W. H. REX

J. E. MORRIS

### REX & MORRIS DRILLING COMPANY

625 SOUTH MAIN

TEL. 321 - 3800

BUCKEYE CORP

P. O. BOX 334

EL DORADO, KANSAS 67042

AUGUST 18, 1977

#### GEOLOGICAL REPORT

WELL NAME:

REX & MORRIS #1 BRENSING

LOCATION:

SW SE SW, SECTION 24-245-12W

STAFFORD COUNTY, KANSAS

CONTRACTOR:

H-30 RIG 4

DATE COMMENCED:

8 AUGUST 1977

DATE COMPLETED:

15 AUGUST 1977

SAMPLES SAVED:

550' TO 3915' RTD

DRILLING TIME SAVED:

550' TO 3915' RTD

CASING RECORD:

NEW 20# 8 5/8 SET AT 324' WITH 235 SACKS OF CEMENT WITH 3% CALCIUM CHLORIDE

(SUN OIL WELL CEMENTING CO.)

GEOLOGICAL INFORMATION:

WELL SUPERVISED BY J. E. MORELAND

FROM 3425 TO 3915 RTD.

DRILL STEM TESTS

1 VIOLA TEST RUN SUN TESTING CO.

ELECTRICAL SURVEY:

NONE

DRILLING MUD PROGRAM:

STARCH BASE MUD WITH CRUDE OIL ADDED

(MUD BY TOTAL SERVICE MUD CORP.)

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### PERTINENT FORMATION MARKERS (ALL DEPTHS MEASURED FROM ROTARY BUSHING)

ELEVATION	1856 RB	L & S
BASE ANHYDRITE	660	+1196
BASE HUTCHINSON SALT	1730	+ 126
WINFIELD	1810	+ 46
FORT RILEY	1925	- 69
BASE FORT RILEY	2015	- 159
NEVA LIME	2305	- 449
WABAUNSEE LIME	2565	- 66 <del>9</del>
TARKIO LIME	2680	- 824
HOWARD LIME	2900	-1044
TOPEKA LIME	2990	-1134
HEEBNER SHALE	3310	~1454
TORONTO LIME	3324	-1468
DOUGLAS SHALE	3345	-1489
BROWN LIME	3464	-1608
LANSING	LAnspy 3494	-1638
BASE KANSAS CITY	3772	-1916
BASAL PENN. UNCONFORMITY	3818	-1962
KINDERHOOK SHALE	3824	-1968
VIOLA LIME	3899	-2043
VIOLA CHÉRT	3905	-2049
ROTARY TOTAL DEPTH	3915	-2059

#### MAJOR ZONES OF POROSITY

#### LANSING KANSAS CITY

- 3503-07 Lime, fine to medium crystalline, cream to tan, poor scattered vugular porosity, no show.
- 3514-16 Limestone, dense to fine crystalline, tan, good oblicastic porosity, no show.
- 3574-80 Limestone, fine crystalline, white to light gray, chalky, poor porosity, no show.
- 3584-88) Limestone, fine crystalline, cream to tan, mealy and chalky, poor porosity, 3592-97) no show.
- 3604-11) Limestone, fine crystalline, cream, mealy, poor scattered colicastic porosity, 3616-19) no show.
- 3634-37 Limestone, fine crystalline, cream to tan, chalky and mealy, very poor scattered vuggy porosity, no show.
- 3653-56 Limestone, dense, brown, very poor scattered vugular porosity, with dark asphaltic stain, show heavy asphaltic oil, no odor.

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3674-79 Limestone, fine crystalline, tan, dolomític, good oolicastic porosity, in part white chalky lime, trace of asphaltic residue.

#### VIOLA

- 3899-3905 Limestone, dense to fine crystalline, tan to gray, with tan opaque sharp fresh chert, no porosity, no show.
- 3905-15 Chert, white-gray, fresh, sharp, translucent, also some bony, sharp, light stain on edges, show free live oil in cracks; with 10% limestone, dolomitic, cream, fine crystalline, light scattered stain, fracture porosity, no odor. (Covered by DST #1)

#### DRILL STEM TESTS

DST #1 3890-3915 VIOLA
Open 30 minutes, shut in 30 min., open 60 min. shut in 30 min.
Strong blow throughout test.
Gas to surface in 22 minutes, stablized at 26,600 CU. feet per day.
Recovery 270' gassy oil cut mud, water cut plus 60' salt water.
Initial shut in pressure 302 psi.
Flow pressures 107 to 126.
Final shut in pressure 302 psi.
Bottom hole temperature 118°F.

#### RECOMMENDATIONS AND DISCUSSION

This well was plugged and abandoned due to lack of commercial oil shows and low structural position.

Joseph E. Moreland, Geologist

JEM, Jr.:nd