Bison Oil Well Cementing
Single Cement Surface Pipe

Date: 5/7/2015
Invoice # 80075
API#
Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.
Well Name: haley lc 27-715

County: Weld
State: Colorado
Sec: 26
Twp: 9n
Range: 58w

Consultant: steve
Rig Name & Number: H&P 343
Distance To Location:
Units On Location: 4038-3103/4024-3204
Time Requested: 200 am
Time Arrived On Location: 200 am
Time Left Location: 6:45am

WELL DATA

Casing Size OD (in) :	9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	597
Total Depth (ft) :	642
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	100
Conductor ID :	16
Shoe Joint Length (ft) :	41
Landing Joint (ft) :	35
Max Rate:	
Max Pressure:	

Cement Data

Cement Name:	BFN III
Cement Density (lb/gal) :	14.2
Cement Yield (cuft) :	1.49
Gallons Per Sack:	7.48
% Excess:	30%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	
Fluid Ahead (bbls):	40.0
H20 Wash Up (bbls):	10.0

Spacer Ahead Makeup

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

cuft of Casing 315.77 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 422.66 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 75.28 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 284 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 50.52 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.69 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 440.41 PSI

Pressure of the fluids inside casing

Displacement:	239.74 psi
Shoe Joint:	30.25 psi
Total	269.98 psi
Differential Pressure:	170.42 psi
Collapse PSI:	2020.00 psi
Burst PSI:	3520.00 psi
Total Water Needed:	146.21 bbls

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DESCRIPTION OF JOB EVENTS

Amount Pumped		Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess	26%	425 am	Rig up				
Mixed bbls	49	448am	JSA				
Total Sacks	275	508 am	Pressure Test		1	1	1000
bbl Returns	13	510 am	Spacer Ahead	10 bbls fresh h2o	5	10	90
Water Temp			Spacer Ahead	10 bbls dye h2o	5	10	
			Spacer Ahead	20 bbls fresh h2o	5	20	
Notes:		519 am	Lead Cement	275 sks cement 72.9 bbls slurry	5	72.9	120
		539 am	Shutdown				
		542 am	Drop Plug				
		542 am	Start Displacement	45.6 bbls h2o	5	45.6	150
		554 am	Bump Plug	190 psi before bump	1		430
		556 am	Pressure Test Casing	1000 psi 15 min			1000
		611 am	End Job	release psi			0
		613 am	Rig Down				
		645 am	Leave Location				

X Dave Rea
Work Preformed

X W.S.S NEI
Title

X 5-7-15
Date