

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Ft. Lupton District, co

### **For: Extraction Rep**

Date: Wednesday, June 12, 2019

### **\*Extraction, SO# 905753783, myCem ID# 6859, Livingston S19-2 -12N**

co, \*Extraction, SO# 905753783, myCem ID# 68

Case 1

Job Date: Wednesday, June 12, 2019

Sincerely,

**Michael Herbig**

## Legal Notice

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### Disclaimer:

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## 1.0 Cementing Job Summary

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### 1.1 Job Summary

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Halliburton appreciates the opportunity to perform the cementing services for this cementing services 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.

*The Road to Excellence Starts with Safety*

Sold To #: 369404	Ship To #: 3883773	Quote #:	Sales Order #: 0905753783
Customer: EXTRACTION OIL & GAS -		Customer Rep: Extraction Rep	
Well Name: LIVINGSTON	Well #: S19-25-12N	API/UWI #: 05-014-20750-00	
Field: WATTENBERG	City (SAP): BROOMFIELD	County/Parish: BROOMFIELD	State: COLORADO
Legal Description: NW SE-7-1S-68W-2331FSL-1330FEL			
Contractor:		Rig/Platform Name/Num: CARTEL 15	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HX38199		Srvc Supervisor: Michael Herbig	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1595ft		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
Open Hole Section			13.5				0	1597		0
Casing		9.625	8.921	36			0	1595		0

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625				Top Plug	9.625		HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625				SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625		HES
Stage Tool	9.625				Centralizers	9.625		HES

**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	Red Dye Spacer	Red Dye Spacer	0	bbl	8.33					

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
2	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74		5	9.2
9.20 Gal		<b>FRESH WATER</b>							
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
3	Fresh Water	Fresh Water	0	bbl	8.33				
Cement Left In Pipe	Amount	ft	Reason					Shoe Joint	
Mix Water:	pH ##		Mix Water Chloride:	## ppm		Mix Water Temperature:	## °F °C		
Cement Temperature:	## °F °C		Plug Displaced by:	## lb/gal kg/m <sup>3</sup> XXXX		Disp. Temperature:	## °F °C		
Plug Bumped?	Yes/No		Bump Pressure:	#### psi MPa		Floats Held?	Yes/No		
Cement Returns:	## bbl m <sup>3</sup>		Returns Density:	## lb/gal kg/m <sup>3</sup>		Returns Temperature:	## °F °C		
<b>Comment</b>									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Check Floats	Call Out	6/11/2019	19:00:00	USER					Crew notified at 19:00
Event	2	Event	Pre-Convoy safety meeting	6/12/2019	00:15:00	USER					All personnel present. Discuss driving hazards.
Event	3	Crew Leave Yard	Crew Leave Yard	6/12/2019	00:30:00	USER					One elite, one 660, and one p/u leave yard for location.
Event	4	Arrive At Loc	Arrive At Loc	6/12/2019	01:30:00	USER					FS 15595, FC 15552, CSG 9.625 36# 1500, OH 13.5, MUD 8.3
Event	5	Assessment Of Location Safety Meeting	assessment of location	6/12/2019	01:45:00	USER					Rig running casing when crew arrived.
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig up Safety Meeting	6/12/2019	02:00:00	USER					All personnel present. JSA signed.
Event	7	Rig-Up Equipment	Rig-Up Equipment	6/12/2019	02:15:00	USER					Rig up pump and lines.
Event	8	Start Job	Start Job	6/12/2019	05:13:59	COM4	0.00	0.30	0.00	0.00	Start HES pumping unit.
Event	9	Test Lines	Test Lines	6/12/2019	05:21:32	COM4	0.00	8.41	12.00	2.00	Test lines 3500psi
Event	10	Pump Spacer 1	Pump Spacer 1	6/12/2019	05:26:01	COM4	0.00	8.41	6.00	2.00	Pump 10bbbls red dye at 4bpm 120psi
Event	11	Pump Lead Cement	Pump Lead Cement	6/12/2019	05:28:59	COM4	3.90	8.42	91.00	9.10	Pumped 168bbbls cement at 8bpm 320psi at 13.5ppg, 1.74yld, 9.2gal/sk. Weight verified using pressurized mud scale.
Event	12	Check Weight	Check Weight	6/12/2019	05:37:14	USER	8.10	13.60	300.00	62.10	Check weight. Weight verified using pressurized mud scale.

Event	13	Drop Top Plug	Drop Top Plug	6/12/2019	05:54:35	COM4	0.00	13.90	0.00	0.00	Drop top plug, witnessed by company man.
Event	14	Pump Displacement	Pump Displacement	6/12/2019	05:54:54	COM4	2.70	12.45	12.00	0.30	Pump displacement 8bpm 200psi
Event	15	Slow Rate	Slow Rate	6/12/2019	06:08:46	USER	5.00	8.26	537.00	102.70	Slow rate prior to bump.
Event	16	Bump Plug	Bump Plug	6/12/2019	06:12:57	COM4	0.00	8.29	1004.00	118.60	Bump plug, 120bbbls away 490psi to 1030psi
Event	17	Check Floats	Check Floats	6/12/2019	06:14:17	USER	0.00	8.29	1035.00	118.60	Check floats. 1/2bbl back. Rig returned 22bbbls cement to surface.
Event	18	End Job	End Job	6/12/2019	06:14:53	COM4	0.00	8.26	22.00	0.00	
Event	19	Pre-Rig Down Safety Meeting	Rig Down Lines	6/12/2019	06:30:00	USER					All personnel present. JSA signed.
Event	20	Rig-Down Equipment	Rig-Down Equipment	6/12/2019	06:45:00	USER					Rig down pump and lines.
Event	21	Event	Pre-Convoy safety meeting	6/12/2019	18:00:00	USER					All personnel present. Discuss driving hazards.
Event	22	Depart Location	Depart Location	6/12/2019	18:05:00	USER					Crew leave location.

3.0 Attachments

3.1 Case 1-Custom Results.png

