

ENCANA OIL & GAS (USA) INC. - EBUS  
DO NOT MAIL - 370 17TH ST STE 1700  
DENVER, Colorado

Vogl McCoy 2H-5H-F267

**H&P 278**

## **Post Job Summary**

# **Cement Production Casing**

Date Prepared: 3/4/2014  
Version: 1

Service Supervisor: OTERI, VAUGHN

Submitted by: LANSDALE, JUSTIN

# HALLIBURTON

## Wellbore Geometry

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Job Tubulars					MD		TVD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	
Open Hole Section	6 1/8" Open Hole Section		6.125		7,695.00	15,135.00	0.00	7,385.00	0.00
Casing	4 1/2" Production Casing	4.50	3.920	13.50	0.00	15,135,000.00	0.00	7,385.00	40.00
Casing	7" Intermediate Casing String	7.00	6.366	26.00	0.00	7,695.00	0.00	7,385.00	0.00

# HALLIBURTON

## ***Pumping Schedule***

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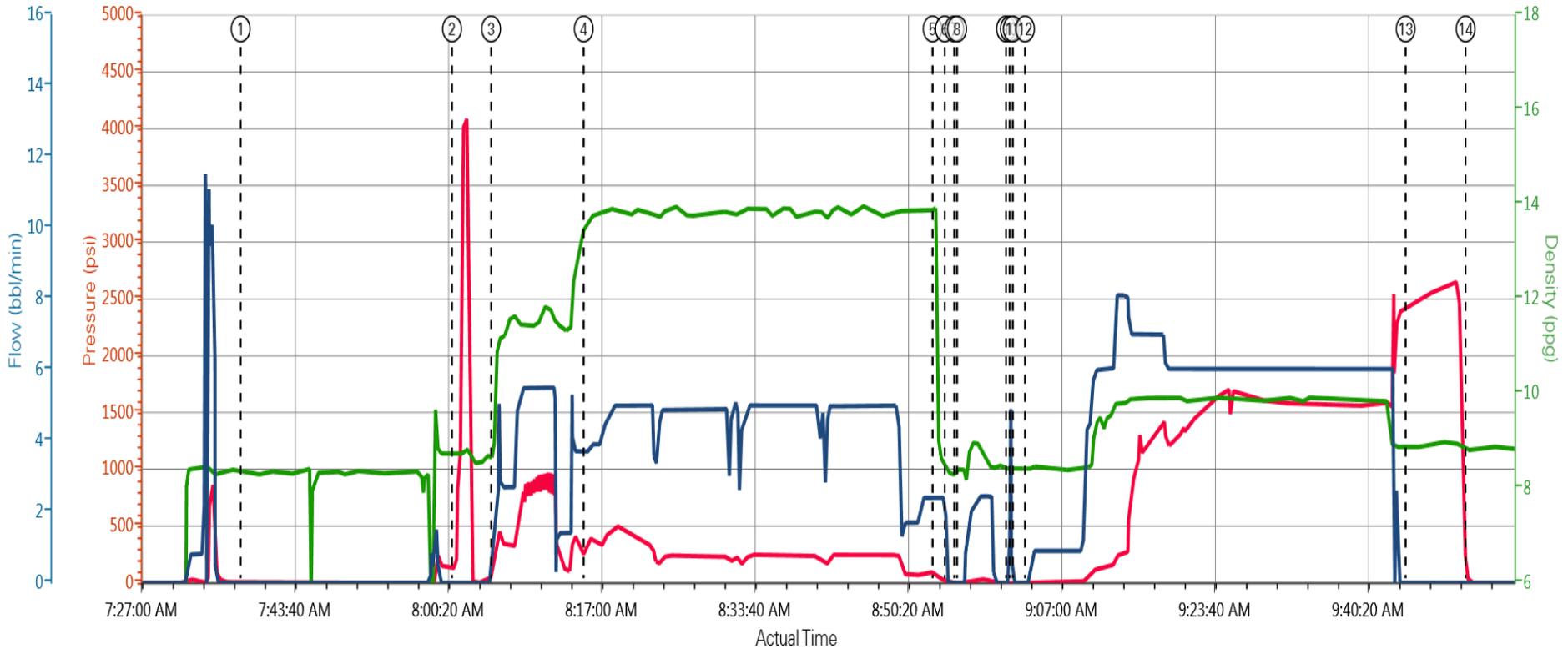
<b>Stage /Plug #</b>	<b>Fluid #</b>	<b>Fluid Type</b>	<b>Fluid Name</b>	<b>Surface Density lbm/gal</b>	<b>Avg Rate bbl/min</b>	<b>Surface Volume</b>
1	1	Spacer	TUNED SPACER III	11.50	4	40.0 bbl
1	2	Cement Slurry	13.8# ExpandaCem	13.80	4	563.0 sacks
1	3	Spacer	MMCR DISPLACEMENT	8.34	2.5	3.25 bbl
1	4	Spacer	DISPLACEMENT	8.34	6	223



# HALLIBURTON

## Data Acquisition

### ENCANA VOGL MCCOY 2H-5H-F267 PRODUCTION



PS Pump Press (psi) DH Density (ppg) Comb Pump Rate (bbl/min)

- |                              |                                  |                                |                              |                         |
|------------------------------|----------------------------------|--------------------------------|------------------------------|-------------------------|
| ① Start Job 0;8.37;0         | ④ Pump Cement 339;13.66;3.7      | ⑦ Clean Lines -7;8.38;0        | ⑩ Shutdown 12;8.46;0         | ⑬ Bump Plug 2426;8.85;0 |
| ② Test Lines 132;8.75;0      | ⑤ Pump Displacement 92;13.89;2.4 | ⑧ Drop Top Plug -7;8.43;0      | ⑪ Drop Ball 6;8.4;0          | ⑭ End Job 19;8.81;0     |
| ③ Pump Spacer 1 234;9.46;1.4 | ⑥ Shutdown 8;8.36;0              | ⑨ Pump Displacement 5;8.38;0.9 | ⑫ Pump Displacement 4;8.34;0 |                         |

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
02/22/2014 13:00		Call Out					CALL OUT FROM ARS OFFICE
02/22/2014 17:00		Arrive At Loc					ARRIVE ON LOCATION STILL HAD 30 JOINTS OF CASING TO RUN , MET WITH COMPANY REP TO DISCUSS JOB PROCESS AND ANY CONCERNS
02/23/2014 01:00		Casing on Bottom					HELD PRE RIG UP SAFTY MEETING WHEN LAST JOINT WAS LANDED ADVISED AT THAT TIME SAFE TO RIG UP AFTER CASING CREW WAS RIGGED DOWN
02/23/2014 03:00		Other					CASING CREW RIGGED DOWN AND WAS SAFE TO RIG UP HES IRON
02/23/2014 03:00		HES or HES Sub-Contractor Equipment Problem - Star					WHILE RIGGING UP DPF LIGHT CAME ON THE PUMP TRUCK AFTER SEVERAL TRIES TO REGEN TRUCK SHUT DOWN, HAVE NEW PUMP TRUCK BEING HOT SHOTED OUT
02/23/2014 07:00		HES or HES Sub-Contractor Equipment Problem - End					NEW PUMP TRUCK ARRIVED AND RIGGED UP TO IRON AND BULK SYSTEM, DID NOT CHARGE FOR ADD HOURS ON HES DOWN TIME
02/23/2014 07:41		Start Job					HELD SAFTY MEETING IN DOG HOUSE WITH ALL PARTIES ON LOCATION TO DISCUSS JOB PROCESS AND HAZARDS
02/23/2014 08:04		Test Lines				3990.0	PRESSURE TESTED PUMPS AND LINES FOUND NO LEAKS AND PRESSURE HELD GOOD
02/23/2014 08:08		Pump Spacer 1	4	40		450.0	MIXED 11.5PPG TUNE SPACER WITH FRESH WATER
02/23/2014 08:18		Pump Lead Cement	4	168		389.0	MIXED 13.8PPG EXPANDACEM WITH FRESH WATER
02/23/2014 08:56		Pump Displacement	2.5	3		360.0	PUMPED 3BBL OF MMCR WATER
02/23/2014 08:58		Shutdown					
02/23/2014 08:59		Clean Lines					WASH PUMP AND LINES
02/23/2014 08:59		Drop Top Plug					BLACK HAWK HAND RELEASED PLUG WITNESSED BY COMPANY REP AND HES TOOL HAND
02/23/2014 09:04		Pump Displacement		0.25			PUMPED 1/4 BBL OF MMCR WATER
02/23/2014 09:05		Shutdown					
02/23/2014 09:05		Drop Ball					BLACK HAWK HAND RELEASED BALL WITNNESSED BY COMPANY REP AND HES TOOL HAND
02/23/2014 09:06		Pump Displacement	6	223.23		1500.0	PUMPED 10.0PPG BRINE WATER
02/23/2014 09:48		Bump Plug	4			2350.0	BUMPED PLUG 500PSI OVER FINAL PUMP PRESSURE
02/23/2014 09:54		Check Floats		1			RELEASE PRESSURE BACK TO PUMP TRUCK TO CHECK FLOATS, FLOATS HELD GOOD
02/23/2014 09:54		End Job					

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 340078	<b>Ship To #:</b> 3191318	<b>Quote #:</b>	<b>Sales Order #:</b> 901134612
<b>Customer:</b> ENCANA OIL & GAS (USA) INC. - EBUS		<b>Customer Rep:</b> Roane, Mike	
<b>Well Name:</b> Vogl McCoy		<b>Well #:</b> 2H-5H-F267	<b>API/UWI #:</b> 05-123-37781
<b>Field:</b> WATTENBERG	<b>City (SAP):</b> FIRESTONE	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Lat:</b> N 40.168 deg. OR N 40 deg. 10 min. 5.196 secs.		<b>Long:</b> W 104.915 deg. OR W -105 deg. 5 min. 6.324 secs.	
<b>Contractor:</b> H&P		<b>Rig/Platform Name/Num:</b> H&P 278	
<b>Job Purpose:</b> Cement Production Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Production Casing	
<b>Sales Person:</b> GREGORY, JON		<b>Srvc Supervisor:</b> OTERI, VAUGHN	<b>MBU ID Emp #:</b> 443828

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
HARRAH, THADDEUS Gregory	0.0	552592	MULLER, MICHEL B	0.0	529830	OTERI, VAUGHN Steeves	7.0	443828
SCILEPPI, JOSEPH Dean	0.0	555492	VIATOR, JASON R.	0.0	550394	WILEY, JAMES A	12.0	440080

### Equipment

HES Unit #	Distance-1 way						
10829457	25 mile	10857080C	25 mile	11064535	25 mile	11362287C	25 mile
11633848	25 mile	11808819	25 mile	NA	25 mile		

### Job

### Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					22 - Feb - 2014	13:00	MST
<b>Form Type</b>			<b>BHST</b>	<b>On Location</b>	22 - Feb - 2014	17:00	MST
<b>Job depth MD</b>	15000. ft		<b>Job Depth TVD</b>	7385. ft	<b>Job Started</b>	22 - Feb - 2014	22:00
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>	35. ft	<b>Job Completed</b>	23 - Feb - 2014	03:00
<b>Perforation Depth (MD)</b>	<i>From</i>		<i>To</i>		<b>Departed Loc</b>	23 - Feb - 2014	05:00

### Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbf/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
6 1/8" Open Hole Section				6.125				7695.	15135.	.	7385.
4 1/2" Production Casing	Unknown		4.5	3.92	13.5		P-110	.	1513500.	.	7385.
7" Intermediate Casing String	Unknown		7.	6.366	26.	VAM - NEW	P-110	.	7695.	.	7385.

## Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
CMT CASING EQUIPMENT BOM	1	JOB		
MILEAGE FOR CEMENTING CREW,ZI	15	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	15	MI		
SH,FLT,4-1/2 ULT DQX 13.5,P110,2-3/4,HP	1	EA		
CLR,FLT,4-1/2 ULTRA DQX 13.5, P110, SSII	1	EA		
CTRZR ASSY,STR BL,SLIP-ON,AL,4 1/2 CSG	34	EA		

## 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	TUNED SPACER III	TUNED SPACER III - SBM (483826)	40.00	bbl	11.5	7.21	53.96	4	
		36.83 gal/bbl FRESH WATER							
		148.725 lbm/bbl BARITE, 100 LB SK (100003680)							
2	13.8# ExpandaCem	EXPANDACEM (TM) SYSTEM (452979)	563.0	sacks	13.8	1.68	7.74	4	7.74
		7.74 Gal FRESH WATER							
3	MMCR DISPLACEMENT		10.00	bbl	8.34			2.5	
		0.2 gal/bbl MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
4	DISPLACEMENT		223	bbl	8.34			6	

### 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

<i>The Information Stated Herein Is Correct</i>	<b>Customer Representative Signature</b>
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