HALLIBURTON

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

MC Hagood B2

H&P 304 **432-238-4515**

Post Job Summary
Cement Surface Casing

Prepared for: Bryce Schroeder
Date Prepared: June 23, 2011
Version: 1

Service Supervisor: BIRCHELL, DEVIN

Submitted by: Joshua Anglin

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Wellbore Geometry

Job Tubulars					MD		TVD		Excess	Shoe Joint Length
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	%	ft
Casing	Conductor Casing	16.00	15.010	84.00	0.00	60.00				
Open Hole Section	12-1/4" Hole		12.250		60.00	2,000.00				
Casing	Surface Casing	9.63	8.921	36.00	0.00	2,000.00				40.00

Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	Gel Water	8.50	0.00	20.0 bbl	20.0 bbl
1	2	Cement Slurry	Tuned Light Lead	11.00		330.0 sacks	330.0 sacks
1	3	Cement Slurry	Tuned Light Tail	12.00		165.0 sacks	165.0 sacks
1	4	Spacer	Displacement	8.34	0.00	151.0 bbl	151.0 bbl
1	5	Cement Slurry	Top Out Cement	15.80			151.0 bbl

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Fluids Pumped

Stage/Plug # 1 **Fluid 1:** Gel Water

DUMMY MUD / FLUSH / SPACER SBC MATERIAL

10 lbm/bbl Halliburton Gel

Fluid Density:	8.50 lbm/gal
Fluid Volume:	20.00 bbl
Pump Rate:	0.00 bbl/min

Stage/Plug # 1 **Fluid 2:** Tuned Light Lead

TUNED LIGHT (TM) SYSTEM

0.125 lbm Poly-E-Flake

Fluid Weight:	11.00 lbm/gal
Slurry Yield:	2.88 ft3/sack
Total Mixing Fluid:	15.68 Gal
Surface Volume:	330.0 sacks
Sacks:	330.0 sacks
Calculated Fill:	1,500.00 ft
Calculated Top of Fluid:	0.00 ft
Estimated Top of Fluid:	

Stage/Plug # 1 **Fluid 3:** Tuned Light Tail

TUNED LIGHT (TM) SYSTEM

0.125 lbm Poly-E-Flake

Fluid Weight:	12.00 lbm/gal
Slurry Yield:	2.03 ft3/sack
Total Mixing Fluid:	9.48 Gal
Surface Volume:	165.0 sacks
Sacks:	165.0 sacks
Calculated Fill:	500.00 ft
Calculated Top of Fluid:	1,500.00 ft
Estimated Top of Fluid:	

Stage/Plug # 1 **Fluid 4:** Displacement

DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density:	8.34 lbm/gal
Fluid Volume:	151.00 bbl
Pump Rate:	0.00 bbl/min

Stage/Plug # 1 **Fluid 5:** Top Out Cement

Top Out Cement

94 lbm Premium Cement

2 % Calcium Chloride, Pellet

Fluid Weight:	15.80 lbm/gal
Slurry Yield:	1.17 ft3/sack
Total Mixing Fluid:	5.02 Gal
Estimated Top of Fluid:	

HALLIBURTON

Job Summary

Job Information

Job Start Date	6/22/2011 11:35:00 AM
Job MD	2,000.0 ft
Job TVD	2,000.0 ft
Height of Plug Container/Swage Above Rig Floor	4.0 ft
Surface Temperature at Time of Job	72 degF
Time Circulated before job	1.33 hour(s)
Pipe Movement During Hole Circulation	None
Pipe Movement During Cementing	None
Calculated Displacement	148.00 bbl
Amount of Cement Returns	90.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	No
Length of Rat Hole	6.00 ft

Cementing Equipment

Number of Centralizers Used	13
Did Float Equipment Hold?	Unknown
Plug set used?	Yes
Brand of Plug set used?	Halliburton
Did Plugs Bump?	No
Calculated Pressure to Bump Plugs	227.0 psig
Did Stage Cementing Tool Open Properly?	Unknown

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Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
06/21/2011 21:30		Call Out							Called Crew for Job
06/21/2011 23:20		Pre-Convoy Safety Meeting							Discussed Possible Hazerds on Route to Location
06/21/2011 23:40		Depart from Service Center or Other Site							Crew Left Yard
06/22/2011 01:00		Arrive At Loc							
06/22/2011 06:30		Pre-Rig Up Safety Meeting							Discussed Possible Hazerds of Rigging Up
06/22/2011 09:00		Rig-Up Completed							
06/22/2011 09:05		Wait on Customer or Customer Sub-Contractor Equip							Casing Crew Rigging Down, Rig Conditioning Hole
06/22/2011 11:10		Pre-Job Safety Meeting							Went over proccidures With Crews
06/22/2011 11:35		Test Lines						4000.0	Tested Lines to 4000 psi
06/22/2011 11:38		Pump Spacer	4	20				150.0	Pumped 20 bbl Fresh Water Spacer
06/22/2011 11:44		Pump Spacer	4	20				150.0	Pumped 20 bbls Gel Spacer
06/22/2011 11:51		Pump Lead Cement	5.2	169				200.0	Pump 169 bbls Lead Slurry @ 11 ppg Yield 2.88 cuft/sk Mix Fluid 15.68 gal/sk
06/22/2011 12:24		Pump Tail Cement	5.2	59				50.0	Pump 59 bbls Tail Slurry @ 12 ppg Yield 2.03 cuft/sk Mix Fluid 9.48 gal/sk
06/22/2011 12:37		Drop Top Plug							
06/22/2011 12:38		Clean Lines							Cleaned Pump and Lines On top of Plug
06/22/2011 12:39		Pump Displacement - Start	6						Dislpasted 142 bbls First 40 water could not get mud very good

HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
06/22/2011 12:49		Displ Reached Cmnt	6	8				200.0	Displacent reach Cement With 8 bbls away
06/22/2011 12:50		Cement Returns to Surface	6	58				250.0	With 58 bbls away
06/22/2011 13:05		Slow Rate	3					380.0	Slowed to 2.5 bpm to land Plug
06/22/2011 13:15		Bump Plug		151				330.0	Pumped 151, 3 bbls Half of Shue Joint Plug Did not Bump
06/22/2011 13:16		Check Floats							Floats Held With .5 bbl Back
06/22/2011 13:17		Other							Wait to see if Cement falls
06/22/2011 13:40		Pre-Rig Down Safety Meeting							Discussed Hazerds in rig-down procidure
06/22/2011 14:40		Rig-Down Completed							
06/22/2011 14:50		Pre-Convoy Safety Meeting							Discussed All Hazerds in Route Home
06/22/2011 15:00		Depart Location for Service Center or Other Site							

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 338668	**Ship To #:** 338668	**Quote #:**	**Sales Order #:** 8264210
Customer: CHEVRON - MID-CONTINENT EBIZ		**Customer Rep:**	
Well Name: MC Hagood	**Well #:** B2		**API/UWI #:**
Field:	**City (SAP):** HOUSTON	**County/Parish:** Gilpin	**State:** Colorado
Contractor: H&P	**Rig/Platform Name/Num:** 304	432-238-4515	
Job Purpose: Cement Surface Casing			
Well Type: Development Well	**Job Type:** Cement Surface Casing		
Sales Person: SCHROEDER, BRYCE	**Srvc 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 #
ALLRED, JARED Don		471751	BIRCHELL, DEVIN Ray		466993	BROWN, CHRISTOPHER Paul		491062
GOODRICH, BENJAMIN Franklin		481342	SLAUGH, CODY B		104465			

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*
10948690	60 mile	11062230	60 mile	11076824	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		**BHST**			
Job depth MD	2000. ft	**Job Depth TVD**	2000. ft		
Water Depth		**Wk Ht Above Floor**	4. ft		
Perforation Depth (MD)	*From*		**To**		

Job Times

	Date	Time	Time Zone
Called Out			
On Location	22 - Jun - 2011	01:00	MST
Job Started	22 - Jun - 2011	11:35	MST
Job Completed	22 - Jun - 2011	00:00	MST
Departed Loc			

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
12-1/4" Hole				12.25				60.	2000.		
Conductor Casing	Unknown		16.	15.01	84.			.	60.		
Surface Casing	New		9.625	8.921	36.		H-40	.	2000.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		
SUGAR - GRANULATED	10	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			

HALLIBURTON

Cementing Job Summary

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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Gel Water		20.00	bbl	8.5	.0	.0	.0	
	10 lbm/bbl	HALLIBURTON GEL, 50 LB SK (100064040)							
2	Tuned Light Lead	TUNED LIGHT (TM) SYSTEM (452984)	330.0	sacks	11.	2.88	15.68		15.68
	0.125 lbm	POLY-E-FLAKE (101216940)							
	15.68 Gal	FRESH WATER							
3	Tuned Light Tail	TUNED LIGHT (TM) SYSTEM (452984)	165.0	sacks	12.	2.03	9.48		9.48
	0.125 lbm	POLY-E-FLAKE (101216940)							
	9.48 Gal	FRESH WATER							
4	Displacement		151.00	bbl	8.34	.0	.0	.0	
5	Top Out Cement	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)		sacks	15.8	1.17	5.02		5.02
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	5.019 Gal	FRESH WATER							

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 40 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

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Lab Data

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Cementing Rockies, Vernal

LAB RESULTS - Lead

Job Information

Request/Slurry	156501/1	**Rig Name**	H&P 304	**Date**	20/JUN/2011
Submitted By	Joshua Anglin	**Job Type**	Surface Casing	**Bulk Plant**	Vernal
Customer	Chevron	**Location**	Rio Blanco	**Well**	MC Hagood B2

Well Information

Casing/Liner Size	9 5/8"	**Depth MD**	2000 ft	**BHST**	106 F
Hole Size	12 1/4"	**Depth TVD**	0 ft	**BHCT**	90 F

Drilling Fluid Information

Mud Company	Type	Density	PV/YP

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		Tuned Light				Slurry Density	11.00	PPG
15.68	gal/sack	Field (Fresh) Water	Lab	Jul 22, 2010	7/22/2010	Slurry Yield	2.88	ft3/sk
						Water Requirement	15.68	GPS

Water Source	Field (Fresh) Water	
Water Chloride	N/A	ppm

Operation Test Results Request ID 156501/1

Thickening Time, Request Test ID:1570853, Historical Data

Temp (°F)	Pressure (psi)	Batch Mix (min)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)
90	1,200	0	17	16	11:05	11:53	11:53

35m Sd after 11h:18m pumping time, Bc's 28 to 78.

Marsh Funnel, Request Test ID:1570857, Historical Data

Volume [ml]	Time [Sec]	Foam Quality
250	15	0

Free fluid API 10B-2 / ISO 10426-2, Request Test ID:1570858, Historical Data

Con. Temp (F)	Cond. Time (min)	Static time (min)	Incl. (deg)	% Fluid
90	20	120	0	1.4

FYSA Viscosity Profile & Gel Strength, Request Test ID:1570856, Historical Data

Test Temp (°F)	600	300	200	100	60	30	6	3	3D - 3 rpm Decay	6D - 6 rpm Decay	K1 factor	K2 factor
80	28	12	9	8	6	6	6	5	4	4	0	1

HALLIBURTON

LAB RESULTS - Tail

HALLIBURTON

Cementing Rockies, Vernal

Job Information

Request/Slurry	156503/1	**Rig Name**	H&P 304	**Date**	20/JUN/2011
Submitted By	Joshua Anglin	**Job Type**	Surface Casing	**Bulk Plant**	Vernal
Customer	Chevron	**Location**	Rio Blanco	**Well**	MC Hagood B2

Well Information

Casing/Liner Size	9 5/8"	**Depth MD**	2000 ft	**BHST**	106 F
Hole Size	12 1/4"	**Depth TVD**	0 ft	**BHCT**	90 F

Drilling Fluid Information

Mud Company	Type	Density	PV/YP

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		Tuned Light				Slurry Density	12.00	PPG
9.48	gal/sack	Field (Fresh) Water	Lab	Jul 22, 2010	7/22/2010	Slurry Yield	2.03	ft3/sk
						Water Requirement	9.48	GPS

Water Source	Field (Fresh) Water	
Water Chloride	N/A	ppm

Operation Test Results Request ID 156503/1

Thickening Time, Request Test ID:1570864, Historical Data

Temp (°F)	Pressure (psi)	Batch Mix (min)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
90	1,200	0	17	26	05:30	09:13	09:13	09:13

35m SD at 8:38 pumping time - Bc's 34 to 137.

Marsh Funnel, Request Test ID:1570870, Historical Data

Volume [ml]	Time [Sec]	Foam Quality
250	17	0

Free Water, Request Test ID:1570866, Historical Data

Test Temp (°F)	% FW Vert
90	0

FYSA Viscosity Profile & Gel Strength, Request Test ID:1570869, Historical Data

Test Temp (°F)	600	300	200	100	6	3	3D - 3 rpm Decay	6D - 6 rpm Decay	K1 factor	K2 factor
80	58	41	40	45	49	45	44	46	0	1

API Fluid Loss, Request Test ID:1570867, Historical Data

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol (< 30 min, cc)	Extr. ISO FL (cc/30 min)
90	1,000	0.08	15	581

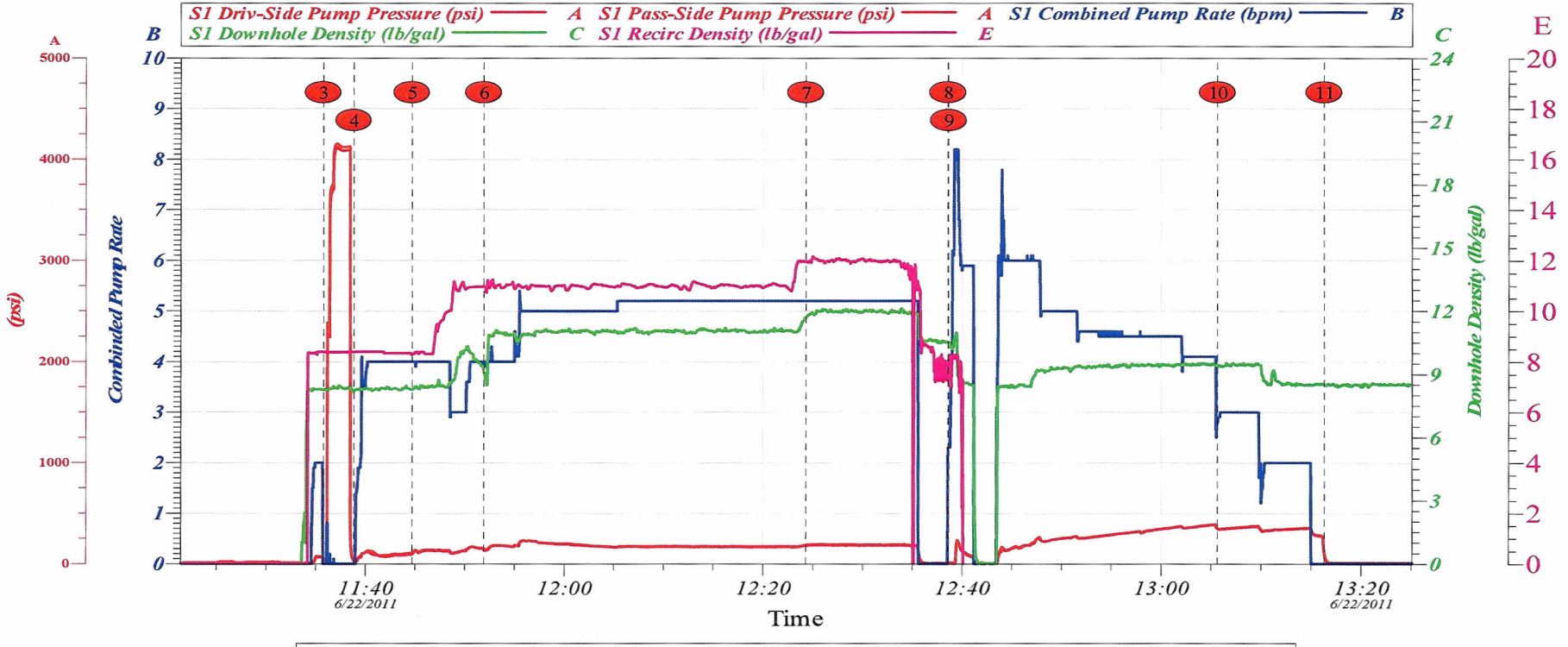
HALLIBURTON

Data Acquisition

Chevron MC Hagood B2

9.625 Surface

June 22nd, 2011



Global Event Log

3	Test Lines	11:35:45	4	Pump Spacer 1	11:38:49	5	Pump Spacer 2	11:44:41
6	Pump Lead Cement	11:51:54	7	Pump Tail Cement	12:24:16	8	Drop Top Plug	12:38:34
9	Pump Displacement	12:38:38	10	Slow Rate	13:05:39	11	Check Floats	13:16:17

Customer:	Chevron	Job Date:	22-Jun-2011	Sales Order #:	8264210
Well Description:	MC Hagood		B2	Elite #	11076824
Svc. Supervisor	D.Birchell	Svc. Operator	J.Allred	Svc. Leader	

OptiCem v6.3.3
22-Jun-11 13:45