

9/6/12
plug back

**CHEVRON - MID-CONTINENT EBIZ
11111 S WILCREST DR - DO NOT MAIL
HOUSTON, Texas**

Hagood L.N. A 14X

WORK OVER

Post Job Summary Plug Service - Whipstock

Date Prepared: 10/3/2012
Version: 1

Service Supervisor: BIRCHELL, DEVIN

Submitted by: Thomas Stumpf

EW
11/26/12
DUP

HALLIBURTON

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Wellbore Geometry

Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Casing	Upper Intermediate Casing	7.00	6.366	23.00	0.00	5,404.00	0.00
Casing	Lower Intermediate Casing	7.00	6.366	23.00	5,404.00	6,690.00	0.00
Tubing	2 7/8" Tubing	2.88	2.441	6.40	0.00	6,165.00	0.00

Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	Water Ahead	8.34	2.00	13.0 bbl
2	Cement Slurry	PlugCem V1	15.80	2.00	77.0 sacks
3	Spacer	Water Behind	8.34	2.50	32.0 bbl

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Job Summary

Job Information

Job Start Date	9/6/2012 8:50:00 AM
Job MD	6,165.0 ft
Job TVD	6,165.0 ft
Height of Plug Container/Swage Above Rig Floor	4.0 ft
Surface Temperature at Time of Job	65 degF
Time From End Mud Circ. to Job Start	1,200.00 minute
Pipe Movement During Cementing	None
Job Displaced by (rig/halco)	Cement Unit HP Pumps

Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
09/06/2012 03:00	Call Out				Called Out Cement Crew For Chevron, Hagood L.N. A14X Whipstock Plug
09/06/2012 04:20	Pre-Convoy Safety Meeting				Discussed Hazards On Route To Location
09/06/2012 04:30	Depart from Service Center or Other Site				
09/06/2012 06:30	Arrive At Loc				Arrived To Location Talked With Company Rep On Volumes, Rates, Depths
09/06/2012 06:40	Pre-Rig Up Safety Meeting				Discussed Hazards For Rigging Up Iron and Water Hoses
09/06/2012 06:50	Rig-Up Equipment				
09/06/2012 07:45	Rig-Up Completed				Finished Rigging Up To The Floor And Well Head
09/06/2012 07:48	Prime Pumps				Primed Pumps and Lines For Pressure Test
09/06/2012 08:00	Wait on Customer or Customer Sub-Contractor Equip				Rig Crew Circulating Gas Out Of Well, 250 bbls River Water
09/06/2012 08:40	Pre-Job Safety Meeting				Discussed Job Procedures With Cement and Rig Crews
09/06/2012 08:52	Pressure Test			3800.0	Test Pump and Lines to 3800 psi

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
09/06/2012 08:57	Pump Spacer	2	13	63.0	Pumped 10 bbls Fresh Water Spacer To Establish Circulation
09/06/2012 09:02	Pump Cement	2	15	46.0	Pumped 15 bbls (77sks) 15.8 ppg Slurry, Yield 1.15 ft3/sk Water 4.99 gal/sk
09/06/2012 09:10	Pump Displacement	2.5	32	52.0	Pumped 32 bbls Fresh Water Displacement
09/06/2012 09:23	Move Tubing Up				Rig Crew Tried To Pull Tubing To Reverse Circulate, And Tubing Would Not Move
09/06/2012 09:23	Clean Lines				Cleaned Pump And Lines To Haul Off Pit
09/06/2012 09:47	Reverse Circ Well	1.7	36	826.0	Set Manifold To Reverse Circulate Pressured Up To 826 psi @ 1.7 bpm, No Returns Pumped 36 bbls Fresh Water Down Annulus
09/06/2012 10:26	Pressure Up Tubing			2026.0	Tried To Pump Down Tubing, Pressured Tubing To 2026 psi And Shut In
09/06/2012 10:31	Pump Water	1.6	50	486.0	Pumped 50 bbls Water Down Annulus
09/06/2012 11:07	Shutdown				
09/06/2012 11:10	Post-Job Safety Meeting (Pre Rig-Down)				Discussed Hazards For Rigging Down Iron and Water Hoses
09/06/2012 11:20	Rig-Down Equipment				
09/06/2012 12:00	Rig-Down Completed				
09/06/2012 12:05	Pre-Convoy Safety Meeting				Discussed Hazards On Route To Service Center
09/06/2012 12:10	Depart Location for Service Center or Other Site				

The Road to Excellence Starts with Safety

Sold To #: 338668	Ship To #: 2507096	Quote #:	Sales Order #: 9797302
Customer: CHEVRON - MID-CONTINENT EBIZ	Customer Rep:		
Well Name: Hagood L.N.	Well #: A 14X	API/UWI #: 05-103-07950	
Field: RANGELY	City (SAP): RANGELY	County/Parish: Rio Blanco	State: Colorado
WEBER SAND UNIT			
Legal Description: Section 23 Township 2N Range 103W			
Contractor: WORK OVER	Rig/Platform Name/Num: WORK OVER		
Job Purpose: Plug Service - Whipstock			
Well Type: Producing Well	Job Type: Plug Service - Whipstock		
Sales Person: LEHAR, JARED	Srv Supervisor: BIRCHELL, DEVIN	MBU ID Emp #: 466993	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BIRCHELL, DEVIN	0.0	466993	ESTEP, KENNETH	0.0	214387	HUNTER, SAMUEL	0.0	479669
Ray						David		
SMITH, BRET George	0.0	529662						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10872435	60 mile	11259880	60 mile	11338211	60 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL			Total is the sum of each column separately					

Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Wk Ht Above Floor	Perforation Depth (MD)	From	To
				BHST	6165. ft	6165. ft	4. ft			

Job Times

Called Out	Date	Time	Time Zone
On Location	06 - Sep - 2012	00:00	MST
Job Started	06 - Sep - 2012	06:30	MST
Job Completed	06 - Sep - 2012	08:50	MST
Job Completed	06 - Sep - 2012	11:00	GMT
Departed Loc	06 - Sep - 2012	12:10	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Lower Intermediate Casing	Unknown		7.	6.366	23.		N-80	5404.	6690.		
Upper Intermediate Casing	Unknown		7.	6.366	23.		J-55	.	5404.		
2 7/8" Tubing	Unknown		2.875	2.441	6.4		J-55	.	6165.		

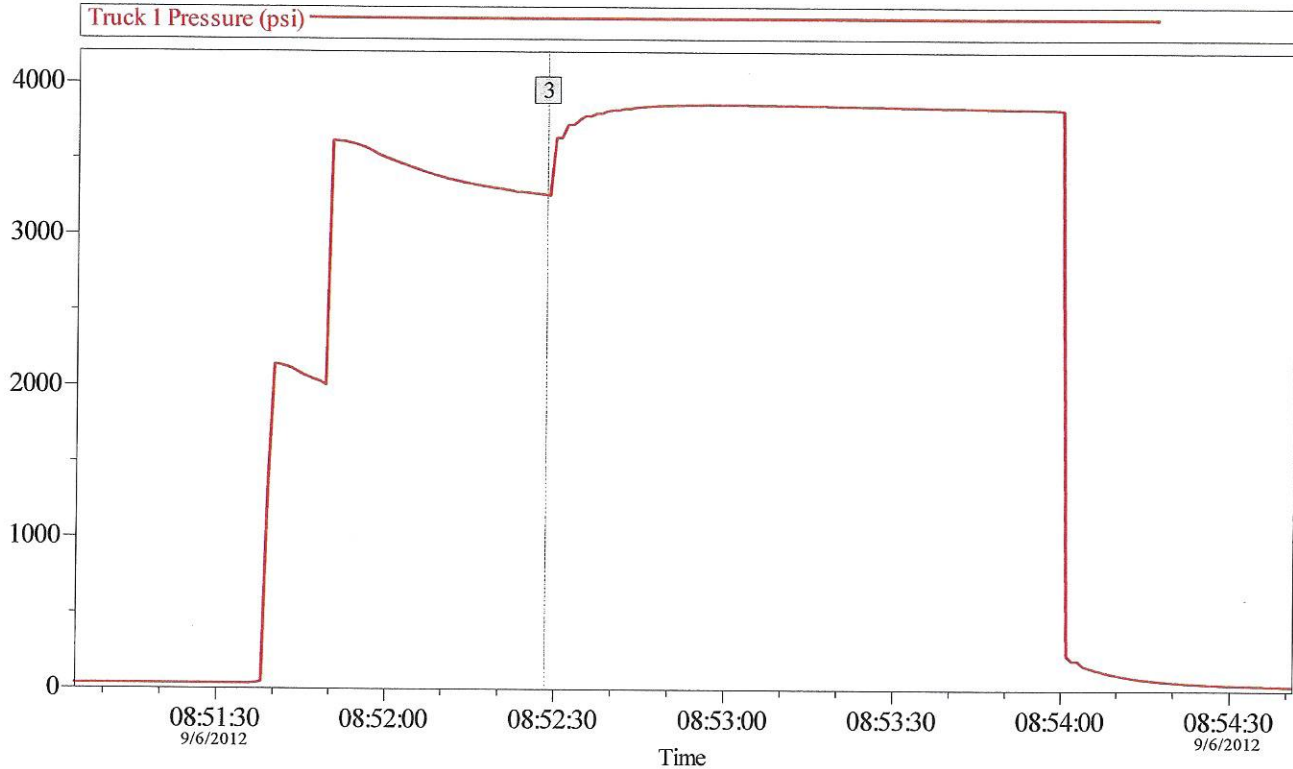
Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
SUGAR - GRANULATED	20	LB		

Tools and Accessories													
Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			
Miscellaneous Materials													
Gelling Agt			Conc		Surfactant			Conc		Acid Type		Qty	Conc %
Treatment Fld			Conc		Inhibitor			Conc		Sand Type		Size	Qty
Fluid Data													
Stage/Plug #: 1													
Fluid #	Stage Type	Fluid Name				Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk	
1	Water Ahead					13.00	bbl	8.34	.0	.0	3.0		
2	PlugCem V1	PLUGCEM (TM) SYSTEM (452969)				77.0	sacks	15.8	1.15	4.99	3.0	4.99	
	0.3 %	HR-800, 50 LB SACK (101619742)											
	4.988 Gal	FRESH WATER											
3	Water Behind					32.00	bbl	8.34	.0	.0	3.0		
Calculated Values		Pressures		Volumes									
Displacement		Shut In: Instant			Lost Returns			Cement Slurry			Pad		
Top Of Cement		5 Min			Cement Returns			Actual Displacement			Treatment		
Frac Gradient		15 Min			Spacers			Load and Breakdown			Total Job		
Rates													
Circulating		Mixing			Displacement			Avg. Job					
Cement Left In Pipe	Amount	0 ft	Reason	Shoe Joint									
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @	ID			
The Information Stated Herein Is Correct					Customer Representative Signature								

Data Acquisition

Chevron, Hagood L.N. A14X Whipstock Pressure Test



Global Event Log

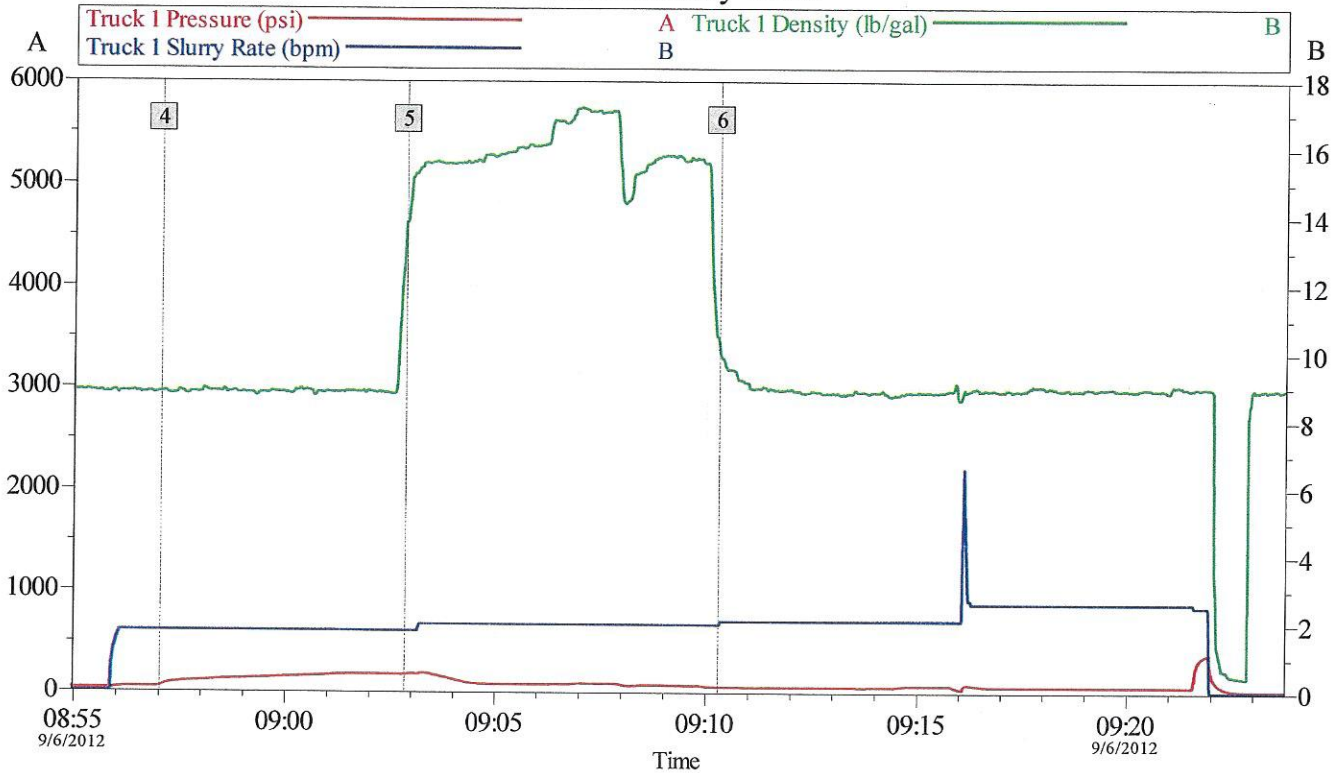
3 Test Lines 08:52:29

Customer: Chevron	Job Date: 06-Sep-2012	Sales Order #: 9797302
Job Description: Whipstock	UWI: 05-103-07950	Elite #: 10972435
Service Supervisor: Devin Birchell	Service Operator: Sam Hunter	Service Leader: None

OptiCem v6.4.10
06-Sep-12 09:31

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Chevron, Hagood L.N. A14X Whipstock Job Summary Chart



Global Event Log

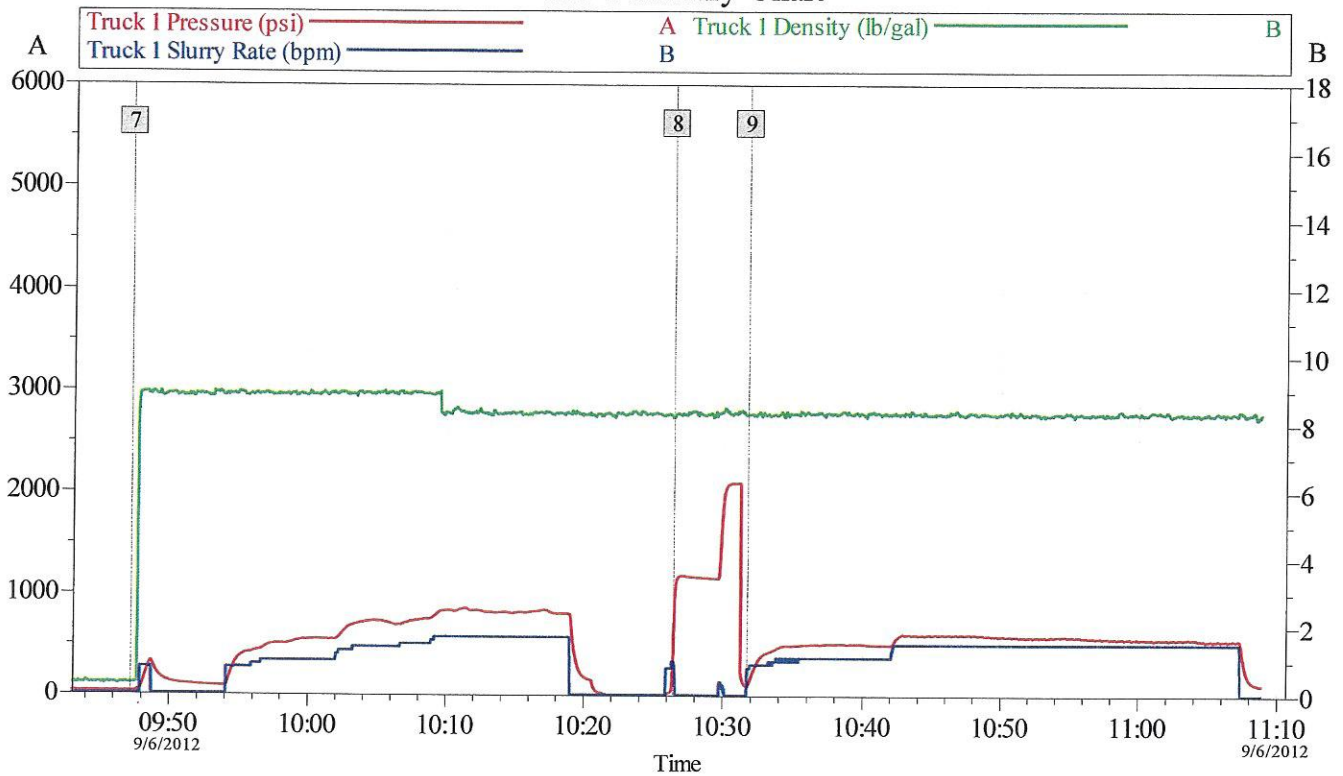
4 Pump Spacer 1 08:57:03 5 Pump Cement 09:02:52 6 Pump Displacement 09:10:19

Customer: Chevron	Job Date: 06-Sep-2012	Sales Order #: 9797302
Job Description: Whipstock	UWI: 05-103-07950	Elite #: 10972435
Service Supervisor: Devin Birchell	Service Operator: Sam Hunter	Service Leader: None

OptiCem v6.4.10
06-Sep-12 09:32

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Chevron, Hagood L.N. A14X Whipstock, Job Summary Chart



Global Event Log

7 Reverse Circ Well 09:47:18 8 Pressure Up Tubing 10:26:31 9 Pump Down Annulus 10:31:48

Customer: Chevron	Job Date: 06-Sep-2012	Sales Order #: 9797302
Job Description: Whipstock	UWI: 05-103-07950	Elite #: 10972435
Service Supervisor: Devin Birchell	Service Operator: Sam Hunter	Service Leader: None

OptiCem v6.4.10
06-Sep-12 11:08

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Lab Data

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Cementing Rockies, Vernal

LAB RESULTS - Plug

Job Information

Request/Slurry	269627/1	Rig Name	Workover	Date	06/SEP/2012
Submitted By	Charli Brown	Job Type	Cased Hole Plug	Bulk Plant	Vernal
Customer	Chevron	Location	Rio Blanco	Well	Hagwood LN A 14X

Well Information

Casing/Liner Size	7"	Depth MD	6162 ft	BHST	153 F
Hole Size		Depth TVD	6162 ft	BHCT	127 F

Cement Information - Plug Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties	
						Slurry Density	16.50 PPG
						Slurry Yield	1.05 ft ³ /sk
100.00	% BWOC	Mountain G	Bulk	Sep 06, 2012	1000036	Water Requirement	4.26 GPS
4.26	gal/sack	Field (Fresh) Water	Bulk	Sep 06, 2012	9-6-12	Total Mix Fluid	4.26 GPS
0.300	% BWOC	HR-800	Bulk	Sep 06, 2012	7031201		

Water Source Field (Fresh) Water

Investigation Test Results Request ID 269627/1

Thickening Time - ON-OFF-ON, Request Test ID:2897893

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
128	4,784	14	02:51	02:51	02:51	02:58	10	20	20	12

Sample Bag Number 2

Mixability (0 - 5) - 0 is not mixable, Request Test ID:2897885

Mixability rating (0 - 5)

5

API Rheology, Request Test ID:2897894

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	284	138	118	94	84	70	33	23	0	103.5 / 48.4

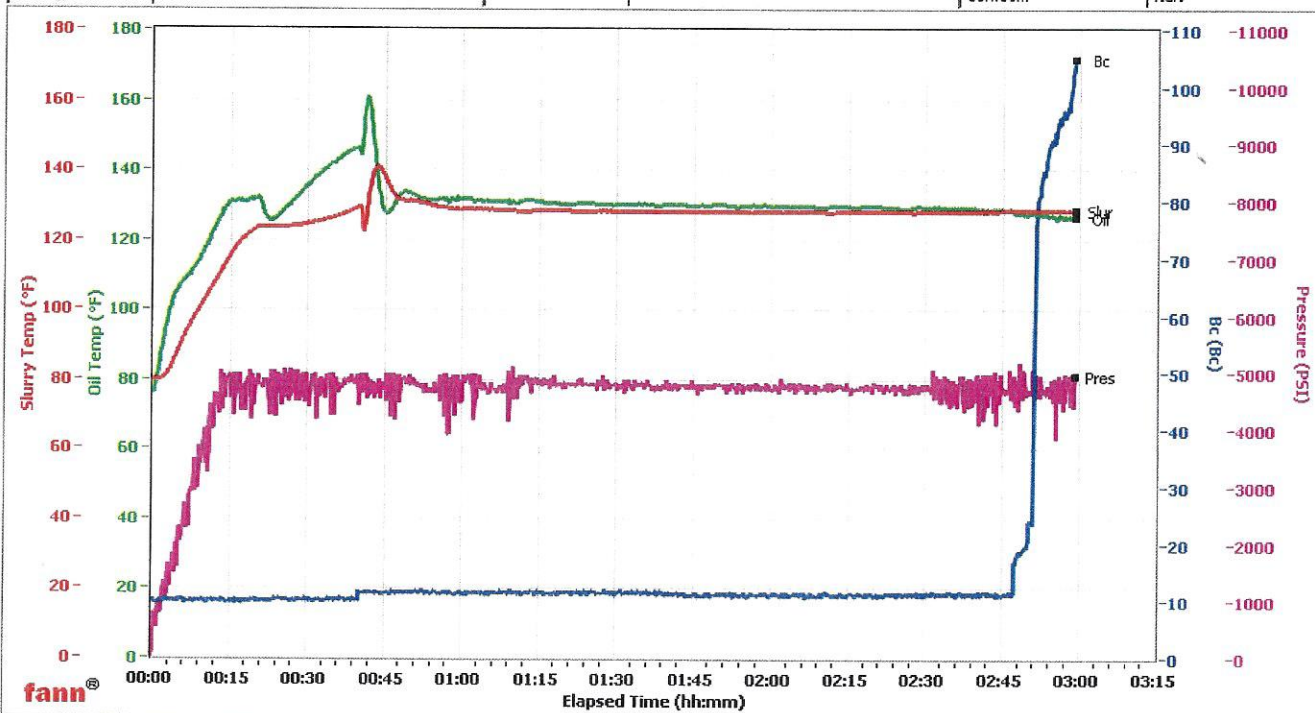
HALLIBURTON

VERNAL

Fields	Values
Project Name	CHEVRON
Test ID	269627-1
Request ID	HPHT #7
Tested by	D.O.
Customer	CHEVRON
Well No	LN A 14X
Rig	7
Casing/Liner Size	7

Fields	Values
Job Type	
Cement Type	G
Cement Weight	Light Weight
Test Date	09/07/12
Test Time	02:09 AM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	02h:51m
50.00 Bc	02h:51m
60.00 Bc	02h:51m
70.00 Bc	02h:51m
100.00 Bc	02h:58m
200.00 Bc	NaN
00h:39m	10.49
06h:00m	NaN



Data File O:\HPHT Data Files\Vernal Consistometer #7\CHEVRON 269627-1.tdms

Comments 16.5 DEN, 1.05 YD THIS IS BAG #2

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Cementing Rockies, Vernal

LAB RESULTS - Plug

Job Information

Request/Slurry	269627/2	Rig Name	Workover	Date	06/SEP/2012
Submitted By	Charli Brown	Job Type	Cased Hole Plug	Bulk Plant	Vernal
Customer	Chevron	Location	Rio Blanco	Well	Hagwood LN A 14X

Well Information

Casing/Liner Size	7"	Depth MD	6162 ft	BHST	153 F
Hole Size		Depth TVD	6162 ft	BHCT	127 F

Cement Information - Plug Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						Slurry Density	16.50	PPG
						Slurry Yield	1.05	ft ³ /sk
100.00	% BWOC	Mountain G	Bulk	Sep 06, 2012	1000036	Water Requirement	4.26	GPS
0.300	% BWOC	HR-800	Bulk	Sep 06, 2012	7031201	Total Mix Fluid	4.26	GPS
4.26	gal/sack	Field (Fresh) Water	Bulk	Sep 06, 2012	w-208 Chevron			
						Water Source	Field (Fresh) Water	

Investigation Test Results Request ID 269627/2

Thickening Time - ON-OFF-ON, Request Test ID:2898284

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
128	4,784	14	02:02	02:25	02:26	02:26	10	20	20	23

Almost no deflection out of shutdown 21-23 Bc. Sample Bag Number 2

Mixability (0 – 5) – 0 is not mixable, Request Test ID:2898283

Mixability rating (0 – 5)

5

Used river water.

API Rheology, Request Test ID:2898282

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	305	151	124	96	82	64	31	21	0	120 / 44

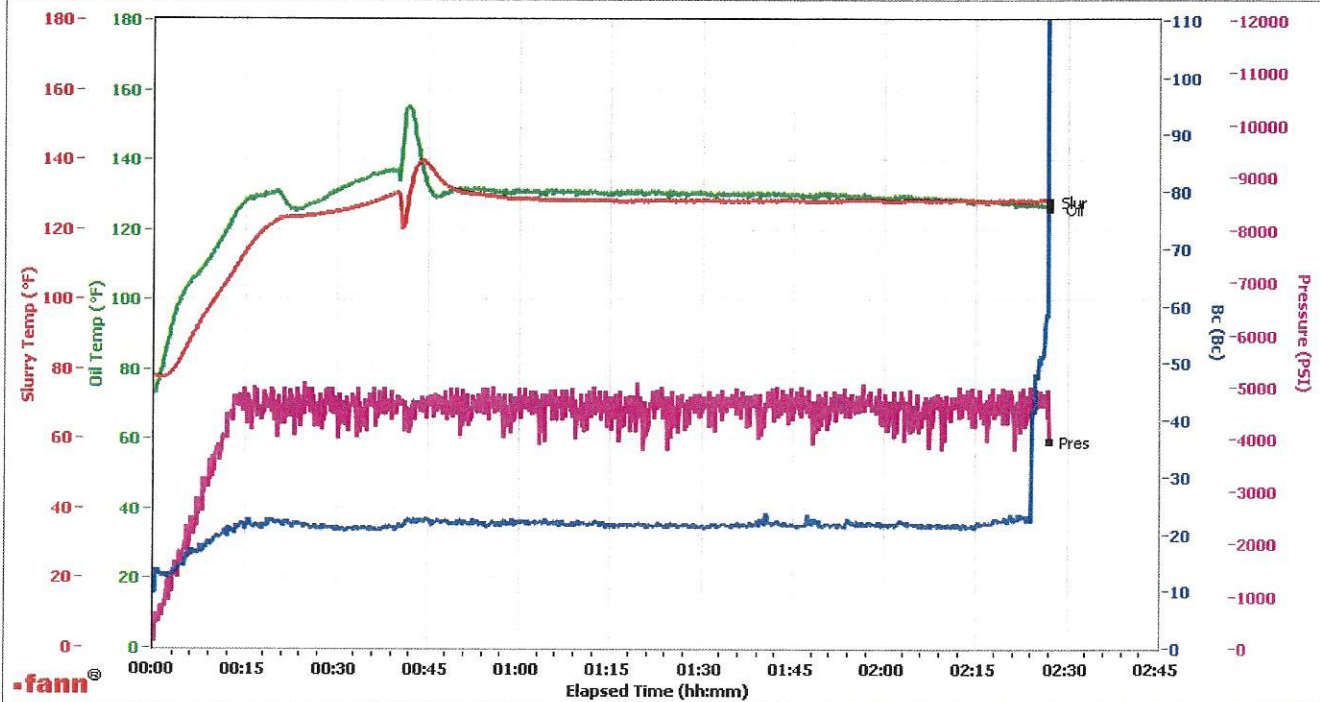
HALLIBURTON

VERNAL

Fields	Values
Project Name	CHEVRON 296627-2
Test ID	296627-2
Request ID	HPHT #8
Tested by	PBL
Customer	CHEVRON
Well No	HAGWOOD LN A 14X
Rig	WORKOVER
Casing/Liner Size	7

Fields	Values
Job Type	CASED HOLE PLUG INVEST
Cement Type	G
Cement Weight	Standard
Test Date	09/06/12
Test Time	11:27 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	02h:24m
50.00 Bc	02h:25m
60.00 Bc	02h:26m
70.00 Bc	02h:26m
100.00 Bc	02h:26m
200.00 Bc	NaN
03h:00m	NaN
06h:00m	NaN



Data File Z:\HPHT Data Files\Vernal Consistometer #8\CHEVRON 296627-2.tdms

Comments DEN 16.499, YLD 1.05

HALLIBURTON

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Cementing Rockies, Vernal

LAB RESULTS – Plug

Job Information

Request/Slurry	269628/1	Rig Name	Workover	Date	06/SEP/2012
Submitted By	Charli Brown	Job Type	Cased Hole Plug	Bulk Plant	Vernal
Customer	Chevron	Location	Rio Blanco	Well	Hagwood LN A 14X

Well Information

Casing/Liner Size	7"	Depth MD	6162 ft	BHST	153 F
Hole Size		Depth TVD	6162 ft	BHCT	127 F

Cement Information – Plug Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						Slurry Density	16.50	PPG
						Slurry Yield	1.05	ft3/sk
						Water Requirement	4.26	GPS
						Total Mix Fluid	4.26	GPS
100.00	% BWOC	Mountain G	Bulk	Sep 06, 2012	1000036			
					85			
4.26	gal/sack	Field (Fresh) Water	Bulk	Sep 06, 2012	9-6-12			
0.300	% BWOC	HR-800	Bulk	Sep 06, 2012	7031201			
						Water Source	Field (Fresh) Water	

Investigation Test Results Request ID 269628/1

Thickening Time – ON-OFF-ON, Request Test ID:2897889

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
128	4,786	14	02:44	02:56	02:59	03:05	20	20	20	20

No deflection out of shutdown. Bc = 20 before and after Sd. Sample Bag Number 1

Mixability (0 - 5) - 0 is not mixable, Request Test ID:2897887

Mixability rating (0 - 5)

5

API Rheology, Request Test ID:2897890

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	180	90	73	55	46	40	20	16	0	69.2 / 27.1

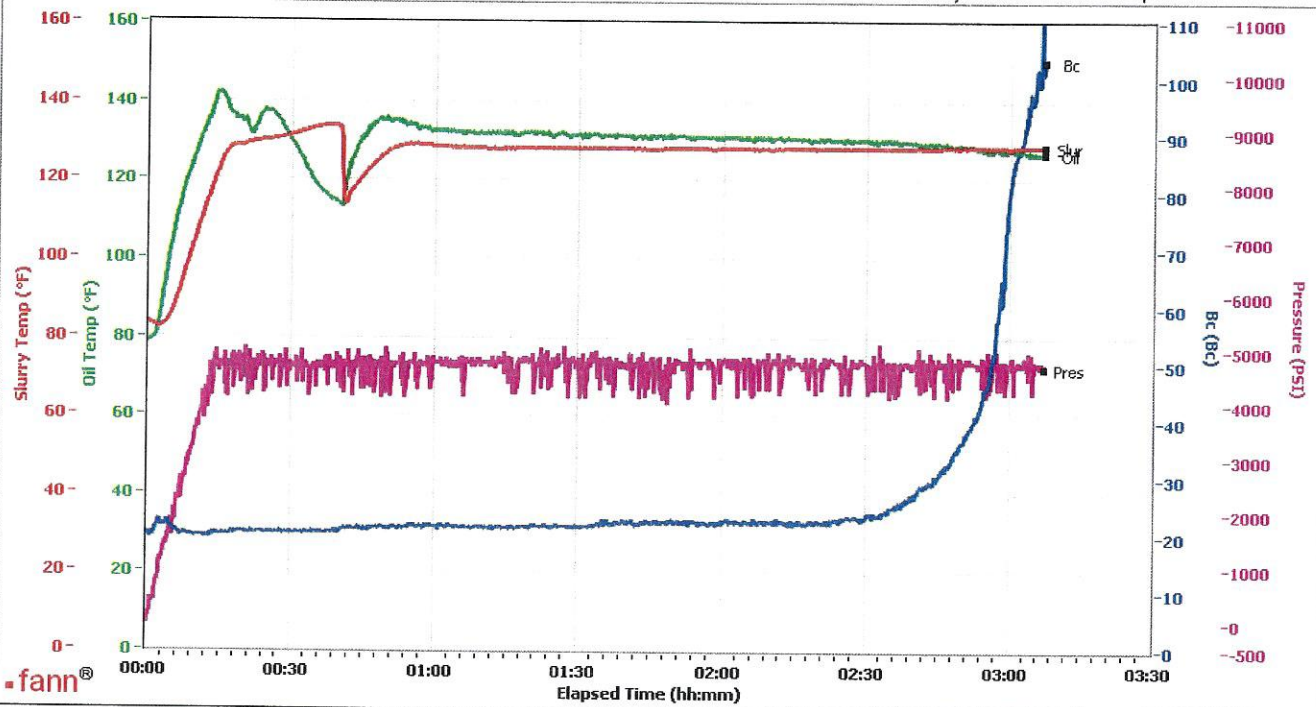
HALLIBURTON

VERNAL

Fields	Values
Project Name	CHEVRON
Test ID	269628-1
Request ID	HPHT #6
Tested by	D.O.
Customer	CHEVRON
Well No	LN A 14X
Rig	
Casing/Liner Size	7

Fields	Values
Job Type	PLUG
Cement Type	G
Cement Weight	Light Weight
Test Date	09/06/12
Test Time	05:17 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
30.00 Bc	02h:44m
50.00 Bc	02h:56m
70.00 Bc	02h:59m
100.00 Bc	03h:05m
00h:36m	20.67
01h:00m	21.76
01h:30m	21.71
02h:00m	22.82



Data File Y:\HPHT Data Files\Vernal Consistometer #6\CHEVRON 269628-1.tdms

Comments 16.5 DEN, 1.05 THIS IS BAG #1