

BERGMAN DRILLING, INC.

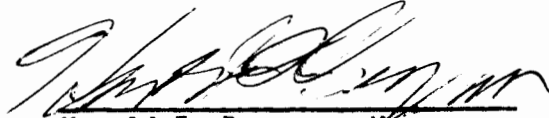
DRILLERS LOG

Re: Krause # 4
SE SE SE Sec. 26-13S-20W
Ellis County, Kansas

OPERATOR: Liberty Enterprises, Inc.
CONTRACTOR: Bergman Drilling, Inc.
COMMENCED: April 28, 1977
COMPLETED: May 9, 1977
TOTAL DEPTH: 3884' Ran 8 5/8" @ 223' w/150 sacks

0	20	Rock Post - Shells Clay
20	227	Post Rock - Clay- Shells
217	755	Shale - Shells - Red Bed
755	1195	Dark Sand
1195	1230	Red Bed
1230	1489	Red Bed - Shale
1489	1536	Anhydrite
1536	1657	Shale
1657	2111	Shale
2111	2335	Shale
2335	2397	Shale - Lime
2397	2909	Shale - Lime
2909	3240	Lime & Shale
3240	3385	Shale - Lime
3385	3470	Lime & Shale
3470	3549	Lime
3549	3775	Lime
3775	3829	Lime
3829	3845	Arbuckle
3884		Total Depth Set 3884' 5 1/2" w/ 150 sacks

we certify that the above and foregoing to be true and correct copy of the drillers log on the # 4 Krause, located in Ellis County, Kansas as revealed by the records of Bergman Drilling, Inc.


Harold I. Bergman, Manager