

ATTACHMENT A

JOSEPH B. GOULD

PHILLIPS 32 # 5

CEMENTING, PERFORATING, & STIMULATION RECORD

CASING AND CEMENTING RECORD

SURFACE CASING: Ran 7 joints (306') 8-5/8", 24#, J55, STC, 8rd casing. Set at 318' KB. Cemented with 200 sacks (236 cu. ft.) Class "B" cement with 1/4#/sk. flocele and 3% calcium chloride. Circulated 10 sacks cement to surface. Plug down at 2:30 PM. WOC 12 hours and pressure tested casing and BOP to 600 psig. Held.

PROD. CASING: Ran 216 joints, 4-1/2", 11.6#, K55, LT&C, 8rd casing. Set at 8060' KB. Cemented in two stages. First stage: 600 sacks (732 cu. ft.) Class "B" 50/50 poz w/ 2% gel, 6-1/4#/sk. gilsonite, 6#/sk. salt, preceeded by 1000 gallons fluid loss chemical. Float collar at 8021' KB. Plug down at 3:45 PM on 9-16-84. Float held. Circulated 2 hours between stages. Second Stage: Stage tool at 5967' KB. Cemented with 500 sacks (1420 cu. ft.) Class "B" 65/35 poz w/ 12% gel, 10#/sk. gilsonite, 500 sacks (1060 cu. ft.) Class "B" 65/35 poz. w/ 6% gel and 10#/sk. gilsonite, tailed with 150 sacks (177 cu. ft.) Class "B" w/ 2% calcium chloride. Circulated 45 bbls cement to surface. Plug down at 7:30 PM on 9-16-84. Float held. Set slips with 80,000# tension and cutr off casing. Rig released.

DAKOTA FORMATION PERFORATIONS AND STIMULATION

Perforate Dakota Formation from 7838 to 8014 as follows, using 3-1/8" cased hole guns:

7838 - 7854	16 holes	
7920 - 7924	4 holes	
7964 - 7972	8 holes	
7996 - 8014	18 holes	Total of 46 holes 0.38"

Acidized down casing with 1500 gallons 15% HCL acid.

Fracture treated down casing @ 35 BPM with 40# cross-link gel, 1% KCL, 1 gal./1000 surfactant, 1 gal./1000 NE agent as follows:

20,000	gallons	PAD		25#/1000	FLA
10,000	gallons	w/ 1/2#/gal.	20/40 sand	25#/1000	FLA
10,000	gallons	w/ 1#	/gal.		
20,000	gallons	w/ 2#	/gal.		
20,000	gallons	w/ 3#	/gal.		

Flushed to top perforation. Total sand 115,000# in 80,000 gal. gel.