

## ***ENCANA OIL & GAS (USA) INC. - EBUS***

Rasmussen 4-2-28

Ensign/122

# **Post Job Summary**

## **Cement Surface Casing**

Prepared for: Sheilla D. Reed-High  
Date Prepared: 03/08/2013  
Version: 1

Service Supervisor: VIGIL, NICHOLAS

Submitted by: MCKAY, ADAM

**HALLIBURTON**

## ***Wellbore Geometry***

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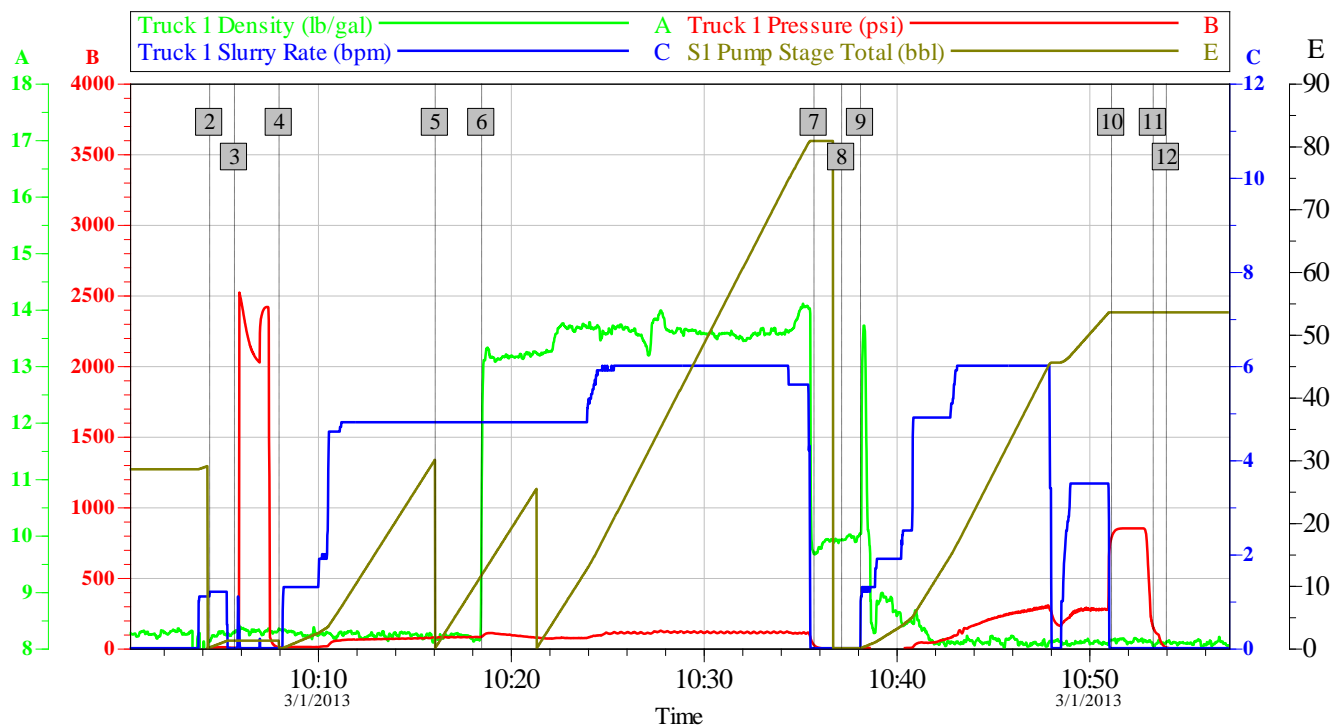
Job Tubulars					MD		Excess	Shoe Joint Length
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	%	ft
Open Hole Section	Open Hole Section		12.250		0.00	850.00	40.00	
Casing	Surface Casing	8.65	8.097	24.00	0.00	837.00	-	42.00

## ***Pumping Schedule***

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Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Cement Slurry	Surface Cement	13.50	5.00	300.0 sacks	300.0 sacks

## Data Acquisition



### Global Event Log

2 Start Job	10:04:24	3 Test Lines	10:05:41	4 Water	10:08:00
5 Dye	10:16:06	6 13.5 ppg Cement	10:18:30	7 Shutdown	10:35:45
8 Drop Top Plug	10:37:10	9 Pump Displacement	10:38:09	10 Bump Plug	10:51:10
11 Shut In Well	10:53:20	12 End Job	10:54:01		

Customer: Encana  
Well Description: Rasmussen 2-4-28

Job Date: 01-Mar-2013  
Job Type: Surface

Sales Order #: 900259600  
Supervisor: VIGIL

OptiCem v6.4.10  
01-Mar-13 11:05

## **Service Supervisor Reports**

### **Job Log**

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
03/01/2013 08:00		Arrive At Loc						Well site assessment, Hazard hunt, Water test, Rig up safety meeting, Waited for rig to finish running casing
03/01/2013 10:04		Start Job						
03/01/2013 10:05		Test Lines						Pressure tested lines to 2000 psi
03/01/2013 10:08		Pump Spacer 1	6	30			70.0	Rig water
03/01/2013 10:16		Pump Spacer 2	6	10			75.0	Dye water
03/01/2013 10:18		Pump Cement	6	88			102.0	13.5 ppg HLC Premium (300 SKS) weight verified by scale
03/01/2013 10:35		Shutdown						
03/01/2013 10:38		Drop Top Plug						Plug was pre loaded
03/01/2013 10:38		Pump Displacement	6	30			237.0	Rig water
03/01/2013 10:51		Bump Plug	3	50.5			289.0	Calculated pressure to land was 214 psi + 500 over
03/01/2013 10:53		Shut In Well						Bled casing pressure back to 200 psi and shut in
03/01/2013 10:54		End Job						Rig down safety meeting

# HALLIBURTON

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 340078	<b>Ship To #:</b> 2984354	<b>Quote #:</b>	<b>Sales Order #:</b> 900259600
<b>Customer:</b> ENCANA OIL & GAS (USA) INC. - EBUS		<b>Customer Rep:</b>	
<b>Well Name:</b> Rasmussen		<b>Well #:</b> 4-2-28	<b>API/UWI #:</b>
<b>Field:</b>	<b>City (SAP):</b> FREDERICK	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Contractor:</b> Ensign		<b>Rig/Platform Name/Num:</b> 122	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> FLING, MATTHEW		<b>Srvc Supervisor:</b> VIGIL, NICHOLAS	<b>MBU ID Emp #:</b> 443481

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BARRAS, JOSEPH Corey	0.0	405168	OTERI, VAUGHN Steeves	0.0	443828	VIGIL, NICHOLAS Joseph	0.0	443481

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
11360865C	18 mile	11398490	18 mile	11764054C	18 mile	12010168	18 mile

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			<i>Total is the sum of each column separately</i>					

### Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To
				BHST	850. ft	850. ft				

### Job Times

Date	Time	Time Zone
01 - Mar - 2013	05:00	MST
01 - Mar - 2013	08:00	MST
01 - Mar - 2013	00:00	MST
01 - Mar - 2013	00:00	MST
01 - Mar - 2013	00:00	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				12.25				.	850.		
Surface Casing	Unknown		8.625	8.097	24.		J-55	.	837.	.	.

### 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**

# HALLIBURTON

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	Surface Cement	VARICEM (TM) CEMENT (452009)	300.0	sacks	13.5	1.65	8.49	5.0	8.49
8.49 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	42 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					