

# HALLIBURTON

iCem<sup>®</sup> Service

**BISON OIL & GAS II LLC**

Ft. Lupton District, COLORADO

**Ross 8-60 18-7-3 Surface**

Job Date: Saturday, May 14, 2022

Sincerely,

**Meghan Van Zyl**

## Legal Notice

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### Disclaimer:

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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 **Ross 8-60 18-7-3** 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 35 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> 0907858120	
<b>Customer:</b> BISON OIL & GAS II LLC				<b>Customer Rep:</b> Jose Torres			
<b>Well Name:</b> Ross 8-60			<b>Well #:</b> 18-7-3		<b>API/UWI #:</b> 05-123-51396		
<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>	1973ft			<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	1973		
Casing		9.625	8.921	36			0	1973		

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			1973	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	600	sack	13.5	1.75	5538	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> 290bbls 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	5/14/2022	00:00:00					CREW CALLED OUT, REQUESTED ON LOCATION 19:30
2	Arrive At Loc	Arrive At Loc	5/14/2022	00:01:00					CREW ON LOCATION FROM PREV JOB, RECIEVED NUMBERS FROM CO REP, TD 1973, TP 1973, SJ 43.7, CSG 9 5/8 36#, PREV CSG 16" @ 80', HOLE 13.5, MUD 8.4, 16 CENTALIZERS, WATER TEST, TEMP 60, CHLORIDES 0, PH 7
3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	5/14/2022	07:00:00					SAFETY MEETING WITH ALL HES EE TO ASSESS ALL HAZARDS
4	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	5/14/2022	07:15:00					PRE RIG UP SAFETY MEETING WITH ALL HES EE
5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/14/2022	08:00:00	8.05	0.00	-2.66	8.53	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
6	Start Job	Start Job	5/14/2022	08:37:32	8.26	0.00	-4.87	0.00	START RECORDING DATA
7	Test Lines	Test Lines	5/14/2022	08:40:17	8.13	0.00	93.46	8.54	TEST LINES TO 2100 PSI
8	Pump Spacer 1	Pump Spacer 1	5/14/2022	08:42:18	8.15	0.00	86.96	0.00	PUMP 10 BBLS FRESH WATER SPACER W/DYE, 6 BPM 350 PSI

9	Pump Cement	Pump Cement	5/14/2022	08:44:56	8.13	0.00	96.87	0.00	MIX AND PUMP 600 SKS 187 BBLS CEMENT 13.5 PPG, 1.75 FT3/SK, 9.23 GAL/SK 8.5 BPM 750 PSI, CALCULATED TOC SURFACE
10	Check Weight	Check Weight	5/14/2022	08:52:39	13.54	7.73	753.92	16.40	VERIFY WEIGHT ON PRESSURIZED SCALES
11	Shutdown	Shutdown	5/14/2022	09:16:08	14.18	0.00	130.14	194.41	SHUTDOWN
12	Drop Top Plug	Drop Top Plug	5/14/2022	09:17:30	12.57	0.00	-3.10	194.41	LAUNCH TOP PLUG
13	Pump Displacement	Pump Displacement	5/14/2022	09:17:32	12.56	0.00	-3.00	0.00	PUMP 149 BBLS FRESH WATER DISPLACEMENT 10 BPM 790 PSI, RECIEVED 35 BBLS CEMENT TO SURFACE
14	Bump Plug	Bump Plug	5/14/2022	09:40:39	8.41	0.00	1071.31	149.31	BUMP PLUG AT 650 PSI TOOK TO 1150 PSI
15	Check Floats	Check Floats	5/14/2022	09:41:33	8.42	0.00	1172.52	149.31	FLOATS HELD TOOK 1 BBL BACK
16	End Job	End Job	5/14/2022	09:42:36	8.36	0.00	-0.25	0.00	STOP RECORDING DATA, USED 291 BBLS FRESH WATER
17	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	5/14/2022	09:45:00					PRE RIG DOWN SAFETY MEETING WITH ALL HES EE
18	Depart Location Safety Meeting	Depart Location Safety Meeting	5/14/2022	11:00:00					PRE DEPARTURE SAFETY MEETING WITH ALL HES EE
19	Crew Leave Location	Crew Leave Location	5/14/2022	11:30:00					THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

3.0 Attachments

3.1 Real Time iCem Job Chart

