

Caerus Oil and Gas LLC

Puckett 23C-1

H&P 330

Post Job Analysis

Cement Surface Casing

Date Prepared: 11/01/2015
Job Date: 10/26/2015

Submitted by: Jenna Cook – Grand Junction Cement Engineer

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	10/25/2015	11:00:00	USER					REQUESTED ON LOCATION @ 17:00
Event	2	Pre-Convoy Safety Meeting	10/25/2015	13:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	10/25/2015	13:30:00	USER					1 - 550 PU, 1 ELITE PUMP, 1 660, AND 1 SUPER FLUSH TRUCK. ALL TRUCKS LEFT THE YARD TOGETHER
Event	4	Arrive At Loc	10/25/2015	16:00:00	USER					ARRIVED AN HOOOR EARLY. CASING CREW HAD ABOUT 600' OF CASING TO RUN STILL. ANNULAR FILL TRUCK WAS ON LOCATION
Event	5	Assessment Of Location Safety Meeting	10/25/2015	16:05:00	USER					MET WITH CO REP AND WENT OVER NUMBERS AND JOB PROCEDURE. DID A WALK AROUND OF LOCATION AND COLLECTED WASTER SAMPLE (PH - 7, CHL - 0, TEMP 50). FILLED OUT PRE-RIG UP JSA AND SPOTTED TRUCKS
Event	6	Rig-Up Equipment	10/25/2015	16:15:00	USER					RIGGED UP EVERYTHING WE COULD SAFELY STAYING OUT OF THE RED ZONE. FINISHED RIGGING UP WHEN CASING CREW WAS DONE AROUND 1800
Event	7	Pre-Rig Up Safety Meeting	10/25/2015	16:30:00	USER					ALL HES PRESENT

Event	8	Other	10/25/2015	16:35:00	USER					CUSTOMER HAS RECIEVED SDS
Event	9	Pre-Job Safety Meeting	10/25/2015	18:00:00	USER					FILLED OUT RIG FLOOR JSA AND MET WITH RIG CREW. ALL HES PRESENT
Event	10	Start Job	10/25/2015	19:48:36	COM5					TD 2540', TP 2510', CS 9.625" J-55 36#, OH 14.75", SJ 41', MW 9.2.
Event	11	Prime Pumps	10/25/2015	19:49:23	COM5	8.34	2.00	40.00	2	2 BBLS FRESH WATER
Event	12	Test Lines	10/25/2015	19:52:06	COM5			3880		TESTED TO 3880 KO FUNCTIONING AND TESTED GOOD
Event	13	Pump Spacer 1	10/25/2015	19:54:06	COM5	8.34	2	108	10	10 BBLS FRESH WATER
Event	14	Pump Spacer 2	10/25/2015	19:58:33	COM5	10	3	108	20	20 BBLS SUPER FLUSH
Event	15	Pump Spacer 1	10/25/2015	20:06:23	COM5	8.34	3	108	10	10 BBLS FRESH WATER
Event	16	Pump Lead Cement	10/25/2015	20:14:50	COM5	11	6	270	243.8	375 SKS (243.8 BBLS) 11 PPG, 3.65 FT3/SK, 23.08 GAL/SK
Event	17	Other	10/25/2015	20:40:55	USER					GOT IT CORRECTED
Event	18	Other	10/25/2015	21:06:31	USER					CEMENT HEAD GO STUCK OPERATOR WITHOUT KNOWING YET CLOSED THE FLAPPER VALVE. ADDED WATER TO GET DENSITY DOWN AND STARTED MIXING AGAIN. HEAD WAS STILL STUCK OPEN SO IT GOT HEAVY AGAIN. WE GOT THE HEAD UNSTUCK AND GOT DENSITY LINED OUT
Event	19	Pump Tail Cement	10/25/2015	21:17:09	COM5	12.8	6	230	62.1	160 SKS (62.1 BBLS) 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	20	Other	10/25/2015	21:24:18	USER					DENSITY GOT LIGHT AT THE

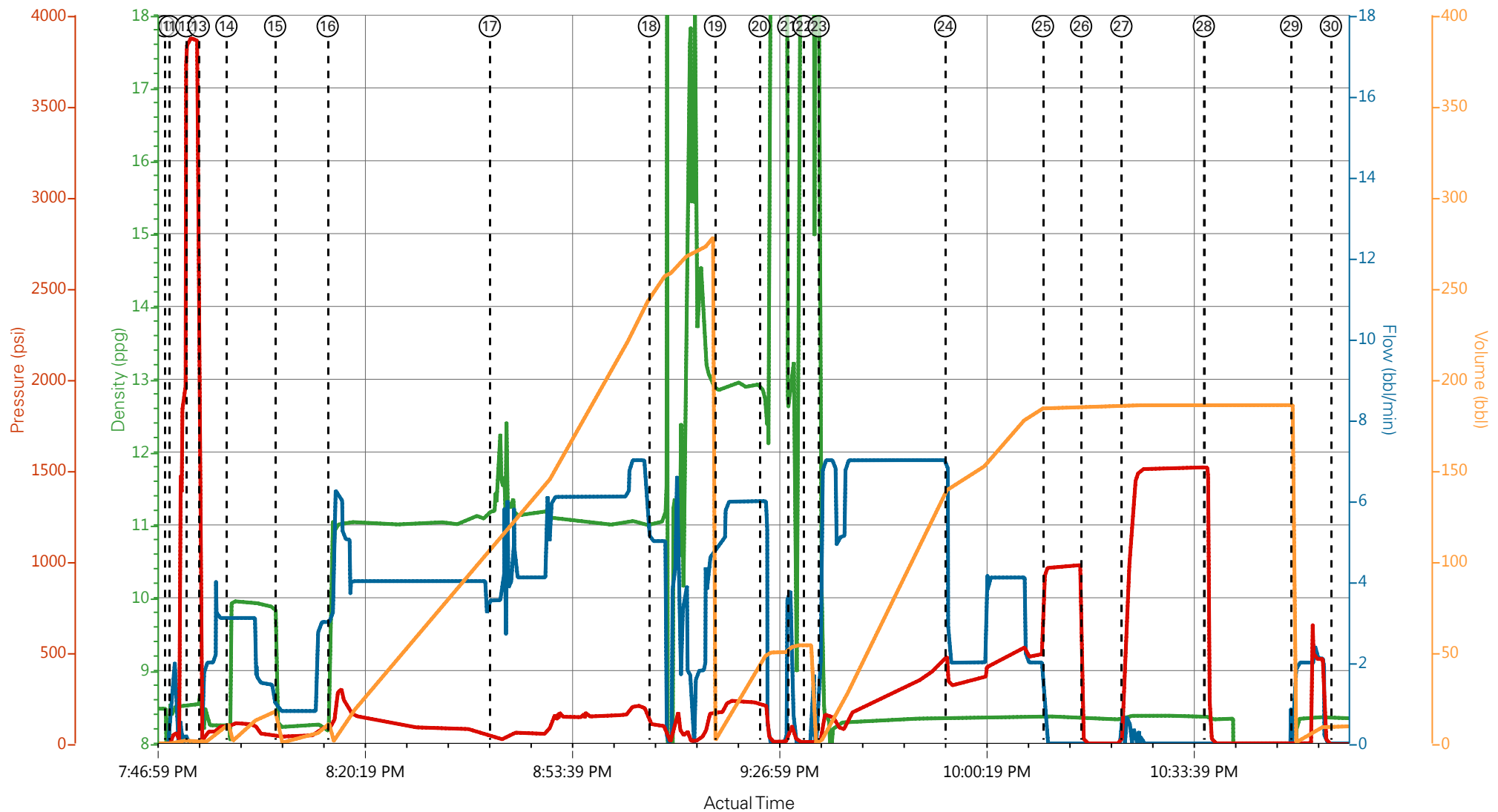
END OF CEMENT SO WE
SHUT DOWN AND GOT IT
BACK TO WEIGHT AND
PUMPED THE REMAINING
CEMENT OFF THE TRUCK AT
CORRECT WEIGHT

Event	21	Shutdown	10/25/2015	21:28:56	USER					END OF CEMENT
Event	22	Drop Top Plug	10/25/2015	21:31:25	USER					WASHED UP ON TOP AND PLUG WENT
Event	23	Pump Displacement	10/25/2015	21:33:49	COM5	8.34	7	530	190.9	190.9 BBLS FRESH WATER
Event	24	Other	10/25/2015	21:54:10	USER	8.34	2	350	140.7	RIG PUMPS WERE HAVING PROBLEMS SO WE HAD TO ADJUST RATE SEVERAL TIMES PER CO REP
Event	25	Bump Plug	10/25/2015	22:09:54	COM5					LANDED AT 400 WENT UP TO 950 PSI
Event	26	Check Floats	10/25/2015	22:16:02	USER					FLOATS HELD
Event	27	Test Lines	10/25/2015	22:22:31	COM5					PRESSURE TESTED TO 1500 PSI FOR 10 MIN
Event	28	Other	10/25/2015	22:35:46	USER					CASING HELD PRESSURE
Event	29	Other	10/25/2015	22:49:49	USER	8.34	2	700	10	10 BBLS SUGAR WATER PRESSURED UP TO 700 PSI
Event	30	End Job	10/25/2015	22:56:13	USER					GREAT RETURNS THROUGHOUT JOB. GOT ABOUT 80 BBLS GOOD CEMENT TO SURFACE. CALCULATED 7.2
Event	31	Start Job	10/26/2015	03:03:25	COM5					ANNULAR TOP OUT
Event	32	Pump Cement	10/26/2015	03:16:04	COM5	12.8	2	25	5	13 SKS (5 BBLS) 12.8 PPG 2.12 FT3/SK 11.15 GAL/SK
Event	33	Check Weight	10/26/2015	03:16:55	COM5	12.8	2	25	0	12.8. ALL CEMENT WAS WEIGHED UP AT 12.8 ON THE PREMIX SIDE ONLY

BEFORE ROLLING OVER TO
THE DOWNHOLE SIDE

Event	34	End Job	10/26/2015	03:22:07	USER	
Event	35	Pre-Rig Down Safety Meeting	10/26/2015	03:30:00	USER	ALL HES PRESENT
Event	36	Rig-Down Equipment	10/26/2015	03:45:00	USER	
Event	37	Pre-Convoy Safety Meeting	10/26/2015	05:00:00	USER	ALL HES PRESENT
Event	38	Crew Leave Location	10/26/2015	05:15:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT. CLIFF SPARKS AND CREW

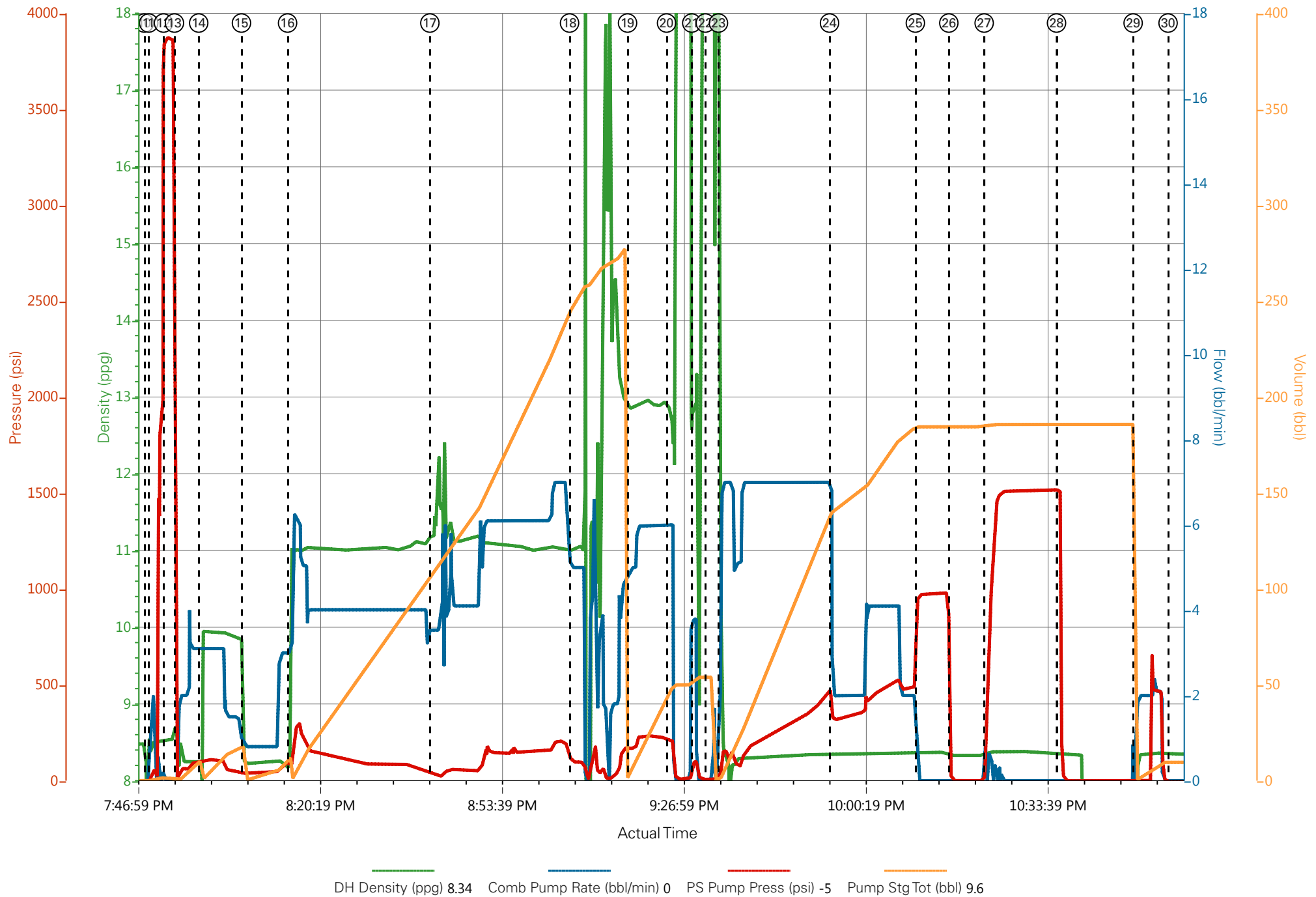
CAERUS PUCKETT 23C-1 9.625" SURFACE



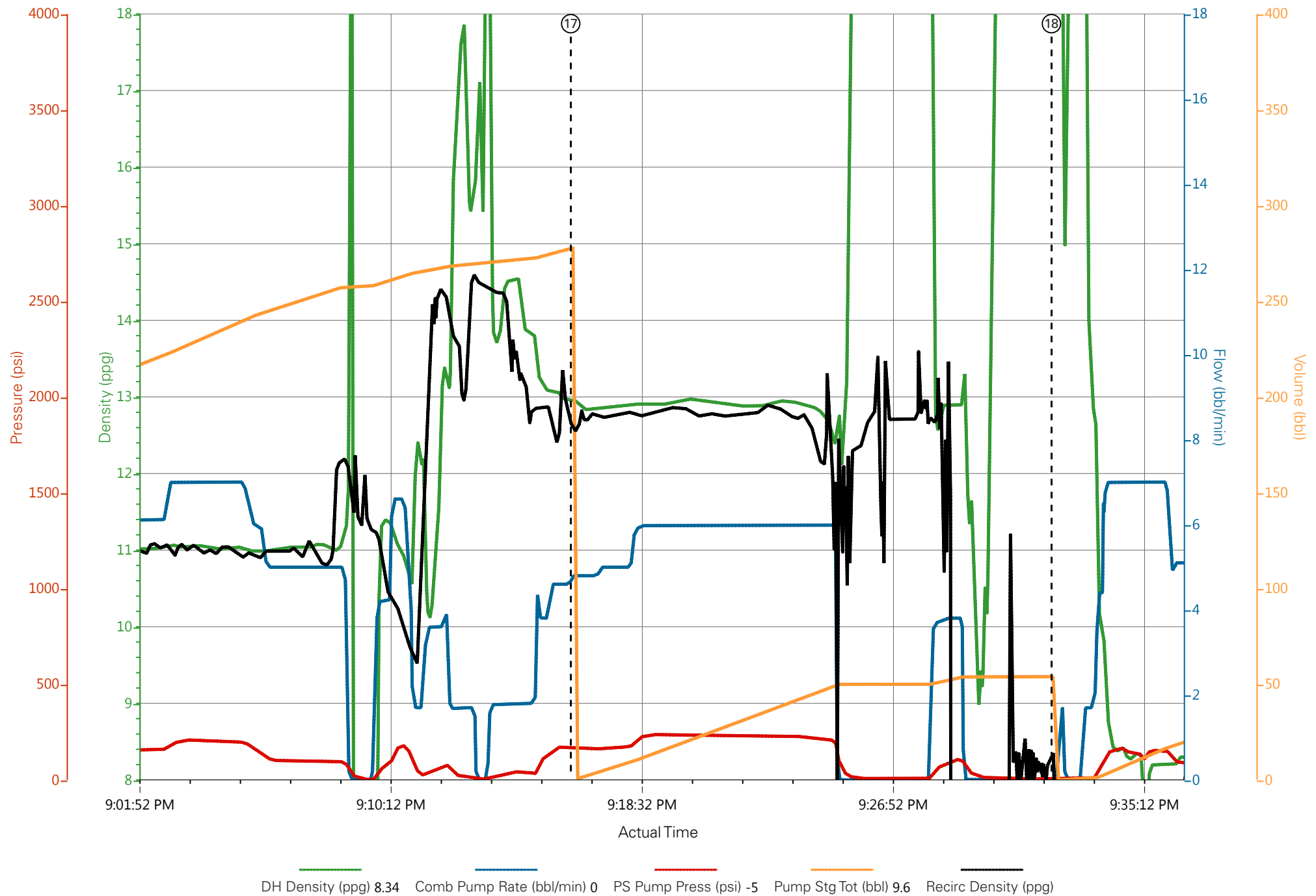
DH Density (ppg) 8.34 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) -5 Pump Stg Tot (bbl) 9.6

ng n/a;n/a;n/a;n/a	⑨ Pre-Job Safety Meeting 0.01;0;3;0	⑬ Pump Spacer 1 8.48;0;9;0.95	⑰ Tuff Fiber Issues 11.15;3.5;45;108.1	⑳ Shutdown 12.91;3.8;106;53	㉒ Bump Plug 8.37;0;962;184.5
	⑩ Start Job 7.63;0;-6;0	⑭ Pump Spacer 2 8.05;3.1;83;11.2	⑱ Head Stuck 11.02;5;97;247	㉓ Drop Top Plug 28.39;0;5;53.9	㉔ Check Floats 8.33;0;7;184.5
n/a	⑪ Prime Pumps 8.52;2;40;0.3	⑮ Pump Spacer 1 8.23;0.8;39;0	㉕ Pump Tail Cement 12.85;5;164;4.3	㉖ Pump Displacement 10.04;5.9;82;2	㉗ Test Lines 8.36;0;469;185
	⑫ Test Lines 8.54;0;3879;1.5	⑯ Pump Lead Cement 10.66;3;84;11.9	㉘ Other 12.85;6;220;45.9	㉙ Other 8.34;2;333;140.7	㉚ End Of Test 8.37;0;1517;185

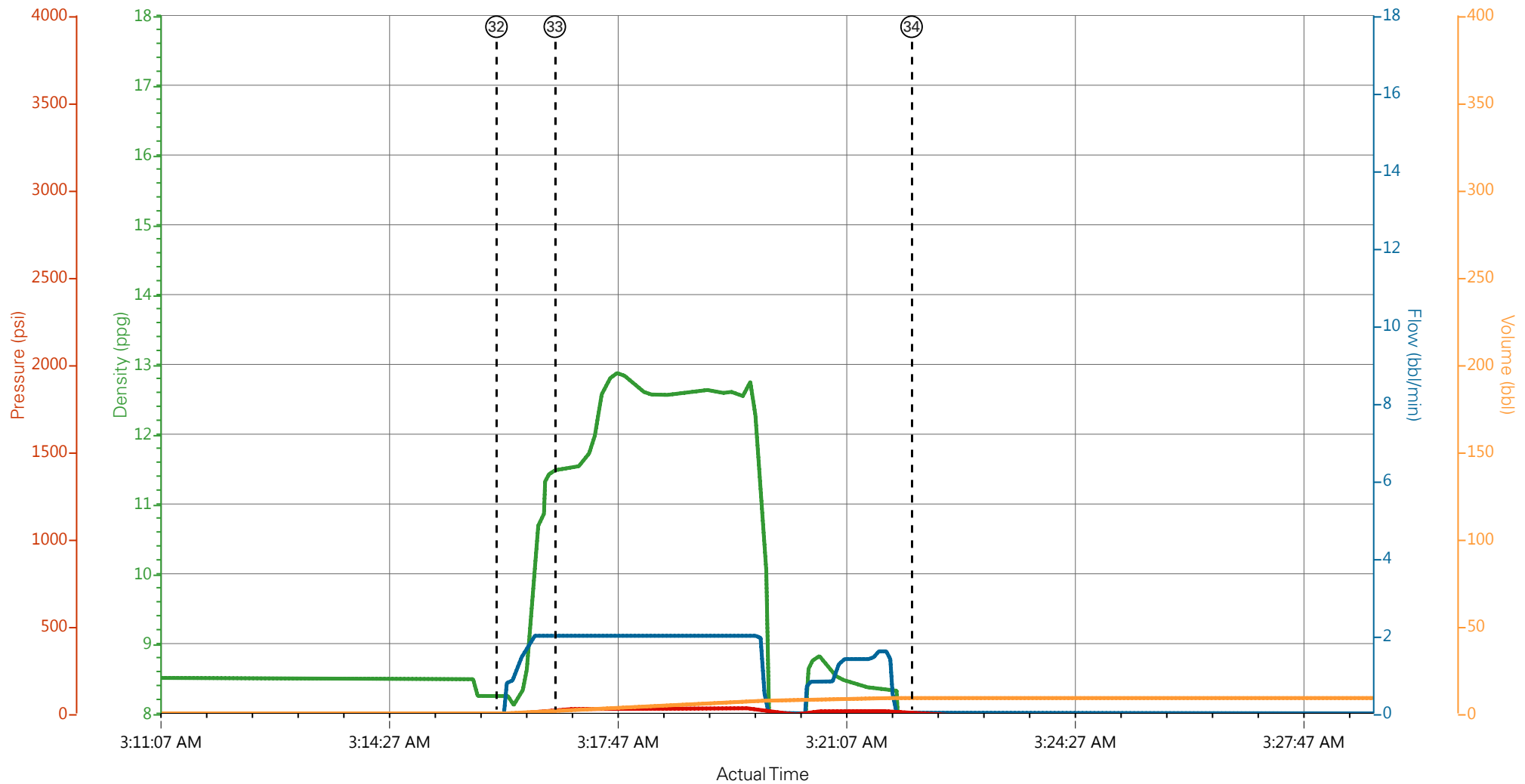
CAERUS PUCKETT 23C-1 9.625" SURFACE



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CAERUS PUCKETT 23C-1 9.625" SURFACE



DH Density (ppg) 7.46 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) -8 Pump Stg Tot (bbl) 18.3

g n/a;n/a;n/a;n/a	⑬ Pump Spacer 1 8.48;0;8.63;1.5	⑲ Pump Tail Cement 12.85;5;164;4.3	25 Bump Plug 8.37;0;961.52;184.5	31 Start Job 8.33;0;-6;18.8	37 Pre-Convoy Safe
0.01;0;3;0	⑭ Pump Spacer 2 8.11;3.1;83;11.16	20 Other 12.85;6;220;45.9	26 Check Floats 8.33;0;7;184.5	32 Pump Cement 8.26;0;-11;0	38 Crew Leave Loca
3	⑮ Pump Spacer 1 8.23;0.8;39;6.26	21 Shutdown 12.91;3.8;104;52.9	27 Test Lines 8.36;0;464;185	33 Check weight 11.49;2;21;1.3	
1.5	⑯ Pump Lead Cement 10.59;3;84.33;11.87	22 Drop Top Plug 28.39;0;5;53.9	28 End Of Test 8.37;0;1517;185.7	34 End Job 0.45;0;-6;8.8	
	⑰ Tuff Fiber Issues 11.14;3.5;45;108.1	23 Pump Displacement 10.06;4.4;73;1.9	29 Clear Parasite 3.13;0.8;-4;0.2	35 Pre-Rig Down Safety Meeting 8.35;1.6;9;10	
	⑱ Head Stuck 11.02;5;100;246.9	24 Other 8.34;2;333;140.7	30 End Job 8.34;0;-5;9.6	36 Rig-Down Equipment n/a;n/a;n/a;n/a	

Sales Order #: 0902852866	Line Item: 10	Survey Conducted Date: 10/26/2015
Customer: CAERUS OIL AND GAS LLC - EBUS		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: GEORGE URBAN		API / UWI: (leave blank if unknown) 05-045-22859-00
Well Name: PUCKETT		Well Number: 0080730025
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. 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	10/26/2015
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HB74155
Customer Participation	Did the customer participate 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	Yes
Personnel	Were you satisfied with our people? Circle Y or N	Yes
Customer Comment	Customer's Comment	N/A

CUSTOMER SIGNATURE

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KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	10/26/2015

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.	Deviated
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	9
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?	No
Pumping Hours Total number of hours pumping fluid on this job. Enter in decimal format.	4
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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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)	Yes
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	95
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)	Yes
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