



# Bill Barrett Corporation

## Production Liner Post Job Report

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Anschutz Equus Farms 4-62-28-1609C

API: 05-123-42740

S:28 T:4N R:62W Weld CO

Quote #: 06078

| Execution #: 03353

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# Bill Barrett Corporation

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Matt Schwartz | (303) 312-8142 | [maschwartz@billbarrettcorp.com](mailto:maschwartz@billbarrettcorp.com)

Bill Barrett Corporation | 1099 18 St. | Denver, CO 80202

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Dear Mr. Schwartz,

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,

Karl Griesser

Field Engineer I | (713) 829-7498 | [Karl.Griesser@BJServices.com](mailto:Karl.Griesser@BJServices.com)

Field Office 1716 East Allison Rd., Cheyenne WY, 82007

Phone: (307) 638-5585

Sales Office 999 18th St. Suite 1200 Denver, CO 80202

Phone: (281) 408-2361

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# Cementing Treatment



<b>Start Date</b>	2-4-2018	<b>Well</b>	ANSCHUTZ EQUUS FARMS 4-62-28-1609C
<b>End Date</b>	2-4-2018	<b>County</b>	WELD
<b>Client</b>	BILL BARRETT CORPORATION	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Robert	<b>API</b>	05-123-42740
<b>Service Supervisor</b>	Albert Snyder	<b>Rig</b>	Savanna 802
<b>Field Ticket No.</b>	FT-03353-P5S7G50202-32408	<b>Type of Job</b>	Liner
<b>District</b>	Cheyenne, WY		

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Previous Casing	6.37	7.00	23.00	6,613.00	6,613.00	
Open Hole	6.13			16,253.00	6,767.00	10.00
Drill Pipe	3.34	4.00	14.00	5,725.00	5,725.00	
Liner	4.00	4.50	11.60	16,253.00	6,767.00	

**Shoe Length (ft):** 3.43

## HARDWARE

<b>Bottom Plug Used?</b>	no	<b>Max Casing Pressure - Rated (psi)</b>	5350
<b>Top Plug Used?</b>	Yes	<b>Max Casing Pressure - Operated (psi)</b>	5000
<b>Top Plug Provided By</b>	Weatherford	<b>Pipe Movement</b>	none
<b>Top Plug Size 4.5</b>	4.5	<b>Job Pumped Through</b>	Dp
<b>Centralizers Used</b>	No	<b>Top Connection</b>	LTC
<b>Landing Collar Depth (ft)</b>	16249	<b>Top Connection Size</b>	4"
<b>Tool Type</b>	Hanger		
<b>Tool Depth (ft)</b>	5753		

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

Well Circulated by	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	Flare Prior to/during the Cement Job	No
Circulation Time (min)	120	Gas Present	No
Circulation Rate (bpm)	8		
Lost Circulation Prior to Cement Job	No		
Mud Density In (ppg)	9.2		
Mud Density Out (ppg)	9.2		
PV Mud In	3		
PV Mud Out	3		
YP Mud In	4		
YP Mud Out	4		

## TEMPERATURE

Ambient Temperature (°F)	35	Slurry Cement Temperature (°F)	55
Mix Water Temperature (°F)	55	Flow Line Temperature (°F)	102

## 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					30.0000
Tail Slurry	P50-X1	13.5000	1.5930	7.95	690	1,099.0000	195.7000
Displacement 1	Retarded Water	8.3300					20.0000
Displacement 2	Retarded Water	8.3300					20.0000
Displacement 2	Water + Chems	8.3300					130.0000
Displacement Final	Water	8.3300					74.8000

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	CD Spacer	SAND, S-8, Silica Flour, 200 Mesh	179.4000	PPB
Spacer / Pre Flush / Flush	CD Spacer	AR-20	0.6000	PPB
Spacer / Pre Flush / Flush	CD Spacer	GELLANT WATER, GW-86	0.8000	PPB
Tail Slurry	P50-X1	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	P50-X1	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	P50-X1	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	P50-X1	BONDING AGENT, BA-90	3.0000	LBS/SK
Tail Slurry	P50-X1	EXTENDER, BENTONITE	4.0000	BWOB
Tail Slurry	P50-X1	FLUID LOSS, FL-24	0.4000	BWOB
Tail Slurry	P50-X1	Flyash (Rockies)	50.0000	PCT
Tail Slurry	P50-X1	BONDING AGENT, EC-2	3.0000	BWOB
Tail Slurry	P50-X1	AR-20	0.2000	BWOB
Displacement 1	Retarded Water	ASF-50	0.0800	GPB
Displacement 1	Retarded Water	RETARDER, R-8L	0.5000	GPB
Displacement 1	Retarded Water	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water	RETARDER, R-8L	0.5000	GPB
Displacement 2	Water + Chems	ASF-50	0.0800	GPB
Displacement 2	Water + Chems	BIOCIDE, BIOC11139W	0.0100	GPB

## TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
CD Spacer	5.00	30.00	1100
P50-X1	5.00	195.70	1200
Retarded Water	5.00	20.00	1900
Water + Chems	5.00	130.00	1974
Retarded Water	5.00	20.00	1740
Water	5.00	74.80	1300

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ Services	Amount of Cement Returned/Reversed	16
Calculated Displacement Volume	200	Method Used to Verify Returns	Visual
Actual Displacement Volume	200	Amount of Spacer to Surface	30
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0
Bump Plug	yes	Total Volume Pumped (bbls)	1064.4
Bump Plug Pressure (psi)	2000	Top Out Cement Spotted	No
Were Returns Planned at Surface	No	Lost Circulation During Cement Job	No
Cement returns During Job	Yes		

## CEMENT PLUG

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Bottom of Cement Plug?	No	Wiper Balls Used?	No
Plug Catcher	No		

## COMMENTS

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### Treatment Report

Mixed and pumped 690 sks at 13.5 #. Plug landed on calculated 200 bbls. Floats held. Circulated 130 bbls displacement. Got back 16 bbls cement and 30 bbls of spacer. Job went as planned.



Customer Name BILL BARRETT  
 Well Name ANSHUTZ EQUIS FARMS 4-62-28-1609C  
 Job Type Liner

District Cheyenne  
 Supervisor ALBERT SNYDER

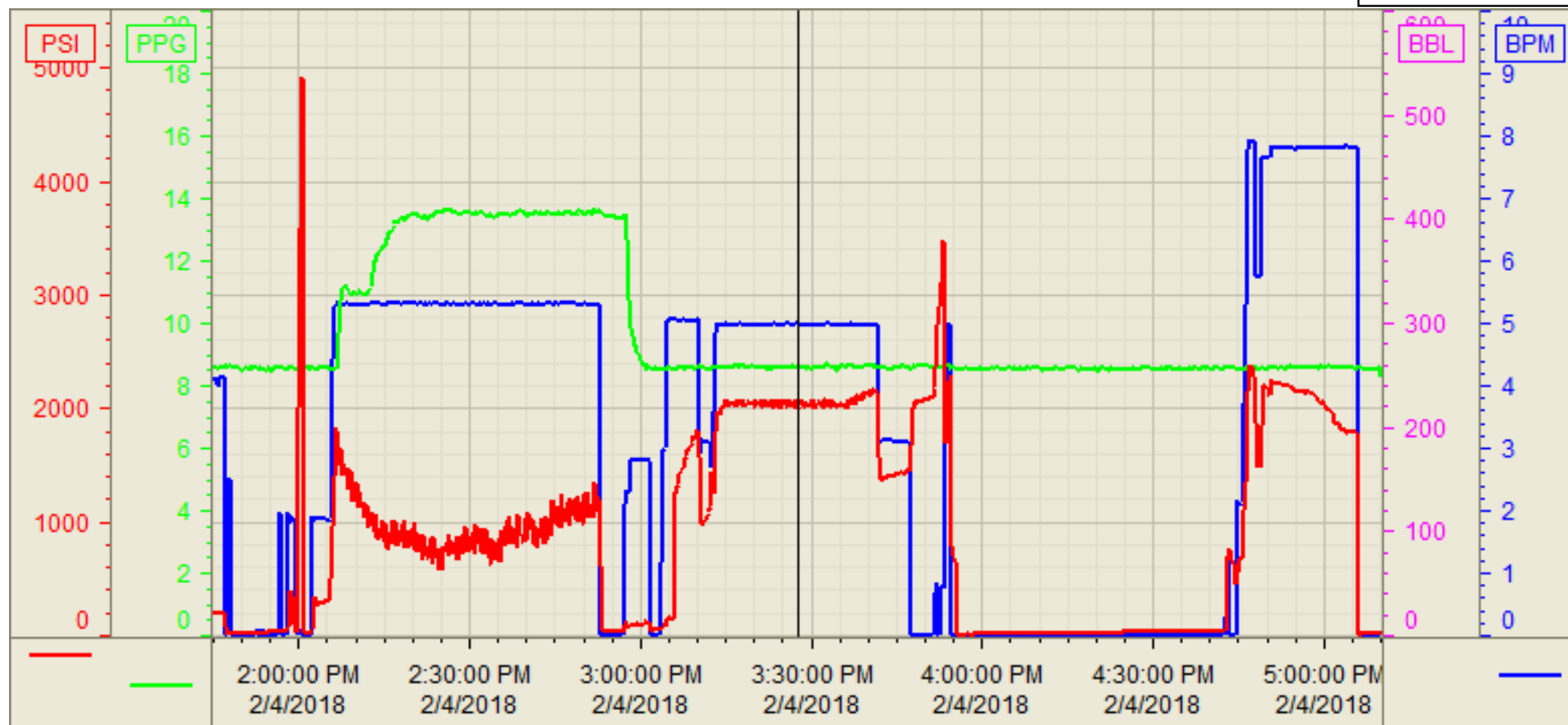
Start Date/Time	Event	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
2/4/2018 7:00	Called out						called out at 7:00
2/4/2018 8:00	Steacs Journey						discussed journey to location
2/4/2018 9:30	depart						travel in convoy
2/4/2018 11:00	request on location						requested on location 11:00
2/4/2018 11:00	arrive on location	48					arrived at 11:00 just getting on bottom
2/4/2018 11:10	Steacs briefing						discussed rigging up
2/4/2018 11:30	rig up iron						used teamwork to rig up
2/4/2018 11:45	wait on rig						waiting on tool hand to drop ball and circualte
2/4/2018 13:00	Steacs Breifing						discussed job proceedure
2/4/2018 14:11	fill Lines		8.33	3	3	250	filled using water
2/4/2018 14:13	Test lines		8.33	1	1	5000	tested lines all held good
2/4/2018 14:15	pump CD spacer		11	5.5	30	1100	pump Cd spacer at 11#/gal
2/4/2018 14:31	mix and pump Cement		13.5	5.5	195.4	1200	Mix and pump 690 sks of P50-X1 at 13.5# with 1.59 yield and 7.95 water requiemtent
2/4/2018 15:04	shut down wash up						washed to the pit
2/4/2018 15:07	drop plug						dropped the dart by weatherford
2/4/2018 15:16	Displace well		8.33	5	50	1900	fresh water with R8I first 10 barrels
2/4/2018 15:39	Displace well		8.33	5	100	1974	Fresh water
2/4/2018 15:50	Displace well		8.33	5	150	1740	Fresh Water with R8I for 20 barrels
2/4/2018 16:01	Displace well		8.33	3	200	1300	fresh water
2/4/2018 16:01	Land the plug				200	2000	plug landed on calculated
2/4/2018 16:04	Burst plug					3540	plug burst according to plan
2/4/2018 16:07	pump water		8.33	3	5	300	fresh water
2/4/2018 16:12	check float						float is holding flowed back 1 barrels
2/4/2018 16:15	set packer						
2-416:58	Circulate out		8.33	8	130	1600	pump 130 bbsl total got back 30 bbls of spacer and 16 bbls back to the surface when circulating out
2/4/2018 17:20	end job						
2/4/2018 17:40	Steacs Briefing						Discussed rigging down
2/4/2018 17:50	rig down	73					use team work to be safe
2/4/2018 18:00	steacs Journey						discussed journey back to yard
2/4/2018 18:20	After Action review						discussed how the job went
2/4/2018 18:30	Depart Location						

Customer: BILL BARRETT  
Well Number: 4-62-28-1609C  
Lease Info: ANSHUTZ EQUIS FARMS



Print Date/Time

2/4/2018 5:14:46 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	2005.9	2/4/2018 3:27:35 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	8.59	2/4/2018 3:27:39 PM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined Rate	5.00 i.	2/4/2018 3:27:35 PM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 5:14:41 PM