

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3814494		Quote #: 0022400515		Sales Order #: 0904604143					
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: James Adkins							
Well Name: NEWBY STATE			Well #: 37N-4HZ			API/UWI #: 05-123-45087-00					
Field: WATTENBERG		City (SAP): LONGMONT		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-33-3N-68W-589FSL-1395FEL											
Contractor: NABORS DRLG				Rig/Platform Name/Num: NABORS X22							
Job BOM: 7523 7523											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX41066				Srvs Supervisor: Steven Markovich							
Job											
Formation Name											
Formation Depth (MD)		Top				Bottom					
Form Type						BHST					
Job depth MD		13623ft				Job Depth TVD					
Water Depth						Wk Ht Above Floor					
Perforation Depth (MD)		From				To					
Well Data											
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft	
Casing		9.625	8.921	36		J-55	0	2251	0	2251	
Casing		5.5	4.892	17	LTC	HCP110	0	13623	0	0	
Open Hole Section			7.875				2251	13631	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5			13623		Top Plug	5.5		HES		
Float Shoe	5.5					Bottom Plug	5.5		HES		
Float Collar	5.5					SSR plug set	5.5		HES		
Insert Float	5.5					Plug Container	5.5		HES		
Stage Tool	5.5					Centralizers	5.5		HES		
Fluid Data											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name			Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Spacer III	Tuned Spacer III			60	bbl	10.5	6.25			
35.80 gal/bbl		FRESH WATER									
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)									

0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	ElastiCem LEAD	ELASTICEM (TM) SYSTEM	560	sack	13.2	1.57		6	7.53
7.53 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	EconoCem Tail	ECONOCEM (TM) SYSTEM	820	sack	13.5	1.68		6	7.99
7.99 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	Biocide Water	Biocide Water	295.88	bbl	8.34				
Comment Bumped plug at 315.8bbbls away, final lift pressure was 2194psi. Spacer to surface at 313bbbls away brining 2.5bbbls to surface. After 15min casing test pressure went from 3000psi to 3274psi. Kicked in pumps to shear wet shoe sub. WSS sheered at 4292psi, then pumped a 3bbl wet shoe. Estimated Top of Tail Cement 5682' Estimated Top of Lead Cement 1195'									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	1/31/2018	06:00:00	USER	Job called out with an on location time of 11:30
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/31/2018	09:00:00	USER	JSA with HES crew on driving safety and route to rig.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	1/31/2018	10:30:00	USER	Arrived on location, rig still running casing. Approx 4000'
Event	4	Assessment Of Location Safety Meeting	Assesment Of Location Safety Meeting	1/31/2018	10:40:00	USER	JSA and hazard hunt with HES crew
Event	5	Rig-Up Equipment	Rig-Up Equipment	1/31/2018	10:55:00	USER	Rigged up HES lines and equipment.
Event	6	Wait on HES or HES Sub-Contractor Equipment - Start Time	Wait on HES or HES Sub-Contractor Equipment - Start Time	1/31/2018	17:45:00	USER	Passenger side deck motor on pump would not start. Swapped out starters and fuel systems.
Event	7	Wait on HES or HES Sub-Contractor Equipment - End Time	Wait on HES or HES Sub-Contractor Equipment - End Time	2/1/2018	00:30:00	USER	New pump in place and ready to start job.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/1/2018	00:35:00	USER	JSA with HES and rig crew on job safety and procedure.
Event	9	Start Job	Start Job	2/1/2018	00:41:45	COM4	TD 13631' TP 13623" FC 13619.5' 5 1/2"17# production casing, 7 7/8" open hole, 9 5/8" 36# surface casing at 2251' TVD 7177' Estimated top of Tail Cement 5682' Estimated top of Lead Cement 1195'
Event	10	Test Lines	Test Lines	2/1/2018	00:43:16	COM4	Set kick outs to 500psi and check kick outs, then bring pressure up to 5500psi and hold.
Event	11	Pump Spacer 1	Pump Spacer 1	2/1/2018	00:55:02	COM4	Pump 60bbls of 10.5ppg 6.25yield Tuned Spacer. Added 40 gallons of Musol A and Dual Spacer B on the fly. Pumped at 3bbl/min 290psi.
Event	12	Check Weight	Check weight	2/1/2018	01:03:26	COM4	Weight verified by pressurized scales.

Event	13	Drop Bottom Plug	Drop Bottom Plug	2/1/2018	01:18:11	USER	Plug pre loaded into HES head. Plug loaded and dropped in front of company rep.
Event	14	Pump Lead Cement	Pump Lead Cement	2/1/2018	01:20:45	COM4	Pump 156.5bbls (560sks) of 13.2ppg 1.57yield Lead Cement. Pumped at 7.5bbl/min 525psi.
Event	15	Check Weight	Check weight	2/1/2018	01:21:40	COM4	Weight verified by pressurized scales.
Event	16	Check Weight	Check weight	2/1/2018	01:24:35	COM4	Weight verified by pressurized scales.
Event	17	Check Weight	Check weight	2/1/2018	01:34:23	COM4	Weight verified by pressurized scales.
Event	18	Pump Tail Cement	Pump Tail Cement	2/1/2018	01:46:18	COM4	Pump 245bbls of 13.5ppg 1.68yield Tail Cement. Pumped at 7bbl/min 660psi.
Event	19	Check Weight	Check weight	2/1/2018	01:48:50	COM4	Weight verified by pressurized scales.
Event	20	Shutdown	Shutdown	2/1/2018	02:23:34	COM4	Shutdown
Event	21	Clean Lines	Clean Lines	2/1/2018	02:25:21	COM4	Clean pumps and lines.
Event	22	Drop Top Plug	Drop Top Plug	2/1/2018	02:44:29	COM4	Plug pre loaded into HES head. Plug loaded and dropped in front of company rep.
Event	23	Pump Displacement	Pump Displacement	2/1/2018	02:44:37	COM4	Pump 315.8bbls of H2O. First 20bbls with MMCR. Pumped at 8bbls a min and slowed rate with pressure increase. Spacer to surface at 313bbls away bringing 2.5bbls of spacer to surface.
Event	24	Bump Plug	Bump Plug	2/1/2018	03:27:35	COM4	Bumped plug at 315.8bbls away, final lift pressure was 2194psi. Took pressure 500psi over and held.
Event	25	Test Lines	Test Lines	2/1/2018	03:29:35	COM4	Kicked in pumps and brought pressure up to 3000psi for 15min casing test. After 15 mins pressure was 3274psi.
Event	26	Other	Other	2/1/2018	03:44:37	USER	Kicked in pump to shear wet shoe sub. WSS sheered at 4292psi then picked up rate to 5bbl/min and pumped 3bbl wet shoe.
Event	27	End Job	End Job	2/1/2018	03:48:07	COM4	Thank you Steve Markovich and crew.

3.0 Attachments

3.1 Job Chart

