

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Interchange B N35-20-10N Production

Sincerely,
Meghan Jacobs

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Interchange B N35-20-10N** 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.

Approximately 53 bbls of cement were returned to surface.

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

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3954848		Quote #:		Sales Order #: 0905753709				
Customer: EXTRACTION OIL & GAS-EBUS				Customer Rep: MANNY						
Well Name: INTERCHANGE B			Well #: N35-20-10N			API/UWI #: 05-014-20844-00				
Field: WATTENBERG		City (SAP): BROOMFIELD		County/Parish: BROOMFIELD		State: COLORADO				
Legal Description: NE SW-10-1S-68W-2513FSL-1707FWL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 901						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Vitali Neverdasov						
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type						BHST				
Job depth MD		18904ft		Job Depth TVD		7802				
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	0	9.625	8.921	36			0	1655	0	1655
Casing	0	5.5	4.892	17	BTC	P-110	0	18909	0	7802
Open Hole Section			8.75				1655	18912	1655	7802
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	N/A	
Float Shoe	5.5	1	N/A	18904		Bottom Plug	5.5	1	N/A	
Float Collar	5.5	1	N/A	18895		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5			
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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS		50	bbl	12.5	2.74		5	
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		586	sack	13.2	1.6		6	7.75
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	GasStop	ELASTICEM (TM) SYSTEM		615	sack	13.2	1.6		6.5	7.74
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	ELASTICEM (TM) SYSTEM		1767	sack	13.2	1.57		8	7.66
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	MMCR Displacement	MMCR Displacement		20	bbl	8.33			8	
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/min	Total Mix Fluid Gal
6	Displacement	Displacement		418	bbl	8.33			8	
Cement Left In Pipe		Amount	0 ft			Reason			WET SHOE	
Comment : 53 BBSL OF CEMENT BACK TO SURFACE. ESTIMATED TOP OF TAIL @ 6794'.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	6/10/2019	19:00:00	USER				ON LOCATION @ 01:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	6/10/2019	23:30:00	USER				HELD JSA PRIOR LEAVING THE YARD
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/10/2019	23:45:00	USER				
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/11/2019	00:30:00	USER				24 MILES. DISCUSS NUMBERS AND PROCEDURE WITH CUSTOMER. RIG IS RUNNING CASING.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/11/2019	00:50:00	USER				JSA PRIOR SPOTTING EQUIPMENT AND RIGGING UP
Event	6	Other	SPOT TRUCKS	6/11/2019	01:10:00	USER				SPOT TRUCKS
Event	7	Other	RIG UP	6/11/2019	01:20:00	USER				RIG UP ALL SURFACE LINES TO THE BUFFER ZONE
Event	8	Casing on Bottom	Casing on Bottom	6/11/2019	05:30:00	USER				CASING LANDED
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/11/2019	07:10:00	USER				DISCUSS HAZARDS AND JOB PROCEDURE WITH ALL PERSONAL INVOLVED
Event	10	Start Job	Start Job	6/11/2019	07:24:01	COM4				
Event	11	Check Weight	Check Weight	6/11/2019	07:28:24	COM4				
Event	12	Pressure Test	Pressure Test	6/11/2019	07:46:00	USER				LOAD LINE AND TEST TO 4750 PSI
Event	13	Drop Bottom Plug	Drop Bottom Plug	6/11/2019	07:48:00	USER				DROP BOTTOM PLUG
Event	14	Pump Spacer	Pump Spacer	6/11/2019	07:50:00	USER				BATCH/ WEIGHT/ PUMP 50 BBLS OF FDP SPACER @ 12.5 PPG.
Event	15	Pump Lead Cement	Pump LEAD 1 Cement	6/11/2019	08:01:00	USER	5.00	12.61	282.00	BATCH/ WEIGHT/PUMP 586 SKS (167 BBLS) OF ELASTICEM @ 13.2 PPG.

Event	16	Check Weight	Check Weight	6/11/2019	08:01:10	COM4	5.00	12.72	298.00	
Event	17	Pump Lead Cement	Pump LEAD 2 Cement	6/11/2019	08:30:00	USER	0.00	13.92	-5.00	WEIGHT/ PUMP 615 SKS (170.9 BBLS) OF GASSTOP CEMENT USING LATEX @ 13.2 PPG.
Event	18	Check Weight	Check Weight	6/11/2019	08:36:25	COM4	4.90	13.30	363.00	
Event	19	Check Weight	Check Weight	6/11/2019	08:49:10	COM4	4.90	13.26	372.00	
Event	20	Pump Tail Cement	Pump Tail Cement	6/11/2019	09:09:00	USER	5.00	13.17	339.00	WEIGHT/ PUMP 1767 SKS (494.1 BBLS) OF ELASTICEM @ 13.2 PPG.
Event	21	Check Weight	Check Weight	6/11/2019	09:13:09	COM4	5.00	13.18	330.00	
Event	22	Check Weight	Check Weight	6/11/2019	09:19:11	COM4	5.00	13.19	301.00	
Event	23	Check Weight	Check Weight	6/11/2019	09:21:35	COM4	5.00	13.18	302.00	
Event	24	Shutdown	Shutdown	6/11/2019	10:22:00	USER	1.70	13.27	62.00	FINISHED PUMPING CEMENT
Event	25	Clean Lines	Clean Lines	6/11/2019	10:25:00	USER	0.00	13.48	-7.00	BLOW DOWN AND WASH PUMPS AND LINES.
Event	26	Drop Top Plug	Drop Top Plug	6/11/2019	10:34:00	USER	4.00	8.08	30.00	LOAD AND DROP TOP PLUG.
Event	27	Pump Displacement	Pump Displacement	6/11/2019	10:36:00	USER	3.90	7.97	55.00	438.4 BBLS OF FRESH WATER DISPLACEMENT. FIRST 20 BBLS WIRH MMCR.
Event	28	Bump Plug	Bump Plug	6/11/2019	11:46:00	USER	2.90	7.98	2413.00	BUMP PLUG @ 2934 PSI.
Event	29	Other	Other	6/11/2019	11:49:00	USER	0.20	8.01	2996.00	PRESSURE UP TO 3500 PSI, BURST DISC AND PUMP 5 BBLS WET SHOE.
Event	30	Check Floats	Check Floats	6/11/2019	11:53:00	USER	0.00	7.97	2144.00	FLOATS HELD. 3 BBLS BACK
Event	31	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/11/2019	11:58:00	USER	0.00	7.98	-1.00	HELD JSA PRIOR TO RIG DOWN
Event	32	End Job	End Job	6/11/2019	12:03:42	COM4	0.00	7.99	3.00	

3.0 Attachments

3.1 Interchange B N35-20-10N Production – Job Chart

