HALLIBURTON

Cementing

Caerus Oil and Gas LLC- EBUS

Puckett 31C-1

H&P 330

Post Job Summary
Cement Surface Casing

Date Prepared: 09/23/2015
Job Date: 09/21/2015

Submitted by: Evan Russell – Grand Junction Cement Engineer

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 360446	**Ship To #:** 3665990	**Quote #:**	**Sales Order #:** 0902765370
Customer: CAERUS OIL AND GAS LLC - EBUS		**Customer Rep:** GEORGE URBAN	
Well Name: PUCKETT	**Well #:** 31C-1		**API/UWI #:** 05-045-22855-00
Field: GRAND VALLEY	**City (SAP):** PARACHUTE	**County/Parish:** GARFIELD	**State:** COLORADO
Legal Description: SE NW-1-7S-97W-2069FNL-1345FWL			
Contractor: H & P DRLG		**Rig/Platform Name/Num:** H & P 330	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB80977		**Srvc Supervisor:** Eric Carter	

Job

Formation Name				
Formation Depth (MD)	**Top**	128 FT.	**Bottom**	2550 FT.
Form Type			**BHST**	
Job depth MD	2520ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	N/A
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	3	20	19.124	94			0	128	0	0
Casing		9.625	8.921	36	8 RD (LT&C)		0	2520		0
Open Hole Section			14.75				128	2550	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe						**Top Plug**	9.625	1	HES
Float Shoe						**Bottom Plug**			
Float Collar						**SSR plug set**			
Insert Float						**Plug Container**	9.625	1	HES
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/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water	10	bbl	8.34			4	

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

2	Super Flush 101	Super Flush 101	20	bbl	10			4	
21 gal/bbl		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Water	Water	10	bbl	8.34			4	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Lead Cement	VARICEM (TM) CEMENT	375	sack	11	3.65	23.08	7	
23.08 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	Tail Cement	VARICEM (TM) CEMENT	160	sack	12.8	2.18	12.11	7	
12.11 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
6	Displacement	Displacement	191.5	bbl	8.34			7	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
7	Super Flush 101	Super Flush 101	10	bbl	10				
21 gal/bbl		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
8	Top Out	REVERCEM (TM) CEMENT	226	sack	12.8	2.12	11.15	3	
11.15 Gal		FRESH WATER							

Cement Left In Pipe	Amount	44 ft	Reason	Shoe Joint

Comment

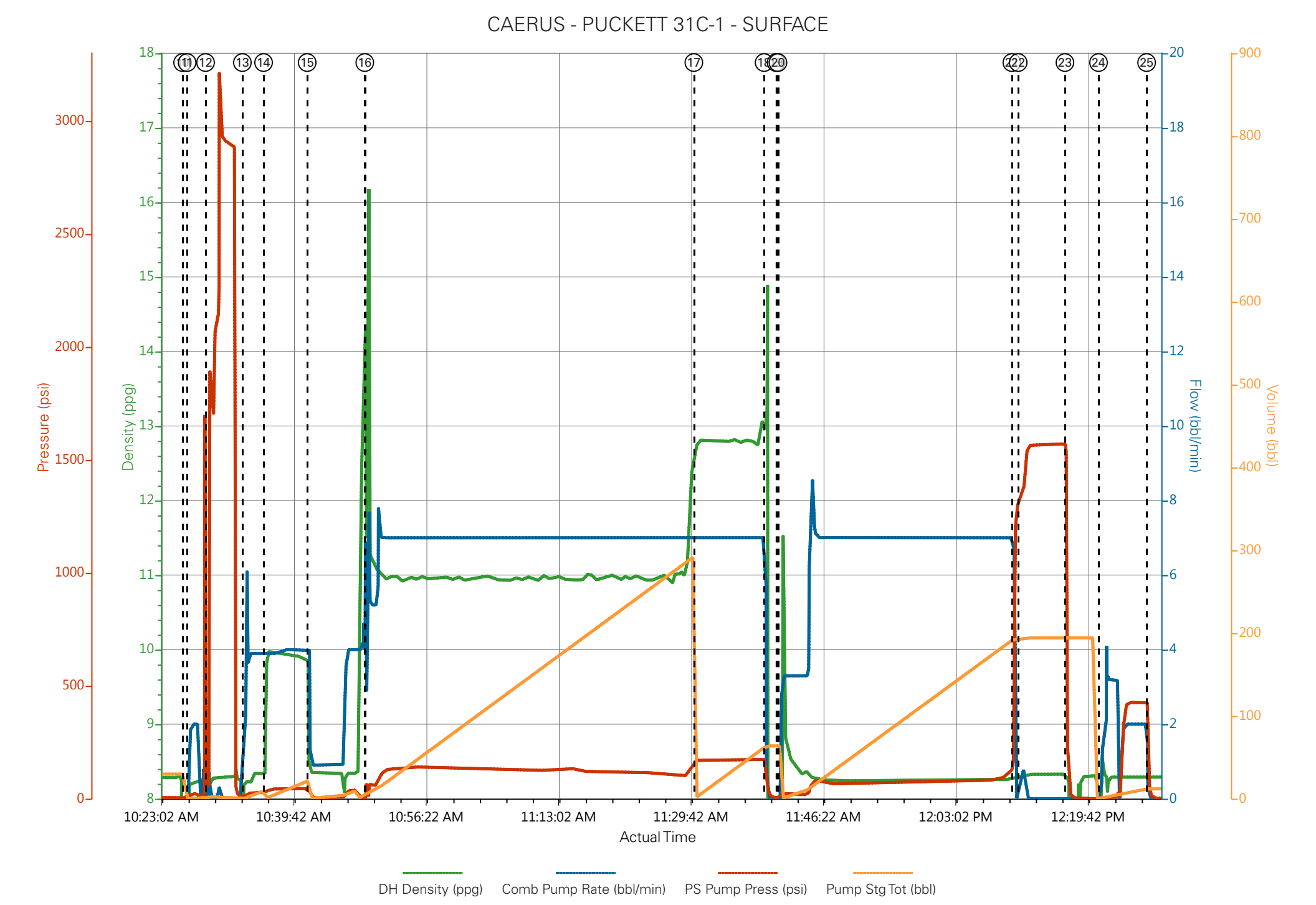
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	9/21/2015	03:00	USER					
Event	2	Depart Yard Safety Meeting	9/21/2015	04:50	USER					ATTENDED BY ALL HES CREW
Event	3	Crew Leave Yard	9/21/2015	05:00	USER					
Event	4	Arrive At Loc	9/21/2015	07:30	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/21/2015	08:30	USER					ATTENDED BY ALL HES CREW
Event	6	Other	9/21/2015	08:40	USER					SPOT EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	9/21/2015	08:50	USER					ATTENDED BY ALL HES CREW
Event	8	Rig-Up Equipment	9/21/2015	09:00	USER					
Event	9	Pre-Job Safety Meeting	9/21/2015	10:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	10	Other	9/21/2015	10:26:01	USER					TP 2520', TD 2550', MW 9.2 PPG, CASING 9.625", 36#, J-55, SJ 43.72', HOLE 14.75", CONDUCTOR CASING 20", 94# SET AT 128', RIG DID NOT HAVE CIRCULATION PRIOR TO JOB, JOB PUMPED OFF LINE
Event	11	Other	9/21/2015	10:26:35	USER	8.34	2	30	2	FRESH WATER
Event	12	Test Lines	9/21/2015	10:28:54	USER					PRESSURED UP TO 3100 PSI, PRESSURE HELD

Event	13	Pump Spacer	9/21/2015	10:33:33	USER	8.34	4	40	10	FRESH WATER
Event	14	Pump Spacer	9/21/2015	10:36:12	USER	10	4	50	20	SUPER FLUSH 101
Event	15	Pump Spacer	9/21/2015	10:41:42	USER	8.34	4	40	10	FRESH WATER
Event	16	Pump Lead Cement	9/21/2015	10:48:57	USER	11	7	150	243.8	375 VARICEM SKS MIXED AT 11 PPG, 3.65 YIELD, 23.08 GL/SK, TUFFIBER MIXED ON THE FLY
Event	17	Pump Tail Cement	9/21/2015	11:30:23	USER	12.8	7	180	62.1	160 SKS VARICEM MIXED AT 12.8 PPG, 2.18 YIELD, 12.11 GL/SK
Event	18	Shutdown	9/21/2015	11:39:13	USER					
Event	19	Drop Top Plug	9/21/2015	11:40:44	USER					PLUG LAUNCHED
Event	20	Pump Displacement	9/21/2015	11:40:58	USER	8.34	7	90	191.5	FRESH WATER
Event	21	Bump Plug	9/21/2015	12:10:25	USER			1560		PLUG LANDED
Event	22	Comment	9/21/2015	12:11:13	USER					HELD PRESSURE ON CASING TO TEST AT COMPANY REP'S REQUEST
Event	23	Check Floats	9/21/2015	12:17:06	USER			1570		FLOATS HELD, NO RETURNS THROUGHOUT JOB
Event	24	Pump Water	9/21/2015	12:21:20	USER	8.34	2.5	430	12	SUGAR WATER PUMPED DOWN PARASITE
Event	25	Shutdown	9/21/2015	12:27:23	USER					
Event	26	Pump Cement	9/21/2015	13:35:12	USER	12.8	3	130	85.3	226 SKS REVERCEM MIXED AT 12.8 PPG, 2.12 YIELD, 11.15 GL/SK
Event	27	Shutdown	9/21/2015	14:08:01	USER					
Event	28	End Job	9/21/2015	14:08:10	USER					7 BBLS CEMENT TO SURFACE
Event	29	Post-Job Safety Meeting (Pre Rig-Down)	9/21/2015	14:10	USER					ATTENDED BY ALL HES CREW

Event	30	Rig-Down Equipment	9/21/2015	14:20	USER	
Event	31	Depart Location Safety Meeting	9/21/2015	15:20	USER	ATTENDED BY ALL HES CREW
Event	32	Crew Leave Location	9/21/2015	15:30	USER	THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW.

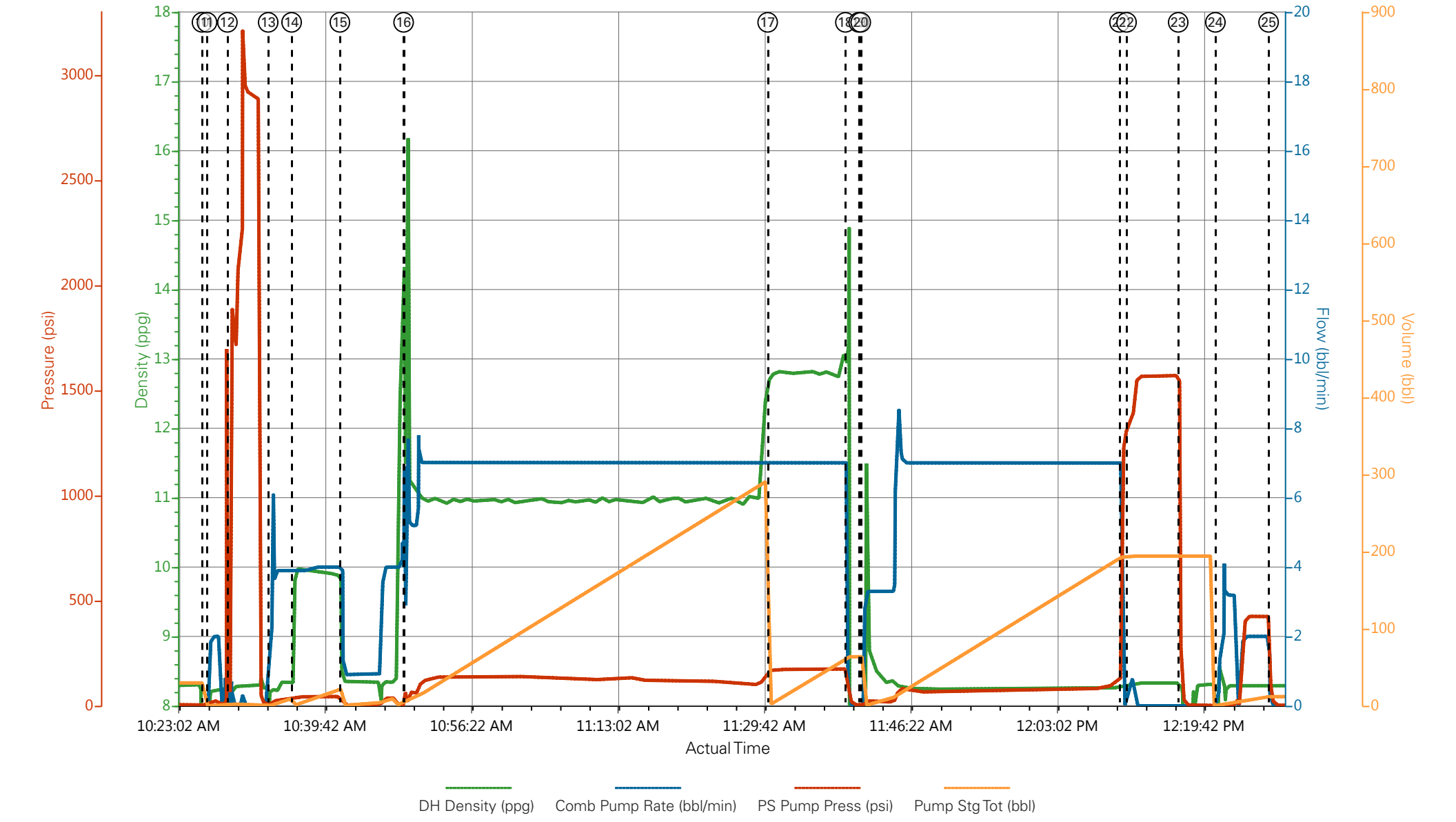


HALLIBURTON | iCem® Service

Created: 2015-09-21 04:59:35, Version: 4.1.107 Edit

Customer : CAERUS OIL AND GAS LLC - EBUS
Representative : GEORGE URBAN
Job Date : 9/21/2015 9:34:58 AM
Sales Order # : 902765370
Well : PUCKETT 31C-1
ELITE 4 : ERIC CARTER/PAUL SALAZAR

CAERUS - PUCKETT 31C-1 - SURFACE



① Call Out n/a;n/a;n/a;n/a
② Depart Yard Safety Meeting n/a;n/a;n/a;n/a
③ Crew Leave Yard n/a;n/a;n/a;n/a
④ Arrive At Loc n/a;n/a;n/a;n/a
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a
⑥ Other n/a;n/a;n/a;n/a
⑦ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a
⑧ Rig-Up Equipment n/a;n/a;n/a;n/a
⑨ Pre-Job Safety Meeting n/a;n/a;n/a;n/a
⑩ Start Job 0.06;0;5;0
⑪ Fill Lines 8.21;1.6;21;0.1
⑫ Test Lines 8.24;0;60;2.1
⑬ Pump Spacer 8.25;1.9;10;0.6
⑭ Pump Spacer 9.85;3.9;33;0.9
⑮ Pump Spacer 8.33;0.9;24;0.4
⑯ Pump Lead Cement 15.68;3.9;15;5.7
⑰ Pump Tail Cem
⑱ Shutdown 13.
⑲ Drop Top Plug
20 Pump Displac

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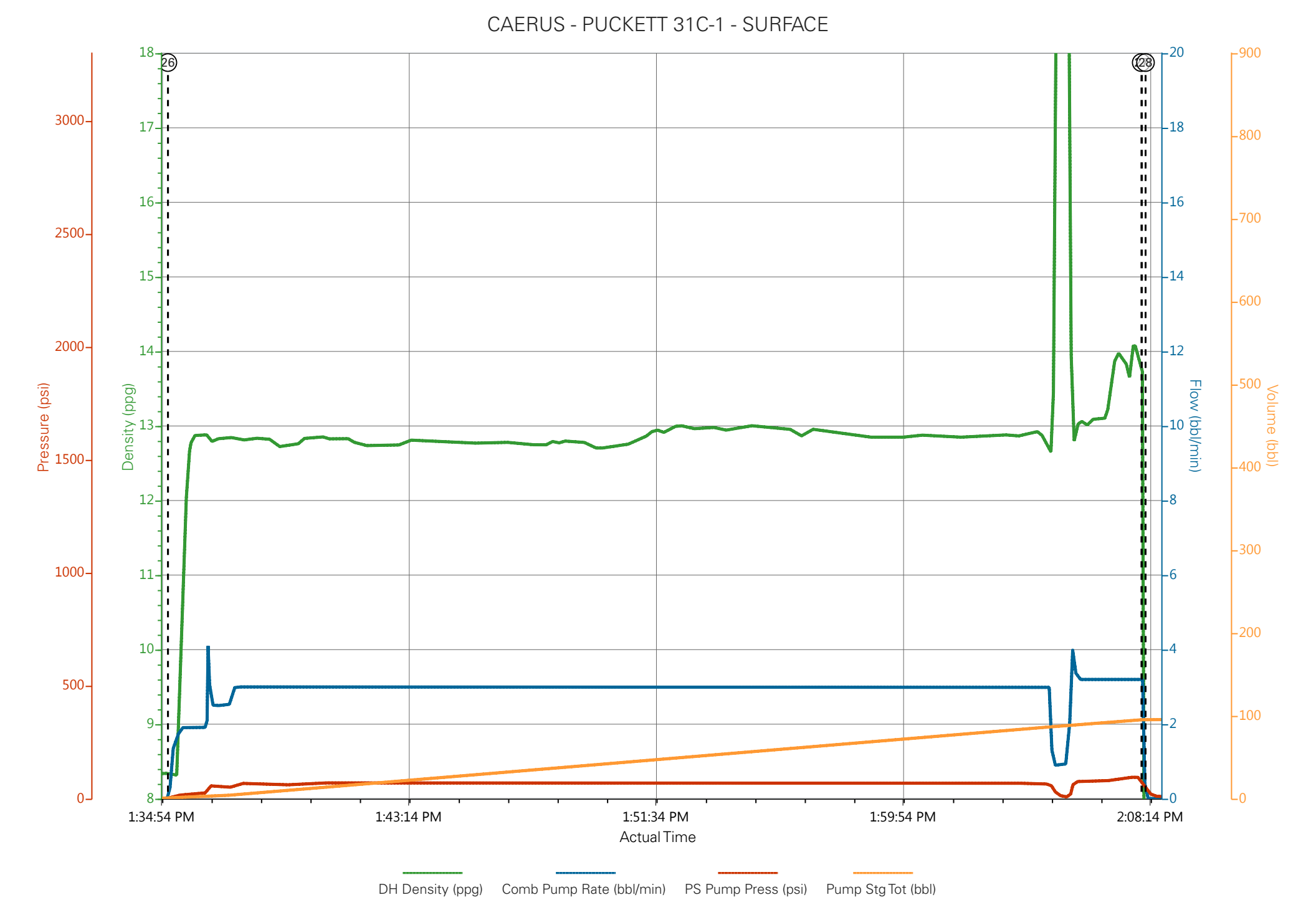

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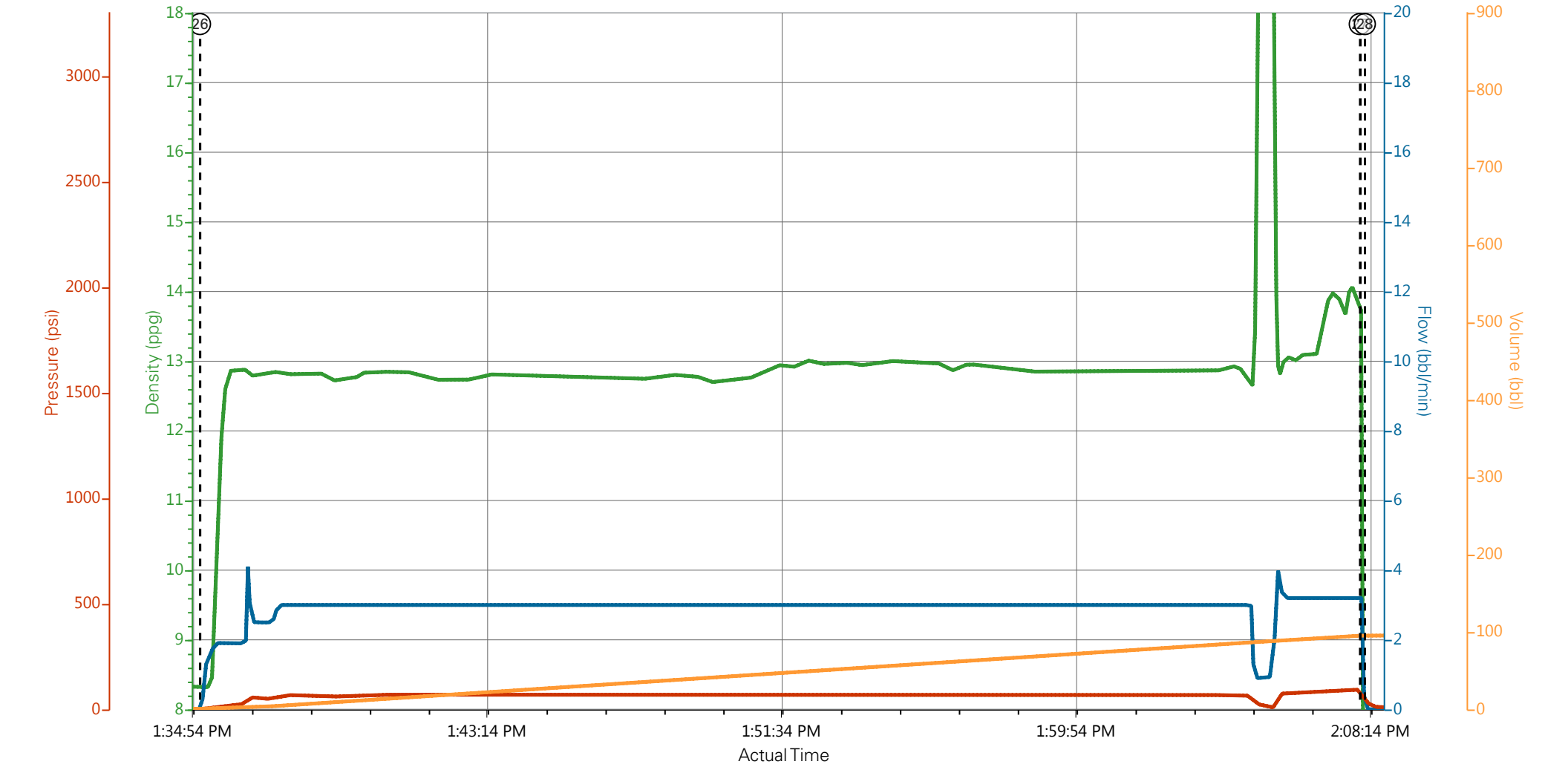
CAERUS - PUCKETT 31C-1 - SURFACE



① Call Out n/a;n/a;n/a;n/a	⑦ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a	⑬ Pump Spacer 8.25;1.9;10;0.6	⑲ Drop Top Plug 0.34;0;4;63.7	25 Shutdown 8.28;0;42
② Depart Yard Safety Meeting n/a;n/a;n/a;n/a	⑧ Rig-Up Equipment n/a;n/a;n/a;n/a	⑭ Pump Spacer 9.85;3.9;33;0.9	20 Pump Displacement 0.34;0.7;4;0	26 Pump Cement 8.34;(
③ Crew Leave Yard n/a;n/a;n/a;n/a	⑨ Pre-Job Safety Meeting n/a;n/a;n/a;n/a	⑮ Pump Spacer 8.33;0.9;24;0.4	21 Bump Plug 8.28;3.3;1113;193.5	27 Shutdown 5.89;1.5;5
④ Arrive At Loc n/a;n/a;n/a;n/a	⑩ Start Job 0.06;0;5;0	⑯ Pump Lead Cement 15.68;3.9;15;5.7	22 Slow Rate 8.3;0.6;1356;193.8	28 End Job 0.3;0;27;95.
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a	⑪ Fill Lines 8.21;1.6;21;0.1	⑰ Pump Tail Cement 12.76;7;169;2.3	23 Check Floats 8.25;0;130;194.2	29 Post-Job Safety Me
⑥ Other n/a;n/a;n/a;n/a	⑫ Test Lines 8.24;0;60;2.1	⑱ Shutdown 13.79;0;75;63.7	24 Pump Water 8.55;0.4;-3;0	30 Rig-Down Equipme

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Water Analysis Report

Company:	**CAERUS**	**Date:**	**9/23/2015**
Submitted by:	**ERIC CARTER**	**Date Rec.:**	**9/23/2015**
Attention:	**J.Trout**	**S.O.#**	**902765370**
Lease	**H&P 330**	**Job Type:**	**SURFACE**
Well #	**PUCKETT 31C-1**		

Specific Gravity	***MAX***	**1**	
pH	***8***	**7**	
Potassium (K)	***5000***	**0**	**Mg / L**
Hardness	***500***	**120**	**Mg / L**
Iron (FE2)	***300***	**0**	**Mg / L**
Chlorides (Cl)	***3000***	**0**	**Mg / L**
Sulfates (SO_4)	***1500***	**<200**	**Mg / L**
Temp	***40-80***	**54**	**Deg**
Total Dissolved Solids		**450**	**Mg / L**

Respectfully: **ERIC CARTER**

Title: **CEMENTING SUPERVISOR**

Location: **Grand Junction, CO**

NOTICE: This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its

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CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0902765370	10	9/21/2015
Customer:		**Job Type (BOM):**
CAERUS OIL AND GAS LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
GEORGE URBAN		05-045-22855-00
Well Name:		**Well Number:**
PUCKETT		0080729643
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	**The date the survey was conducted**	**9/21/2015**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**HX15491**
Customer Participation	**Did the customer partipcipate in this survey? (Y/N)**	**Yes**
Customer Representative	**Enter the Customer representative name**	**GEORGE URBAN**
HSE	**Was our HSE performance satisfactory? Circle Y or N**	**Yes**
Equipment	**Were you satisfied with our Equipment? Circle Y or N**	**No**
Personnel	**Were you satisfied with our people? Circle Y or N**	**Yes**
Customer Comment	**Customer's Comment**	**NEED TO CHECK BARREL COUNTER, LANDED AT 7 BPM INSTEAD OF 2 BPM**

CUSTOMER SIGNATURE

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
0902765370	10	9/21/2015
Customer:		**Job Type (BOM):**
CAERUS OIL AND GAS LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
GEORGE URBAN		05-045-22855-00
Well Name:		**Well Number:**
PUCKETT		0080729643
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	9/21/2015

Cementing KPI Survey	
Type of Job Select the type of job. (Cementing or Non-Cementing)	0
Select the Maximum Deviation range for this Job What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Vertical
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	5
HSE Incident, Accident, Injury HSE Incident, Accident, Injury. This should be recordable incidents only.	No
Was the job purpose achieved? Was the job delivered correctly as per customer agreed design?	Yes
Pumping Hours Total number of hours pumping fluid on this job. Enter in decimal format.	3
Type of Rig Classification Job Was Performed Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
Number Of JSAs Performed Number Of Jsas Performed	5
Was this a Primary Cement Job (Yes / No) Primary Cement Job= Casing job, Liner job, or Tie-back job.	Yes
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Customer Non-Productive Rig Time (hrs)	0

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CUSTOMER SURVEY

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0902765370	10	9/21/2015
Customer:		**Job Type (BOM):**
CAERUS OIL AND GAS LLC - EBUS		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
GEORGE URBAN		05-045-22855-00
Well Name:		**Well Number:**
PUCKETT		0080729643
Well Type:	**Well Country:**	
DIRECTIONAL GAS	USA	
H2S Present:	**Well State:**	**Well County:**
No	COLORADO	GARFIELD

Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment? Was the non productive time or the unplanned shutdown caused by a problem with a piece of equipment?	No
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
If a top plug was run, was the plug bumped? (Yes/No/N/A) If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
If applicable, was Halliburton float equipment used? (Yes/No/N/A) If applicable, was Halliburton float equipment used? (Yes/No/N/A)	Not Available
If applicable, did the floats hold? (Yes/No/N/A) If applicable, did the floats hold? (Yes/No/N/A)	Yes
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cment mixed at designed density divided by total BBLs of cement multiplied by 100	96
Pump Rate (percent) of Job Stayed At Designed Pump Rate Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	95
If applicable, were there returns throughout the job? (Yes/No/N/A) If applicable, were there returns throughout the job? (Yes/No/N/A)	No
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0