

# HALLIBURTON

iCem<sup>®</sup> Service

## **SYNERGY RESOURCES CORPORATION**

Date: Wednesday, December 30, 2015

### **SRC Vista 44-2C**

Intermediate

Job Date: Sunday, November 22, 2015

Sincerely,

**Lauren Roberts**

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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 **SRC Vista 44-2C** cement **Intermediate** 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.

**3 bbls 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 #: 3700913	Quote #:	Sales Order #: 0902922179							
Customer: SYNERGY RESOURCES CORPORATION		Customer Rep: Kevin								
Well Name: SRC Vista	Well #: 44-2C	API/UWI #: 05-123-41063								
Field:	City (SAP): JOHNSTOWN	County/Parish: WELD	State: COLORADO							
Legal Description:										
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 131								
Job BOM: 7522										
Well Type: GAS										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Chris Turner								
Job										
Formation Name: Vista										
Formation Depth (MD)	Top: 653 ft	Bottom:	7665 ft							
Form Type	Intermediate	BHST	225 deg							
Job depth MD	7650 ft	Job Depth TVD								
Water Depth	N/A	Wk Ht Above Floor	0 ft							
Perforation Depth (MD)	From: N/A	To:	N/A							
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	0	0	653
Casing		7	6.276	26		P-110	0	7650	0	6900
Open Hole Section			8.75				653	7665		6900
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
					Top Plug	7	1	HES		
					Bottom Plug	7	1	HES		
					Plug Container	7	1	HES		
Fluid Data										
Stage/Plug #: 1										
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	Fresh Water W/ Red Dye	Fresh Water W/ Red Dye	20	bbl	8.33			4		
Stage/Plug #: 2										
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	20	bbl	11.5	3.86	24.8	4		

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## Cementing Job Summary

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
3	ElastiCem B2	ELASTICEM (TM) SYSTEM	868	sack	13.8	1.6	7.09	8	7.09
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
4	Displacement	Displacement	282	bbl	10.4				
Cement Left In Pipe		Amount	47 ft	Reason				Shoe Joint	
Mix Water:		pH 7	Mix Water		60 ppm	Mix Water Temperature:		51 °F	
			Chloride:						

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	11/22/2015	11:00	USER				Call out For Job
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/22/2015	14:20	USER				Pre departure safety meeting with crew
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	11/22/2015	14:30	USER				Depart from yard with crew
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/22/2015	15:25	USER				Arrive safely at location
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/22/2015	15:30	USER				Pre rig up safety meeting with crew to assess site and discuss rig up hazards and spotting equipment
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/22/2015	15:40	USER				Rig up all equipment on the ground
Event	7	Other	Water Test	11/22/2015	15:45	USER				PH: 7, Chlorides: 60, Temp: 51 deg F, Hardness 225
Event	8	Other	Rig Circulating	11/22/2015	15:45	USER				360 BBL, 6 BPM, 840 PSI, 1 HR, 460 Units Gas. Mud Weight 10.5 ppg, 40 Vis, 8 YP.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/22/2015	16:45	USER				Pre job safety meeting with crew, rig crew, and customer to discuss job procedures and safety throughout the job
Event	10	Rig-up Lines	Rig-up Lines	11/22/2015	17:00	USER				Rig up all equipment on the rig floor

Event	11	Start Job	Start Job	11/22/2015	17:14	COM4	198.00	8.33	2	Fill Lines with 2 BBL of Fresh Water
Event	12	Test Lines	Test Lines	11/22/2015	17:17	COM4	4000	8.33	0.00	Test lines to 4000 psi, good test no leaks
Event	13	Pump Spacer 1	Pump Spacer 1	11/22/2015	17:23	COM4	140.00	8.33	4.5	Pump 25 BBL of Fresh Water 4.5 bpm 481 psi
Event	14	Pump Spacer 2	Pump Spacer 2	11/22/2015	17:35	COM4	375.00	11.5	4.5	Pump 20 BBL of Tune Spacer @ 11.5 ppg, 4.5 bpm 321 psi. Checked weight on mud scales
Event	15	Drop Bottom Plug	Drop Bottom Plug	11/22/2015	17:42	COM4	226.00	11.61	0.80	Drop Bottom Plug, Customer Witnessed
Event	16	Pump Cement	Pump Cement	11/22/2015	17:43	COM4	287.00	13.8	7.5	Pump 247 BBL of Cement @ 13.8 ppg- 7.5 bpm 550 psi
Event	17	Check Weight	Check weight	11/22/2015	17:55	COM4	765.00	13.8	7.5	13.8 PPG
Event	18	Check Weight	Check weight	11/22/2015	18:13	COM4	420.00	13.8	7.5	13.75 ppg
Event	19	Shutdown	Shutdown	11/22/2015	18:22	COM4	59.00	13.8	0.00	Shutdown to line up to drop plug
Event	20	Drop Top Plug	Drop Top Plug	11/22/2015	18:25	COM4	47	13.8	2	Drop Top Plug, Customer witnessed
Event	21	Pump Displacement	Pump Displacement	11/22/2015	18:26	COM4	780	10.5	7.5	Pump 282 bbl of WBM to displace casing. Caught Cement @ 120 bbl gone. Got 3 BBL of Cement to Surface
Event	22	Bump Plug	Bump Plug	11/22/2015	19:17	COM4	2287.00	8.33	0.00	Bumped plug @ calculated displacement. 1780 psi final circulating pressure to 2330 psi.
Event	23	Other	Other	11/22/2015	19:21	COM4				Bleed off Pressure, 1.5 bbl back



Event	24	Pressure Up Well	Pressure Up Well	11/22/2015	19:22	COM4	Pressure up on casing to 1000 psi for 10 min casing test
Event	25	End Job	End Job	11/22/2015	19:28	COM4	End Job
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/22/2015	19:30	USER	Pre rig down safety meeting with crew
Event	27	Rig-Down Equipment	Rig-Down Equipment	11/22/2015	19:40	USER	Rig down all equipment
Event	28	Rig-Down Completed	Rig-Down Completed	11/22/2015	20:30	USER	Rig down completed
Event	29	Depart Location	Depart Location	11/22/2015	20:35	USER	Depart location