

HALLIBURTON

iCem[®] Service

TAPSTONE ENERGY LLC

For:

Date: Tuesday, January 13, 2015

schupbach 33-2h

Case 1

Sincerely,

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1.0 Job Design

1.1 Time of Stages

Graph Label	Time (min)	Stage Starts Pumping	Stage Enters Annulus
①	0	Bump Plug	

2.0 Hydraulics Summary

3.0 Temperature Modeling

4.0 Real-Time Job Summary

4.1 Stage Summary - Liquid Volume, Density, & Design Shutdown

4.2 Stage Summary - Pump Pressure & ECD

4.3 Stage Summary - Pump Rate & Nitrogen Rate

4.4 Shutdown Summary

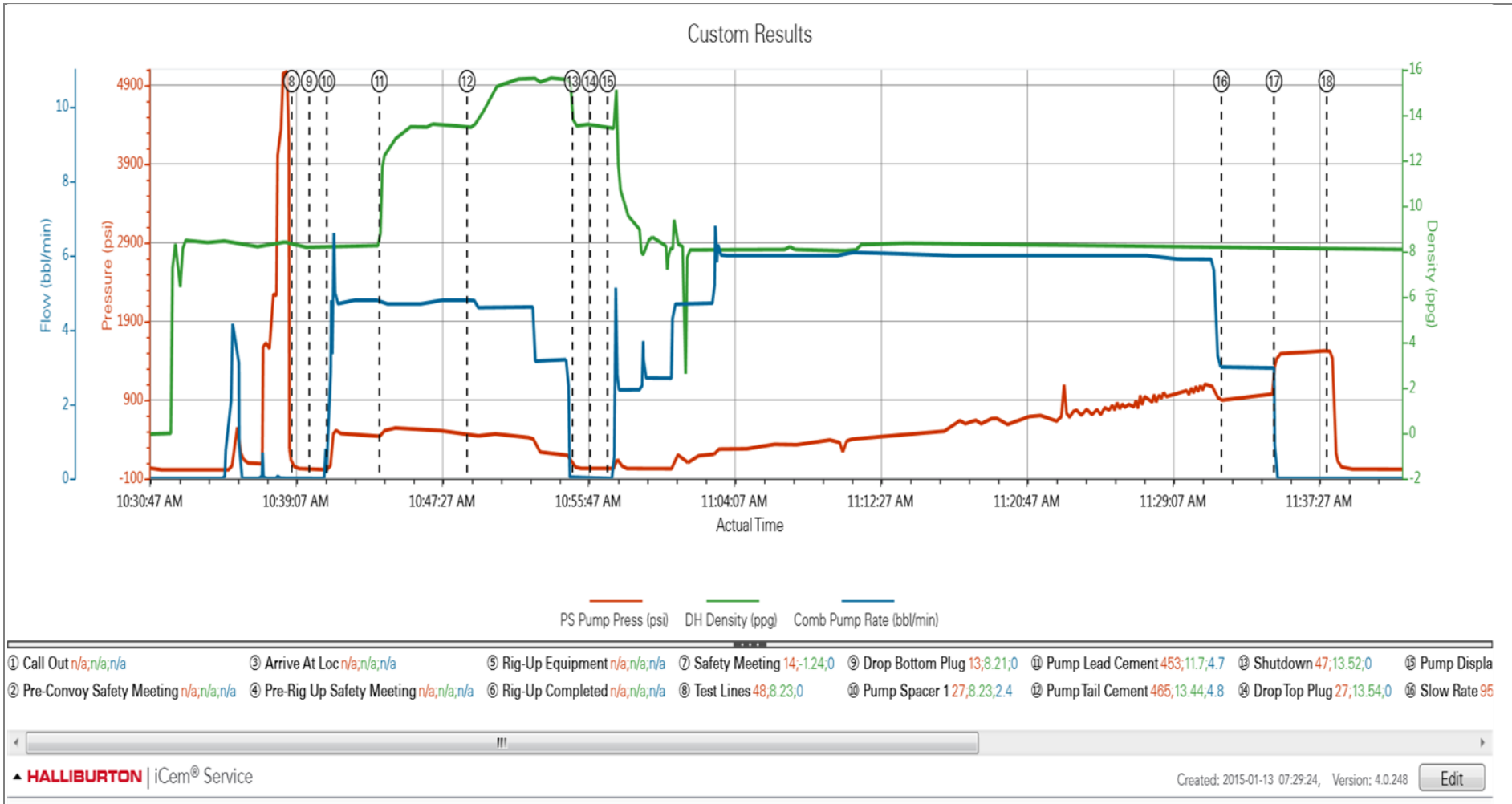
4.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	1/12/2015	22:00:00	USER				requested 03:30
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/13/2015	00:15:00	USER				stay on route and in convoy, use smith driving skills
Event	3	Arrive At Loc	Arrive At Loc	1/13/2015	02:00:00	USER				casing is still being run, test water, wait on casing crew to finish
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/13/2015	06:20:00	USER				pipe racks out of area, watch icy spots, stay clear of line of fire, watch hand placement
Event	5	Rig-Up Equipment	Rig-Up Equipment	1/13/2015	06:30:00	USER				
Event	6	Rig-Up Completed	Rig-Up Completed	1/13/2015	07:30:00	USER				
Event	7	Safety Meeting	Safety Meeting	1/13/2015	10:15:00	USER				go over meeting place, job design, stay clear of red zone, don't hammer on pressurized iron
Event	8	Test Lines	Test Lines	1/13/2015	10:39:00	COM5	5000.00	8.34	0.00	test lines 500 psi low/5000 psi high
Event	9	Drop Bottom Plug	Drop Bottom Plug	1/13/2015	10:40:00	USER				drop bottom plug
Event	10	Pump Spacer 1	Pump Spacer 1	1/13/2015	10:41:00	COM5	440.00	8.34	3.50	pump 10 bbls mudflush ahead...good returns
Event	11	Pump Lead Cement	Pump Lead Cement	1/13/2015	10:44:00	COM5	453.00	13.60	5.00	pump 34.5 bbls (130 sks) lead cement at 13.6#...good returns
Event	12	Pump Tail Cement	Pump Tail Cement	1/13/2015	10:49:00	COM5	465.00	15.60	4.80	pump 19 bbls (90 sks) tail cement at 15.6#...good returns
Event	13	Shutdown	Shutdown	1/13/2015	10:55:00	USER	0.00		0.00	
Event	14	Drop Top Plug	Drop Top Plug	1/13/2015	10:56:00	COM5	0.00		0.00	drop top plug
Event	15	Pump Displacement	Pump Displacement	1/13/2015	10:57:00	COM5	290.00	8.34	6.00	pump 199.5 bbls water

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
										displacement...good returns
Event	16	Slow Rate	Slow Rate	1/13/2015	11:32:00	USER	950.00	8.34	3.00	slow rate to 3 bbls min last 15 bbls... good returns
Event	17	Bump Plug	Bump Plug	1/13/2015	11:35:00	USER	1500.00	8.34	0.00	land plug from 980-1500 psi
Event	18	Check Floats	Check Floats	1/13/2015	11:38:00	USER	0.00	8.34	0.00	floats holding 1 bbl back
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/13/2015	11:45:00	USER				watch over head loads, watch footing and hand placement, use tag lines,
Event	20	Rig-Down Equipment	Rig-Down Equipment	1/13/2015	11:50:00	USER				
Event	21	Rig-Down Completed	Rig-Down Completed	1/13/2015	12:30:00	USER				
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/13/2015	12:35:00	USER				stay on route

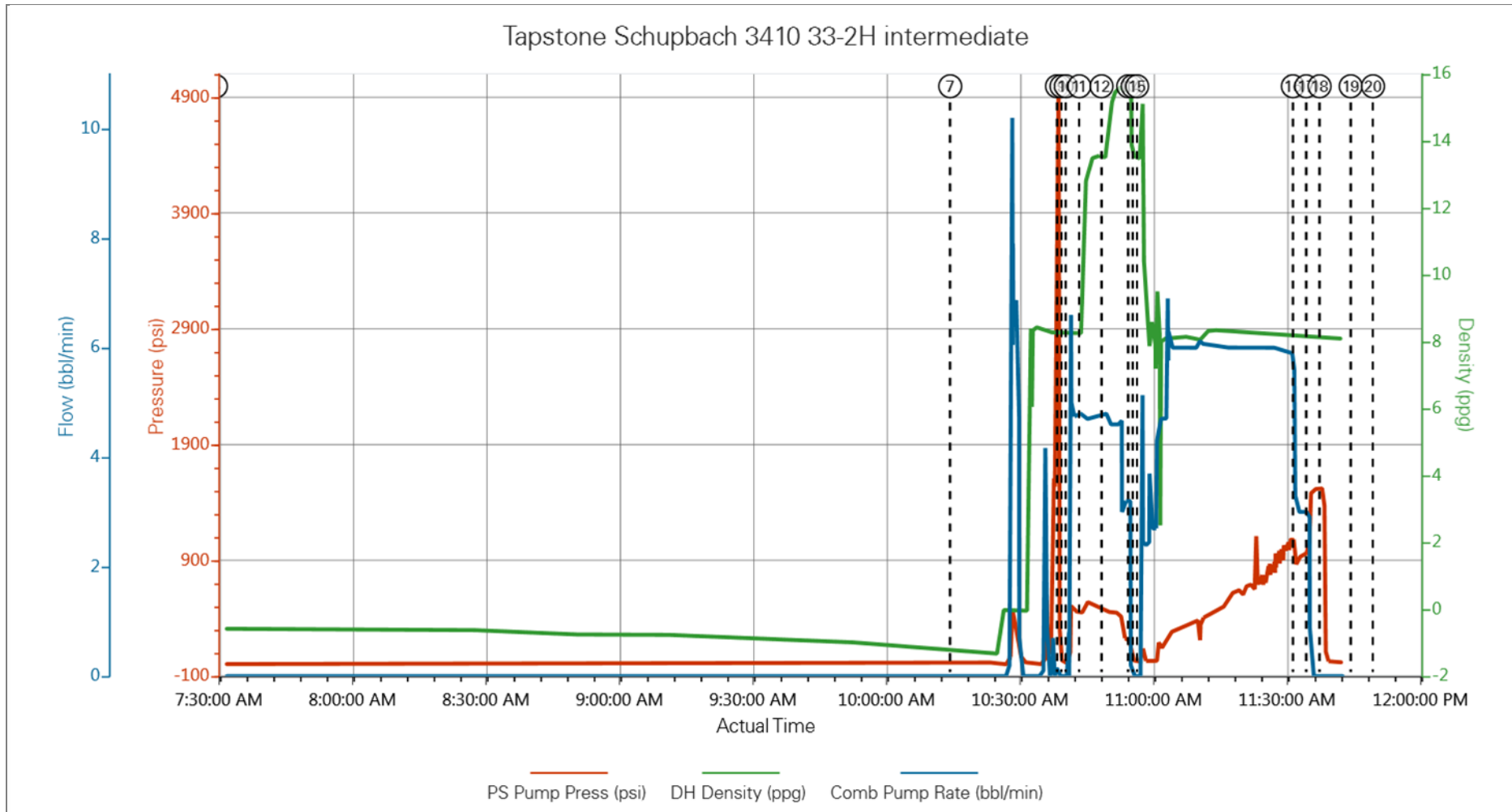
5.0 Attachments

5.1 Case 1-Custom Results.png



6.0 Custom Graphs

6.1 Custom Graph



7.0 Appendix

7.1 One-Minutes Real-Time Data Listing
