

# HALLIBURTON

iCem<sup>®</sup> Service

**BISON OIL & GAS II LLC**

Ft. Lupton District, COLORADO

**Ross 8-60 18-7-1 Surface**

Job Date: Friday, May 13, 2022

Sincerely,

**Meghan Van Zyl**

## Legal Notice

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### Disclaimer:

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Table of Contents

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Cementing Job Summary ..... 4  
    Executive Summary ..... 4  
Real-Time Job Summary ..... 7  
    Job Event Log ..... 7  
Attachments ..... 9  
    Real Time iCem Job Chart ..... 9

## 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 **Ross 8-60 18-7-1** 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 50 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**

<b>Sold To #:</b> 324725		<b>Ship To #:</b> 324725		<b>Quote #:</b>		<b>Sales Order #:</b> 0907855569	
<b>Customer:</b> BISON OIL & GAS II LLC				<b>Customer Rep:</b> Jose			
<b>Well Name:</b> Ross 8-60			<b>Well #:</b> 18-7-1		<b>API/UWI #:</b> 05-123-51392		
<b>Field:</b>		<b>City (SAP):</b> Keota		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO	
<b>Legal Description:</b>							
<b>Contractor:</b> ENSIGN DRLG				<b>Rig/Platform Name/Num:</b> ENSIGN 140			
<b>Job BOM:</b> 7521 7521							
<b>Well Type:</b> OIL & GAS WELL							
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srvc Supervisor:</b> Kyle Bath			

**Job**

<b>Formation Name</b>							
<b>Formation Depth (MD)</b>	<b>Top</b>				<b>Bottom</b>		
<b>Form Type</b>				<b>BHST</b>			
<b>Job depth MD</b>	1970ft			<b>Job Depth TVD</b>			
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>			
<b>Perforation Depth (MD)</b>	<b>From</b>				<b>To</b>		

**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	1970		
Casing		9.625	8.921	36			0	1970		

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			1970	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**

<b>Stage/Plug #: 1</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	
1	Water with dye	Water with dye	10	bbl	8.34		420			
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	SBM SWIFTCEM CEMENT SYSTEM CEM	625	sack	13.5	1.75	5768	6	9.23	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	Displacement	Displacement	149	bbl	8.34		6258			
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/m3 XXXX			Disp. Temperature:## °F °C					
Plug Bumped?		Yes/No	Bump Pressure:#### psi MPa			Floats Held?Yes/No				
Cement Returns:## bbl m3		Returns Density:## lb/gal kg/m3			Returns Temperature:## °F °C					
<b>Comment</b> 296bbbls mix water total used.										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Call Out	Call Out	5/12/2022	04:30:00					CREW CALLED OUT, REQUESTED ON LOCATION 11:00
2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	5/12/2022	07:45:00					PRE CONVOY SAFETY MEETING WITH ALL HES EE
3	Crew Leave Yard	Crew Leave Yard	5/12/2022	08:00:00					CREW DEPART YARD FOR LOCATION
4	Arrive At Loc	Arrive At Loc	5/12/2022	10:30:00					ARRIVE ON LOCATION, RECIEVED NUMBERS FROM CO REP, TD 1970, TP 1970, SJ 43.7, CSG 9 5/8 36#, PREV CSG 16"@40', HOLE 13.5, MUD 8.4, TVD 1970, 16 CENTALIZERS, WATER TEST, TEMP 65, CHLORIDES 0, PH 7
5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	5/12/2022	10:45:00					SAFETY MEETING WITH ALL HES EE TO ASSESS ALL HAZARDS
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	5/12/2022	11:00:00					PRE RIG UP SAFETY MEETING WITH ALL HES EE
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/12/2022	21:00:00	8.18	0.00	7.53	14.54	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
8	Start Job	Start Job	5/12/2022	21:25:04	8.13	0.00	0.77	0.00	START RECORDING DATA
9	Test Lines	Test Lines	5/12/2022	21:28:35	8.14	0.00	218.47	2.08	TEST LINES TO 2100 PSI

10	Pump Spacer 1	Pump Spacer 1	5/12/2022	21:31:36	8.12	0.00	103.04	0.00	PUMP 10 BBLS FRESH WATER SPACER W/DYE 3 BPM 250 PSI
11	Pump Cement	Pump Cement	5/12/2022	21:38:52	8.32	0.00	144.63	0.00	MIX AND PUMP 625 SKS 195 BBLS CEMENT 13.5 PPG, 1.75 FT3/SK, 9.23 GAL/SK 8 BPM 750 PSI, CALCULATED TOC SURFACE
12	Check Weight	Check Weight	5/12/2022	21:42:21	13.55	6.99	613.82	20.74	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
13	Drop Top Plug	Drop Top Plug	5/12/2022	22:13:02	13.66	0.00	6.17	202.87	LAUNCH TOP PLUG
14	Pump Displacement	Pump Displacement	5/12/2022	22:13:04	13.64	0.00	6.18	0.00	PUMP 149 BBLS FRESH WATER DISPLACEMENT 8 BPM 750 PSI, RECIEVED 50 BBLS CEMENT TO SURFACE
15	Bump Plug	Bump Plug	5/12/2022	22:39:46	8.47	3.95	801.13	151.63	BUMP PLUG AT 670 PSI TOOK TO 1220 PSI
16	Check Floats	Check Floats	5/12/2022	22:42:01	8.50	0.00	1181.61	151.72	RECIEVED 1 BBL BACK
17	End Job	End Job	5/12/2022	22:43:13	8.41	0.00	-0.31	0.00	STOP RECORDING DATA, USED 296 BBLS FRESH WATER
18	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	5/12/2022	23:00:00					PRE RIG DOWN SAFETY MEETING WITH ALL HES EE
19	Depart Location Safety Meeting	Depart Location Safety Meeting	5/12/2022	23:30:00					PRE DEPARTURE SAFETY MEETING WITH ALL HES EE
20	Crew Leave Location	Crew Leave Location	5/12/2022	23:59:00					THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

3.0 Attachments

3.1 Real Time iCem Job Chart

