



**Bison Oil Well Cementing
Tail & Lead**

Date: 3/27/2018

Invoice # 900282

API# 05-123-46459

Foreman: J Corey Barras

Customer: Bison Oil and Gas II

Well Name: Hunt 8-60 6C-5-10

County: Weld

State: Colorado

Sec: 28

Twp: 3N

Range: 68W

Consultant: Matt R.

Rig Name & Number: Ensign 140

Distance To Location: 49 miles

Units On Location: 4027/3103-42 024/3201-4040/3201

Time Requested: 130

Time Arrived On Location: 1230

Time Left Location: _____

WELL DATA	Cement Data
<p>Casing Size (in) : <u>9.625</u> Casing Weight (lb) : <u>36</u> Casing Depth (ft.) : <u>1,902</u> Total Depth (ft) : <u>1935</u> Open Hole Diameter (in) : <u>13.50</u> Conductor Length (ft) : <u>80</u> Conductor ID : <u>15.6</u> Shoe Joint Length (ft) : <u>44</u> Landing Joint (ft) : <u>24</u></p> <p>Sacks of Tail Requested <u>100</u> HOC Tail (ft): <u>0</u></p> <p style="text-align: center; font-size: small;">One or the other, cannot have quantity in both</p> <p>Max Rate: Max Pressure:</p>	<p style="text-align: center;">Lead</p> <p>Cement Name: Cement Density (lb/gal) : <u>13.5</u> Cement Yield (cuft) : <u>1.68</u> Gallons Per Sack <u>8.90</u> % Excess <u>15%</u></p> <p style="text-align: center;">Tail</p> <p>Cement Name: Cement Density (lb/gal) : <u>15.2</u> Cement Yield (cuft) : <u>1.27</u> Gallons Per Sack: <u>5.80</u> % Excess: <u>0%</u></p> <p>Fluid Ahead (bbls) 30.0 H2O Wash Up (bbls) 20.0</p> <p style="text-align: center;">Spacer Ahead Makeup 30 BBL of water with die in 2nd 10bbl</p>

Lead Calculated Results	Tail Calculated Results
HOC of Lead 1577.22 ft	Tail Cement Volume In Ann 127.00 cuft (HOC Tail) X (OH Ann)
Volume of Lead Cement 770.83 cuft HOC of Lead X Open Hole Ann	Total Volume of Tail Cement 107.90 Cuft (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
Volume of Conductor 65.76 cuft (Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	bbls of Tail Cement 22.62 bbls (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
Total Volume of Lead Cement 836.60 cuft (cuft of Lead Cement) + (Cuft of Conductor)	HOC Tail 220.78 ft (Tail Cement Volume) ÷ (OH Ann)
bbls of Lead Cement 171.35 bbls (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	Sacks of Tail Cement 100.00 sk (Total Volume of Tail Cement) ÷ (Cement Yield)
Sacks of Lead Cement 572.67 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	bbls of Tail Mix Water 13.81 bbls (Sacks of Tail Cement X Gallons Per Sack) ÷ 42
bbls of Lead Mix Water 121.35 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Pressure of cement in annulus
Displacement 145.48 bbls (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	Hydrostatic Pressure 585.23 PSI
Total Water Needed: 330.64 bbls	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi

X Michael [Signature]
 Authorization To Proceed



**Bison Oil Well Cementing
Two Cement Surface Pipe**

Customer Bison Oil and Gas II
Well Name Hunt 8-60 6C-5-10

Date 3/27/2018
INVOICE # 900282
LOCATION Weld
FOREMAN J Corey Barras

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
Lead mixed bbls	121.35	1230	Arrive on Location			
Lead % Excess	15%	300	Safety Meeting Bison Crew			
Lead Sacks	573	315	Rig Up			
		345	Pre Job Safety Metting			
		420	Start Job			
Tail mixed bbls	13.8					
Tail % Excess	0%	422	Test Lines	1500 PSI	2	
Tail Sacks	100	424	Spacer	Water	7	30 170
Total Sacks	673	432	Lead	13.5PPG	7	171 160
Water Temp	50	500	Tail	15.2PPG	5	22 150
bbl Returns	20					
		510	Shut Down			
Notes:		512	Drop Plug			
			Preloaded in Plug Container			
		514	Start Displacement		8	90 340
		540	Bump Plug	500 Over lift Pressure (1050 psi)	2	145 520
		542	Casing TEST	1000psi FOR 15 MIN		
		556	Check Floats	Floats Held with 1 bbl back		
		600	End Job			
		620	Rign Down			
		700	Leave Location			

X *[Signature]*
Work Performed

X CO MAN
Title

X 3-27-2018
Date



Bison Oil Well Cementing Tail & Lead

Cementing Customer Satisfaction Survey

Service Date	3/27/2018
Well Name	Hunt 8-60 6C-5-10
County	Weld
State	Colorado
SEC	28
TWP	3N
RNG	68W

Invoice Number	900282
API #	05-123-46459
Job Type	Two Cement
Company Name	Bison Oil and Gas II

Customer Representative

Supervisor Name J. Corey Barras

Employee Name (Including Supervisor)
Corey B
Monte B.
Jesse R.
Enrique V.
Tommie H / Terry R.

Exposure Hours (Per Employee)
6
6
6
6
6
30

Total Exposure Hours

Did we encounter any problems on this job? Yes No

To Be Completed By Customer

- Rating/Description
 5 - Superior Performance (Established new quality/performance standards)
 4 - Exceeded Expectation (Provided more than what was required/expected)
 3 - Met Expectations (Did what was expected)
 2 - Below Expectations (Job problems/failures occurred - *Recovery made)
 1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
 *Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY
5	Personnel -
5	Equipment -
5	Job Design -
5	Product/Material -
5	Health & Safety -
5	Environmental -
5	Timeliness -
5	Condition/Appearance -
5	Communication -

CUSTOMER SATISFACTION RATING

- Did our personnel perform to your satisfaction?
- Did our equipment perform to your satisfaction?
- Did we perform the job to the agreed upon design?
- Did our products and materials perform as you expected?
- Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
- Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
- Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
- Did the equipment condition and appearance meet your expectations?
- How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

- Yes No Did an accident or injury occur?
- Yes No Did an injury requiring medical treatment occur?
- Yes No Did a first-aid injury occur?
- Yes No Did a vehicle accident occur?
- Yes No Was a post-job safety meeting held?

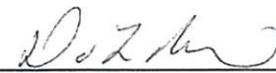
Please Circle:

- Yes No Was a pre-job safety meeting held?
- Yes No Was a job safety analysis completed?
- Yes No Were emergency services discussed?
- Yes No Did environmental incident occur?
- Yes No Did any near misses occur?

Additional Comments:

DID GREAT JOB!!!!

THE INFORMATION HEREIN IS CORRECT -

X 
Customer Representative's Signature

DATE: 3-27-18

Any additional Customer Comments or HSE concerns should be described on the back of this form

Hunt 8-60 6C-5-10

