Bison Oil Well Cementing
Tail & Lead

Date: 1/27/2014
Invoice # 12275
API#
Foreman: kirk

Customer: bill barrett
Well Name: state of colorado north 1-66-36-0108CH

Consultant: casey
Rig Name & Number: major 43
Distance To Location:
Units On Location: 3103-3203
Time Requested: 930 am
Time Arrived On Location: 700 am
Time Left Location: 2:00 pm

County: adams
State: Colorado
Sec: 36
Twp: 1n
Range: 66w

WELL DATA

Casing Size (in) :	9.625
Casing Weight (lb) :	36
Casing Depth (ft.) :	1,510
Total Depth (ft) :	1520
Open Hole Diameter (in) :	13.50
Conductor Length (ft) :	
Conductor ID :	
Shoe Joint Length (ft) :	43
Landing Joint (ft) :	8

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	25%

Tail

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

Fluid Ahead (bbls)	114.0
H20 Wash Up (bbls)	20.0

Spacer Ahead Makeup

Casing ID 8.921 Casing Grade J-55 only used

Lead Calculated Results

HOC of Lead Casing Depth - HOC Tail	1280.33 ft
Volume of Lead Cement HOC of Lead X Open Hole Ann	625.74 cuft
Volume of Conductor (Conductor ID Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	0.00 cuft
Total Volume of Lead Cement (cuft of Lead Cement) + (Cuft of Conductor)	625.74 cuft
bbls of Lead Cement (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	139.30 bbls
Sacks of Lead Cement (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	462.82 sk
bbls of Lead Mix Water (Sacks Needed) X (Gallons Per Sack) ÷ 42	95.21 bbls
Displacement (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	114.02 bbls
Total Water Needed:	229.23 bbls

Tail Calculated Results

Tail Cement Volume In Ann (HOC Tail) X (OH Ann)	127.00 cuft
Total Volume of Tail Cement (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)	108.34 Cuft
bbls of Tail Cement (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)	22.62 bbls
HOC Tail (Tail Cement Volume) ÷ (OH Ann)	221.67 ft
Sacks of Tail Cement (Total Volume of Tail Cement) ÷ (Cement Yield)	100.00 sk
bbls of Tail Mix Water (Sacks of Tail Cement X Gallons Per Sack) ÷ 42	14.02 bbls
Pressure of cement in annulus	
Hydrostatic Pressure	1027.56 PSI
Collapse PSI:	2020.00 psi
Burst PSI:	3520.00 psi

X Casey Jam
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.

Bison Oil Well Cementing
Two Cement Surface Pipe

Customer	bill barrett
Well Name	e of colorado north 1-66-36-01-(

Date	1/27/2014
INVOICE #	12275
LOCATION	adams
FOREMAN	kirk

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting	1137am
MIRU	715am
CIRCULATE	1200pm
Drop Plug	
1246 pm	
M & P	

Time	Sacks
1206 pm	562
1242 pm stop	

Lead mixed bbls	95
Lead % Excess	25%
Lead Sacks	462
Tail mixed bbls	14
Tail % Excess	0%
Tail Sacks	100
Total Sacks	562
bbl Returns	34

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
0	1246	20	0			0			0			0		
10	1250	40	10			10			10			10		
20	1252	40	20			20			20			20		
30	1256	80	30			30			30			30		
40	1258	90	40			40			40			40		
50	100	130	50			50			50			50		
60	101	190	60			60			60			60		
70	103	250	70			70			70			70		
80	105	310	80			80			80			80		
90	107	360	90			90			90			90		
100	109	430	100			100			100			100		
110	112	400	110			110			110			110		
120			120			120			120			120		
130			130			130			130			130		
140			140			140			140			140		
150			150			150			150			150		

Notes:

bumped plug at 116 pm 540 psi

X Casey Ta
Work Preformed

X Coma
Title

X 1-27-14
Date