

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Monday, February 19, 2018

### **WS-Sunrise 2-5-5 Surface**

Job Date: Sunday, February 11, 2018

Sincerely,

**Bryce Hinsch**

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Table of Contents

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1.0    Cementing Job Summary ..... 4

    1.1    Executive Summary .....4

2.0    Real-Time Job Summary ..... 7

    2.1    Job Event Log .....7

3.0    Attachments..... 10

    3.1    Extraction WS-Sunrise 2-5-5 Surface Job Chart.....10

## 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 2-5-5** 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 33 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]**

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3847557		Quote #:		Sales Order #: 0904628985				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre						
Well Name: WS-SUNRISE		Well #: 2-5-5		API/UWI #: 05-123-46048-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-32-6N-65W-249FSL-1704FEL										
Contractor: Extraction				Rig/Platform Name/Num: Cartel 41						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Adam Covington						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1576ft		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	0	9.625	8.921	36	8 RD	J-55	0	1576	0	0
Open Hole Section			13.5				0	1579	0	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			1576		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	10	bbl	8.33			4		
Stage/Plug #: 2										
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	SwiftCem	SWIFTCM (TM) SYSTEM	550	sack	13.5	1.74		5	9.2	
9.20 Gal		FRESH WATER								

last updated on 2/13/2018 4:53:11 PM

Page 1 of 3

## HALLIBURTON

### *Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Fresh Water	Fresh Water	118	bbl	8.33			6	
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint	
Comment 33 bbls of cement to surface. Floats held.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Combined Pump Total (bbl)	Comments
Event	1	Call Out	Call Out	2/11/2018	19:00:00	USER					CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 0400
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	2/11/2018	19:50:00	USER					HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Depart Shop for Location	Depart Shop for Location	2/11/2018	20:00:00	USER					JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	2/11/2018	21:00:00	USER					UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/12/2018	07:20:00	USER	43.00	0.00	0.00	3.1	DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Rig-Up Equipment	Rig-Up Equipment	2/12/2018	07:30:00	USER	42.00	0.00	0.00	3.1	RIGGED UP ALL IRON, BULK HOSES AND WATER LINES. NO INCIDENTS.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/12/2018	09:15:00	USER	42.00	0.00	0.00	3.1	HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY.

Event	8	Start Job	Start Job	2/12/2018	09:45:17	COM4	73.00	8.53	0.00	34.4	FILLED LINES WITH 3 BBLS OF FRESH WATER. 58 PSI 3 BPM.
Event	9	Test Lines	Test Lines	2/12/2018	09:49:26	COM4	1445.00	9.15	0.00	37.9	PRESSURE TESTED TO 3500 PSI, AFTER PERFORMING A 500 PSI KICK OUT TEST, THEN A 5TH GEAR STALL. HELD FOR A MINUTE AND OPERATOR TOLD ME IT WAS DROPPING 1 PSI EVERY 4 SECONDS. HELD FOR A COUPLE MINUTES.
Event	10	Pump Spacer 1	Pump Spacer 1	2/12/2018	09:53:59	COM4	53.00	1.50	0.00	37.9	PUMPED 30 BBLS OF FRESH WATER SPACER AT 3BPM AT 80 PSI.
Event	11	Pump Spacer 2	Pump Spacer 2	2/12/2018	10:03:54	COM4	191.00	9.23	5.10	76.7	PUMPED 10 BBLS OF DYED SPACER AT 3 BPM 100 PSI.
Event	12	Pump Cement	Pump Cement	2/12/2018	10:09:16	COM4	90.00	9.11	0.00	89.7	PUMPED 170 BBS (550 SKS) 13.5#, 1.74 y, 9.2 wr CEMENT. AT 6 BPM, 150 PSI.
Event	13	Check Weight	Check weight	2/12/2018	10:19:36	COM4	290.00	13.46	7.00	151.8	CHECKED WEIGHT WITH PRESSURIZED MUD SCALES. WEIGHED UP AT 13.5#
Event	14	Drop Top Plug	Drop Top Plug	2/12/2018	10:47:10	COM4	56.00	17.28	0.00	263.1	ADAM COVINGTON DROPPED HALLIBURTON 9 5/8" TOP PLUG. WITNESSED BY CO. REP.
Event	15	Pump Displacement	Pump Displacement	2/12/2018	10:47:17	COM4					PUMPED 118 BBLS OF FRESH WATER DISPLACEMENT. PUMPED AT 6 BPM. 130 PSI. HAD TO SLOW DOWN A COUPLE TIMES BECAUSE THE MUD PUMPS WOULDN'T KEEP UP.
Event	16	Other	Other	2/12/2018	11:20:51	COM4	1102.00	7.70	0.00	388.2	CHECKED FLOATS. FLOATS



											HELD, GOT 1 BBL OF WATER BACK TO TRUCK.
Event	17	Bump Plug	Bump Plug	2/12/2018	11:21:30	COM4					BUMPED HALLIBURTON 9 5/8" TOP PLUG. FCP 525 PSI. BUMP- 1030 PSI. GOT 33 BBLS OF CEMENT BACK TO SURFACE.
Event	18	End Job	End Job	2/12/2018	11:22:52	COM4	68.00	7.63	0.00	388.2	END JOB
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/12/2018	11:30:00	USER	59.00	7.57	0.00	388.2	DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	20	Depart Location Safety Meeting	Depart Location Safety Meeting	2/12/2018	12:10:00	USER					HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	21	Depart Location	Depart Location	2/12/2018	12:45:00	USER					PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

3.1 Extraction WS-Sunrise 2-5-5 Surface Job Chart

