

HALLIBURTON

iCem® Service

BP AMERICA PROD CO-SORAC/NAG EBIZ

For: Alan Johnson

Date: Wednesday, September 06, 2017

E. Sauls Creek 26 #1-2, Surface

E. Sauls Creek 26 #1-2

BP, E. Sauls Creek 26 #1-2, Surface

Job Date: Wednesday, September 06, 2017

Sincerely,

Jacob Ayers

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The Road to Excellence Starts with Safety

Sold To #: 358135	Ship To #: 3797502	Quote #: 0022339390	Sales Order #: 0904281248
Customer: BP AMERICA PROD CO - NAG-EBUS		Customer Rep:	
Well Name: EAST SAULS CREEK 26	Well #: 1-2	API/UWI #: 05-067-10000-00	
Field: IGNACIO-BLANCO	City (SAP): BAYFIELD	County/Parish: LA PLATA	State: COLORADO
Legal Description: SW NE-27-35N-6W-1552FNL-1623FEL			
Contractor: AZTEC WELL SERVICING CO		Rig/Platform Name/Num: AZTEC 507	
Job BOM: 7521 7521			
Well Type: COAL DE-GAS			
Sales Person: HALAMERICA\HB41307		Srv Supervisor:	

Job

Formation Name	
Formation Depth (MD)	Top
Form Type	BHST
Job depth MD	610ft
Water Depth	
Perforation Depth (MD)	From

Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		13.375	12.615	54.5	STC	J-55	0	627		
Open Hole Section			16				0	622		

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	13.375			622	Top Plug	13.375		HES
Float Shoe	13.375				Bottom Plug	13.375		HES
Float Collar	13.375				SSR plug set	13.375		HES
Insert Float	13.375				Plug Container	13.375		HES
Stage Tool	13.375				Centralizers	13.375		HES

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water Spacer	Fresh Water Spacer	20	bbl	8.33				

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
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2	Primary Cement	Premium Cement	755	sack	15.8	1.174		5	5.13
0.1250 lbm		POLY-E-FLAKE (101216940)							
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
5.13 Gal		FRESH WATER							
94 lbm		CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	90	bbl	8.33				
Cement Left In Pipe		Amount	40 ft				Reason		Shoe Joint
Mix Water:		pH 6.5	Mix Water Chloride:		<291 ppm		Mix Water Temperature:		75°F
sulfates:		>400	Plug Bumped?		Yes		Bump Pressure:		250 psi
Cement Returns:		65 bbl					Floats Held?		Yes
Comment									

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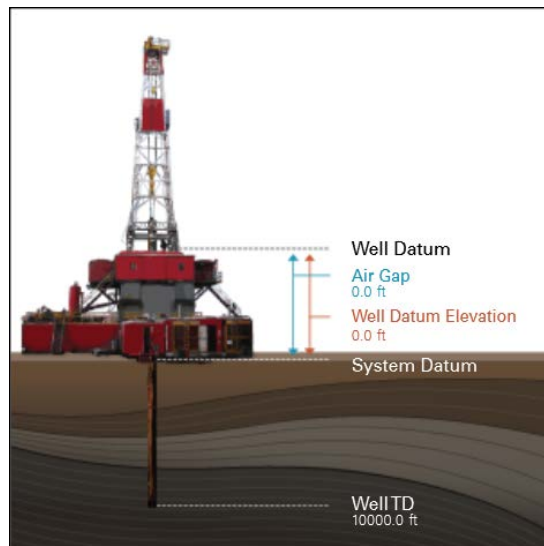
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1.0 Job Design

1.1 Overview

Job Type	Primary Cement Job
Injection Path	Casing/Conventional
Foam Job	No

Well Snapshot



Simulations Performed

1.2 Pump Schedule

Description	Stage No.	Density (ppg)	Rate (bbl/min)	Yield (ft³/sack)	Water Req. (gal/sack)	Volume (bbl)	Bulk Cement (sacks)	Duration (min)
Spud Mud	1	8.50	5.00			0.00		0.00
Fresh Water	2	8.33	4.00			10.00		2.50
Surface Cement 2334018/1	3	15.80	4.00	1.1745	5.156	157.93	755.00	39.48
Top Plug/Start Displacement								
Fresh Water	4-1	8.33	4.00			70.00		17.50
Fresh Water	4-2	8.33	2.00			17.98		8.99
Total:						255.91		68.47

*Pump schedule may include additional rows for displacement if "Automatic Rate Adjustment" was enabled and ECDs approached the fracture gradient.

2.0 Real-Time Job Summary

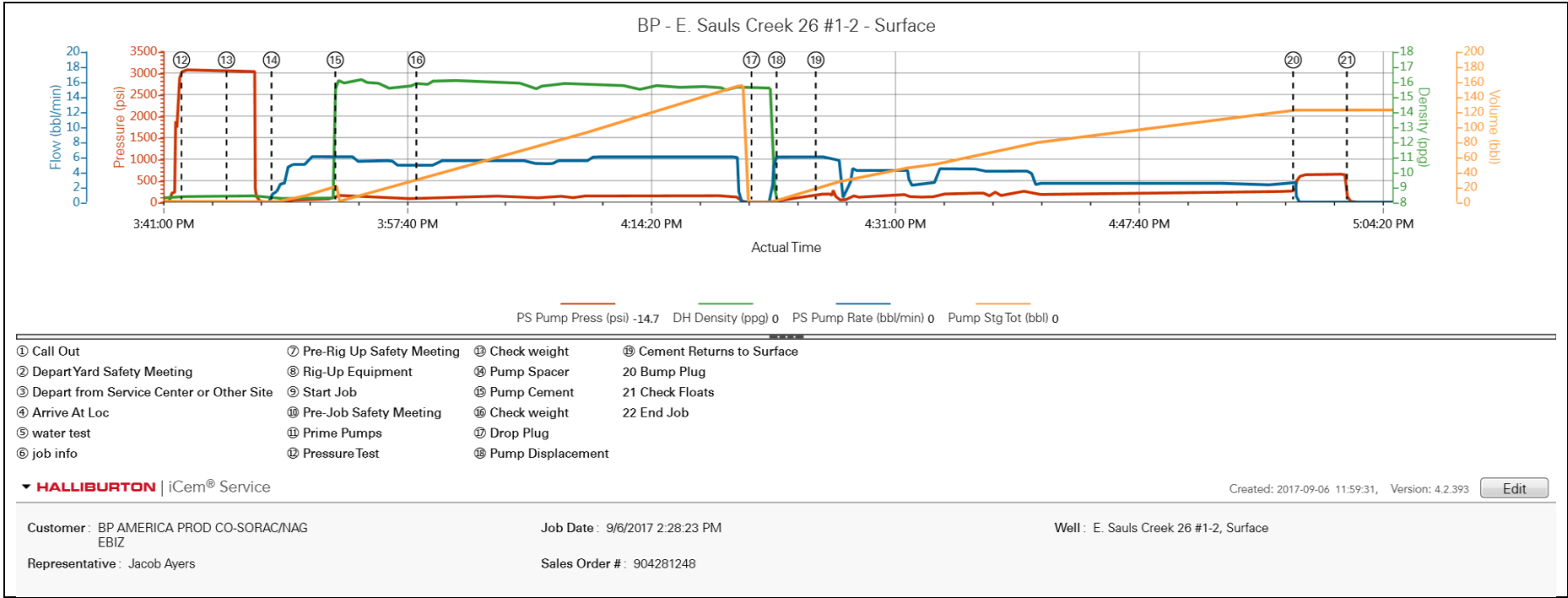
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	PS Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	9/6/2017	07:00:00	USER					Job called out @ 0500
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	9/6/2017	08:15:00	USER					Depart yard meeting held with crew
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/6/2017	08:30:00	USER					Departed from yard @ 830
Event	4	Arrive At Loc	Arrive At Loc	9/6/2017	10:00:00	USER					Arrived on location @ 1000
Event	5	Other	water test	9/6/2017	10:15:02	USER					PH- 6.5 CHLORIDES-<291 SULFATES >400 TEMP-75
Event	6	Other	job info	9/6/2017	12:06:31	USER					OH- 17.5" 622' casing 13 3/8 " 54.5# 627' SJ- 44 ' mud wt. 9.1 #
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/6/2017	14:15:00	USER					Pre rig up meeting with crew
Event	8	Rig-Up Equipment	Rig-Up Equipment	9/6/2017	14:20:00	USER					Rigged up Halliburton a 2" iron and water hoses
Event	9	Start Job	Start Job	9/6/2017	15:02:51	COM5					
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/6/2017	15:14:00	USER	-10.70	8.33	0.00	0.0	Pre job safety meeting with all affected personnel on location
Event	11	Prime Pumps	Prime Pumps	9/6/2017	15:39:40	USER	0.30	8.26	1.30	0.5	Prime pumps
Event	12	Pressure Test	Pressure Test	9/6/2017	15:42:24	USER	3062.30	8.37	0.00	1.8	Test pumps and lines to 3000psi
Event	13	Check Weight	Check weight	9/6/2017	15:45:28	COM5					
Event	14	Pump Spacer	Pump Spacer	9/6/2017	15:48:32	USER	-18.70	8.27	1.20	0.3	Pump 20 bbl fresh water spacer

Event	15	Pump Cement	Pump Cement	9/6/2017	15:52:54	USER	163.30	16.20	6.00	0.6	755 sks@15.8# 1.18yield 5.24 wrq = 158.6 bbl cmt 94 bbl mix water
Event	16	Check Weight	Check weight	9/6/2017	15:58:27	COM5	87.30	15.84	4.90	30.6	
Event	17	Drop Plug	Drop Plug	9/6/2017	16:21:21	USER	-7.70	15.64	0.00	0.0	Drop Halliburton top plug
Event	18	Pump Displacement	Pump Displacement	9/6/2017	16:23:04	USER	43.30	7.82	6.00	2.8	Calculated 90 bbl to land plug
Event	19	Cement Returns to Surface	Cement Returns to Surface	9/6/2017	16:25:44	USER	188.30	7.82	6.00	19.0	Calculated 75 bbl of cmt back. 65 bbl of good cmt actually returned to surface
Event	20	Bump Plug	Bump Plug	9/6/2017	16:58:22	USER	382.30	7.96	2.60	122.2	Calculated 230 psi to land plug. plug landed @ 250psi took it 400 psi over to 650 psi calculated 180 psi to lift
Event	21	Check Floats	Check Floats	9/6/2017	17:02:02	USER	36.30	7.94	0.00	122.3	Check floats, floats held 3/4 bbl back shut in head
Event	22	End Job	End Job	9/6/2017	17:06:01	COM5					

3.0 Attachments

3.1 BP, E. Sauls Creek 26 #1-2, Surface -Custom Results.png



3.2 BP, E. Sauls Creek 26 #1-2, Surface -Custom Results (1).png

