

HALLIBURTON

iCem[®] Service

BISION OIL & GAS II LLC-EBUS

Ross 8-60 18-7-4 Production

Job Date: Sunday, June 05, 2022

Sincerely,

Meghan Van Zyl

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Ross 8-60 18-7-4** cement **Production** 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 80 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

Sold To #: 324725		Ship To #: 9063260		Quote #:		Sales Order #: 0907907643				
Customer: BISON OIL & GAS II LLC-EBUS				Customer Rep: Kristoffer Peterson						
Well Name: ROSS 8-60			Well #: 18-7-4			API/UWI #: 05-123-51395-00				
Field:		City (SAP): BRIGGSDALE		County/Parish: WELD			State: COLORADO			
Legal Description: 18-8N-60W										
Contractor: ENSIGN DRLG				Rig/Platform Name/Num: ENSIGN 140						
Job BOM: 7523 7523										
Well Type: VERTICAL OIL										
Sales Person: HALAMERICA\HX41066				Srvc Supervisor: Steven Markovich						
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		15608ft		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		9.625	8.921	36			0	1968	0	1968
Casing		5.5	4.892	17			0	15598	0	0
Open Hole Section			8.5				1968	15608	0	1968
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			15598		Top Plug	5.5		HES	
Float Shoe	5.5					Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		HES	
Stage Tool	5.5					Centralizers	5.5		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	Tuned Prime Cement Spacer	TUNED PRIME CEMENT SPACER SYS	50	bbl	11.5	3.74	1775	6		

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	ElastiCem	SBM CEM ELASTICEM™ SYS	565	sack	13	1.66	4689	8	8.33	
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	
3	IsoBond	SBM CEM FDP-C1371 SYS	540	sack	13	1.55	3898	8	7.22	
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	
4	ElastiCem	SBM CEM ELASTICEM™ SYS	1355	sack	13.2	1.59	10514	8	7.76	
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	
5	MMCR Displacement	MMCR Displacement	20	bbl	8.33	0	840	9.25		
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	
6	Displacement	Displacement	336.8	bbl	8.33		14154			
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint		
Mix Water:		pH 6	Mix Water Chloride:			0 ppm		Mix Water Temperature:		62°F °C
Cement Temperature:		79 °F °C	Plug Displaced by:			8.33 lb/gal H2O XXXX		Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:			2347 psi MPa		Floats Held?		Yes
Cement Returns:		80 bbl m3	Returns Density:			13 lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Pump 356.8bbls of H2O. First 20bbls with MMCR. Pumped at 10bbl/min and slowed rate with pressure increase. Spacer to surface at 226bbls away, cement to surface at 276bbls away bringing 80bbls of cement to surface. Bumped plug at calculated displacement, Final lift pressure was 2347psi. Brought pressure 500psi over and held. After 5 mins pressure was 3034psi. Opened release line to check floats, after 4bbls back floats held. Estimated Top of Tail Cement 6196' Estimated Top of Lead Cement 2542'. 834bbls mix water total used.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Dnwhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Check Floats	Call Out	6/5/2022	00:00:00					Job called out with an on location time of 0600.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/5/2022	03:30:00					JSA with HES crew on driving safety and route to rig.
3	Arrive at Location from Service Center	Arrive at Location from Service Center	6/5/2022	05:30:00					Arrived on location. Rig still running casing. Approx 7000'
4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/5/2022	05:45:00					JSA and hazard hunt with HES crew.
5	Rig-Up Equipment	Rig-Up Equipment	6/5/2022	06:00:00					Rig up HES lines and equipment.
6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/5/2022	10:30:00	8.28	0.00	12.73	14.18	JSA with HES and rig crew on job safety and procedure.
7	Start Job	Start Job	6/5/2022	10:59:44	8.26	0.00	14.58	14.18	TD 15608' TP 15598' (10662' of 17# 4931' of 20#) 5 1/2" Production Casing, 8 1/2" OPHO, TVD 6472, 9 5/8" 36# Surface casing set at 1668'. Estimated Top of Tail Cement 6196' Estimated Top of Lead Cement 2542'.
8	Check Weight	Check Weight	6/5/2022	11:03:02	8.25	0.00	13.62	0.00	
9	Check Weight	Check Weight	6/5/2022	11:05:48	8.25	0.00	13.14	0.00	Weight verified by pressurized scales.
10	Drop Bottom Plug	Drop Bottom Plug	6/5/2022	11:20:28	8.53	2.01	42.07	0.66	Plug loaded into casing by company rep.

11	Test Lines	Test Lines	6/5/2022	11:22:59	8.33	0.00	-6.23	4.57	Set kick outs to 500psi and check low pressure kick outs. Then bring pressure up to 5000psi and hold.
12	Pump Spacer 1	Pump Spacer 1	6/5/2022	11:36:25	8.37	0.00	0.86	0.00	Pump 50bbls of 11.5ppg 3.74yield spacer. Pumped at 5bbl/min. (1775 mix gallons)
13	Shutdown	Shutdown	6/5/2022	11:48:43	11.54	2.51	10.51	52.28	Shutdown to mix up cement
14	Check Weight	Check Weight	6/5/2022	11:52:19	15.62	0.00	3.87	52.37	Weight verified by pressurized scales.
15	Pump Cap Cement	Pump Cap Cement	6/5/2022	11:53:10	12.02	1.66	16.39	0.03	Pump 167bbls of 13ppg 1.66 yield Cap Cement. Pumped at 9bbl/min 805psi. Total mix gallons 4706.
16	Check Weight	Check Weight	6/5/2022	11:58:01	13.16	8.98	891.36	35.71	Weight verified by pressurized scales.
17	Check Weight	Check Weight	6/5/2022	12:02:26	13.01	9.01	591.20	75.53	Weight verified by pressurized scales.
18	Check Weight	Check Weight	6/5/2022	12:03:52	13.01	9.05	525.04	88.31	Weight verified by pressurized scales.
19	Pump Lead Cement	Pump Lead Cement	6/5/2022	12:13:09	13.11	7.28	574.42	0.06	Pump 149bbls of 13ppg 1.55yield Lead Cement. Pumped at 9bbl/min 996psi. Total mix gallons 3898.
20	Check Weight	Check Weight	6/5/2022	12:14:22	13.03	9.05	927.94	9.86	Weight verified by pressurized scales.
21	Check Weight	Check Weight	6/5/2022	12:16:25	13.11	9.02	1047.96	28.48	Weight verified by pressurized scales.
22	Pump Tail Cement	Pump Tail Cement	6/5/2022	12:30:56	14.08	1.63	132.35	0.01	Pump 383.7bbls of 13.2ppg 1.59yield Tail Cement. Pumped at 9bbl/min 800psi. 10514 total mix gallons.
23	Check Weight	Check Weight	6/5/2022	13:00:30	13.31	8.97	709.09	216.77	Weight verified by pressurized scales.
24	Shutdown	Shutdown	6/5/2022	13:25:10	14.59	0.00	21.27	405.38	Shutdown and clean pumps and lines.
25	Drop Top Plug	Drop Top Plug	6/5/2022	13:42:23	8.27	0.00	6.49	428.48	Plug loaded into the casing by company rep.
26	Pump Displacement	Pump Displacement	6/5/2022	13:42:27	8.26	0.00	6.27	0.00	Pump 356.8bbls of H2O. First 20bbls with MMCR. Pumped at 10bbl/min and slowed rate with pressure increase. Spacer to surface at 226bbls

away, cement to surface at 276bbbls away bringing
80bbbls of cement to surface.

27	Bump Plug	Bump Plug	6/5/2022	14:29:12	8.33	3.99	2347.13	366.70	Bumped plug at calculated displacement, Final lift pressure was 2347psi. Brought pressure 500psi over and held.
28	Check Floats	Check Floats	6/5/2022	14:34:32	8.39	0.00	3034.53	367.26	After 5 mins pressure was 3034psi. Opened release line to check floats, after 4bbbls back floats held.
29	End Job	End Job	6/5/2022	14:38:36	8.21	0.00	11.64	367.26	Thank you, Markovich and crew.

3.0 Attachments

3.1 Real Time iCem Job Chart

