

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3912298	Quote #:	Sales Order #: 0905693303
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: JOHN DRAJOTA	
Well Name: WELLS RANCH STATE		Well #: AA36-683	API/UWI #: 05-123-48163-00
Field: WATTENBERG	City (SAP): GILL	County/Parish: WELD	State: COLORADO
Legal Description: SW NW-32-6N-62W-1934FNL-814FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 517	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB31357		Srvc Supervisor: Vitali Neverdasov	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	17157ft	Job Depth TVD	6544
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			0	1930	0	0
Casing	0	5.5	4.892	17			0	17157	0	6544
Open Hole Section			8.5				1930	17177	1930	6544

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5	1	N/A	17157	Bottom Plug	5.5	2	HES
Float Collar	5.5	1	N/A	17109	SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5	291	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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	120	bbl	11.5	3.79		5	
34.70 gal/bbl		FRESH WATER							
0.60 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)							

148.31 lbm/bbl	BARITE, BULK (100003681)								
0.60 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
1 lbm/bbl	FE-2 (100001615)								
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		5	8.04
8.04 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	471	sack	13.2	1.68		6	8.06
0.60 %		SCR-100 (100003749)							
8.06 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	1144	sack	13.2	2.04		7	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	397	bbl	8.33			8	
Cement Left In Pipe	Amount	48 ft		Reason	Shoe Joint				
Comment: ESTIMATED TOP OF CAC CEMENT @ 2490'. TOP OF LEAD @ 3517'. TOP OF TAIL @ 6970'. NO SPACER BACK 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	Call Out	Call Out	5/14/2019	21:00:00	USER	ON LOCATION @ 03:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	5/14/2019	23:00:00	USER	HELD JSA PRIOR LEAVING THE YARD
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	5/14/2019	23:30:00	USER	
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	5/15/2019	02:50:00	USER	56 MILES. DISCUSS NUMBERS AND PROCEDURE WITH CUSTOMER. RIG IS RUNNING CASING.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/15/2019	03:15:00	USER	JSA PRIOR SPOTTING EQUIPMENT AND RIGGING UP
Event	6	Other	SPOT TRUCKS	5/15/2019	03:25:00	USER	SPOT TRUCKS
Event	7	Other	RIG UP	5/15/2019	03:30:00	USER	RIG UP ALL SURFACE LINES TO THE BUFFER ZONE
Event	8	Casing on Bottom	Casing on Bottom	5/15/2019	08:30:00	USER	CASING LANDED
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/15/2019	09:46:00	USER	DISCUSS HAZARDS AND JOB PROCEDURE WITH ALL PERSONAL INVOLVED
Event	10	Start Job	Start Job	5/15/2019	10:05:00	USER	
Event	11	Pressure Test	Pressure Test	5/15/2019	10:14:00	USER	LOAD LINE AND TEST TO 4903 PSI
Event	12	Drop Bottom Plug	Drop 1ST Bottom Plug	5/15/2019	10:21:00	USER	CUSTOMER DROP 1ST BOTTOM PLUG

Event	13	Pump Spacer	Pump Spacer	5/15/2019	10:24:00	USER	BATCH/ WEIGHT/ PUMP 120 BBLS OF TUNED SPACER III @ 11.5 PPG WITH SURFACTANS
Event	14	Drop Bottom Plug	Drop 2ND Bottom Plug	5/15/2019	10:52:00	USER	CUSTOMER DROP 2ND BOTTOM PLUG
Event	15	Pump Cap Cement	Pump Cap Cement	5/15/2019	10:55:00	USER	BATCH/ WEIGHT/PUMP 140 SKS (41.9 BBLS) OF ELASTICEM NO CBL @ 13.2 PPG.
Event	16	Pump Lead Cement	Pump Lead Cement	5/15/2019	11:06:00	USER	WEIGHT/ PUMP 471 SKS (140.9 BBLS) OF ELASTICEM @ 13.2 PPG.
Event	17	Pump Tail Cement	Pump Tail Cement	5/15/2019	11:36:00	USER	WEIGHT/ PUMP 1144 SKS (415.6 BBLS) OF NEOCEM @ 13.2 PPG.
Event	18	Shutdown	Shutdown	5/15/2019	12:46:00	USER	FINISHED PUMPING CEMENT
Event	19	Clean Lines	Clean Lines	5/15/2019	12:49:00	USER	WASH PUMPS AND LINES.
Event	20	Drop Top Plug	Drop Top Plug	5/15/2019	12:59:00	USER	CUSTOMER DROP TOP PLUG.
Event	21	Pump Displacement	Pump Displacement	5/15/2019	13:02:00	USER	396.9 BBLS OF FRESH WATER DISPLACEMENT. FIRST 20 BBLS WIRH MMCR, REMAINING WITH BIOCID. LAST 50 BBLS FRESH WATER.
Event	22	Bump Plug	Bump Plug	5/15/2019	13:48:00	USER	BUMP PLUG @ 2456 PSI 500 OVER FINAL LIFT PRESSURE.
Event	23	Check Floats	Check Floats	5/15/2019	13:56:00	USER	FLOATS HELD
Event	24	End Job	End Job	5/15/2019	13:59:00	USER	JOB IS COMPLETE
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/15/2019	14:05:00	USER	HELD JSA PRIOR TO RIG DOWN

3.0 Attachments

3.1 Job Chart

