

15-159-20801

Geological Survey

WICHITA BRANCH  
KANSAS DRILLERS LOG

S. 2 T. 20 R. 8 <sup>\*</sup>/<sub>W</sub>  
Loc. 2300' EWL & 800' NSL  
County Rice

API No. 15 — 159 — 20,801  
County Number

Operator  
Northern Natural Gas Co.

Address  
P. O. Box 88 Lyons, Kansas 67554

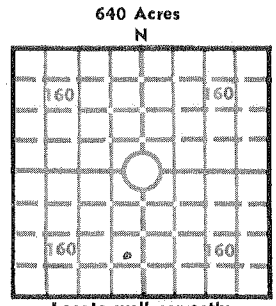
Well No. #2-11 Lease Name Pool

Footage Location  
800 feet from (X) (S) line 2300 feet from (X) (W) line

Principal Contractor Sterling Drilling Geologist

Spud Date February 28, 1979 Total Depth 3564' P.B.T.D.

Date Completed March 29, 1979 Oil Purchaser



Elev.: Gr. 1687'  
DF KB 1700'

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 3/4"	8 5/8"	24	1059'	50-50 poz-mix	500	3% cc
Production	7 7/8"	5 1/2"	15.5	3534'	50-50 poz-mix	750	500 sks w/4% Gel & 5# Gil w/5% Halad 9 250 sks w/18% Salt .75% CFR-2

LINER RECORD

PERFORATION RECORD

Top, ft.	Bottom, ft.	Sacks cement	Shots per ft.	Size & type	Depth interval
			4	D.P. Jet	3257'-3310' 3320'-3380'
			4	D.P. Jet	3390'-3450'

TUBING RECORD

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated
2400 Gal. 15% HCL	3257'-3310'
2400 Gal. 15% HCL	3320'-3380'
2400 Gal. 15% HCL	3390'-3450'

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.

Operator

Northern Natural Gas Company

DESIGNATE TYPE OF COMP.: OIL, GAS,  
DRY HOLE, SWDW, ETC.:  
Gas Storage Well

Well No.

2-11

Lease Name

Pool

S 2 T 20 R 8 <sup>K</sup><sub>W</sub>

**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
			GRN	Surf. -3557
Hutchinson Salt	729	1013	IES	3000-3563
Chase Group	1179		Density	1067-3563
Council Grove Group	1518		SCB/SS	Surf. -1067
Tarkio Lime	2051		BHCS-Int.	1067-3556
Howard Lime	2281			
Heebner Shale	2669			
Lansing/K.C. Group	2843			
Basal Penn. SH. & Cong.	3170			
Simpson Group	3205			
Arbuckle Dolomite Group	3255			

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

Date Received

*Darryl Wilson*  
Signature

Director of Reservoir Engineering & Operations

Title

April 4, 1979

Date