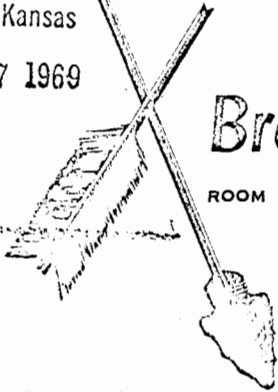


SEP 27 1969

Broken Arrow Drilling Company

ROOM 409 PETROLEUM BUILDING • TULSA, OKLAHOMA 74103 • AC 918-582-1181



DRILLER'S LOG

OWNER: NATIONAL ASSOCIATED PETROLEUM
Petroleum Building
Tulsa, Oklahoma

NAME: J. O. Gunnels et al **NO.** 1

WELL DEPTH 5125

DATE: 5/3/69 **COMP.:** 5/20/69

CONTRACTOR: BROKEN ARROW DRILLING CO.

SEC. 5 **TWP.** 11S **RGE.** 37W

LOCATION: C NW-NW

COUNTY: Logan

NEUTRALIZATION 3378

PRODUCTION: D & A

CASING RECORD: 274' New 8-5/8"

CEMENT RECORD: 150 sacks cement
100#/A.C. - 200#/C.C.

0' - 330'	Sandy Soil
330' - 2500'	Shale
2500' - 2701'	Red Bed
2701' - 2743'	Anhydrite
2743' - 3105'	Shale
3105' - 3280'	Shale & Shells
3280' - 3845'	Shale
3845' - 4485'	Lime & Shale
4485' - 4680'	Lime
4680' - 4940'	Lime & Shale
4940' - 4980'	Lime
4980' - 5125'	Lime & Shale
T.D.	5125'



We hereby certify that the above is a true copy of the Driller's Log for the above described well.

BROKEN ARROW DRILLING COMPANY

By: *John Robert*
General Manager

Subscribed and sworn to before me this _____ day of _____, 1969

My Commission expires: