

# Cement Post Job Report

**Client:** PDC Energy

**Well Name:** George 8N

**API #:** 05-123-51775

**Job Date:** March 28, 2024

**Job Type:** New Well - 5.5" Production String

**Cement Company & Contact:** EXERO Well Integrity -  
Cheve Meyer 720-239-3819

# EXERO

## TREATMENT REPORT

CLIENT	WELL	RIG	JOB TYPE	THREAD TYPE	WELLHEAD CONNECTION
PDC Energy	George 08N	True 41	Production	Buttress	5 1/2" HP Cement Head

WELL MD (FT)	WELL TVD (FT)	DEVIATION (DEG)	NUMBER OF STAGES	BHST (DEG)	BHCT (DEG)
17,984	6757	90	1	230	230

PACKER/RETAINER/CIBP/DV TOOL DEPTHS (FT)	TOOL TYPE	TOP OF PERFS (FT)	BOTTOM OF PERFS (FT)	NUMBER OF HOLES

CASING/TUBING/DP DETAILS								
STRING TYPE	GRADE	OD"	WT/FT	ID"	OH SIZE"	% EXCESS LEAD	% EXCESS TAIL	TOTAL DEPTH (FT)
Surface		9.625	36	8.921	12.25			2000
Production	P110	5.5	20	4.778	8.5	0	0	17,975
MAXIMUM CASING/TUBING/DP PSI			MAXIMUM ANNULAR PSI					

Mud Type	OBM	Rotate Y,N	Yes	Circulation Data				Water Requirements (bbls)		
Mud ppg	10.2	Rate (rpm)	30	Circulate Time (hrs)		2	Spacers		160	
Flow Temp	135	Torque Val.	10	Circulation Rate (bpm)		11	PSI	1250	Stage 1 Lead	148
Vis. Sec/qt	54	Time (hr)	2	Full Circulation ? (Y,N,P)		Yes			Stage 1 Tail	244
PV (cP)	13	Pipe Reciprocation		Gas Present (Y,N)		Yes	Units	500	Stage 2 Lead	
Yield Pt	14	Recip Y,N	Yes	Centralizers/Plugs				Stage 2 Tail		
10 sec gel	6	Stroke (ft)	-	Quantity & Type		Customer Provided			Displacement	399
10 min gel	9	Recip time	-	Top Plug/Type		Customer Provided			Wash up	20
30 min gel	14	Stuck ?	Yes	Bottom Plug/Type		Customer Provided			Total + 10% Safety	1068

Preflush & Spacers		Stage 1 Lead - Class G		Stage 1 Tail - Class G		Stage 2 Lead		Stage 2 Tail		Displacement	
Spacer 1	Spacer	Density	12.9	Density	13.7	Density		Density		Fluid Type	Water
Density	12	Sacks	1643	Sacks	1525	Sacks		Sacks		Dens. ppg	8.33
Volume	160	Vol/bbls	319.0	Vol/bbls	372.1	Vol/bbls	0.0	Vol/bbls	0.0	Vol. bbl	399
Rate	10	Rate	10	Rate	10	Rate		Rate		Rate bpm	10
Spacer 2		Yield	1.09	Yield	1.37	Yield		Yield		Clay Stay?	No
Density		Gal/Sk	3.77	Gal/Sk	6.63	Gal/Sk		Gal/Sk		Biocide ?	Yes
Volume		% Excess	0	% Excess	0	% Excess		% Excess		Slow @ bbl	370
Rate		TOL (ft)	1019	TOT (ft)	8661	TOL (ft)		TOT (ft)		Bump PSI	3700

Final Displacement (bbls)	399
Bump Plug?	Yes
Final Bump Pressure (psi)	3700
Full Returns throughout job?	Full
Vol. away/Time when returns lost	-
Vol. away when returns were regained	-
Spacer to Surface?	Yes
Spacer volume returned (bbls)	111
Cement to surface?	No
Cement volume to surface stage 1	-
Cement volume to surface stage 2	-

Surface Top Out Details-Pumped		Job Summary & Chems Used	
Cement Type		MFC 47 (gal)	112
Dens. ppg		MFC 67 (gal)	160
Sacks qty		Defoamer (gal)	35
Gal/sk		Biocide (gal)	20
Yield		Corr. Inhib (gal)	
Lbs. of chloride used		Fiber (lbs)	145
Top out pipe used ?		Chloride (lbs)	
Feet of top out pipe		Retarder (lbs)	
Annulus holding?		Clay Stay (gal)	
Sodium Silicate Used		Other	

## JOB LOG

CLIENT	WELL	RIG	JOB TYPE	START DATE	Ambient Conditions
<b>PDC Energy</b>	<b>George 08N</b>	<b>True 41</b>	<b>Production</b>	<b>3/28/2024</b>	Temp / Hum / Air Press 48 Deg F / 44% / 24.77 in

DATE (dd/mm)	TIME (hh:mm)	DENSITY (ppg)	RATE (bpm)	VOL. (bbl)	TOTAL VOL.	PRESSURE	TREATMENT COMMENTS
3/28/2024	10:30:00 AM						Crew called out, requested by 17:30.
	0:00						Arrived on location.
3/28/2024	7:00:00 PM						Spotted equipment.
3/28/2024	7:30:00 PM						Rigged up.
3/28/2024	9:00:00 PM						Safety meeting.
3/28/2024	9:34:00 PM	8.33	4.5	3	3	500	Filled lines.
3/28/2024	9:36:00 PM					7000	Pressure tested lines, no leaks.
3/28/2024	9:37:00 PM						Dropped bottom plug.
3/28/2024	9:39:00 PM	12	7.0	160	160	1600	Mixed and pumped spacer @ 12ppg, with surfactant and fiber.
3/28/2024	9:58:00 PM	12.9	10.0	319	319	1900	Mixed and pumped lead cmt @ 12.9ppg. (1643sks, 1.09yld, 3.77gl/sk) TOLC 1019'.
3/28/2024	10:34:00 PM	13.7	10.0	372	372	1750	Mixed and pumped tail cmt @ 13.7ppg. (1525sks, 1.37yld, 6.63gl/sk) TOTC 8661'.
3/28/2024	11:12:00 PM	8.33	10.0	8	8	1800	Pumped sugar water.
3/28/2024	11:13:00 PM						Shutdown. Washed pumps and lines.
3/28/2024	11:15:00 PM						dropped Top plug.
3/28/2024	11:18:00 PM	8.33	10.0	10	399	1500	Fresh water displacement with biocide.
3/28/2024	11:23:00 PM	8.33	10.0	50	399	2350	Fresh water displacement with biocide.
3/28/2024	11:29:00 PM	8.33	10.0	100	399	3150	Fresh water displacement with biocide.
3/28/2024	11:35:00 PM	8.33	10.0	150	399	3850	Fresh water displacement with biocide.
3/28/2024	11:41:00 PM	8.33	9.0	200	399	4000	Fresh water displacement with biocide.
3/28/2024	11:48:00 PM	8.33	7.5	250	399	3900	Fresh water displacement with biocide.
3/28/2024	11:54:00 PM	8.33	7.5	300	399	3950	Fresh water displacement with biocide.
3/29/2024	12:00:00 AM	8.33	7.5	350	399	3950	Fresh water displacement with biocide.
3/29/2024	12:09:00 AM			399	399	3700	Landed plug @ calculated displacement, received 111bbl spacer to surface. FCP 3200psi.
3/29/2024	12:15:00 AM					5100	Burst Top plug.
3/29/2024	12:15:00 AM	8.33	2.0	5	5	2800	Pumped 5bbl wet shoe.
3/29/2024	12:20:00 AM						checked floats, 5bbl back.
3/29/2024	12:30:00 PM						Flushed stack, verified clean by rig crew.
3/29/2024	12:45:00 PM						Rigged down.
3/29/2024	1:30:00 PM						Departed location.

# George 8N Production Pump Chart – Pressure / Rate / Density

## Chart Report

— discharge pressure ds 20:58:40 74.521 psi  
— backup density 20:58:40 8.411 lbm/galUS  
— combined rate 20:58:40 0.628 bbl/min

