

PATTERSON PETROLEUM LP
PROPOSED CASING & CEMENTING PROGRAM

GACH "31" STATE WELL NO. 1

13 3/8", 48 lb/ft, H-40 Surface Casing Set at 400' - in a 17 1/2" Hole

Circulate to surface with 500 sacks of Class "C" + 2% CaCl₂ + 1/4 lb/sk celloflake

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 cu.ft/sk
Water Requirement:	6.3 gal./sk

9 5/8", 40 lb/ft, J-55 & N-80 Intermediate Casing Set at 4800' - in a 12 1/4" Hole

Lead : 2250 sx of 35:65 Poz Class "C" + 5% salt + 6% gel + 1/4 lb/sk celloflake
+ 2/10 % antifoamer

Desired TOC = Surface

Slurry Weight:	12.4 ppg
Slurry Yield:	2.15 cu.ft/sk
Water Requirement:	11.99 gal/sk

Tail : 250 sx of Class "C" Neat

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 cu.ft/sk
Water Requirement:	6.31 gal/sk

7" , 26 lb/ft, N-80 & P110 Protection String Casing Set at 12,950' - in an 8 3/4" Hole

Cement w/ 650 sx of Class "H" + 5% salt + 2% gel + 3/10% retarder + 2/10% antifoamer

Desired TOC = 8000'

Slurry Weight:	16.4 ppg
Slurry Yield:	1.09 cu.ft/sk
Water Requirement:	5.49 gal/sk

5" , 18 lb/ft, N80 Production Liner Set from 12,600' to 13,600' - in a 6 1/8" Hole

Cement w/ 180 sx of Class "H" + 3/10% retarder + 2/10% antifoamer + 6/10% Gasblock

Slurry Weight:	16.4 ppg
Slurry Yield:	1.09 cu.ft/sk
Water Requirement:	5.49 gal/sk