

HALLIBURTON

iCem[®] Service

SYNERGY RESOURCES CORP-EBUS

Date: Thursday, June 01, 2017

Synergy Hood 11N-22B-M Production

Job Date: Wednesday, May 17, 2017

Sincerely,
Bryce Hinsch

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Hood 11N-22B-M** 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 5 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 [Ft. Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 359915		Ship To #: 3786334		Quote #:		Sales Order #: 0904033183				
Customer: SYNERGY RESOURCES CORPORATION				Customer Rep: Kalib Ford						
Well Name: HOOD		Well #: 11N-22B-M		API/UWI #: 05-123-44374-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO				
Legal Description: SE SE-20-6N-66W-725FSL-1122FEL										
Contractor: Precision				Rig/Platform Name/Num: Precision 562						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307				Srvc Supervisor: Nicholas Peterson						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		15343ft		Job Depth TVD		7,005'				
Water Depth				Wk Ht Above Floor		5'				
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbn/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36	LTC	J-55	0	1757	0	1757
Casing	3	5.5	4.778	20		P-110	0	15324	0	0
Open Hole Section			8.5				1757	15343	1757	7010
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe						Top Plug	5.5	1	Weatherford	
Float Shoe	5.5	1	Weatherford	15324		Bottom Plug	5.5	1	Weatherford	
Float Collar	5.5	1	Weatherford	15277		SSR plug set				
Insert Float						Plug Container	5.5	1	HES	
Stage Tool						Centralizers	5.5	157	HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbn/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.75		4		
0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.50 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
149.34 lbn/bbl		BARITE, BULK (100003681)								
35.10 gal/bbl		FRESH WATER								

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Cementing Job Summary

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 Lead	ELASTICEM (TM) SYSTEM	1026	sack	13.2	1.57		8	7.52
7.52 Gal		FRESH WATER							
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	NeoCem Tail	NeoCem TM	989	sack	13.2	2.08		8	10.02
10.08 Gal		FRESH WATER							
0.35 %		SCR-100 (100003749)							
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	MMCR Displacement	MMCR Displacement	40	bbl	8.34			10	
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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	Cla Web Dispplcaement	Cla Web Dispplcaement	298	bbl	8.33			10	
0.0571 gal/bbl		CLA-WEB - BULK (101985043)							
Cement Left In Pipe		Amount	No		Reason			Shoe Joint	
Comment: 40 bbls Spacer back to surface, 5 bbls cement back to surface. Pumped 6 bbl wet shoe.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	5/16/2017	23:00:00	USER				CREW CALLED OUT AT 23:00, REQUESTED ON LOCATION 05:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 E-6, PUMP 10378461.
Event	2	Crew Leave Shop	Crew Leave Shop	5/17/2017	02:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	5/17/2017	04:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36# @ 1757', 5.5" CASING: 20# TOTAL 15,324.26, 8.5" HOLE, 15,343" SHOE, FRESH WATER DISPLACEMENT WITH MMCR FIRST 40 BBLS, CLAYWEB AND BIOCIDES TO 300 AWAY.
Event	4	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	5/17/2017	04:15:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	5/17/2017	04:30:00	USER				RIG UP BULK AND MIXING EQUIPMENT.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/17/2017	08:00:00	USER	8.41	0.00	3.00	MEETING WITH HALLIBURTON AND RIG

PERSONNEL
COMMUNICATED
POTENTIAL SAFETY
HAZARDS AND JOB DETAILS.

Event	7	Start Job	Start Job	5/17/2017	08:20:00	COM4	8.54	0.00	-2.00	START RECORDING DATA.
Event	8	Test Lines	Test Lines	5/17/2017	08:22:24	COM4	8.37	0.00	19.00	PRESSURE TESTED IRON TO 4500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1300 PSI, 5TH GEAR STALL OUT @ 1490 PSI.
Event	9	Drop Bottom Plug	Drop Bottom Plug	5/17/2017	08:27:02	USER	8.33	0.00	30.00	PLUG LEFT VERIFIED BY SYNERGY REP.
Event	10	Pump Spacer 1	Pump Spacer 1	5/17/2017	08:27:40	COM4	8.34	0.00	14.00	PUMP 40 BBLS OF TUNED SPACER @ 11.5 LB/GAL, WITH 15 GALS MUSOL A, 15 GALS DUAL SPACER B, AND 10 GALLONS D-AIR. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	11	Check Weight	Check Weight	5/17/2017	08:42:29	USER	10.96	0.00	1.00	WEIGHT CONFIRMED USING PRESSURIZED MUD SCALES.
Event	12	Pump Lead Cement	Pump Lead Cement	5/17/2017	08:43:41	COM4	10.95	0.00	1.00	PUMPED 1026 SKS OF ELASTICEMCEM @ 13.2 LB/GAL, 1.57 YIELD, 7.52 GAL/SK. 286.88 BBLS, TOL @ SURFACE CALCULATED 15 BBLS BACK. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Tail Cement	Pump Tail Cement	5/17/2017	09:27:33	COM4	13.16	6.50	326.00	PUMP 989 SKS OF NEOCEM @ 13.2 LB/GAL, 2.08 YIELD, 10.02 GAL/SK. 366.37 BBLS. TOT @ 6,370'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	5/17/2017	10:25:01	COM4	13.85	0.00	10.00	CLEAN LINES BEFORE DISPLACING.

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Event	15	Drop Top Plug	Drop Top Plug	5/17/2017	10:41:52	USER	8.27	0.00	8.00	PLUG LEFT CONTAINER, VERIFIED BY SYNERGY REP.
Event	16	Pump Displacement	Pump Displacement	5/17/2017	10:42:50	COM4	8.14	0.00	0.00	BEGIN CALCULATED DISPLACEMENT OF 339 BBLS WITH FRESH WATER. CAUGHT CEMENT @ 45 BBLS INTO DISPLACEMENT.
Event	17	Spacer Returns to Surface	Spacer Returns to Surface	5/17/2017	11:17:00	USER	8.12	5.80	2167.00	SPACER TO SURFACE @ 293 BBLS INTO DISPLACEMENT. 40 BBLS OF TUNED SPACER TO SURFACE.
Event	18	Cement Returns to Surface	Cement Returns to Surface	5/17/2017	11:26:00	USER	8.13	2.00	1911.00	CEMENT BACK TO SURFACE @ 333 BBLS INTO DISPLACEMENT. 5 BBLS OF CEMENT BACK TO SURFACE.
Event	19	Bump Plug	Bump Plug	5/17/2017	11:29:02	COM4	8.17	0.00	2771.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 2600.
Event	20	Check Floats	Check Floats	5/17/2017	11:34:04	USER	8.14	0.00	2000.00	RELEASED PRESSURE, FLOATS HELD, 3 BBLS BACK.
Event	21	Pump Water	Pump Water	5/17/2017	11:35:56	USER	8.09	1.90	32.00	PUMPED 7 BBLS TO BACK ON PLUG UNTIL RUPTURED DISC @ 4400 PSI. CHASED WITH 6 BBLS FRESH WATER FOR WET SHOE @ 3 BBLS/MIN.
Event	22	End Job	End Job	5/17/2017	11:42:47	COM4	8.07	0.00	36.00	STOP RECORDING DATA.
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	5/17/2017	11:50:00	USER	8.08	0.40	-1.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	24	Rig-Down Equipment	Rig-Down Equipment	5/17/2017	12:00:00	USER	-0.26	0.00	3.00	RIG DOWN BULK AND MIXING EQUIPMENT.

Event	25	Crew Leave Location	Crew Leave Location	5/17/2017	14:00:00	USER	BULK TRUCKS LEFT LOCATION TO GET CEMENT FOR THE NEXT JOB.
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3.0 Attachments

3.1 Synergy Hood 11N-22B-M Production Job Chart

