

# HALLIBURTON

iCem<sup>®</sup> Service

## **SANDRIDGE ENERGY INC-EBUS**

Date: Sunday, December 09, 2018

### **Peters 0781 10-13H12 Production**

Job Date: Friday, November 23, 2018

Sincerely,  
**Bryce Hinsch**

## Legal Notice

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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 **Peters 0781 10-13H12** 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.

**No spacer or cement was returned to surface. Returns fully lost 330 bbls into displacement.**

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 #: 305021	Ship To #: 3902683	Quote #: 0022512696	Sales Order #: 0905278555
Customer: SANDRIDGE ENERGY INC-EBUS		Customer Rep: John Work	
Well Name: PETERS 0781	Well #: 10-13H12	API/UWI #: 05-057-06590-00	
Field: WILDCAT	City (SAP): COALMONT	County/Parish: JACKSON	State: COLORADO
Legal Description: NE NE-12-7N-81W-710FNL-41FEL			
Contractor: CYCLONE		Rig/Platform Name/Num: CYCLONE 33	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srvc Supervisor: Luke Kosakewich	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	17095ft	Job Depth TVD	6065ft
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	STC	J-55	0	2400	0	2400
Casing		5.5	4.778	20	GB CD	P-110	0	17084	0	6065
Open Hole Section			8.75				2400	17095	2400	6065

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	HES
Float Shoe	5.5	1	HES	17084	Bottom Plug	5.5	2	HES
Float Collar	5.5	1	HES	17038	SSR plug set			HES
Insert Float					Plug Container	5.5	1	HES
Base Tool	5.5	1	HES	9440	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	10.6	5.97		5	

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	TergoVis I	CMT PKG TERGOVIS I	50	bbl	10.6	3.626		5		
3	NeoCem	NeoCem TM	850	sack	12	2.31		7	12.66	
4	EconoCem	ECONOCEM (TM) SYSTEM	1960	sack	13.5	1.68		7	7.99	
5	Displacement Fluid	Displacement Fluid	8	bbl	8.4			7		
6	Displacement Fluid	Displacement Fluid	20	bbl	8.4			8		
7	Displacement Fluid	Displacement Fluid W BE3 and Clayweb	358	bbl	8.4			8		
<b>Cement Left In Pipe</b>										
<b>Amount</b>		46 ft			<b>Reason</b>			<b>Shoe Joint</b>		
Mix Water:		pH 7		Mix Water Chloride:		0 ppm		Mix Water Temperature:		61 °F
Plug Bumped?		Yes		Bump Pressure:		1,200 psi		Floats Held?		Yes
<b>Comment</b> Had partial returns throughout the job. Lost returns fully 330 bbls. into displacement. Bumped the plug 500 psi. over 1,200 psi. at 3 bpm. Final pressure was 1,800 psi. Held for 5 minutes. Pressure held. Check floats. Floats held. Got 2.5 bbls. of fluid back to the truck. Circulated no spacer or cement to surface.										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	11/22/2018	03:00:00	USER					Crew was called out at 03:00 for an on location time of 09:00.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	11/22/2018	05:45:00	USER					Crew held a pre journey safety meeting and JSA.
Event	3	Depart Shop for Location	Depart Shop for Location	11/22/2018	06:00:00	USER					Started journey management with dispatch and left location.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/22/2018	11:00:00	USER					Crew performed a site assessment, safety meeting and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics. The rig was running casing.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/22/2018	20:00:00	USER					Held a pre rig up safety meeting with my crew.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/22/2018	20:10:00	USER					The crew rigged up all lines, hoses and equipment for the job.
Event	7	Safety Meeting	Safety Meeting	11/23/2018	01:00:00	USER					Halliburton cement crew held a pre cement job safety meeting and JSA with third party personnel and rig crew.
Event	8	Start Job	Start Job	11/23/2018	01:51:55	COM5	-1.00	0.00	8.48	9.70	Pumped 3 bbls. of fresh water at 3 bpm. to fill lines and establish flow to the

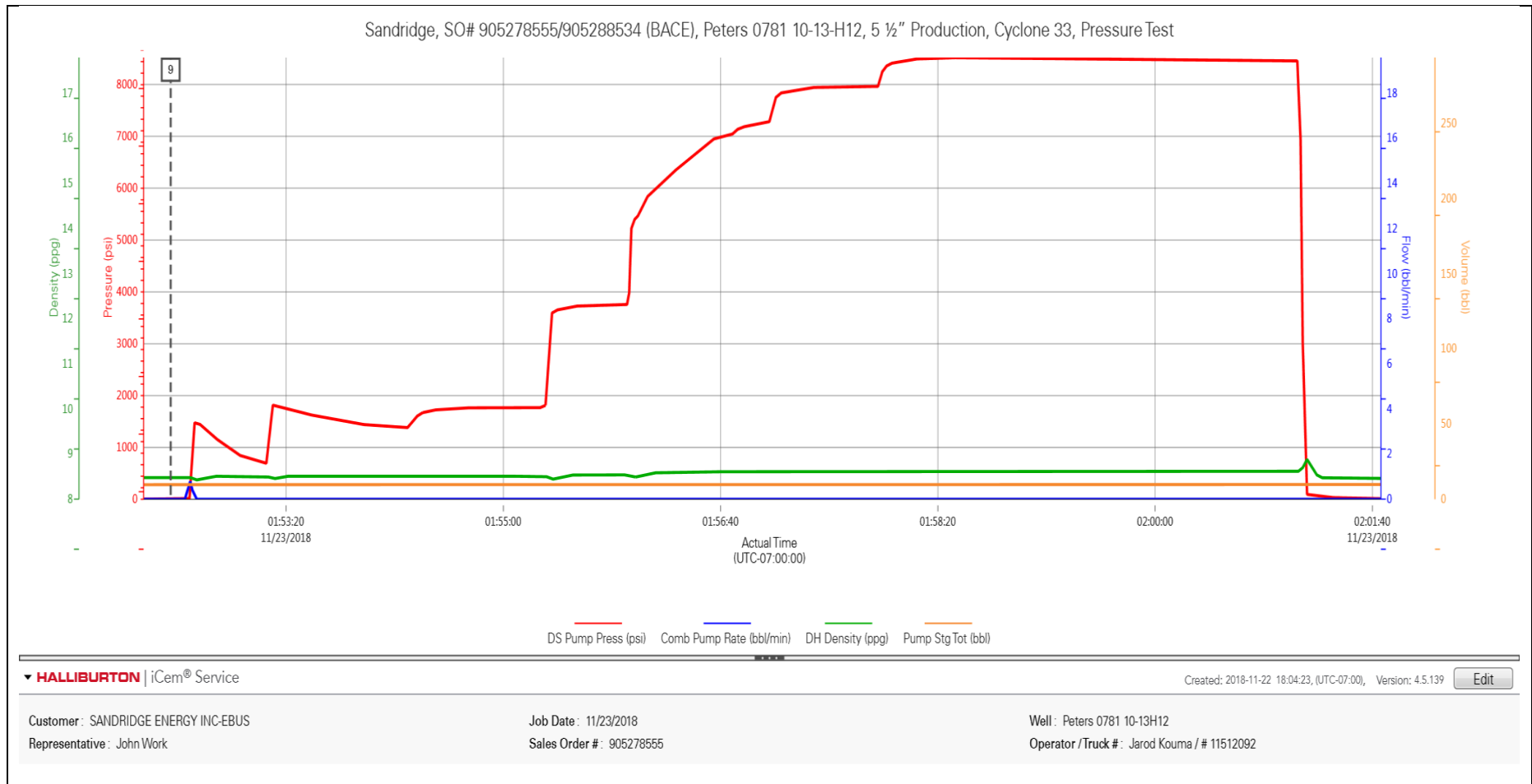
											trip tanks.
Event	9	Test Lines	Test Lines	11/23/2018	01:52:27	COM5	-1.00	0.00	8.48	9.70	Pressure tested lines to 8,000 psi. with a 500 psi. electronic kick out test.
Event	10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	11/23/2018	07:04:12	USER	1026.00	0.00	9.57	9.80	Halliburton cement crew held another pre cement job safety meeting and JSA with third party personnel and rig crew for the crew change.
Event	11	Pump Spacer 1	Pump Spacer 1	11/23/2018	08:16:13	COM5	171.00	0.00	8.44	16.10	Pumped 40 bbls. of Tuned Spacer III with surfactants mixed at 10.6 ppg. Yield 5.97 ft3/sk, 38.9 gal/sk. Density was verified by pressurized scales.
Event	12	Pump Spacer 2	Pump Spacer 2	11/23/2018	08:32:30	COM5	76.00	0.00	10.44	39.40	Pumped 50 bbls. of TergoVis with surfactants mixed at 10.6 ppg., Yield: 3.626 ft3/sks, 22.24 gal/sks. Density was verified by pressurized scales.
Event	13	Drop Bottom Plug	Drop Bottom Plug	11/23/2018	08:49:02	COM5	10.00	0.00	10.47	52.80	Dropped the bottom plug, which was witnessed by the customer.
Event	14	Pump Lead Cement	Pump Lead Cement	11/23/2018	08:49:11	COM5	11.00	0.00	10.47	52.80	Pumped 350 bbls. (850 sks.) of Neocem mixed at 12 ppg. Yield: 2.31 ft3/sks, 12.66 gal/sks. Density was verified by pressurized scales.
Event	15	Pump Tail Cement	Pump Tail Cement	11/23/2018	09:44:33	COM5	264.00	6.10	12.28	0.90	Pumped 586 bbls. (1960 sks.) of Econocem mixed at 13.5 ppg., Yield: 1.68 ft3/sks, 7.99 gal/sks. Density was verified by pressurized scales.
Event	16	Shutdown	Shutdown	11/23/2018	11:32:07	COM5					All cement away and shut

				8							down.
Event	17	Pump Water	Pump Water	11/23/2018	11:33:30	USER	72.00	5.00	8.67	0.80	Pumped 8 bbls. of fresh water with 5 gals. of MMCR ahead of the top plug for a wet shoe.
Event	18	Drop Top Plug	Drop Top Plug	11/23/2018	11:36:13	COM5	35.00	0.00	8.32	8.10	Dropped the top plug, which was witnessed by the customer.
Event	19	Pump Displacement	Pump Displacement	11/23/2018	11:36:41	COM5					Pumped 378 bbls. of fresh water with MMCR in the first 20 bbls. BE-3 and Clayweb was added throughout all of displacement. Had mostly full returns until 200 bbls. away. Lost returns fully 330 bbls. away into displacment.
Event	20	Bump Plug	Bump Plug	11/23/2018	12:26:17	COM5	1196.00	3.00	8.40	371.60	Bumped the plug 500 psi. over 1,200 psi. at 3 bpm. Final pressure was 1,800 psi. Held for 5 minutes. Pressure held. Circulated no spacer or cement to surface.
Event	21	Shutdown	Shutdown	11/23/2018	12:30:01	COM5	1892.00	0.00	8.41	373.80	Unable to estimate TOC due to the loss of returns.
Event	22	Check Floats	Check Floats	11/23/2018	12:32:34	USER	1937.00	0.00	8.40	373.80	Bled off pressure to check floats. Floats hled. Got 2.5 bbls. of fluid back to the truck.
Event	23	End Job	End Job	11/23/2018	12:34:50	COM5					Washed and blew down all pumps and lines until clean and dry.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/23/2018	12:45:00	USER	6.00	0.00	4.94	373.80	Halliburton cement crew held a pre rig down safety meeting and JSA.

Event	25	Rig-Down Equipment	Rig-Down Equipment	11/23/2018	13:00:00	USER	7.00	0.00	0.26	373.80	Rigged down all lines, hoses and equipment.
Event	26	Safety Meeting - Departing Location	Safety Meeting - Departing Location	11/23/2018	15:20:00	USER					Held a pre journey safety meeting with crew.
Event	27	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	11/23/2018	15:30:00	USER					Started journey management with dispatch and left location.

3.0 Attachments

3.1 Sandridge, SO# 905278555, Peters 0781 10-13-H12 Pressure Test



3.2 Sandridge, Peters 0781 10-13-H12, 5.5 Inch, Production

