

ROTARY DRILLERS' LOG

OPERATOR: Graves Drilling Co., Inc. DRILLING COMMENCED: 23 March 1977
 910 Union Center
 Wichita, Kansas 67202

CONTRACTOR: Graves Drilling Co., Inc. DRILLING COMPLETED: 31 March 1977
 910 Union Center
 Wichita, Kansas 67202

CASING RECORD: 5 Jts. 205' of used 8 5/8" LOCATION: Thomas-Forsyth No. 6
 cemented with 200 sacks; C SW SE
 137 Jts. 4518 of new 4 1/2" Section 29-32S-12W
 cemented with 100 sacks Barber County, Kansas

0 - 524 Red bed
 524 - 1500 Red bed & shale
 1500 - 2112 Shale & lime
 2112 - 3133 Lime & shale
 3133 - 3326 Lime, shale & sand
 3326 - 3606 Lime & shale
 3606 - 3825 Lime, shale & sand
 3825 - 4251 Shale & lime
 4251 - 4473 Lime & shale
 4473 - 4515 Lime, shale & chert
 4515 Rotary Total Depth

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

GRAVES DRILLING CO., INC.

By J. H. Graves
President

STATE OF KANSAS)
) SS: