

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

Date: Monday, February 25, 2019

SG 324-15 Surface

Terra SG 324-15 Surface

API# 05-045-24126-00

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pmp Stg Tot <i>(bbl)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	1/17/2019	23:00:00						Requested on Location @ 05:00
Event	2	Pre-Convoy Safety Meeting	1/18/2019	01:50:00						
Event	3	Crew Leave Yard	1/18/2019	02:00:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	1/18/2019	05:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	1/18/2019	05:20:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 50 degrees
Event	6	Pre-Rig Up Safety Meeting	1/18/2019	05:40:00						
Event	7	Rig-Up Equipment	1/18/2019	06:00:00						DME iron to ground manifold, standpipe. Water hoses to both uprights, bulk hose to 660.
Event	8	Other	1/18/2019	06:20:00						Rig Circulated 1 hrs prior to cement job at 8 bpm @ 400 psi. Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	1/18/2019	09:20:00						All HES personnel, rig crew, and company rep.
Event	10	Start Job	1/18/2019	10:43:44						TD 1067', TP 1062.15', SJ 43.73', OH 13.5'', Csg 9.5/8'' 32.3 lb/ft J-55, Mud 9.3 ppg.
Event	11	Fill Lines	1/18/2019	10:44:56		8.33	2	60	5	Fresh Water
Event	12	Test Lines	1/18/2019	10:48:10				2027		Held pressure 2 minutes
Event	13	Other	1/18/2019	10:50:49						Fix leak

Event	14	Pump Spacer	1/18/2019	11:01:13	8.33	4	175		Fresh Water
Event	15	Check Weight	1/18/2019	11:04:27					Density verified via mud cup
Event	16	Pump Lead Cement	1/18/2019	11:08:05	12.3	8	580	42.4	100 sacks, 12.3 ppg, 2.38 yield, 13.77 gal/sk
Event	17	Pump Tail Cement	1/18/2019	11:15:29	12.8	8	630	65.8	175 sks, 12.8 ppg, 1.32 Yield, 13.77 gal/sk
Event	18	Shutdown	1/18/2019	11:23:57					Wash up on plug
Event	19	Drop Top Plug	1/18/2019	11:26:31					Co-Rep Verify Plug Launched
Event	20	Pump Displacement	1/18/2019	11:28:32	8.33	10	610	80.1	Fresh Water
Event	21	Slow Rate	1/18/2019	11:38:13	8.33	2	272	70	Slow Rate 10 bbls to Calculated Displacement
Event	22	Bump Plug	1/18/2019	11:42:23			940		Plug Bumped at 272 psi, Brought up to 940 psi
Event	23	Check Floats	1/18/2019	11:44:57					Floats held – 1 bbl back to the truck
Event	24	End Job	1/18/2019	11:45:42					Good returns throughout job. 20 bbl of cement to surface
Event	25	Pre-Rig Down Safety Meeting	1/18/2019	11:52:53					40 lbs of sugar used, HES top plug used, 0 add hours.
Event	26	Rig-Down Equipment	1/18/2019	11:57:35					
Event	27	Pre-Convoy Safety Meeting	1/18/2019	12:15:13					
Event	28	Crew Leave Location	1/18/2019	12:18:10					Thanks for using Halliburton Cement, Chris Martinez and crew.

Terra SG 324-15 9 5/8" Surface

