

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Friday, July 07, 2017

### **McGirr 6C Production**

Job Date: Thursday, July 06, 2017

Sincerely,

**Luke Kosakewich**

## Legal Notice

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **McGirr 6C** 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 60 barrels 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 [Ft. Lupton]**

**HALLIBURTON**

### *Cementing Job Summary*

### The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3799733		Quote #:		Sales Order #: 0904143833				
Customer: EXTRACTION OIL & GAS				Customer Rep:						
Well Name: MCGIRR		Well #: 6C		API/UWI #: 05-069-06490-00						
Field: WATTENBERG		City (SAP): CAMPION		County/Parish: LARIMER		State: COLORADO				
Legal Description: NE SE-26-5N-68W-1998FSL-409FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor:						
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type						BHST				
Job depth MD		17010ft				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		J-55	0	1570	0	1570
Casing		5.5	4.778	20		P-110	0	16997	0	0
Open Hole Section			8.5				1570	17010	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe						Top Plug				
Float Shoe	5.5			16997		Bottom Plug	5.5	1	KLX	
Float Collar	5.5			16992		SSR plug set				
Insert Float						Plug Container	5.5	1	HES	
Stage Tool						Centralizers				
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	Spacer	Tuned Spacer III	50	bbl	11.5	3.78		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	Lead	ELASTICEM	2715	sack	13.2	1.57		8	7.53	

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*Cementing Job Summary*

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	378	bbl	8.34			10	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	
Comment Got 60 bbls. of cement to surface. Pumped 5 bbls. of fresh water for a wet shoe.									

## 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)	DS Pump Press (psi)	DH Density (ppg)	Comments
Event	1	Call Out	Call Out	7/5/2017	15:00:00	USER				Crew called out at 15:00 for an location time of 21:00.
Event	2	Safety Meeting - Departing Location	Safety Meeting - Departing Location	7/5/2017	18:30:00	USER				Held pre journey safety meeting and JSA.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/5/2017	18:45:00	USER				Started journey management with dispatch and the crew left the yard.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/5/2017	19:40:00	USER				Preformed a hazard hunt and site assessment. Checked in with the customer. Discussed numbers needed to calculate the job and rig up. Rig was running casing. Surface Casing: 9.625" 36# Casing 5.5" 20# OH: 8.5" Mud#: 9.7 ppg. TD: 17,010'. TP:16,997'. FC:16,992'. SC: 1,570'. Water test, Temp: 74 Degrees F. PH: 7.5 Chlorides: 62 ppm.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/5/2017	20:00:00	USER				Preformed a hazard hunt and held pre rig up safety meeting and JSA.
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/5/2017	20:15:00	USER				Spotted trucks in and rigged up all iron and hoses for the job.
Event	7	Safety Meeting	Safety Meeting	7/5/2017	23:50:00	USER				Held pre job safety meeting and JSA with all personnel on location.
Event	8	Start Job	Start Job	7/6/2017	03:24:25	COM4	0.00	16.00	8.50	Pumped 3 bbls. of fresh water to fill lines.
Event	9	Test Lines	Test Lines	7/6/2017	03:32:56	COM4	0.00	5278.00	8.57	Pressure tested lines to 5,000 psi. with a 500 psi. electronic kick out test.
Event	10	Pump Spacer 1	Pump Spacer 1	7/6/2017	03:37:38	COM4	1.70	43.00	8.47	Pumped 50 bbls. of Tuned Spacer III mixed at 11.5 ppg. Density was verified by pressurized scales.
Event	11	Pump Cement	Pump Cement	7/6/2017	03:59:20	COM4	3.50	93.00	13.26	Pumped 759 bbls. ( 2,715 sks. ) of ElastiCem mixed at 13.2 ppg. Density was verified by pressurized scales.
Event	12	Shutdown	Shutdown	7/6/2017	05:49:41	COM4	0.00	-5.00	13.97	Shutdown and washed pumps and lines until clean.

Event	13	Drop Top Plug	Drop Top Plug	7/6/2017	06:00:14	COM4	5.30	10.00	1.19	Loaded and dropped the plug. Witnessed by customer.
Event	14	Pump Displacement	Pump Displacement	7/6/2017	06:03:36	COM4	1.90	-13.00	7.96	Pumped 376 bbls. of fresh water for displacement. Got 60 bbls. of cement to surface.
Event	15	Bump Plug	Bump Plug	7/6/2017	06:45:32	USER	4.90	2604.00	8.13	Finale circulating pressure was 2,600 psi. at 5 bpm. Bumped the plug 500 psi over. Pressure was 3,100 psi.
Event	16	Other	Other	7/6/2017	06:47:38	USER	0.70	2995.00	8.13	Pressured up to 3,900 psi. to burst the plug. Pumped 5 bbls. of fresh water at 5 bpm. for a wet shoe.
Event	17	Check Floats	Check Floats	7/6/2017	06:51:02	USER	0.00	24.00	8.09	Bled off pressure to check floats. Floats held. Got 2.5 bbls. back to the truck.
Event	18	End Job	End Job	7/6/2017	06:53:41	USER	0.00	-17.00	8.08	Washed pumps and lines until clean.
Event	19	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	7/6/2017	07:10:00	USER	0.00	-17.00	8.09	Held pre rig down safety meeting and JSA.
Event	20	Rig Down Lines	Rig Down Lines	7/6/2017	07:20:00	USER	2.30	-17.00	-0.30	Rigged down all lines and hoses.
Event	21	Safety Meeting - Departing Location	Safety Meeting - Departing Location	7/6/2017	09:30:00	USER				Held pre journey safety meeting and JSA.
Event	22	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/6/2017	10:00:00	USER				Departed location and started journey management with dispatch.



3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

