

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Brunswick Drilling Leasing, Inc.

LEASE Brunswick #7

FIELD Emercan Northeast

LOCATION SE SE NW 1/4

SEC 26 TWP 12S RGE 16W

COUNTY ELLIS STATE KANSAS

CONTRACTOR SHIELDS DR. PRODUCERS, INC.

SPUD 2-26-2014 COMP 3-4-2014

RTD 3520 LTD 3521

MUD UP 2700' TYPE MUD Chemical

SAMPLES SAVED FROM 2850' TO RTD

DRILLING TIME KEPT FROM 2800' TO RTD

SAMPLES EXAMINED FROM 2850' TO RTD

GEOLOGICAL SUPERVISION FROM 2850' TO RTD

GEOLOGIST ON WELL Bead S. Hutchison

FORMATION TOPS	LOG	SAMPLES	ELEVATIONS
ANHYDRITE	1106 +86 (+6)	2900 -934	KB 1966'
TOPEKA	2902 -936 (-4)	3123 -1157 (-5)	DF _____
HEERNER	3144 -1178 (-5)	3142 -1156	GL 1961'
TORONTO	3174 -1208 (-6)	3171 -1205	Measurements Are All From <u>Kelly Bushnik</u>
LANSING	3414 -1448 (-11)	3405 -1439	
Base Kansas City	3442 -1476	3441 -1475	
Simpson Domo.	3448 -1502 (-31)	3470 -1504	
ARBUCKLE			

Comparison: Brunswick #10

CASING SURFACE 8 5/8" @ 217'
 PRODUCTION 5 1/2" @ 3515'

ELECTRICAL SURVEYS
 CNL/CDL
 MEL DIL.

REMARKS It was recommended based on log analysis and sample shows, ~~it was~~ that 5 1/2" production casing be set and cemented at 3515 (est.) and the following zones to be tested:

Survey:	DEPTH:	DEVIATION
	220'	0
	3520'	0

1. Simpson Domoite 3446-3450

2. Lansing

3171-3184	3333-3340
3201-3205	3360-3362
3220-3223	
3266-3271	

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

ENG/

2011 501

LITHOLOGY

DEPTH

DRILLING TIME
(Logarithmic Scale)

SAMPLE DESCRIPTIONS

REMARKS

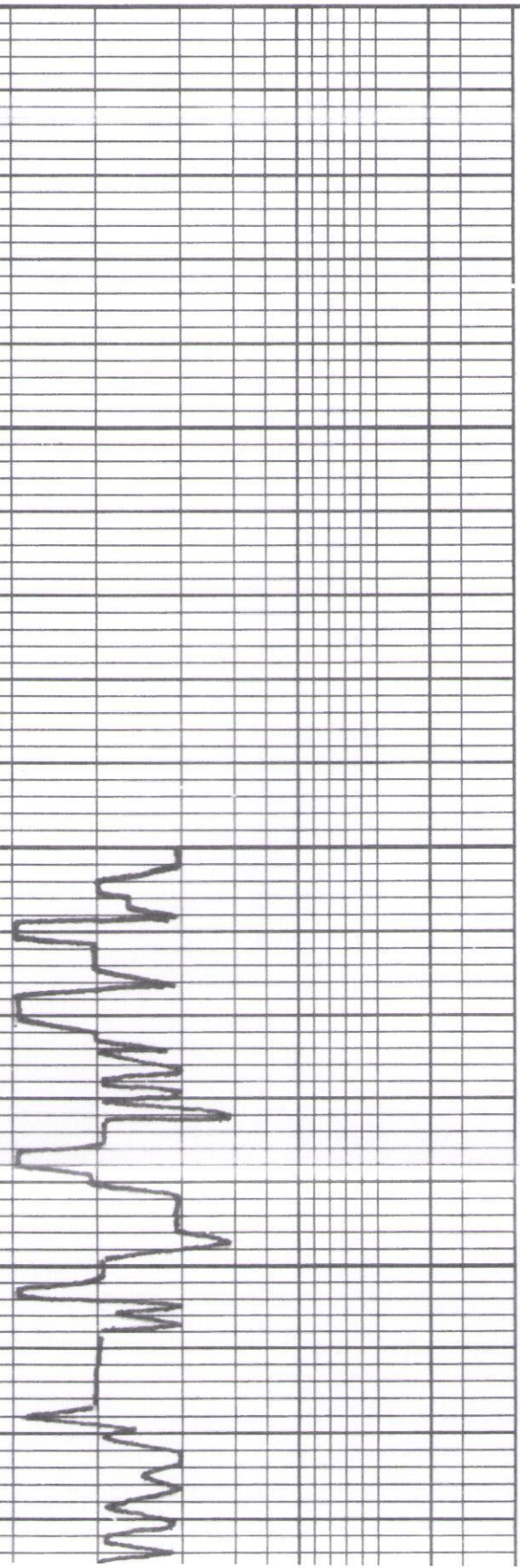
.5 1 2 3 4 5 10 15 20 30

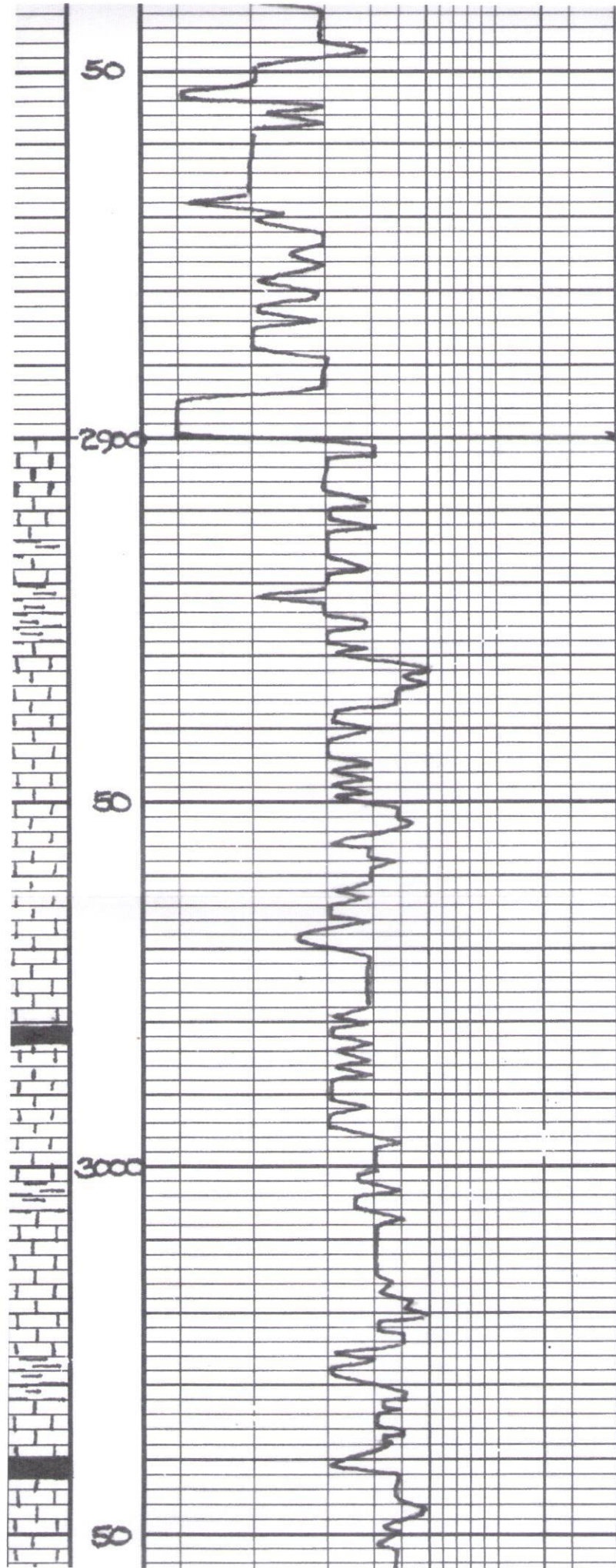
100

50

2800

50





Topeka 2900 (-934)

ls CRM FINE - chalky
 sctd dk brn str. soft.

very poor soil

ls CRM - WHT chalky
 NS

ls AA

ls CRM FINE FOSS
 NS

abund WHT chalky,
 AA,

sh blk carb.

ls WHT chalky

ls buff tan dse
 blocky

AA TR smoky blk
 A

ls WHT - CRM highly
 chalky

ls buff FINE FOSS

sh blk carb.

ls WHT FOSS

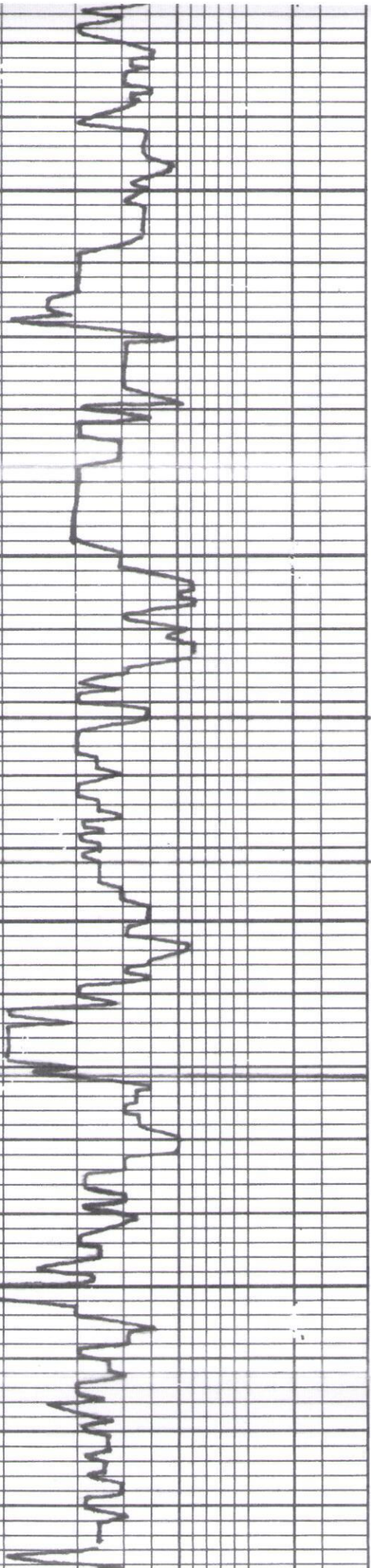
ls buff - CRM FINE

50

3100

50

3200



ls buff Fxls Foss

sh blk carb.,

ls wht Foss

ls buff-crm Fxls
chalky highly Foss.,

NS

AA

ls crm-wht Fxls ool
sld fr ool of TR sld fr
brn ool NEO odor

INC wht highly chalky
ls TR spt brn str.,

ls buff-crm Dse
highly Foss.,

ls crm chalky

HEEBNER 3122 (-1156)
sh blk carb.,

sh gry - pale grn quartz

TORONTO 3142 (-1176)

ls lt gry - buff dse
NS

sh med. clays

AA

LANSING 3111 (-1205)

● ls crm-buff Fxls Dse.
TR spt str fr 1st vug,
sh sld fr odor

sh pale grn Abund wht
chalky ls.

● ls buff-lt gry ool-ool
fr-ool ool of (some barrel)
TR sld fr lt str.
sld (gassy) wtk odor

sh gry

● ls buff-crm Fxls - dy
ool spt lt str TR int ool
of w/ Abund wht chalk
neo bl odor

ls crm-wht Dse

shale blk carb.,

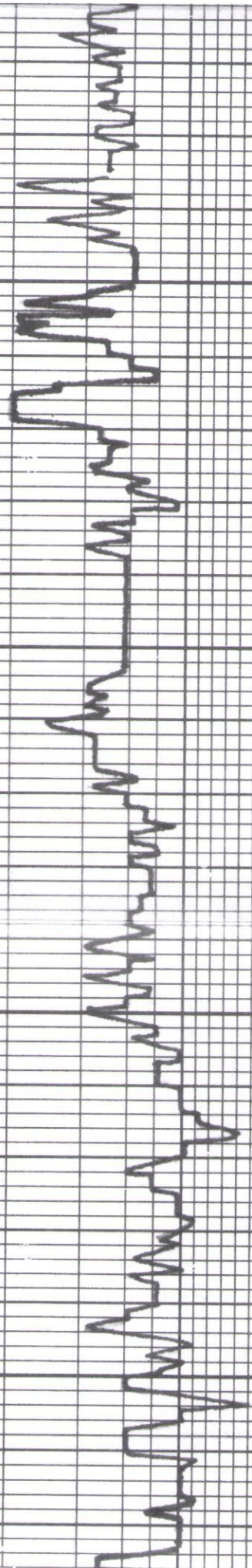
... ..

50

3300

50

3400



LS buff - GRM FAXL - AY
 col spt lt sta TR int col
 w/ abund wht chalk
 NEO on odor

LS GRM - WHT Dse

shale blk carb.

LS grayish - GRM FAXL - AY
 poss TR spt blk sta
 Abund gry str.

LS buff VEXL
 TR spt lt brn sta.

LS lt gry - buff FAXL ooc
 gd sctd box g ER sctd gddes
 brn sta - sctd
 SEO wk odor

LS lt gry dse w/ Abund
 wht chalky ls.

AA TR smoky gry A

SH gry gumbo - blk
 carb.

LS lt gry VEXL Dse
 blkxy sh poss

sh gry

LS GRM - WHT FAXL col
 TR pr wt ooc of TR spt
 lt sta NEO or odor.

LS buff VEXL TR spt
 rare pps TR spt lt sta
 NEO or odor

sh gry gumbo Abund
 wht chalk.

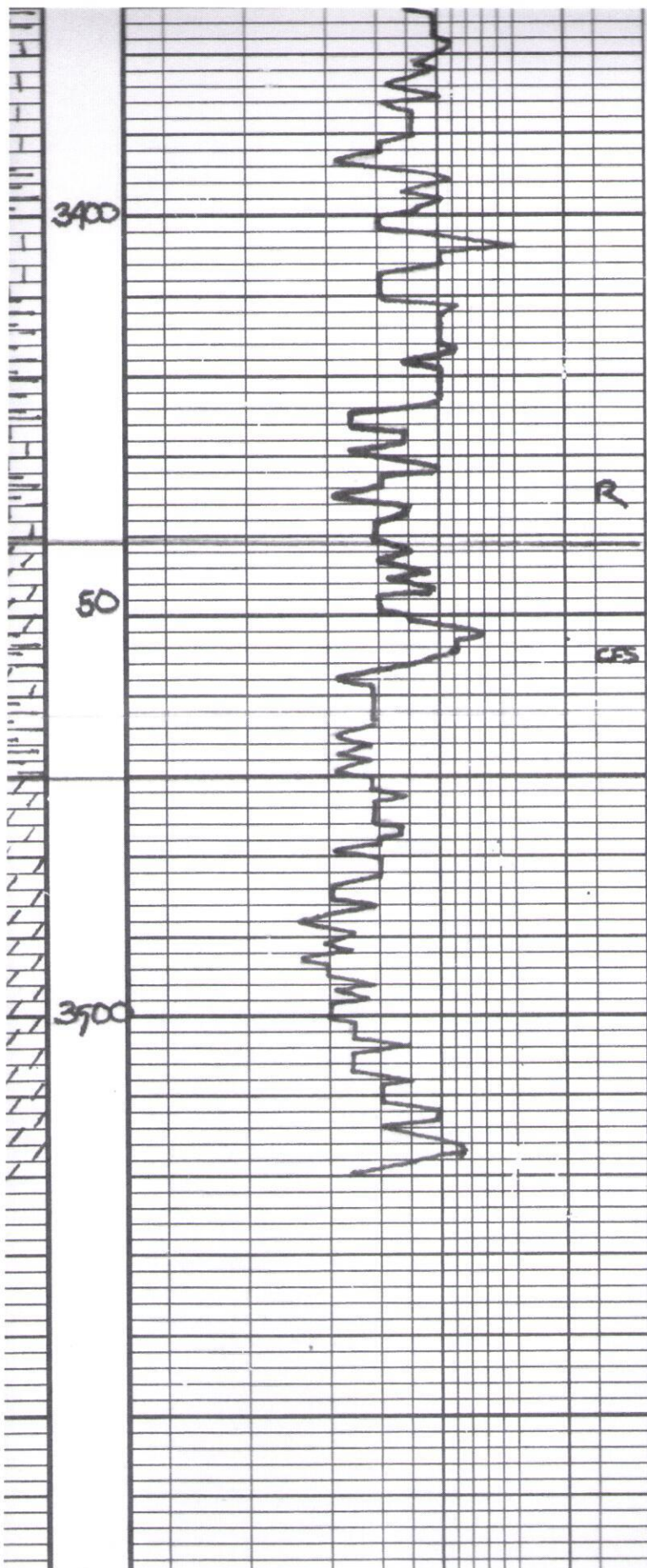
SH AND WHT chalky LS
 AA

SH blk carb

LS lt gry - buff Dse

SH BRICK rd gen
 with LS

SH A A w TR arrow



SH AND WHET CHALKY LS
AA

SH blk carb

LS lt grey buff Dse

SH BRICK rd grn
with LS

SH A A w TR boney
WHIT A

AA

Simpson Dno 3441 (-1473)

Dolo lt grey VEXL Dse
spt ppr int xl of rd dk
Dolo stain spt SED (broken
broken) FR odor

Dolo AA w inc grn
waxy sh pyritic ind fluxy
WHIT A

AA

ARBOCKLE 3470 (-1504)

Dolo lt grey - lt brn v.
Dse VEXL TR spt str
SH SED sh odor

AA dec show/odor
Abund pyrit

Dolo grey - dk md-cs
xl ay fr scrl int xl
waxy o NS

AA