GEOLOGICAL REPORT

DRILLING TIME — SAMPLE LOG

COMPANY K. BROWN ENTERPRISES
FARM No. 12 SRGA
COUNTY Ellis STATE Kansas
SEC. 5 TWP. 11S RGE. 18W
LOCATION Approx. SE-NW-NW
ELEVATION: K.B. 2067 D.F. 2065 G.L. 2054
MEASUREMENTS FROM K.B.
CONTRACTOR Shields Drlg. Co., Inc. Rig 3
ROTARY TOTAL DEPTH 3585 DATE COMP. 2-7-84 CABLE TOOL TOTAL DEPTH — DATE COMP. —
CASING RECORD 8 5/8" @ 218' w/150 sx
SAMPLES SAVED FROM 3000 TO 3585
DRILLING TIME AND SAMPLES CHECKED BY WELLEX
SURVEY FROM 3400 TO 3585
MUD TYPE, ADDITIVES & WEIGHT Starch
FORMATION TESTS AND STRUCTURAL POSITION
ELECTRICAL SURVEYS
RUN
DIRECTIONAL SURVEY
RUN
(274 ft. S.E.)
3585 ft. 1/2° / 3585ft.
DRILL STEM TESTS

RECEIVED
STATE CORPORATION COMMISSION
MAR 02 1984
CONSERVATION DIVISION

Lawrence W. Gray
Consulting Geologist
1728 NOTTINGHAM CT.
WICHITA, KANSAS, 67204
PHONE AC 316 838-7295

LOG

FORMATION	DEPTH	DATUM	SAMPLE	LOG	CORR.
TOPEKA	3049	-982			
HEEBNER SH	3271	-1204			
TORONTO LS	3285	-1218			
LANS-KANS CITY	3312	-1245			
BASE KANS CITY	3546	-1481			
RTD	3585	-1519			

DRILL STEM TESTS

LEGEND

Anhydrite · Salt · Sandstone · Shale · Carb. Sh · Limestone · Dol. Lime · Chert · Dolomite

Lithology: Limestone fine lt. Limestone Chert Shale Carb. Sh. Salt Anhydrite Sand Sandstone

DRILLING TIME IN MINUTES PER FOOT
RATE OF PENETRATION INCREASES

SAMPLE DESCRIPTIONS & REMARKS

3000 — lt-med gray Cht abdt w/ls
gray sh
TOPEKA 3049 (-982)
lt-brn Xln-Fine Grn ls
lt-brn gray chty Granule ls pr-fr por Grn stn NFO
dense dty
3100 — gray sh
lt-brn Xln-Fine Grn ls w/ Anhydrite
gray, olv Spec Comp ls pr-fair dk brn/red stn
50 — blk, blk sh
gray shale
Tan Xln dty Sandy ls
3200 — dk gray sh
blk sh
gray sh
Tan buff Xln/Sandy ls
gray, lt gray sh
Tan/olv shale/ls
Shale
HEEBNER SH 3271 (-1204)
blk carb sh
TORONTO LS 3285 (-1218)
gray, brn, gray sh
lt gray chty Granule ls pr-fair Spotty stain 3350
3300 — red, gray, multi sh
LANS-KANS CITY 3312 (-1245)
lt-brn Xln dty ls
lt gray sh
lt-brn Xln Sandy ls pr-fair Spotty stain 3350
dk gray, blk sh
lt-dk gray, olv Sandy ls pr-fair Spotty stain 3400
50 — gray sh
lt-brn, olv Sandy ls pr-fair Spotty stain 3500
blk sh
3400 — lt gray, olv oolitic ls pr-fair Spotty stain NFO
gray, sh
Tan Xln shale/ls
dk gray, blk sh
Tan Xln dty ls pr-fair Spotty stain 3550
50 — lt gray sh
dk gray - blk sh
lt gray Xln dty Shale pr-fair Spotty stain 3580
gray sh
lt-brn Xln dty ls
3500 — blk, gray sh
gray, lt-brn dty Granule ls pr-fair por brn stain NFO
dense dty
dk gray sh
lt-brn Xln Sandy ls
red-gray sh
BASE KANS CITY 3546 (-1481)
lt-brn Xln Sandy ls
red sh
lt-brn Xln Chty ls
50 — red-green sh
lt-brn Xln dty ls
RTD 3585 (-1519)
5 1/2" Csg at 3583 w/150 sx
3600 —

DRILLING TIME IN MINUTES PER FOOT	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS & REMARKS

COMPANY K. Brown Enterprises — ELEVATION 2067 KB
LEASE No. 12 SRGA
LOCATION NW-NW-SE 5 TWP. 11S RGE. 18 W
COUNTY Ellis STATE Kans.