

**HALLIBURTON**

*Cementing Job Summary*

*The Road to Excellence Starts with Safety*

Sold To #: 300488		Ship To #: 3794484		Quote #: 0022343315		Sales Order #: 0904252213					
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: Jeremy Wilde							
Well Name: RW			Well #: 29N-5HZ			API/UWI #: 05-123-44613-00					
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO					
Legal Description: SE SW-29-3N-85W-441FSL-1719FWL											
Contractor: Xtreme					Rig/Platform Name/Num: Xtreme 22						
Job BOM: 7523 7523											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX41088					Srvc Supervisor: Nathaniel Moore						
<b>Job</b>											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type											
BHST											
Job depth MD		13588ft			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		9.625	8.921	36		J-55	0	1844	0	1844	
Casing		5.5	4.778	20	LTC	HCP110	0	13534	0	7048	
Open Hole Section			7.875				1844	13544	1844	7048	
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5					Top Plug	5.5		HES		
Float Shoe	5.5			13478		Bottom Plug	5.5		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		
<b>Fluid Data</b>											
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	Tuned Spacer III	Tuned Spacer III			60	bbl	10.5	6.25			
0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)									
88.91 lbm/bbl		BARITE, BULK (100003681)									
37.58 gal/bbl		FRESH WATER									
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003685)									

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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
2	ElastiCem - Cap Cement	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.573		5	7.52
7.52 Gal		FRESH WATER							
0.70 %		SCR-100 (100003749)							
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	ELASTICEM (TM) SYSTEM	400	sack	13.2	1.57		5	7.53
0.10 %		SUPER CBL, 50 LB PAIL (100003868)							
0.40 %		SCR-100 (100003749)							
7.53 Gal		FRESH WATER							
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	EconoCem	ECONOCEM (TM) SYSTEM	830	sack	13.5	1.68		5	7.99
7.99 Gal		FRESH WATER							
0.30 %		HR-5, 50 LB SK (100005050)							
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	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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	Biocide Water	Biocide Water	279.1	bbl	8.34				
Cement Left In Pipe	Amount	47 ft			Reason	Shoe Joint			

20 bbl spacer to surface. Estimated tops: 1<sup>st</sup> lead 980' 2<sup>nd</sup> lead 1837' Tail 5451'.

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	8/24/2017	00:00:00	USER				OL time 0430. Verify equipment and materials.
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	8/24/2017	03:30:00	USER				Sign in with customer. Spot in and rig up equipment. TD 13486' 7.875" hole. TP 13476 5.5" 20#. FC 13432'. MW 9.5 ppg. Surface 1857' 9.625" 36# J-55. Water tested.
Event	3	Event	Pre-Job Safety Meeting	8/24/2017	06:30:00	USER	82.00	8.48	0.00	Discuss job procedure with HES and rig crew.
Event	4	Start Job	Start Job	8/24/2017	07:08:26	COM1	85.00	7.34	0.00	Fill lines 3 bbl water
Event	5	Test Lines	Test Lines	8/24/2017	07:13:52	COM1	5518.00	8.60	0.00	500 psi kickout test and 5000 psi pressure test
Event	6	Pump Spacer 1	Pump Spacer 1	8/24/2017	07:18:45	COM1	525.00	10.47	4.00	60 bbl tuned spacer with surfactants. 10.5 ppg 6.24 ft3/sk 40.2 gal/sk
Event	7	Drop Bottom Plug	Drop Bottom Plug	8/24/2017	07:34:04	COM1	-6.00	10.98	0.00	Latchdown bottom plug 1250 psi.
Event	8	Pump Lead Cement	Pump Lead Cement	8/24/2017	07:36:38	COM1	620.00	12.54	6.20	150 sks ElastiCem cap without CBL 13.2 ppg 1.57 ft3/sk 7.52 gal/sk
Event	9	Pump Lead Cement	Pump Lead Cement	8/24/2017	07:42:14	USER	616.00	13.13	7.10	400 sks ElastiCem 13.2 ppg 1.57 ft3/sk
Event	10	Pump Tail Cement	Pump Tail Cement	8/24/2017	07:55:35	COM1	402.00	13.11	7.30	830 sks EconoCem 13.5 ppg 1.68 ft3/sk 7.99 gal/sk
Event	11	Shutdown	Shutdown	8/24/2017	08:28:58	COM1	105.00	13.39	0.00	Wash pumps and lines. Blow down with rig air.
Event	12	Drop Top Plug	Drop Top Plug	8/24/2017	08:37:14	COM1	-13.00	7.76	0.00	Latchdown top plug witnessed by company rep.
Event	13	Pump Displacement	Pump Displacement	8/24/2017	08:37:17	COM1	-13.00	7.77	0.00	297 bbl water displacement with MMCR in the first 20 and biocide throughout.
Event	14	Other	Spacer to surface	8/24/2017	09:10:32	COM1	2654.00	7.90	5.00	277 bbl into displacement. 20 bbl spacer back
Event	15	Bump Plug	Bump Plug	8/24/2017	09:14:15	COM1	2976.00	7.90	0.00	2500 psi final pump pressure. Pressured up to 3000 psi and held for 15 minute casing test
Event	16	Other	Check floats	8/24/2017	09:29:44	COM1	2.00	7.86	0.00	3.5 bbl back. Floats held

Event	17	End Job	End Job	8/24/2017	09:29:51	COM1	-3.00	7.90	0.00	Estimated top of cement: 1st lead 960'. 2nd lead 1837'. Tail 5451'.
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/24/2017	09:35:00	USER	-1.00	7.88	1.10	
Event	19	Depart Location Safety Meeting	Depart Location Safety Meeting	8/24/2017	10:30:00	USER				

3.0 Attachments

3.1 Custom Results – Job Chart with Events



### 3.2 Custom Results – Job Chart without Events

