

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 # 5140  
name Frontier Oil Company  
address 125 N. Market, Ste 1720  
Wichita, Ks. 67202  
City/State/Zip

Operator Contact Person Jean Angle  
Phone 316-263-1201

Contractor: license # 5302  
name Red Tiger Drilling Company

Wellsite Geologist Steven D. Angle  
Phone 913-628-2586  
PURCHASER Northern Gas Products Company

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

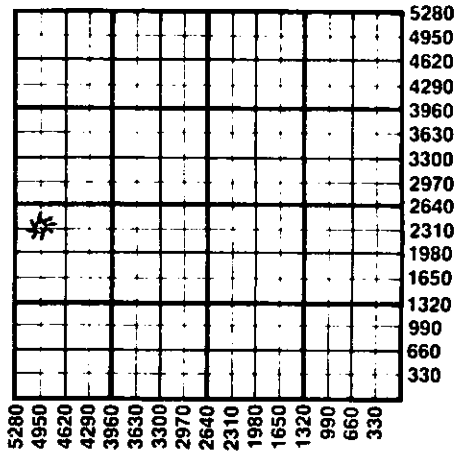
WELL HISTORY

Drilling Method:  Mud Rotary  Air Rotary  Cable  
11-15-83 11-27-83 7-13-84  
Spud Date Date Reached TD Completion Date  
3710' 2250'  
Total Depth PBSD  
Amount of Surface Pipe Set and Cemented at 1208 feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If Yes, Show Depth Set 2315' feet  
If alternate 2 completion, cement circulated from feet depth to w/ SX cmt

API NO. 15-165-21,146-00-00  
County Rush  
NW NW SW Sec 1 Twp 17S Rge 18W East West  
(location)  
2310 Ft North from Southeast Corner of Section  
4955 Ft West from Southeast Corner of Section  
(Note: locate well in section plat below)

Lease Name Muth Well# 1  
Field Name Reichel West  
Producing Formation Chase  
Elevation: Ground 2099' KB 2104'

Section Plat



RECEIVED  
STATE CORPORATION COMMISSION  
JUL 16 1984  
07-16-1984  
CONSERVATION DIVISION  
Wichita, Kansas

WATER SUPPLY INFORMATION

Source of Water:  
Division of Water Resources Permit #  
 Groundwater Ft North From Southeast Corner and Ft West From Southeast Corner of Sec Twp Rge East West  
 Surface Water Ft North From Southeast Corner and Ft West From Southeast Corner Sec Twp Rge East West  
 Other (explain) Larry Collins, Nekoma, Ks. (purchased from city, R.W.D.#)

Disposition of Produced Water:  Disposal  Repressuring  
Docket # CD-118236

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. Rules 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 herein are complete and correct to the best of my knowledge.

Signature George A. Angle  
Title Owner  
Subscribed and sworn to before me this 13<sup>th</sup> day of July 19 84  
Notary Public Jean Angle  
Date Commission Expires 5-14-85



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)

Sec. 1, Twp. 17, Rge. 18W

Operator Name Frontier Oil Company Lease Name Muth Well# 1 SEC 1 TWP 17S RGE 18W  East  West

**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

DST 1 (1951-2120) 60-30-60-30 Strg blo in 5" GTS 20".  
 Avg gg 1st op. 230,000 CFGPD. 2nd op 348,000 CFGPD.  
 Rec 570' GM. IF 68-186, FF 205-235, ISI & FSI 519.

DST 2 (2748-2910) 30-30-30-30 wk blo 5" 2nd op No blo.  
 Rec 70'M. IF 58-78 FF 78-78 ISI 235 FSI 147.

DST 3 (3086-3120) 60-30-60-30 GTS 30". gg 4,120,000 1st  
 op. 3,370,000 2nd op. Rec 210' GsyMdyWtr. IF 107-166,  
 FF 205-254, ISI 837 FSI 837.

DST 4 (3218-3325) 30-30-30-30. Vy wk blo TO both ops.  
 Rec 200' M w/tr Wtr. IF 39-88 FF 107-137 ISI 1046 FSI  
 1026.

DST 5 (3327-3420) 30-30-30-30 Vy wk blo 15". 2nd op no  
 blo. Rec 30' M IF 29-29 FF 39-39 ISI 1006 FSI 986.

DST 6 (3418-3556) 60-30-60-30 Vy wk blo TO. both ops.  
 Rec 260' M, 180' WM. IF 58-156, FF 186-264, ISI 1096  
 FSI 1076.

DST 7 (3554-3580) 30-30-30-30 Vy Wk blo TO both ops.  
 Rec 100' M w/few spks O & small show gas. IF 29-39,  
 FF 98-107, ISI 68 FSI 117.

DST 8 (3580-3640) 30-30-30-30 Vy wk blo 15". 2nd op no  
 blo. Rec 20'M. IF 29-29 FF 49-49 ISI 147 FSI 58.

DST 9 (3580-3680) 60-30-60-30 Strg blo 10" TO. 2nd op  
 strg blo TO. Rec 70' M. IF 39-39 FF 58-58 ISI 460 FSI  
 313.

Name	Top	Bottom
Anhydrite	1208	1256
Herrington	1999	
Winfield	2035	
Ft. Riley	2187	
Cottonwood	2448	
Neva	2519	
Red Eagle	2589	
Brownville	2740	
Tarkio	2852	
Elmont	2904	
Topeka	3092	
Heebner	3331	
Toronto	3348	
Lansing-KC	3380	
Base KC	3605	
Granite Wash	3649	
RTD	3710	

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
Surface Production	12-1/4"	8-5/8"	24#	1216, 40'	60-40. Poz.	450	2% gel. 3% cc.
DV	7-7/8"	4-1/2"	10-1/2#	3709'	Common	250	10% Salt
	"	"	"	2315'	Common	150	10% Salt

PERFORATION RECORD		Acid, Fracture, Shot, Cement Squeeze Record	
shots per foot	specify footage of each interval perforated	(amount and kind of material used)	Depth
4	2034' - 2044'	500 gal 15% demulsion	2034-2044
4	3094' - 3100'	500 gal 15% demulsion	3094-3100
4	3656' - 3660'		
4	3680' - 3686'		

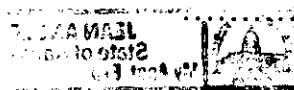
TUBING RECORD			
size	N/A	set at	packer at
Liner Run		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First Production	Producing method <input checked="" type="checkbox"/> flowing <input type="checkbox"/> pumping <input type="checkbox"/> gas lift <input type="checkbox"/> Other (explain)		
Estimated Production Per 24 Hours	Oil	Gas	Water
	N/A		
	Bbls	1-7-90 MCF	Bbls
			CFPB

Disposition of gas:  vented  sold  used on lease

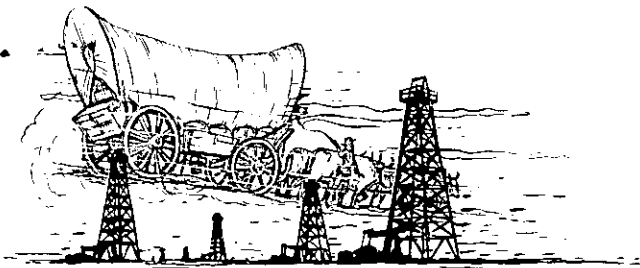
**METHOD OF COMPLETION**  
 open hole  perforation  other (specify)

**PRODUCTION INTERVAL**

Dually Completed.  
 Commingled



15-165-21146-00-00



# **FRONTIER OIL COMPANY**

**1720 KANSAS STATE BANK BUILDING**

**WICHITA, KANSAS 67202**

**TELEPHONE 316-263-1201**

ACO-1 #1 Muth

DST 10 (3580-3710) 60-30-60-30 Fr to wk blo. both ops. Rec 70'M.  
IF 58-58 FF 58-58 ISI 186 FSI 264.

RTD 3710'.

RECEIVED  
STATE CORPORATION COMMISSION

JUL 16 1984

CONSERVATION DIVISION  
Wichita, Kansas

TWX 910-741-6842 FOC WIC