

15-163-20755

State Geological Survey
WICHITA BRANCH

BERGMAN DRILLING, INC.

DRILLERS LOG

12-9-17W

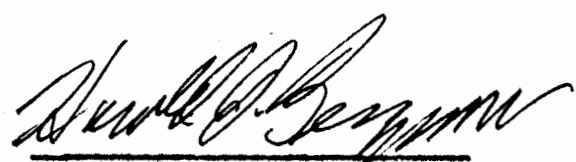
Re: Hrabe # 3 "C"
NW SW NE
Section 12-9S-17W
Rooks County, Kansas

OPERATOR: George P. Crawford
CONTRACTOR: Bergman Drilling, Inc.
COMMENCED: November 1, 1977
COMPLETED: November 14, 1977
TOTAL DEPTH: 3464

Set 8 5/8" @220' w/140 sx.

0	220	Post Rock & Lime	
220	665	Shale - Sand - Red Bed	
665	1256	Red Bed & Sand	
1256	1292	Anhydrite	
1292	1370	Red Bed - Shale Streaks	
1370	1770	Red Bed - Shells - Shale	
1770	1940	Shale - Lime	
1940	2415	Lime - Shale	
2415	2600	Lime - Shale	
2600	3000	Lime & Shale	
3000	3080	Lime & Shale	
3080	3180	Lime - (Lansing)	
3180	3250	Lime	
3250	3330	Lime - Shale Streaks	
3330	3405	K. C. Lime	
3405	3464	Lime	
3464	Lime &	Lime & Shale	
3464		Total Depth.	Set 5 1/2" @ 3466' w/200 sacks

We certify that the above and foregoing to be true and correct copy of the drillers log on the Hrabe # 3, located in Rooks County, Kansas, as revealed by the records of Bergman Drilling, Inc.


Harold I. Bergman