

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3727939	Quote #:	Sales Order #: 0903762407							
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: JW Irwin								
Well Name: EARP FEDERAL	Well #: LC23-745	API/UWI #: 05-123-42940-00								
Field: WILDCAT	City (SAP): KEOTA	County/Parish: WELD	State: COLORADO							
Legal Description: SW SE-11-9N-59W-363FSL-2360FEL										
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 524								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB61755		Srv Supervisor: Nathaniel Moore								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	16478ft	Job Depth TVD								
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	1931	0	1931
Casing		5.5	4.778	20			0	16470	0	0
Open Hole Section			8.5				1929	16479	1931	6010
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			16470		Bottom Plug	5.5	2	HES	
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 ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.78				
147.42 lbm/bbl		BARITE, BULK (100003681)								
36.09 gal/bbl		FRESH WATER								
0.40 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.40 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								

last updated on 3/2/2017 10:34:01 AM

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iCem® Service

(v. 4.3.44)

Created: Tuesday, January 17, 2017

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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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79			
147.42 lbm/bbl		BARITE, BULK (100003681)							
35.90 gal/bbl		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
3	ElastiCem	ELASTICEM™ SYSTEM	150	sack	13.2	1.57		5	7.53
7.53 Gal		FRESH WATER							
0.30 %		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
4	ElastiCem W /CBL	ELASTICEM™ SYSTEM	495	sack	13.2	1.6		5	7.68
0.30 %		SCR-100 (100003749)							
7.68 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
5	NeoCem Tail	NeoCem TM	1220	sack	13.2	2.04		5	9.75
9.75 Gal		FRESH WATER							
0.05 %		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
6	Displacement	Displacement	365	bbl	8.33				
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
15 bbl spacer to surface									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	1/8/2017	15:00:00	USER				OL time 2300. Verify equipment and materials
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	1/9/2017	21:00:00	USER				
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	1/9/2017	22:30:00	USER				Sign in with customer. Spot in and rig up equipment.
Event	4	Other	Meet with customer rep	1/9/2017	01:00:00	USER				TD 16478' 8.5" open hole. TP 16470.7' 5.5" 20# P-110. SJ 43.26'. Surface 1931' 9.625" 36# J-55. TVD 6010'. MW 9.5 ppg oil based mud.
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/9/2017	02:30:00	USER				Discuss job procedure with HES and rig crew.
Event	6	Start Job	Start Job	1/9/2017	03:05:00	COM1				Fill lines 3 bbl water
Event	7	Test Lines	Test Lines	1/9/2017	03:11:55	COM1	5078.00	8.74	0.00	500 psi kickout test and 4800 psi pressure test
Event	8	Drop Bottom Plug	Drop Bottom Plug	1/9/2017	03:15:00	USER	264.00	8.60	0.00	
Event	9	Pump Spacer 1	Pump Spacer 1	1/9/2017	03:27:40	COM1	184.00	12.05	2.90	80 bbl tuned spacer 11.5 ppg 3.78 ft3/sk 23.8 gal/sk. Surfactant in first 40 bbl.
Event	10	Check Weight	Check weight	1/9/2017	03:30:27	COM1	360.00	11.25	4.00	11.5 ppg verified with pressurized scales
Event	11	Drop Bottom Plug	Drop Bottom Plug	1/9/2017	03:43:32	COM1	67.00	11.72	0.00	
Event	12	Check Weight	Check weight	1/9/2017	03:51:34	COM1	31.00	11.63	0.00	Lead 13.2 ppg
Event	13	Pump Lead Cement	Pump Lead Cement	1/9/2017	03:55:43	COM1	294.00	13.24	4.00	150 sks 1st lead 13.2 ppg 1.57 ft3/sk 7.54 gal/sk
Event	14	Pump Lead Cement	Pump Lead Cement	1/9/2017	04:02:15	COM1	586.00	13.24	6.00	495 sks /141 bbl 2nd lead 13.2 ppg 1.6 ft3/sk 7.69 gal/sk
Event	15	Check Weight	Check weight	1/9/2017	04:02:42	COM1	634.00	13.29	6.00	13.2 ppg
Event	16	Pump Tail Cement	Pump Tail Cement	1/9/2017	04:26:18	COM1	292.00	13.20	4.00	1220 sks tail 13.2 ppg 2.04 ft3/sk 9.75 gal/sk
Event	17	Check Weight	Check weight	1/9/2017	04:26:53	COM1	305.00	13.13	4.00	13.2 ppg

Event	18	Shutdown	Shutdown	1/9/2017	05:29:38	COM1	132.00	13.16	0.00	Wash pumps and lines and blow down iron with rig air.
Event	19	Drop Top Plug	Drop Top Plug	1/9/2017	05:44:25	COM1	-16.00	8.13	0.00	Witnessed by company rep
Event	20	Pump Displacement	Pump Displacement	1/9/2017	05:44:29	COM1	-16.00	8.13	0.00	365 bbl water displacement with MMCR in first 20 bbl.
Event	21	Other	Spacer to surface	1/9/2017	06:19:03	USER	2764.00	8.24	9.30	15 bbl spacer to surface
Event	22	Bump Plug	Bump Plug	1/9/2017	06:23:06	COM1	3123.00	8.23	0.00	Final circulating pressure 2700 psi. Pressured up to 3100 psi and held for 5 minutes.
Event	23	Other	Check Floats	1/9/2017	06:27:10	USER				5 bbl back. Floats held.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/9/2017	06:28:00	USER				
Event	25	End Job	End Job	1/9/2017	06:31:42	COM1				
Event	26	Depart Location Safety Meeting	Depart Location Safety Meeting	1/9/2017	08:00:00	USER				