

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Friday, August 05, 2016

Varra #11

Surface

Job Date: Thursday, August 04, 2016

Sincerely,
Lauren Roberts

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Varra #11** cement **Surface** 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.

38 bbl. 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 #: 369404		Ship To #: 3563376		Quote #:		Sales Order #: 0903450801				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Todd Stevens						
Well Name: VARRA		Well #: 11		API/UWI #: 05-123-39991-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: NW SW-5-6N-67W-1485FSL-785FWL										
Contractor:				Rig/Platform Name/Num: Spud Rig						
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB71271				Srcv Supervisor: Brandon Parker						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1576ft		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	1576	0	1576
Open Hole Section			13.5				0	1576	0	1576
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1	weather	1553		Top Plug	9.625	1	weatherford	
Float Shoe	9.625					Bottom Plug	9.625		HES	
Float Collar	9.625	1	weather	1530		SSR plug set	9.625		HES	
Insert Float	9.625					Plug Container	9.625		HES	
Stage Tool	9.625					Centralizers	9.625		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name		Qty	Qty UoM	Mixing Density lbm/gal	Yield R3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water		15	bbl	8.33			2	
Fluid #	Stage Type	Fluid Name		Qty	Qty UoM	Mixing Density lbm/gal	Yield R3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	SwiftCem	SWIFTCEM (TM) SYSTEM		175	sack	13.5	1.74		6	9.2
9.20 Gal		FRESH WATER								

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Oil Based Mud Displacement	FW Displacement	118	bbl	8.3				
Cement Left In Pipe									
Amount		45 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

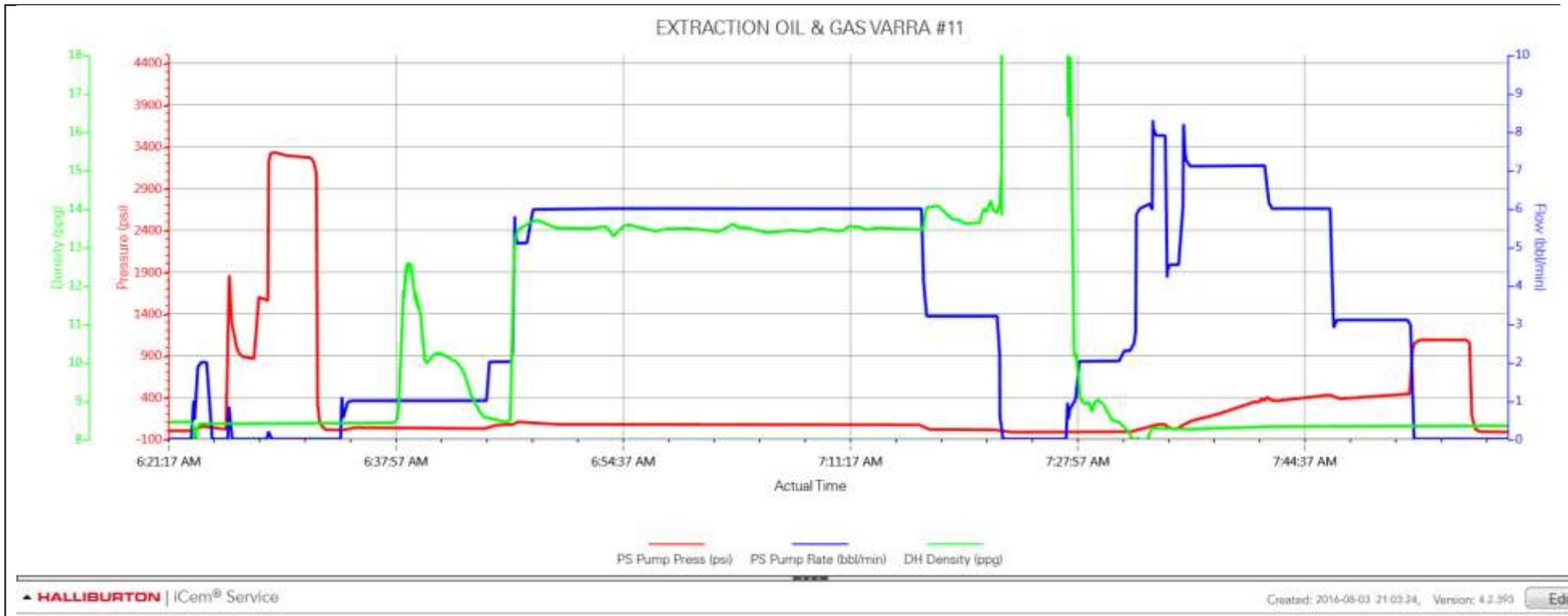
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Pass-Side Pump Rate (bbl/min)	Downhole Density (ppg)	Comments
Event	1	Call Out	Call Out	8/3/2016	19:30:00	USER				crew called out to 9.625 surface job, 1 red tiger pump trk, 2 660 loaded with 565 sks of SwiftCem cmt. top plug was issued but top plug was not used it will be returned.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/3/2016	21:45:00	USER				meeting with all HES personnel to discuss safety issues and hazards associated with traveling to location. also covered route of travel.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	8/3/2016	22:00:00	USER				
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/4/2016	00:30:00	USER				crew arrived on location at assigned dispatch time of 00:30
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	8/4/2016	00:32:00	USER				water temp 73.5, sul <200, ph 7, chlo 0. checked frac tanks for proper amount of water needed for job. Frac tank 2 was completely full at 500BBL's, checked over rig up area
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/4/2016	00:45:00	USER				meeting with all HES personnel to discuss safety/hazards issues associated with rigging up equipment. All personnel signed JSA
Event	7	Rig-Up Equipment	Rig-Up Equipment	8/4/2016	01:00:00	USER				tp1576, sj45.25, fc1530.75, 13.5"oh, 9.625 casing j55 36#, weatherford float equipment, 15 cnt, 8.5ppg wf, weatherford top plug only.
Event	8	Standby - Other - see comments	Standby - Other - see comments	8/4/2016	02:00:00	USER				HES went into wait mode waiting on rig to land casing
Event	9	Rig-Up Equipment	Rig-Up Equipment	8/4/2016	05:30:00	USER				HES finished rigging up iron to floor
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	8/4/2016	05:45:00	USER				meeting with all personnel on location to discuss safety/hazards and job procedures associated with job in hand. all personnel signed a jsa
Event	11	Start Job	Start Job	8/4/2016	06:22:00	USER	1.00	0.00	8.45	

Event	12	Pump Water	Fill Lines FW	8/4/2016	06:23:36	USER	52.00	2.00	8.42	fill lines with 2BBL's of FW at 2BPM top pressure was 51 Red dye applied
Event	13	Test Lines	Test Lines	8/4/2016	06:25:36	USER	19.00	0.00	8.41	test kick outs, low pressure and high pressure test at 3338psi. pressure held great
Event	14	Pump Spacer	Pump FW Spacer	8/4/2016	06:34:13	USER	17.00	0.80	8.37	pumped a total of 15BBL's of FW spacer, pumped at 1BPM to bring cmt up to weight, then went to 2BPM. 2lbs of red dye used in fw spacer. average psi 50psi
Event	15	Pump Tail Cement	Pump Tail Cement	8/4/2016	06:46:26	USER	68.00	2.00	10.48	pumped 175BBL's of tail cmt, 565sks, 13.5lbs, 1.74 yield, 9.2 gal/sk, pumped at 6BPM and average pressure was 75psi. weight of cmt was verified using high pressure mud scales, weight was confirmed by HES supervisor and Todd Stevens
Event	16	Shutdown	Shutdown	8/4/2016	07:22:24	USER	-8.00	0.00	32.38	done pumping cmt
Event	17	Drop Top Plug	Drop Top Plug	8/4/2016	07:26:12	USER	-15.00	0.00	26.13	dropped 9.625 weatherford top plug, witnessed by HES supervisor and company rep.(Todd Stevens) pumped down using positive displacement
Event	18	Pump Displacement	Pump FW Displacement	8/4/2016	07:27:03	USER	-15.00	0.00	26.37	pumped a total of 118BBL's of FW displacement.
Event	19	Other	Caught Cement	8/4/2016	07:36:47	USER	135.00	7.10	8.27	caught cmt at 14BBL's into displacement pressure to from 60 to 170psi
Event	20	Cement Returns to Surface	Cement Returns to Surface	8/4/2016	07:44:44	USER	388.00	6.00	8.33	spacer back at 76BBL's away with red dye, and good cmt back at 88BBL's away. total of 38BBL's to surface
Event	21	Slow Rate	Slow Rate	8/4/2016	07:47:07	USER	381.00	3.10	8.33	slow rate to 3BPM to land plug
Event	22	Bump Plug	Bump Plug	8/4/2016	07:52:43	USER	1063.00	0.00	8.36	HES bumped plug at calculated displacement of 118 at 450 psi and kicked pumps out at 900 and pressure rose to 1089 and held like a rock
Event	23	Check Floats	Check Floats	8/4/2016	07:57:20	USER	-7.00	0.00	8.35	weatherford floats held .5BBL back to the trk
Event	24	End Job	End Job	8/4/2016	07:58:58	COM5	-15.00	0.00	8.34	
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/4/2016	08:00:00	USER	-15.00	0.00	8.35	meeting with all HES personnel to discuss safety/hazards associated with rigging down equipment. all personnel signed a jsa
Event	26	Rig-Down Equipment	Rig-Down Equipment	8/4/2016	08:15:00	USER	7.00	2.70	8.38	
Event	27	Pre-Convoy Safety	Pre-Convoy Safety	8/4/2016	09:30:00	USER				meeting with all HES personnel to discuss safety/hazards

	Meeting	Meeting					associated with driving back to service center. all personnel signed jsa
Event	28	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	8/4/2016	09:45:00	USER	
Event	29	Other	Other	8/4/2016	09:46:00	USER	Thank You for Choosing Halliburton Cement. Parker and crew (713)703-3283

3.0 Attachments

3.1 Case 1-no eventsCustom Results.png



3.2 Case 1-events Custom Results.png

