HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS

Date: Sunday, April 10, 2016

Bybee #4
Production
Job Date: Thursday, March 10, 2016

Sincerely,
Justin Lansdale

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Bybee #4** cement **Production** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Fort Lupton]

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The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3677738	**Quote #:**	**Sales Order #:** 0903173722
Customer: EXTRACTION OIL & GAS		**Customer Rep:** Hugh McGraw	
Well Name: BYBEE	**Well #:** 4		**API/UWI #:** 05-123-41801-00
Field: WATTENBERG	**City (SAP):** FIRESTONE	**County/Parish:** WELD	**State:** COLORADO
Legal Description: NE SE-14-2N-68W-2268FSL-1164FEL			
Contractor: PATTERSON-UTI ENERGY		**Rig/Platform Name/Num:** PATTERSON 346	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		**Srvc Supervisor:** Kendall Broom	

Job

Formation Name			
Formation Depth (MD)	**Top**	**Bottom**	
Form Type		**BHST**	
Job depth MD	12735ft	**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	1597		0
Casing		5.5	4.778	20			0	12735		0
Open Hole Section			7.875				1597	12735	0	0

Tools and Accessories

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

Miscellaneous Materials

Gelling Agt		**Conc**	**Surfactant**		**Conc**	**Acid Type**	**Qty**	Conc
Treatment Fld		**Conc**	Inhibitor		Conc	**Sand Type**	Size	Qty

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

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| 1 | 11.5 lb/gal Tuned Spacer III | Tuned Spacer III | 50 | bbl | 11.5 | 3.74 | | 6 | |

36.09 gal/bbl	**FRESH WATER**
0.20 gal/bbl	**MUSOL(R) A, BULK (100003696)**
0.20 gal/bbl	**DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)**
149.34 lbm/bbl	**BARITE, BULK (100003681)**

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 Lead	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.51

| 7.51 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	ElastiCem Tail Cement	ELASTICEM (TM) SYSTEM	450	sack	13.2	1.57		8	7.51

| 7.51 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
4	MMCR Displacement	MMCR Displacement	0	bbl	8.33			8	

| 0.50 gal/bbl | **MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)** |

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	Displacement	Displacement	283	bbl	8.33			8	

| Cement Left In Pipe | **Amount** | ft | | Reason | | **Shoe Joint** | |

Comment

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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	3/10/2016	09:15:00	USER	Called crew out to be on location at 1500
Event	2	Depart Shop for Location	Depart Shop for Location	3/10/2016	14:00:00	USER	Held a safety meeting before leaving for location
Event	3	Arrive At Loc	Arrive At Loc	3/10/2016	14:30:00	USER	Arrived on locationand met with the company man. Rig was still running casing
Event	4	Rig-up Lines	Rig-up Lines	3/10/2016	14:45:00	USER	Held a hazard hunt before spotting in trucks and rigging up lines
Event	5	Other	Water Test	3/10/2016	15:30:00	USER	Temp 60, PH 7, Chlorides 0, Iron 0, Sulfates <200
Event	6	Safety Meeting	Safety Meeting	3/10/2016	17:00:00	USER	Held a safety meeting with the rig crew to discuss the operation and safety
Event	7	Start Job	Start Job	3/10/2016	17:54:17	COM4	Filled lines with 2 bbl water
Event	8	Test Lines	Test Lines	3/10/2016	17:56:57	COM4	Test lines to 4491 psi
Event	9	Pump Spacer 1	Pump Spacer 1	3/10/2016	18:01:24	COM4	Pumped 50 bbl Tuned Spacer with Musol and Surfactant. 11.5#, 3.74 yield, 23.8 gal/sks. Pumped at 5 bpm and 280 psi
Event	10	Pump Lead Cement	Pump Lead Cement	3/10/2016	18:11:31	COM4	Pumped 150sks, 41.94 bbl Elasticem13.2#, 1.57 yield, 7.51 gal/sks. Pumped at 8 bpm and 365 psi
Event	11	Pump Tail Cement	Pump Tail Cement	3/10/2016	18:18:06	COM4	Pumped 1450 sks 405 bbl Elasticem 13.2#, 1.57 yield,

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							7.51 gal/sks. Pumped at 9 bpm and 379 psi
Event	12	Check Weight	Check weight	3/10/2016	18:35:56	COM4	Verified weight with pressurized scales
Event	13	Shutdown	Shutdown	3/10/2016	19:27:12	COM4	Shut down and blew down lines with rig air
Event	14	Clean Lines	Clean Lines	3/10/2016	19:33:32	COM4	Washed up cement head and lines
Event	15	Drop Top Plug	Drop Top Plug	3/10/2016	19:38:15	COM4	Dropped plug loaded throught the top of the quick latch
Event	16	Pump Displacement	Pump Displacement	3/10/2016	19:38:18	COM4	Pumped 283 bbl water displacement. got all the spacer and 9 total bbl cement back to surface
Event	17	Bump Plug	Bump Plug	3/10/2016	20:19:46	COM4	Bumped plug at calculated 283 bbl. and 3228 psi. checked floats and got 3 bbl back to the truck.
Event	18	Pressure Up	Pressure Up	3/10/2016	20:21:00	USER	Pressure up and blew the plug at 4255 psi. Pumped an additional 5 bbl displacement
Event	19	End Job	End Job	3/10/2016	20:30:14	COM4	
Event	20	Rig Down Lines	Rig Down Lines	3/10/2016	20:35:00	USER	Held a safety meeting before rigging down lines
Event	21	Depart Location	Depart Location	3/10/2016	21:30:00	USER	Held a safety huddle before leaving location

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2.2 Custom Graph

EXTRACTION Bybee #4 Prod.

DH Density (ppg)   PS Pump Press (psi)   Comb Pump Rate (bbl/min)

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