



**HALLIBURTON** | Cementing

DESIGN, DELIVER, AND VALIDATE

SUSTAINABLE BARRIERS

**TAILORED**

to

MINIMIZE RISK

and

MAXIMIZE PRODUCTION.

# HALLIBURTON

## POST JOB SUMMARY

Customer Name: OCCIDENTAL PETROLEUM

Submitted By: Christopher Nettles

Date: 29-Apr-2025

Well Name: Glade WEST

Job: INTERMEDIATE CASING

Rig: Precision 580

SO#: 0910037472

**Objectives**

Objective	Justification	Comments
<b>HSE Objective</b>	There are to be no accidents or incidents concerning any cementing operation and no harm is to be caused to the environment. Cementing jobs are to be conducted in accordance with Halliburton’s Health, Safety and Environmental Standards.	Objective met
<b>Top of Cement (TOC)</b>	Need cement to surface per customer requirement.	Both stages pumped as planned, reported full returns throughout the entire cement job. - 1st Stage: FCP 950psi at 4bpm; 85bbls of cement to surface after opening DV tool - 2nd Stage: FCP 700psi at 4bpm; 35 bbls of lead cement returns
<b>Density Performance</b>	Weight over rate.	Objective met. - 1st Stage LEAD avg density: 12.46ppg - 2nd Stage LEAD avg density: 13.17ppg
<b>Density Performance</b>	Weight over rate.	Objective met. - 1st Stage TAIL avg density: 12.48ppg - 2nd Stage TAIL avg density: 13.15ppg

**Fluids Pumped**

Stage No	Description	Density (ppg)	Rate (bbl/min)	Yield (ft3/sk)	Water Req. (gal/sk)	Volume (bbl)
<b>1<sup>st</sup> STAGE</b>						
1	Drilling Fluid (Mud)					
2	Tuned Prime Spacer	10.5	7.0	3.247	21.26	80.0
3	1 <sup>st</sup> Stage LEAD	12.5	7.0	1.98	10.04	248.6
4	1 <sup>st</sup> Stage TAIL	13.2	7.0	1.689	7.94	69.2
Drop Plug/Start Displacement						
5	Mud	10.1	6.0			308.7
6	Spacer/Flush	10.5	4.0	3.247	21.26	20.0
7	Mud	10.1	4.0			471.9
<b>2<sup>nd</sup> STAGE</b>						
1	Tuned Prime Spacer	10.5	7.0	3.247	21.26	60.0
2	2 <sup>nd</sup> Stage LEAD	12.5	7.0	1.98	10.04	407.0
3	2 <sup>nd</sup> Stage TAIL	13.2	7.0	1.689	7.94	31.6
Drop Plug/Start Displacement						
5	Mud	10.1	4.0			481.7

**Job Log**

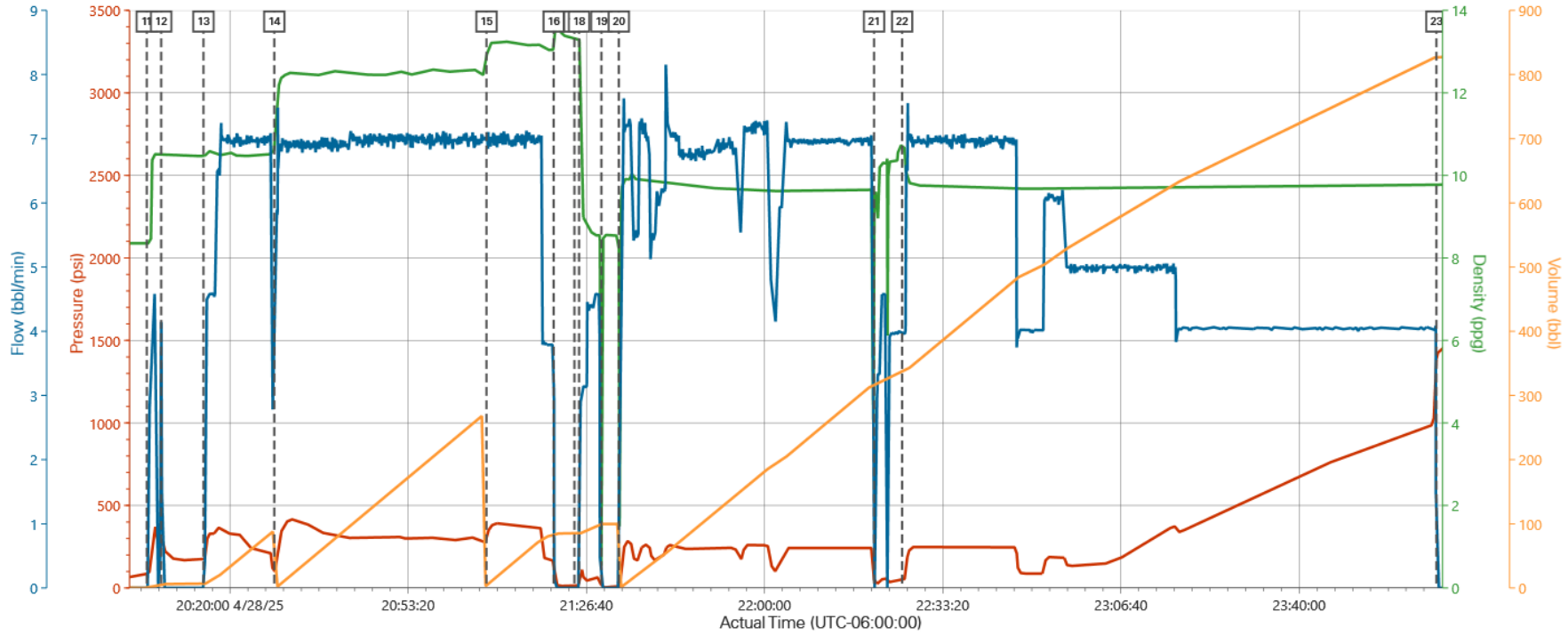
Seq #	Graph Label	Time / Date	Comments
1	Call Out	28-Apr-2025 04:00	CREW CALLED OUT FOR FOR JOB.
2	Pre-Convoy Safety Meeting	28-Apr-2025 10:15	PRE-CONVOY SAFETY MEETING AT HES LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.
3	Crew Leave Yard	28-Apr-2025 10:30	CREW DEPARTS HALLIBURTON FACILITIES FOR LOCATION.
4	Arrive At Loc	28-Apr-2025 11:00	CREW ARRIVES ON LOCATION. MET WITH CO MAN TO DISCUSS JOB. TD-11042 12-1/4" OH TP-11021' 9-5/8 47# L-80 FC-10937' PC-2356' 13-3/8 # J55 DV TOOL AT 6580' PACKER AT 6597' TVD-11021' 10.1 PPG OBM. 1 TOP PLUG FOR SATGE 1 1 CLOSING TOOL 1 TOP PLUG FOR SECOND STAGE.. WATER 65* 7.0 PH 0 CHLORIDES.
5	Pre-Rig Up Safety Meeting	28-Apr-2025 13:00	PRE-RIG UP SAFTEY MEETING WITH ALL HES EMPLOYEES TO DISCUSS HAZARDS OF LOCATION AND DISCUSS RIG UP SEQUENCE.
6	Rig-up Lines	28-Apr-2025 13:15	RIG UP PUMPS AND LINES.
7	Pre-Job Safety Meeting	28-Apr-2025 20:30	SAFTEY NMEETING WITH HES COMPANY MAN AND RIG HANDS.
8	Start Job	28-Apr-2025 20:53	START JOB DATA RECORDING.
9	Fill Lines	28-Apr-2025 20:53	FILL LINES WITH 3 BBL OF FRESH WATER.
10	Test Lines	28-Apr-2025 20:54	PRESSURE TESTED LINES TO 5000 PSI 500 EKO TEST AT 400 PSI 5TH GEAR STALL AT 2400PSI.
11	Pump Spacer	28-Apr-2025 21:04	PUMPED 80 BBLs OF 10.5 PPG TUNED SPACER. 3.25 CUFT/SK AND 21.26 GAL/SK VERIFIED WEIGHT WITH PRSSURIZED MUD SCALES.
12	Shutdown	28-Apr-2025 21:07	SHUTDOWN TO A WING CRACKED ON A BULK HOSE.
13	Resume Pumping	28-Apr-2025 21:15	HOSE REMOVED FROM SERVICE. RESUME PUMPING SPACER.

14	Pump Lead Cement	28-Apr-2025 21:28	PUMPED 248.6 BBLS OF 12.5 PPG ISOBOND 705 SKS 1.98 CUFT/SK 10.04 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT 5437'.
15	Pump Tail Cement	28-Apr-2025 22:07	PUMPED 69.2 BBLS OF 13.2 PPG ELASTICEM 230 SKS 1.69 CUFT/SK 7.94 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT 9892'.
16	Shutdown	28-Apr-2025 22:20	SHUTDOWN TO DROP TOP PLUG.
17	Drop Top Plug	28-Apr-2025 22:24	PLUG LEFT PLUG CONTAINER VERIFIED BY TOOL HAND.
18	Pump Displacement	28-Apr-2025 22:25	WASH UP ON THE PLUG WITH 10 BBL OF WATER.
19	Shutdown	28-Apr-2025 22:29	SHUTDOWN TO SWAP TO MUD.
20	Pump Displacement	28-Apr-2025 22:32	BEGIN DISPLACEMENT WITH 10.1 PPG OBM PUMP 308.7 BBL.
21	Pump Spacer	28-Apr-2025 23:20	PUMPED 20 BBLS OF 10.5 PPG TUNED SPACER. 3.25 CUFT/SK AND 21.26 GAL/SK VERIFIED WEIGHT WITH PRSSURIZED MUD SCALES.
22	Pump Displacement	28-Apr-2025 23:25	RESUME PUMPING DISPLACEMENT WITH 10.1 PPG OBM TOTAL DISPLACEMENT OF 800.6 BBL.
23	Bump Plug	29-Apr-2025 01:05	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 950 PSI AT 4BBL/MIN. HELD PRESSURE AT 1450 PSI FOR 3 MIN. 76 BBL OF CEMENT TO SURFACE.
24	Set Packer	29-Apr-2025 01:08	PRESSURE UP TO SET PACKER PACKER SET AT 2490 PSI.
25	Release Casing Pressure	29-Apr-2025 01:39	RELEASED PRESSURE BACK TO THE TRUCK 7 BBL BACK.
26	Drop Opening Device For Multiple Stage Cementer	29-Apr-2025 01:42	DROP FREE FALL OPENING TOOL.
27	Open Multiple Stage Cementer	29-Apr-2025 02:08	PRESSURED UP TO OPEN DV TOOL TOOL DIDNT OPEN.
28	Open Multiple Stage Cementer	29-Apr-2025 02:19	DV TOOL OPENED AT 900 PSI HES PUMPED 20 BBL OF OBM TURNED THE WELL OVER TO THE RIG 85 BBL OF CEMENT CIRCULATED TO SURFACE.
29	Start Job	29-Apr-2025 04:04	START JOB DATA RECORDING FOR 2ND STAGE.
30	Fill Lines	29-Apr-2025 04:04	FILL LINES WITH 3 BBL OF FRESH WATER.

31	Test Lines	29-Apr-2025 04:06	PRESSURE TESTED LINES TO 5200 PSI 500 EKO TEST AT 900 PSI 5TH GEAR STALL AT 2800PSI.
32	Pump Spacer 1	29-Apr-2025 04:16	PUMPED 60 BBLs OF 10.5 PPG TUNED SPACER. 3.25 CUFT/SK AND 21.26 GAL/SK VERIFIED WEIGHT WITH PRSSURIZED MUD SCALES.
33	Pump Lead Cement	29-Apr-2025 04:25	PUMPED 407 BBLs OF 12.5 PPG ISOBOND 1160 SKS 1.98 CUFT/SK 10.04 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT SURFACE.
34	Pump Tail Cement	29-Apr-2025 05:28	PUMPED 31.6 BBLs OF 13.2 PPG ELASTICEM 105 SKS 1.69 CUFT/SK 7.94 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT SURFACE.!
35	Shutdown	29-Apr-2025 05:35	SHUTDOWN TO DROP TOP PLUG.
36	Drop Top Plug	29-Apr-2025 05:38	PLUG LEFT PLUG CONTAINER VERIFIED BY TOOL HAND.
37	Pump Displacement	29-Apr-2025 05:38	BEGIN PUMPING DISPLACEMENT FIRST 10 BBL WITH FRESH WATER FOLLOWED BY 471.7 BBL OF 10.1 PPG OBM.
38	Bump Plug	29-Apr-2025 07:04	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 1100 PSI AT 4BBL/MIN. HELD PRESSURE AT 2100 PSI FOR 5 MIN. 35 BBL OF CEMENT TO SURFACE.
39	Release Casing Pressure	29-Apr-2025 07:09	RELEASED PRESSURE BACK TO THE TRUCK 5 BBL BACK.
40	End Job	29-Apr-2025 07:11	END JOB DATA RECORDING.
41	Pre-Rig Down Safety Meeting	29-Apr-2025 07:15	PRE-RIG DOWN SAFTEY MEETING TO DISCUSS HAZRDS OF LOCATION AND SEQUENCE OF RIG DOWN.
42	Rig Down Lines	29-Apr-2025 07:20	RIG DOWN PUMPS AND LINES.
43	Pre-Convoy Safety Meeting	29-Apr-2025 08:15	PRE-CONVOY SAFETY MEETING ON LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.
44	Crew Leave Location	29-Apr-2025 08:30	CREW DEPARTS LOCATION THANK YOU FOR CHOOSING HES. THOMAS HAAS AND CREW.

**Job Chart**

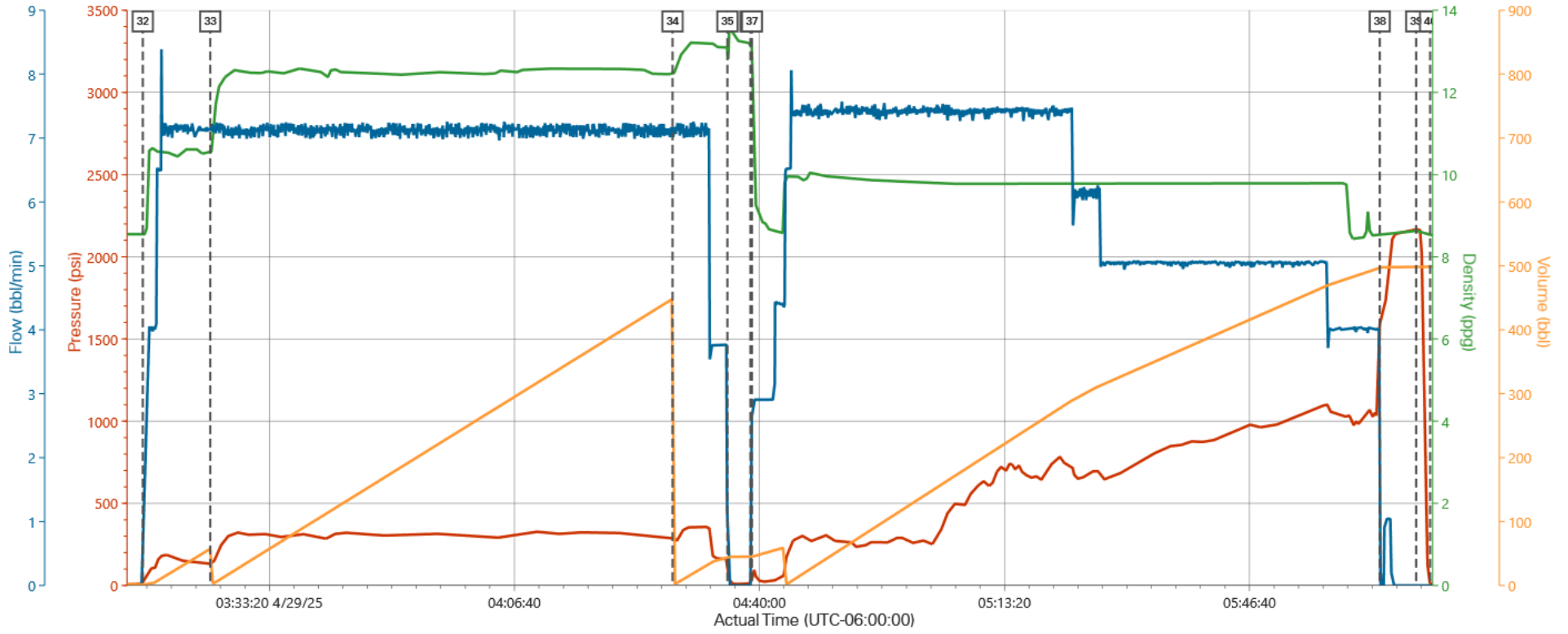
Oxy - Glade West - MS Intermediate Casing - 1ST STAGE Job Summary



Pump A Pressure (psi)    Downhole Density (ppg)    Cmb Pump Rate (bbl/min)    Cmb Stg Total (bbl)

Description	Actual Time (UTC-06:00:00)	Pump A Pressure (psi)	Downhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)
11 Pump Spacer	20:04:25	85.95	8.35	0.00	0.00
12 Shutdown	20:07:07	281.78	10.49	4.19	5.71
13 Resume Pumping	20:15:02	168.95	10.47	0.00	6.17
14 Pump Lead Cement	20:28:17	85.63	10.63	2.77	88.69
15 Pump Tail Cement	21:07:59	313.20	12.92	6.96	4.42
16 Shutdown	21:20:33	168.34	13.03	3.81	84.75
17 Drop Top Plug	21:24:25	13.91	13.32	0.00	84.90
18 Pump Displacement	21:25:18	14.27	13.29	0.00	84.90
19 Shutdown	21:29:28	12.57	0.76	0.00	99.73
20 Pump Displacement	21:32:44	2.51	8.23	0.00	0.00
21 Pump Spacer	22:20:29	45.81	9.18	0.00	317.19
22 Pump Displacement	22:25:43	57.77	10.69	3.96	335.57
23 Bump Plug	00:05:41	1396.86	9.78	0.00	827.48

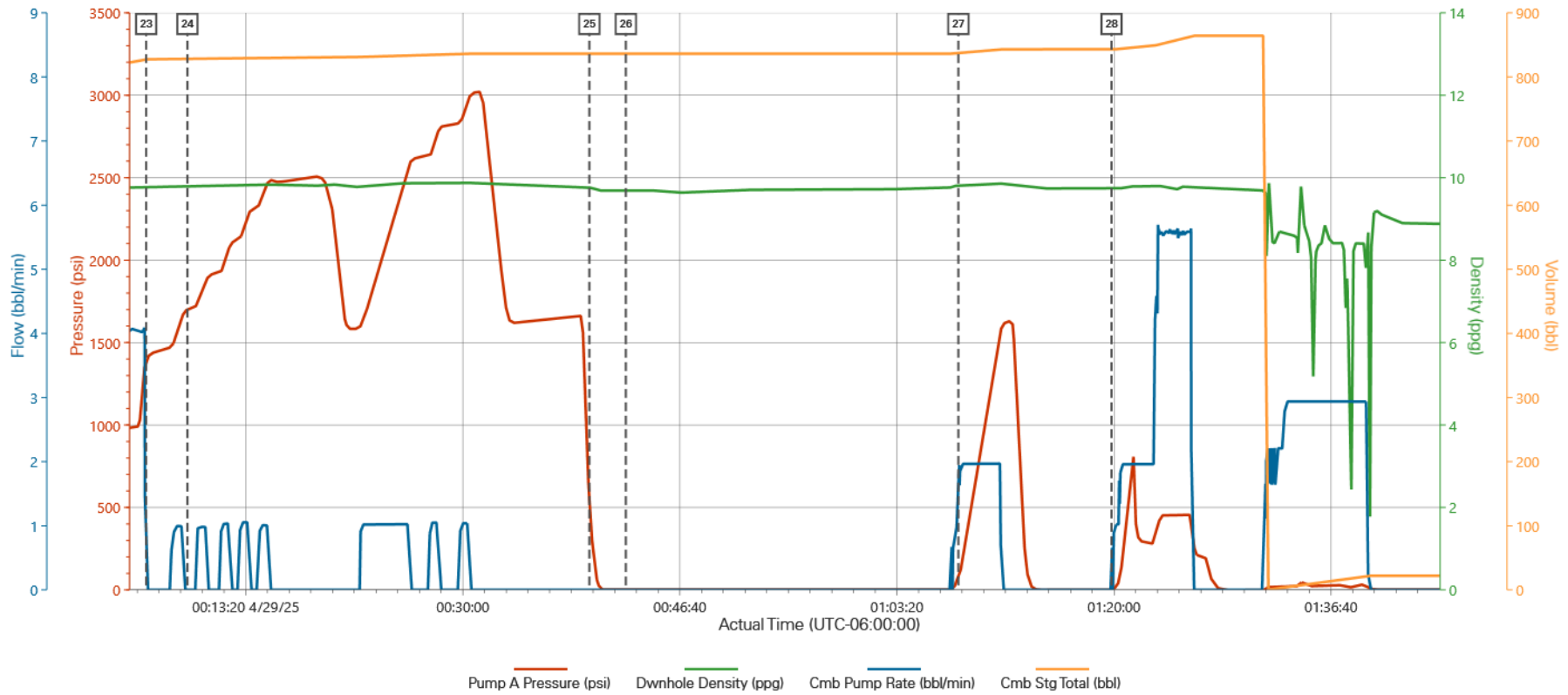
Oxy - Glade West - MS Intermediate Casing - 2ND STAGE Job Summary



Pump A Pressure (psi)    Dwnhole Density (ppg)    Cmb Pump Rate (bbl/min)    Cmb Stg Total (bbl)

Description	Actual Time (UTC-06:00:00)	Pump A Pressure (psi)	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)
32 Pump Spacer 1	03:16:07	10.16	Dwnhole Density (ppg)	0.00	0.00
33 Pump Lead Cement	03:25:18	131.73	10.54	7.16	0.18
34 Pump Tail Cement	04:28:11	289.92	12.49	7.19	0.06
35 Shutdown	04:35:38	128.64	13.13	0.00	44.80
36 Drop Top Plug	04:38:47	12.43	13.20	0.00	44.80
37 Pump Displacement	04:38:59	34.26	12.87	2.91	45.01
38 Bump Plug	06:04:23	1602.78	8.54	0.00	497.88
39 Release Casing Pressure	06:09:19	2167.13	8.63	0.00	498.90
40 End Job	06:11:14	9.87	8.52	0.00	498.90

Oxy - Glade West - MS Intermediate Casing - Opening DV Tool



Description	Actual Time (UTC-06:00:00)	Pump A Pressure (psi)	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)
23 Bump Plug	00:05:41	1396.86	9.78	0.00	827.48
24 Set Packer	00:08:51	1701.77	9.78	0.00	828.29
25 Release Casing Pressure	00:39:43	535.74	9.77	0.00	836.23
26 Drop Opening Device For Multiple Stage Cementer	00:42:31	-3.90	9.68	0.00	836.23
27 Open Multiple Stage Cementer	01:08:03	69.33	9.80	0.98	836.67
28 Open Multiple Stage Cementer	01:19:49	0.10	9.76	0.00	842.96

**Lab Reports**

**HALLIBURTON**

Rockies, Brighton

Lab Results- **1<sup>st</sup> Stage LEAD**

**Job Information**

Request/Slurry	2910683/1	Rig Name	Precision 580	Date	24/APR/2025
Submitted By	Christopher Robert Nettles	Job Type	Intermediate Casing	Bulk Plant	Brighton
Customer	Occidental Petroleum Corp.	Location	Weld	Well	Glade West

**Well Information**

Casing/Liner Size	9.625 in	Depth MD	10600 ft	BHST	166°C / 330°F
Hole Size	12.25 in	Depth TVD	10600 ft	BHCT	81°C / 177°F
Press.	5560 psi				

**Drilling Fluid Information**

Mud Supplier Name	Mud Trade Name	Density	9.6 lbm/gal
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**Cement Information - Lead Design**

Conc	UOM	Cement/Additive	Cement Properties		
		IsoBond(tm)	Slurry Density	12.5	lbm/gal
0.35	lb/sk	BridgeMaker II	Slurry Yield	1.98	ft3/sack
		LCM	Water Requirement	10.04	gal/sack
0.32	% BWOC	SCR-100	Total Mix Fluid	10.07	gal/sack

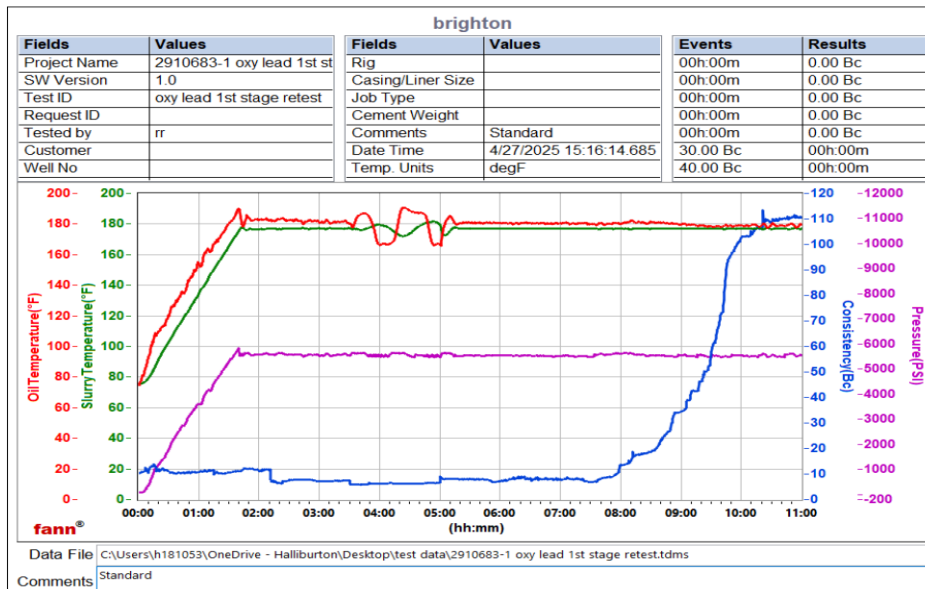
**Operation Test Results Request ID 2910683/1**

Mixability (0 - 5) - 0 is not mixable, Request Test ID:41503711 27/APR/2025

Mixability Rating (0 - 5)	Avg. RPM Mixing Under Load (~12,000)
5	12000

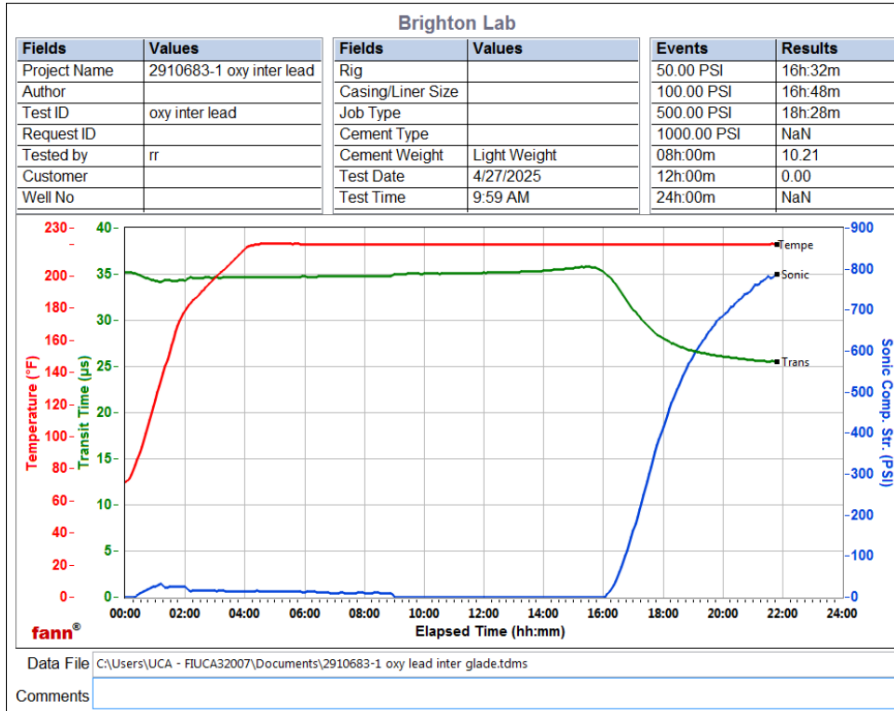
Thickening Time - ON-OFF-ON, Request Test ID:41509988 28/APR/2025

Test Temp. (degF)	Pressure (psi)	Reached In (min)	30 BC (HH:MM)	50 BC (HH:MM)	70 BC (HH:MM)	100 BC (HH:MM)	Start BC	Stirring Before Stop (min)	Static Period (min)
177	5560	100	08:51	09:27	09:38	09:56	10.3	210	90



UCA Comp. Strength, Request Test ID:41503713 28/APR/2025

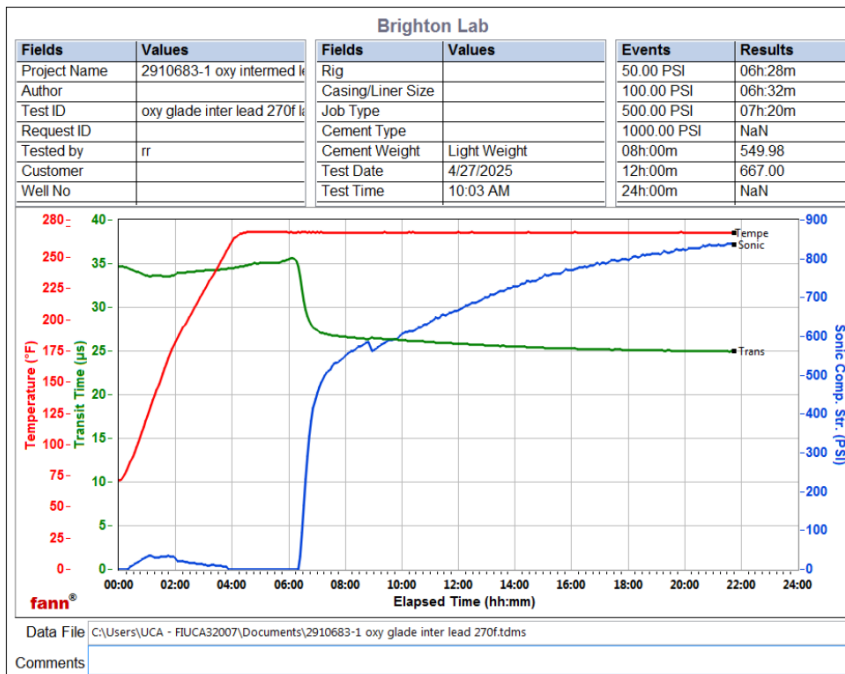
End Temp. (degF)	Pressure (psi)	50 psi (HH:MM)	100 psi (HH:MM)	500 psi (HH:MM)	8hr CS (psi)
220	3000	16:32	16:48	18:28	10



**UCA Comp. Strength, Request Test ID:41503714**

**28/APR/2025**

End Temp. (degF)	Pressure (psi)	50 psi (HH:MM)	100 psi (HH:MM)	500 psi (HH:MM)	8hr CS (psi)	12 hr CS (psi)
270	3000	08:28	06:32	07:20	549	667



# HALLIBURTON

Rockies, Brighton

Lab Results- **1<sup>st</sup> Stage TAIL**

**Job Information**

Request/Slurry	2910684/1	Rig Name	Precision 580	Date	24/APR/2025
Submitted By	Christopher Robert Nettles	Job Type	Intermediate Casing	Bulk Plant	Brighton
Customer	Occidental Petroleum Corp.	Location	Weld	Well	Glade Project

**Well Information**

Casing/Liner Size	9.625 in	Depth MD	10600 ft	BHST	166°C / 330°F
Hole Size	12.25 in	Depth TVD	10600 ft	BHCT	81°C / 177°F
Press.	6130 psi				

**Drilling Fluid Information**

Mud Supplier Name	Mud Trade Name	Density	9.6 lbm/gal
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**Cement Information - Tail Design**

Conc	UOM	Cement/Additive	Cement Properties	
		ElastiCem	Slurry Density	13.2 lbm/gal
0.3	lb/sk	BridgeMaker II	Slurry Yield	1.69 ft3/sack
		LCM	Water Requirement	7.94 gal/sack
0.23	% BWOC	SCR-100	Total Mix Fluid	7.97 gal/sack

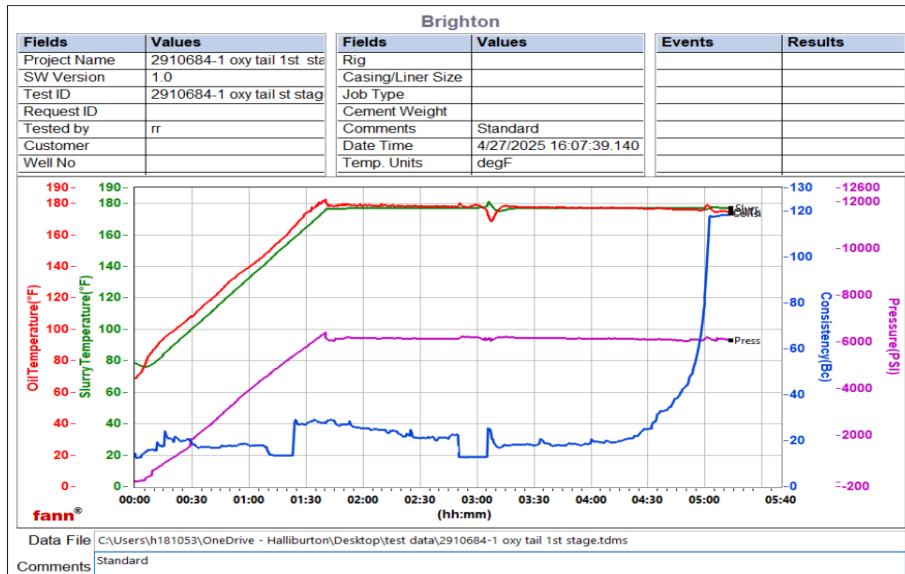
**Operation Test Results Request ID 2910684/1**

Mixability (0 - 5) - 0 is not mixable, Request Test ID:41503715 27/APR/2025

Mixability Rating (0 - 5) Avg. RPM Mixing Under Load (~12,000)  
 4 12000

**Thickening Time, Request Test ID:41503716 28/APR/2025**

Temp. (degF)	Pressure (psi)	Reached In (min)	Start BC	30 BC (HH:MM)	50 BC (HH:MM)	70 BC (HH:MM)	100 BC (HH:MM)
177	6130	100	15	04:35	04:53	04:58	05:01



UCA Comp. Strength, Request Test ID:41503717

29/APR/2025

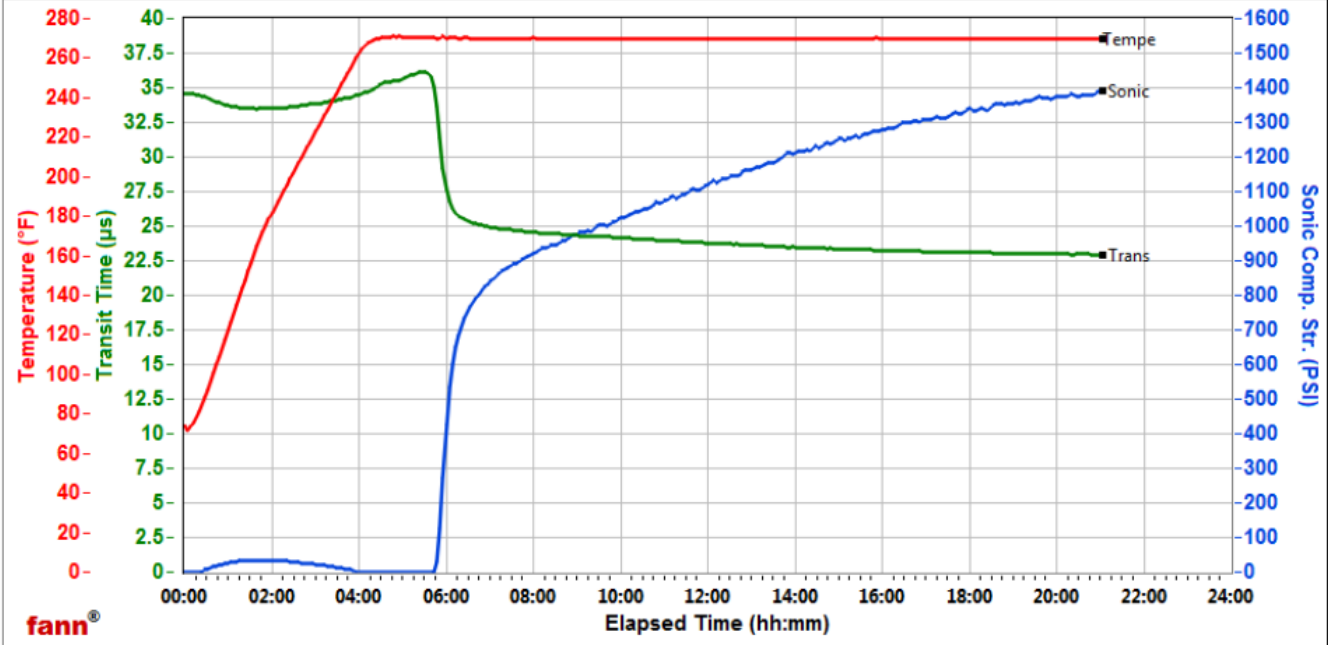
End Temp. (degF)	Pressure (psi)	50 psi (HH:MM)	100 psi (HH:MM)	500 psi (HH:MM)	1000 psi (HH:MM)	8hr CS (psi)	12 hr CS (psi)
270	3000	05:52	05:52	06:04	09:28	921	1123

**Brighton Lab**

Fields	Values
Project Name	2910684-1 OXY GLADE
Author	
Test ID	OXY TAIL GLADE 1ST S
Request ID	
Tested by	RR
Customer	
Well No	

Fields	Values
Rig	
Casing/Liner Size	
Job Type	
Cement Type	
Cement Weight	Light Weight
Test Date	4/28/2025
Test Time	9:20 AM

Events	Results
50.00 PSI	05h:52m
100.00 PSI	05h:52m
500.00 PSI	06h:04m
1000.00 PSI	09h:28m
08h:00m	920.84
12h:00m	1122.81
24h:00m	NaN



Data File C:\Users\UCA - FIUCA32007\Documents\2910684-1 OXY TAIL 1ST STAGE.tdms

Comments

# HALLIBURTON

Rockies, Brighton

Lab Results- **2<sup>nd</sup> Stage LEAD**

**Job Information**

Request/Slurry	2910685/1	Rig Name	Precision 580	Date	24/APR/2025
Submitted By	Christopher Robert Nettles	Job Type	Intermediate Casing	Bulk Plant	Brighton
Customer	Occidental Petroleum Corp.	Location	Weld	Well	Glade West

**Well Information**

Casing/Liner Size	9.625 in	Depth MD	6600 ft	BHST	82°C / 180°F
Hole Size	12.25 in	Depth TVD	6600 ft	BHCT	57°C / 135°F
Press.	3500 psi				

**Drilling Fluid Information**

Mud Supplier Name	Mud Trade Name	Density	9.6 lbm/gal
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**Cement Information - Lead Design**

Conc	UOM	Cement/Additive	Cement Properties	
		IsoBond(tm)	Slurry Density	12.5 lbm/gal
0.2	% BWOC	SCR-100	Slurry Yield	1.97 ft3/sack
			Water Requirement	10.02 gal/sack
			Total Mix Fluid	10.05 gal/sack

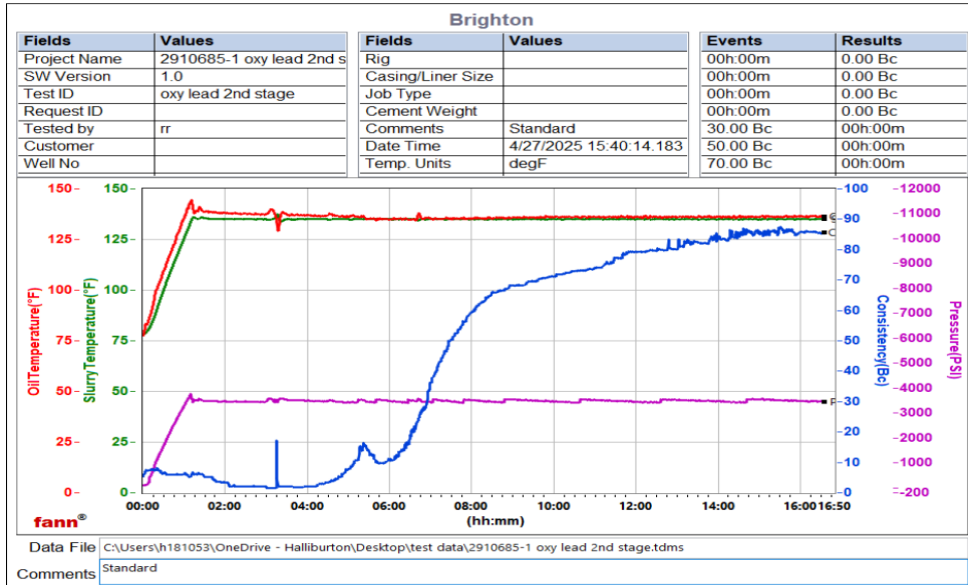
**Operation Test Results Request ID 2910685/1**

Mixability (0 - 5) - 0 is not mixable, Request Test ID:41503718 27/APR/2025

Mixability Rating (0 - 5) Avg. RPM Mixing Under Load (~12,000)  
 5 12000

**Thickening Time - ON-OFF-ON, Request Test ID:41503719 28/APR/2025**

Test Temp. (degF)	Pressure (psi)	Reached In (min)	30 BC (HH:MM)	50 BC (HH:MM)	70 BC (HH:MM)	Start BC	Stirring Before Stop (min)	Static Period (min)
135	3500	70	06:55	07:29	09:40	5.2	180	15





UCA Comp. Strength, Request Test ID:41503710

29/APR/2025

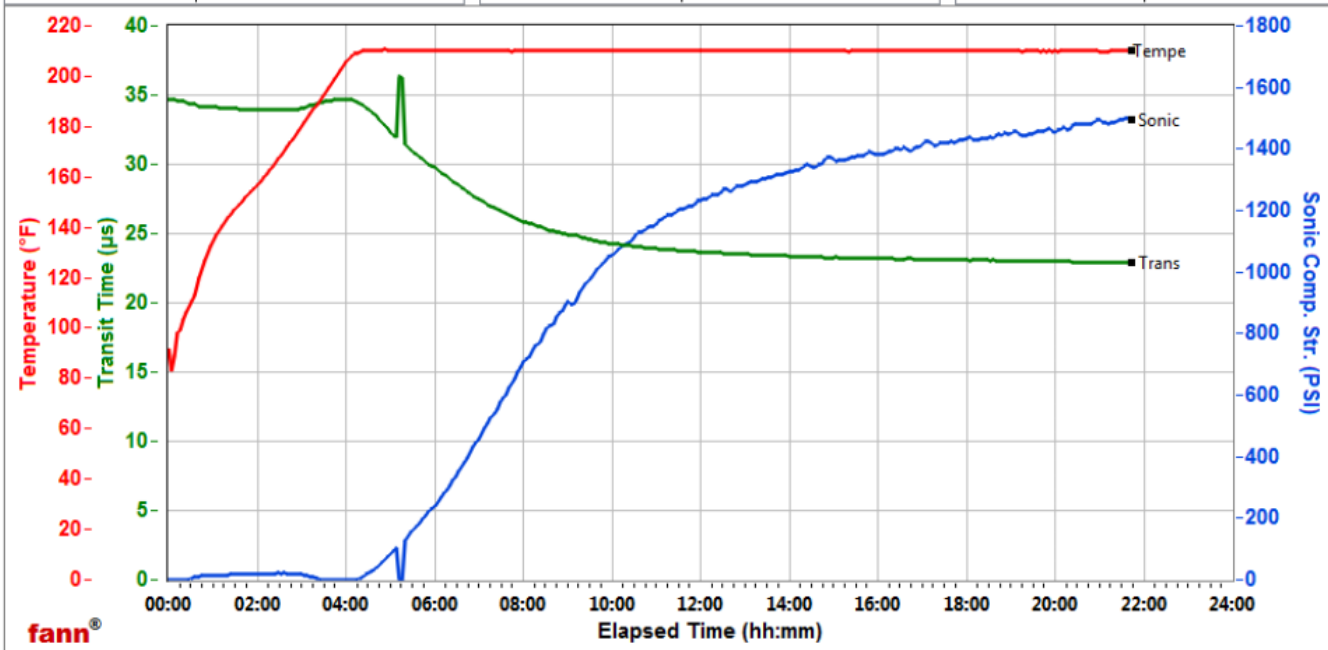
End Temp. (degF)	Pressure (psi)	50 psi (HH:MM)	100 psi (HH:MM)	500 psi (HH:MM)	1000 psi (HH:MM)	8hr CS (psi)	12 hr CS (psi)
210	3000	05:20	05:20	07:12	09:40	707	1233

### Brighton Lab

Fields	Values
Project Name	2910682-1 OXY TAIL GLA
Author	
Test ID	OXY GLADE TAIL 2ND S
Request ID	
Tested by	RR
Customer	
Well No	

Fields	Values
Rig	
Casing/Liner Size	
Job Type	
Cement Type	
Cement Weight	Light Weight
Test Date	4/28/2025
Test Time	8:44 AM

Events	Results
50.00 PSI	05h:20m
100.00 PSI	05h:20m
500.00 PSI	07h:12m
1000.00 PSI	09h:40m
08h:00m	707.38
12h:00m	1233.07
24h:00m	NaN



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Data File C:\Users\UCA - FIUCA32007\Documents\2910682-1 OXY TAIL GLADE 2ND STAGE.tdms

Comments