

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America, COLORADO

### **For: Terra**

Date: Monday, November 05, 2018

### **SG 533-26 Production**

**API#05-045-23941-00**

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

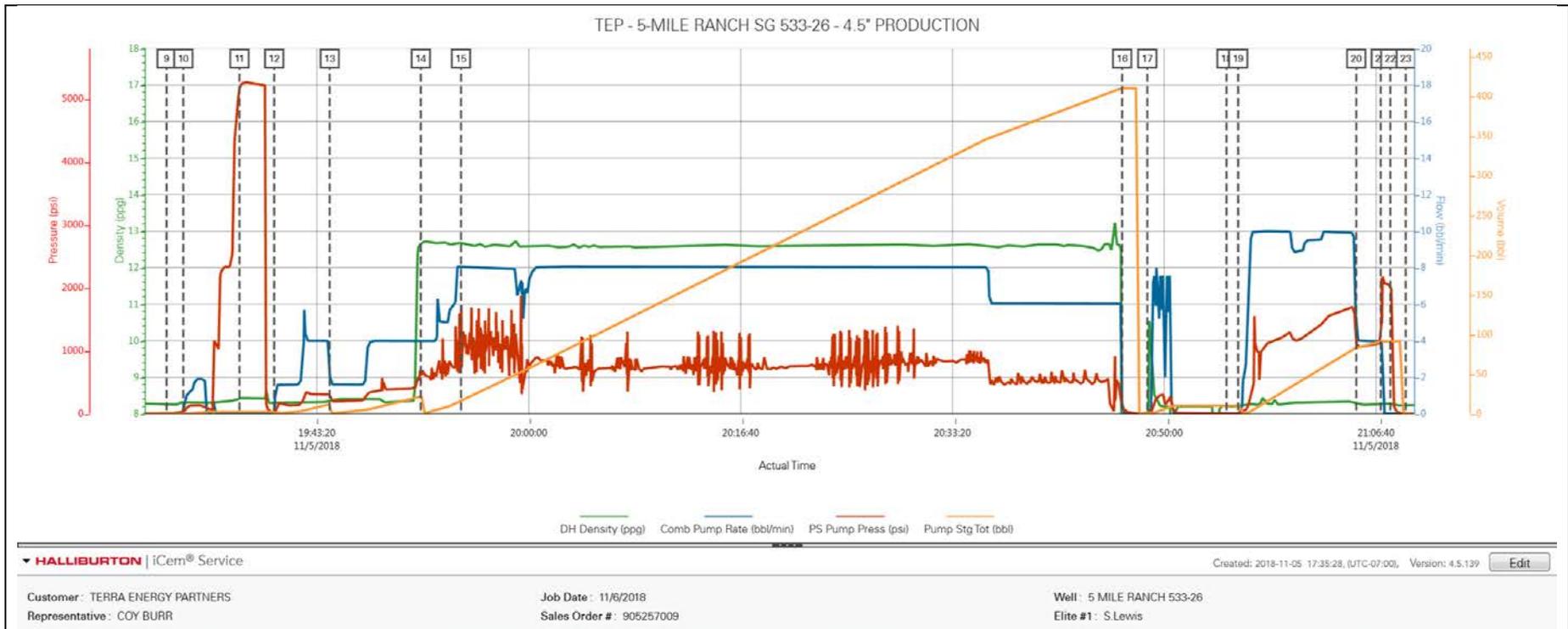
### 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	11/5/2018	12:30:00	USER					Requested on Location @ 17:30
Event	2	Pre-Convoy Safety Meeting	11/5/2018	14:45:00	USER					All HES Present
Event	3	Crew Leave Yard	11/5/2018	15:15:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location from Service Center	11/5/2018	16:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	11/5/2018	16:35:00	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	11/5/2018	17:00:00	USER					1 hardline to standpipe, water hoses to upright, bulk hose to 660 and field silo.
Event	7	Other	11/5/2018	18:40:00	USER					Rig Circulated 1 bottoms up prior to cement job at 600 gpm 1400 psi
Event	8	Pre-Job Safety Meeting	11/5/2018	18:45:00	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	11/5/2018	19:31:30	USER	8.28	0.00	6.00	0.00	TD 5934', TP 5928' set @ 5925', SJ 32', FC 5896 OH 8 3/4", Csg 4.5", 11.6 lb/ft P110, SCsg 9 5/8 32.3lb/ft, Mud 10.4 ppg.
Event	10	Fill Lines	11/5/2018	19:32:49	USER	8.31	2.00	160.00	3.00	Fresh Water
Event	11	Test Lines	11/5/2018	19:37:14	USER	8.43	0.00	5179.00	3.00	Held pressure 2 minutes no leaks
Event	12	Pump Water Spacer	11/5/2018	19:39:58	COM5	8.30	4.00	310.00	10.00	Pump Water Spacer
Event	13	Pump Mud Flush	11/5/2018	19:44:20	USER	8.39	3.00	294.00	20.00	Mud Flush
Event	14	Pump Tail Cement	11/5/2018	19:51:30	USER	12.50	8.00	1040.00	368.3	1055 Sks 12.5 ppg 1.96 yield, 9.4 gal/sk
Event	15	Check Weight	11/5/2018	19:54:40	COM5					Density Verified via Mud Scales
Event	16	Shutdown	11/5/2018	20:46:41	USER					Clean lines to pit

Event	17	Clean Lines	11/5/2018	20:48:40	COM5					Washed Truck and Blew Lines to pit
Event	18	Drop Top Plug	11/5/2018	20:54:54	USER					Co-Rep Verify Plug Launched
Event	19	Pump Displacement	11/5/2018	20:55:49	USER	8.40	10.00	1700.00	91.40	3 lbs BE-6, 1 gal MMCR, 2% KCl
Event	20	Slow Rate	11/5/2018	21:05:06	USER	8.27	4.00	1121.00	81.40	Slow Rate 10 bbls to calculated displacement
Event	21	Bump Plug	11/5/2018	21:07:02	USER	8.26	4.00	1250.00	91.40	Plug Bumped at 1250 psi, Brought up to 2057 psi
Event	22	Check Floats	11/5/2018	21:07:47	USER	8.28	0.00	2057.00	91.50	Floats held – 1 bbl back to the truck
Event	23	End Job	11/5/2018	21:09:00	USER	8.23	0.00	1.00	0.00	Good returns throughout job. Pipe was reciprocated during job.
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	11/5/2018	21:15:00	USER					All HES Present
Event	25	Pre-Convoy Safety Meeting	11/5/2018	22:15:00	USER					All HES Present
Event	26	Crew Leave Location	11/5/2018	22:30:00	USER					Thanks For Using Halliburton Cement. Andrew Brennecke And Crew.

3.0 Attachments

3.1 5 MILE RANCH SG 533-26-Custom Results.png



## Job Information

<b>Request/Slurry</b>	2511883/1	<b>Rig Name</b>	H&P 271	<b>Date</b>	30/OCT/2018
<b>Submitted By</b>	Lukas Van Zyl	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	Terra Energy Partners	<b>Location</b>	Garfield	<b>Well</b>	5 Mile Ranch #SG 533-26

## Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	5934 ft	<b>BHST</b>	76°C / 169°F
<b>Hole Size</b>	8.75 in	<b>Depth TVD</b>	5213 ft	<b>BHCT</b>	45°C / 113°F
<b>Pressure</b>	3028 psi				

## Drilling Fluid Information

<b>Mud Supplier Name</b>	Baroid	<b>Mud Trade Name</b>	BARADRIL-N	<b>Density</b>	9.9 lbm/gal
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## Cement Information - Tail Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>	
						Slurry Density	12.5 lbm/gal
						Slurry Yield	1.962 ft3/sack
						Water Requirement	9.434 gal/sack
						Total Mix Fluid	9.434 gal/sack
						Water Source	Fresh Water
						Water Chloride	

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**Operation Test Results Request ID 2511883/1**

**Thickening Time - ON-OFF-ON**

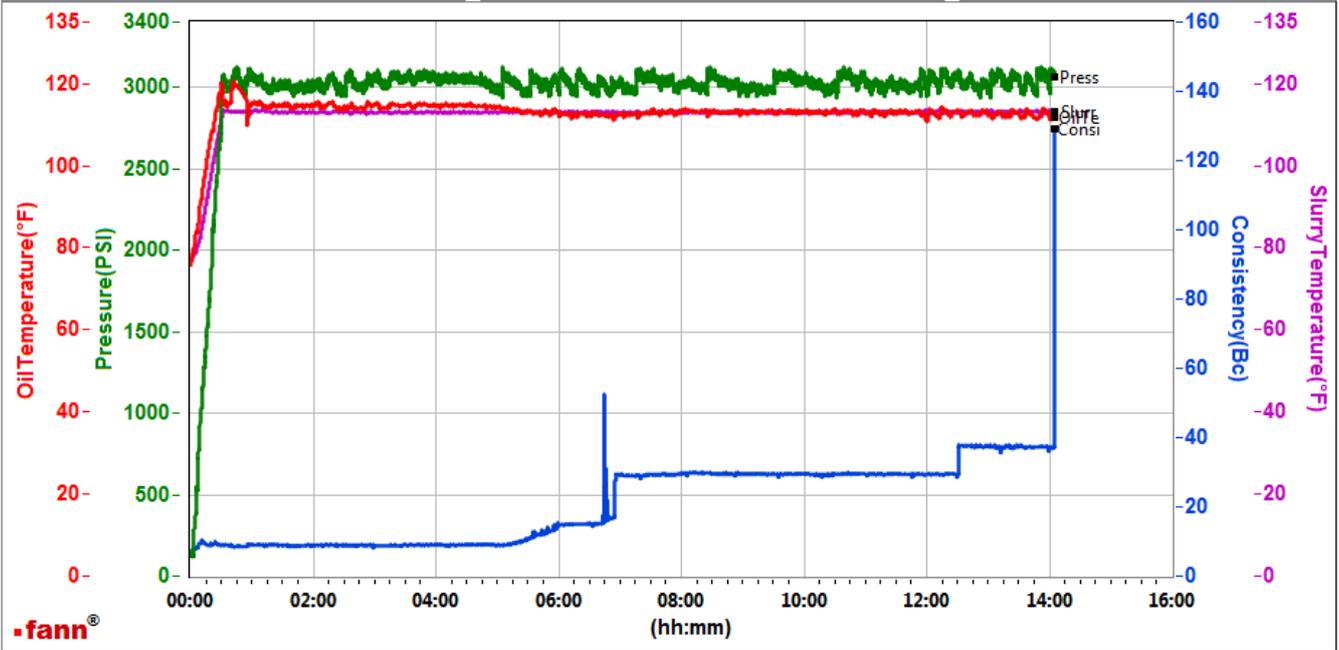
**03/NOV/2018**

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
113	3028	30	8:31	14:04	14:04	14:04	7	40	15	9

Total SKS 1055  
 CS2389, Trailer 8658, 400 sks  
 CS2390, Trailer 8677, 400 sks  
 CS2391, 92, Trailer 4053, 255 sks  
 Deflection: 9 - 9

**GRAND JUNCTION**

Fields	Values	Fields	Values	Events	Results
Project Name	2511883-1 H&P 271 Terr	Rig	H&P 271	30 BC	8:31
SW Version	1.0	Casing/Liner Size	4.5 INCH	50 BC	14:04
Test ID	35941438 - TT	Job Type	PRODUCTION CASING	70 BC	14:04
Request ID	2511883-1	Cement Weight	GCC TYPE I-II	100 BC	14:04
Tested by	CT	Comments	Standard		
Customer	TERRA ENERGY PARTN	Date Time	11/2/2018 10:59:37.569		
Well No	SG 533-26	Temp. Units	degF		



Data File: C:\Users\H185329\Desktop\000 Graphs\GJ2511883-1 TERRA BULK PRODUCTION PRIMARY.tdms  
 Comments: Standard

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