



# Bison Oil Well Cementing Tail & Lead

Customer: Crestone Peak Resources

Well Name: Davis 1K-9H-G266

Date: 5/24/2018

Invoice # 900301

API# 05-123-46517

Foreman: Corey Barras

County: Weld

State: Colorado

Sec: 4

Twp: 1N

Range: 65W

Consultant: Jerry Thorstad

Rig Name & Number: Ensign 135

Distance To Location: 26 Miles

Units On Location: 4027-3103/4035-3213/ 3/4024-3201

Time Requested: 2230

Time Arrived On Location: 2130

Time Left Location: 315

## WELL DATA

Casing Size (in) : 9.625  
Casing Weight (lb) : 40  
Casing Depth (ft.) : 2,186  
Total Depth (ft) : 2200  
Open Hole Diameter (in) : 13.50  
Conductor Length (ft) : 98  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 84  
Landing Joint (ft) : 6

Sacks of Tail Requested 190  
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) : 13.5  
Cement Yield (cuft) : 1.68  
Gallons Per Sack 8.90  
% 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) 60.0  
H2O Wash Up (bbls) 20.0

### Spacer Ahead Makeup

60 BBL with Die in 3rd 10

Casing ID

8.835

Casing Grade

J-55 only used

## Lead Calculated Results

HOC of Lead 1661.44 ft

Casing Depth - HOC Tail

Volume of Lead Cement 812.00 cuft

HOC of Lead X Open Hole Ann

Volume of Conductor 78.90 cuft

(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

Total Volume of Lead Cement 890.89 cuft

(cuft of Lead Cement) + (Cuft of Conductor)

bbls of Lead Cement 198.33 bbls

(Total cuft of Lead Cement) X (.1781) X (1+Lead Excess)

Sacks of Lead Cement 662.87 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

bbls of Lead Mix Water 140.46 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement 159.79 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)

Total Water Needed: 406.90 bbls

## Tail Calculated Results

Tail Cement Volume In Ann 241.30 cuft

(HOC Tail) X (OH Ann)

Total Volume of Tail Cement 205.54 Cuft

(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)

bbls of Tail Cement 42.98 bbls

(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)

HOC Tail 420.56 ft

(Tail Cement Volume) ÷ (OH Ann)

Sacks of Tail Cement 190.00 sk

(Total Volume of Tail Cement) ÷ (Cement Yield)

bbls of Tail Mix Water 26.65 bbls

(Sacks of Tail Cement X Gallons Per Sack) ÷ 42

Pressure of cement in annulus

Hydrostatic Pressure 585.23 PSI

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

X

Authorization To Proceed



Bison Oil Well Cementing  
Two Cement Surface Pipe

Customer Crestone Peak Resources  
Well Name Davis 1K-9H-G266

Date 5/24/2018  
INVOICE # 900301  
LOCATION Weld  
FOREMAN Corey Barras

DESCRIPTION OF JOB EVENTS

Amount Pumped		Time/Date	Event	Description	Rate	BBLs	Pressure
Lead mixed bbls	140.46	2130	Arrive on Location				
Lead % Excess	25%	1155	Rig Up				
Lead Sacks	663	1205	Safety Meeting	Bison and Rig Crew			
		1255	Start Job				
Tail mixed bbls	26.6	1236	Test Lines	1500 IPSI	1.5	2	1500
Tail % Excess	0%	1258	Pump Spacer	Water	7	60	140
Tail Sacks	190						
		110	Lead Cement	13.5 PPG	7	198	190
Total Sacks	853	142	Tail Cement	15.2 PPG	5	43	130
Water Temp	52						
bbl Returns	29	156	Shut Down				
		158	Drop Plug	Preloaded in Plug Container			
Notes:							
		200	Pump Displacement	Water	7	90	320
		222	Bump Plug	500 PSI over Final Lift (1110 PSI)	2	159	610
		228	Check Floats	With 1 bbl Back to surface			
		235	Rig Down				
		315	Leave Location				

X  
Work Preformed

X  
Title

X  
Date