



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/28/2018
 Invoice #: 666323
 API#: 05-123-46434
 Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation
Well Name: Gracie 24-6HZ

County: Weld
 State: Colorado
 Sec: 8
 Twp: 1N
 Range: 65W

Consultant: Levi
 Rig Name & Number: Cartel 88
 Distance To Location: 30 Miles
 Units On Location: 4023/4041/4024
 Time Requested: 13:30
 Time Arrived On Location: 13:00
 Time Left Location:

WELL DATA	
Casing Size OD (in) :	9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,866
Total Depth (ft) :	1876
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	80
Conductor ID :	15.25
Shoe Joint Length (ft) :	42
Landing Joint (ft) :	10
Max Rate:	8
Max Pressure:	2000

Cement Data	
Cement Name:	BFN III
Cement Density (lb/gal) :	14.2
Cement Yield (cuft) :	1.49
Gallons Per Sack:	7.48
% Excess:	10%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	
Fluid Ahead (bbls):	30.0
H2O Wash Up (bbls):	0.0
Spacer Ahead Makeup	
Dye in second 10 bbl	

Casing ID: 8.921 Casing Grade: J-55 only used

Calculated Results		
cuft of Shoe	18.23	cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		
cuft of Conductor	61.05	cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		
cuft of Casing	960.16	cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		
Total Slurry Volume	1039.44	cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		
bbls of Slurry	185.12	bbls
(Total Slurry Volume) X (.1781)		
Sacks Needed	698	sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		
Mix Water	124.24	bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42		

Displacement:	141.78 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
Pressure of cement in annulus	
Hydrostatic Pressure:	1376.55 PSI
Pressure of the fluids inside casing	
Displacement:	786.47 psi
Shoe Joint:	30.98 psi
Total	817.46 psi
Differential Pressure:	559.09 psi
Collapse PSI:	2020.00 psi
Burst PSI:	3520.00 psi
Total Water Needed:	296.02 bbls

X *[Signature]*
 Authorization To Proceed

Gracie 24-6HZ

