State Geological Survey
WICHITA, BRANCH

KANSAS DRILLERS LOG

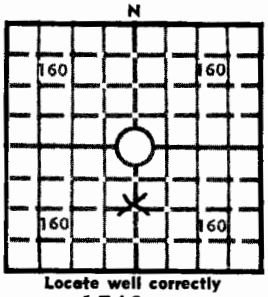
S. 36 T. 19 R. 8 E/W

API No. 15 — 159 (County) — 20,698 (Number)

Loc. 2600' WEL & 1400' NSL

County Rice

640 Acres



Locate well correctly

Elev.: Gr. 1742

DF _____ KB 1755

Operator	Northern Natural Gas Co.
Address	P. O. Box 88 Lyons, Kansas 67554
Well No.	#36-03
Lease Name	Knight
Footage Location	1400 feet from XX (S) line 2600 feet from (E) XXX line
Principal Contractor	Sterling Drilling
Geologist	
Spud Date	6/21/77
Total Depth	3744
P.B.T.D.	
Date Completed	7/26/77
Oil Purchaser	

CASING RECORD

Report of all strings set — surface, intermediate, production, etc.

Purpose of string	Size hole drilled	Size casing set (in O.D.)	Weight lbs/ft.	Setting depth	Type cement	Sacks	Type and percent additives
Surface	12 1/4"	8 5/8"	23.6	1103	50-50P02MIX	500	3% C.C.
Production	7 7/8"	5 1/2"	15.5	3738	50-50P02MIX	750	500 W/4% GEL, .5 of 1% HALAD -9, & 5# GIL. 250 W/18% SALT & .75 of 1% CFR-2

LINER RECORD

Top, ft.	Bottom, ft.	Sacks cement

TUBING RECORD

Size	Setting depth	Packer set at
2 7/8"	3476	3485

PERFORATION RECORD

Shots per ft.	Size & type	Depth interval
2	D.P. JET	3496-3516

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated
500 GAL. 15% HCL	3496-3516

INITIAL PRODUCTION

Date of first production	Gas Storage Well
Producing method (flowing, pumping, gas lift, etc.)	

RATE OF PRODUCTION PER 24 HOURS	Oil	Gas	Water	Gas-oil ratio
	bbls.	MCF	bbls.	CFPB

Disposition of gas (vented, used on lease or sold)

Producing interval(s)

INSTRUCTIONS: As provided in KCC Rule 82-2-125, within 90 days after completion of a well, one completed copy of this Drillers Log shall be transmitted to the State Geological Survey of Kansas, 4150 Monroe Street, Wichita, Kansas 67209. Copies of this form are available from the Conservation Division, State Corporation Commission, 3830 So. Meridian (P.O. Box 17027), Wichita, Kansas 66217. Phone AC 316-522-2206. If confidential custody is desired, please note Rule 82-2-125. Drillers Logs will be on open file in the Oil and Gas Division, State Geological Survey of Kansas, Lawrence, Kansas 66044.

C-10-1972

Operator		DESIGNATE TYPE OF COMP.: OIL, GAS, DRY HOLE, SWDW, ETC.:
Northern Natural Gas Company		
Well No. 36-03	Lease Name Knight	Gas Storage Well
S 36 T 19 R 8 ~~E~~ W		

WELL LOG

Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

SHOW GEOLOGICAL MARKERS, LOGS RUN, OR OTHER DESCRIPTIVE INFORMATION.

FORMATION DESCRIPTION, CONTENTS, ETC.	TOP	BOTTOM	NAME	DEPTH
Hutchinson Salt	799	1051	IES	3100-3742
Chase Group	1226		DENSITY	1103-3742
Council Grove Group	1559		SONIC	1103-3738
Tarkio Lm.	2104		GRN	0-3742
Howard Lm.	2335		CSM/SS	10-1103
Heebner Shale	2724		DIP	3150-3742
Lansing/K.C. Group	2899			
Basal Penn. Sh. & Cong.	3229			
Simpson Group	3433			
Arbuckle Dolomite Group	3492			

USE ADDITIONAL SHEETS, IF NECESSARY, TO COMPLETE WELL RECORD.

Date Received	
	Gary N. Wilson Signature Sr. Res. Engr. Title 8/3/77 Date