



Bison Oil Well Cementing Tail & Lead

Date: 12/24/2013
Invoice #: 125402
API#: 445564
Foreman: monte

Customer: encana
Well Name: loc boie 2d-31h

County: Weld
State: Colorado
Sec: 31
Twp: 1n
Range: 65w

Consultant: rickey
Rig Name & Number: h & p 522
Distance To Location: 25.8
Units On Location: 3
Time Requested: 10:00pm
Time Arrived On Location: 8:00pm
Time Left Location:

WELL DATA

Casing Size (in) : 9.625
Casing Weight (lb) : 40
Casing Depth (ft.) : 1,492
Total Depth (ft) : 1504
Open Hole Diameter (in) : 12.25
Conductor Length (ft) : 114
Conductor ID : 15.5
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 3

Sacks of Tail Requested 100
HOC Tail (ft): 0

One or the other, cannot have quantity in both

Max Rate:
Max Pressure:

Cement Data

Lead

Cement Name:
Cement Density (lb/gal) : 13.1
Cement Yield (cuft) : 1.69
Gallons Per Sack : 8.64
% Excess : 62%

Tail

Cement Name:
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack : 5.89
% Excess : 0%

Fluid Ahead (bbls) 30.0
H2O Wash Up (bbls) 20.0

Spacer Ahead Makeup

10 fresh 10 dye 10 fresh

Casing ID	8.835
Lead Calculated Results	
HOC of Lead	1029.85 ft
Casing Depth - HOC Tail	
Volume of Lead Cement	322.53 cuft
HOC of Lead X Open Hole Ann	
Volume of Conductor	91.78 cuft
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	
Total Volume of Lead Cement	414.30 cuft
(cuft of Lead Cement) + (Cuft of Conductor)	
bbls of Lead Cement	119.54 bbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	
Sacks of Lead Cement	397.14 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
bbls of Lead Mix Water	81.70 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42	
Displacement	109.95 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	
Total Water Needed:	131.70 bbls

Casing Grade	J-55 only used
Tail Calculated Results	
Tail Cement Volume In Ann	127.00 cuft
(HOC Tail) X (OH Ann)	
Total Volume of Tail Cement	108.09 Cuft
(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)	
bbls of Tail Cement	22.62 bbls
(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)	
HOC Tail	345.15 ft
(Tail Cement Volume) ÷ (OH Ann)	
Sacks of Tail Cement	100.00 sk
(Total Volume of Tail Cement) ÷ (Cement Yield)	
bbls of Tail Mix Water	14.02 bbls
(Sacks of Tail Cement X Gallons Per Sack) ÷ 42	
Pressure of cement in annulus	
Hydrostatic Pressure	1015.31 PSI
Collapse PSI:	2570.00 psi
Burst PSI:	3950.00 psi

X

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.



Treatment Report Page 2

monte

loc boie 2d-31h

DESCRIPTION OF JOB EVENTS

Notes:

Notes:

circulate 30 bbls ahead with dye in 2nd 10, mix and pump 39/

mix and pump 100 sks tail cement at 15.2, 1.27 yield, 5.89 h₂o

Discharge 100 OF 66

displace

displace 109.93 m

23 bbls b

23 bbl/s b

#VALUE!

#VALUE!

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