

**ENCANA OIL & GAS (USA) INC. - EBUS  
DO NOT MAIL-3601 N STAGECOACH RD  
LONGMONT, Colorado**

Chavez 4A-4H

Ensign/124

## **Post Job Summary** **Cement Production Casing**

Date Prepared: 7/9/2012  
Version: 1

Service Supervisor: ROSALES, MATTHEW

Submitted by: KENNEDY, HERRON

**HALLIBURTON**

# HALLIBURTON

## ***Wellbore Geometry***

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Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Casing	Production Casing	4.50	4.000	11.60	0.00	11,760.00	91.00
Casing	Surface Casing	9.63	8.835	40.00	0.00	970.00	
Open Hole Section	Open Hole Section		6.125		7,449.00	11,730.00	

# HALLIBURTON

## Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	TUNED SPACER III	11.50	4.00	40.0 bbl	40.0 bbl
1	2	Cement Slurry	EXPANDACEM B2	13.80	4.00	340.0 sacks	340.0 sacks

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
06/30/2012 07:15		Start Job					
06/30/2012 07:15		Test Lines	0.5			4500.0	
06/30/2012 07:17		Pump Spacer 1	5.4	40		875.0	11.5#/GAL TUNED SPACER
06/30/2012 07:22		Pump Cement	5.2	101.7		500.0	EXPANDACEM: 340SKS, 571.2CUFT, 1.68CUFT/SK, 7.75GAL/SK, 13.8#/GAL, MIXED WITH WATER PROVIDED BY RIG
06/30/2012 07:45		Shutdown					
06/30/2012 07:45		Clean Lines					
06/30/2012 07:55		Drop Plug					LATCH DOWN PLUG, LOADED INTO BLACKHAWK PLUG CONTAINER, DART DROPPED BY BLACKHAWK HAND
06/30/2012 07:56		Pump Displacement	5	171.5		750.0	10BBL WATER WITH 1GAL MMCR, 140BBL BRINE WATER, 21.5BBL WATER
06/30/2012 08:34		Bump Plug	2	171.5		1790.0	PRESSURE REACHED 2050PSI IN THE 5MIN MONITOR PERIOD
06/30/2012 08:40		Check Floats					GOOD RETURNS THROUGH OUT JOB, 1BBL BACK TO TRUCK WHEN PRESSURE RELEASED
06/30/2012 08:40		End Job					

## The Road to Excellence Starts with Safety

Sold To #: 340078	Ship To #: 2933728	Quote #:	Sales Order #: 9631943
Customer: ENCANA OIL & GAS (USA) INC. - EBUS		Customer Rep: Office, Rich	
Well Name: Chavez		Well #: 4A-4H	API/UWI #: 05-123-35476
Field: WARRENBURG	City (SAP): HUDSON	County/Parish: Weld	State: Colorado
Contractor: Ensign		Rig/Platform Name/Num: 124	
Job Purpose: Cement Production Casing			
Well Type: Development Well		Job Type: Cement Production Casing	
Sales Person: AARON, WESLEY		Srvc Supervisor: ROSALES, MATTHEW	MBU ID Emp #: 392095

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BELL, ROBERT Preston	11.5	437060	CHAVEZ, JEROME Christophe	11.5	458298	EDWARDS, MICHEAL H	11.5	522592
JEWELL, WILLIAM Uris	11.5	503358	MARKOVICH, STEVEN Michael	11.5	502964	ROSALES, MATTHEW John	11.5	392095

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10679720C	12 mile	10857012C	12 mile	11064046C	12 mile	11605598	12 mile
11812069C	12 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	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	29 - Jun - 2012	19:30	MST
Form Type		BHST	Job Started	30 - Jun - 2012	22:30	MST
Job depth MD	11730. ft	Job Depth TVD	Job Completed	30 - Jun - 2012	07:15	MST
Water Depth		Wk Ht Above Floor	Departed Loc	30 - Jun - 2012	08:40	MST
Perforation Depth (MD)	From	To		30 - Jun - 2012	10:00	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
Open Hole Section				6.125				7449.	11730.	7449.	11730.
Production Casing	New		4.5	4.	11.6		P-110	.	11760.	.	11760.
Surface Casing	Used		9.625	8.835	40.		J-55	.	970.	.	970.

## 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			

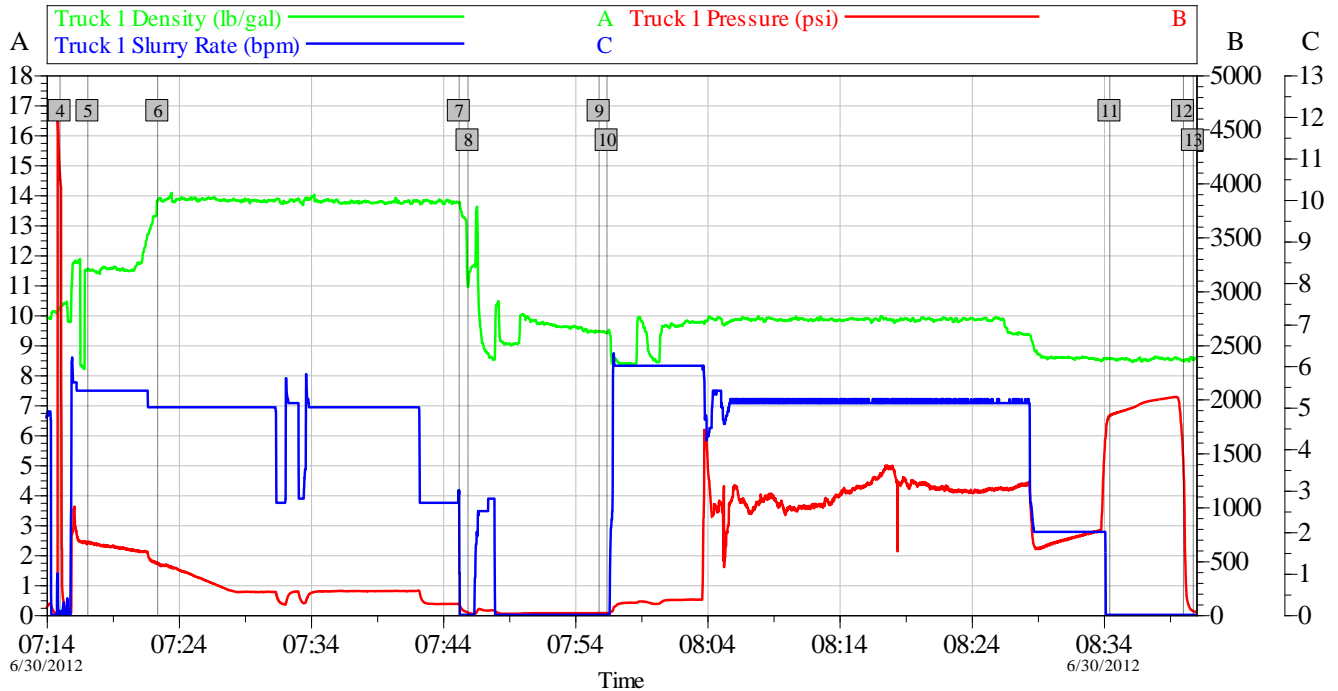
## Miscellaneous Materials

Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc	%
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	
<b>Fluid Data</b>													
<b>Stage/Plug #: 1</b>													
Fluid #	Stage Type	Fluid Name			Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk		
1	TUNED SPACER III	TUNED SPACER III - SBM (483826)			40.00	bbl	11.5	7.21	43.11	4.0			
30.27 lbm/bbl		BARITE, 100 LB SK (100003680)											
39.07 gal/bbl		FRESH WATER											
2	EXPANDACEM B2	EXPANDACEM (TM) SYSTEM (452979)			340.0	sacks	13.8	1.68	7.75	4.0	7.75		
7.75 Gal		FRESH WATER											
<b>Calculated Values</b>		<b>Pressures</b>			<b>Volumes</b>								
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		
<b>Rates</b>													
Circulating		Mixing			Displacement			Avg. Job					
Cement Left In Pipe	Amount	91 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								

# HALLIBURTON

## Data Acquisition

Encana - Chavez 4A-4H  
PRODUCTION



### Global Event Log

4 Test Lines	07:15:02	5 11.5#/gal Tuned Spacer	07:17:08	6 13.8#/gal Expandacem Cement	07:22:25
7 Shutdown	07:45:14	8 Clean Lines	07:45:54	9 Drop Latch Down Dart	07:55:49
10 Pump Displacement	07:56:25	11 Bump Plug/ Hold and Monitor Pressure	08:34:29	12 Release Pressure/ Check Floats	08:40:03
13 End Job	08:40:47				

Customer: ENCANA	Job Date: 30-Jun-2012	Sales Order #: 9631943
Well Description: CHAVEZ 4A-4H	UWI: 05-123-35476-00	
Halliburton Service Supervisor: Matthew J. Rosales	Halliburton Operator: Jerome Chavez	

OptiCem v6.4.10  
30-Jun-12 08:57