

HALLIBURTON

iCem[®] Service

SYNERGY RESOURCES CORPORATION

Date: Tuesday, October 10, 2017

Ag 31N-31B-L Production

Job Date: Monday, September 18, 2017

Sincerely,

Justin Lansdale

Legal Notice

Disclaimer:

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. Accordingly, HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Table of Contents

1.0 Cementing Job Summary 4

 1.1 Executive Summary4

2.0 Real-Time Job Summary 7

 2.1 Job Event Log7

3.0 Attachments..... 9

 3.1 Job Chart.....9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Ag 31N-31B-L** 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.

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]

The Road to Excellence Starts with Safety

Sold To #: 359915		Ship To #: 3801249		Quote #:		Sales Order #: 0904298898				
Customer: SYNERGY RESOURCES CORPORATION				Customer Rep: Lovel Young						
Well Name: AG			Well #: 31N-31B-L		API/UWI #: 05-123-44875-00					
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO				
Legal Description: NE NE-32-6N-66W-979FNL-545FEL										
Contractor: Synergy				Rig/Platform Name/Num: Precision 462						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307				Srv Supervisor: Luke Kosakewich						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		18440 ft		Job Depth TVD		6,848ft				
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	1759	0	1759
Casing		5.5	4.778	20		P-110	0	18440	0	6848
Open Hole Section			8.5				1759	18454	1759	6848
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		18440		Bottom Plug	5.5	1	Weatherford	
Float Collar	5.5	1		18327		SSR plug set				
Insert Float						Plug Container	5.5	1	HES	
Stage Tool						Centralizers				
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 Spacer III	Tuned Spacer III	40	bbl	11.5	3.8		4		

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	935	sack	13.2	1.57		7	7.52
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	1375	sack	13.2	2.09		8	10.08
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	10	bbl	8.34			8	
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 Displacement	Cla Web Displacement	396	bbl	8.33			10	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	
Comment Comment Full returns throughout the job. Got 60 bbls. of lead cement back to surface. Estimated top of tail cement is at 4,631.2'. Floats held. Got 2. bbls. of fluid back to the truck. Pumped a 6 bbl wet shoe.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	9/17/2017	20:30:00	USER	Crew was called out at 20:30 for an on location time of 00:30.
Event	2	Depart Location Safety Meeting	Depart Location Safety Meeting	9/17/2017	23:05:00	USER	Held a pre journey safety meeting and JSA with the crew.
Event	3	Depart Shop for Location	Depart Shop for Location	9/17/2017	23:15:00	USER	Started journey management with dispatch and left the yard.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/18/2017	00:00:03	USER	Crew performed a site assessment and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics to calculate the job. The rig was running casing.
Event	5	Other	Other	9/18/2017	00:00:05	USER	W
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/18/2017	00:00:15	USER	Held a pre rig up safety meeting and JSA with the crew.
Event	7	Rig-Up Equipment	Rig-Up Equipment	9/18/2017	00:00:20	USER	The crew rigged up all lines, hoses and equipment for the job.
Event	8	Safety Meeting	Safety Meeting	9/18/2017	02:00:00	USER	Held a pre job safety meeting and JSA with all personnel on location.
Event	9	Start Job	Start Job	9/18/2017	03:12:25	COM4	Pumped 3 bbls. of fresh water to fill lines.
Event	10	Test Lines	Test Lines	9/18/2017	03:16:18	COM4	Pressure tested lines to 4,900 psi. with a 500 psi. electronic kick out test.
Event	11	Pump Spacer 1	Pump Spacer 1	9/18/2017	03:20:30	COM4	Pumped 40 bbls. of Tuned Spacer w/surfactants mixed at 11.5 ppg. Yield 3.8 ft3/sks, 23.8 gal/sks. Density was verified pressurized scales.
Event	12	Drop Bottom Plug	Drop Bottom Plug	9/18/2017	03:22:36	COM4	Dropped the bottom plug on the fly witnessed by the customer.

Event	13	Pump Lead Cement	Pump Lead Cement	9/18/2017	03:30:26	COM4	Pumped 261 bbls. (935 sks) of Elasticm mixed at 13.2 ppg. Yield 1.57 ft3/sks, 7.52 gal/sks. Density was verified by pressurized scales.
Event	14	Pump Tail Cement	Pump Tail Cement	9/18/2017	04:22:16	COM4	Pumped 511 bbls. (1375 sks) of Neocem mixed at 13.2 ppg. Yield 2.09 ft3/sks. 10.08 gal/sks. Density was verified by pressurized scales.
Event	15	Shutdown	Shutdown	9/18/2017	05:32:35	COM4	
Event	16	Clean Lines	Clean Lines	9/18/2017	05:32:43	COM4	Washed up pumps and lines until clean.
Event	17	Drop Top Plug	Drop Top Plug	9/18/2017	05:40:34	COM4	Dropped the top plug witnessed by the customer
Event	18	Pump Displacement	Pump Displacement	9/18/2017	05:40:40	COM4	Pumped 406 bbls. of fresh water with MMCR in the first 10 bbls., Clayweb and Bio cide throughout the rest of displacement.
Event	19	Bump Plug	Bump Plug	9/18/2017	06:38:09	USER	Bumped the plug 500 psi. over 2,250 psi. at 3 bpm. Final pressure was 2,750 psi.
Event	20	Other	Other	9/18/2017	06:38:10	USER	Got 60 bbls. of cement to surface. Estimated top of tail is at 4,631.2'.
Event	21	Other	Other	9/18/2017	06:38:11	COM4	Pressured up the well to 4,880 psi. to burst the plug. Pumped 6 bbls. of fresh water for a wet shoe.
Event	22	Check Floats	Check Floats	9/18/2017	06:42:05	USER	Bled off pressure to check floats. Got 2 bbls. of fluid back to the truck.
Event	23	Safety Meeting	Safety Meeting	9/18/2017	08:19:27	USER	Held a pre rig down safety meeting and JSA.
Event	24	Rig-Down Equipment	Rig-Down Equipment	9/18/2017	08:19:43	USER	Rigged down all lines, hoses and equipment.
Event	25	Depart Location Safety Meeting	Depart Location Safety Meeting	9/18/2017	08:19:55	USER	Held a pre journey safety meeting with the crew.
Event	26	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	9/18/2017	08:20:09	USER	Started journey management with dispatch and left location.

3.0 Attachments

3.1 Job Chart

Custom Results



