

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

Chavez  
Chavez 4B-4H

Ensign/124

## Post Job Summary

# Cement Production Casing

Date Prepared: 07/18/12  
Version: 1

Service Supervisor: SIPNEFSKI, ROBERT

Submitted by: MCKAY, ADAM

HALLIBURTON

# HALLIBURTON

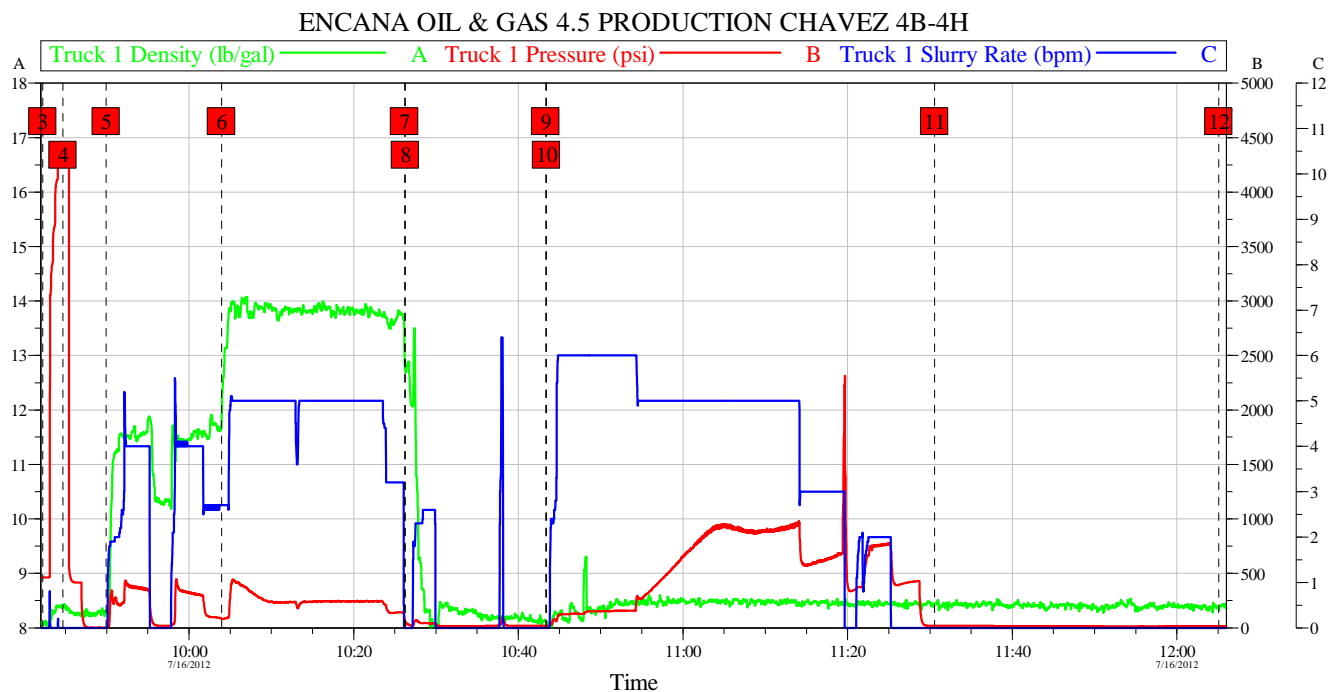
## ***Wellbore Geometry***

Job Tubulars					MD		TVD		Excess %	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft		
Casing	Production Casing	4.50	4.000	11.60	0.00	11,739.00	0.00	11,739.00		91.00
Casing	Surface Casing	9.63	8.835	40.00	0.00	970.00	0.00	970.00		
Open Hole Section	Open Hole Section		6.125		7,449.00	11,739.00	7,449.00	11,739.00		

## ***Pumping Schedule***

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	TUNED SPACER III	11.50	4.00	40.0 bbl	40.0 bbl
1	2	Cement Slurry	EXPANDACEM B2	13.80	5.00	325.0 sacks	325.0 sacks
1	3	Spacer	ClayWeb III	8.34	5.00	-	-

## Data Acquisition



### Global Event Log

Intersection	TIP	Intersection	TIP	Intersection	TIP
<b>3</b> Start Job	09:42:15 462.0	<b>4</b> Test Lines	09:44:42 4388	<b>5</b> Pump Spacer 1	09:49:57 1.000
<b>6</b> Pump Cement	10:03:58 84.00	<b>7</b> Shutdown	10:26:12 81.17	<b>8</b> Clean Lines	10:26:18 58.33
<b>9</b> Drop Top Plug	10:43:20 18.00	<b>10</b> Pump Displacement	10:43:26 18.00	<b>11</b> Other	11:30:34 19.00
<b>12</b> End Job	12:05:05 15.40				

Customer:	Job Date: 16-Jul-2012	Sales Order #: 9669083
Well Description:	UWI:	

OptiCem v6.4.10  
16-Jul-12 12:09

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
07/16/2012 04:50		Arrive at Location from Service Center						
07/16/2012 06:30		Rig-Up Equipment						PERFORMED LOCATION ASSESSMENT PRIOR TO RIG UP.
07/16/2012 08:00		Safety Meeting						HELD SAFETY MEETING WITH ALL 3RD PARTY PERSONNEL.
07/16/2012 09:42		Start Job						PRIOR TO JOB START, CUSTOMER ADVISED PUMPING THROUGH BLACKHAWK ROTATING HEAD.
07/16/2012 09:44		Test Lines					4388.0	
07/16/2012 09:49		Pump Spacer 1	4	40			326.0	40BBL OF TUNED SPACER @ 11.5PPG MIXED WITH WATER SUPPLIED BY RIG.
07/16/2012 10:03		Pump Cement	5	97			248.0	325SKS OF EXPANDACEM CMT. @ 13.8PPG MIXED WITH WATER SUPPLIED BY RIG.
07/16/2012 10:26		Shutdown						
07/16/2012 10:26		Clean Lines						
07/16/2012 10:43		Drop Bottom Plug						PER CUSTOMER REQUEST USING BOTTOM PLUG IN PLACE TO TOP PLUG.
07/16/2012 10:43		Pump Displacement	5	170			942.0	PUMPED 170BBL OF BRINE WATER, WATER SUPPLIED BY RIG. PER CUSTOMER REQUEST PUT .5GAL OF MMCR IN @ BEGINNING OF DISPLACEMENT ALSO DISPLACED WITH BRINE H2O. CUSTOMER ADVISED WILL BE DROPPING BOTTOM PLUG PRIOR TO DISPLACEMENT, ADVISED ME WANTS A WET SHOE.
07/16/2012 11:30		Other						CHECK FLOATS. WHILE BUMPING PLUG, RUPTURED DISC.
07/16/2012 12:05		End Job						HELD PRE-RIG DOWN SAFETY MEETING, PREPARE FOR DEPARTURE.

# HALLIBURTON

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 340078	<b>Ship To #:</b> 2937339	<b>Quote #:</b>	<b>Sales Order #:</b> 9669083
<b>Customer:</b> ENCANA OIL & GAS (USA) INC. - EBUS		<b>Customer Rep:</b> Clarke, Leonard	
<b>Well Name:</b> Chavez		<b>Well #:</b> 4B-4H	<b>API/UWI #:</b> 05-123-35474-00
<b>Field:</b> WARRENERG	<b>City (SAP):</b> HUDSON	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Contractor:</b> Ensign		<b>Rig/Platform Name/Num:</b> 124	
<b>Job Purpose:</b> Cement Production Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Production Casing	
<b>Sales Person:</b> AARON, WESLEY		<b>Srv Supervisor:</b> SIPNEFSKI, ROBERT	<b>MBU ID Emp #:</b> 419391

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
HALE, ROBERT E	0.0	470588	ROMERO, JOSEPH M	0.0	512137	SIPNEFSKI, ROBERT Anthony	0.0	419391
SMITH, AARON David	0.0	518187						

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10248053C	12 mile	10951208	12 mile	11341988C	12 mile	11764054C	12 mile
11764737	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	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To
				BHST	11460. ft	11460. ft	4. ft			

### Job Times

Date	Time	Time Zone
16 - Jul - 2012	01:27	MST
16 - Jul - 2012	04:50	MST
16 - Jul - 2012	09:42	MST
16 - Jul - 2012	12:05	MST
16 - Jul - 2012	13:15	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.	11739.	7449.	11739.
Production Casing	New		4.5	4.	11.6		P-110	.	11739.	.	11739.
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	

### Fluid Data

# HALLIBURTON

Stage/Plug #: 1											
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)	325.0	sacks	13.8	1.68	7.75	4.0	7.75		
		7.75 Gal	FRESH WATER								
3	ClayWeb III		20.00	bbl	8.34	.0	.0	.0			
		0.2 gal/Mgal	CLA-WEB - TOTE (101985045)								
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	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							