



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/20/2014
 Invoice # 55030
 API# _____
 Foreman: Monte

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: Grant Ssalisbury 2b-14h C268

County: Weld
 State: Colorado
 Sec: 14
 Twp: 2n
 Range: 68w

Consultant: Chris
 Rig Name & Number: Patterson 272
 Distance To Location: 21.6
 Units On Location: 4029-2101 4018-3211
 Time Requested: 5:30pm
 Time Arrived On Location: 5:10pm
 Time Left Location: 11:10

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>897</u>	Cement Yield (cuft) : <u>1.27</u>
Total Depth (ft) : <u>929</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:	10 fgresh 10 dye 10 fresh

Calculated Results	Pressure of cement in annulus
Casing ID <u>8.835</u> Casing Grade <u>J-55 only used</u>	Displacement: 66.80 bbls
cuft of Shoe 19.58 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 65.76 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus
cuft of Casing 383.80 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 708.27 PSI
Total Slurry Volume 469.15 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
bbls of Slurry 83.55 bbls (Total Slurry Volume) X (.1781)	Displacement: 366.94 psi
Sacks Needed 369 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 36.32 psi
Mix Water 51.80 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 403.26 psi
	Differential Pressure: 305.01 psi
	Collapse PSI: 2570.00 psi
	Burst PSI: 3950.00 psi
	Total Water Needed: 168.61 bbls

[Signature]
 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.



DISON OIL WELL CEMENTING
Single Cement Surface Pipe

Customer
 Well Name

EnCana Oil & Gas (USA) Inc.
 Grant Salisbury 2b-14h C268

INVOICE #
 LOCATION
 FOREMAN
 Date

33330
 Weld
 Monte
 10/20/2014

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DESCRIPTION OF JOB EVENTS

	Time	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	7:40															
MIRU	6:30															
CIRCULATE	8:15	0	9:02	0	0			0			0			0		
Drop Plug		10	9:06	40	10			10			10			10		
9:00		20	9:08	170	20			20			20			20		
		30	9:10	240	30			30			30			30		
		40	9:13	270	40			40			40			40		
M & P		50	9:16	340	50			50			50			50		
		60	9:20	330	60			60			60			60		
Time	Sacks	60	9:20	330	60			60			60			60		
8:20-8:55	370	70	9:24	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		
		120			120			120			120			120		
% 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	27	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 66.80 bbls h2o, bump plug at 9:24 pm at 700 psi, hold 5 min. 37 back

X

Work Performed

Call Hys

X

Title

Coman

X

Date

10-20-14