

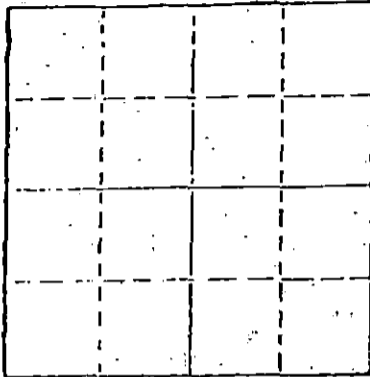
STATE OF KANSAS  
STATE CORPORATION COMMISSION

WELL PLUGGING RECORD

Give All Information Completely  
Make Required Affidavit  
Mail or Deliver Report to  
Conservation Division  
State Corporation Comm.  
245 North Water  
Wichita, KS 67202

Rice County. Sec. 9 Twp. 20 Rge. 7 E/W  
Location as "NE/CNW/SW" or footage from lines  
C N/2. NW/4

Lease Owner Brougher Oil, Inc.  
Lease Name Engelland #1-A Well No. \_\_\_\_\_  
Office Address Great Bend, Kansas 67530  
Character of Well (Completed as Oil, Gas or Dry Hole) \_\_\_\_\_



Locate well correctly on above Section Plat

Date Well completed \_\_\_\_\_ 19\_\_\_\_  
Application for plugging filed \_\_\_\_\_ 19\_\_\_\_  
Application for plugging approved \_\_\_\_\_ 19\_\_\_\_  
Plugging commenced 3/6/80 \_\_\_\_\_ 19\_\_\_\_  
Plugging completed 3/10/80 \_\_\_\_\_ 19\_\_\_\_  
Reason for abandonment of well or producing formation  
depleted

If a producing well is abandoned, date of last production \_\_\_\_\_ 19\_\_\_\_

Was permission obtained from the Conservation Division or its agents before plugging was commenced? yes

Name of Conservation Agent who supervised plugging of this well Toman  
Producing formation \_\_\_\_\_ Depth to top \_\_\_\_\_ Bottom \_\_\_\_\_ Total Depth of Well 3345  
Show depth and thickness of all water, oil and gas formations.

OIL, GAS OR WATER RECORDS

CASING RECORD

FORMATION	CONTENT	FROM	TO	SIZE	PUT IN	PULLED OUT
				8-5/8	245	none
				4 1/2"	3341	2420'

Describe in detail the manner in which the well was plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hold. If cement or other plugs were used, state the character of same and depth placed, from \_\_\_\_\_ feet to \_\_\_\_\_ feet for each plug set.

Sanded to 3300' and ran 3 sacks cement. Shot pipe at 2518', 2432', pulled 59 joints.  
Bailed hole to 245', set rock bridge from 245 to 230' and ran 3 1/2 yards ready mix.

PLUGGING COMPLETE.

RECEIVED 3-13-80  
STATE CORPORATION COMMISSION  
MAR 13 1980  
CONSERVATION DIVISION  
Wichita, Kansas

(If additional description is necessary, use BACK of this sheet)

Name of Plugging Contractor KELSO CASING PULLING  
CHASE, KANSAS

STATE OF KANSAS COUNTY OF RICE  
R. DARRELL KELSO (employee of owner) or (owner or operator)  
of the above-described well, being first duly sworn on oath, says: That I have knowledge of the facts, statements, and matters herein contained and the log of the above-described well as filed and that the same are true and correct. So help me God.

(Signature) R. Darrell Kelso

CHASE, KANSAS

(Address)

SUBSCRIBED AND SWORN TO before me this 12th day of March, 1980

My commission expires \_\_\_\_\_

Margaret Melcher  
Notary Public.



CARL TODD  
*Petroleum Engineer*

1117 WEST RIVER BOULEVARD  
WICHITA, KANSAS 67203

Dec. 7, 1976

RECEIVED  
STATE TELEPHONE  
REGISTRATION COMMISSION

FEB 28 1980

CONSERVATION DIVISION  
Wichita, Kansas

George Ewonus & Bolyard Oil & Gas, Ltd., Et al.

Engelland 1-A

CN  $\frac{1}{2}$  NW  $\frac{1}{2}$  Sec. 9 T 20 S- R 7W.

Rice County, Kansas

Commenced: 11-29-76

Elev.: 1706 KB

Completed: 12-5-76

1704 DF

Contractor: Red Tiger Drlg. Co. Rig #3

1701 GL

Surface Csg.: 8 5/8" @ 245 W/165 Sx. Production Csg: 4 1/2" @ 3341 w/150 Sx.

GENERAL

Subject well is classed as a development well in the Centennial Pool. Location was in a green wheat field.

Ten (10) foot samples were saved from 2400 to 2910 and five (5) samples from 2910 to 3345 (Rotary Total Depth). Circulating samples were caught through all critical zones.

Drilling time was recorded by Geolograph and plotted from 2400 to 3345 on the enclosed time and sample log.

All depths in this report are drill pipe measurements from Kelly Bushing (Elevation 1706) unless otherwise noted drill pipe and Electric Log measurements checked with one (1) foot on all reliable markers.

GEOLOGICAL

Electric Log Tops

Heebner	2728 (-1022)
Brown Lime	2860 (-1154)
Lansing	2906 (-1200)
Base K.C.	3207 (-1501)

FEB 28 1980

CONSERVATION DIVISION  
Wichita, Kansas

Mississippian 3280 (-1575)  
Kinderhook 3304 (-1598)  
Rotary Total Depth 3345 (-1639)

There were no shows of oil or gas in the Lansing-Kansas City porous zones nor in the Marmaton formation.

Mississippian Chert 3280-3304

The top 4-5 feet was black, vitreous, dense pink and yellow che with little or no porosity. The remainder was clean white, viterous to semi-devitrified. with fine vugular porosity and rare evidence of fract Some vugs appeared to be filled with red mud. gas hubbles were observe in rare paces but no odor was observed. This zone was covered by Drill Stem Test No. 1.

Drill Stem Test No. 1 3267-3305 Date 12-4-76

Tool opened at 6 P.M.

Strong blow at the start of each opening and decreasing & end each flow period . Died in 2 minutes after first shut-in and 9 minutes after 2nd shut-in.

IFP 39/39 FFP 44/48 PSI  
BHP 361/730 PSI,

Recovered 90 feet of slightly gas cut thin mud.

Comments and Recommendations

Captioned well on the Lansing formation is 7 feet lower than Le No. 1 and 18 feet lower than Engelland No. 1. On the Mississippi pore zone it is only 4 feet lower than Messman-Rinehart Engelland No. 1 in Section 3-20-7W , which is reportedly the best well in the field . Ther structured position is considered favorable.

Electric Log calculations show this zone to have favorable pore Drill Stem Test Data indicates poor permeability and possible formation damage. Lack of apparent connecting porosity between vugs and some of vugs being filled with red mud was of some concern. Establishment of commercial production will depend upon a successful fracture treatment.

It was therefore reccommended that 4 1/2" production casing be set 3341 with 150 sx., the porous zone perforated and fractured with suitab treatment. Respectfully submitted, *Paul Todd*