

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 345242	Ship To #: 3872828	Quote #:	Sales Order #: 0902667351								
Customer: NOBLE ENERGY INC E-BUSINESS		Customer Rep: Jim Boyd									
Well Name: GREYSON	Well #: LD28-773	API/UWI #: 05-123-41588-00									
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO								
Legal Description: SE SW-28-9N-58W-610FSL-1597FWL											
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 343									
Job BOM: 7522											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA/HB45834		Srcv Supervisor: Kendall Broom									
<b>Job</b>											
Formation Name											
Formation Depth (MD)	Top	Bottom									
Form Type		BHST	225 degF								
Job depth MD	6323ft	Job Depth TVD									
Water Depth		Wk Ht Above Floor									
Perforation Depth (MD)	From	To									
<b>Well Data</b>											
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	0	9.625	8.921	36	BTC	J-55	0	1094			
Casing	0	7	6.276	26	BTC	P-110	0	6312			
Open Hole Section			8.75				1094	6323			
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make			
Guide Shoe	7	1			Top Plug						
Float Shoe	7	1		6312	Bottom Plug						
Float Collar	7	1			SSR plug set						
Insert Float	7	1			Plug Container						
Stage Tool	7	1			Centralizers						
<b>Miscellaneous Materials</b>											
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc					
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty					
<b>Fluid Data</b>											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal		
1	12.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	12.5	2.76	17	6			
203.65 lbm/bbl		BARITE, BULK (100003681)									
34.60 gal/bbl		FRESH WATER									

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0.50 lbm/bbl		POLY-E-FLAKE (101216940)								
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	ElastiCem	ELASTICEM (TM) SYSTEM	486	sack	13.6	1.88		6	8.56	
0.55 %		HR-5, 50 LB SK (100005050)								
8.56 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	
3	Displacement	Displacement	240	bbl	8.33					
Cement Left In Pipe		Amount	41.37 ft		Reason			Shoe Joint		
Comment										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	8/21/2015	12:30:00	USER				Called crew out to be on location at 1530
Event	2	Depart Location	Depart Location	8/21/2015	14:30:00	USER				Held a safety huddle before leaving location to go to the next job
Event	3	Arrive At Loc	Arrive At Loc	8/21/2015	16:00:00	USER				Arrived on location and met with the company man. rig still had 7 joints plus the landing joint
Event	4	Rig-up Lines	Rig-up Lines	8/21/2015	16:30:00	USER				Held a hazard hunt before spotting in the trucks and rigging up
Event	5	Safety Meeting	Safety Meeting	8/21/2015	18:00:00	USER	8.10	287.00	8.10	Held a safety meeting with the rig crew to discuss the operation and safety
Event	6	Start Job	Start Job	8/21/2015	18:24:46	COM4	8.31	15.00	0.00	Filled lines with 2 bbl water
Event	7	Drop Bottom Plug	Drop Bottom Plug	8/21/2015	18:34:25	COM4	8.42	19.00	0.00	Dropped the plug, preloaded and witnessed by the company man
Event	8	Pump Spacer 1	Pump Spacer 1	8/21/2015	18:34:47	COM4	8.38	19.00	0.00	Pumped 50 bbl Tuned spacer 12.5#
Event	9	Test Lines	Test Lines	8/21/2015	18:37:01	COM4	12.60	142.00	1.90	Pressure tested lines to 4300 psi
Event	10	Drop Bottom Plug	Drop Bottom Plug	8/21/2015	19:00:28	COM4	12.20	31.00	0.00	Dropped plug, preloaded and witnessed by the company man
Event	11	Pump Cement	Pump Cement	8/21/2015	19:00:31	COM4	12.20	31.00	0.00	Pumped 162.72 bbl Elasticem, 13.6#, 1.88 yield, 8.56 gal/sks
Event	12	Shutdown	Shutdown	8/21/2015	19:34:43	COM4	13.95	85.00	0.00	Washed up the cement head and lines
Event	13	Drop Top Plug	Drop Top Plug	8/21/2015	19:36:28	COM4	13.82	37.00	0.00	Dropped top plug, preloaded and witnessed by the company man
Event	14	Pump Displacement	Pump Displacement	8/21/2015	19:36:44	COM4	13.82	37.00	0.00	Pumped 240 bbl displacement ,No cement or spacer to surface. calculated HOC is 5567ft.
Event	15	Bump Plug	Bump Plug	8/21/2015	20:17:27	COM4	7.88	1751.00	0.00	Bumped plug final lift 1320 psi bump at 1771

Event	16	Pressure Up Well	Pressure Up Well	8/21/2015	20:20:43	COM4	7.92	3007.00	0.00	Pressured up well to 3000 psi for 15 min for casing test
Event	17	End Job	End Job	8/21/2015	20:38:49	COM4	8.20	53.00	0.00	
Event	18	Rig Down Lines	Rig Down Lines	8/21/2015	20:40:00	USER	8.07	54.00	0.00	Held a safety meeting before rigging down
Event	19	Depart Location	Depart Location	8/21/2015	21:30:00	USER				Held a safety huddle before leaving location