



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/9/2014
 Invoice # 55029
 API# _____
 Foreman: Monte

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: Grant Ssalisbury 2c-14h

County: Weld Consultant: Chris
 State: Colorado Rig Name & Number: Patterson 272
 Distance To Location: 21.6
 Sec: 14 Units On Location: 4032-3102 4034-3213
 Twp: 2n Time Requested: 1:30pm
 Range: 68w Time Arrived On Location: 12:30pm
 Time Left Location: _____

WELL DATA		Cement Data	
Casing Size OD (in) :	<u>9.625</u>	Cement Name:	<u>BFN III</u>
Casing Weight (lb) :	<u>40.00</u>	Cement Density (lb/gal) :	<u>15.2</u>
Casing Depth (ft.) :	<u>899</u>	Cement Yield (cuft) :	<u>1.27</u>
Total Depth (ft) :	<u>931</u>	Gallons Per Sack:	<u>5.89</u>
Open Hole Diameter (in.) :	<u>12.25</u>	% Excess:	<u>50%</u>
Conductor Length (ft) :	<u>80</u>	Displacement Fluid lb/gal:	<u>8.3</u>
Conductor ID :	<u>15.6</u>	BBL to Pit:	_____
Shoe Joint Length (ft) :	<u>46</u>	Fluid Ahead (bbls):	<u>30.0</u>
Landing Joint (ft) :	<u>30</u>	H2O Wash Up (bbls):	<u>20.0</u>
Max Rate:	_____	Spacer Ahead Makeup	_____
Max Pressure:	_____	<u>10 fgreen 10 dye 10 fresh</u>	_____

Casing ID 8.835 Casing Grade J-55 only used

Calculated Results			Displacement: <u>66.95</u> bbls	
cuft of Shoe	<u>19.58</u>	cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)			Pressure of cement in annulus	
cuft of Conductor	<u>65.76</u>	cuft	Hydrostatic Pressure:	<u>709.85</u> PSI
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)			Pressure of the fluids inside casing	
cuft of Casing	<u>384.74</u>	cuft	Displacement:	<u>367.80</u> psi
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)			Shoe Joint:	<u>36.32</u> psi
Total Slurry Volume	<u>470.09</u>	cuft	Total	<u>404.12</u> psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)			Differential Pressure:	<u>305.73</u> psi
bbls of Slurry	<u>83.72</u>	bbls	Collapse PSI:	<u>2570.00</u> psi
(Total Slurry Volume) X (.1781)			Burst PSI:	<u>3950.00</u> psi
Sacks Needed	<u>370</u>	sk	Total Water Needed:	<u>168.86</u> bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)				
Mix Water	<u>51.91</u>	bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42				



Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.



DISH ON WELL CEMENTING
Single Cement Surface Pipe

Customer
Well Name

EnCana Oil & Gas (USA) Inc.
Grant Ssalisbury 2c-14h

INVOICE #
LOCATION
FOREMAN
Date

35029
Weld
Monte
10/9/2014

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DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
Safety Meeting	2:05															
MIRU	1:00															
CIRCULATE	2:55	0	3:25	0	0			0			0			0		
Drop Plug		10	3:28	110	10			10			10			10		
3:20		20	3:30	220	20			20			20			20		
		30	3:32	270	30			30			30			30		
		40	3:34	310	40			40			40			40		
M & P		50	3:36	350	50			50			50			50		
Time	Sacks	60	3:38	310	60			60			60			60		
3:00-3:17	370	70	3:41	700	70			70			70			70		
		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	51.91	130			130			130			130			130		
Total Sacks	370	140			140			140			140			140		
bbl Returns	25	150			150			150			150			150		
Water Temp	67															

Notes:

safty meeting, miru, pressure test per company man, circulate 30 bbls ahead with dye in 2nd 10, mix and pump 370 sks,
drop plug and displace 66.95 bbls h2o, bump plug at 3:41 pm at 700 psi, hold 5 min. 25 back to pit bumped 1 bbl early

X _____
Work Performed

X _____
Title

X _____
Date