

STATE CORPORATION COMMISSION OF KANSAS  
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION OR RECOMPLETION FORM  
ACO-1 WELL HISTORY

DESCRIPTION OF WELL AND LEASE

Operator: License # 5447  
Name Cities Service Oil & Gas Corp  
Address 3545 N.W. 58th Street  
City/State/Zip Okla. City, Okla. 73112

Purchaser Northern Natural Pipeline Co.

Operator Contact Person Raymond Hui  
Phone (405) 949-4400

Contractor: License # 3098  
Name Exeter Drilling Company

Wellsite Geologist Andrew Howell  
Phone (405) 949-4400

Designate Type of Completion

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

If OWWO: old well info as follows:

Operator  
Well Name  
Comp. Date  
Old Total Depth

WELL HISTORY

Drilling Method:

- Mud Rotary  Air Rotary  Cable

10-16-87 10-19-87 2-2-88  
Spud Date Date Reached TD Completion Date  
2790' 2705'  
Total Depth PBTD

Amount of Surface Pipe Set and Cemented at 716 feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set feet  
If alternate 2 completion, cement circulated from feet depth to w/SX cmt

API NO. 15-129-20892-00-00

County Morton  
Approx. NE/4 SE/4 Sec. 31 Twp. 34S Rge. 40  East  West

1980  
1250 Ft North from Southeast Corner of Section  
Ft West from Southeast Corner of Section  
(Note: Locate well in section plat below)

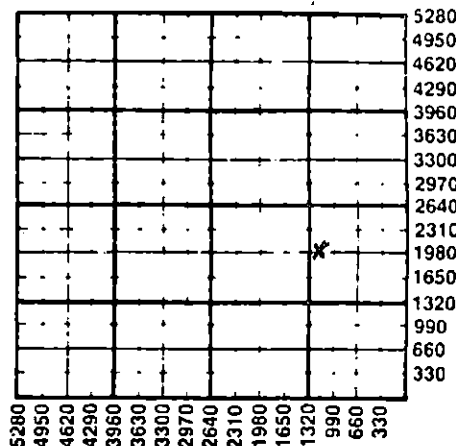
Lease Name Hayward A Well # 2

Field Name Kansas Hugoton Gas

Producing Formation Chase

Elevation: Ground 3392' KB 3403'

Section Plat



WATER SUPPLY INFORMATION

Disposition of Produced Water:  Disposal  Repressuring  
Docket #

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

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

INSTRUCTIONS: This form shall be completed in duplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 90 days after completion or recompletion of any well. Rule 82-3-130 and 82-3-107 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 here are complete and correct to the best of my knowledge.

Signature Del G. Oliver

Title Assistant Manager of Production Date 2-18-88

Subscribed and sworn to before me this 18th day of February 1988  
Notary Public Jeesa Jo Nowitt

Date Commission Expires 4-24-89

K.C.C. OFFICE USE ONLY  
 Letter of Confidentiality Attached  
 Wireline Log Received  
 Drillers Time Log Received  
Distribution  
 KCC  SWD/Rep  NGPA  
 KGS  Plug  Other (Specify)

31 Wp 34 Rge 40 S

SIDE TWO

Operator Name Cities Service Oil & Gas Corporation Lease Name Hayward A Well # 2

Sec. 31 Twp. 34S Rge. 40  East  West County Morton

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 CBL w/Variable Density, GR & CCL Log from 2697-600'. Ran cement Evaluation log from 2697-600'.

Name	Top	Bottom
Red Bed	0	718'
Shale & Red Bed	718	1730'
Lime	1730	2790'
	TD	2790'
	PBTD	2705'

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"	22"		20'	Redi-Mix	2 yds	
Surface	12-1/4"	8-5/8"	24#	716'	Cl C	375	6% gel; 2% CaCl <sub>2</sub>
Production	7-7/8"	5-1/2"	15.5#	2789'	Cl C	600	6% gel; 6% salt; 3% CaCl <sub>2</sub>
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record			
Shots Per Foot	Specify Footage of each Interval Perforated			(Amount and Kind of Material Used)			Depth
	Chase: 2620-34'; 2604-12'; 2572-88'; 2556-72'; 2546-56'; 2536-40'; 2506-22'; 2490-2506'; 2480-90'; 2472-80' (118'; 123 holes)			5000 gals 2% KCLW 107,471 gal gel N <sub>2</sub> foam			2472-2634'
TUBING RECORD				Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Size	2-3/8"	Set At	2641'	Packer at			
Date of First Production	Producing Method <input 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	292 MCF	24 Bbls	CFPB			

METHOD OF COMPLETION

Production Interval

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

Chase  
 2472-2634'