

# HALLIBURTON

Customer: NOBLE ENERGY INC  
Job: Noble Energy Well# Daryl L Arnold 1  
Case: Well#Daryl L Arnold 1

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	Comb Pump Total (bbl)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	7/9/2018	04:45:00	USER					Crew callout
Event	2	Arrive At Location	Arrive At Location	7/9/2018	07:45:00	USER					HES crew arrives on location, signs in with rig safety captain, conducts hazard hunt, spots equipment, conducts pre-rig up safety meeting, completes jsa, and verify volumes with co-rep
Event	3	Water Test	Water Test	7/9/2018	07:46:00	USER					Water test=pH: 7, Cl: <140, temp 77 degrees, Well Fluid density: 8.4 watertemp: approx.. 100, calibrate pressurized mud scales via provided fresh water source @ 8.33ppg
Event	4	Well Info	Well Info	7/9/2018	07:47:00	USER					Tubing 2 3/8" 11.6# 7415', csg 4 1/2" 11.6#, CIBP 7415', TOC 7149
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/9/2018	09:15:00	USER	0.00	17.10	8.34	0.00	Conduct safety meeting with all on location: discuss job procedure/contingency plans/hazards involved prior to pumping
Event	7	Pressure Test	Pressure Test	7/9/2018	09:37:05	USER	0.00	2.30	8.37	657.00	Low pressure test surface lines @ 657psi
Event	8	Pressure Test	Pressure Test	7/9/2018	09:38:08	USER	0.00	2.30	8.40	2704.00	High pressure test surface lines @ 2704psi
Event	9	Pump Spacer	Pump Spacer	7/9/2018	09:40:19	USER	0.90	0.30	8.35	105.00	Pump 5bbls fresh

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(v. 4.3.44)

Created: Monday, July 09, 2018

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water/verify well circulation										
Scale and pump approx. 5.5bbls/30cutft/20sks lead cement @ +/- 15.5 density/1.51 yield/6.21 water (Premium Cement)										
Event	10	Pump Cement	Pump Cement	7/9/2018	09:47:28	USER	1.00	0.20	15.10	98.00
Balance well with approx. 26.7bbls fresh water displacement										
Event	11	Pump Displacement	Pump Displacement	7/9/2018	09:51:20	USER	1.60	0.30	16.17	22.00
Event	12	Shutdown	Shutdown	7/9/2018	10:01:47	USER	0.90	26.80	8.38	127.00
Bleed off surface lines/tubing and verify well balanced then turn well over to rig										
Event	13	Bleed Tubing	Bleed Tubing	7/9/2018	10:01:49	USER	0.00	26.80	7.07	102.00
HES crew conducts pre-rig down safety meeting, signs out with rig safety captain and departs location										
Event	14	Depart Location	Depart Location	7/9/2018	12:00:00	USER				
Event	15	Depart Location	Gratitude	7/9/2018	12:01:00	USER				Thank you for choosing Halliburton Energy Services

# HALIBURTON

Customer: NOBLE ENERGY INC  
Job: Noble Energy Well#Daryl L Anderson 1 PTA  
Case: Well#Daryl L Anderson Squeeze#2

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	Comb Pump Total (bbl)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	7/11/2018	06:30:00	USER					Crew Callout
Event	2	Arrive At Location	Arrive At Location	7/11/2018	09:00:00	USER					HES crew arrives on location, signs in with rig safety captain, conducts hazard hunt, spots equipment, conducts pre-rig up safety meeting, completes jsa, and verify volumes with co-rep
Event	3	Water Test	Water Test	7/11/2018	09:01:00	USER					Water test=PH: 7, Cl: <140, temp 77 degrees, Well Fluid density: 8.4 watertemp: approx.. 100, calibrate pressurized mud scales via provided fresh water source @ 8.33ppg
Event	4	Well Info	Well Info	7/11/2018	09:02:00	USER					Plug1-Tub 2 3/8" 4.7# 2120, CICR 2120-2123, Csg 4 1/2" 11.6#, BotPerf 2500-2501, TopPerf 2000'-2001', TOCCICR1992', TOCANNN1975', Plug 2 Tub 2 3/8" 4.7# 1060', Casing 4 1/2" 11.6#, TOC 12'
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/11/2018	11:19:19	USER	0.00	0.00	8.72	2.00	Conduct safety meeting with all on location: discuss job procedure/contingency plans/hazards involved prior to pumping operations
Event	7	Pressure Test	Pressure Test	7/11/2018	11:59:37	USER	0.00	2.10	8.20	663.00	Low pressure test surface lines @ 663psi
Event	8	Pressure Test	Pressure Test	7/11/2018	12:02:18	USER	0.00	2.10	8.29	3606.00	High pressure test surface lines

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(v. 4.3.44)

Created: Wednesday, July 11, 2018

# HALLIBURTON

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@ 3606

Event 9	Pump Spacer	Pump Spacer	7/11/2018	12:07:51	USER						Pump 10bbls mud flush III
Event 10	Pump Water	Pump Water	7/11/2018	12:12:56	USER						Pump 5bbls fresh water spacer
Event 11	Pump Cement	Pump Cement	7/11/2018	12:15:33	USER						Scale and pump approx. 39bbls/219cuft/190sks lead cement @ +/- 15.8 density/1.15 yield/5.0 water (HALCEM (TM) SYSTEM)
Event 12	Pump Displacement	Pump Displacement	7/11/2018	12:34:06	USER						Pump 6.2bbls fresh water displacement
Event 13	Shutdown	Shutdown	7/11/2018	12:36:28	USER	0.00	6.40	8.92	105.00		
Event 14	Bleed Tubing	Bleed Tubing	7/11/2018	12:36:54	USER	0.00	6.40	8.82	20.00		Bleed off surface lines/tubing and turn well over to rig
Event 15	Standby - Other - see comments	Standby - Other - see comments	7/11/2018	12:37:16	USER	0.00	6.40	8.67	5.00		Standby while rig pooh
Event 16	Pump Cement	Pump Cement	7/11/2018	13:18:13	USER	1.60	1.20	14.74	55.00		Scale and pump approx. 29bbls/162cuft/141sks lead cement @ +/- 15.8 density/1.15 yield/5.0 water (HALCEM (TM) SYSTEM)
Event 17	Cement Returns to Surface	Cement Returns to Surface	7/11/2018	13:43:04	USER	2.00	37.20	10.39	23.00		Cement observed to surface
Event 18	Shutdown	Shutdown	7/11/2018	13:43:34	USER	2.00	0.70	9.50	16.00		
Event 19	Bleed Tubing	Bleed Tubing	7/11/2018	13:44:00	USER	0.00	1.10	0.22	12.00		Bleed off surface lines/tubing and turn well over to rig to pooh
Event 20	Standby - Other - see comments	Standby - Other - see comments	7/11/2018	13:44:13	USER	0.00	1.10	0.15	10.00		Standby while rig pooh and rigs down
Event 21	Pump Cement	Pump Cement	7/11/2018	14:44:40	USER	0.90	0.00	8.81	9.00		Pump approx. 1.5bbls cement/fill lines to top well off/shutdown and divert lines
Event 22	Pump Cement	Pump Cement	7/11/2018	14:47:56	USER	0.90	1.40	18.07	6.00		Pump approx. 2bbls/11cuft/10sks cement @ -

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+/- 15.8 density/1.15 yield/5.0  
 water (HALCEM (TM) SYSTEM)

Event	23	Cement Returns to Surface	Cement Returns to Surface	7/11/2018	14:49:39	USER	0.40	1.30	17.08	10.00	cement observed to surface
Event	24	Shutdown	Shutdown	7/11/2018	14:49:40	USER	0.00	1.30	17.36	10.00	
Event	25	Depart Location	Depart Location	7/11/2018	17:30:00	USER					HES crew conducts pre-rig down safety meeting, signs out with rig safety captain and departs location
Event	26	Depart Location	Gratitude	7/11/2018	17:31:00	USER					Thank you for choosing Halliburton Energy Services