



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED #24D-26-496 05-045-24441
S:26 T:4S R:96W Garfield CO

CallSheet #: 85541
Proposal #: 66482



TWO-STAGE/MULTI-STAGE CEMENT Post Job Report

Attention: Mr. Cole Walton | (720) 880-6325 | cwalton@caerusoilandgas.com

Caerus Operating LLC

1001 17TH STREET | DENVER, CO 80202

Dear Mr. Cole Walton,

Thank you for the opportunity to provide cementing services on this well. American Cementing strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact American Cementing at any time.

Sincerely,

Krystal Schell

Field Engineer I | (719) 992-1830 | krystal.schell@americacementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 657-1157

Job Details & Summary

Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	20	19.5	53	n/a	0	100	0
Open Hole	Outer	n/a	14.75	n/a	n/a	100	2500	25
Open Hole	Outer	n/a	14.75	n/a	n/a	2500	3000	0
Casing	Inner	9.625	8.921	36	n/a	0	3000	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-468		
Field Storage Silo	FSS-469		
Cement Trailer Float	CTF-246	TRH-769	Dragon, Shane
Cement Trailer Float	CTF-555	TRC-059	Richey, Steven
Light Duty Vehicles	LDV-061		Woronovitch, Collin
Light Duty Vehicles	LDV-062		Lancaster, Stephen
Cement Pump Float	CPF-136	TRH-855	Bradbrook, Jeremy

Timing

Event	Date/Time
ERTS	00/11/2023 10:00
Call Out	2/13/2023 05:00
Depart Facility	2/13/2023 07:05
On Location	2/13/2023 09:15
Rig Up Iron	2/13/2023 09:20
Job Started	2/13/2023 17:48
Job Completed	2/14/2023 04:11
Rig Down Iron	2/14/2023 04:15
Depart Location	2/14/2023 05:17

General Job Information

Metrics	Value
Well Fluid Density	9.5 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1174 bbls
Rig Circulation Time	1 hours
Calculated Displacement	228/69 bbls
Actual Displacement	228/69 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	34 bbls

Job Details

Metrics	Value
Flare Prior to Job	No
Flare Prior to Job	0 units
Flare During Job	No
Flare During Job	0 units
Flare at End of Job	No
Flare at End of Job	0 units
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9.5 lb/gal
Well Fluid Density Out of Well	9.5 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	300 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	0 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

Circulation

Lost Circulation Experienced
No

Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Designed Top (ft)
1	Water	Flush	8.34			42.00		40.00	686
2	Stage-1 Lead	Lead	12.00	2.52	14.80		524.00	235.42	950
3	Stage-1 Tail	Tail	13.00	2.06	11.21		175.00	64.08	2500
4	Water	DisplacementFinal	8.34			42.00		229.00	0
1	Water	Flush	8.34			42.00		40.00	0
2	Stage-2 Primary	Primary	12.00	2.55	14.95		346.00	157.14	0
3	Water	DisplacementFinal	8.34			42.00		74.00	0

Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Lead	Stage-1 Lead	ASTM TYPE I/II	Cement	100.00	%
2	Lead	Stage-1 Lead	A-10	Accelerator	5.00	%BWOB
2	Lead	Stage-1 Lead	A-2	Accelerator	3.00	lb/sk
2	Lead	Stage-1 Lead	FP-24	Defoamer	0.30	%BWOB
2	Lead	Stage-1 Lead	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
2	Lead	Stage-1 Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Lead	Stage-1 Lead	R-7C	Retarder	0.30	%BWOB
2	Lead	Stage-1 Lead	STATIC FREE	Other	0.01	lb/sk
3	Tail	Stage-1 Tail	ASTM TYPE I/II	Cement	100.00	%
3	Tail	Stage-1 Tail	A-10	Accelerator	5.00	%BWOB
3	Tail	Stage-1 Tail	A-2	Accelerator	2.00	lb/sk
3	Tail	Stage-1 Tail	A-5	Accelerator	5.00	%BWOW
3	Tail	Stage-1 Tail	FP-24	Defoamer	0.30	%BWOB
3	Tail	Stage-1 Tail	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
3	Tail	Stage-1 Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
3	Tail	Stage-1 Tail	STATIC FREE	Other	0.01	lb/sk
2	Primary	Stage-2 Primary	ASTM TYPE I/II	Cement	100.00	%
2	Primary	Stage-2 Primary	A-10	Accelerator	5.00	%BWOB
2	Primary	Stage-2 Primary	A-2	Accelerator	3.00	lb/sk
2	Primary	Stage-2 Primary	A-7P	Accelerator	2.00	lb/sk

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Primary	Stage-2 Primary	FP-24	Defoamer	0.30	%BWOB
2	Primary	Stage-2 Primary	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Primary	Stage-2 Primary	STATIC FREE	Other	0.01	lb/sk

Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Job Call Out	2/13/2023	05:00					Job called out. On location time 10:00
2	Depart Rifle Yard	2/13/2023	07:05					Leave yard
3	On Location	2/13/2023	09:15					Arrive on location
4	Rig up Iron	2/13/2023	09:20					Rig up iron
5	Finish riggin up iron	2/13/2023	10:50					Done rigging up iron, rig running casing
6	Safety Meeting	2/13/2023	17:48					Held pre job safety meeting on rig floor
7	Press test line	2/13/2023	18:16	8.3	2	5	3400	Press test lines
8	Pump water spacer	2/13/2023	18:26	8.3	3.5	15	161	Pump water spacer
9	Start lead cement	2/13/2023	18:31	12	5	5	392	Start Stage 1 Lead
10	Pump lead cement	2/13/2023	18:41	12	4	50	350	Pump lead cement 50 bbls (no returns)
11	Pump lead cement	2/13/2023	18:51	12	5	100	334	Pump lead cement 100 bbls
12	Pump lead cement	2/13/2023	19:01	12	5	150	330	Pump lead cement 150 bbls (no returns)
13	Pump lead cement	2/13/2023	19:10	12	5	200	332	Pump lead cement 200 bbls
14	End lead cement	2/13/2023	19:18	12	5	235	359	End lead cement 235 bbls (no returns)
15	Start Tail Cement	2/13/2023	19:19	13	5	5	362	Start Stage 1 Tail
16	Pump tail cement	2/13/2023	19:27	13	5	50	308	Pump tail cement 50 bbls (no returns)
17	End tail cement	2/13/2023	19:30	13	5	64		Pump tail cement 64 bbls
18	Drop top plug	2/13/2023	19:35					Drop top plug
19	Start displacing	2/13/2023	19:36	8.34	5	5	230	Displacing 5 bbls pumped
20	Displacing	2/13/2023	19:44	8.34	10	50	391	50 bbls pumped (no returns)
21	Displacing	2/13/2023	19:46	8.34	4	60	163	60 bbls pumped
22	Displacing	2/13/2023	19:51	8.34	7	82	490	82 bbls pumped (no returns)
23	Displacing	2/13/2023	19:53	8.34	7	100	496	Displacing 100 bbls pumped
24	Displacing	2/13/2023	20:00	8.34	7	150	660	Displacing 150 bbls pumped/
25	Displacing	2/13/2023	20:05	8.34	7	180	790	Displacing 180 bbls pumped ,(got returns back @ 171 bbls pumped)
26	Displacing	2/13/2023	20:08	8.34	7	200	868	Displacing 200 bbls pumped
27	Bump plug	2/13/2023	20:12	8.34	4	228	1143	Slowed to 4 bpm and lost returns @ 211 bbls pumped, landed plug @ 228 bbls pumped, FCP 700, bump pressure 1143
28	Bleed Press check floats	2/13/2023	20:14					Bleed press, floats are holding 1 bbl back
29	Other	2/13/2023	20:15					Swap line to parasite to pump sugar water
29	Pump 10 bbls sugar water	2/13/2023	20:19	8.34	2	7.7	573	Broke over at 573 psi 7.5 bbls pumped
30	End sugar water	2/13/2023	20:24	8.34	2	10	154	10 bbls pumped. Shut Down
31	Rig drop bomb	2/13/2023	20:26					Drop Bomb to open DV Tool

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
32	Start pumping	2/13/2023	20:34	8.34	2	1	554	Opening DV tool. Open @ 544 psi
33	End pumping	2/13/2023	20:36	8.34	4	20	245	End pumping 20 bbls pumped
34	Rig Circulating	2/13/2023	20:39					Rig Circulating
35	Pump Cement	2/13/2023	22:26	12	5	10	310	10 bbls pumped (full returns)
36	Pump Cement	2/13/2023	22:36	12	5	50	333	50 bbls pumped
37	Pump Cement	2/13/2023	22:46	12	5	100	317	100 bbls pumped
38	Pump Cement	2/13/2023	22:55	12	5	150	345	150 bbs pumped
39	Pump Cement	2/13/2023	22:58	12	5	157	351	157 bbls pumped shut down
40	Drop Plug	2/13/2023	23:01					Drop Plug
41	Pump Displacement	2/13/2023	23:03	8.34	5	10	321	Start displacing stage 2, (got returns back @ 5.6 bbls displaced)
42	Pump Displacement	2/13/2023	00:00	8.34	5	30	335	30 bbls displaced
43	Pump Displacement	2/13/2023	23:12	8.34	5	50	268	50 bbls displaced
44	Land Plug	2/13/2023	23:16	8.34	4	70	1975	Land plug FCP 304, bumped to 1975 psi (22 bbls cement to surface)
45	Check Floats	2/13/2023	23:20					Check floats, got .5 bbl back, floats held
46	Start Topout	2/14/2023	03:50	15.8	3	10	160	Start top out
47	Pump topout	2/14/2023	04:02	15.8	2	30	127	Cement to surface @ 30 bbls pumped
48	End Topout	2/14/2023	04:11	15.8		34		Total bbls pumped 34, 158 sks shutdown, end job
49	Rig Down Iron	2/14/2023	04:15					Rig down iron and hoses
50	Depart Location	2/14/2023	05:17					Depart location for RCO AC HQ

Pump Diagrams

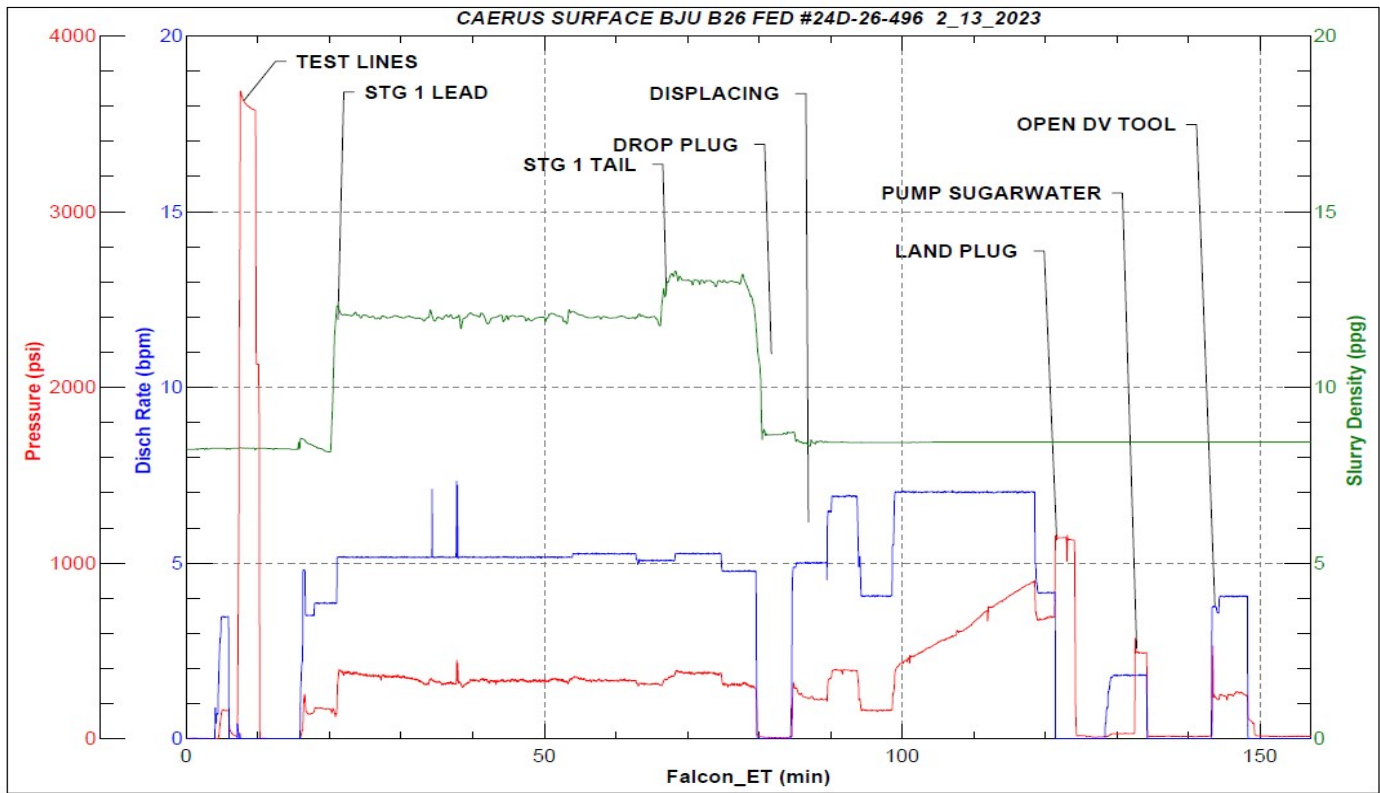


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Job Number: 85541

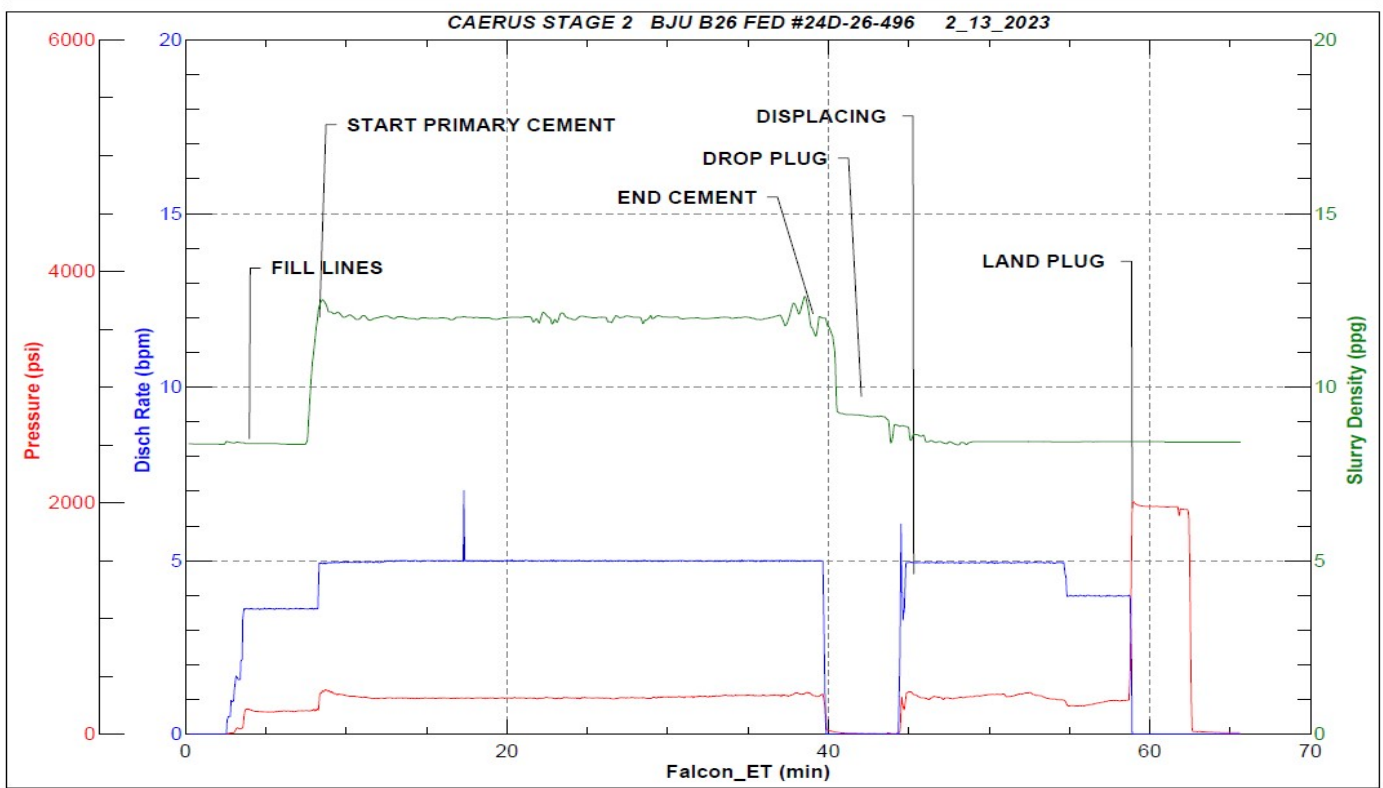
Customer: CAERUS

Well Name: BJU B26 FED 24D-26-496



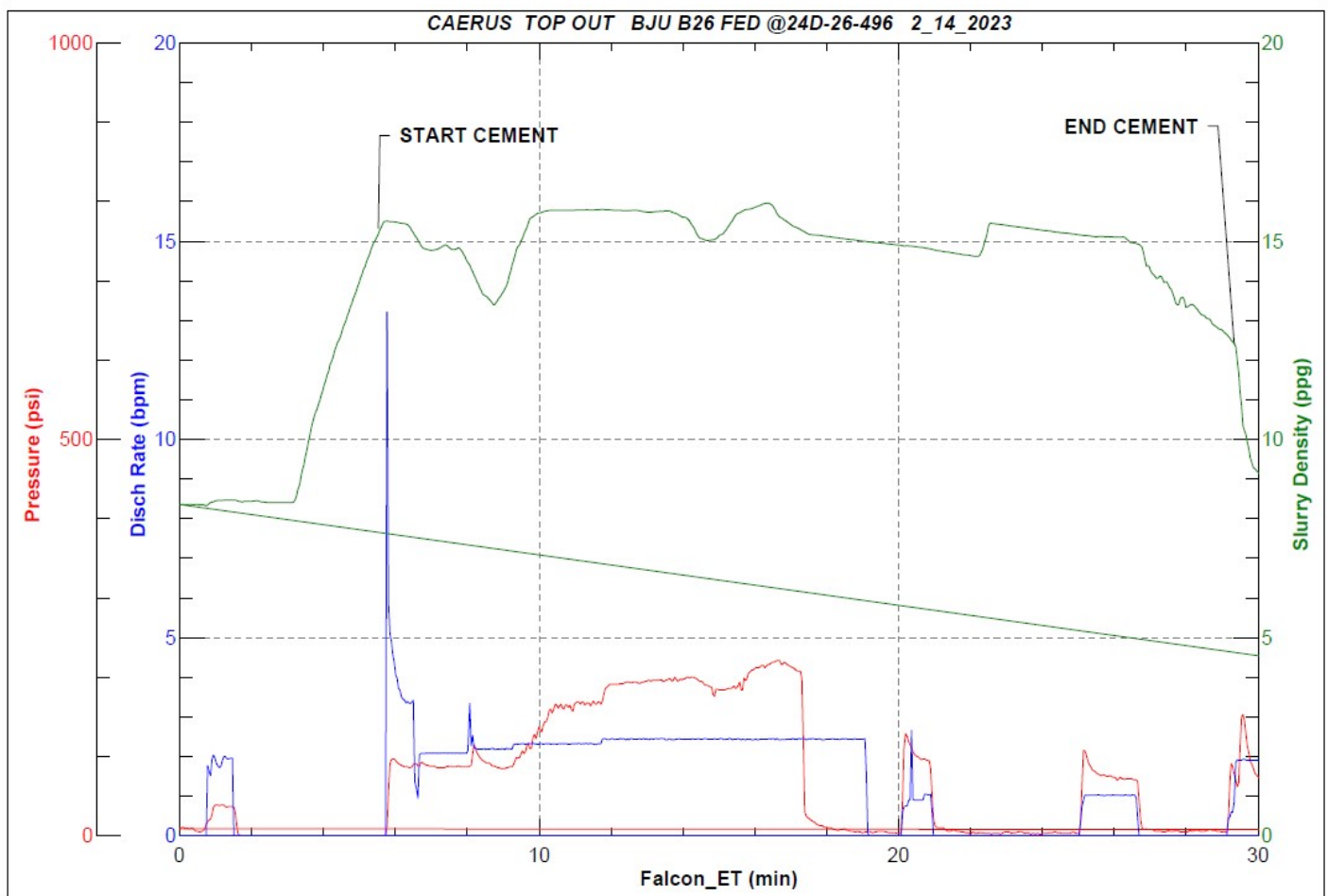
BJ Services

Job Start: Monday, February 13, 2023





JobMaster Program Version 5.01C1
Job Number: 85541
Customer: CAERUS
Well Name: BJU B26 FED #24D-26-496



BJ Services

Job Start: Tuesday, February 14, 2023