

CAERUS OIL AND GAS LLC - EBUS

Puckett 32C-1

H&P 330

Post Job Summary

Cement Surface Casing

Date Prepared: 10/20/2015

Job Date: 10/09/15

Submitted by: Aaron Katz - Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 360446	Ship To #: 3666000	Quote #:	Sales Order #: 0902813225
Customer: CAERUS OIL AND GAS LLC - EBUS		Customer Rep: Boyd Cottam	
Well Name: PUCKETT	Well #: 32C-1	API/UWI #: 05-045-22853-00	
Field: GRAND VALLEY	City (SAP): PARACHUTE	County/Parish: GARFIELD	State: COLORADO
Legal Description: SE NW-1-7S-97W-2062FNL-1349FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 330	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB80977		Srvc Supervisor: Carlton Kukus	

Job

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	2454ft Job Depth TVD
Water Depth	Wk Ht Above Floor 5ft
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	3	9.625	8.921	36	8 RD (LT&C)	J-55	0	2454	0	2454
Open Hole Section			14.75				128	2510	0	2510

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			2454	Top Plug	9.625	1	HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625			2407.3	SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625	1	HES
Stage Tool	9.625				Centralizers	9.625		HES

Fluid Data

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water	Fresh Water	10	bbl	8.34			4	
2	Super Flush 101	Super Flush 101	20	bbl	9.17			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/mi n	Total Mix Fluid Gal
3	Water	Water	10	bbl	8.34			2	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Lead Cement	VARICEM (TM) CEMENT	375	sack	11	3.65	23.08	6	
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/mi n	Total Mix Fluid Gal
5	Tail Cement	VARICEM (TM) CEMENT	160	sack	12.8	2.18	12.11	6	
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/mi n	Total Mix Fluid Gal
6	Displacement	Displacement	186.1	bbl	8.34			8	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
7	Super Flush 101	Super Flush 101	20	bbl	9.17				
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/mi n	Total Mix Fluid Gal
8	Top Out	REVERCEM (TM) CEMENT	300	sack	12.8	2.12	11.15	2	
11.15 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
9	Top Out	Type I-II Cement		sack	15.6	1.16		2	5.02
94 lbm		TYPE I / II CEMENT, BULK (101439798)							
5.02 Gal		FRESH WATER							
Cement Left In Pipe	Amount	47 ft			Reason	Shoe Joint			

1.0 Real-Time Job Summary

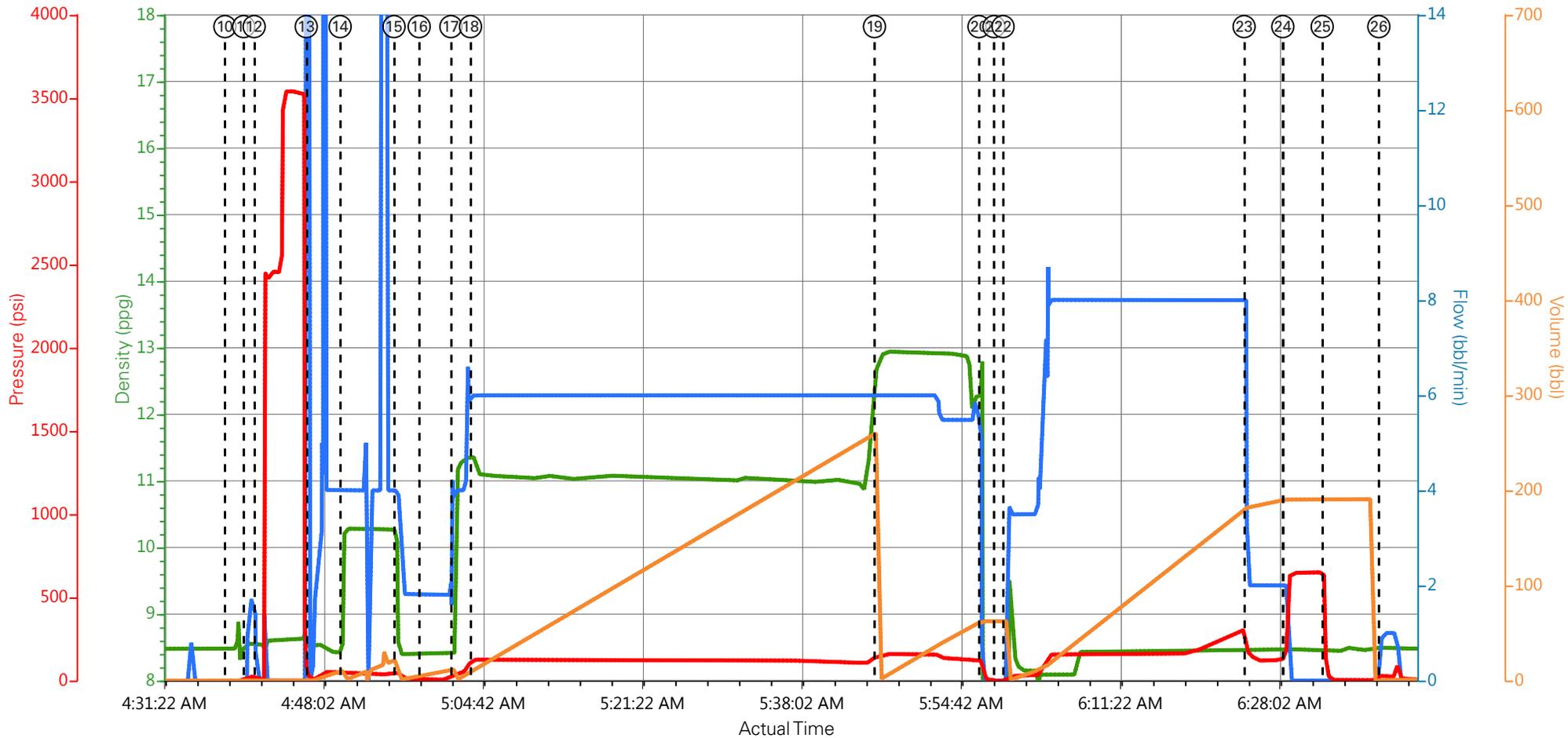
1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	10/8/2015	21:00:00	USER					ALL HES CREW CALLED OUT
Event	2	Pre-Convoy Safety Meeting	10/8/2015	23:00:00	USER					JOURNEY CREATED ALL HES INVOLVED IN SAFETY MEETING
Event	3	Crew Leave Yard	10/8/2015	23:15:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 2-660 BULK TRUCKS, 1-SUPERFLUSH TRANSPORT
Event	4	Arrive At Loc	10/9/2015	01:30:00	USER					HES ARRIVED 2.5 HOURS EARLY
Event	5	Assessment Of Location Safety Meeting	10/9/2015	01:45:00	USER					RIG WAS RUNNING CASING, HES REP SPOKE WITH COMPANY REP, HELD SAFETY MEETING AND SPOTTED EQUIPMENT AND BEGAN RIG UP
Event	6	Pre-Rig Up Safety Meeting	10/9/2015	01:50:00	USER					JSA WAS FILLED OUT AND REVIEWED BY ALL HES
Event	7	Rig-Up Equipment	10/9/2015	02:00:00	USER					RIG UP IRON TO THE CELLAR, WATER HOSES TO RIG TANK, BULK EQUIPMENT TO PUMP TRUCK, SUPERFLUSH TRANSPORT TO PUMP TRUCK
Event	8	Rig-Up Completed	10/9/2015	03:00:00	USER					COMPLETED
Event	9	Pre-Job Safety Meeting	10/9/2015	04:00:00	USER					ALL HES AND RIG CREW IN ATTENDANCE
Event	10	Start Job	10/9/2015	04:38:00	USER					TD: 2510FT TP: 2454.2FT SJ: 46.89FT OH: 14.75 CSG: 9.625 36# J-55 MUD: 9.1 VISC: 61 PARASITE: 2406.5FT
Event	11	Fill Lines	10/9/2015	04:39:57	USER	8.34	2	27	2	FILL LINES TO PRESSURE TEST
Event	12	Test Lines	10/9/2015	04:41:03	COM7	8.34		3544		PRESSURE TEST LINES TO 3500 PSI, PRESSURE TEST OK

Event	13	Fresh Water	10/9/2015	04:46:30	COM7	8.34	4	51	10	10 BBL FRESH WATER SPACER
Event	14	SuperFlush	10/9/2015	04:50:03	COM7	10.0	4	50	20	20 BBL SUPERFLUSH SPACER
Event	15	Fresh Water	10/9/2015	04:55:41	COM7	8.34	2	8	10	10 BBL FRESH WATER SPACER
Event	16	Check weight	10/9/2015	04:58:19	COM7	11				VERIFIED WEIGHT OF CEMENT
Event	17	Pump Lead Cement	10/9/2015	05:01:38	COM7	11	6	145	243.7	375 SKS OF VARICEM CEMENT WITH TUF-FIBER 11PPG 3.65YIELD 23.08GAL/SK WEIGHT OF CEMENT VERIFIED VIA MUD SCALES THROUGHOUT LEAD CEMENT
Event	18	Check weight	10/9/2015	05:03:41	COM7	12.8				VERIFIED WEIGHT OF CEMENT
Event	19	Pump Tail Cement	10/9/2015	05:45:57	COM7	12.8	6	160	62.1	160 SKS OF VARICEM CEMENT 12.8PPG 2.18YIELD 12.11GAL/SK WEIGHT OF CEMENT VERIFIED VIA MUD SCALES THROUGHOUT TAIL CEMENT
Event	20	Shutdown	10/9/2015	05:56:53	USER					SHUTDOWN END OF CEMENT, HES WASHED UP ON TOP OF PLUG, READY TANKS FOR DISPLACEMENT
Event	21	Drop Top Plug	10/9/2015	05:58:27	USER					PLUG AWAY NO PROBLEMS
Event	22	Pump Displacement	10/9/2015	05:59:24	COM7	8.34	8	313	176	FRESH WATER DISPLACEMENT, HES WASHED UP ON TOP OF THE PLUG
Event	23	Slow Rate	10/9/2015	06:24:37	USER	8.34	2	120	10	SLOW RATE TO 2 BBL/MIN LAST 10 BBL TO BUMP THE PLUG
Event	24	Bump Plug	10/9/2015	06:28:40	COM7	8.34	2	119	186.1	HES BUMPED THE PLUG AT 119 PSI TOOK TO 622 PSI
Event	25	Check Floats	10/9/2015	06:32:47	COM7			650		FLOATS HELD 1 BBL BACK TO DISPLACEMENT TANKS
Event	26	Sugar Water	10/9/2015	06:38:43	COM7	8.48	1	91	6	HES PUMPED 6 BBL OF SUGAR WATER TO CLEAR PARASITE LINE, HES PRESSURED UP TO 91 PSI TO CLEAR PARASITE LINE
Event	27	Other	10/9/2015	06:57:30	USER					HES TO WAIT 4 HOURS BEFORE BEGINNING TOP-OUT

Event	28	Check weight	10/9/2015	12:03:47	COM7					VERIFIED WEIGHT OF CEMENT
Event	29	Pump Lead Cement	10/9/2015	12:05:46	COM7	12.8	2	30	94	300 SKS OF REVERCEM CEMENT 12.8PPG 2.12YIELD 11.15GAL/SK WEIGHT OF CEMENT VERIFIED VIA MUD SCALES THROUGHOUT TOPOUT CEMENT
Event	30	Check weight	10/9/2015	12:08:12	COM7					VERIFIED WEIGHT OF CEMENT
Event	31	Shutdown	10/9/2015	12:51:15	USER					SHUTDOWN, CEMENT WAS BROUGHT TO SURFACE
Event	32	Pre-Rig Down Safety Meeting	10/9/2015	13:00:00	USER					JSA REVIEWED ALL HES IN ATTENDANCE
Event	33	Rig-Down Equipment	10/9/2015	13:15:00	USER					WASH UP AND BLOW DOWN PUMP TRUCK, RIG DOWN ALL LINES AND RACK UP EQUIPMENT
Event	34	Rig-Down Completed	10/9/2015	14:00:00	USER					COMPLETED
Event	35	Pre-Convoy Safety Meeting	10/9/2015	14:10:00	USER					JOURNEY CREATED, ALL HES IN ATTENDANCE
Event	36	Crew Leave Location	10/9/2015	14:30:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 2-660 BULK TRUCKS, 1-SUPERFLUSH TRANSPORT
Event	37	Other	10/9/2015	14:32:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW

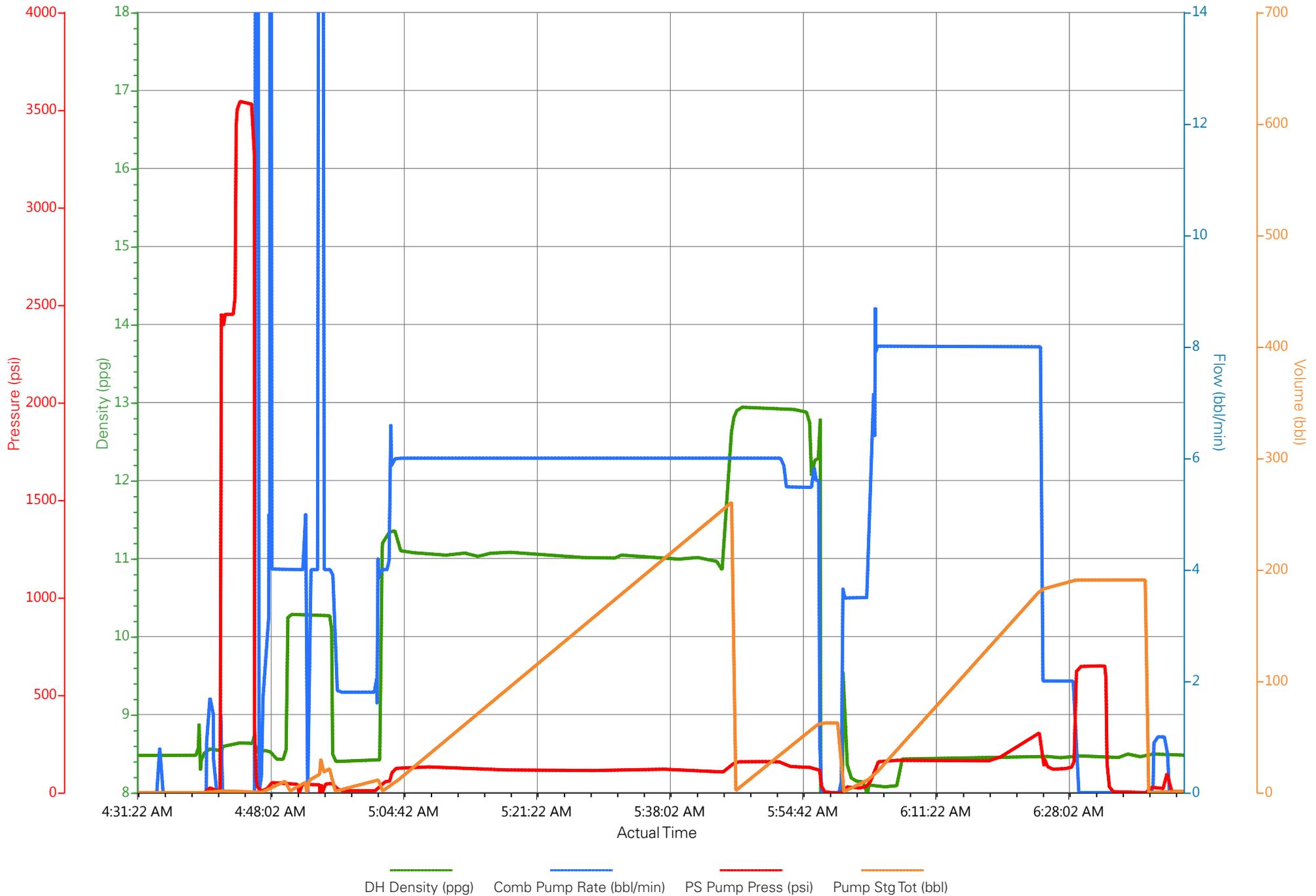
CAERUS-PUCKETT 32C-1-902813225-SURFACE



— DH Density (ppg)
 — Comb Pump Rate (bbl/min)
 — PS Pump Press (psi)
 — Pump Stg Tot (bbl)

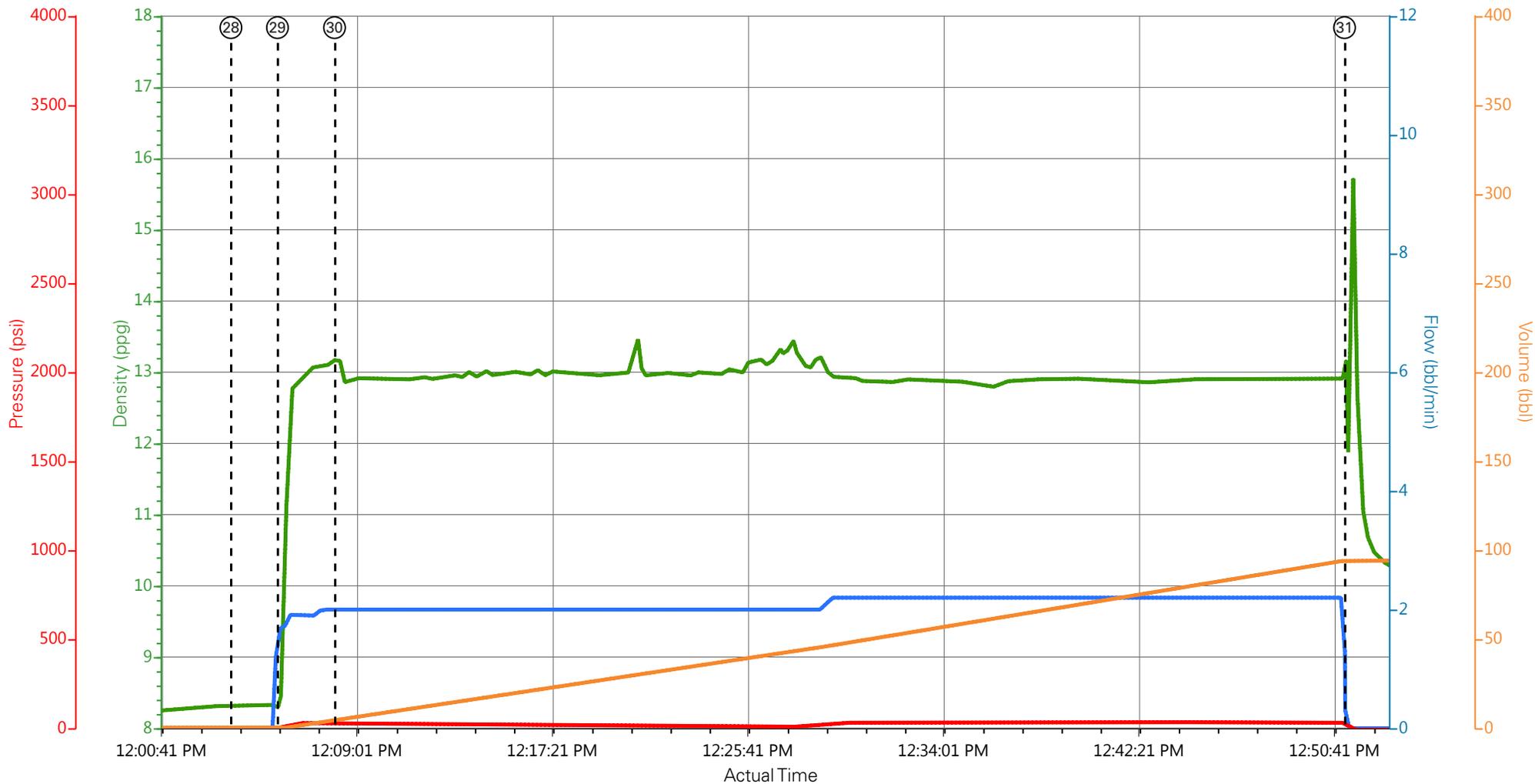
- | | | |
|---|----------------------------------|-------------------------------------|
| ① Call Out n/a;n/a;n/a;n/a | ⑩ Start Job 8.48;0;3;0 | ⑲ Pump Tail Cement 12.79;6;149;0.05 |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a | ⑪ Fill Lines 8.54;1.7;16;0 | 20 Shutdown 5.91;0;48;62.4 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a | ⑫ Test Lines 8.57;0;2;1.5 | 21 Drop Top Plug -0.03;0;-4;62.4 |
| ④ Arrive At Loc n/a;n/a;n/a;n/a | ⑬ Fresh Water 8.51;0;10;0 | 22 Pump Displacement -0.1;0;-4;62.4 |
| ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑭ SuperFlush 10.14;4;43;0.1 | 23 Slow Rate 8.45;2;177;182.4 |
| ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑮ Fresh Water 8.79;4;55;0.1 | 24 Bump Plug 8.45;2;201;190.5 |
| ⑦ Rig-Up Equipment n/a;n/a;n/a;n/a | ⑯ Check weight 8.41;1.8;8;5.5 | 25 Check Floats 8.45;0;113;190.8 |
| ⑧ Rig-Up Completed 8.48;0;0;16.1 | ⑰ Pump Lead Cement 8.41;4;38;0.1 | 26 Sugar Water 8.48;1;25;0.2 |
| ⑨ Pre-Job Safety Meeting 8.48;0;-1;0 | ⑱ Check weight 11.36;6;125;9.7 | 27 Other n/a;n/a;n/a;n/a |

CAERUS-PUCKETT 32C-1-902813225-SURFACE



— DH Density (ppg)
 — Comb Pump Rate (bbl/min)
 — PS Pump Press (psi)
 — Pump Stg Tot (bbl)

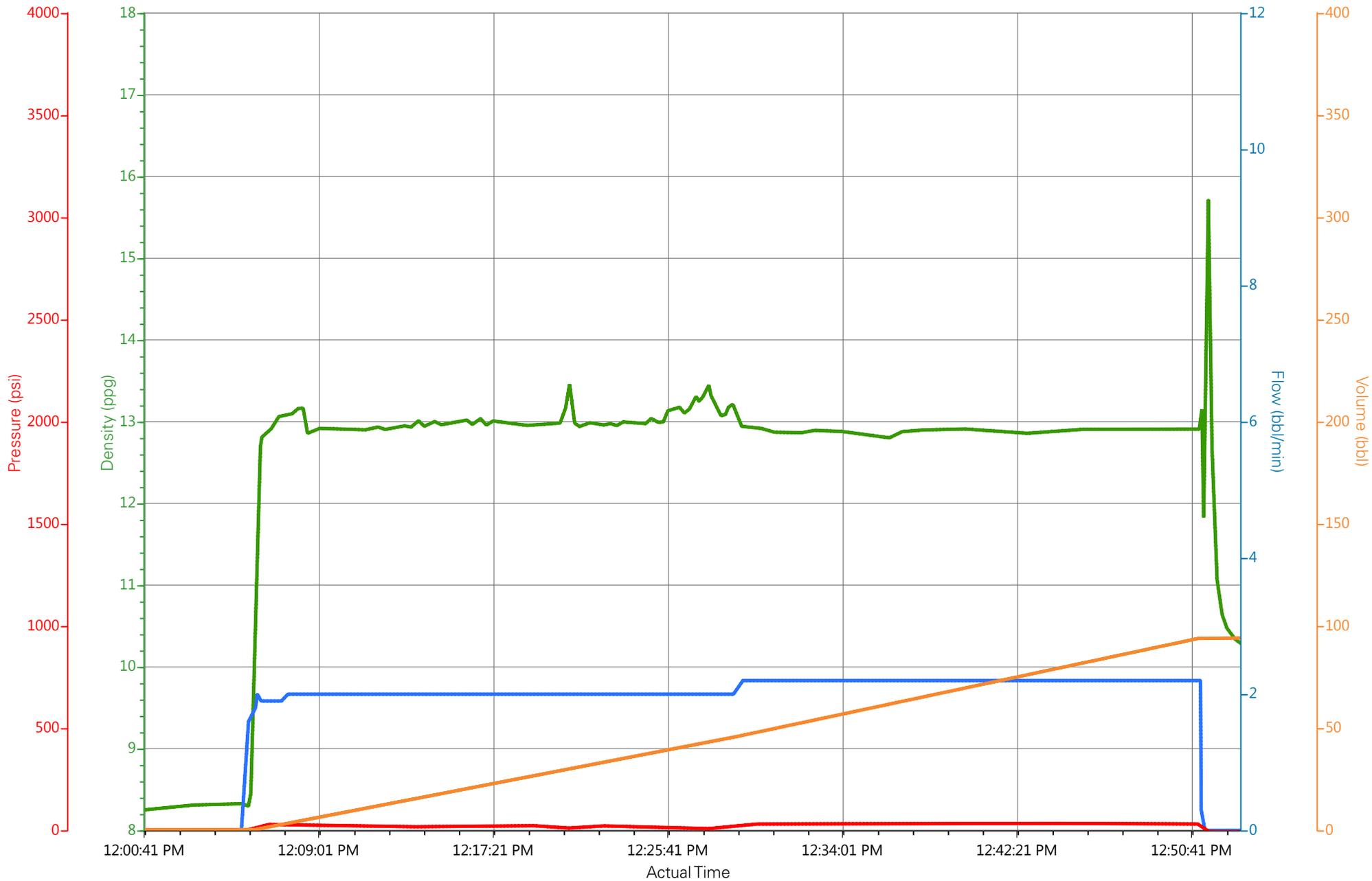
CAERUS-PUCKETT 32C-1-902813225-TOPOUT



— DH Density (ppg)
 — Comb Pump Rate (bbl/min)
 — PS Pump Press (psi)
 — Pump Stg Tot (bbl)

⑦ Rig-Up Equipment n/a;n/a;n/a;n/a	⑬ Fresh Water 8.51;0;10;0	⑲ Pump Tail Cement 12.79;6;149;0.05	⑳ Check Floats 8.45;0;113;190.8	⑳ Shutdown 11.93;0;6;94.2
⑧ Rig-Up Completed 8.48;0;0;16.1	⑭ SuperFlush 10.14;4;43;0.1	㉑ Shutdown 5.91;0;48;62.4	㉒ Sugar Water 8.48;1;25;0.2	
⑨ Pre-Job Safety Meeting 8.48;0;-1;0	⑮ Fresh Water 8.79;4;55;0.1	㉒ Drop Top Plug -0.03;0;-4;62.4	㉓ Other 8.38;0;-4;1.8	
⑩ Start Job 8.48;0;3;0	⑯ Check weight 8.41;1.8;8;5.5	㉓ Pump Displacement -0.1;0;-4;62.4	㉔ Check weight 8.32;0;-5;0.3	
⑪ Fill Lines 8.54;1.7;16;0	⑰ Pump Lead Cement 8.41;4;38;0.1	㉔ Slow Rate 8.45;2;177;182.4	㉕ Pump Lead Cement 8.45;1.7;9;0	
⑫ Test Lines 8.57;0;2;1.5	⑱ Check weight 11.36;6;125;9.7	㉕ Bump Plug 8.45;2;201;190.5	㉖ Check weight 13.18;2;25.6;4.73	

CAERUS-PUCKETT 32C-1-902813225-TOPOUT



— DH Density (ppg)
 — Comb Pump Rate (bbl/min)
 — PS Pump Press (psi)
 — Pump Stg Tot (bbl)

HALLIBURTON

Water Analysis Report

Company: CAERUS
Submitted by: CARLTON KUKUS
Attention: J.Trout
Lease: PUCKETT
Well #: 32C-1

Date: 10/9/2015
Date Rec.: 10/9/2015
S.O.#: 902813225
Job Type: SURFACE

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	200 Mg / L
Calcium (Ca)	<i>500</i>	120 Mg / L
Iron (FE2)	<i>300</i>	3 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-80</i>	55 Deg
Total Dissolved Solids		250 Mg / L

Respectfully: CARLTON KUKUS
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 use.

Sales Order #: 0902813225	Line Item: 10	Survey Conducted Date: 10/9/2015
Customer: CAERUS OIL AND GAS LLC - EBUS		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-22853-00
Well Name: PUCKETT		Well Number: 0080730026
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: GARFIELD

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. Our 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, as possible to ensure we constantly improve our service. Your comments are of great value 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	10/9/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB44726
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

CUSTOMER SIGNATURE

Sales Order #: 0902813225	Line Item: 10	Survey Conducted Date: 10/9/2015
Customer: CAERUS OIL AND GAS LLC - EBUS		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-22853-00
Well Name: PUCKETT		Well Number: 0080730026
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: GARFIELD

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	10/9/2015
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	7
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Pumping Hours	5
Total number of hours pumping fluid on this job. Enter in decimal format.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	6
Number Of Jsas Performed	
Was this a Primary Cement Job (Yes / No)	Yes
Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Customer Non-Productive Rig Time (hrs)	0

Sales Order #: 0902813225	Line Item: 10	Survey Conducted Date: 10/9/2015
Customer: CAERUS OIL AND GAS LLC - EBUS		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-22853-00
Well Name: PUCKETT		Well Number: 0080730026
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: 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 cement mixed at designed density divided by total BBLs of cement multiplied by 100	90
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	85
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