

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3727938	Quote #:	Sales Order #: 0903752478
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: DAVE NELSON	
Well Name: EARP FEDERAL	Well #: LC23-740	API/UWI #: 05-123-42942-00	
Field: WILDCAT	City (SAP): KEOTA	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-11-9N-59W-363FSL-2322FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 524	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB61755		Srvc Supervisor: Andrew Brennecke	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	16776ft	Job Depth TVD	6049
Water Depth		Wk Ht Above Floor	3
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	1929	0	1929
Casing		5.5	4.778	20			0	16776	0	0
Open Hole Section			8.5				1929	16776	1929	6049

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	
Float Shoe	5.5	1		16776	Bottom Plug	5.5	1	
Float Collar	5.5	1		16727	SSR plug set			
Insert Float					Plug Container			
Stage Tool					Centralizers			

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	40	bbl	11.5	3.78		4		
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)								
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		4		
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 (TM) SYSTEM	150	sack	13.2	1.57		6.5	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 (TM) SYSTEM	540	sack	13.2	1.6		7	7.69	
0.30 %		SCR-100 (100003749)								
7.69 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	1225	sack	13.2	2.04		7.5	9.71	
9.71 Gal		FRESH WATER								
0.06 %		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	369.7	bbl	8.33			10		
Cement Left In Pipe		Amount	49 ft		Reason			Shoe Joint		

Mix Water:	pH 7	Mix Water Chloride:	0 ppm	Mix Water Temperature:	65 °F
Cement Temperature:		Plug Displaced by:	8.4 lb/gal	Disp. Temperature:	
Plug Bumped?	Yes	Bump Pressure:	2600 psi MPa	Floats Held?	Yes
Cement Returns:	0 bbl	Returns Density:		Returns Temperature:	
Comment					

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	1/2/2017	07:00:00	USER	
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/2/2017	10:00:00	USER	ALL HES PRESENT
Event	3	Crew Leave Yard	Crew Leave Yard	1/2/2017	10:30:00	USER	ON LOCATION TIME CHANGED TO 15:30
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	1/2/2017	13:40:00	USER	RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	1/2/2017	15:30:00	USER	
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/2/2017	15:45:00	USER	ALL HES PRESENT
Event	7	Rig-Up Completed	Rig-Up Completed	1/3/2017	17:45:00	USER	1-ELITE, 3-660 BULK TRAILER, 2-SILO, 2" LOTORQ, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/3/2017	20:30:00	USER	ALL HES AND RIG CREW PRESENT
Event	9	Drop Bottom Plug	DROP BOTTOM PLUG	1/3/2017	20:40:00	USER	RIG LOADED BOTTOM PLUG INTO CASING
Event	10	Start Job	Start Job	1/3/2017	22:19:00	COM5	TD-16776', TVD-6049', TP-16776.4', SJ-49.13', CSG-5.5" 20# P110, OH-8.5", SCSG-9.625" 36# 0-1929', MUD-9.4PPG JOB START DELAYED ICE BLOCKAGE IN AIR SYSTEM ON PUMP TRUCK
Event	11	Prime Pumps	Prime Pumps	1/3/2017	22:21:01	USER	FRESH WATER
Event	12	Test Lines	Test Lines	1/3/2017	22:28:10	USER	PRESSURE HELD ON RIGS LINE
Event	13	Test Lines	Test Lines	1/3/2017	22:34:35	COM5	ALL PRESSURE HELD
Event	14	Pump Spacer 1	Pump Spacer 1	1/3/2017	22:44:36	COM5	40BBLs TUNED SPACER III, 11.5PPG, 3.78CF/SK, 23.8GAL/SK, 15 GAL DUAL SPACER, 15 GAL MUSAL

Event	15	Pump Spacer 2	Pump Spacer 2	1/3/2017	22:55:20	COM5	40BBLs TUNED SPACER III, 11.5PPG, 3.79CF/SK, 24.4GAL/SK
Event	16	Pump Lead Cement	Pump Lead Cement	1/3/2017	23:05:12	COM5	ELASTICEM W/O CBL 150SKS, 13.2PPG, 1.57CF/SK, 7.53GAL/SK
Event	17	Pump Lead Cement	Pump Lead Cement	1/3/2017	23:16:11	COM5	ELASTICEM 540SKS, 13.2PPG, 1.6CF/SK, 7.69GAL/SK
Event	18	Pump Tail Cement	Pump Tail Cement	1/3/2017	23:40:25	COM5	NEOCEM 1225SKS, 13.2PPG, 2.04CF/SK, 9.71GAL/SK
Event	19	Shutdown	Shutdown	1/3/2017	00:11:43	USER	CEMENT LINE PACKED OFF
Event	20	Shutdown	Shutdown	1/3/2017	01:02:14	USER	
Event	21	Clean Lines	Clean Lines	1/3/2017	01:09:09	COM5	RIG BLEW LINES BACK, WASHED TRUCK UP INTO 4 SIDED TANK
Event	22	Drop Top Plug	Drop Top Plug	1/3/2017	01:16:11	USER	PLUG LOADED BY COMPANY REP
Event	23	Pump Displacement	Pump Displacement	1/3/2017	01:16:55	COM5	FRESH WATER WITH 10GAL MMCR
Event	24	Shutdown	Shutdown	1/3/2017	01:32:47	USER	SHUTDOWN NO WATER TO TRUCK WITH ALL TANKS OPEN
Event	25	Slow Rate	Slow Rate	1/3/2017	02:04:10	USER	
Event	26	Bump Plug	Bump Plug	1/3/2017	02:04:25	COM5	
Event	27	Check Floats	Check Floats	1/3/2017	02:11:20	USER	
Event	28	End Job	End Job	1/3/2017	02:13:00	COM5	
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/3/2017	02:27:00	USER	
Event	30	Crew Leave Location	Crew Leave Location	1/3/2017	04:00:00	USER	