

GEOLOGICAL REPORT

Earl M. Murphy

Perrier #2

950' FNL, 1250' FEL, NE/4

Section 25-T21S-R10E

Lyon County, Kansas

KCC

APR 7 1994

COMMENCED: 9/15/93
COMPLETED: 9/22/93
CONTRACTOR: Tri-Star
SIZE HOLE: 7 7/8"
SURFACE PIPE: 8 5/8" @ 101'
CEMENTED WITH: 60 sx, 3% cc
LONG STRING: 5 1/2" @ 2257'
CEMENTED WITH: 50 sx, 2% Gel,
 1% cc
OTHER:

STATUS: To be Open Hole Comp
API NO.: 15-111-20,394
OPER. LIC.: 30223
FIELD: Bradfield
ELEVATION: Surveyed
GL: 1246
KB: ----
RTD: 2557 1/2
LOGS RUN: ----
MUD SYSTEM: Chemical/Gel

GEOLOGICAL CONSULTING

Rex R. Ashlock
 Petroleum Geologist
 1135 S. Summit
 El Dorado, KS 67042
 (316) 321-9520



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JAN 11 1994

CONSERVATION DIVISION
 WICHITA, KS

GEOLOGICAL CONSULTING

1135 S. Summit
El Dorado, KS 67042

Rex R. Ashlock
Petroleum Geologist

(316) 321-9520

September 29, 1993

Earl Murphy
R. R. #1
Madison, KS 66860

Re: Perrier #2
950'FNL, 1250'FEL, NE/4
Section 25-T21S-R10E
Lyon County, Kansas

Dear Sir:

The following report on the subject well is based upon microscopic examination of rotary cuttings from 1100' to a rotary total depth of 2557 1/2'. All measurements were taken from ground level which was surveyed at 1246'. The following sample tops were picked:

Bonner Springs	1204	+42
Kansas City	1239	+7
Base Kansas City	1515	-269
Marmaton	1638	-392
Cherokee	1799	-553
Ardmore	1881	-635
Cattlemen Zone	1902	-656
"Upper" Bartlesville Zone	1980	-734
"Lower" Bartlesville Zone	2002	-756
Mississippi	2113	-867
Osage "Chat"	2269	-1023
Kinderhook	2470	-1224
Misener Sand	2556.5	-1310.5
Viola	2557	-1311
RTD	2557.5	-1311.5

MAJOR ZONES OF INTEREST

Kansas City. 1390 - 1403. Limestone, mottled dark cream to grayish tan, very fine to medium crystalline, poor with traces of good crystalline and bioclastic porosity, no apparent odor, 3-5% of sample showing fair fluorescence, scattered staining and traces of speckled shows of free oil, does not merit further testing.

1469-1478. Limestone, medium tans, dolomitic, very oolitic, good to very good crystalline and oolitic porosity, 15% of sample showing fair fluorescence and staining, very weak to weak scattered shows of free oil, possible gas with water zone, does not merit further testing at this time.

Mississippi. 2121 - 2127. Chert, "dirty", grey-brown, white, off-white, tripolitic in part, trace dolomitic limestone, poor to fair porosity, very dull to no fluorescence, weak to fair odor, weak to fair shows of free oil, possibly gassy.

2127 - 2132. Chert, as above, a little more tripolitic, trace more "limey", fair to good leached and vugular porosity, fair odor, no apparent fluorescence, 3% of sample showing free oil in vugular areas.

NOTE: Mississippi does not merit further testing at this time.

Misener Sand. 2556 1/2 - 2557. Sandstone, clear, white, fine to coarse grained, sub-rounded to sub-angular, moderately to very well sorted, well to very well consolidated, friable to firm, poor to fair intergranular porosity in part, very dull to no fluorescence, faint odor, weak spotty shows of free oil.

Viola. 2557 - 2557 1/2. Chert, white, grayish white, 60-70% tripolitic, fair to good leached porosity, very, very dull to no fluorescence, weak to fair odor, very weak to weak show of free oil. NOTE: After diluted Hydrochloric acid applied to cuttings - good to very good shows of free oil broke out from same.

SUMMARY

Due to the show of oil found in the Viola, the decision was made to run production casing for further testing of this zone through Open Hole completion methods.

Sincerely,



Rex R. Ashlock
Petroleum Geologist

REORDER NO. 77-0

TRIPPING TIME In Minutes Per Foot
Rate of Penetration Decreases
5 10 15 20 25

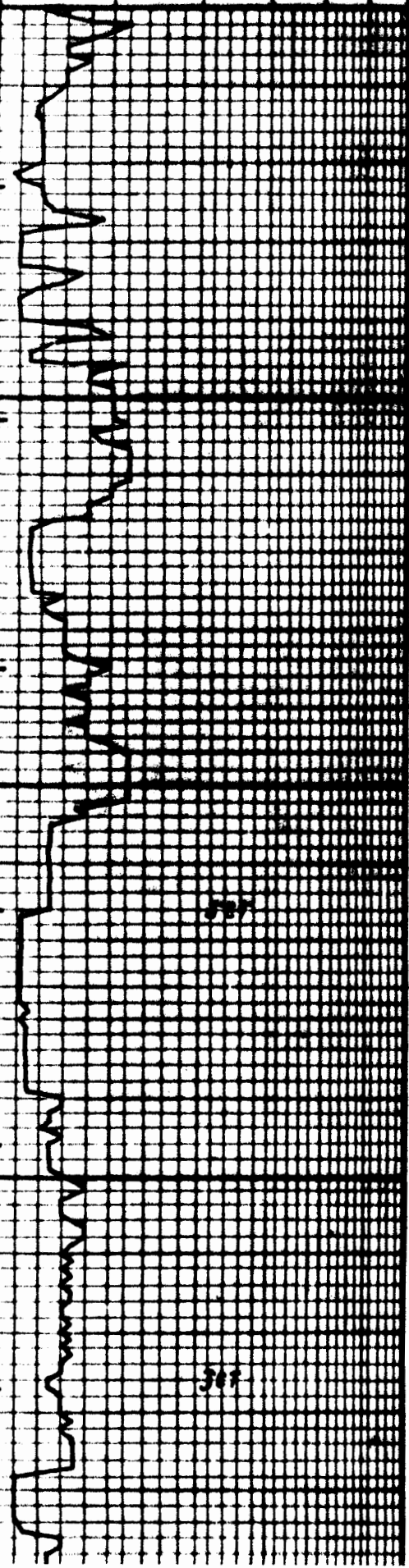
DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS



1200

LS, LT. GY, FN. XLN, VP. POR

LS, WH, OFF WH, VFN-ERS. XLN, F-G. POR, NS

LS, A/A, TR, CRM

SH, "PALE" GRN-GY V. SLTY

LS, "DULL" WH, CRS. XLN, DENSE

SH, GY, MED GY

LS, V. LT. GY'S, MICRO-MED XLN

LS, GY-MED GY'S, VFN-FN. XLN TR LT. GY-TAN

LS, "MOTT" GY-TAN'S, G-VG. XLN. POR NS

LS, MED GY-TAN'S, V. LT. BRN P-VP. POR, TR ARG

LS A/A, DENSE

SH, MED GY, "NO" V. SLTY TO-SNDY, TR FINE FRAG

SH, MED GY, DK GRN-GY

LS, "ARG", W/ FINE FRAG.

LS, "MOTT" GY-TAN. ARG IN PART, P-F. POR

LS, V. LT GY'S, LT. TAN-ERM, MICRO-VFN. XLN, TR CRS

LS, MED TAN, VV. LT. BRN, FN-U. CRS XLN, F. POR, NS

SH, MED TO-DK GY, SLTY-SNDY TR VFN. GN, LT. GY, SS, NS

LS, SLTY + ARG

Lansing
Drig. Time Top
1080 (+)

Bonner Spgs.
1204 (+42)

Kansas City
1239 (+7)

1300

LS, SLTY + ARG

LS, CRM, OFF WH, VFN - FN.XLN
P-F.POR

LS, WA, OFF WH, VFN - V.CRS.XLN
G-UG.XLN W/TR UUG POR
NS

LS, VV. LT.TAN, FN-CRS.XLN, G.
POR, NS

LS, "MOTT" LT.GY'S MICRO-FN.
XLN, UP.XLN POR

SS, V.LT.GY, CL, FN-MED.GN, ANG-
V-ANG, W.SORT, P-MOD W-CONS
F-G. INTER GN POR, TR MICR
TR CARB + SHLY, NS

SH, MED-DRGY

LS, OFF WH W/LT. GY TENT

SH, "DULL" GRN, GRN-GY, SLTY
EN PART, TR SUDY

1400

LS, "MOTT" DK CRM-TO-GYISH
TAN'S, VFN-MED XLN, P-
TR G.XLN + BIOCLASTIC
POR, 3-5% OF SPL SHOWING
F.FLUR, SCAT. STAINING &
FO, N. APPT. ODOR

LS, "MOTT" MED GY-TAN'S, FN
MED XLN, P-UP.POR

LS, V. LT TAN-TO-LT. GYISH TAN
FN-CRS. XLN, F-G. POR, TR
CNT, TR SH, NS

LS, V. LT. GY, MED-CRS XLN, P.POR
"DENSE"

SH, DK GY'S, BLK, TR SLTY

LS, MED TAN'S, DOLIC. V. OLITIC
G-UG. XLN & OLITIC
POR, 15% SHOWING, F.FLUR
STAINING, VN-WK "SCAT" SPD,
POSS. GAS W/WR ZONE, DOES
NOT MEET FURTHER TESTING

LS, MED TAN'S, VFN-MED XLN, P-
UP.POR, TR CNT

1500

LS, LT. GY, VFN-FN.XLN, DENSE
SH BLK

LS, MED-DK TAN, UP.POR

SH, GY, DK GY

LS, "MOTT" LT GY'S & TAN'S, UP.POR

1500

LS, LT. GY, VFN-FN-XLN, DENSE
SM. BLK
LS, MED-DK TAN, VP. PRK
SH, GY, DK GY
LS, MOTT' LT GY & TAN'S, VP. PRK
SH, GY, SLTY-TO - "Limy"

Base Ks. City
1515 (-269)

SH, GY, MED GY, SLTY

SH, GY, V-SLTY-TO - SANDY

SH, MED GY

1600

SH, GY, TR GR-GRN & BLK

LS, GRN-TAN, BLK

SH, GRN-GRN-GY

Marmaton
1638 (-392)

LS, DK GRN-TO-V. LT. TAN,
MTCRN-VEN XLN, P-VP. PRK

SH, BLK

SH, "DULL" GRN-GY, TR SLTY

SH, GY, SILTY-SNDY

1700

SH, TR BLK

1700

SH, DK GY

LS, LT. TAN, DEUSE, BRNU @
BASE, TR GY'ISH-CRM LS

SH, GY-CRM, DK GY

LV, GY, DEUSE, TR CRM-TO-TAN

SH, BLK

SH, MED GY, GY, SLTY-TR-
SDDY IN PART, TR LS

LS, DK GY-TAN, VFN-FN-XLV
VP-POR

SH, BLK

LS, "MOTT" GY-TAN'S, VP-POR

1800

SH, BLK

SLTY/SS, V-LG GRN

SH, GY, SLTY

SH, $\frac{1}{2}$, V-SLTY

SH, MED-YO-DK GY

SH, DK-V-DK GY, TR BLK, CARB

LS, V-LT-LT. TAN, V-DEUSE, FN-
XLV, TR FOS, ARG. IN
PART, BROWN

Cherokee
1799(-553)

Ardmore
1881(-635)

1900

SH, LV, OR GRN, SDDY

Gettysburg Zone
1902(-656)

1900

SH, BLK, V. GRN, SLTP

Calhoun Zone
1902(-656)

SH, V. SLTP-SUDY

SH, BLK, V. CARB
SH, GP, MED GP, TR SLTP

SH, V. DX GP-TO-BLK

SH, GP, SUDY

SH, GP-MED GP

SH, TR BLK
SH, V. SLTP-TO-SUDY

"Upper" Bv. Zone
1980(-734)

2000

SH, V. DX GP, BLK

SH, MED-TO-DX GP-GRN, GRN-
GY, & GP

"Lower" Bv. Zone
2002(-756)

SH, V/ LS, FRAG, "CALC." NODULES,
SEAF. SS, CLUSTERS, "EGT."

SH, V. DX GP-TO-BLK, DX GRN-
GYs

SH, V. DX GP-BLK

2100

SH, A.A. W/ LG GYs, PALE GRN
TR CARB, TR LS & ENT FRAG,
TR "LOOSE" CRs, GRAIN RDD
SS (CG), TR PY

AA

2100

SM. A. W. / LG. GY'S. PALE GY'S
 TR CARB., TR LS + CNT FRAG,
 TR "LOBBE" CRS GRAZU RDD
 SS (CGI), TR PY

LT. GY-GY'S, SHARP, TR LS + DOL,
 CNT, TR LG. RDD SS GN'S, SEAT
 STAIN, NSFO

"DIRTY" GY-BANDS, WH, OFF WH,
 CNT, TRAP IN PART, TR DOL, 4 LS
 P-TR F. POR, WH-F. ODDOR, WH-F
 SFO, NO-FO-VV-DULL FLOOR, GASTY

CNT. A / A. LIPIN. DARR. TR. 370
 OF SPL SHOWS TO IN "DREBY"
 AREAS; F. ODDOR, TR MORE "LIMY"
 LS, LT. TAN, LT. GY'S, TAN, FN,
 XLN, P-UP. XLN POR, TR DOL'ic
 N-SFO

Miss.
2113(-867)

LT. V. LT. TAN, VEN = MED. TAN, FN
 XLN'S ADD'ED + EATED, F-G
 POR, V. WH (?) ODDOR, NS, TR PELT

LS, DK TAN, BRN, V. PELT, VP.
 POR, NS

DOL, LT. TAN, TAN, FN, XLN, F-TR G
 XLN POR, NS

DOL'ic / LS, LT. - MED TAN, FN - MED
 XLN, P-POR, TR "Re-worked" LS
 TR (LESS 1%) U/ DEAD OIL STAIN
 WHK ODDOR, N. ELUMR, TR PELT

DOL, TAN, DK TAN, VEN-FD. XLN
 P-G. POR, TR LG. RDD SS +
 BLK SN, TR OFF WH CNT
 NS

2200

DOL, "DIRTY" "MOTT" TAN'S, GY'S.
 GY-FAN SOMEWHAT ARG,
 TR PALE GRN SHLES, CNT

DOL, "DULL" CRAM-TAN, FN, XLN
 P-F. POR

DOL, LT. TAN, V-LT. GY'S, TAN
 VEN-CRS. XLN, F-G. POR

DOL, "MOTT" LT-TB-DK TAN'S,
 GY'S, LT. BANDS, ARG IN PART
 TR DOL'ic SN, TR CALL
 TR CNT, "Limy" IN PART
 TR CHALCEDONY

Osage "Chat"
2289(-1023)

POOR
 SPTS

CNT, OFF WH, LT. BRN, LT-MED
 GRN, GRN, GRN, GRN, GRN
 DK BRN, VEN-FD. XLN
 DOL, F-UP. FRAC. XLN
 POR, NS

2300

CNT, OFF WH, LT. BRN, LT-MED
 GRN, GRN, GRN, GRN, GRN
 DK BRN, VEN-FD. XLN
 DOL, F-UP. FRAC. XLN
 POR, NS

300

G-DE'POR, 25

CNT, OFF WH, WH "BLOCKY"

CNT, V-LT GY, SEAMY THROUSE
IN PART

DOL, LT. GY, VFN-XLN, P-POR, W/
LT. GY, CNT

POOR SPL'S, ABUNDY, DAN-GY,
GY-CAN, MED-FG-DR GY, BLR,
SH'S

DOL V-LT GY, GY'ISH OFF WH
FU-XLN, VS-BXEL, XLN POR
NS

LS, V-LT TAN, CRM, TR W/ LT.
GY'ISH FINT, VFN-RED
XLN, TR MICRO XLN, VP.
POR

2400

LS, MED TAN, TAN, MED-RED
VFN XLN, "DUBBY" VP. POR

LS, LT. GY'ISH, TAN, VFN-FU.
XLM, P-POR

LS, "MED" TAN, AM, EN-MED
XLN, P-VP. POR

LS, TA, TR SH

DOL, GY'S, FU-XLN, F-G. POR, NS
TR SH

LS, LA TAN'S GY, VFN-MED
XLN, P-VP. POR, TR SH

LS, TAN-DR TAN, EN-DR XLN
P-VP. POR

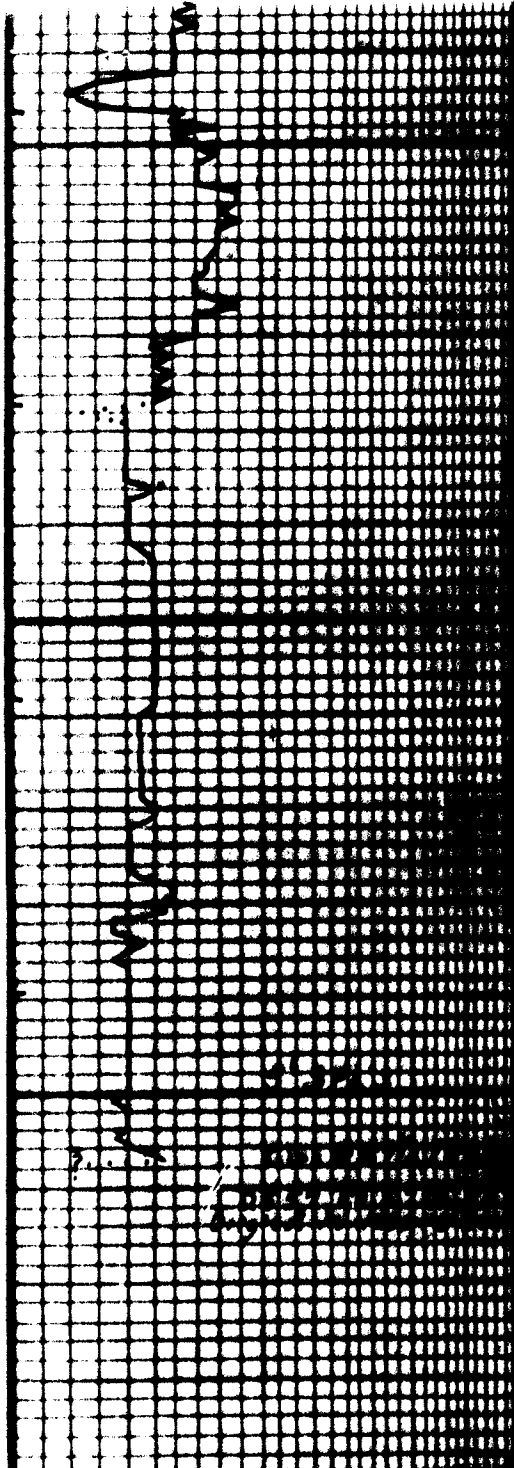
LS, V-LT GY'ISH - OFF WH, VFN.
EN. XLN. PASS.

SH, MED-DR CAN-GY, GP-CAN,
MED GY, & TR SH

SH, MED-V-DR GY, BLR, TR. TA

2500

Kinderhook
2470(-1224)



2500

LS, TA, TR SN
DOL, GY'S, FN-XLN, F-G. POR, NS TR SN
LS, LT TANIC & GY - VFN-MED XLN, P-UP. POR, TR SN
LS, TAN-DK TAN, FN-GRC XLN P-UP. POR
LS, V-LT GYISH - OFF WH, VFN FN-XLN, FASE
SH, MED-DK GRN-GY, GK-GRN, MED GY, & TR BLX
SH, MED-V-DK GY, BLX, TR TA
SH, GY'S, DOLIC, TR PALE GRN L GY SILETY-TO-SUDY SN
SH, GY, TR PP
SH, DK-TO-V-DK GY-BAN, STG FRAGILE QUAK, SPURS, PYIC
MSBGR-SY, SS, CL, WH, ADICIS GN, SIBDD-V-ANG, MOD-V-V SOFT, W-VN-CONS, MTL-FAN, P-F. MASTO PART, WH-SPTY SPURS, QUAK, SPURS TO IN FLOR
LS57-57A, CNT, WH, GYISH-WH, 60-70% TRIP, F-G. LEACHED POR, VV-BULL-TO-DB FLOR WH-F.ODD VWH-WH-SFO, G. SFO AFTER ACID APPLIED

Kinderhook
2470(-1224)

Misener
2556.5(-1310.5)
Viola
2557(-1311)
RTD
2557.5(-1311.5)

5 10 15 20 25	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
DRILLING TIME - In Minutes Per Foot Rate of Penetration Decreases				

CONTRACTOR TRI-Stat Drilling LOCATION 950' ENL, 1250' FEL, NE/4
 LEASE Perrier N#2 SEC 25 TWP 21s RNG 10 E
 ELEVATION 1246 Gr. RTD 2557.5 COUNTY Lyon STATE Kansas