

HALLIBURTON

iCem[®] Service

SYNERGY RESOURCES CORPORATION

United States of America

SRC Williams 12-4-5NM-C

Production

Synergy

Job Date: Sunday, December 25, 2016

Sincerely,

Derek Trier

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 **SRC Williams 12-4-5NM-C** 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, 18bbl of cement 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 #: 3735435		Quote #:		Sales Order #: 0903738173					
Customer: SYNERGY RESOURCES CORPORATION				Customer Rep: Lovel Young							
Well Name: SRC WILLIAMS			Well #: 12-4-5NM-C			API/UWI #: 05-123-43167-00					
Field: WATTENBERG		City (SAP): JOHNSTOWN		County/Parish: WELD		State: COLORADO					
Legal Description: NE NW-4-4N-67W-1100FNL-2423FWL											
Contractor: PRECISION DRLG					Rig/Platform Name/Num: PRECISION 462						
Job BOM: 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srv Supervisor: Jacob Nelson						
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type		BHST									
Job depth MD		13637ft			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	LTC	J-55	0	1763	0	1763	
Casing		5.5	4.778	20		P-110	0	13637	0	6845	
Open Hole Section			8.5				1763	13637	1763	6845	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5			13637		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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal		
1	Tuned Spacer III	Tuned Spacer III	0	bbl	11.5	3.75		6			
0.30 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)									
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)									
149.34 lbm/bbl		BARITE, BULK (100003681)									
35.60 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		sack	13.2	1.57		6	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		sack	13.2	2.08		4	9.98
9.98 Gal		FRESH WATER							
0.25 %		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	0	bbl	8.34				
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	Clay-Web Displacement	Clay-Web Displacement	0	bbl	8.33				
0.05 gal/bbl		CLA-WEB - TOTE (101985045)							
Cement Left In Pipe		Amount	88 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			
Comment									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Start Job	Start Job	12/25/2016	08:50:24	COM5	-23.70	8.43	0.00	0.00	TD: 13669', TVD: 6845', KOP: 6188', TC: 13659', CSNG: 5.5" 20# P-110, BOPC, 1778' 9.625" 36#, MW: 9.9#.
Event	2	Pump Water	Fill Lines	12/25/2016	08:51:29	USER	10.30	8.57	2.10	0.00	Fill lines with 5 bbls of fresh water.
Event	3	Test Lines	Test Lines	12/25/2016	08:55:18	COM5	34.30	8.25	0.00	0.12	Pressure test lines to 4500 psi.
Event	4	Pump Spacer 1	Pump Tuned Spacer	12/25/2016	09:04:03	COM5	115.30	8.16	3.10	0.03	Pumped 40 bbls of Tuned Spacer at 11.5 ppg. Yield: 3.75, Gal/sk: 23.8. 10 gals of D-Air, 15 gals of Musol A, and 15 gals of Dual Spacer B added. Density verified with mud scale.
Event	5	Pump Lead Cement	Pump Lead Cement	12/25/2016	09:14:12	COM5	520.30	12.41	6.00	0.95	Pumped 976 sks/ 273 bbls of ElastiCem at 13.2 ppg. Yield: 1.57, Gal/sk: 7.52. Density verified with mud scale.
Event	6	Pump Tail Cement	Pump Tail Cement	12/25/2016	09:55:12	COM5	346.30	13.12	7.00	6.70	Pumped 856 sks/ 317 bbls of NeoCem at 13.2 ppg. Yield: 2.08, Gal/sk: 9.98. Density verified with mud scale.
Event	7	Shutdown	Shutdown	12/25/2016	10:47:55	USER	11.30	13.93	0.00	8.09	Shutdown to wash up mixing head and tubs.
Event	8	Clean Lines	Clean Lines	12/25/2016	10:50:06	COM5	41.30	15.05	3.40	0.01	Flush pumps and clean lines with 10 bbls of clean fresh water.
Event	9	Pump Displacement	Pump Displacement	12/25/2016	10:53:47	COM5	41.30	8.32	4.40	0.01	Total displacement to bump is 301 bbls. Dropped 3rd party plug. Company man witnessed plug launch. Pump away plug with 7 bbls for a wet shoe.
Event	10	Shutdown	Shutdown	12/25/2016	10:55:18	USER	23.30	8.37	0.00	0.17	Shutdown after 7 bbls of displacement to drop a 2nd plug. Company man witnessed

Event	ID	Description	Activity	Date	Time	User	Volume	Pressure	Flow	Time	Notes
											plug launch.
Event	11	Spacer Returns to Surface	Spacer Returns to Surface	12/25/2016	11:25:57	USER	2391.30	8.37	7.50	5.90	Got back 40 bbls of Tuned Spacer and 18 bbls of cement to surface as calculated.
Event	12	Bump Plug	Bump Plug	12/25/2016	11:39:11	USER	1899.30	8.34	2.90	7.52	Bumped first plug at 2000 psi. Plug burst at 3000 psi. Pumped the 7 bbls for a wet shoe.
Event	13	Bump Plug	Bump Plug	12/25/2016	11:42:24	USER	1952.30	8.37	0.00	7.69	Bumped 2nd plug at 1900 psi. Plug burst at 3800 psi.
Event	14	Check Floats	Check Floats	12/25/2016	11:42:56	USER	237.30	8.29	0.00	7.69	Floats held. Got 2.0 bbls back.
Event	15	End Job	End Job	12/25/2016	11:46:12	COM5	-56.70	8.25	0.00	0.00	Thank you for choosing Halliburton cementing and the crew of Jacob Nelson.

3.0 Attachments

3.1 Synergy-Custom Results.png

