HALLIBURTON

BILL BARRETT CORPORATION E-BILL

Dow-Laura 3-28

Garfield County , Colorado

Plug to Abandon Service

10-Dec-2013

Job Site Documents

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 343492	**Ship To #:** 2367804	**Quote #:**	**Sales Order #:** 900957011
Customer: BILL BARRETT CORPORATION E-BILL		**Customer Rep:** Lyons, Ed	
Well Name: Dow-Laura	**Well #:** 3-28		**API/UWI #:** 05123210000000
Field:	**City (SAP):** KERSEY	**County/Parish:** Garfield	**State:** Colorado
Legal Description: Section 28 Township 5N Range 63W			
Contractor: Workover	**Rig/Platform Name/Num:** Workover		
Job Purpose: Plug to Abandon Service			
Well Type: Development Well	**Job Type:** Plug to Abandon Service		
Sales Person: GREGORY, JON	**Srvc Supervisor:** MCBRIDE, NATHAN	**MBU ID Emp #:** 313810	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CONGDON, RICHARD S.	8.0	320306	MARKOVICH, STEVEN Michael	16.0	502964	MCBRIDE, NATHAN Charles	8.0	313810
TAUILILI, SAIAIGA	16.0	545471						

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*

Job Hours

Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours
12/7/13	5	2	12/9/13	7	2	12/10/13	9	5
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name			
Formation Depth (MD)	**Top**		**Bottom**
Form Type		**BHST**	
Job depth MD	5900. ft	**Job Depth TVD**	5900. ft
Water Depth		**Wk Ht Above Floor**	
Perforation Depth (MD)	*From*		**To**

Job Times

	Date	Time	Time Zone
Called Out	07 - Dec - 2013	07:30	MST
On Location	07 - Dec - 2013	13:00	MST
Job Started	07 - Dec - 2013	10:45	MST
Job Completed	10 - Dec - 2013	17:30	MST
Departed Loc	10 - Dec - 2013	00:00	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
4-1/2" Casing	Unknown		4.5	4.	11.6			.	7227.		
2-7/8" Tubing	Used		2.875	2.469	6.45			.	5807.		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt		**Conc**		**Surfactant**		**Conc**		**Acid Type**		**Qty**		*Conc*	%
Treatment Fld		**Conc**		*Inhibitor*		Conc		**Sand Type**		*Size*		*Qty*	

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk

Stage/Plug #: 1

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Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Squeeze#1 Plug#1	HALCEM (TM) SYSTEM (452986)	36.0	sacks	15.8	1.36	5.66	2.0	5.66
	5.66 Gal	FRESH WATER							
2	SQUEEZE #2 PLUG#2	SQUEEZECEM (TM) SYSTEM (452971)	66.0	sacks	15.8	1.15	4.97	2.0	4.97
	4.97 Gal	FRESH WATER							
3	SQUEEZE #3 PLUG #3	SQUEEZECEM (TM) SYSTEM (452971)	150.0	sacks	15.8	1.15	4.97	2.0	4.97
	4.97 Gal	FRESH WATER							
4	SQUEEZE #3 PLUG #4	HALCEM (TM) SYSTEM (452986)	24.0	sacks	15.8	1.15	4.97	2.0	4.97
	0.2 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	0.2 %	HR-5, 50 LB SK (100005050)							
	4.97 Gal	FRESH WATER							

Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns	0	Cement Slurry	48.5	Pad	
Top Of Cement	0	5 Min		Cement Returns		Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	

Rates							
Circulating	2	Mixing	2	Displacement	2	Avg. Job	2

Cement Left In Pipe	Amount	0 ft	Reason	Shoe Joint

Frac Ring # 1 @		ID		Frac ring # 2 @		ID		Frac Ring # 3 @		ID		Frac Ring # 4 @		ID	

The Information Stated Herein Is Correct	Customer Representative Signature

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Field:	**City (SAP):** KERSEY	**County/Parish:** Garfield	**State:** Colorado
Legal Description: Section 28 Township 5N Range 63W			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		**Long:** E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Workover	**Rig/Platform Name/Num:** Workover		
Job Purpose: Plug to Abandon Service			**Ticket Amount:**
Well Type: Development Well	**Job Type:** Plug to Abandon Service		
Sales Person: GREGORY, JON	**Srvc Supervisor:** MCBRIDE, NATHAN		**MBU ID Emp #:** 313810

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Arrive at Location from Service Center	12/07/2013 13:00							Pump truck on location @ a 1230 SS on location @ 1300
Assessment Of Location Safety Meeting	12/07/2013 13:05							
Pre-Rig Up Safety Meeting	12/07/2013 13:10							
Comment	12/07/2013 13:53							Rig starting to Run in with Retainer/Perferating
Rig-Up Equipment	12/07/2013 13:53							
Rig-Up Completed	12/07/2013 13:53							Finish Rigging as far as possible. Wait on 3rd party activities to finish.
Pre-Job Safety Meeting	12/07/2013 13:53							
Casing on Bottom	12/07/2013 16:10							
Start Job	12/07/2013 16:58							
Pump Water	12/07/2013 17:06		2	2				
Test Lines	12/07/2013 17:13						4000.0	
Comment	12/07/2013 17:31							During injection test. Communication occured between tbg and annulus above retainer.
Crew Leave Location	12/07/2013 18:00							Released @ 1800 to return tomorrw. Equipment to stay on location.
Arrive At Loc	12/09/2013 08:30							Requested on location was 1200
Wait on Orders - Start Time	12/09/2013 12:00							

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Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Water	12/09/2013 14:00		0.5	35	37		800.0	Pump Retainer into position on wireline
Pressure Test	12/09/2013 14:54							Test Retainer 1000psi for 4 minutes final pressure 1140
Comment	12/09/2013 15:00							Crew Released from location to return RTP @ 0830
Crew Leave Location	12/09/2013 15:45							
Arrive at Location from Service Center	12/10/2013 09:45							
Assessment Of Location Safety Meeting	12/10/2013 09:50							
Pre-Job Safety Meeting	12/10/2013 10:30							
Start Job	12/10/2013 10:47							
Pressure Up	12/10/2013 10:51						415.0	Pressured up Backside
Test Lines	12/10/2013 11:00			2	39	3500.0		Filled Lines with 2 bbl Water. Pressure did not hold. No Leaks on Surface. Customer requested go ahead with job.
Establish Rate	12/10/2013 11:11		2	6	45	1540.0		Injection Test. Pumping through Retainer @ 5807' and Perfs @ 5900'
Pump Cement	12/10/2013 11:33		2	9	54	1340.0		36 sacks of HalCem mixed @ 15.8ppg, Yeild 1.36 ft3/sk, Water Requirment 5.66 gal/sk
Pump Displacement	12/10/2013 11:38		1	21	75	550.0		Calculated Displacement was 22 bbl. Left one bbl cement in Tubing to fall out on top of retainer. (Aprox. 64')
Shutdown	12/10/2013 12:04					350.0		Rlg unstung from Retainer. Pressure fell to 0 PSI.
Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	

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SUMMIT Version: 7.3.0106 Tuesday, December 10, 2013 06:24:00

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Cementing Job Log

Wait on Customer or Customer Sub-Contractor Equip	12/10/2013 12:05							Rig Pulled Tubing out of Well. Rigged up Wireline to Shoot next Perfs. Shot Perfs and Rigged down Wireline. Rig ran Mechanical Packer on Tubing and Set. Had to Change Surface casing valve before next stage could be started.
Wait on Customer or Customer Sub-Contractor Equipm	12/10/2013 15:15							
Pressure Up	12/10/2013 15:26						125.0	Pressured up Backside
Establish Rate	12/10/2013 15:32							Injection Test. Unable to Pump. Pressured up and held. Tool hand adjusted tubing position.
Establish Rate	12/10/2013 15:40		2	4	79	80.0		Injection Test. Pumping through Retainer @ 650' and Perfs @ 750'
Pump Cement	12/10/2013 16:01		2	13.5	92.5	63.0		66 sacks SqueezeCem mixed @ 15.8ppg, Yeild 1.15 ft3/sk, Water Requirement 4.97 gal/sk
Pump Displacement	12/10/2013 16:09		2	1.5	94	80.0		Calculated Displacement was 2.5 bbl. Left one bbl cement in Tubing to fall out on top of retainer. (Aprox. 64')
Shutdown	12/10/2013 16:10							
Wait on Customer or Customer Sub-Contractor Equip	12/10/2013 16:11							Rig Pulled Tubing out of Well. Rigged up Wireline to Shoot next Perfs. Shot Perfs and Rigged down Wireline. Rig ran Mechanical Packer on Tubing and Set. Had to Change Surface casing valve before next stage could be started.
Wait on Customer or Customer Sub-Contractor Equipm	12/10/2013 17:10							
Establish Rate	12/10/2013 17:13		2	4	98			Injection Test. Pumping through Retainer @ 422' and Perfs @ 322'
Pump Cement	12/10/2013 17:21		2	26	129			126sacks SqueezeCem mixed @ 15.8ppg, Yeild 1.15 ft3/sk, Water Requirement 4.97 gal/sk

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Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Cement	12/10/2013 17:34							24sacks PlugCem mixed @ 15.8ppg, Yeild 1.15 ft3/sk, Water Requirement 4.97 gal/sk. Did not use as second Plug. Mixed it up and pumped it as top off Cement
Pump Displacement	12/10/2013 17:40		2	0.5	129.5			Calculated Displacement was 1.3 bbl. Left one bbl cement in Tubing to fall out on top of retainer. (Aprox. 64')
End Job	12/10/2013 17:45							Rig Pulled remaining Tubing from Hole
Pre-Rig Down Safety Meeting	12/10/2013 18:00							
Depart Location for Service Center or Other Site	12/10/2013 18:30							

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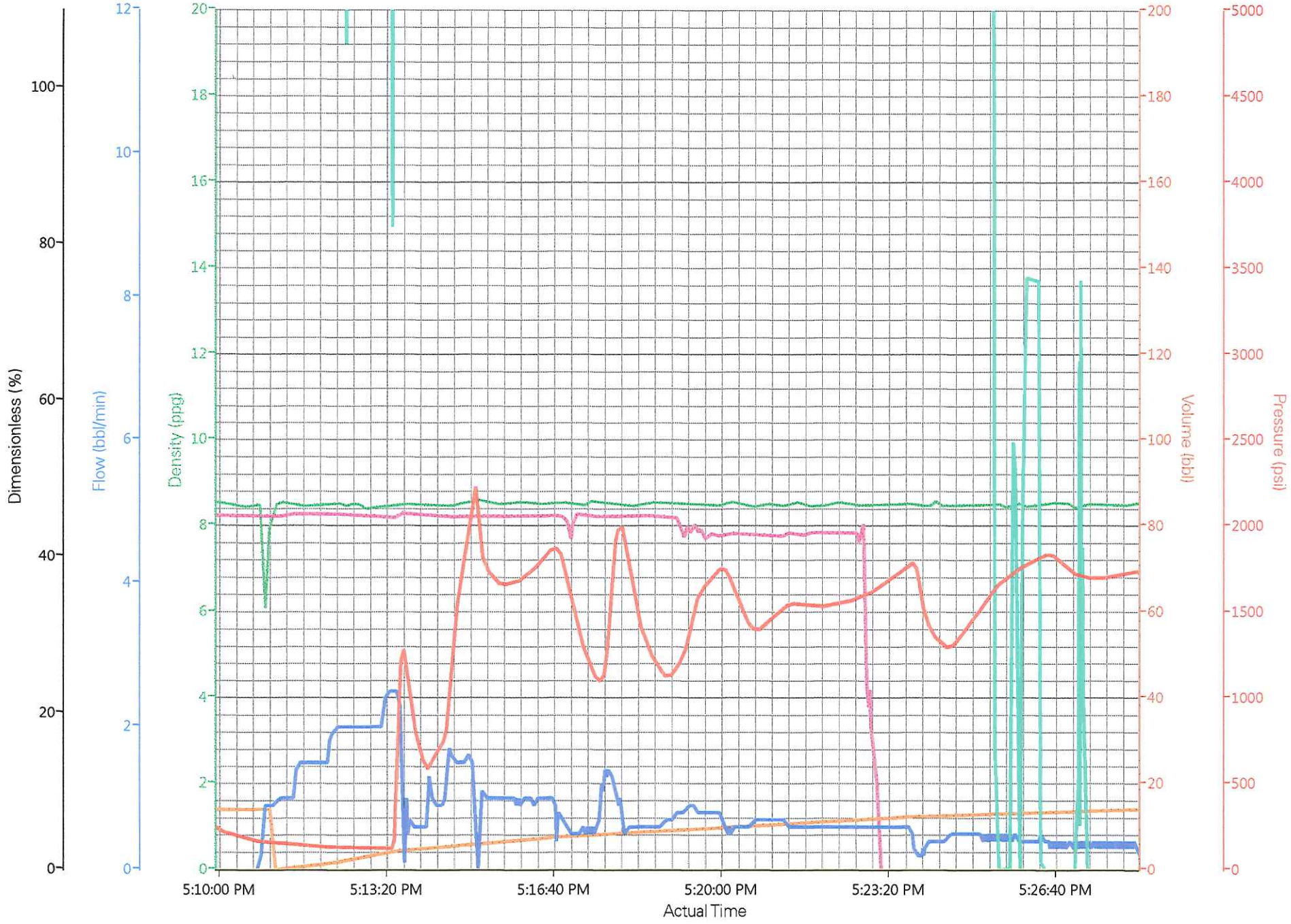
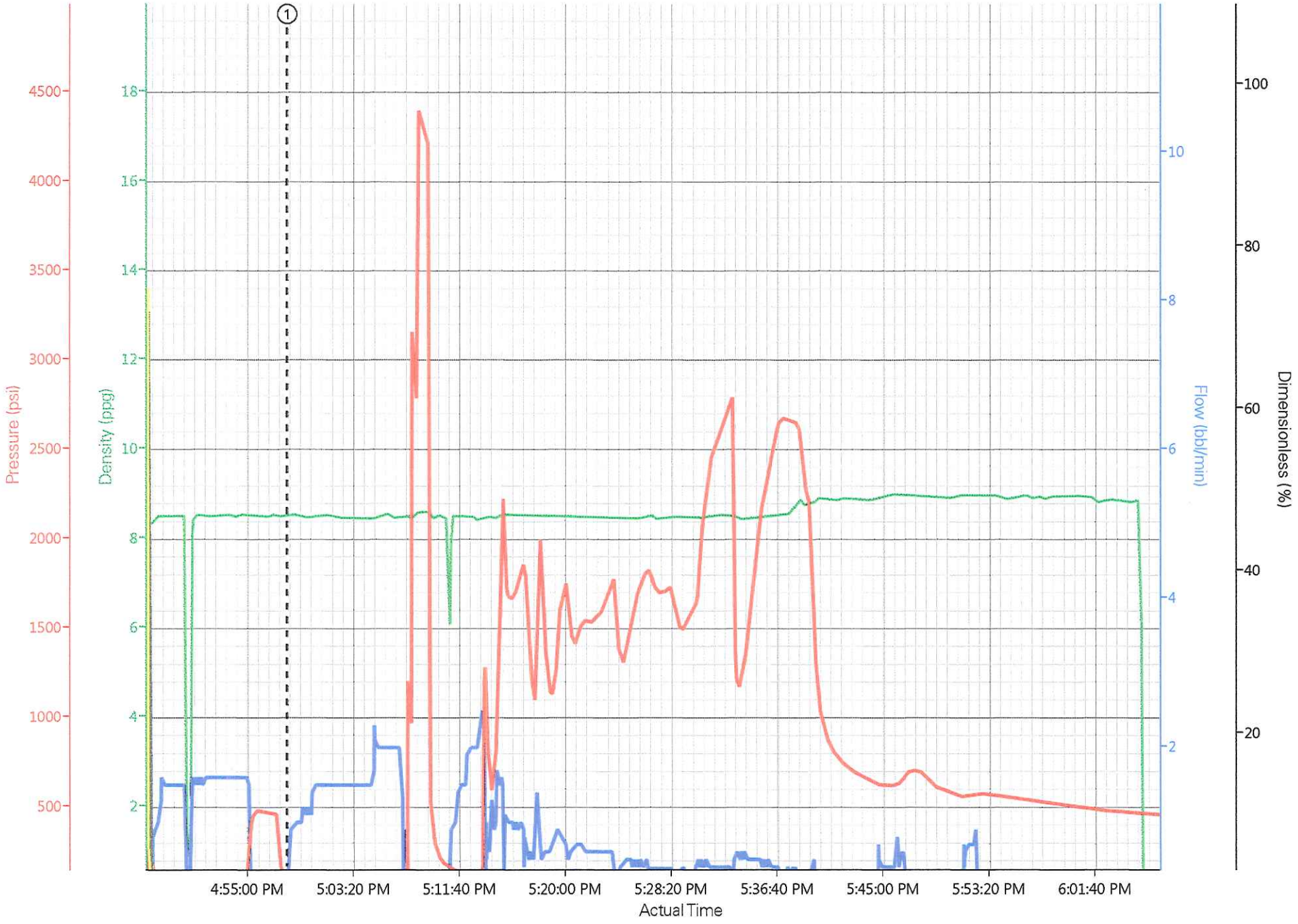
Final Chart



DH Density (ppg) | Recirc Density (ppg) | Pump Stg Tot (bbl) | Comb Pump Rate (bbl/min) | Mix Water Rate (bbl/min) | PS Pump Press (psi) | Cmnt Valve Psn (%) | Water Valve Psn (%)

Final Chart


1
Pressure (psi)
4500
4000
3500
3000
2500
2000
1500
1000
500
Density (ppg)
18
16
14
12
10
8
6
4
2
Flow (bbl/min)
10
8
6
4
2
Dimensionless (%)
100
80
60
40
20
4:55:00 PM
5:03:20 PM
5:11:40 PM
5:20:00 PM
5:28:20 PM
5:36:40 PM
5:45:00 PM
5:53:20 PM
6:01:40 PM
Actual Time
DH Density (ppg)
Comb Pump Rate (bbl/min)
PS Pump Press (psi)
Cmnt Valve Psn (%)
Water Valve Psn (%)