

# WELL RECORD

Company Cities Service Oil Company Well No. 4 Farm Rein "A"  
 Location 660' FNL and 510' FWL Sec 29 T. 19S R. 21W  
 2316 KB  
 Elevation 2313 DE, 2308 GL County Ness State Kansas  
 State Potential:  
 Initial Prod. 132 bbls. oil, trace water, 24 hrs. Contractor Peel Brothers, Inc.  
 Acid 250 gals. 7½% BDA Drlg. Comm. July 29, 1966  
 T. D. 4468', PBTd 4455' Drlg. Comp. August 19, 1966

**CASING RECORD:**

8-5/8", 32#, at 509' cemented with 200 sx 50-50  
     Pozmix, 2% CC, and 75 sx  
     Common, 2% CC.  
 4-1/2", 9.5#, at 4467' cemented with 150 sx SS  
     common cement.

**FORMATION RECORD:**

clay, sand & limestone	0-80'
sand & shale	510
shale, sand & shells	950
sand	1215
anhydrite	1539
sand & shale	1965
lime & shale	2676
lime & shale	3120
lime & shale	3560
lime	3800
lime & shale	3850
lime	4330
lime & shale	4430
lime	4467 RTD

**LOG TOPS:**

Heebner	3801 (-1485)
Toronto	3820 (-1504)
Lansing	3849 (-1533)
Base Kansas City	4171 (-1855)
Pawnee	4264 (-1948)
Fort Scott	4345 (-2029)
Cherokee	4362 (-2046)
Conglomerate	4411 (-2095)
Mississippi (Warsaw)	4430 (-2114)
Mississippi (Osage)	4434 (-2118)

Log TD 4468 = 4467 RTD.

**COMPLETION:**

Perf. Mississippi 4438-44.  
 120' fluid in 12 hrs.  
 Bailed 23½ gals. oil, 7½ gals. water  
 3 hrs.  
 Acidized with 250 gals. 7½% BDA.

**State Test:**

132 oil, trace water, 24 hrs.

**SLOPE TESTS:**

1000'	1/4°
1765'	1/4°
2456'	1/4°
2972'	1/2°
3887'	1/2°

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY

Lease and Well No. REIN "A" #4

County NESS State KANSAS Date AUGUST 7, 1966

Formation Test No. 1 Total Depth 4439 Elev. 2316 KB

Interval Tested 4429 To 4439 Anchor Length 10'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4

Mud Weight 10 Viscosity 47 Water Loss 14.6 c.c. Bottom Hole Temp. 114 °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 8116

## RECOVERY

GOOD BLOW THROUGHOUT TEST  
247 FEET OF FREE OIL  
156 FEET OF MUDDY OIL  
164 FEET OF GAS

PARTIAL PLUGGING OF TOOL ON 1ST OPENING FOR 5 MINS.

Lease and Well No. REIN "A" #4 29 198 21W C. NW NW Formation Test No. 1

COMPANY CITIES SERVICE OIL CO. DATE AUGUST 7, 1966

LEASE REIN WA WELL NO. 4 TEST NO. 1 TICKET NO. 8116

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2430
INITIAL CLOSED IN PRESSURE	30 MINS.	1336
INITIAL FLOW	15 MINS.	28 to 51
FINAL FLOW	75 MINS.	55 to 146
FINAL CLOSED IN PRESSURE	30 MINS.	1309
FINAL HYDRO MUD PRESSURE		2388

TOTAL DEPTH 4439

PACKER DEPTH 4429

ST. NO. 1069 DEPTH 4434

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		28		51		55		146
P1		46		1235		73		1190
P2		49		1281		92		1235
P3		51		1309		110		1272
P4				1323		128		1290
P5				1331		146		1304
P6				1336				1309
P7								
P8								
P9								
P10								
	5 MINUTE INTERVAL		5 MINUTE INTERVAL		15 MINUTE INTERVAL		5 MINUTE INTERVAL	

REMARKS PARTIAL PLUGGING OF FIRST 5 MINS. OF 1ST OPENING.

**SPECIAL PRESSURE DATA**

COMPANY CITIES SERVICE OIL COMPANY DATE AUGUST 8, 1966

LEASE REIN "A" W WELL NO. 4 TEST NO. 2 TICKET NO. 8117

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2425
INITIAL CLOSED IN PRESSURE	30 MINS.	1334
INITIAL FLOW	40 MINS.	41 to 97
FINAL FLOW	60 MINS.	105 to 183
FINAL CLOSED IN PRESSURE	30 MINS.	1301
FINAL HYDRO MUD PRESSURE		2416

TOTAL DEPTH 4449

PACKER DEPTH 4439

ST. NO. 1049 DEPTH 4444

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		41		97		105		183
P1		?		1235		110		1217
P2		?		1281		119		1244
P3		?		1299		154		1263
P4		66		1318		156		1281
P5		68		1327		165		1290
P6		82		1334		183		1301
P7		92						
P8		97						
P9								
P10								
	5 MINUTE INTERVAL		5 MINUTE INTERVAL		10 MINUTE INTERVAL		5 MINUTE INTERVAL	

REMARKS PARTIAL PLUGGING ON BOTH FLOW PERIODS

**SPECIAL PRESSURE DATA**

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY

Lease and Well No. REIN "A" #4

County NESS State KANSAS Date AUGUST 8, 1966

Formation Test No. 2 Total Depth 4449 Elev. 2316 KB

Interval Tested 4439 To 4449 Anchor Length 10'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4

Mud Weight 9.8 Viscosity 51 Water Loss 14.6 c.c. Bottom Hole Temp 114 °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 8117

## RECOVERY

GOOD BLOW THROUGHOUT TEST

1048 FEET OF GAS IN PIPE

272 FEET OF CLEAN OIL

189 FEET OF MUDDY OIL

Lease and Well No. REIN "A" #4 29 19S 21N C NW NW Formation Test No. 2

# MILLER TESTING COMPANY

Box 547

## GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY

Lease and Well No. REIN "A" #4

County NESS State KANSAS Date AUGUST 8, 1966

Formation Test No. 3 Total Depth 4457 Elev. 2316 KB  
Interval Tested 4449 To 4457 Anchor Length 8'  
Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4  
Mud Weight 9.8 Viscosity 50 Water Loss 11 c.c. Bottom Hole Temp. 122 ° F  
Chokes: Top 1/2 Bottom 1/2 Ticket No. 8118

### RECOVERY

GOOD BLOW DECREASING SOME BY END OF TEST,  
  
1376 FEET OF GAS IN PIPE  
388 FEET OF FREE OIL  
126 FEET OF MUDDY OIL  
48 FEET OF SLIGHTLY OILY MUD  
15 FEET OF THIN MUD

Lease and Well No. REIN "A" #4 29 198 21M G NW NW Formation Test No. 3

COMPANY CITIES SERVICE OIL CO. DATE AUGUST 8, 1966

LEASE REIN "A" WELL NO. 4 TEST NO. 3 TICKET NO. 8118

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2379
INITIAL CLOSED IN PRESSURE	30 MINS.	1338
INITIAL FLOW	30 MINS.	28 to 119
FINAL FLOW	30 MINS.	146 to 211
FINAL CLOSED IN PRESSURE	30 MINS.	1334
FINAL HYDRO MUD PRESSURE		2379

TOTAL DEPTH 4457

PACKER DEPTH 4449

ST. NO. 1049 DEPTH 4452

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		28		119		146		211
P1		37		1272		151		1263
P2		55		1304		165		1299
P3		73		1318		174		1309
P4		92		1327		183		1318
P5		105		1334		197		1327
P6		119		1338		211		1334
P7								
P8								
P9								
P10								
	5	MINUTE INTERVAL	5	MINUTE INTERVAL	5	MINUTE INTERVAL	5	MINUTE INTERVAL

REMARKS \_\_\_\_\_

**SPECIAL PRESSURE DATA**

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
Great Bend, Kansas

75  
AD

LABORATORY WATER ANALYSIS

No. \_\_\_\_\_

To Cities Services Oil Co.  
Box 308  
Great Bend, Kan.

Date 12/8/67

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Well No. Rein A-4 Formation Miss. Osage

Location Sec. 29-19-21 Ness Co.

Field \_\_\_\_\_ Sample Source \_\_\_\_\_

Remarks: \_\_\_\_\_

Specific Gravity	<u>1.030</u>	Sulfates	<u>5,740</u>	mpl
pH	<u>7.5</u>	Calcium	<u>1,750</u>	mpl
Hydrogen Sulfide	<u>None</u>	Magnesium	<u>419</u>	mpl
Resistivity @ $^{\circ}\text{F}$ <u>70</u>	Ohm m <sup>2</sup> /m	Bicarbonates	<u>ND</u>	mpl
Chlorides	<u>26,700</u>	Iron	<u>None</u>	mpl

\* milligrams per liter

Remarks: Dakota has broken in. Note the high sulfates.

*Completed*

Respectfully submitted,

Laboratory Analyst  
Fitzgerald

HALLIBURTON COMPANY

By A. J. F. J.