

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION OR RECOMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

SIDE ONE

API NO. 15-175-20989-00-00

County Seward

SW/4. NE/4. NE/4 Sec. 4. Twp. 34S. Rge. 33 East West

4030 Ft North from Southeast Corner of Section
1100 Ft West from Southeast Corner of Section

(Note: Locate well in section plat below)

Lease Name Graham B Well # 2

Field Name Kansas Hugoton Gas

Producing Formation Chase

Elevation: Ground 2847' KB 2858'

Section Plat

										5280					
										4950					
										4620					
										4290					
										3960					
										3630					
										3300					
										2970					
										2640					
										2310					
										1980					
										1650					
										1320					
										990					
										660					
										330					
5280	4950	4620	4290	3960	3630	3300	2970	2640	2310	1980	1650	1320	990	660	330

WATER SUPPLY INFORMATION

Disposition of Produced Water: Disposal
Docket # Repressuring

Questions on this portion of the ACO-1 call:
Water Resources Board (913) 296-3717

Source of Water:
Division of Water Resources Permit #

Groundwater.....Ft North from Southeast Corner
(Well)Ft West from Southeast Corner of
Sec Twp Rge East West

Surface Water.....Ft North from Southeast Corner
(Stream, pond etc).....Ft West from Southeast Corner
Sec Twp Rge East West

X Other (explain) Purchased
(purchased from city, R.W.D. #)

Operator: License # 5447
Name Cities Service Oil & Gas Corp
Address 3545 NW 58th Street
Oklahoma City, Oklahoma
City/State/Zip 73112

Purchaser Northern Natural Pipeline Co.

Operator Contact Person Raymond Hui
Phone (405) 949-4268

Contractor: License # 3098
Name Exeter Drig Co

Wellsite Geologist Robert Vick
Phone (405) 949-4400

Designate Type of Completion
X New Well Re-Entry Workover
Oil SWD Temp Abd
X Gas Inj Delayed Comp.
Dry Other (Core, Water Supply, etc.)

If ONWO: old well info as follows:
Operator
Well Name
Comp. Date Old Total Depth

WELL HISTORY

Drilling Method:
X Mud Rotary Air Rotary Cable
12-1-87 12-11-87 2-5-88
Spud Date Date Reached TD Completion Date
6550' 6502'
Total Depth PBTD

Amount of Surface Pipe Set and Cemented at 1699 feet
Multiple Stage Cementing Collar Used? X Yes No
If yes, show depth set DV tool @ 3330 feet
If alternate 2 completion, cement circulated
from.....feet depth to.....w/.....SX cmt
Cement Company Name
Invoice #

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 apply.

Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months. One copy of all wireline logs and drillers time log shall be attached with this form. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Del G. Oliver

Title Assistant Manager of Prod. Date 2-18-88

Subscribed and sworn to before me this 18th day of February 1988

Notary Public Dena J. Howell

Date Commission Expires 4-24-89

K.C.C. OFFICE USE ONLY

F Letter of Confidentiality Attached
C Wireline Log Received
C Drillers Timelog Received
Distribution
KCC SWD/Rep NGPA
KGS Plug Other
(Specify)

REC'D
2-23-88
CONSERVATION DIVISION
Wichita, Kansas

Operator Name Cities Service Oil & Gas Corp Lease Name Graham B Well # 2

Sec 4 Twp 34S Rge 33 East West County Seward

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken Yes No
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No

Formation Description
 Log Sample

Ran Spectral Litho-Density/Comp. Neutron w/Gamma Ray; Dual Induction Lateralog and Micro-Elec. Logs. Ran CBL/CCL/GR & PET/GR from 6493-4206' & 4849-2003'. Est. tops of cmt.: 1st stage at 5380'; 2nd stage at 2295' KB.

Name	Top	Bottom
Red- Bed	0	1448'
Anhydrite	1448	1700'
Lime & Shale	1700	6550'
	TD	6550'
	PBTD	6502'

*Production Casing Cementing information:

Set DV tool at 3300'. Cmt'd. 1st stage as follows:
 500 gals mud flush, 50 sx 65/35 C1 H Poz w/6% Total gel & 1/4#/sx Flo. 475 sx 65/35 C1 H Poz w/6% Total gel & 1/4#/sx Flo. 175 sx 50/50 C1 H Poz w/2% Total gel, 12% salt 0.5% HALAD-9, 2% CaCl₂ & 1/4#/sx Flo. Cmt'd 2nd Stage w/500 gals mud flush & 400 sx 65/35 Poz C w/6% Total gel & 1/4#/sx Flo. 250 sx 50/50 C1 C Poz w/2% Total gel, 6% salt, 0.4% HALAD-4, 3% CaCl₂ & 1/4#/sx Flo.

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (in O.D.)	Weight Lbs/Ft.	Setting Depth	Type of Cement	#Sacks Used	Type and Percent Additives
Conductor Pipe	30"	20"		30'	Red-MIX	3.5 yds	
Surface	12-1/4"	8-5/8"	24#	1699'	C1 C	725	6% gel; 2% CaCl ₂
Production	7-7/8"	5-1/2"	15.5#	6549'	(Please refer to Log)		* under well
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)			
Shots Per Foot	Specify Footage of Each Interval Perforated			Depth			
4	Chester SS: 6218-6224' (6'; 24 holes)			Frac treated 6218-24' w/250 gal 7-1/2% FE acid and 17180 gal of gelled diesel. TLTR: 561 bbls.			
TUBING RECORD		Size	Set At	Packer at	Liner Run	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First Production	Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (explain).....						
Waiting for PL Connection							
Estimated Production Per 24 Hours	Oil	Gas	Water	Gas-Oil Ratio	Gravity		
	bbls	195 MCF	12 BLW Bbls		CFPB		

METHOD OF COMPLETION

Production Interval

Disposition of gas: Vented Sold Open Hole Perforation Other (Specify)
 Used on Lease Dually Completed Commingled

Chester SS
 6218-6224'