



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED 24B-26-496 05-045-24457
S:26 T:4S R:96W Garfield CO

CallSheet #: 85305
Proposal #: 66071



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	2988	0
Casing	Inner	9.625	8.921	36	n/a	0	2988	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-469		
Field Storage Silo	FSS-468		
Cement Trailer Float	CTF-108	TRC-244	Bonin, Matthew
Cement Pump Float	CPF-052	TRH-957	Brady, Shawn
Light Duty Vehicles	LDV-082		Kelsey, John

Timing

Event	Date/Time
ERTS	00/08/2023 17:00
Call Out	1/8/2023 10:00
Depart Facility	1/8/2023 13:15
On Location	1/8/2023 15:15
Rig Up Iron	1/8/2023 15:45
Job Started	1/8/2023 20:58
Job Completed	1/9/2023 04:00
Rig Down Iron	1/9/2023 04:30
Depart Location	1/9/2023 05:10

General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	500 bbls
Rig Circulation Time	1 hours
Calculated Displacement	228/69.4 bbls
Actual Displacement	228/69.4 bbls
Total Spacer to Surface	20/20 bbls
Total CMT to Surface	53/61 bbls
Well Topped Out	Yes
Top Out Volume	4 bbls

Job Details

Metrics	Value
Flare Prior to Job	No
Flare Prior to Job	- units
Flare During Job	No
Flare During Job	- units
Flare at End of Job	No
Flare at End of Job	- units
Well Full Prior to Job	YES
Well Fluid Density Into Well	8.6 lb/gal
Well Fluid Density Out of Well	8.6 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	60 °F	50-80 °F
pH Level	5	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	400 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
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

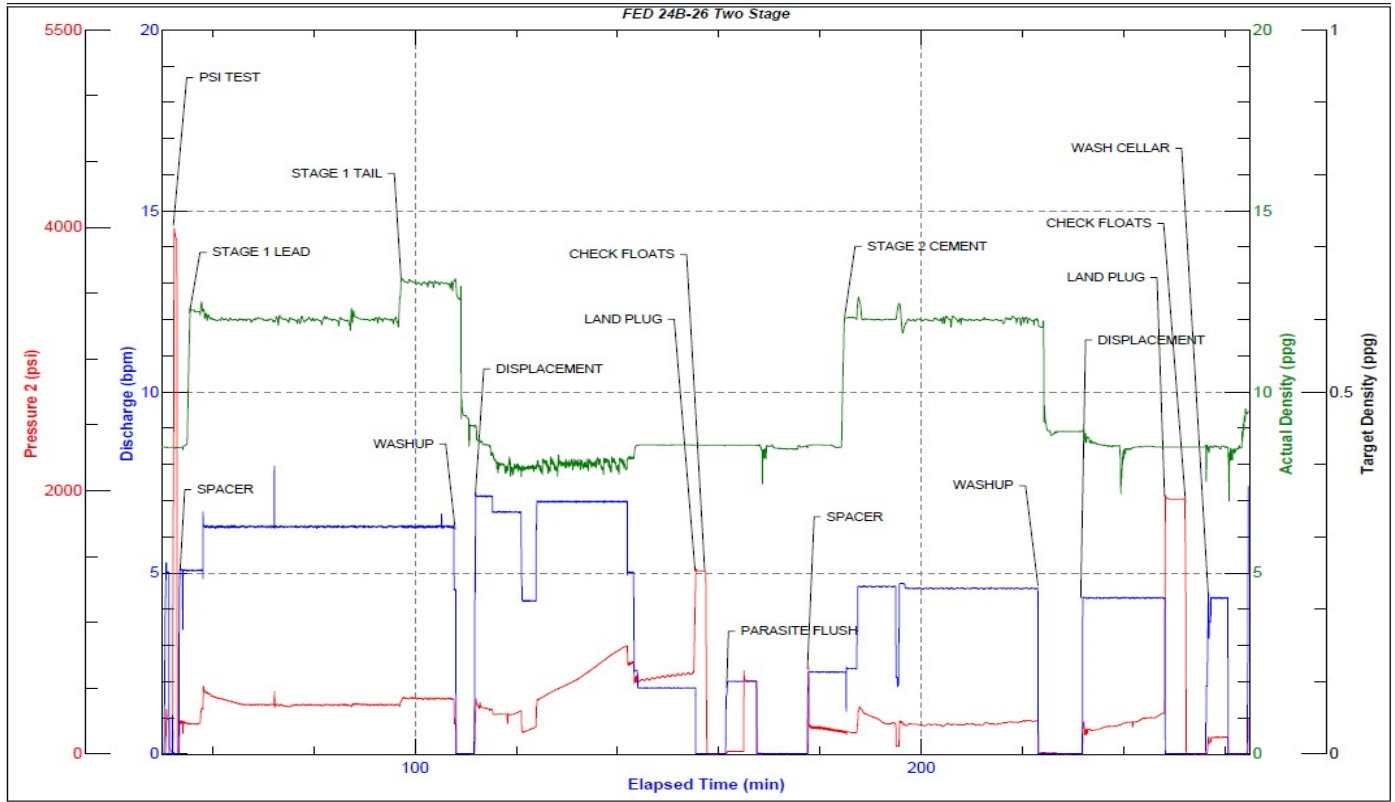
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	1/8/2023	10:00					CREW CALLED TO PREPARE FOR A 2-STAGE SURFACE JOB. RTS IS 16:30
2	SAFETY MEETING	1/8/2023	13:00					JOURNEY MANAGEMENT MEETING
3	DEPART YARD	1/8/2023	13:15					CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	1/8/2023	15:15					ARRIVE ON LOCATION, VERIFY ALL PROPER EQUIPMENT, PRODUCTS AND JOB PROCEDURES WITH CUSTOMER
5	SAFETY MEETING	1/8/2023	15:25					RIG UP MEETING
6	SPOT UNITS	1/8/2023	15:35					SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	1/8/2023	15:45					RIG UP ALL EQUIPMENT
8	STANDBY	1/8/2023	17:00					CREW ON STANDBY WHILE RIG RUNS CASING AND CIRCULATES WELL GOOD RETURNS
9	SAFETY MEETING	1/8/2023	20:30					PRE JOB MEETING WITH ALL CREWS
10	LOAD LINES	1/8/2023	20:58	8.34	5	5	330	LOAD LINES WITH 3 BBLS FRESH GOOD RETURNS
11	PRESSURE TEST	1/8/2023	20:59	8.34	1	1	4075	PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	SPACER	1/8/2023	21:00	8.34	5	20	300	20 BBLS FRESH SPACER
13	LEAD CEMENT	1/8/2023	21:05	12	6.3	10	500	235 BBLS Lead CMT – 12 #, 2.52 Y, 14.8 MW, 524 sks, 10 BBLS AWAY
14	LEAD CEMENT	1/8/2023	21:13	12	6.3	40	380	50 BBLS AWAY
15	LEAD CEMENT	1/8/2023	21:21	12	6.3	50	386	100 BBLS AWAY
16	LEAD CEMENT	1/8/2023	21:29	12	6.3	50	393	150 BBLS AWAY
17	LEAD CEMENT	1/8/2023	21:37	12	6.3	50	401	200 BBLS AWAY
18	LEAD CEMENT	1/8/2023	21:44	12	6.3	35	420	235 BBLS AWAY SWAP TO TAIL CEMENT
19	TAIL CEMENT	1/8/2023	21:45	12.5	6.3	10	428	64 BBLS Tail CMT – 12.5 #, 2.06 Y, 11.2 MW, 175 sks, 10 BBLS AWAY
20	TAIL CEMENT	1/8/2023	21:55	12.5	6.3	54	420	64 BBLS AWAY SHUTDOWN FOR WASHUP AND LOAD PLUG
21	WASHUP	1/8/2023	21:56					WASHUP PUMP MIX SYSTEM
22	DISPLACEMENT	1/8/2023	21:59	8.34	7	10	384	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY
23	DISPLACEMENT	1/8/2023	22:06	8.34	6.7	40	310	50 BBLS AWAY
24	DISPLACEMENT	1/8/2023	22:15	8.34	7	50	495	100 BBLS AWAY
25	DISPLACEMENT	1/8/2023	22:22	8.34	7	50	673	150 BBLS AWAY
26	DISPLACEMENT	1/8/2023	22:31	8.34	1.8	50	555	200 BBLS AWAY SLOWED RATE DUE TO CELLAR PUMP ISSUES
27	LAND PLUG	1/8/2023	22:42	8.34	1.8	28	685	228 BBLS AWAY LAND PLUG UP TO 1400 PSI
28	CHECK FLOATS	1/8/2023	22:44					CHECK FLOATS, FLOATS HELD WITH .5 BBLS BACK
29	PARASITE	1/8/2023	22:48	8.34	2	12	639	PUMP 12 BBLS SUGAR WATER DOWN PARASITE LINE BROKE OVER AT 7 BBLS AWAY WITH 639 PSI
30	DROP DV PLUG	1/8/2023	22:56					DROP DV PLUG AND WAIT 10 MINS
31	OPEN DV	1/8/2023	23:05	8.34	1	1	250	OPEN DV TOOL
32	Begin Stage 2	1/8/2023	23:06					BEGIN PUMPING STAGE 2
33	SPACER	1/8/2023	23:07	8.34	2	20	190	SPACER 20 BBLS FRESH WATER GOOD RETURNS

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
34	CEMENT	1/8/2023	23:14	12	4.5	10	213	157 BBLS Primary CMT – 12 #, 2.55 Y, 14.9 MW, 346 sks, 10 BBLS AWAY
35	CEMENT	1/8/2023	23:26	12	4.5	40	220	50 BBLS AWAY
36	CEMENT	1/8/2023	23:36	12	4.5	50	228	100 BBLS AWAY
37	CEMENT	1/8/2023	23:47	12	4.5	57	252	157 BBLS AWAY
38	WASHUP	1/8/2023	23:50					WASHUP PUMP MIX SYSTEM AND SWAP OUT CELLAR PUMP POWER UNIT
39	DISPLACEMENT	1/8/2023	23:58	8.34	4.3	10	232	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY
40	DISPLACEMENT	1/9/2023	00:05	8.34	4.3	20	220	30 BBLS AWAY
41	LAND PLUG	1/9/2023	00:14	8.34	4.3	39.4	308	69.4 BBLS AWAY LAND PLUG UP TO 1950 PSI
42	CHECK FLOATS	1/9/2023	00:15					CHECK FLOATS, FLOATS HELD WITH .5 BBLS BACK WASH OUT CELLAR AND PICKLE PUMP AND LINES, ESTIMATED 53 BBLS STAGE ONE CEMENT AND 61 BBLS STAGE 2 CEMENT TO SURFACE
43	STANDBY	1/9/2023	00:20					CREW ON STANDBY FOR TOP OUT JOB WHILE RIG NIPPLES UP
44	TOPOUT CEMENT	1/9/2023	03:50	15.8	3.5	7	100	PUMP 7 BBLS TOPOUT CEMENT AT 15.8# 4 BBLS IN CASING AND 3 TO SURFACE FOR A TOTAL OF 34 SKS
45	WASHUP	1/9/2023	04:00					WASH PUMP AND LINES AND PICKLE
46	SAFETY MEETING	1/9/2023	04:15					RIG DOWN MEETING
47	RIG DOWN	1/9/2023	04:30					RIG DOWN ALL EQUIPMENT
48	SAFETY MEETING	1/9/2023	05:00					JOURNEY MANAGEMENT MEETING
49	DEPART LOCATION	1/9/2023	05:10					CREW DEPARTS LOCATION

Pump Diagrams



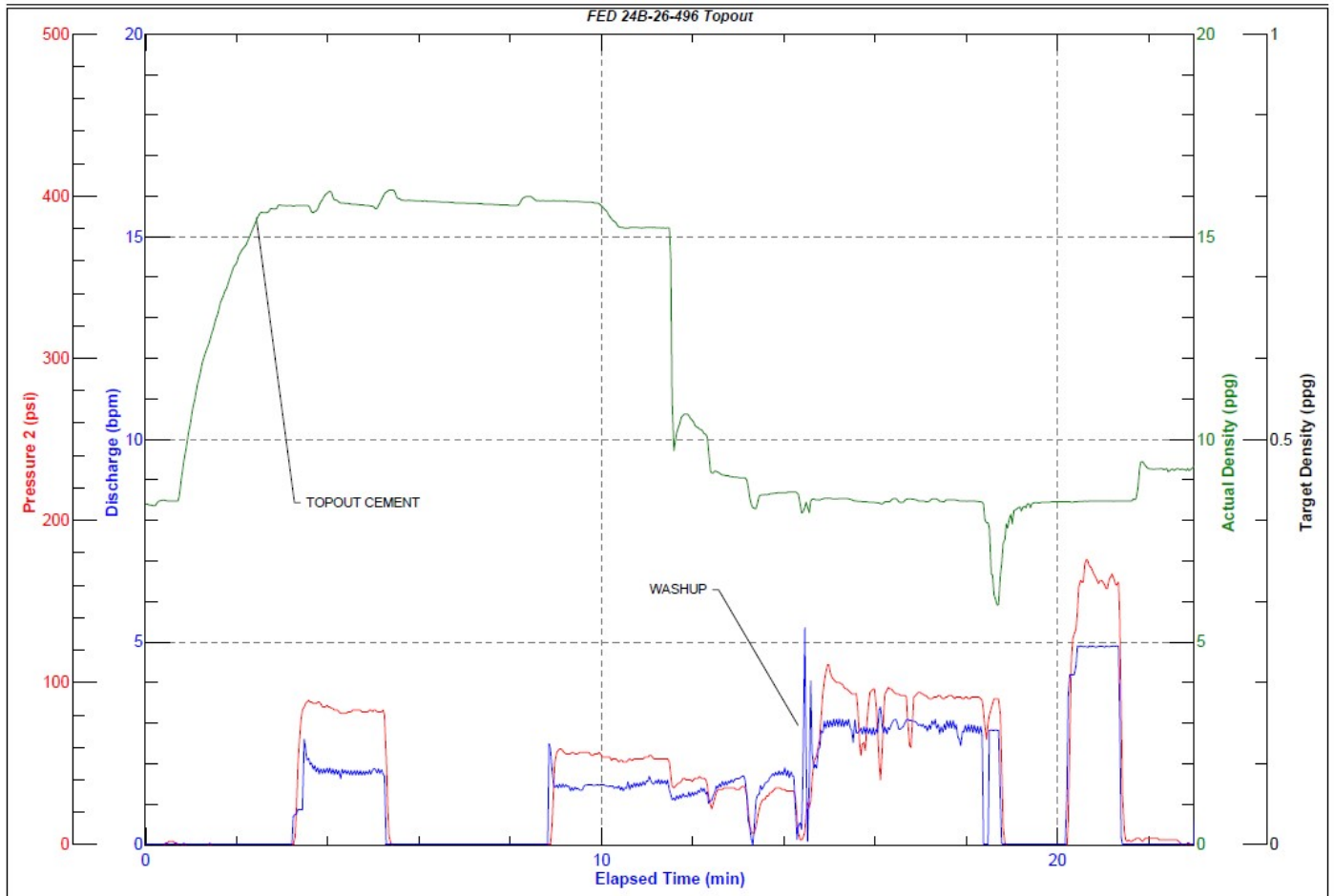
JobMaster Program Version 5.01C1
Job Number: 85305
Customer: Caerus
Well Name: FED 24B-26



Job Start: Sunday, January 08, 2023



JobMaster Program Version 5.01C1
Job Number: 85305
Customer: Caerus
Well Name: FED 24B-26



Job Start: Monday, January 09, 2023