

ROTARY DRILLERS' LOG

OPERATOR: A. Scott Ritchie
950 Vickers/KSB&T Bldg.
Wichita, Kansas 67202

DRILLING COMMENCED: 11 April 1977

CONTRACTOR: Graves Drilling Co., Inc.
910 Union Center
Wichita, Kansas 67202

DRILLING COMPLETED: 20 April 1977

CASING RECORD: 5 Jts. 209' of used 8 5/8"
cemented with 200 sacks

LOCATION: McDaniel No. 1
C SE SW
Section 9-32S-9W
Harper County, Kansas

0 - 209	Red bed & sand
209 - 500	Red bed
500 - 1170	Red bed & shale
1170 - 1631	Lime & shale
1631 - 1780	Shale & lime
1780 - 2207	Lime & shale
2207 - 2480	Shale
2480 - 2743	Shale & lime
2743 - 2867	Lime & shale
2867 - 3165	Shale
3165 - 3700	Shale & lime
3700 - 4356	Lime & shale
4356 - 4413	Lime, shale & chert
4413	Rotary Total Depth

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

GRAVES DRILLING CO., INC.