

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3912265	Quote #:	Sales Order #: 0905698330
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: CRAIG	
Well Name: WELLS RANCH STATE		Well #: AA36-633	API/UWI #: 05-123-48164-00
Field: WATTENBERG	City (SAP): GILL	County/Parish: WELD	State: COLORADO
Legal Description: NW SW-32-6N-62W-2046FSL-817FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 321	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB31357		Srvc Supervisor: Lance Carpenter	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 230 degF
Job depth MD	16912ft		Job Depth TVD 6550
Water Depth			Wk Ht Above Floor 4
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	1947	0	1947
Casing	0	5.5	4.778	17			0	16892	0	6550
Open Hole Section			8.5				1947	16912	0	6550
Open Hole Section			8.5					16889	0	6550

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			16844.6	Top Plug	5.5	1	
Float Shoe	5.5				Bottom Plug	5.5	2	
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 ft/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	80	bbl	11.5	3.79	23.5	5	
0.60 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)							

148.31 lbm/bbl	BARITE, BULK (100003681)
36.09 gal/bbl	FRESH WATER
1 lbm/bbl	FE-2 (100001615)
0.60 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)

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	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.68	8.04	8	8.04

8.06 Gal	FRESH WATER
0.95 %	SCR-100 (100003749)

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	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	453	sack	13.2	1.68	8.06	8	8.06

0.60 %	SCR-100 (100003749)
8.07 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	NeoCem NT1	NeoCem TM	1132	sack	13.2	2.04	9.75	8	9.75

9.75 Gal	FRESH WATER
0.08 %	SCR-100 (100003749)

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	Displacement	Displacement	391	bbl	8.33				

Cement Left In Pipe	Amount	48 ft	Reason	Shoe Joint
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Mix Water: Ph7	Mix Water Chloride: 200 ppm	Mix Water Temperature: 65°F
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Cement Temperature: ## °F °C	Plug Displaced by: ## lb/gal kg/m3 XXXX	Disp. Temperature: ## °F °C
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Plug Bumped?: Yes	Bump Pressure: 1780 psi	Floats Held?: Yes
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Cement Returns: ## bbl m3	Returns Density: ## lb/gal kg/m3	Returns Temperature: ## °F °C
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Comment

JOB WENT WELL, CEMENT WAS WEIGHED AND VERRIFIED ON SCALES. PUMPED 391 BBLS OF DISPLACEMENT WATER AT 10 BPM CAUGHT PRESSURE AT 45 BBLS AWAY, SLOWED RATE TO 3BPM AT 361 BBLS AWAY BUMPED PLUG AND TOOK 500 PSI OVER FINAL CIRCULATING PRESSURE 1780PSI HELD FOR 5 MINS. CHECKED FLOATS AND GOT 4.5 BBLS BACK.

TOP OF TAIL CEMENT 6843'

TOP OF LEAD CEMENT 3534'

TOP OF CAP CEMENT 2529'

15 BBLS OF SPACER BACK TO SURFACE

Real-Time Job Summary

1.2 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	5/18/2019	13:00:00	USER	CREW CALLED OUT FOR JOB
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	5/18/2019	16:00:00	USER	VERRIFIED CORRECT CEMENT VOLUMES WERE LOADED AND EQUIPMENT WAS RUNNING. HAD PRE CONVOY SAFETY MEETING WITH CREW AND DISCUSSED SAFE FOLLOWING DISTANCES, WILD LIFE AND ROUTE TO LOCATION.
Event	3	Arrive At Loc	Arrive At Loc	5/18/2019	17:40:00	USER	CREW ARRIVED ON LOCATION, RIG WAS STILL RUNNING CASING.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/18/2019	18:00:00	USER	HAD PRE RIG UP SAFETY MEETING WITH CREW AND DISCUSSED USING A SPOTTER WHILE BACKING, TEAM CARRY, SLIP, TRIPS, FALLS AND PINCH POINTS. CREW RIGGED UP.
Event	5	Casing on Bottom	Casing on Bottom	5/18/2019	18:45:00	USER	RIG CREW LANDED CASING ON BOTTOM AND STARTED CIRCULATING WELL.

Event	6	Safety Meeting	Safety Meeting	5/18/2019	21:00:00	USER	HAD SAFTEY MEETING WITH RIG CREW AND HES HANDS, DISCUSSED S.W.A, MUSTER AREA, NEAREST HOSPITAL, SLIP, TRIPS AND FALLS, PRESSURE TESTING, AND GOOD COMMUNICATION.
Event	7	Start Job	Start Job	5/18/2019	21:34:49	COM6	START JOB
Event	8	Test Lines	Test Lines	5/18/2019	21:52:54	COM6	PRESSURE TESTED HES LINES TO 4500PSI
Event	9	Test Lines	Test Lines	5/18/2019	21:57:24	COM6	PRESSURE TESTED AGAINST RIGS VALVE TO 2500PSI
Event	10	Drop Bottom Plug	Drop Bottom Plug	5/18/2019	22:00:00	USER	DROP BOTTOM PLUG WITH COMPANY MAN ON RIG FLOOR.
Event	11	Pump Spacer 1	Pump Spacer 1	5/18/2019	22:04:32	COM6	PUMPED 120 BBLS OF TUNED SPACER 11.5PPG 3.79 YIELD 23.5 GAL
Event	12	Pump Cement	Pump Cement	5/18/2019	22:43:23	COM6	PUMPED 41BBLS OF CAP (ELASTICEM) CEMENT 13.2PPG 1.68 YIELD 8.04 GAL 140 SKS
Event	13	Drop Bottom Plug	Drop Bottom Plug	5/18/2019	22:44:00	USER	DROP 2ND BOTTOM PLUG WITH COMPANY MAN ON RIG FLOOR.
Event	14	Pump Lead Cement	Pump Lead Cement	5/18/2019	22:55:29	COM6	PUMPED 135 BBLS OF LEAD (ELASTICEM) CEMENT 13.2 PPG 1.68 YIELD 2.06 GAL 453SKS
Event	15	Pump Tail Cement	Pump Tail Cement	5/18/2019	23:16:26	COM6	PUMPED 411 BBLS OF (NEOCEM) TAIL CEMENT 13.2PPG 2.04 YIELD 9.75 GAL 1132SKS.

Event	16	Drop Top Plug	Drop Top Plug	5/19/2019	00:16:07	COM6	DROP TOP PLUG WITH COMPANY MAN ON RIG FLOOR.
Event	17	Clean Lines	Clean Lines	5/19/2019	00:16:14	COM6	RIG BLEW DOWN IRON TO WASH UP TANK. HES WASHED PUMPS AND LINES.
Event	18	Pump Displacement	Pump Displacement	5/19/2019	00:26:50	COM6	PUMPED 391 BBLS OF DISPLACEMENT WATER WITH MMCR IN THE FIRST 20 BBLS AND BIOCIDES THROUGH. CAUGHT PRESSURE AT 45 BBLS AWAY.
Event	19	Bump Plug	Bump Plug	5/19/2019	01:12:04	COM6	SLOWED RATE TO 3BPM TO BUMP PLUG TOOK 500 PSI OVER FINAL CIRCULATING PRESSURE 1780PSI HELD FOR 5 MINS.
Event	20	Check Floats	Check Floats	5/19/2019	01:15:00	USER	CHECKED FLOATS AND GOT 4.5 BBLS BACK.
Event	21	End Job	End Job	5/19/2019	01:17:33	COM6	END JOB
Event	22	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	5/19/2019	01:30:00	USER	HAD PRE RIG DOWN SAFETY MEETING WITH CREW AND DISCUSSED PINCH POINTS, TEAM CARRY, SLIP, TRIPS AND FALLS, 40' BUFFER ZONE AND USING A SPOTTER WHILE BACKING UP.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/19/2019	02:30:00	USER	HAD PRE CONVOY SAFETY MEETING WITH CREW AND DISCUSSED SAFE FOLLOWING DISTANCE, WILD LIFE AND ROUTE TO LEAVE LOCATION. CREW LEAVES RIG.

