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GEOLOGIC REPORT LOG

COMPANY **STAAB OIL CO.**

WELL **FRANK #1**

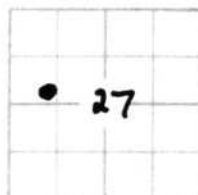
FIELD **WILDCAT**

LOCATION **2245' FNL § 1305' FWL**

SEC. **27** TWP. **13S** RGE. **22W**

COUNTY **TREGO**

STATE **KANSAS**



PRODUCTION **LKC-CHEE.**

ELEVATION KB **2343**

DF

GL **2338**

Drilling Measured From: **KB**

Samples Saved From **3700** To: **TD**

Drilling Time From **3350** To: **TD**

Samples Examined From: **3700** To: **TD**

Geological Supervision From **3700** To Total Depth

Wellsite Geologist **MARC DOWNING - R. NELSON**

Electrical Surveys **PIONEER WIRELINE -**

**DUAL POROSITY, DUAL IAD,
MICRO**

OPERATOR **STAAB OIL**

CONTRACTOR **SHIELD'S DRILLING**

COMM: **8-21-13** COMP: **8-31-13**

CASING RECORD

SURF: **8 5/8" @ 221'** PROD:

TOTAL DEPTH DRILLERS: **4305'**

TOTAL DEPTH LOG: **4274'**

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
TOP ANHYDRITE		1802	+541	-11
BASE ANHYDRITE		1843	+500	-9
TOPEKA	3488	3458	-1115	FL
HARBOR	3721	3690	-1347	+5
LKC	3784	3722	-1379	+4
BKC	4001	3972	-1629	FL
MARMATON	4104	4076	-1733	+2
CHEROKEE SHALE	4158	4127	-1784	FL
CHEROKEE SAND	4201	4172	-1829	-2
MISSISSIPPI (CONG. CHEST)	4237	4208	-1865	-16

REFERENCE WELL FOR STRUCTURE **STAAB OIL'S MORG-BENNO #1 @**
500' FSL § 2130' FEL 29-13-22

LEGEND



Anhydrite



Salt



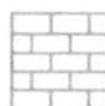
Sandstone



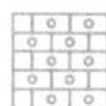
Shale



Carb sh



Limestone




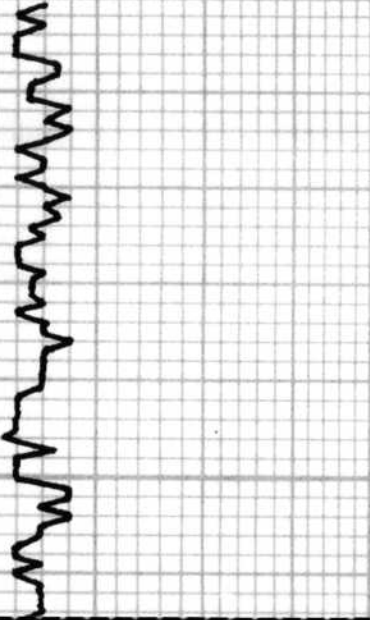

Ool.Lime



Chert



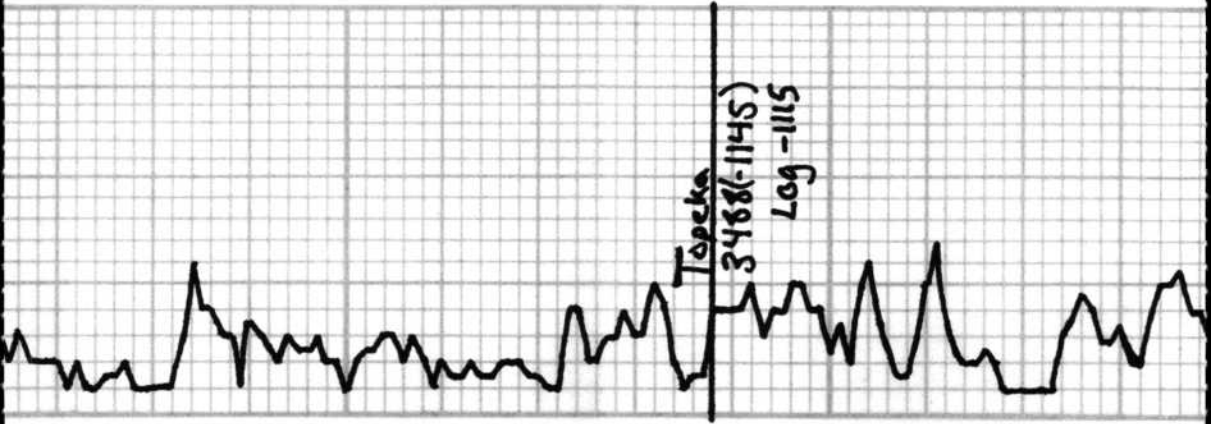
Dolomite

<p>DRILLING TIME IN MINUTES PER FOOT</p> <p>Rate of Penetration Decreases</p> 	<p>DEPTH</p>	<p>LITHOLOGY</p>	<p>SAMPLE DESCRIPTIONS</p>	<p>OIL SHOWS</p>	<p>REMARKS</p>
	<p>3350</p> <p>3400</p>				

80

3500

Topeka
3488(-1145)
Log -1115



50

3600

50

* Error Found in board
of 30.20' too long.
Geograph not adjusted.

★ NOTE - ALL TOPS APP 30' OFF
DUE TO PIPE TALLY. LOG TOPS
ARE CORRECT

3700

LS: tom. wht, Fess,
Scat ungs. Rx mtd
in prt, All NS.

HEEBNER

3721(-1378)
LOG -1347

Sh: Black Carb

Sh: gry

LS: wht, Fun xln, scat
prg wh wht cnts, NS.

Vis: 47 wt: 9.1

DST #1

3771 - 3818

45 - 45 - 45 - 45

I.F. - 808 17 min / 2 1/4" SIB

F.F. - 808 18 min / 2 1/4" SIB

IFP: 21.99

FFP: 108-101

SIP: 1254-1235

HP: 1935 - 1782

REL:

310' GIP

400' GA 90%

50

Sh: gry

LS: wht, v fun xln +
dms, prg, NS.

LS: wht, AIA, SUC in
prt. Much Sh wht
cnts, All NS.

Sh: drk gry

D
S



3800

CFS ⊙

CFS ⊙

50

3900

DST # 2

1

LS: tan, fm xln. Foss sunl foss, mostly sun. of int xln & ul sunl vngs, of sat ul of sfo, frnt - 11' ad. some total sat. Fr ant int foss & ul of sat & sfo

Sh: gr

LS: wht, fm xln, mostly pr & tife. Fr ant rx Carry from "C" zone.

Sh: gr ul brn

LS: wht & tan. md xln, foss, sunl delam. Fr. of int foss & ul vngs, fr ant sub xln rx, shllng in pr. of sat str, of sfo, fr ad

Sh: gr

LS: 1/2 pes tan - wh. sl ool. w/ frintool & pp. USSfo. rare spf str r2f1a. bl. mst - trng tot barren NS

Sh blk vdgry

LS wh fwpes sl ool - foss w/ fr intool of. USSfo. Blk spf sld str no od

trng tan-wh. mic xyl w/ v bns pr - v pr int xyl of NS

v bns wh - tan mic xyl w/ LS NS

Sh blk carb

Sh ovgry

LS tan - gr v fr gr mic xyl w/ v pr xyl of NS

Sh gr bk

62' GMA 57%, 86% O
BHT: 117° G=NA

DST # 2
3814-3833'
45"-45"-45"-46"
12" op BOB 20"
SI 1/2"
2nd op BOB 13"
SI 1 1/2"

IFP 17-48
FFP 60-78
SIP 1172-1151
HP 1828-1724
Rec 620' g ip
60' gassy oil
120' mud cut gassy oil
BHT 117° Gravity 21

CLOCK STOPPED

CE5 © 50

BKC -1658
Log -1629

4000

grly dk gry sh

LS tan 1-2 pcs slool fassy w/
spid scd, brn sm vvs to
instelashn xylbr pr pns

w/ vdk gry sh

LS tan wh dns pr xyl p
NS

w/sh gry brn

tan max wh wh LS
CCKY mft NS pr p

cht tan wh gry

sh dk gry
BLK CARB

LS tan wh - Hry An xyl
pr xyl p ns

LS sm chry sm An xyl
pr p NS

sm chrt tan wh

SHRO, brn gry

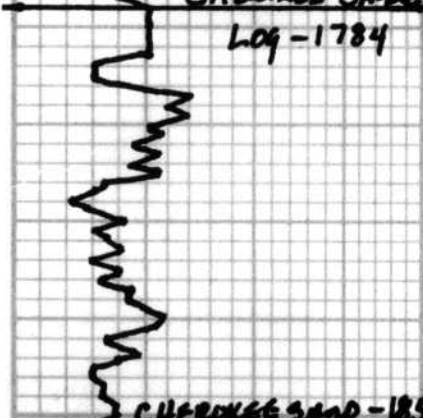
LS tan - gry sm rd arg
pr xyl p NS fto trc pp

abnt sh gry vdk gry

tan dns An xyl wh pns
NS

GREENE SHALE - 1875

Log - 1784



CHEROKEE SAND - 1858 4200

Log - 1829

CFS

MISSISSIPPI - 1894

log - 1865

9
7

3

sh blue clay
 sh blue gray dk gray
 Ben
 shs as above v gummy
 sticky
 dk tan-gray v fine grained
 sh dk gray
 Lstron - wh. fm sandy ls pec
 all light dms prob
 sh dk gray
 lg. sm con glauc. sm cln grs cln prns
 elstrs sh - me to sand but sto, ad
 od sub spid sm, friable sm cln
 gray sh loose grns
 fms elstrs with long w/ om frce
 grns res.
 about gray, dk gray sh
 shs aa
 var color ch. no. wh. fm.
 op. ben prng shp frst
 qd prob fract. 1-2 w spf
 blk sm nsto
 ch as above
 ch aa
 gray sh
 v dms tan-gray microp
 ls pr 1200 res.

50

I.F. - 8 1/2' blow
 F.F. - 5" blow
 IFF: 87-89
 FFP: 98-101
 SIA: 919-902
 HP: 2026-1985

Rec:

90' GIP
 30' OCM 5% o
 120' OCM 3% o, 10% w
 120' OCM 2% o, 40% w

BHT: 121°



CTCH ① 4300

RTD -1962

LTD -1931

Rig was 1 ft. off
during drilling.

DRILL TIME NOT CORRECTED

a c w/ shs. Ectf
vs.

ABOUT SHS GRAY BRN

Ron Nelson