

R O T A R Y D R I L L E R S ' L O G

OPERATOR: Graves Drilling Co., Inc. DRILLING COMMENCED: December 31, 1979  
910 Union Center  
Wichita, Kansas 67202

CONTRACTOR: Graves Drilling Co., Inc. DRILLING COMPLETED: January 8, 1980  
910 Union Center  
Wichita, Kansas 67202

CASING RECORD: 6 Jts. 210' of used 8-5/8" LOCATION: Warren No. 1  
cemented with 200 sacks. NE NW NW  
106 Jts. 4439' of new 4 1/2" Section 17-31S-8W  
cemented with 75 sacks. Harper County, Kansas

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0 - 110	Sand
110 - 210	Red bed
210 - 255	Shale & red bed
255 - 1110	Red bed
1110 - 1630	Red bed & shale
1630 - 2048	Shale & lime
2048 - 2269	Lime & shale
2269 - 2718	Shale & lime
2718 - 2943	Lime & shale
2943 - 4234	Shale & lime
4234 - 4344	Lime & shale
4344 - 4441	Shale & lime
4441	Rotary Total Depth

I hereby certify the foregoing statements to be true and correct to the best of my knowledge.

GRAVES DRILLING CO., INC.