

SIDE ONE

(Rules 82-3-130 and 82-3-107)

This form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within ninety (90) days after the completion of a well, regardless of how the well was completed.

FOR INFORMATION REGARDING THE NUMBER OF COPIES TO BE FILED AND APPLICATIONS REQUIRING COPIES OF ACO-1 FORMS SEE PAGE TWO (2), SIDE TWO (2) OF THIS FORM.

F _____ Letter requesting confidentiality attached.

C Attach ONE COPY of EACH wireline log run (i.e. electrical log, sonic log, gamma ray neutron log etc.)***Check here if NO logs were run _____.

PLEASE FILL IN ALL INFORMATION. IF NOT AVAILABLE, INDICATE. IF INFORMATION LATER BECOMES AVAILABLE, SUBMIT BY LETTER.

LICENSE # 6878 EXPIRATION DATE 6/30/83
OPERATOR Northern Natural Gas Producing Company API NO. 15-189-20,630-0000
ADDRESS P. O. Box 5444 COUNTY Stevens
Denver, Colorado 80217 FIELD Panoma

** CONTACT PERSON C. J. Park, Prod. Acctg. Supv. PROD. FORMATION
PHONE 303/572-2696

PURCHASER Northern Natural Gas Company LEASE Lightcap No. 4 Unit
ADDRESS 2223 Dodge Street WELL NO. 5
Omaha, Nebraska 68102

DRILLING Contractor Earl F. Wakefield, Inc. WELL LOCATION NW/4
CONTRACTOR ADDRESS 300 West Douglas, Suite 500 1250 Ft. from North Line and
Wichita, Kansas 67202 1250 Ft. from West Line of
the NW/4(Qtr.) SEC 12 TWP 33S RGE 36(W).

PLUGGING CONTRACTOR ADDRESS

WELL PLAT (Office Use Only)
KCC
KGS
SWD/REP _____
PLG. _____
NGPA _____

TOTAL DEPTH 3130' PBDT 3095'
SPUD DATE 1/25/83 DATE COMPLETED 5/11/83
ELEV: GR 3004.4' DF KB 3012.4'

DRILLED WITH ~~(CABLE)~~ (ROTARY) ~~(AIR)~~ TOOLS.
DOCKET NO. OF DISPOSAL OR REPRESSURING WELL BEING USED TO DISPOSE OF WATER FROM THIS LEASE 82408-C (C-1382)

Amount of surface pipe set and cemented 617' DV Tool Used? No

TYPE OF COMPLETION THIS AFFIDAVIT APPLIES TO: (Circle ONE) - Oil, Shut-in Gas, Gas, Dry, Disposal, Injection, Temporarily Abandoned. If OWWO, indicate type of re-completion. Other completion. NGPA filing

ALL REQUIREMENTS OF THE STATUTES, RULES AND REGULATIONS PROMULGATED TO REGULATE THE OIL AND GAS INDUSTRY HAVE BEEN FULLY COMPLIED WITH.

A F F I D A V I T

C. J. Park, being of lawful age, hereby certifies that:

I am the Affiant, and I am familiar with the contents of the foregoing Affidavit. The statements and allegations contained therein are true and correct.

SUBSCRIBED AND SWORN TO BEFORE ME this 8th day of June, 1983.

MY COMMISSION EXPIRES: 11/30/86
NOTARIAL SEAL AND SIGNATURE

** The person who can be reached by phone regarding any questions concerning this information.
JUN 15 1983
CONSERVATION DIVISION
Wichita, Kansas

SIDE TWO

ACO-1 WELL HISTORY

OPERATOR

Northern Natural Gas Prod. CEASE Lightcap #4 Ut. SEC. 12 TWP. 33S RGE. 36W (W)

FILL IN WELL INFORMATION AS REQUIRED:

WELL NO. 5

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
X Check if no Drill Stem Tests Run.				
Check if samples sent to Geological Survey				
Sand & Clay	0	590	Chase	2595
Red Bed	590	1055	Council Grove	2936
Shale - Gyp	1055	1155		
Sand	1155	1365		
Shale & Gyp/Anhydrite	1365	1725		
Shale & Gyp	1725	1742		
Anhydrite	1742	1762		
Shale & Gyp	1762	2035		
Shale	2035	2325		
Shale & Lime	2325	2530		
Lime & Shale	2530	3130		
R.T.D.	3130			

If additional space is needed use Page 2,

Report of all strings set - surface, intermediate, production, etc. CASING RECORD (New) or (Used)

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"	24#	617'	Class H	125	12% gel + 3% CaCl ₂
					Class H	125	3% CaCl ₂
Production	7 7/8"	5 1/2"	14#	3118'	Class H	510	6% KCC + 1/4% cellophane
					Class H	125	8% salt + .2% D-46

LINER RECORD

PERFORATION RECORD

Top, ft.	Bottom, ft.	Sacks cement	Shots per ft.	Size & type	Depth interval
			2 shots/ft.		3028-31, 3020-22
					3010-15, 3002-3005
					2987-2989, 2975-80
					2970-73, 2959-63
					2952-55, 2944-2950

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used		Depth interval treated
Acidize: 12 bbls. 15% acid (12 BPM), 86 bbls. of gelled water (20 BPM), 117 bbls. of 15% acid @ 12 BPM. Dropped 108 ball sealers, 86 bbls. of gelled water. FRAC: 100 bbls. pad at 120 BPM, 1714 bbls. w/o #20/40 sd./gal. @ 120 BPM. Flush with 100 bbls. total fluid 2152 bbls. gelled water, 216M #20/40 sd. IR-120 BPM.		2944-3031
Date of first production	Producing method (flowing, pumping, gas lift, etc.)	Gravity
Awaiting pipeline connection		
Estimated Production -I.P.	Oil - bbls. Gas - bbls. Water - % MCF	Gas-oil ratio CFPB
Disposition of gas (vented, used on lease or sold)		Perforations
Awaiting pipeline connection		2944-3031