

ROTARY DRILLERS' LOG

CONTRACTOR: Graves Drilling Co., Inc. DRILLING COMMENCED: 30 July 1977  
910 Union Center  
Wichita, Kansas 67202

OPERATOR: Graves Drilling Co., Inc. DRILLING COMPLETED: 7 Aug. 1977  
910 Union Center  
Wichita, Kansas 67202

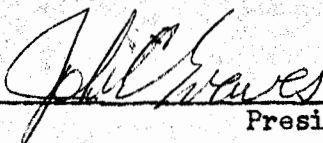
CASING RECORD: 5 Jts. 212' 8-5/8" used LOCATION: Updegraff No. 1  
cemented with 185 sacks C NE SE  
Section 22-31S-12W  
Barber County, Kansas

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0 - 212	Red bed
212 - 1837	Red bed & shale
1837 - 2152	Shale & lime
2152 - 2426	Lime & shale
2426 - 2805	Shale & lime
2805 - 3505	Lime & shale
3505 - 3845	Shale & lime
3845 - 4009	Lime & shale
4009 - 4283	Lime & chert
4283 - 4371	Lime
4371	Rotary Total Depth

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

GRAVES DRILLING CO., INC.

By   
President