

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Monday, February 19, 2018

### **WS-Sunrise C1-5-5 Surface**

Job Date: Sunday, February 11, 2018

Sincerely,

**Bryce Hinsch**

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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 **WS-Sunrise C1-5-5** cement **surface** 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 38 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 #: 3847522	Quote #:	Sales Order #: 0904630510
Customer: EXTRACTION OIL & GAS -		Customer Rep: Ben	
Well Name: WS-SUNRISE	Well #: C1-5-5	API/UWI #: 05-123-46045-00	
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-32-6N-65W-250FSL-1686FEL			
Contractor: Extraction		Rig/Platform Name/Num: Cartel 41	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Bradley Hinkle	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1568ft	Job Depth TVD	1568ft
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	8 RD	J-55	0	1568	0	0
Open Hole Section			13.5				0	1570	0	0

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
					Top Plug	9.625	1	HES
Float Shoe	9.625	1		1568				
Float Collar	9.625	1		1523	Plug Container	9.625	1	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	Spacer	Fresh Water	30	bbl	8.33			4		

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	Spacer	Red Dye Water	10	bbl	8.33			4		
3	Primary Cement	SWIFTCEM	550	sack	13.5	1.74		7	9.2	
4	Displacement	Fresh Water	118	bbl	8.33			7		
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:			78 °F
Cement Temperature:		## °F °C	Plug Displaced by:		## lb/gal kg/m3 XXXX		Disp. Temperature:			## °F °C
Plug Bumped?		Yes	Bump Pressure:		635 psi		Floats Held?			Yes
Cement Returns:		38 bbl	Returns Density:		## lb/gal kg/m3		Returns Temperature:			## °F °C
<b>Comment</b> 38 bbls of cement to surface										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	2/10/2018	18:00:00	USER					Crew called for an on location of 0400. Crew was Bradley Hinkle, William Mix, Martin Schmidt and Ethan Beck.
Event	2	Arrive at Location from Service Center	Arrive at Location from Service Center	2/10/2018	20:00:00	USER					Perform a site assessment and pre-rig safety meeting.
Event	3	Safety Meeting	Safety Meeting	2/11/2018	09:00:00	USER	4.00	0.00	0.00	4.3	Pre-job safety meeting. Rig hands did not participate.
Event	4	Start Job	Start Job	2/11/2018	09:36:56	COM4	7.00	8.28	0.00	16.6	
Event	5	Test Lines	Test Lines	2/11/2018	09:40:07	COM4	26.00	9.07	0.00	17.8	Pressure test lines with a 500 psi electronic kick-out test.
Event	6	Pump Spacer 1	Pump Spacer 1	2/11/2018	09:51:40	COM4	19.00	8.73	1.00	0.1	Pump 30 bbls fresh water.
Event	7	Pump Cement	Pump Cement	2/11/2018	10:06:16	COM4	41.00	8.21	0.00	0.0	Pump 170 bbls (550 sacks, 1.74 cuft/sk, 9.2 gal/sk) SwiftCem mixed at 13.5 ppg. Density verified by pressurized scales.
Event	8	Check Weight	Check weight	2/11/2018	10:08:57	COM4	191.00	13.59	5.00	6.2	Cement weighed at 13.5 ppg.
Event	9	Check Weight	Check weight	2/11/2018	10:17:55	COM4	231.00	13.40	7.00	68.3	Cement weighed at 13.5 ppg.
Event	10	Check Weight	Check weight	2/11/2018	10:22:53	COM4	225.00	13.50	7.00	103.0	Cement weighed at 13.5 ppg.
Event	11	Shutdown	Shutdown	2/11/2018	10:35:37	COM4	70.00	14.00	0.10	176.1	

Event	12	Drop Top Plug	Drop Top Plug	2/11/2018	10:39:15	COM4	16.00	6.00	0.00	0.0	Top plug preloaded. Witnessed by tool pusher.
Event	13	Pump Displacement	Pump Displacement	2/11/2018	10:39:37	COM4	26.00	13.83	1.70	0.3	118 bbls fresh water.
Event	14	Bump Plug	Bump Plug	2/11/2018	11:03:28	COM4	779.00	7.86	0.00	126.9	Bump plug at 635 psi and increase 500 psi over. Held until pressure leveled off.
Event	15	Pressure Up Well	Pressure Up Well	2/11/2018	11:04:49	COM4	1472.00	7.88	0.00	127.1	Increase pressure to 1500 psi for a 5 minute casing test.
Event	16	Check Floats	Check Floats	2/11/2018	11:09:54	USER	238.00	7.79	0.00	127.1	Floats held. Half bbl back.
Event	17	End Job	End Job	2/11/2018	11:10:33	COM4	40.00	7.77	0.00	127.1	
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/11/2018	11:15:00	USER	567.00	7.75	10.70	136.8	Pre-rig down safety meeting.
Event	19	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/11/2018	12:00:00	USER					Pre-journey safety meeting. Bulk trucks left to get reloaded for next well.

3.0 Attachments

3.1 Extraction WS-SunriseC1-5-5 Surface Job Chart

