

HALLIBURTON

iCem[®] Service

VERDAD OIL & GAS

For:

Date: Wednesday, August 23, 2017

904242533 Verdad BRNAK 1-64-10-1H Production

904242533 Verdad BRNAK 1-64-10-1H Produc

Case 1

Job Date: Tuesday, August 22, 2017

Sincerely,

Nathaniel Moore

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1.0 Real-Time Job Summary

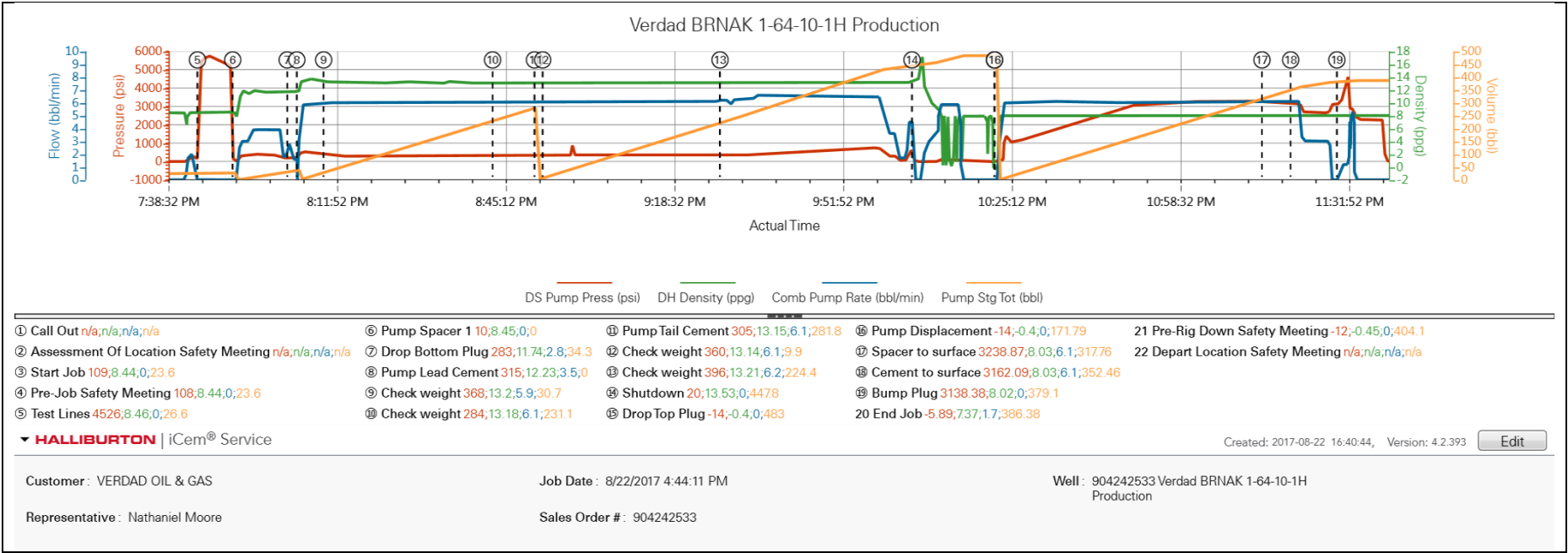
1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Driv-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	Call Out	8/22/2017	09:00:00	USER					OL time 1400. Verify equipment and materials.
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	8/22/2017	14:00:00	USER					Sign in with customer. Spot in and rig up equipment. TD 17283' 8.5" hole. TP 17273' 5.5" 20# P-110. WSS 17122'. Surface 1760' 9.625" 36#. MW 10.1 ppg.
Event	3	Start Job	Start Job	8/22/2017	18:22:35	COM1	109.00	8.44	0.00	23.6	
Event	4	Pre-Job Safety Meeting	Pre-Job Safety Meeting	8/22/2017	18:30:00	USER	108.00	8.44	0.00	23.6	Discuss job procedure with HES and rig crew. Rig circulated full hole volume.
Event	5	Test Lines	Test Lines	8/22/2017	19:44:44	COM1	4526.00	8.46	0.00	26.6	Fill lines 3 bbl water and pressure test to 5800 psi. 500 psi kickout test.
Event	6	Pump Spacer 1	Pump Spacer 1	8/22/2017	19:51:42	COM1	10.00	8.45	0.00	0.0	40 bbl tuned spacer with surfactants 11.5 ppg 3.79 ft3/sk 23.6 gal/sk
Event	7	Drop Bottom Plug	Drop Bottom Plug	8/22/2017	20:02:28	COM1	283.00	11.74	2.80	34.3	Witnessed by company rep.
Event	8	Pump Lead Cement	Pump Lead Cement	8/22/2017	20:04:22	COM1	315.00	12.23	3.50	0.0	1030 sks ElastiCem 13.2 ppg 1.57 ft3/sk 7.55 gal/sk
Event	9	Check Weight	Check weight	8/22/2017	20:09:40	COM1	368.00	13.20	5.90	30.7	13.2 ppg
Event	10	Check Weight	Check weight	8/22/2017	20:43:03	COM1	284.00	13.18	6.10	231.1	13.2 ppg
Event	11	Pump Tail Cement	Pump Tail Cement	8/22/2017	20:51:20	COM1	305.00	13.15	6.10	281.8	1275 sks NeoCem 13.2 ppg 2.09 gt3/sk 9.75 gal/sk

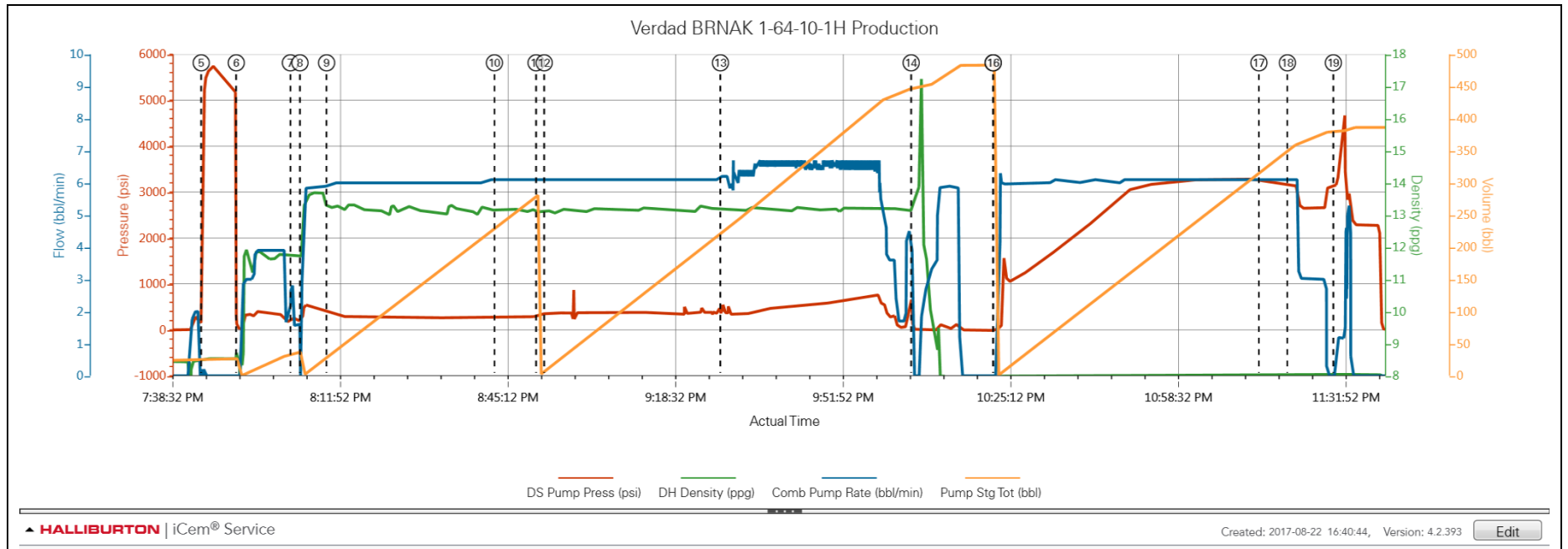
Event	12	Check Weight	Check weight	8/22/2017	20:52:57	COM1	360.00	13.14	6.10	9.9	13.2 ppg
Event	13	Check Weight	Check weight	8/22/2017	21:28:00	COM1	396.00	13.21	6.20	224.4	13.2 ppg
Event	14	Shutdown	Shutdown	8/22/2017	22:05:55	COM1	20.00	13.53	0.00	447.8	Wash pumps and lines and blow down with rig air.
Event	15	Drop Top Plug	Drop Top Plug	8/22/2017	22:22:12	COM1	-14.00	-0.40	0.00	483.0	Witnessed by company rep.
Event	16	Pump Displacement	Pump Displacement	8/22/2017	22:22:15	COM1					379 bbl water displacement with retarder in first 20 bbl and biocide throughout.
Event	17	Other	Spacer to surface	8/22/2017	23:15:05	COM1					315 bbl into displacement.
Event	18	Other	Cement to surface	8/22/2017	23:20:45	COM1					350 bbl into displacement. 30 bbl cement back.
Event	19	Bump Plug	Bump Plug	8/22/2017	23:29:53	COM1					2700 psi final circulating pressure. Pressured up to 3200 psi. Shifted wet shoe sub at 4802 psi and pumped 5 bbl wet shoe. Held for 5 minutes and checked floats. 2.5 bbl back, floats held.
Event	20	End Job	End Job	8/22/2017	23:45:36	COM1					
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/22/2017	23:55:00	USER	-12.00	-0.45	0.00	404.1	
Event	22	Depart Location Safety Meeting	Depart Location Safety Meeting	8/23/2017	01:00:00	USER					

2.0 Attachments

2.1 Case 1-Custom Results.png



2.2 Case 1-Custom Results (1).png



3.0 Custom Graphs

3.1 Custom Graph

