

GEOLOGICAL WELL REPORT

KLM EXPLORATION, INC.

TROUPE NO. 1

SW SW NE Sec. 3-T10S-R20E

Leavenworth County, Kansas

BANKERS LIFE FIELD

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WELL DATA SUMMARY

OPERATOR: KLM Exploration, Inc., McLouth, Kansas

WELL: Troupe No. 1

LOCATION: SW SW NE Sec. 3-T10S-R20E, Leavenworth County,
Kansas

AREA: Bankers Life Field

ELEVATION: 982 feet, ground level. Drilling measured from
ground level

PRINCIPAL CONTRACTOR: Kelly Down Drilling, Inc., Neosho Falls, Kansas

EQUIPMENT: Type: Portable mud rotary
Make: Speedstar SS22
Motors: Cummins 290 diesel
Pumps: Gardner-Denver 6 x 10 and aux. National
7-1/4 x 12 w/ Detroit V92
Drill pipe: 2-7/8" IF w/ seven 6-inch collars
Bit size: 6-1/2"

COMMENCED: 2-13-88

SURFACE CASING: 8-5/8" @ 255 feet, cemented to surface

DRILLING FLUID: Chemical mud, Trotter Supply, Inc., Topeka, Kansas

COMPLETED DRILLING: 2-16-88

ROTARY TOTAL DEPTH: 1389 feet

ELECTRIC LOGGING: Log-Tech, Topeka, Kansas

DEPTH REACHED, ELECTRIC LOG: 1392 feet

PRODUCTION STRING: 4-1/2" casing

GEOLOGIST: John E. Hickox

PROGRESS

- 2-13-88 Moved in and rigged up rotary tools. Drilled to 280', set 8-5/8" casing @ 255' and cemented to surface.
- 2-14 BOP did not test. Reset casing. BOP tested OK. Drilled to 820'.
- 2-15 Drilling ahead.
- 2-16 Drilled to 1389' TD. Ran electric logs. Ran 4-1/2" casing and cemented to surface.

FORMATION TOPS
(Electric log)

	KLM 1 Troupe 3-10S-20E	KLM 2 Daniels 3-10S-20E
Base Kansas City	655 (+327)	(+346)
Lenapah-Altamont	765 (+217)	(+220)
Cherokee	895 (+87)	(+103)
Ardmore	988 (-6)	(+13)
McLouth sand	1342 (-360)	(-329)
Mississippian	1380 (-398)	(-371)
RTD	1389 (-407)	(-373)
ELTD	1392 (-410)	(-374)

DUAL POROSITY/DUAL INDUCTION LOG

				S_w M=1.8 $R_w=.2$
Formation and depth	\emptyset	R_t		
McLouth sand	1342-1344	18	12	59
	1344-1346	20	20	41
	1346-1348	21	40	27
	1348-1350	20	40	29
	1350-1352	13	15	72

SAMPLE DESCRIPTION
Depths corrected to electric log

DEPTH

1150-1164 Shale, dark gray
1164-1182 Sandstone, gray, fine-grained, slight porosity
1182-1207 Shale, dark gray, gray-green
1207-1236 Shale, dark gray, black, black carbonaceous, w/ coal streaks
1236-1269 Shale, gray, dark gray, black, partly silty
1269-1301 Shale, dark gray, black, soft, w/ streaks coal and shale, black, carbonaceous
1301-1324 Shale, black, soft, w/ coal streaks, and shale, gray-green
1324-1342 Shale, black, soft w/ thin coal streaks, and shale, white, limy, sticky, and limestone streaks, buff, tan, dense, finely crystalline

1342 McLOUTH SAND

1342-1352 Sandstone, gray, brown, fine to medium-grained, sub-rounded, good porosity, fair show free oil, oil on pits, no odor
1352-1380 Shale, gray, gray-green, black, w/ coal streaks and thin limestones, buff, tan, finely crystalline

1380 MISSISSIPPIAN

1380-1392 Limestone, light gray-buff, dense, finely crystalline

1389 RTD

1392 ELTD

COMMENTS AND RECOMMENDATIONS

Subject well is prospective for oil production from the McLouth sand interval 1352-1380'.