)	24.00	bbl	8.4		42.0	3.5	
3	EXTENDACEM B1	EXTENDACEM (TM) SYSTEM (452981)	435.0	sacks	11.3	2.46	14.1	8.0	14.1
	14.101 Gal	FRESH WATER							
4	FracCem B2	FRACCEN (TM) SYSTEM (452963)	175.0	sacks	13.5	1.74	8.3	8.0	8.3
	8.3 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	45 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