



Rocky Mountain Area Laboratory
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Brighton, CO 80601
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***Rocky Mountain Area Laboratory
CEMENTING REPORT***

Prepared for:
***Bayswater Exploration
Bower #15-3
Weld County, Colorado
Lab Report #C04-030-13
Longstring
05-123-36732-0000***

***Rocky Mountain Area Laboratory
899 Baseline Place
Brighton, CO 80601
Phone (303) 659-7347***

ANALYST: Michael Curl

***BAKER HUGHES TECHNICAL REPRESENTATIVE
Crystal Mapes***

Submitted by: Blake David

April 6, 2013



CEMENTING LABORATORY REPORT

Lab Report #C04-030-13

COMPANY :	Bayswater Exploration	DATE:	April 6, 2013
WELL NAME:	Bower #15-3	LOCATION:	Weld County, Colorado
DISTRICT:	Brighton	TYPE JOB:	Longstring
API #	05-123-36732-0000	TOC(md):	
DEPTH MD(ft):	7,946 ft	BHST(°F):	254 °F
CASING SIZE("):	4 1/2 in	BHCT(°F):	177 °F
TUBING SIZE("):	4 1/2 in	BHSqT(°F):	
HOLE SIZE("):	7 7/8 in	TOL (°F):	Static Circ

SLURRY DESIGN DATA

#1	Slurry 1 : Premium Lite Cement + 4% Bentonite + 0.6% Sodium Metasilicate + 8 pps CSE-2
#2	Slurry 2 : Premium Lite Cement + 2% Bentonite +0.2% R-3 + 0.4% FL-52
#3	Slurry 3: Class G Cement:Poz (Fly Ash) (50:50) + 0.1% CD-32 + 0.4% FL-52 + 0.1% SMS

SLURRY PROPERTIES		#1	#2	#3
Density : ppg		11.00	12.50	14.60
Yield :cu.ft./sk.		3.22	1.87	1.16
Mixing Water: gal/sk.		19.86	10.28	5.01
Water Type:		Fresh	Fresh	Fresh
Testing Temperature :		177 °F	178 °F	178 °F
Thickening Time: hrs:mins.		5:09	2:53	3:19
Free Water: mls.				
Fluid Loss:ml/30min				
Compressive Strength:				
	hrs.			
	hrs.			
Rheologies	RPM			
	300			
	200			
	100			
	6			
	3			
	600			
	PV			
	YP			
Gel Strength : #/100sq.ft.	10 sec.			
	10 min.			

REMARKS :	Slurry No. 1 (11.0 ppg) turned off 2 times to help facilitate thickening
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Customer/Well Information

Company:	Bayswater Exploration	Depth MD:	7,946 ft	Date:	April 6, 2013
Well Name:	Bower #15-3	Depth TVD:	7,946 ft	Prepared for:	Crystal Mapes
API #:	05-123-36732-0000	TOC(md):		Submitted by:	Blake David
Location:	Weld County, Colorado	Casing Size:	4 1/2 in	Prepared by:	Michael Curl
District:	Brighton	Tubing Size:	4 1/2 in	Water Type:	Fresh
Type Job:	Longstring	Hole size:	7 7/8 in		

BHST: 254 °F BHCT: 177 °F BHSqT: °F

Slurry Design Data

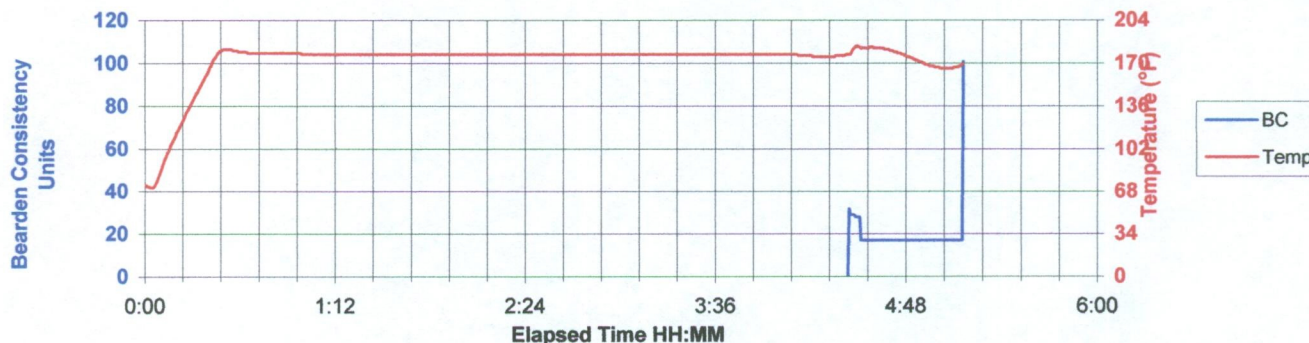
Slurry 1 : Premium Lite Cement + 4% Bentonite + 0.6% Sodium Metasilicate + 8 pps CSE-2

Slurry Properties

Density:	11.0 ppg	Fluid Loss:		Test Temp:	177 °F
Yield:	3.22 cf/sack	Free Water:		Time to 70bc:	5:09 hrs:min
Mix Water:	19.86 gps	Total Fluid:		Time to 100 bc:	

Rheology:	600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm	PV	YP	Gel Strength	
									10 sec	10 min

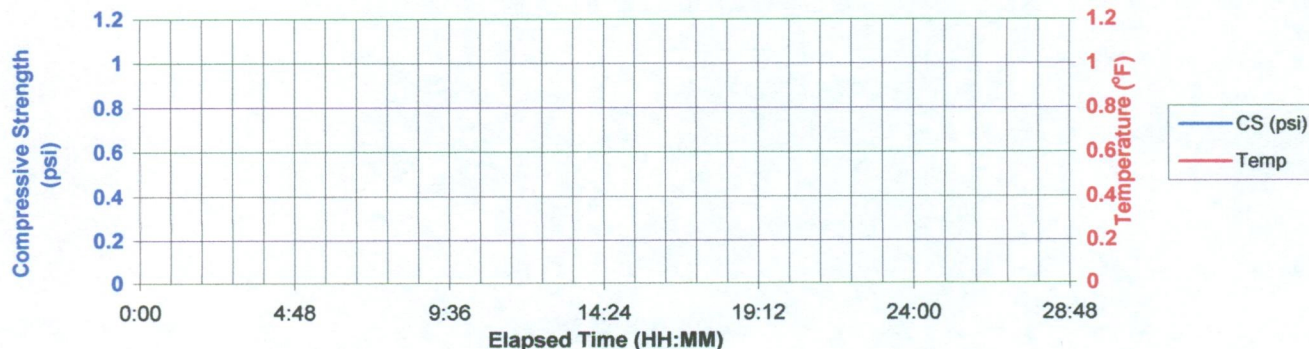
Consistometer Recording of Bearden Consistency:



Compressive Strength Data:

Temperature	12 hours	24 hours	36 hours	48 hours
25 psi				

Ultrasonic Cement Analyzer Data Chart:



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Customer/Well Information

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Well Name:	Bower #15-3	Depth TVD:	7,946 ft	Prepared for:	Crystal Mapes
API #:	05-123-36732-0000	TOC(md):		Submitted by:	Blake David
Location:	Weld County, Colorado	Casing Size:	4 1/2 in	Prepared by:	Michael Curl
District:	Brighton	Tubing Size:	4 1/2 in	Water Type:	Fresh
Type Job:	Longstring	Hole size:	7 7/8 in		

BHST: 254 °F BHCT: 177 °F BHSqT: °F

Slurry Design Data

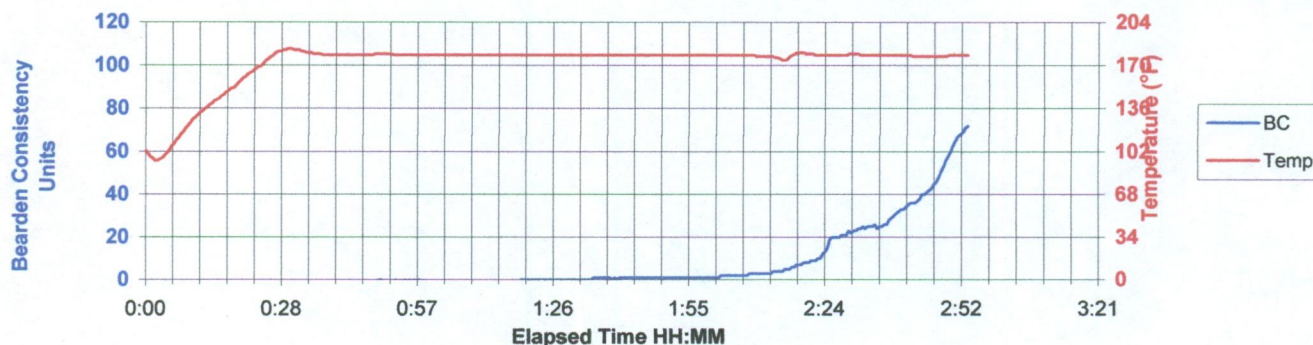
Slurry 2 : Premium Lite Cement + 2% Bentonite +0.2% R-3 + 0.4% FL-52

Slurry Properties

Density:	12.5 ppg	Fluid Loss:		Test Temp:	178 °F
Yield:	1.87 cf/sack	Free Water:		Time to 70bc:	2:53 hrs:min
Mix Water:	10.28 gps	Total Fluid:		Time to 100 bc:	

Rheology:	600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm	PV	YP	Gel Strength	
									10 sec	10 min

Consistometer Recording of Bearden Consistency:



Compressive Strength Data:

Temperature	12 hours	24 hours	36 hours	48 hours
25 psi				

Ultrasonic Cement Analyzer Data Chart:



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Baker Hughes Rocky Mountain Area Laboratory Report

Report #: C04-030-13

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Location:	Weld County, Colorado	Casing Size:	4 1/2 in	Prepared by:	Michael Curl
District:	Brighton	Tubing Size:	4 1/2 in	Water Type:	Fresh
Type Job:	Longstring	Hole size:	7 7/8 in		

BHST: 254 °F BHCT: 177 °F BHSqT: °F

Slurry Design Data

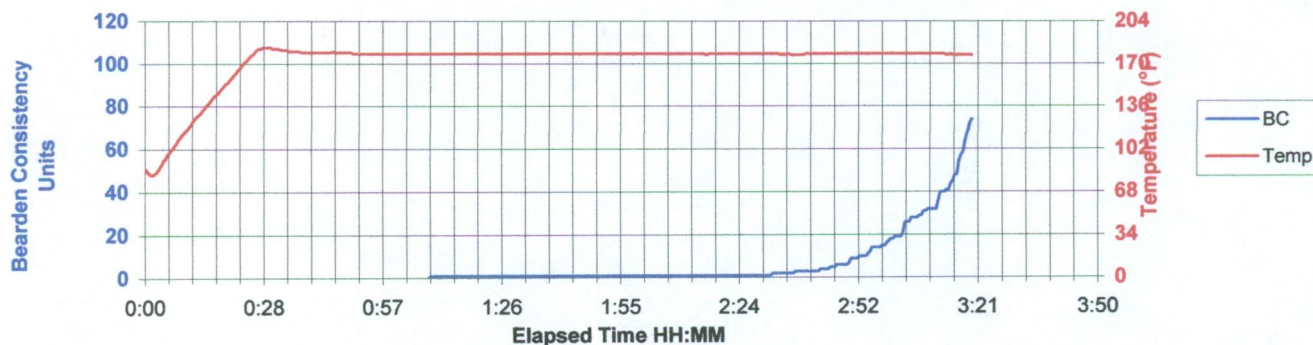
Slurry 3: Class G Cement:Poz (Fly Ash) (50:50) + 0.1% CD-32 + 0.4% FL-52 + 0.1% SMS

Slurry Properties

Density:	14.6 ppg	Fluid Loss:		Test Temp:	178 °F
Yield:	1.16 cf/sack	Free Water:		Time to 70bc:	3:19 hrs:min
Mix Water:	5.01 gps	Total Fluid:		Time to 100 bc:	

Rheology:	600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm	PV	YP	Gel Strength	
									10 sec	10 min

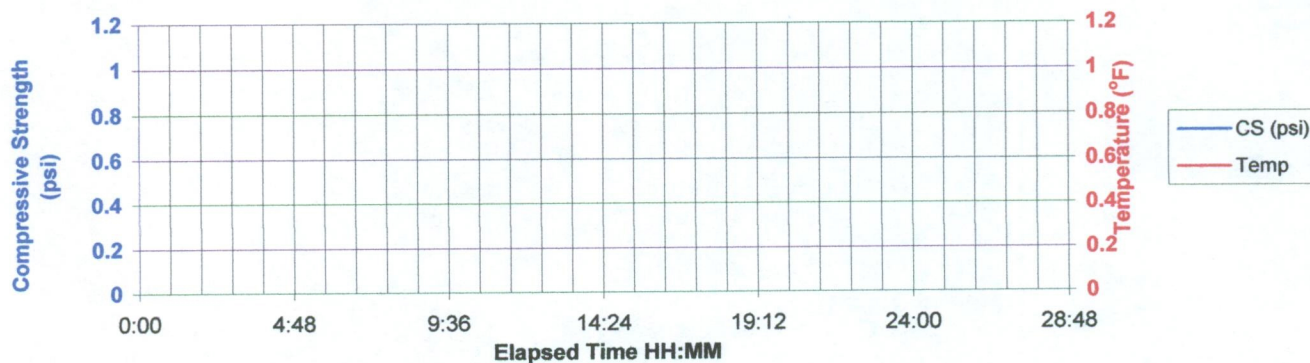
Consistometer Recording of Bearden Consistency:



Compressive Strength Data:

Temperature	12 hours	24 hours	36 hours	48 hours
25 psi				

Ultrasonic Cement Analyzer Data Chart:



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COMPANY:	<i>Bayswater Exploration</i>	DATE:	<i>April 6, 2013</i>
WELL NAME:	<i>Bower #15-3</i>	LOCATION:	<i>Weld County, Colorado</i>
DISTRICT:	<i>Brighton</i>	TYPE JOB:	<i>Fresh</i>

[illegible]

Water Analysis			
Temp:	°F	Viscosity:	cP
pH:		Color:	
Specific Gravity:		Odor:	
S.G Corrected:		Turbidity	
Resistivity:	Ω-m	Filtrates:	

Cation:	mg/L	me/l	ppm
Sodium (calc.)			
Calcium			
Magnesium:			
Potassium			
Iron			

Anions:	mg/L	me/l	ppm
Chloride			
Sulfates			
Hydroxide			
Carbonate			
Bicarbonate			

Summary	mg/L	me/l	ppm
Total Dissolved Solids (calc.)			
Total Hardness as CaCO ₃			

Mud / Spacer Compatibility

Mud:						
Spacer:						
	VISCOMETER DIAL READING					
	600	300	200	100	6	3
100% Mud						
100% Spacer						
75% Mud - 25% Spacer						
50% Mud - 50% Spacer						
25% Mud - 75% Spacer						

Comments: