

# HALLIBURTON

iCem<sup>®</sup> Service

## **VERDAD RESOURCES LLC**

Date: Sunday, April 21, 2019

### **Peggy 2501-01H Production**

Job Date: Sunday, April 21, 2019

Sincerely,  
**Tyler Hill**

## Legal Notice

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*The Road to Excellence Starts with Safety*

Sold To #: 380688	Ship To #: 3951115	Quote #:	Sales Order #: 0905644742
Customer: VERDAD RESOURCES LLC		Customer Rep: George	
Well Name: PEGGY		Well #: 2501-01H	API/UWI #: 05-123-49840-00
Field: WILDCAT	City (SAP): GROVER	County/Parish: WELD	State: COLORADO
Legal Description: SE SW-25-9N-60W-300FSL-2412FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 290	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srcv Supervisor: Kamereon White	

**Job**

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	11857ft Job Depth TVD
Water Depth	Wk Ht Above Floor 3'
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			0	1581		1581
Casing		5.5	4.778	20			0	11857	0	6218
Open Hole Section			8.5				1581	11867	1581	6218

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
					Top Plug	5.5	1	WTHR
Float Shoe	5.5	1		11857	Bottom Plug	5.5	1	WTHR
Float Collar	5.5	1		11755				
					Plug Container	5.5	1	HES
					Centralizers	5.5	128	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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	12.5	2.78			

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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	12.5	2.71				
3	ElastiCem	ELASTICEM (TM) SYSTEM	677	sack	13.2	1.57		8	7.55	
4	NeoCem	NeoCem TM	648	sack	13.2	2.04		8	9.75	
5	MMCR Displacement	MMCR Displacement	20	bbl	8.34					
6	Displacement		241	bbl	8.34					
<b>Cement Left In Pipe</b>										
<b>Amount</b>		101 ft			<b>Reason</b>			<b>Shoe Joint</b>		
<b>Mix Water:</b>		pH 7		<b>Mix Water Chloride:</b> < 400 ppm			<b>Mix Water Temperature:</b> 47,43 °F			
				<b>Plug Displaced by:</b> 8.33 lb/gal						
<b>Plug Bumped?</b>		Yes		<b>Bump Pressure:</b> 2600 psi			<b>Floats Held?</b> Yes			
<b>Cement Returns:</b>		29 bbl		<b>Returns Density:</b> 12.5 lb/gal						

Comment

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS 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	Call Out	Call Out	4/20/2019	20:00:00	USER					Crew called out and was requested to be on location @ 02:00.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	4/20/2019	23:50:00	USER					Crew discussed the route of travel.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	4/21/2019	00:00:00	USER					Crew left the yard.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	4/21/2019	02:00:00	USER					Crew arrived on location and the rig was running casing. 1000' left to run.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	4/21/2019	02:10:00	USER					Spotting in trucks and supervisor met with the customer and got the well information. TD-11,867' TP-11,856.56' SJ-101.08' FC-11,755.48' Cas-5.5" 20# HCP-110 PC-9.625" 36# Set @ 1581' Mud Weight-9.7 ppg OBM, Wet Shoe- 5 Bbls TVD-6218' OH-8.5."
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/21/2019	02:20:00	USER					Discussed rig up procedure and signed the JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	4/21/2019	02:30:00	USER					Rigged up all HES equipment and lines.
Event	8	Rig-Up Completed	Rig-Up Completed	4/21/2019	03:15:00	USER					All HES equipment and lines rigged up safely.
Event	9	Casing on Bottom	Casing on Bottom	4/21/2019	03:30:00	USER					Casing on Bottom with the landing joint.

Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/21/2019	04:44:48	USER	-31.00	0.00	0.00	0.00	Discussed the job procedure and pressures with all personnel involved with the cement job. The rig circulated @ 417 gpm 830 psi and 13,100 strokes.
Event	11	Start Job	Start Job	4/21/2019	06:18:49	COM4	-28.00	0.00	0.00	0.00	Started recording data.
Event	12	Check Weight	Check Weight	4/21/2019	06:27:27	COM4	-33.00	8.48	0.00	8.60	Checked the weight on the spacer with the pressurized mud scales, scaled @ 12.5 ppg
Event	13	Other	Other	4/21/2019	06:32:30	COM4	-23.00	8.10	1.60	8.80	Fill lines with 3 bbls of water 3 bpm 220 psi.
Event	14	Test Lines	Test Lines	4/21/2019	06:36:35	COM4	6043.00	8.45	0.00	11.90	Tested the lines to 500 psi and to 6000 psi and held for 2 min no leaks.
Event	15	Pump Spacer 1	Pump Spacer 1	4/21/2019	06:39:07	COM4	-4.00	8.31	0.00	11.90	Pumped 100 bbls of spacer @ 12.5 ppg 2.78 yield 16.7 gal/sk 3 bpm 130 psi.
Event	16	Drop Bottom Plug	Drop Bottom Plug	4/21/2019	07:12:32	COM4	-17.00	12.76	0.90	101.20	The customer and Halliburton rep witnessed the bottom plug being dropped and the plug indicator move.
Event	17	Check Weight	Check Weight	4/21/2019	07:12:38	COM4	2.00	12.60	0.90	101.30	Checked the weight on the Lead Cement with the pressurized mud scales, scaled @ 13.2 ppg
Event	18	Pump Lead Cement	Pump Lead Cement	4/21/2019	07:16:05	COM4	363.00	13.16	8.30	0.10	Pumped 189 bbls of Lead cement @ 13.2 ppg 1.57 yield 7.55 yield (677 sks) 8 bpm 430 psi.
Event	19	Pump Tail Cement	Pump Tail Cement	4/21/2019	07:38:49	COM4	451.00	13.13	8.30	0.10	Pumped 236 bbls of Tail bbls of Tail cement @ 13.2 ppg 2.04 yield 9.75 gal/sk (648 sks) 8 bpm 620 psi.

Event	20	Check Weight	Check Weight	4/21/2019	07:41:31	COM4	619.00	13.12	8.30	22.60	Checked the weight on the Tail Cement with the pressurized mud scales, scaled @ 13.2 ppg
Event	21	Shutdown	Shutdown	4/21/2019	08:11:11	COM4	74.00	13.34	0.00	248.20	Shutdown to blow air back through the standpipe to the wash up tank and to wash pumps and lines.
Event	22	Drop Top Plug	Drop Top Plug	4/21/2019	08:20:58	COM4	17.00	8.06	3.70	265.20	The customer and Halliburton rep witnessed the Top Plug being dropped and the plug indicator move.
Event	23	Pump Displacement	Pump Displacement	4/21/2019	08:21:01	COM4	23.00	8.06	3.60	0.00	Pumped calculated displacement of 261 bbls.
Event	24	Displ Reached Cement	Displ Reached Cement	4/21/2019	08:23:15	COM4	710.00	8.33	9.30	19.80	@ 40 bbls into displacement we caught the plug and maintained 10 bpm.
Event	25	Bump Plug	Bump Plug	4/21/2019	08:57:57	COM4	2790.00	8.43	0.00	268.80	Bumped the plug on calculated displacement the final circulating psi was 2600 psi and shutdown. Watched for 5 min casing test.
Event	26	Other	Other	4/21/2019	09:01:12	COM4	2937.00	8.43	0.00	268.80	Pressured up to shift the wet shoe sub @ 2 bpm it shifted @ 3800 psi
Event	27	Other	Other	4/21/2019	09:03:06	COM4	2040.00	8.39	0.00	274.90	Pumped a 5 bbl wet shoe @ 5 bpm and shutdown.
Event	28	Other	Other	4/21/2019	09:03:19	COM4	1921.00	8.38	0.00	274.90	Checked the floats and the floats held, we got 1.5 bbl back.
Event	29	End Job	End Job	4/21/2019	09:04:06	COM4	-17.00	8.35	0.00	274.90	Cement Job Complete, Calculated tops, TOTC-6097' TOLC-1464' and we got 29

											bbbls of spacer back to surface.
Event	30	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/21/2019	09:10:00	USER	-26.00	8.35	0.00	282.00	Crew held a safety meeting discussing the rig down procedure. Also all potential hazards associated with rigging down all HES equipment and lines.
Event	31	Rig Down Lines	Rig Down Lines	4/21/2019	09:20:00	USER					The crew rigged down all HES equipment and lines.
Event	32	Rig-Down Completed	Rig-Down Completed	4/21/2019	10:00:00	USER					Rig down completed no one got hurt.
Event	33	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/21/2019	10:50:00	USER					The crew held a pre journey safety meeting discussing the route and potential hazards while driving.
Event	34	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	4/21/2019	11:00:00	USER					Kamereon White and crew would like to thank you for your business and choosing Halliburton Cement. If you have any questions please give us a call.

## 2.0 Attachments

### 2.1 Verdad H&P 290 Peggy 2501-01H-Cement Job.png

