



# Laramie Energy

## End of Well Cement Report

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Nichols 0994-24-15E 05-077-10392

S:24 T:9S R:94W Mesa CO

Quote #: 08374/08375

| Execution #: 05164/05392

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# Laramie Energy

Attention: Mr. Aaron Duncan | (303) 339-4913 | [aduncan@laramie-energy.com](mailto:aduncan@laramie-energy.com)

Laramie Energy | 1401 17th St, Suite 1400 | Denver, CO 80202

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Dear Mr. Duncan,

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

Sincerely,

Gage Putnam  
Field Engineer I | (307) 887-4243 | [Gage.Putnam@BJServices.com](mailto:Gage.Putnam@BJServices.com)

Field Office 28730 US-6, Rifle, CO 81650  
Phone: (970) 632-2412

Sales Office 999 18th St. Suite 1200 Denver, CO 80202  
Phone: (281) 408-2361

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# Cementing Treatment



<b>Start Date</b>	3/31/2018	<b>Well</b>	Nichols 0994-24-15E
<b>End Date</b>	3/31/2018	<b>County</b>	MESA
<b>Client</b>	LARAMIE ENERGY	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Roger Foster	<b>API</b>	05-077-10392
<b>Service Supervisor</b>	Paul Linn III	<b>Formation</b>	-
<b>Field Ticket No.</b>	Surface	<b>Rig</b>	H&P 290
<b>District</b>	Rifle, CO	<b>Type of Job</b>	Surface

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	Excess(%)	Grade	Thread
Previous Casing	15.25	16.00	65.00	60.00	0.00		
Open Hole	11.00			1,559.00	75.00		
Casing	8.02	8.63	28.00	1,549.00		J-55	ST&C
Open Hole	11.00			1,030.00	48.00		

**Shoe Length (ft):** 45

## HARDWARE

<b>Bottom Plug Used?</b>	Yes	<b>Tool Type</b>	Float Collar
<b>Bottom Plug Provided By</b>	Non BJ	<b>Tool Depth (ft)</b>	1,502.00
<b>Bottom Plug Size</b>	8.625	<b>Max Tubing Pressure - Rated (psi)</b>	-
<b>Top Plug Used?</b>	Yes	<b>Max Tubing Pressure - Operated (psi)</b>	-
<b>Top Plug Provided By</b>	Non BJ	<b>Max Casing Pressure - Rated (psi)</b>	2,470.00
<b>Top Plug Size</b>	8.625	<b>Max Casing Pressure - Operated (psi)</b>	1,976.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	18.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8 rnd.
<b>Landing Collar Depth (ft)</b>	1,549	<b>Top Connection Size</b>	8.625

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

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Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	9.00
Circulation Time (min)	30.00	10 min SGS	14.00
Circulation Rate (bpm)	10.00	30 min SGS	27.00
Circulation Volume (bbls)	300.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.10	Gas Units	0
Mud Density Out (ppg)	-		
PV Mud In	25		
PV Mud Out	-		
YP Mud In	23		
YP Mud Out	-		

## TEMPERATURE

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Ambient Temperature (°F)	64.00	Slurry Cement Temperature (°F)	65.80
Mix Water Temperature (°F)	51.80	Flow Line Temperature (°F)	-

# Cementing Treatment



## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Fresh Water	8.33			0.00				40.00
Lead Slurry	BJCem S100.3.01D	12.00	2.5329	14.89	0.00	1,030.00	170	417.00	74.20
Tail Slurry	BJCem S100.3.01D	12.50	2.2282	12.62	1,030.00	500.00	107	237.00	42.10
Displacement Final	Water	8.33			0.00			0.00	93.00

Fluid Type	Fluid Name	Component	Concentration	UOM
Lead Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Lead Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Lead Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER, SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK

# Cementing Treatment



## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
3/31/2018 4:04 PM	Fresh Water	4.00	40.00	81.00
3/31/2018 4:24 PM	BJCem S100.3.01D	4.00	76.60	216.00
3/31/2018 4:42 PM	BJCem S100.3.01D	5.00	42.50	276.00
3/31/2018 4:54 PM	Water	5.00	95.48	107.00

	Min	Max	Avg
Pressure (psi)	36.00	672.00	216.00
Rate (bpm)	2.00	9.50	5.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	20.00
Calculated Displacement Volume (bbls)	95.48	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	95.00	Amount of Spacer to Surface	40.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	1.50
Bump Plug Pressure (psi)	358.00	Total Volume Pumped (bbls)	247.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

Customer Name LARAMIE District Rifle  
 Well Name NICHOLS 24-15E Supervisor ANDREW LINN  
 Job Type Surface Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	3/31/2018	10:30	CALL OUT					CREW CALL OUT ON LOCATION TIME OF 14:00
2	3/31/2018	11:46	STEACS					PRE CONVOY SAFETY MEETING
3	3/31/2018	13:50	ARRIVE ON LOCATION					CREW WAS ALREADY ON LOCATION
4	3/31/2018	13:52	SITE ASSESSMENT					SITE ASSESSMENT
5	3/31/2018	13:57	SPOT EQUIPMENT					SPOT IN BULK TRUCK
6	3/31/2018	14:06	STEACS					PRE RIG UP SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
7	3/31/2018	14:14	RIG UP					RIG UP ALL GROUND EQUIPMENT
8	3/31/2018	15:30	SAFETY MEETING					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW.
9	3/31/2018	15:42	RIG UP					LOAD PLUGS IN PLUG CONTAINER, STAB PLUG CONTAINER, HOOK LINES TO PLUG CONTAINER
10	3/31/2018	16:00	FILL LINE	8.33	2	5	36	FILL LINES WITH 5 BBLs. FRESH WATER
11	3/31/2018	16:03	DROP PLUG					DROP BOTTOM PLUG
12	3/31/2018	16:04	PRESSURE TEST				4516	PRESSURE TEST TO 4516 PSI.
13	3/31/2018	16:11	SPACER	8.33	4	6	81	FRESH WATER SPACER
14	3/31/2018	16:19	SPACER	8.33	4	40	109	FRESH WATER SPACER
15	3/31/2018	16:24	LEAD CEMENT	12	4	5	216	LEAD CEMENT 12 PPG 170 SKS 2.53 CUFT/SK 14.89 GAL/SK FOR A TOTAL OF 76.6 BBLs OF LEAD REQUIRING 60.27 BBLs OF FRESH WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF LEAD IS 0 FT CALCULATED HEIGHT OF LEAD IS 674.17 FT.
16	3/31/2018	16:30	LEAD CEMENT	12	5	20	280	PUMPED LEAD CEMENT
17	3/31/2018	16:36	LEAD CEMENT	12	5	50	274	PUMPED LEAD CEMENT
18	3/31/2018	16:40	LEAD CEMENT	12	5	71.2	301	FINISHED PUMPING LEAD CEMENT WITH 71.2 BBLs. AWAY
19	3/31/2018	16:42	TAIL CEMENT	12.5	5	10	276	TAIL CEMENT 12.5 PPG 107 SKS 2.23 CUFT/SK 12.62 GAL/SK FOR A TOTAL OF 42.5 BBLs OF TAIL REQUIRING 32.15 BBLs OF FRESH WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF TAIL IS 674.17 FT CALCULATED HEIGHT OF TAIL IS 874.83 FT.
20	3/31/2018	16:47	TAIL CEMENT	12.5	3.5	35	76	PUMPED TAIL CEMENT
21	3/31/2018	16:48	TAIL CEMENT	12.5	3.5	40.2	63	FINISHED PUMPING TAIL CEMENT WITH 40.2 BBLs. AWAY
22	3/31/2018	16:48	SHUT DOWN					SHUT DOWN
23	3/31/2018	16:50	DROP PLUG					DROP TOP PLUG. VERIFIED BY DRILLER
24	3/31/2018	16:54	DISPLACEMENT	8.33	5	10	107	FRESH WATER DISPLACEMENT WITH FIRST 10 BBLs. THREW MIX TUB
25	3/31/2018	16:56	DISPLACEMENT	8.33	9.5	20	447	FRESH WATER DISPLACEMENT
26	3/31/2018	16:59	DISPLACEMENT	8.33	9	50	537	FRESH WATER DISPLACEMENT
27	3/31/2018	17:04	DISPLACEMENT	8.33	7.5	85	672	FRESH WATER DISPLACEMENT
28	3/31/2018	17:02	CEMENT TO SURFACE					20 BBLs OF CEMENT TO SURFACE VERIFIED BY COMPANY MAN
29	3/31/2018	17:05	DISPLACEMENT	8.33	2	86	347	FRESH WATER DISPLACEMENT
30	3/31/2018	17:08	DISPLACEMENT	8.33	2	95	358	FRESH WATER DISPLACEMENT
31	3/31/2018	17:08	LAND PLUG				1902	LANDED PLUG
32	3/31/2018	17:08	CASING TEST					10 MIN CASING TEST AT 1590 PSI.
33	3/31/2018	17:19	CHECK FLOATS					CHECK FLOATS FLOATS HELD 11/2 BBL. BACK
34	3/31/2018	17:22	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH RIG CREW
35	3/31/2018	17:28	RIG DOWN					RIG DOWN THE RIG FLOOR
36	3/31/2018	17:30	WASH PUMPS AND LINES					WASH PUMPS AND LINES INTO CELLAR
37	3/31/2018	17:47	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
38	3/31/2018	17:52	RIG DOWN					RIGGED DOWN ALL EQUIPMENT
39	3/31/2018	18:18	AAR					AFTER ACTION REVIEW
40	3/31/2018	18:33	STEACS					PRE CONVOY SAFETY MEETING
41	3/31/2018	18:40	DEPART LOCATION					DEPART FROM LOCATION FOR RIFLE YARD. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



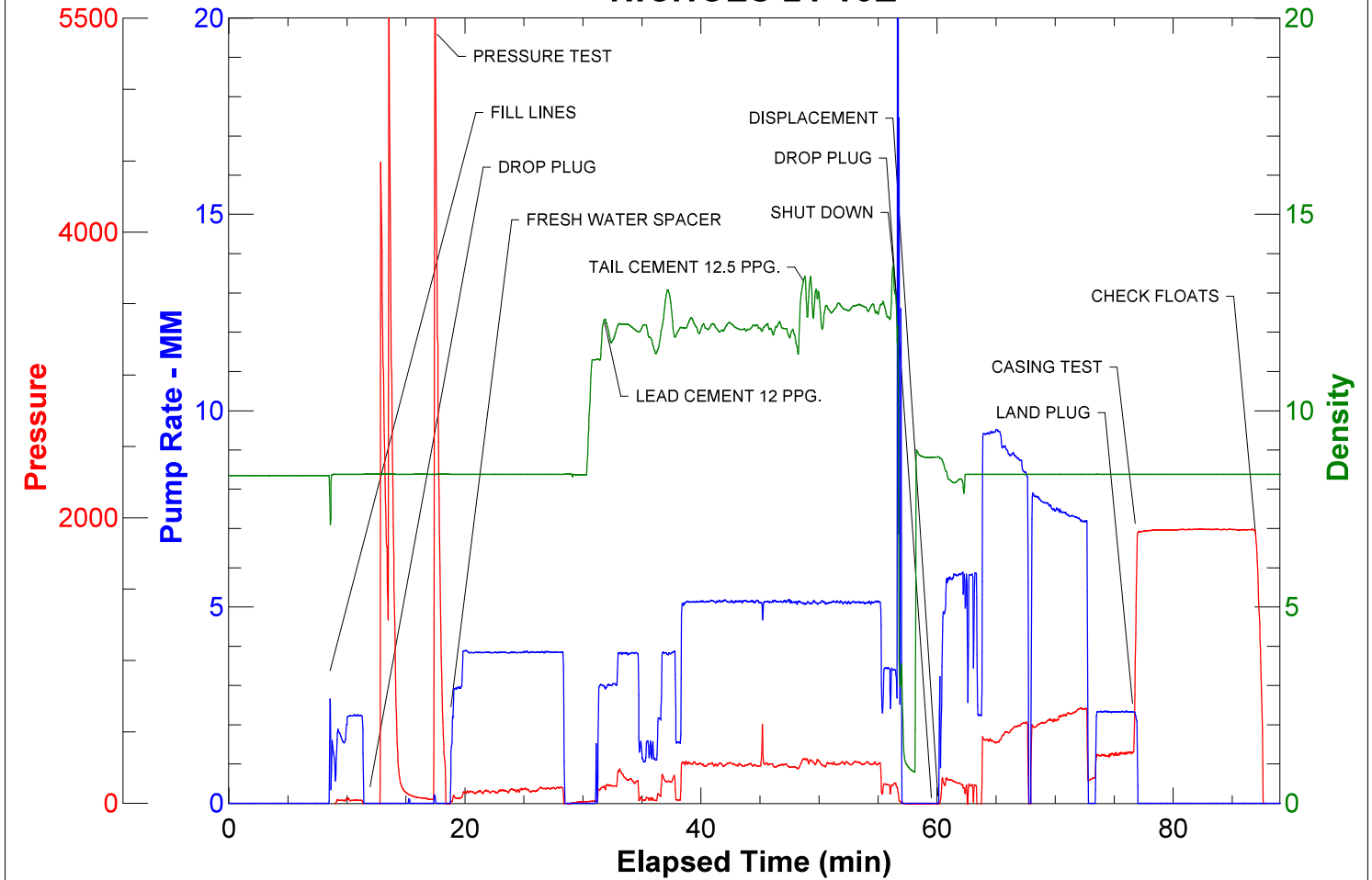
JobMaster Program Version 4.02C1

Job Number:

Customer:

Well Name:

## NICHOLS 24-15E





# Cementing Treatment



<b>Start Date</b>	4/3/2018	<b>Well</b>	Nichols 0994-24-15E
<b>End Date</b>	4/3/2018	<b>County</b>	MESA
<b>Client</b>	LARAMIE ENERGY	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Roger Foster	<b>API</b>	05-077-10392
<b>Service Supervisor</b>	Paul Linn III	<b>Formation</b>	-
<b>Field Ticket No.</b>	Production	<b>Rig</b>	H&P 290
<b>District</b>	Rifle, CO	<b>Type of Job</b>	Long String

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	Excess(%)	Grade	Thread
Previous Casing	8.10	8.63	24.00	1,530.00		J-55	ST&C
Open Hole	8.88			7,759.00	10.00		
Casing	4.00	4.50	11.60	7,749.00		L-80	LT&C
Open Hole	8.88			5,730.00	19.00		

**Shoe Length (ft):** 87

## HARDWARE

<b>Bottom Plug Used?</b>	Yes	<b>Tool Type</b>	Float Collar
<b>Bottom Plug Provided By</b>	Non BJ	<b>Tool Depth (ft)</b>	7,662.00
<b>Bottom Plug Size</b>	4.500	<b>Max Tubing Pressure - Rated (psi)</b>	-
<b>Top Plug Used?</b>	Yes	<b>Max Tubing Pressure - Operated (psi)</b>	-
<b>Top Plug Provided By</b>	Non BJ	<b>Max Casing Pressure - Rated (psi)</b>	7,780.00
<b>Top Plug Size</b>	4.500	<b>Max Casing Pressure - Operated (psi)</b>	4,000.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	102.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8 rnd.
<b>Landing Collar Depth (ft)</b>	7,662	<b>Top Connection Size</b>	4.5

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	16.00
Circulation Time (min)	90.00	10 min SGS	52.00
Circulation Rate (bpm)	10.00	30 min SGS	70.00
Circulation Volume (bbls)	900.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	10.10	Gas Units	0
Mud Density Out (ppg)	-		
PV Mud In	16		
PV Mud Out	-		
YP Mud In	15		
YP Mud Out	-		

## TEMPERATURE

Ambient Temperature (°F)	46.00	Slurry Cement Temperature (°F)	47.50
Mix Water Temperature (°F)	43.50	Flow Line Temperature (°F)	73.00

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	11.00			0.00				60.00
Lead Slurry	BJCem P100.3.01R	12.70	1.9791	11.12	1,030.00	4,700	872	1,719.00	306.10
Tail Slurry	BJCem P70.6.01R	13.50	1.8512	9.35	5,730.00	2,050	393	727.00	129.40
Displacement Final	Water + ResCare +Biocide	8.33			0.00			0.00	119.70

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SAND, S-8, Silica Flour, 200 Mesh	168.8967	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	RETARDER, R-7C	0.3000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	RETARDER, R-3	1.4000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	GELLANT WATER, GW-86	0.8000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	EXTENDER, BENTONITE	10.0000	PPB
Lead Slurry	BJCem P100.3.01R	RETARDER, R-3	0.5000	BWOB
Lead Slurry	BJCem P100.3.01R	DISPERSANT, CD-31	0.1000	BWOB
Lead Slurry	BJCem P100.3.01R	BONDING AGENT, BA-60	0.3000	BWOB
Lead Slurry	BJCem P100.3.01R	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01R	GELLANT WATER, GW-86	0.1000	BWOB
Lead Slurry	BJCem P100.3.01R	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem P70.6.01R	FLUID LOSS, FL-24	0.4000	BWOB
Tail Slurry	BJCem P70.6.01R	CEMENT, CLASS G	70.0000	PCT
Tail Slurry	BJCem P70.6.01R	Flyash (Rockies)	20.0000	PCT
Tail Slurry	BJCem P70.6.01R	SAND, S-8, Silica Flour, 200 Mesh	25.0000	BWOB
Tail Slurry	BJCem P70.6.01R	EXTENDER, BENTONITE	6.0000	BWOB
Tail Slurry	BJCem P70.6.01R	BONDING AGENT, BA-60	0.2000	BWOB
Tail Slurry	BJCem P70.6.01R	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem P70.6.01R	RETARDER, R-3	0.2000	BWOB
Tail Slurry	BJCem P70.6.01R	BONDING AGENT, BA-90	10.0000	PCT
Displacement Final	Water + ResCare +Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB

# Cementing Treatment



## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
4/3/2018 7:41 PM	IntegraGuard EZ Spacer	3.50	60.00	359.00
4/3/2018 7:57 PM	BJCem P100.3.01R	3.50	307.50	193.00
4/3/2018 9:05 PM	BJCem P70.6.01R	4.50	129.40	382.00
4/3/2018 9:45 PM	Water + ResCare +Biocide	13.00	118.76	727.00

	Min	Max	Avg
Pressure (psi)	66.00	3,077.00	286.00
Rate (bpm)	2.00	13.00	4.50

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	118.76	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	120.00	Amount of Spacer to Surface	1.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	2.00
Bump Plug Pressure (psi)	1,764.00	Total Volume Pumped (bbls)	555.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Partial	Lost Circulation During Cement Job	No

Customer Name LARAMIE District Rifle  
 Well Name NICHOLS 24-15E Supervisor ANDREW LINN  
 Job Type Long String Engineer ZEN KEITH



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	4/3/2018	12:00	CALL OUT					CALL OUT. ON LOCATION TIME OF 17:00
2	4/3/2018	13:30	STEACS					PRE CONVOY SAFETY MEETING
3	4/3/2018	13:40	DEPART RIFLE YARD					DEPART FROM RIFLE YARD FOR H&P 290
4	4/3/2018	16:03	ARRIVE ON LOCATION					ARRIVE ON LOCATION. RIG WAS RUNNING CASING
5	4/3/2018	16:08	SITE ASSESSMENT					CREW DID A SITE ASSESSMENT
6	4/3/2018	16:15	SPOT EQUIPMENT					SPOTTED IN EQUIPMENT
7	4/3/2018	16:22	STEACS					PRE RIG UP SAFETY MEETING WITH ALL BJ CEMENT CREW
8	4/3/2018	16:31	RIG UP					RIG UP ALL GROUND EQUIPMENT
9	4/3/2018	18:55	SAFETY MEETING					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ CEMENT CREW
10	4/3/2018	19:24	RIG UP					LOAD BOTH PLUGS IN PLUG CONTAINER, STAB PLUG CONTAINER, HOOK LINES TO PLUG CONTAINER.
11	4/3/2018	19:27	FILL LINES	8.33	2	5	286	FILL LINES WITH 5 BBLs. OF FRESH WATER
12	4/3/2018	19:32	PRESSURE TEST				5921	PRESSURE TEST TO 5921 PSI.
13	4/3/2018	19:39	DROP PLUG					DROP BOTTOM PLUG
14	4/3/2018	19:41	WEIGHTED SPACER	11	3.5	1	359	11 PPG. WEIGHTED SPACER.
15	4/3/2018	19:55	WEIGHTED SPACER	11	3.5	50	200	11 PPG WEIGHTED SPACER
16	4/3/2018	19:57	WEIGHTED SPACER	11	5	57.6	164	FINISHED PUMPING 11 PPG. WEIGHTED SPACER WITH 66.4 BBLs AWAY.
17	4/3/2018	19:58	LEAD CEMENT	12.7	3.5	5	462	LEAD CEMENT 12.7 PPG 872 SKS 1.98 CUFT/SK 11.12 GAL/SK FOR A TOTAL OF 307.5 BBLs OF LEAD CEMENT, REQUIRING 230.87 BBLs. OF WATER. WEIGHT VERIFIED WITH MUD SCALE. CALCULATED TOP OF LEAD IS 0 FT WITH A HEIGHT OF 4592.84 FT.
18	4/3/2018	20:13	LEAD CEMENT	12.7	3.5	50	158	PUMPED LEAD CEMENT
19	4/3/2018	20:24	LEAD CEMENT	12.7	5	100	286	PUMPED LEAD CEMENT
20	4/3/2018	20:34	LEAD CEMENT	12.7	5	150	312	PUMPED LEAD CEMENT
21	4/3/2018	20:44	LEAD CEMENT	12.7	5	200	335	PUMPED LEAD CEMENT
22	4/3/2018	20:51	LEAD CEMENT	12.7	4	235	241	PUMPED LEAD CEMENT
23	4/3/2018	20:55	LEAD CEMENT	12.7	3	250	216	PUMPED LEAD CEMENT
24	4/3/2018	20:58	LEAD CEMENT	12.7	2	255	66	PUMPED LEAD CEMENT
25	4/3/2018	21:04	LEAD CEMENT	12.7	2	275.6	75	FINISHED PUMPING LEAD CEMENT WITH 275.6 BBLs. AWAY.
26	4/3/2018	21:05	TAIL CEMENT	13.5	4.5	5	382	TAIL CEMENT 13.5 PPG. 393 SKS 1.85 CUFT/SK 9.35 GAL/SK FOR A TOTAL OF 129.49 BBLs OF TAIL CEMENT, REQUIRING 87.5 BBLs. OF WATER. WEIGHT VERIFIED WITH MUD SCALE. CALCULATED TOP OF TAIL IS 4592.84 FT. WITH A HEIGHT OF 3156.16 FT.
27	4/3/2018	21:15	TAIL CEMENT	13.5	4.5	50	391	PUMPED TAIL CEMENT
28	4/3/2018	21:23	TAIL CEMENT	13.5	4	85	308	PUMPED TAIL CEMENT
29	4/3/2018	21:26	TAIL CEMENT	13.5	3	100	162	PUMPED TAIL CEMENT
30	4/3/2018	21:31	TAIL CEMENT	13.5	2	112	88	PUMPED TAIL CEMENT
31	4/3/2018	21:37	TAIL CEMENT	13.5	2	126	92	FINISHED PUMPING TAIL CEMENT WITH 126 BBLs. AWAY.
32	4/3/2018	21:37	SHUT DOWN					SHUT DOWN
33	4/3/2018	21:39	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR
34	4/3/2018	21:44	DROP PLUG					DROP TOP PLUG VERIFIED BY COMPANY MAN
35	4/3/2018	21:45	DISPLACEMENT	8.33	13	10	727	FRESH WATER DISPLACEMENT WITH 10 GALS OF RESCARE AND 5 GALS OF BIOCID
36	4/3/2018	21:48	DISPLACEMENT	8.33	10	50	1503	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
37	4/3/2018	21:52	SHUT DOWN					SHUT DOWN DUE TO COLLAR LEAKING
38	4/3/2018	21:54	DISPLACEMENT	8.33	7.5	76	1495	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
39	4/3/2018	21:56	DISPLACEMENT	8.33	7.5	100	1791	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
40	4/3/2018	21:58	DISPLACEMENT	8.33	7.5	108	1888	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE.
41	4/3/2018	21:58	DISPLACEMENT	8.33	4	109	1538	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
42	4/3/2018	22:01	SPACER TO SURFACE					1 BBLs OF WEIGHTED SPACER TO SURFACE
43	4/3/2018	22:02	DISPLACEMENT	8.33	4	119	1764	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
44	4/3/2018	22:02	LAND PLUG				1764	LANDED THE PLUG FINAL CIRCULATING PRESSURE WAS 1764 PSI. TOOK TO 2786 PSI.
45	4/3/2018	22:04	CHECK FLOATS					CHECK FLOATS, FLOATS HELD 1 BBL BACK.
46	4/3/2018	22:05	BREAK OFF PLUG CONTAINER					BROKE OFF PLUG CONTAINER AND HOOKED UP TO THE RIG TO DUE A CASING TEST AS PER COMPANY MAN
47	4/3/2018	22:19	CASING TEST					10 MIN CASING TEST AT 3077 PSI.
48	4/3/2018	22:30	CHECK FLOATS					CHECK FLOATS, FLOATS HELD 2 BBLs. BACK.
49	4/3/2018	22:35	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH RIG CREW
50	4/3/2018	22:41	RIG DOWN					RIG DOWN RIG FLOOR

Customer Name LARAMIE District Rifle  
 Well Name NICHOLS 24-15E Supervisor ANDREW LINN  
 Job Type Long String Engineer ZEN KEITH



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
51	4/3/2018	22:41	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR
52	4/3/2018	23:00	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
53	4/3/2018	23:09	RIG DOWN					RIG DOWN ALL EQUIPMENT.
54	4/3/2018	23:41	AAR					AFTER ACTION REVIEW
55	4/3/2018	23:48	STEACS					PRE CONVOY SAFETY MEETING
56	4/4/2018	0:00	DEPART FROM LOCATION					DEPART FROM LOCATION FOR RIFLE YARD. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



JobMaster Program Version 4.02C1

Job Number: 4386

Customer: LARAMIE

Well Name: NICHOLS 24-15E

