

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3883632		Quote #:		Sales Order #: 0906329068				
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: Roger Foster						
Well Name: EMMY STATE			Well #: H36-766		API/UWI #: 05-123-46979-00					
Field: WATTENBERG		City (SAP): KEENESBURG		County/Parish: WELD		State: COLORADO				
Legal Description: SE SW-25-3N-65W-435FSL-1230FWL										
Contractor: AKITA DRLG				Rig/Platform Name/Num: AKITA 522						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB31357				Srv Supervisor: Mitchell Camper						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11943ft		Job Depth TVD		6973				
Water Depth				Wk Ht Above Floor		6				
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	0	9.625	8.921	36			0	1941	0	1941
Casing	0	5.5	4.892	17			0	11943	0	6973
Open Hole Section			8.5				1941	11958	0	6973
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
						Top Plug	5.5	1	HES	
Float Shoe	5.5			11943		Bottom Plug	5.5	2	HES	
Float Collar	5.5			11896						
						Plug Container	5.5	1	HES	
Fluid Data										
Stage/Plug #: 1										

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Prime Spacer	SBM FDP-C1337-18 CEMENT SPACER SYS	120	bbl	11.5	3.87	24.42	8	4251
0.10 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
1 lbm/bbl		FE-2, 2000 LB BAG - (1005549)							
3.50 lbm/bbl		SEM-94P, 35 LB SACK - (1023987)							
3.50 lbm/bbl		SEM-93P, 35 LB SACK - (1023977)							
145.2420 lbm/bbl		BARITE, BULK (100003681)							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	ElastiCem	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.65	8.4	8	1176
0.33 %		SCR-100, 1200 LB BAG - (1126328)							
8.40 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	504	sack	13.2	1.67	8.05	8	4057
0.23 %		SCR-100, 1200 LB BAG - (1126328)							
8.05 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	NeoCem NT1	NeoCem TM	539	sack	13.2	2.04	9.79	8	5276
0.07 %		SCR-100, 1200 LB BAG - (1126328)							
0.07 %		FE-2, 2000 LB BAG - (1005549)							
9.79 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	MMCR Displacement	MMCR Displacement	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
6	Displacement	Displacement	256	bbl	8.33				

Cementing Job Summary

Cement Left In Pipe	Amount	48 ft	Reason She Track	Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	<300 ppm	Mix Water Temperature:	70 °F
Cement Temperature:	N/A	Plug Displaced by:	8.33 lb/gal F.W.	Disp. Temperature:	68 °F
Plug Bumped?	Yes	Bump Pressure:	2170 psi	Floats Held?	Yes
Cement Returns:	N/A	Returns Density:	N/A	Returns Temperature:	N/A
Comment Plug bumped at calculated displacement, final circulating pressure of 2170 psi, 5 min casing test at 2700 psi, floats held, 3.5 bbl back to the truck. 5 bbl of interface to surface.					

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Other	Call Out	2/23/2020	15:00:00	USER	CREW CALLED OUT AT 1500 2/23/2020, REQUESTED ON LOCATION 2100 2/23/2020. CREW PICKED UP CEMENT, CHEMICALS (40 GAL D-AIR, 10 GAL MMCR, 3 LBS BE-3), 100 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 10897881/10866484, BULK 660: 11593521/10784082, PUMP ELITE: 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/23/2020	17:20:00	USER	DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	2/23/2020	17:30:00	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	2/23/2020	18:30:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1941', CASING: 5.5" 17# @ 11943', 47' SHOE JOINT, 8.5" OPEN HOLE, TVD @ 6973', 10.1PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	2/23/2020	18:40:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	2/23/2020	18:50:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Safety Meeting - Pre Job	Pre-Convoy Safety Meeting	2/23/2020	23:00:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	2/24/2020	00:51:24	COM6	START JOB DATA RECORDING
Event	9	Test Lines	Test Lines	2/24/2020	00:55:05	COM6	KICKOUTS SET @ 500 PSI, KICKED OUT @ 900PSI, 5TH GEAR STALL OUT @ 1850 PSI. PRESSURE TESTED IRON TO 4650 PSI.
Event	10	Test Lines	Test Lines	2/24/2020	00:59:54	COM6	PRESSURE TESTED I-BOP TO 850 PSI
Event	11	Pump Spacer 1	Pump Spacer 1	2/24/2020	01:01:41	COM6	PUMP 120 BBLS OF TUNED SPACER @ 11.5 LB/GAL, ADDED 35 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Shutdown	Shutdown	2/24/2020	01:18:34	COM6	SHUTDOWN TO DROP 2ND BOTTOM PLUG
Event	13	Drop Bottom Plug	Drop Bottom Plug	2/24/2020	01:18:40	COM6	PLUG WAS LOADED DIRECTLY INTO THE LANDING JOINT, VERIFIED BY COMPANY MAN

Event	14	Pump Cap Cement	Pump Cap Cement	2/24/2020	01:24:34	COM6	PUMP 140 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.65 YIELD, 8.4GAL/SK, 41BBLS, CALCULATED TOC @ 2483, DENSITY VERIFIED BY PRESSURIZED MUD SCALES. ADDED 5 GAL OF DAIR.
Event	15	Other	Other	2/24/2020	01:24:56	USER	THE DRILLER FORGOT TO OPEN THE HYDRAULIC SET I-BOP VALVE. HES PRESSURED UP, ONCE PRESSURE WAS BLED OFF AND VALVE WAS CONFIRMED OPEN, WE CONTINUED PUMPING.
Event	16	Pump Lead Cement	Pump Lead Cement	2/24/2020	01:34:22	COM6	PUMP 504 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.67 YIELD, 8.05 GAL/SK, 146BBLS, CALCULATED TOL @ 3488', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	17	Other	Equipment Issue	2/24/2020	01:39:08	USER	THE REAR POD ON 660 #10784082 CONTAINING LEAD CEMENT WOULD NOT OPEN, SWITCHED TO THE LEAD SILO. ONCE WE WERE ABLE TO OPEN THE REAR POD WE SWICHD BACK TO THE 660.
Event	18	Pump Tail Cement	Pump Tail Cement	2/24/2020	01:54:09	COM6	PUMP 539 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 YIELD, 9.79 GAL/SK, 196 BBLS, CALCULATED TOT @ 7164, DENSITY VERIFIED BY PRESSURIZED MUD SCALES
Event	19	Shutdown	Shutdown	2/24/2020	02:22:31	COM6	SHUTDOWN TO DROP TOP PLUG AND CLEAN PUMPS AND LINES AND BLOW DOWN
Event	20	Drop Top Plug	Drop Top Plug	2/24/2020	02:28:16	COM6	TOP PLUG WAS LOADED DIRECTLY INTO LANDING JOINT, VERIFIED BY COMPANY MAN
Event	21	Pump Displacement	Pump Displacement	2/24/2020	02:34:14	COM6	BEGIN CALCULATED DISPLACEMENT 275 BBL FRESH WATER. 10 GAL MMCR IN FIRST 20 BBL, 6 LBS OF BE-3 THROUGH OUT
Event	22	Bump Plug	Bump Plug	2/24/2020	03:14:01	COM6	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 2170 PSI. INTERFACE TO SURFACE.
Event	23	Other	Casing Test	2/24/2020	03:14:12	USER	5 MIN CASING TEST AT 2700 PSI.
Event	24	Check Floats	Check Floats	2/24/2020	03:19:08	USER	RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, 3.5 BBL BACK TO SURFACE
Event	25	End Job	End Job	2/24/2020	03:20:45	COM6	END JOB DATA RECORDING
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	2/24/2020	03:25:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	27	Rig-Down Completed	Rig-Down Completed	2/24/2020	04:00:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	28	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/24/2020	05:20:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	29	Crew Leave Location	Crew Leave Location	2/24/2020	05:30:00	USER	THANK YOU FOR USING HALLIBURTON - MITCHELL CAMPER AND CREW.

3.0 Attachments

3.1 Job Chart

