

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3629212		Quote #:		Sales Order #: 0902952572					
Customer: NOBLE ENERGY INC E-BUSINESS				Customer Rep: JOSH KANWISCHER							
Well Name: MOSER			Well #: H22-711			API/UWI #: 05-123-40757-00					
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO					
Legal Description: NE NE-27-3N-65W-380FNL-501FEL											
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 343						
Job BOM: 7525											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HB45834					Srv Supervisor: Christopher Pickell						
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type		BHST			230 degF						
Job depth MD		17410ft			Job Depth TVD 7000ft						
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	3	4	2	29		P-110	0	1733	0	1732	
Casing	3	7	6.276	26		P-110	0	7367	0	7000	
Drill Pipe	3	4	3.34	14		P-110	1733	7154	1732	6492	
Casing	3	4.5	4	11.6		P-110	7154	17408	0	7000	
Open Hole Section			6.125				7387	17410	0	7000	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make			
Guide Shoe	4.5				Top Plug	4.5	1	BAKER			
Float Shoe	4.5			17408	Bottom Plug	4.5					
Float Collar	4.5			17366	SSR plug set	4.5					
Insert Float	4.5				Plug Container	4.5					
Stage Tool	4.5				Centralizers	4.5					
Fluid Data											
Stage/Plug #: 1											
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	12.0 lb/gal Tuned Spacer III	Tuned Spacer III			60	bbl	12	3.22		6	
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

last updated on 12/7/2015 5:19:29 AM

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2	Expandacem B2	EXPANDACEM (TM) SYSTEM	150	sack	13.8	1.65	7.58	4	
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	Expandacem B2	EXPANDACEM (TM) SYSTEM	555	sack	13.8	1.65	7.58	4	
7.59 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	MMCR Displacemnt Water	MMCR Displacemnt Water	20	bbl	8.33			6	
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
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	Water Displacement	Water Displacement	208.2	bbl	8.33			6	
Cement Left In Pipe	Amount	42 ft		Reason	Shoe Joint				
Comment ALL CEMENT SCALED WITHIN RANGE. ONCE 7 INCH CASING WAS ROLLED CLEAN WE RETURNED ALL 60 BBL OF SPACER AND 15 BBL CEMENT.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Downhole Density <i>(ppg)</i>	Combined Pump Rate <i>(bbl/min)</i>	Pass-Side Pump Pressure <i>(psi)</i>	Comments
Event	1	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/6/2015	11:15:00	USER				Safety meeting held with rig crew to discuss job safety and procedure
Event	2	Call Out	Call Out	12/6/2015	14:30:00	USER				Crew called out at 14:30 to be on location at 19:30. Crew was Chris Pickell, Nick Roles, Devin Cook, Prince Perez
Event	3	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	12/6/2015	17:45:00	USER				Safety meeting held for journey. Equipment double checked. Left the yard for H&P 343.
Event	4	Arrive At Loc	Arrive At Loc	12/6/2015	18:30:00	USER				Arrive on location 1 hour early. Rig was beginning circulating 1 bottoms up.
Event	5	Other	Well Data	12/6/2015	18:31:00	USER				TD 17410' 6 1/8" OH. TP 17408' 4 1/2" 11.6#. SJ 41.75'. TOL 7154.21'. INT 7367'. TVD 7000'. WF 10.3#. HWDP 0'-1732.9'. DP 1733'-5423.7'.
Event	6	Other	Water Test	12/6/2015	18:32:00	USER				TEMP 76 DEGREES. PH 7. IRON 0. CHLORIDE 0. TH 215. SULFATE <200.
Event	7	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/6/2015	18:35:00	USER				Safety meeting held for rig up. Hazard hunt performed. Spotted in trucks and rigged up all equipment.
Event	8	Start Job	Start Job	12/7/2015	00:46:08	COM6	8.30	0.00	67.00	
Event	9	Test Lines	Test Lines	12/7/2015	00:47:43	COM6	8.78	0.00	149.00	Pressure tested lines to 4500 psi. Checked for visible leaks and pressure loss
Event	10	Pump Spacer 1	Pump Spacer 1	12/7/2015	00:57:04	COM6	8.64	0.00	135.00	Pump 60 bbl of Tuned Spacer 12 ppg 3.22 yield 20.2 gal/sk
Event	11	Check Weight	Check weight	12/7/2015	00:59:06	COM6	12.38	3.00	733.00	Spacer scaled at 12.1 ppg
Event	12	Pump Lead Cement	Pump Lead Cement	12/7/2015	01:13:54	COM6	11.76	0.00	120.00	Pump 44 bbl 150 sks of Lead Expandacem cement 13.8 ppg 1.65 yield 7.57 gal/sk

Event	13	Check Weight	Check weight	12/7/2015	01:16:44	COM6	11.68	0.00	67.00	Cement scaled at 14 ppg
Event	14	Check Weight	Check weight	12/7/2015	01:20:20	COM6	13.88	4.10	327.00	Cement scaled at 13.9 ppg
Event	15	Pump Tail Cement	Pump Tail Cement	12/7/2015	01:29:24	COM6	13.91	4.00	314.00	Pump 163 bbl of Tail Expandacem cement 13.8 ppg 1.65 yield 7.57 gal/sk
Event	16	Check Weight	Check weight	12/7/2015	01:39:44	COM6	13.92	4.00	312.00	Cement scaled at 14 ppg
Event	17	Shutdown	Shutdown	12/7/2015	02:15:55	USER	13.70	4.00	285.00	
Event	18	Clean Lines	Clean Lines	12/7/2015	02:17:45	USER	14.02	0.00	60.00	Wash pumps and lines to the cellar
Event	19	Drop Top Plug	Drop Top Plug	12/7/2015	02:24:59	COM6	8.08	0.00	67.00	Baker Hughes tool hand dropped wiper dart from his plug container
Event	20	Pump Displacement	Pump Displacement	12/7/2015	02:25:08	COM6	8.08	0.00	67.00	Pump displacement using water. First 20 bbl 10 gallons of MMCR was added in.
Event	21	Other	Catch Plug	12/7/2015	02:41:51	USER	8.14	2.90	2989.00	Catch wiper plug with 2989 psi
Event	22	Other	Catch Plug	12/7/2015	02:43:16	USER	8.15	2.90	2555.00	Catch wiper plug with 2555 psi
Event	23	Bump Plug	Bump Plug	12/7/2015	03:25:40	COM6	8.14	0.00	2915.00	Land plug with 1850 psi shutting down with 2900 PSI
Event	24	Other	Check Floats	12/7/2015	03:26:48	COM6	8.13	0.00	2939.00	Pressure was held for 1 minute then released. Floats held. 2 bbl back to the tanks
Event	25	End Job	End Job	12/7/2015	03:28:16	COM6	8.07	0.00	65.00	Ended the job and turned well back over to rig. The rig then stomped the packer. Had a successful 2000 psi 10 minute backside test, and circulated all 60 bbl of spacer and 15 bbl of cement back to surface when rolling the 7 inch.
Event	26	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/7/2015	03:30:00	USER				Safety meeting held for rig down. Rigged down all equipment
Event	27	Safety Meeting - Departing Location	Safety Meeting - Departing Location	12/7/2015	05:30:00	USER				Safety meeting held for journey. Left location for the yard