

HALLIBURTON

*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 345242		Ship To #: 3629230		Quote #:		Sales Order #: 0902939868				
Customer: NOBLE ENERGY INC E-BUSINESS				Customer Rep: JOHN DRAHOTA						
Well Name: MOSER		Well #: H22-715		API/UWI #: 05-123-40754-00						
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: NE NE-27-3N-65W-380FNL-524FEL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 343						
Job BOM: 7525										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB45834				Srvc Supervisor: Joseph Fantasia						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST		230 degF				
Job depth MD		15896ft		Job Depth TVD		6984				
Water Depth				Wk Ht Above Floor		8				
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	3.34	14	BTC	P-110	0	7156	0	6492
Casing	3	7	6.276	26	BTC	P-110	0	7384	0	6492
Casing	3	4.5	4	11.6	BTC	P-110	7156	15896	0	0
Open Hole Section			6.125		BTC		7384	15900	0	0
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		5		
174.45 lbm/bbl		BARITE, BULK (100003681)								
35.30 gal/bbl		FRESH WATER								
Fluid Data										
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	Expandacem B2	EXPANDACEM (TM) SYSTEM	150	sack	13.8	1.65	7.58	5	7.58	
Fluid Data										
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	Expandacem B2	EXPANDACEM (TM) SYSTEM	460	sack	13.8	1.65	7.59	5	7.59	

iCem® Service

(v. 4.2.393)

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7.59 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	MMCR Displacement Water	MMCR Displacement Water	20	bbl	8.33			5		
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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
5	Water Displacement	Water Displacement	184	bbl	8.33			5		
Cement Left in Pipe		Amount	42 ft		Reason			Shoe Joint		
Mix Water:		7	Mix Water Chloride:		0			Mix Water Temperature:		38
Comment APPROX 60 BBLS SPACER AND 5 BBLS CEMENT TO SURFACE.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbl/min)	Downhole Density (ppg)	Pass-Side Pump Pressure (psi)	Comments
Event	1	Arrive at Location from Service Center	Arrive at Location from Service Center	11/28/2015	02:30:00	USER				ARRIVE AT LOCATION @ 0230. REQUESTED AT 0330. RIG RUNNING IN LINER. HELD SITE ASSESSMENT AND PRE RIG UP SAFETY MEETING WITH CREW PRIOR TO RIGGING UP EQUIPMENT.
Event	2	Casing on Bottom	Casing on Bottom	11/28/2015	06:00:00	USER				CASING ON BOTTOM. RIG TO CIRCULATE 2 HRS THEN DROP BALLS TO SET HANGER WITH RIG. CIRCULATING 4 BBLS/MIN 800 PSI. MUD WEIGHT 10.2 PPG.
Event	3	Start Job	Start Job	11/28/2015	09:46:06	COM5				HELD PRE JOB SAFETY MEETING WITH ALL PRESENT PERSONNEL.
Event	4	Test Lines	Test Lines	11/28/2015	10:05:24	COM5	0.00	9.01	4650.00	PRESSURE TEST LINES TO 4500 PSI.
Event	5	Pump Spacer 1	Pump Spacer 1	11/28/2015	10:08:14	COM5	2.50	12.26	389.00	PUMP 60 BBLS TUNED SPACER MIXED AT 12 PPG USING SUPPLIED WATER. DENSITY VERIFIED BY SCALE.
Event	6	Pump Cement	Pump Cement	11/28/2015	10:23:06	COM5	5.60	13.80	291.00	PUMP 180 BBLS (610 SKS) EXPANDACEM MIXED AT 13.8 PPG USING SUPPLIED WATER. DENSITY VERIFIED BY SCALE. FIRST 150 SKS NO SUPER CBL.
Event	7	Shutdown	Shutdown	11/28/2015	11:02:10	COM5	0.00	14.08	91.00	
Event	8	Clean Lines	Clean Lines	11/28/2015	11:03:29	COM5	0.00	14.50	19.00	CLEAN PUMPS AND LINES TO CELLAR.
Event	9	Drop Top Plug	Drop Top Plug	11/28/2015	11:08:15	COM5	0.00	8.07	13.00	3RD PARTY DART DROPPED BY 3RD PARTY.
Event	10	Pump Displacement	Pump Displacement	11/28/2015	11:08:32	COM5	0.00	8.12	9.00	DISPLACE USING 204 BBLS WATER. 8 GALLONS MMCR ADDED TO FIRST 20 BBLS. GOOD RETURNS THROUGHOUT.
Event	11	Bump Plug	Bump Plug	11/28/2015	11:53:06	COM5	2.00	8.60	1640.00	PLUG LANDED AT 1640 PSI. PRESSURE BROUGHT TO 2500 PSI AND HELD 1 MIN.
Event	12	Check Floats	Check Floats	11/28/2015	11:55:20	USER	0.00	8.60	3039.00	FLOATS HELD. 2.25 BBLS BACK TO TRUCK.
Event	13	End Job	End Job	11/28/2015	11:59:32	COM5	0.00	8.44	12.00	RIG PERFORMED BACKSIDE PRESSURE TEST AND

CIRCULATE OFF LINER. COULD NOT GET GOOD
PRESSURE TEST SO RIG PUMPED 164 BBLS MUD TO
CLEAN. APPROX 60 BBLS SPACER AND 5 BBLS CEMENT
TO SURFACE.

Event	14	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/28/2015	12:15:00	USER	HELD PRE RIG DOWN SAFETY MEETING PRIOR TO RIGGING DOWN EQUIPMENT.
Event	15	Depart Location	Depart Location	11/28/2015	12:30:00	USER	JOURNEY MGMNT PRIOR TO LEAVING.