



# Laramie Energy

## End of Well Cement Report

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Nichols 0994-24-05W 05-077-10407

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

Quote #: 03928/03973

I Execution #: 02068/02179

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# Laramie Energy

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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,

Zen Keith  
Field Engineer III | (307) 757-7178 | [Zen.Keith@BJServices.com](mailto:Zen.Keith@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



Start Date	12/21/2017	Well	Nichols 0994-24-05W
End Date	12/21/2017	County	MESA
Client	LARAMIE ENERGY	State/Province	CO
Client Field Rep	Matt Settles	API	05-077-10407
Service Supervisor	Andrew Linn	Formation	-
Field Ticket No.	Surface	Rig	H&P 290
District	Rifle, CO	Type of Job	Surface

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	15.25	16.00	65.00	60.00	60.00	0.00		
Open Hole	11.00			1,562.00	1,562.00	75.00		
Casing	8.10	8.63	24.00	1,552.00	1,552.00		J-55	ST&C

Shoe Length (ft): 40

## HARDWARE

Bottom Plug Used?	Yes	Tool Type	Float Collar
Bottom Plug Provided By	Non BJ	Tool Depth (ft)	1,507.00
Bottom Plug Size	8.625	Max Tubing Pressure - Rated (psi)	-
Top Plug Used?	Yes	Max Tubing Pressure - Operated (psi)	-
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	2,950.00
Top Plug Size	8.625	Max Casing Pressure - Operated (psi)	2,360.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	19.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	8 RND.
Landing Collar Depth (ft)	1,484	Top Connection Size	8.625

# 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)	30.00	10 min SGS	39.00
Circulation Rate (bpm)	10.00	30 min SGS	56.00
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)	8.80	Gas Units	0
Mud Density Out (ppg)	8.80		
PV Mud In	91		
PV Mud Out	91		
YP Mud In	18		
YP Mud Out	18		

## TEMPERATURE

Ambient Temperature (°F)	4.00	Slurry Cement Temperature (°F)	88.00
Mix Water Temperature (°F)	91.00	Flow Line Temperature (°F)	-

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Fresh Water	8.3300					40.0000
Lead Slurry	S100-12	12.0000	2.5329	14.89	191	480.0000	85.5000
Tail Slurry	S100-12	12.5000	2.2282	12.62	107	237.0000	42.1000
Displacement Final	Water	8.3300				0.0000	94.5000

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Lead Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Lead Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Lead Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Lead Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Tail Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Tail Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Tail Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
12/22/2017 5:29 AM	Fresh Water	2.00	40.00	400.00
12/22/2017 5:42 AM	S100-12	6.00	86.06	424.00
12/22/2017 5:56 AM	S100-12	6.00	42.50	360.00
12/22/2017 6:06 AM	Water	6.00	95.87	232.00

	Min	Max	Avg
Pressure (psi)	111.00	1,970.00	455.00
Rate (bpm)	2.00	7.00	6.00

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ	Amount of Cement Returned/Reversed	25.00
Calculated Displacement Volume (bbls)	95.87	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	96.00	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	0.50
Bump Plug Pressure (psi)	505.00	Total Volume Pumped (bbls)	255.20
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Partial	Lost Circulation During Cement Job	No

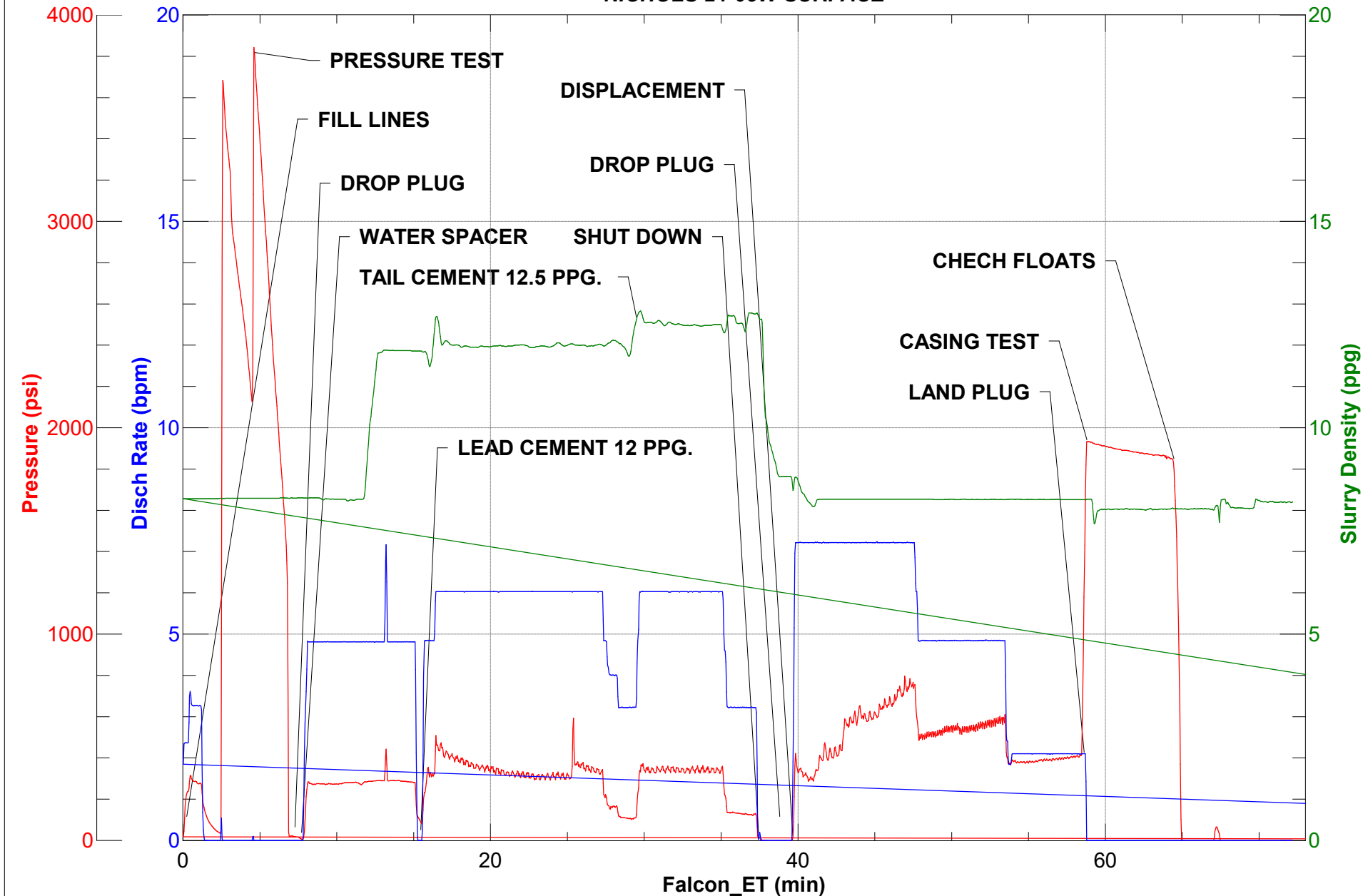
Customer Name LARAMIE District Rifle  
 Well Name NICHOLS 24-05W Supervisor ANDREW LINN  
 Job Type Surface Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/21/2017	15:00	CALL OUT					CREW CALL OUT ON LOCATION TIME OF 23:30 12/21
2	12/21/2017	15:00	ALREADY ON LOCATION					CREW WAS ALREADY ON LOCATION
3	12/21/2017	15:00	SITE ASSESSMENT					SITE ASSESSMENT
4	12/21/2017	15:30	SPOT EQUIPMENT					SPOT IN BULK TRUCK
5	12/21/2017	15:45	STEACS					PRE RIG UP SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
6	12/21/2017	16:00	RIG UP					RIG UP ALL GROUND EQUIPMENT
7	12/22/2017	4:50	SAFETY MEETING					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW.
8	12/22/2017	5:15	RIG UP					LOAD PLUGS IN PLUG CONTAINER, STAB PLUG CONTAINER, HOOK LINES TO PLUG CONTAINER
9	12/22/2017	5:25	FILL LINE	8.33	2	5	351	FILL LINES WITH 5 BBLS. FRESH WATER
10	12/22/2017	5:28	DROP PLUG					DROP BOTTOM PLUG
11	12/22/2017	5:29	PRESSURE TEST				3701	PRESSURE TEST TO 3701 PSI.
12	12/22/2017	5:35	SPACER	8.33	2	6	400	FRESH WATER SPACER
13	12/22/2017	5:40	SPACER	8.33	2	40	368	FRESH WATER SPACER
14	12/22/2017	5:42	LEAD CEMENT	12	6	5	424	LEAD CEMENT 12 PPG. 191 SKS. 2.53 CUFT./SK. 14.89 GAL./SK. FOR A TOTAL OF 86.06 BBLS. OF LEAD REQUIRING 67.71 BBLS. OF FRESH WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF LEAD IS 0 FT. CALCULATED HEIGHT OF LEAD IS 672.97 FT.
15	12/22/2017	5:50	LEAD CEMENT	12	6	50	305	PUMPED LEAD CEMENT
16	12/22/2017	5:54	LEAD CEMENT	12	4	70	220	PUMPED LEAD CEMENT
17	12/22/2017	5:56	LEAD CEMENT	12	4	77.5	180	FINISHED PUMPING LEAD CEMENT WITH 77.5 BBLS. AWAY
18	12/22/2017	5:56	TAIL CEMENT	12.5	6	10	360	TAIL CEMENT 12.5 PPG. 107 SKS. 2.23 CUFT./SK. 12.62 GAL./SK. FOR A TOTAL OF 45.5 BBLS. OF TAIL REQUIRING 32.15 BBLS. OF FRESH WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF TAIL IS 672.97 FT. CALCULATED HEIGHT OF TAIL IS 879.03 FT.
19	12/22/2017	6:04	TAIL CEMENT	12.5	4	41.7	127	FINISHED PUMPING TAIL CEMENT WITH 41.7 BBLS. AWAY
20	12/22/2017	6:04	SHUT DOWN					SHUT DOWN
21	12/22/2017	6:05	DROP PLUG					DROP TOP PLUG. VERIFIED BY COMPANY MAN
22	12/22/2017	6:06	DISPLACEMENT	8.33	6	10	235	FRESH WATER DISPLACEMENT WITH FIRST 10 BBLS. THROUGH MIX TUB
23	12/22/2017	6:10	DISPLACEMENT	8.33	7	20	705	FRESH WATER DISPLACEMENT
24	12/22/2017	6:13	DISPLACEMENT	8.33	7	50	660	FRESH WATER DISPLACEMENT
25	12/22/2017	6:14	DISPLACEMENT	8.33	5	60	510	FRESH WATER DISPLACEMENT
26	12/22/2017	6:19	CEMENT TO SURFACE					25 BBLS. OF CEMENT TO SURFACE VERIFIED BY COMPANY MAN
27	12/22/2017	6:21	DISPLACEMENT	8.33	2	86	444	FRESH WATER DISPLACEMENT
28	12/22/2017	6:25	DISPLACEMENT	8.33	2	95	505	FRESH WATER DISPLACEMENT
29	12/22/2017	6:25	LAND PLUG				1970	LANDED PLUG
30	12/22/2017	6:25	CASING TEST					5 MIN CASING TEST AT 1970 PSI. DUE TO IT BEING 4 DEGREES OUT
31	12/22/2017	6:31	CHECK FLOATS					CHECK FLOATS FLOATS HELD 1/2 BBL. BACK
32	12/22/2017	6:35	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH RIG CREW
33	12/22/2017	6:45	RIG DOWN					RIG DOWN THE RIG FLOOR
34	12/22/2017	6:45	WASH PUMPS AND LINES					WASH PUMPS AND LINES INTO CELLAR
35	12/22/2017	7:10	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
36	12/22/2017	7:20	RIG DOWN					RIGGED DOWN ALL EQUIPMENT
37	12/22/2017	7:40	AAR					AFTER ACTION REVIEW
38	12/22/2017	7:45	STEACS					PRE CONVOY SAFETY MEETING
39	12/22/2017	8:00	CHAIN UP					CHAIN UP EQUIPMENT
40	12/22/2017	8:20	DEPART LOCATION					DEPART FROM LOCATION FOR RIFLE YARD. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



NICHOLS 24-05W SURFACE





# Cementing Treatment



<b>Start Date</b>	12/24/2017	<b>Well</b>	Nichols 0994-24-05W
<b>End Date</b>	12/24/2017	<b>County</b>	MESA
<b>Client</b>	LARAMIE ENERGY	<b>State/Province</b>	CO
<b>Client Field Rep</b>		<b>API</b>	05-077-10407
<b>Service Supervisor</b>		<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
Open Hole	8.88			7,570.00	10.00		
Casing	4.00	4.50	11.60	7,560.00		L-80	LT&C
Previous Casing	8.10	8.63	24.00	1,524.00		J-55	ST&C

**Shoe Length (ft):** 91

## 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>	7,469.00
<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>	6,224.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	140.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8 rnd.
<b>Landing Collar Depth (ft)</b>	7,469	<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	5.00
Circulation Time (min)	60.00	10 min SGS	26.00
Circulation Rate (bpm)	10.00	30 min SGS	59.00
Circulation Volume (bbls)	600.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	9.00	Gas Units	0
Mud Density Out (ppg)	9.00		
PV Mud In	21		
PV Mud Out	21		
YP Mud In	15		
YP Mud Out	15		

## TEMPERATURE

Ambient Temperature (°F)	28.00	Slurry Cement Temperature (°F)	90.00
Mix Water Temperature (°F)	94.00	Flow Line Temperature (°F)	

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	CD Spacer	11.0000					60.0000
Lead Slurry	P100-X2	12.7000	1.9775	11.11	778	1,536.0000	273.4000
Tail Slurry	P70-X1	13.5000	1.8511	9.33	393	727.0000	129.4000
Displacement Final	Freshwater with Clay Stabilizer	8.3300				0.0000	116.8000

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	CD Spacer	GELLANT WATER, GW-86	0.80	PPB
Spacer / Pre Flush / Flush	CD Spacer	R-6 LOW TEMP RETARDER 50 LB BAG BJS	1.40	PPB
Spacer / Pre Flush / Flush	CD Spacer	SAND, S-8, Silica Flour, 200 Mesh	179.97	PPB
Spacer / Pre Flush / Flush	CD Spacer	Spacer Surfactant, SS-247, (BJS Only)	0.80	GPB
Lead Slurry	P100-X2	CEMENT, ASTM TYPE III	100.00	PCT
Lead Slurry	P100-X2	GELLANT WATER, GW-86	0.10	BWOB
Lead Slurry	P100-X2	DISPERSANT, CD-31	0.10	BWOB
Lead Slurry	P100-X2	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Lead Slurry	P100-X2	R-6 LOW TEMP RETARDER 50 LB BAG BJS	0.50	BWOB
Lead Slurry	P100-X2	BONDING AGENT, BA-60	0.30	BWOB
Tail Slurry	P70-X1	CEMENT, CLASS G	70.00	PCT
Tail Slurry	P70-X1	Flyash (Rockies)	20.00	PCT
Tail Slurry	P70-X1	EXTENDER, BENTONITE	6.00	BWOB
Tail Slurry	P70-X1	SAND, S-8, Silica Flour, 200 Mesh	25.00	BWOB
Tail Slurry	P70-X1	BONDING AGENT, BA-60	0.20	BWOB
Tail Slurry	P70-X1	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Tail Slurry	P70-X1	R-6 LOW TEMP RETARDER 50 LB BAG BJS	0.20	BWOB
Tail Slurry	P70-X1	FLUID LOSS, FL-24, (BJS Only)	0.40	BWOB
Tail Slurry	P70-X1	BONDING AGENT, BA-90	10.00	PCT
Displacement Final	Freshwater with Clay Stabilizer	CLAY STABILIZATION, ResCare CS	0.08	GPB

# Cementing Treatment



## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
12/24/2017 4:22 PM	CD Spacer	3.50	60.00	400.00		
12/24/2017 4:54 PM	P100-X2	6.00	274.35	455.00		
12/24/2017 5:35 PM	P70-X1	6.00	129.40	607.00		
12/24/2017 6:06 PM	Freshwater with Clay Stabilizer	7.00	115.78	545.00		

	Min	Max	Avg
Pressure (psi)	157.00	3,164.00	564.00
Rate (bpm)	2.00	8.00	6.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	115.76	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	116.00	Amount of Spacer to Surface	50.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	1.00
Bump Plug Pressure (psi)	2,352.00	Total Volume Pumped (bbls)	549.00
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  
 Well Name NICHOLS 24-05W  
 Job Type Long String

District Rifle  
 Supervisor ANDREW LINN  
 Engineer GAGE P.



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/24/2017	8:00	CALL OUT					CALL OUT. ON LOCATION TIME OF 14:00
2	12/24/2017	11:00	STEACS					PRE CONVOY SAFETY MEETING
3	12/24/2017	11:30	DEPART RIFLE YARD					DEPART FROM RIFLE YARD FOR H&P 290
4	12/24/2017	13:20	ARRIVE ON LOCATION					ARRIVE ON LOCATION. RIG WAS RUNNING CASING
5	12/24/2017	13:30	SITE ASSESSMENT					CREW DID A SITE ASSESSMENT
6	12/24/2017	13:35	SPOT EQUIPMENT					SPOTTED IN EQUIPMENT
7	12/24/2017	13:45	STEACS					PRE RIG UP SAFETY MEETING WITH ALL BJ CEMENT CREW
8	12/24/2017	14:00	RIG UP					RIG UP ALL GROUND EQUIPMENT
9	12/24/2017	15:45	SAFETY MEETING					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ CEMENT CREW
10	12/24/2017	16:00	RIG UP					LOAD BOTH PLUGS IN PLUG CONTAINER, STAB PLUG CONTAINER, HOOK LINES TO PLUG CONTAINER.
11	12/24/2017	16:22	FILL LINES	8.33	2	5	498	FILL LINES WITH 5 BBLs. OF FRESH WATER
12	12/24/2017	16:25	PRESSURE TEST				5013	PRESSURE TEST TO 5013 PSI.
13	12/24/2017	16:32	DROP PLUG					DROP BOTTOM PLUG
14	12/24/2017	16:34	WEIGHTED SPACER	11	3.5	5	400	11 PPG. WEIGHTED SPACER WITH 48 GALS. OF SS-247
15	12/24/2017	16:44	WEIGHTED SPACER	11	2	45	166	11 PPG. WEIGHTED SPACER
16	12/24/2017	16:48	WEIGHTED SPACER	11	2	50	132	11 PPG. WEIGHTED SPACER
17	12/24/2017	16:54	LEAD CEMENT	12.7	6	5	442	LEAD CEMENT 12.7 PPG. 778 SKS. 1.98 CUFT./SK. 11.11 GAL./SK. FOR A TOTAL OF 274.35 BBLs OF LEAD CEMENT, REQUIRING 205.8 BBLs. OF WATER. WEIGHT VERIFIED WITH MUD SCALE. CALCULATED TOP OF LEAD IS 0 FT. WITH A HEIGHT OF 4405.32 FT.
18	12/24/2017	17:01	LEAD CEMENT	12.7	6	50	613	PUMPED LEAD CEMENT
19	12/24/2017	17:09	LEAD CEMENT	12.7	6	100	408	PUMPED LEAD CEMENT
20	12/24/2017	17:17	LEAD CEMENT	12.7	6	150	412	PUMPED LEAD CEMENT
21	12/24/2017	17:25	LEAD CEMENT	12.7	6	200	395	PUMPED LEAD CEMENT
22	12/24/2017	17:32	LEAD CEMENT	12.7	5	235	337	PUMPED LEAD CEMENT
23	12/24/2017	17:33	LEAD CEMENT	12.7	3.75	243	300	PUMPED LEAD CEMENT
24	12/24/2017	17:35	LEAD CEMENT	12.7	3.75	251	157	FINISHED PUMPING LEAD CEMENT WITH 251 BBLs. AWAY.
25	12/24/2017	17:36	TAIL CEMENT	13.5	6	3	607	TAIL CEMENT 13.5 PPG. 393 SKS. 1.85 CUFT./SK. 9.33 GAL./SK. FOR A TOTAL OF 129.41 BBLs OF TAIL CEMENT, REQUIRING 87.3 BBLs. OF WATER. WEIGHT VERIFIED WITH MUD SCALE. CALCULATED TOP
26	12/24/2017	17:43	TAIL CEMENT	13.5	6	50	595	PUMPED TAIL CEMENT

Customer Name LARAMIE  
 Well Name NICHOLS 24-05W  
 Job Type Long String

District Rifle  
 Supervisor ANDREW LINN  
 Engineer GAGE P.



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
27	12/24/2017	17:45	TAIL CEMENT	13.5	4.75	60	439	PUMPED TAIL CEMENT
28	12/24/2017	17:51	TAIL CEMENT	13.5	6	80	631	PUMPED TAIL CEMENT
29	12/24/2017	17:54	TAIL CEMENT	13.5	6	100	630	PUMPED TAIL CEMENT
30	12/24/2017	17:56	TAIL CEMENT	13.5	3	114	330	PUMPED TAIL CEMENT
31	12/24/2017	18:00	TAIL CEMENT	13.5	3	127	215	FINISHED PUMPING TAIL CEMENT WITH 127 BBLs. AWAY.
32	12/24/2017	18:00	SHUT DOWN					SHUT DOWN
33	12/24/2017	18:01	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR
34	12/24/2017	18:06	DROP PLUG					DROP TOP PLUG VERIFIED BY DRILLER
35	12/24/2017	18:08	DISPLACEMENT	8.33	7	10	545	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
36	12/24/2017	18:11	DISPLACEMENT	8.33	8	20	1263	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
37	12/24/2017	18:14	DISPLACEMENT	8.33	8	50	1446	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
38	12/24/2017	18:17	SPACER TO SURFACE					50 BBLs. OF WEIGHTED SPACER TO SURFACE
39	12/24/2017	18:20	DISPLACEMENT	8.33	8	100	2300	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
40	12/24/2017	18:21	DISPLACEMENT	8.33	4	106	1679	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
41	12/24/2017	18:24	DISPLACEMENT	8.33	4	116	2352	FRESH WATER DISPLACEMENT WITH 10 GALS. OF RESCARE
42	12/24/2017	18:24	LAND PLUG				3164	LANDED THE PLUG FINAL CIRCULATING PRESSURE WAS 2352 PSI. TOOK TO 3164 PSI.
43	12/24/2017	18:25	CASING TEST					10 MIN CASING TEST AT 3014 PSI.
44	12/24/2017	18:37	CHECK FLOATS					CHECK FLOATS, FLOATS HELD 1 1/2 BBLs. BACK.
45	12/24/2017	18:42	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH RIG CREW
46	12/24/2017	18:50	RIG DOWN					RIG DOWN RIG FLOOR
47	12/24/2017	18:50	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR
48	12/24/2017	19:15	SAFETY MEETING					PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW
49	12/24/2017	19:21	RIG DOWN					RIG DOWN SOME IRON AND ALL BULK EQUIPMENT. SPOTTED PUMP OUT OF THE WAY.
50	12/24/2017	19:40	AAR					AFTER ACTION REVIEW
51	12/24/2017	19:50	DIDN'T DEPART FROM LOCATION					CREW STAYED ON LOCATION FOR SURFACE JOB. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



NICHOLS 24-05W PRODUCTION

