

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3748128	Quote #:	Sales Order #: 0903574613
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Stetson Nielsen	
Well Name: ELLIE	Well #: LD26-635	API/UWI #: 05-123-43319-00	
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO
Legal Description: SE SE-28-0N-58W-1283FSL-330FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 517	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB61755		Srvc Supervisor: Vaughn Oteri	
Job			

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST 230 degF
Job depth MD	16070ft 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	1927	0	1927
Casing		5.5	4.778	20			0	16056	0	5333
Open Hole Section			8.5				1927	16070	1927	5333

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			16056	Bottom Plug	5.5	1	HES	
Float Collar	5.5			16013	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		5		
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79		5		

last updated on 10/6/2016 9:43:10 AM

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	Elasticem Lead w/o CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.53	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	ElastiCem Lead W/ CBL	ELASTICEM (TM) SYSTEM	460	sack	13.2	1.61		8	7.68	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
5	EconoCem Tail	ECONOCEM (TM) SYSTEM	1436	sack	13.5	1.68		8	7.98	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
6	Displacement	Displacement	353.88	bbl	8.33			8		
Cement Left In Pipe										
Amount		46 ft			Reason			Shoe Joint		
Comment 53bbl of spacer back to surface										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	10/2/2016	22:30:00	USER				Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	10/3/2016	04:00:00	USER				Arrived on location met with company rep to discuss job process and concerns advised that they had 2 racks of casing left to run and would be on bottom around 600am and it was safe for HES to start rigging up
Event	3	Other	Other	10/3/2016	04:03:00	USER				TD-16070 TP-16056 FC-16013 Surf-1927 OH-8.5 Casing-5.5 20# KOP-5333
Event	4	Start Job	Start Job	10/3/2016	08:40:35	COM4				Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	10/3/2016	08:47:46	COM4	4163.00	8.64	0.00	Pressure tested pumps and lines with fresh water, found no leaks and pressure held good 4170psi
Event	6	Test Lines	Test Lines	10/3/2016	08:50:52	COM4	3393.00	8.63	0.00	Pressure tested IBOP. Pressure didn't hold well. Released pressure and advised rig
Event	7	Other	Other	10/3/2016	08:54:51	USER	2999.00	8.61	0.00	IBOP Test failed. Rig hands pumped water through to wash any debris clear of valve. Retested to IBOP 2930psi
Event	8	Drop Bottom Plug	Drop Bottom Plug	10/3/2016	08:56:15	COM4				Released bottom plug witnessed by company rep
Event	9	Pump Spacer 1	Pump Spacer 1	10/3/2016	09:11:00	COM4	180.00	11.48	2.50	Mixed 40bbl of 11.5ppg Tuned Spacer III with surfactants, Mixed 40bbl of 11.5ppg Tuned Spacer III without surfactants at 4.0bpm 245psi
Event	10	Check Weight	Check weight	10/3/2016	09:30:17	COM4				Confirmed weight on scales
Event	11	Pump Cement	Pump Cement	10/3/2016	09:30:22	COM4	154.00	13.27	3.80	Mixed 610sks or 170bbl of 13.2ppg Y-1.57 g/sk-7.53 ElastiCem at 7.0bpm 445psi
Event	12	Pump Cement	Pump Cement	10/3/2016	09:57:39	COM4	524.00	13.21	7.10	Mixed 1436sks or 429bbl of 13.5ppg Y-1.68 g/sk7.98 EconoCem at 7.0bpm 628psi
Event	13	Check Weight	Check weight	10/3/2016	10:22:50	COM4				Confirm weight on scales

Event	14	Shutdown	Shutdown	10/3/2016	11:03:54	COM4				Shut down so that rig could blow back lines with air
Event	15	Clean Lines	Clean Lines	10/3/2016	11:04:00	COM4				Washed pump and lines with fresh water
Event	16	Drop Top Plug	Drop Top Plug	10/3/2016	11:04:03	COM4				Released TOP plug witnessed by company rep
Event	17	Pump Displacement	Pump Displacement	10/3/2016	11:19:36	COM4	-27.00	8.03	0.00	Pumped 353bbl of fresh water to displace cement
Event	18	Bump Plug	Bump Plug	10/3/2016	11:59:34	COM4	2673.00	8.39	0.00	Bumped plug 500psi over final pump pressure 2030/2807psi
Event	19	Other	Other	10/3/2016	12:03:03	COM4	2806.00	8.40	0.00	Released pressure back to pump truck to check floats , floats held good 4.0bbl back
Event	20	End Job	End Job	10/3/2016	12:05:48	COM4				53bbl of Tuned spacer III back to surface