

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3790954		Quote #: 0022391153		Sales Order #: 0904551937					
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: James Adkins							
Well Name: NEWBY STATE			Well #: 26N-33HZ		API/UWI #: 05-123-44565-00						
Field: WATTENBERG		City (SAP): LONGMONT		County/Parish: WELD		State: COLORADO					
Legal Description: SE SE-33-3N-68W-588FSL-1320FEL											
Contractor: NABORS DRLG				Rig/Platform Name/Num: NABORS X22							
Job BOM: 7525 7525											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Steven Markovich							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		12834ft		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	
Drill Pipe		4	3.34	14			0	5915	0	0	
Casing		7	6.276	26	LTC	HCP110	0	6155	0	0	
Casing		4.5	4	11.6	LTC	HCP110	5937	12834	0	0	
Open Hole Section			6.125				6155	12839	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	4.5			12834		Top Plug	4.5		HES		
Float Shoe	4.5					Bottom Plug	4.5		HES		
Float Collar	4.5					SSR plug set	4.5		HES		
Insert Float	4.5					Plug Container	4.5		HES		
Stage Tool	4.5					Centralizers	4.5		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			
37.58 gal/bbl		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
2	EconoCem	ECONOCER (TM) SYSTEM	420	sack	13.5	1.68		6	7.98
7.98 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	Displacement Fluid	Displacement Fluid	159.5	bbl	8.34				
Cement Left In Pipe		Amount	49 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride: 0 ppm			Mix Water Temperature:		70 °F °C	
Comment Spacer to surface at 70bbls away, cement to surface at 130bbl away and the hole was clean at 138bbls which gave us 8bbls of cement above the liner. We were unable to pressure test the backside.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	1/7/2018	05:00:00	USER					Job called out with an on location time of 11:30
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/7/2018	10:00:00	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	1/7/2018	11:00:00	USER					Arrived on location, rig still running drill pipe.
Event	4	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	1/7/2018	11:15:00	USER					JSA and hazard hunt with HES crew.
Event	5	Rig-Up Equipment	Rig-Up Equipment	1/7/2018	11:30:00	USER					Rigged up HES lines and equipment.
Event	6	Start Job	Start Job	1/7/2018	14:27:12	COM4	8.44	-2.00	0.00	0.0	TD 12839' TP 12834' HWPDP (2.56ID) 1400', 4" 14# DP 4515', Liner Top @ 5937', &" 26# casing @ 6155', 4 1/2" 11.6# production casing 6870', 6 1/8" open hole, TVD 7023'
Event	7	Test Lines	Test Lines	1/7/2018	14:32:23	COM4	8.53	148.00	0.00	3.8	Set kick outs to 500psi and check kick outs, then bring pressure up to 5000psi and hold.
Event	8	Pump Spacer 1	Pump Spacer 1	1/7/2018	14:37:01	COM4	8.50	130.00	0.00	0.0	Pump 60bbls of 10.5ppg 6.25yield Tuned Spacer. Added 42 gallons of Musol A and Dual Spacer B on the fly. Pumped at 4bbl/min 756psi.
Event	9	Pump Cement	Pump Cement	1/7/2018	14:51:39	COM4	11.76	731.00	4.00	0.1	Pump 125.67bbs (420sks) of

iCem<sup>®</sup> Service

(v. 4.2.393)

Created: Tuesday, February 27, 2018

13.5ppg 1.68yield Cement.  
Pumped at 5bbl/min 912psi.

Event	10	Check Weight	Check weight	1/7/2018	14:53:07	COM4	13.45	791.00	4.00	6.0	Weight verified by pressurized scales.
Event	11	Check Weight	Check weight	1/7/2018	15:09:02	COM4	13.44	687.00	5.20	85.1	Weight verified by pressurized scales.
Event	12	Shutdown	Shutdown	1/7/2018	15:17:55	COM4	11.11	107.00	0.00	126.7	Shutdown.
Event	13	Clean Lines	Clean Lines	1/7/2018	15:26:31	COM4	-0.09	4.00	0.00	0.0	Clean pumps and lines.
Event	14	Drop Top Plug	Drop Top Plug	1/7/2018	15:34:43	COM4	8.19	-1.00	0.00	12.8	Weatherford dart was loaded into drill pipe.
Event	15	Pump Displacement	Pump Displacement	1/7/2018	15:34:49	COM4	8.18	-1.00	0.00	0.0	Pump 159.5bbls of H2O. First 20bbls with MMCR. Pumped at 5bbl/min. Slowed to 3bbl/min at 47bbls away to anticipate the dart going through the tool. After the dart went through the tool picked the rate back up to 5bbl/min.
Event	16	Other	Other	1/7/2018	15:48:15	COM4	8.33	1531.00	1.40	57.0	Dart passed through the tool at 56.9bbls away. Pressured up to 1531psi.
Event	17	Bump Plug	Bump Plug	1/7/2018	16:10:49	COM4	8.37	1609.00	3.00	159.2	Bumped plug at 159.5bbls away, final lifting pressure was 1609psi. Took pressure 500psi over and held. After 3 mins pressure was 2266psi. Opened release line to check floats, after 1.5bbls back floats held.
Event	18	Other	Other	1/7/2018	16:32:44	USER	8.32	12.00	0.00	0.0	Kick in pumps and pump down the backside until we see returns. After 3.5bbls we gained returns.
Event	19	Pressure Up Well	Pressure Up Well	1/7/2018	16:38:12	COM4	8.35	20.00	0.00	5.1	Kicked in pumps to pressure

											test backside. Pumped 3bbls and pressure was 69psi. Still had flow on the shakers.
Event	20	Pressure Up Well	Pressure Up Well	1/7/2018	16:43:23	USER	8.32	22.00	0.00	8.0	Kicked in pumps to pressure test backside. Pumped 2bbls and pressure was 67psi, Still had flow on the shakers.
Event	21	Other	Other	1/7/2018	16:50:04	USER	8.32	23.00	0.00	9.1	Kicked in pumps to put 800psi on the DP, tool hand stung out and we rolled the hole.
Event	22	Other	Other	1/7/2018	16:51:19	USER	8.36	553.00	0.00	0.3	Rolled the hole clean. Spacer to surface at 70bbls away, Cement to surface at 130bbls away and hole was clean at 138bbls. Which gave us 8bbls of cement above liner.
Event	23	Pressure Up Well	Pressure Up Well	1/7/2018	17:20:36	COM4	8.30	31.00	0.90	144.2	Lined up to pressure test down drill pipe. Pressured up to 3000psi and pressure bled back.
Event	24	Pressure Up Well	Pressure Up Well	1/7/2018	17:30:34	USER	8.34	30.00	0.00	147.7	Lined up again to pressure test down drill pipe. Pressured up to 3000psi and pressure bled back.
Event	25	Test Lines	Test Lines	1/7/2018	17:36:30	COM4	8.36	2266.00	0.00	150.6	Closed our valves and pressure tested our lines to make sure we were not leaking off somewhere, test was good.
Event	26	Pressure Up Well	Pressure Up Well	1/7/2018	17:41:42	USER	8.34	20.00	0.00	150.6	Lined up again to pressure test down drill pipe. Pressured up to 3000psi and pressure bled back.

Event	27	Other	Other	1/7/2018	18:09:26	USER	8.34	24.00	0.00	155.3	clean and ran back the pumps on the truck.
Event	28	Pressure Up Well	Pressure Up Well	1/7/2018	18:28:20	USER	-0.13	18.00	0.00	210.9	Lined up again to pressure test down drill pipe. Pressured up to 3000psi and pressure bled back.
Event	29	End Job	End Job	1/7/2018	18:40:00	COM4	8.34	21.00	0.00	214.0	Thank you Steve Markovich and crew .

3.0 Attachments

3.1 Newby 26N-33HZ Liner -Custom Results.png

