



# Bison Oil Well Cementing Single Cement Surface Pipe

## Cementing Customer Satisfaction Survey

Service Date	4/20/2021
Well Name	Bake11-16HZ
County	Weld
State	Colorado
SEC	11
TWP	4N
RNG	6SW

Invoice Number	900513
API #	512351413
Job Type	Single Cement Surface Pipe
Company Name	Occidental Petroleum

Customer Representative	David
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Supervisor Name	Terry Richey
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Employee Name (Including Supervisor)
Alan A
Terry R
Joe F
Kirt H
Chris C/Chris H

### Exposure Hours (Per Employee)

5
5
5
5
5
25

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
	Personnel -
	Equipment -
	Job Design -
	Product/Material -
	Health & Safety -
	Environmental -
	Timeliness -
	Condition/Appearance -
	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:

THE INFORMATION HEREIN IS CORRECT -

X   
Customer Representative's Signature

DATE: 4-20-21

## Bison Oil Well Cementing Single Cement Surface Pipe

INVOICE #  
LOCATION  
FOREMAN  
Date

900513	Weld	Terry Ric	4/20/2022
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Occidental Petroleum  
Bake11-16HZ

Customer  
Well Name

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## DESCRIPTION OF JOB EVENTS

[illegible]

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15-56-4

X  
Date





# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/20/2021  
Invoice # 900513  
API# 512351413  
Foreman: kirt/Terry Richey

Customer: Occidental Petroleum

Well Name: Bake11-16HZ

County: Weld  
State: Colorado

Sec: 11  
Twp: 4N  
Range: 68W

Consultant: David  
Rig Name & Number: Icon 12  
Distance To Location: 36  
Units On Location: 4045/3103-4039/3205-4033/3201  
Time Requested: 200am  
Time Arrived On Location: 1230am  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,887  
Total Depth (ft) : 1897  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 41  
Landing Joint (ft) : 8

Max Rate: 7  
Max Pressure: 1500

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.48  
Gallons Per Sack: 7.40  
% Excess: 10%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 30.0

### Spacer Ahead Makeup

10 BBL H2O 10BBL DIE 10BBL H2O

Casing ID 8.921

Casing Grade J-55 only used

## Calculated Results

cuft of Shoe 17.80 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 64.40 cuft

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

cuft of Casing 971.45 cuft

(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )

Total Slurry Volume 1053.65 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 187.65 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 712 sk

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

Mix Water 125.43 bbls

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

Displacement: 143.33 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 1392.04 PSI

## Pressure of the fluids inside casing

Displacement: 795.96 psi

Shoe Joint: 30.25 psi

Total 826.21 psi

Differential Pressure: 565.83 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 328.76 bbls

x   
Authorization To Proceed