

*The Road to Excellence Starts with Safety*

Sold To #: 300466	Ship To #: 3811897	Quote #: 0022403579	Sales Order #: 0904625099
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Josh	
Well Name: NEWBY STATE		Well #: 36N-4HZ	API/UWI #: 05-123-45091-00
Field: WATTENBERG	City (SAP): LONGMONT	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-33-3N-68W-589FSL-1485FEL			
Contractor: NABORS DRLG		Rig/Platform Name/Num: NABORS X22	
Job BOM: 7523 7523			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA/HX41066		Srvc Supervisor: Nicholas Peterson	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	13,736'	Job Depth TVD	7,243
Water Depth		Wk Ht Above Floor	5'
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	2288	0	0
Casing	0	5.5	4.892	17	LTC	HCP110	0	13736	0	0
Open Hole Section			7.875				2288	13743	2289	7243

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5	1	WEATH	13,736	Top Plug	5.5	1	WEATH
Wet Shoe Sub	5.5	1	WEATH	13,723.8	Bottom Plug	5.5	1	WEATH
					Plug Container	5.5	1	HES
					Centralizers	5.5	196	WEATH

**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	40.2	4	57	
35.80 gal/bbl		<b>FRESH WATER</b>								

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	ElastiCemLead	ELASTICEM (TM) SYSTEM	560	sack	13.2	1.57	7.53	8	4217
3	EconoCem Tail	ECONOCEM (TM) SYSTEM	830	sack	13.5	1.68	7.99	6	6632
7.99 Gal		<b>FRESH WATER</b>							
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			8	
0.50 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							
5	Biocide Water	Biocide Water	295	bbl	8.34			6	
<b>Cement Left In Pipe</b>									
<b>Amount</b>		5 ft			<b>Reason</b>				<b>Shoe Joint</b>
Mix Water:pH 7.0		Mix Water Chloride:0 ppm			Mix Water Temperature:68 °F				
Cement Temperature:## °F		Plug Displaced by:8.33 lb/gal			Disp. Temperature:68 °F				
Plug Bumped?Yes		Bump Pressure:2,401 psi			Floats Held?Yes				
Cement Returns:0 bbl		Returns Density:10.5 lb/gal			Returns Temperature:## °F				
<b>Comment:</b> 45 BBLs Spacer back to surface.Plug bumped @ 315 bbls displacement, Wet shoe sub ruptured @ 4,613 psi pumped 3 bbls wet shoe.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	2/8/2018	09:30:00	USER					CREW CALLED OUT AT 09:30, REQUESTED ON LOCATION 14:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 10924982, Bulk 660 111566182, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/8/2018	12:30:00	USER					CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Arrive At Loc	Arrive At Loc	2/8/2018	14:00:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 2,288', 5.5" CASING: 17 LB/FT TOTAL 13,735.8', 7.875" HOLE, TD 13,743', SHOE TRAC 11.97', TVD- 7,243'. PUMP FRESH WATER DISPLACEMENT WITH BIOCIDES. CASING LANDED @ 17:00 02/08/2018. RIG CIRCULATED 2 BOTTOMS UP.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/8/2018	14:15:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH

											LOCATION, RIG UP, AND WEATHER.	
Event	5	Rig-Up Equipment	Rig-Up Equipment	2/8/2018	14:30:00	USER						CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Rig-Up Completed	Rig-Up Completed	2/8/2018	15:30:00	USER	0.34	0.00	4.00	0.1		RIG UP COMPLETE WAITED ON RIG TO FINISH RUNNING CASING DUE TO BUFFER ZONE.
Event	7	Other	Other	2/8/2018	15:35:00	USER	0.34	0.00	3.00	0.1		CASING LANDED @ 17:00. RIG CIRCULATED 2 BOTTOMS UP.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/8/2018	18:30:00	USER	8.40	0.00	4.00	0.0		SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	9	Start Job	Start Job	2/8/2018	18:40:04	COM5	8.38	0.00	13.00	0.0		BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	2/8/2018	18:43:03	USER	8.38	0.00	70.00	3.0		PRESSURE TESTED IRON TO 5,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 900 PSI, 5TH GEAR STALL OUT @ 1,930 PSI.
Event	11	Pump Spacer	Pump Spacer	2/8/2018	19:05:23	USER	8.40	0.00	108.00	0.0		PUMP 60 BBLS OF TUNED SPACER @ 10.5 LB/GAL, 20 GALLONS D-AIR, 45 GALS DUAL SPACER B, 45 GALS MUSOL A. CALCULATED HOSPCR @ 1,219.13' TOSPCR CALCULATED @ SURFACE CALCULATED SPACER BACK 1.60 BBLS. DENSITY VERIFIED BY

Event	ID	Description	Material	Date	Time	User	Vol 1	Vol 2	Vol 3	Vol 4	Notes
											PRESSURIZED MUD SCALES. PUMP RATE 4 BBLs/MIN @ 316 PSI.
Event	12	Drop Bottom Plug	Drop Bottom Plug	2/8/2018	19:17:58	USER	10.57	3.80	236.00	45.2	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	13	Pump Lead Cement	Pump Lead Cement	2/8/2018	19:21:12	USER	12.65	3.90	295.00	0.6	PUMPED 560 SKS OF ELASTICEM WITH CBL @ 13.2 LB/GAL, 1.57 FT3/SK, 7.54 GAL/SK. 156.58 BBLs, HOL CALCULATED @ 4,479.59', TOL CALCULATED @ 1,219.13. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLs/MIN 295 PSI.
Event	14	Pump Tail Cement	Pump Tail Cement	2/8/2018	19:49:27	USER	13.58	6.10	362.00	2.8	PUMP 830 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 FT3/SK, 7.99 GAL/SK, 248.34 BBLs. HOT CALCULATED @ 8,036.89', TOT CALCULATED @ 5,698.91'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLs/MIN @ 460 PSI.
Event	15	Clean Lines	Clean Lines	2/8/2018	20:33:31	USER	8.22	2.00	8.00	0.3	CLEANED PUMPS AND LINES WITH 12 BBLs FRESH WATER.
Event	16	Drop Top Plug	Drop Top Plug	2/8/2018	20:37:29	USER	8.57	0.00	46.00	0.0	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	17	Pump Displacement	Pump Displacement	2/8/2018	20:38:48	USER	0.60	0.00	-4.00	0.0	BEGIN CALCULATED DISPLACEMENT OF 318 BBLs WITH FRESH WATER. PUMPED THE FIRST 20 BBLs WITH MMCR, PUMPED 200 BBLs WITH BIOCIDES.
Event	18	Slow Rate	Slow Rate	2/8/2018	21:06:31	USER	8.54	0.30	1509.00	196.3	LOST WATER HAD TO SLOW

											RATE TO KEEP PRIME ON WATER PUMP.
Event	19	Bump Plug	Bump Plug	2/8/2018	21:44:38	USER	8.55	3.20	2387.00	313.5	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,401 PSI PRESSURED 500 PSI OVER BUMP.
Event	20	Test Lines	Test Lines	2/8/2018	21:46:13	USER	8.57	0.00	3119.00	315.4	PRESSURE TESTED CASING @ 3,000 PSI FOR 15 MIN CUSTOMER REQUEST.
Event	21	Shift Tool Lower	Shift Tool Lower	2/8/2018	22:04:43	USER	8.81	0.80	3070.00	1.1	SHIFTED TOOL @ 4,613 PSI. PUMPED 3 BBLs FOR WET SHOE.
Event	22	Check Floats	Check Floats	2/8/2018	22:07:40	USER	8.58	0.00	3.00	0.0	RELEASED PRESSURE, FLOATS HELD, 2 BBLs BACK.
Event	23	End Job	End Job	2/8/2018	22:09:00	COM5	8.57	0.00	0.00	0.0	STOP RECORDING JOB DATA.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/8/2018	22:15:00	USER	1.02	0.00	1.00	0.0	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Equipment	Rig-Down Equipment	2/8/2018	22:30:00	USER					RIG DOWN BULK AND MIXING EQUIPMENT.
Event	26	Rig-Down Completed	Rig-Down Completed	2/8/2018	23:30:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/8/2018	23:45:00	USER					CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	28	Crew Leave Location	Crew Leave Location	2/9/2018	23:55:00	USER					THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

3.0 Attachments

3.1 Anadarko Newby State 36N-4HZ Production Job Chart

