D R I L L E R 'S L O G

FARM NAME: BATES A4

LOCATION: S/2 NW NW
Sec. 31-30S-1W
Sumner County, Ks.

CONTRACTOR: SHAWVER ARMOUR, INC.

OWNER: BEARDMORE DRILLING CO.

ELEVATION: 1306 K.B.

COMMENCED: October 17, 1966

COMPLETED: October 26, 1966

CASING RECORD: Set 439' 8 5/8" w/300 sx cement - 1 inched with 150 sx.
Set 5 1/2" @ 3729' w/75 sx cement

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FORMATION:	
Soil & clay	20
Shale & Shells	250
Shale & Salt	395
Anhydrite	475
Lime & Shale	785
Shale & Lime	1030
Lime & Shale	1350
Shale & Lime	2655
Lime & Shale	2750
Stalnaker Sand	2770
Lime & Shale	3058
Kansas City	3058
Lime	3323
Lime & Shale	3725
Lime	3729
Core #1	3729-3741
R.T.D.	3741

TOPS:	
Stalnaker	2750
Base Kansas City	3323
Cherokee	3560
Mississippi Chert	3720
Mississippi Lime	3727

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STATE OF KANSAS)
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SEDGWICK COUNTY)

I, Marjorie Hall, do hereby certify that the above log is a true and correct copy of the above captioned well as shown on the daily drilling reports.

SHAWVER ARMOUR, INC.

BY Marjorie Hall
Marjorie Hall, Vice President

Subscribed and sworn to before me this
11th day of November 1966.

My commission expires January 20, 1970

Delores M. Andrews
Delores M. Andrews