

M. BRADFORD RINE

Certified Professional Geologist - N.E.S.G. 61647

100 S. Main Suite 415

Wichita, Ks 67202

(316)262-5418

GEOLOGIST'S REPORT

COMPANY SHAKESPEARE OIL COMPANY, INC.

LEASE OTTLEY #2-16

FIELD CHALK BUTTES

LOCATION 1630'FSL & 2225'FEL

SECTION 16 TOWNSHIP 14S RANGE 32W

COUNTY LOGAN STATE KANSAS

CONTRACTOR HD DRILLING COMPANY

COMMENCED DRILLING MARCH 12, 2011

COMPLETED DRILLING MARCH 22, 2011

RTD 4510 FEET LTD 4506 FEET

MUD UP AT 3480 FEET MUD TYPE CHEM

API: 15-109-20978

ELEVATIONS

KB 2803 FEET

DF 2801 FEET

GL 2793 FEET

MEASUREMENTS ARE ALL FROM: KB

CASING

8-5/8"23# @ 225'

5-1/2" CSG SET

ELECTRICAL SURVEYS

IND SUITE

D/N SUITE

SONIC, MICRO

SAMPLES SAVED FROM 3600 FEET TO 4510 FEET

DRILLING TIME KEPT FROM 3600 FEET TO 4510 FEET

SAMPLES EXAMINED FROM 3600 FEET TO 4510 FEET

GEOLOGICAL SUPERVISION FROM 3600 FEET TO 4510 FEET

NOTES: PLEASE NOTE ADDITIONAL DRILLING AND GEOLOGICAL INFORMATION ON THE FOLLOWING "HEADER" PAGES.

REMARKS: Based on sample observations, DST results, and electric log evaluation, it was decision of the Operator to set 5 1/2" casing in the "Ottley #2-16", on March 22, 2011.

Respectfully submitted,
 M. Bradford Rine

M. Bradford Rine, Lic 204
 03/22/11

DAILY PENETRATION

DATE	DEPTH
03-12-11	MRT, Ru, Spud 0'
03-13-11	Dr lg 438'
03-14-11	Dr lg 1860'
03-15-11	Dr lg 2580'
03-16-11	Dr lg 3250'
03-17-11	Dr lg 3785'
03-18-11	Dr lg 3895'
03-19-11	T.I.H. water DST 4025'
03-20-11	T.O.O.H for DST 4100'
03-21-11	Dr lg 4278'
03-22-11	RTD 4:35am 4510'

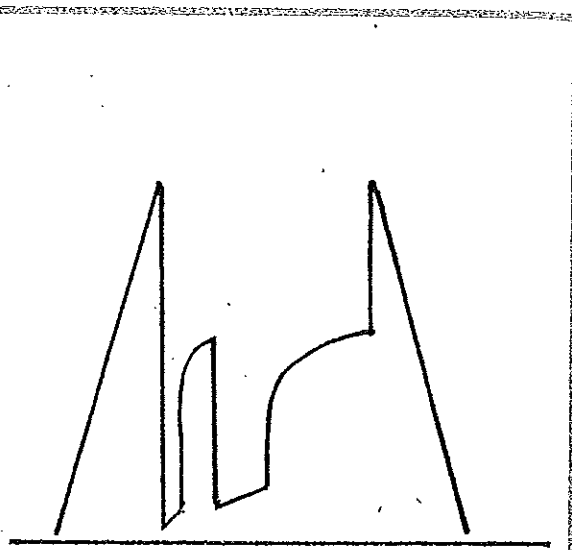
BIT RECORD

NUMBER	SIZE	MARK	TYPE	DEPTH OUT	FEET	FOUR
1	12 1/4	Jz	RR	224	224	2
2	7 7/8	Jz	GX1	2259	2031	26 1/2
3	7 7/8	Jz	GX1	4510	2251	97
Surveys:	3/4"	228'	1°	3890'		
	3/4"	2259'	1/2°	4510'		
Surf Csg:	5 1/2" 888'	23" x 1 1/2"	set @ 225'	(Allied) cement		
	175 SA	Class A, 3 1/2 CC	2 1/2 gal.	c.d.c.		

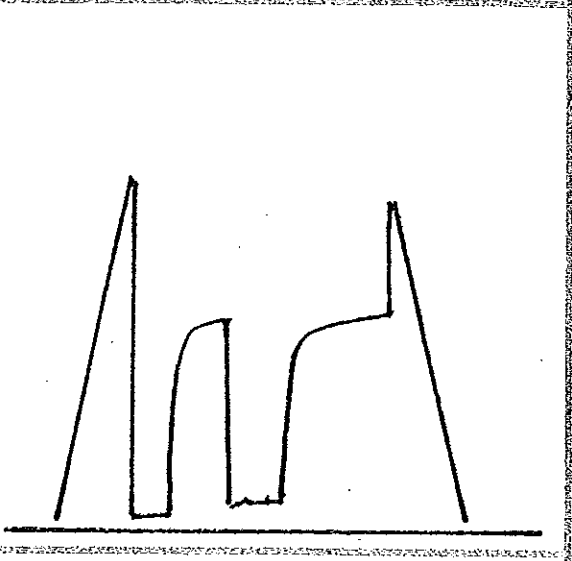
GENERAL INFORMATION

Rig: HD Drilling #2
 Pump: National K-380 6x14
 Drawworks: Unit U34
 Collars: 487' 2 1/2 x 6 1/4
 Drillpipe: 4 1/2" - 16.6" XH
 Toolpusher: Doug Roberts
 Mud: Mudco (Reid Atkins)
 Gas Detector: None
 DST's: Tribit (Shane, McBride, Kevin Mack)
 E-logs: Log-Tech (K. Bange)
 Water: water well draw east of location
 Co-Repres: office (Don Williams)

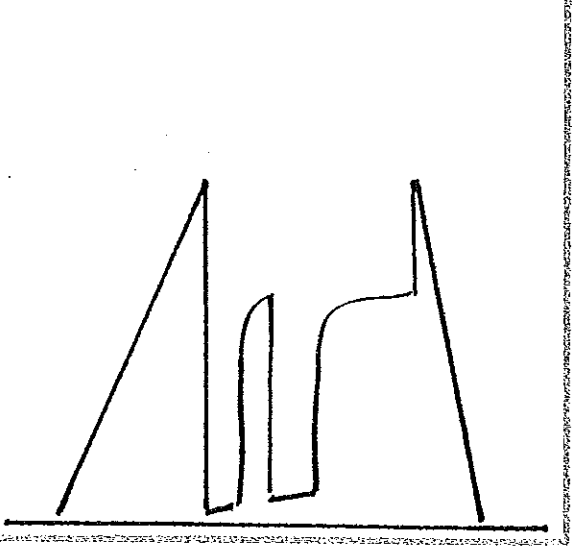
DST # 1 INTERVAL: 3817 - 3890
 FORMATION: Lsg. B, C, D
 TIME: 15-30-45-90
 INITIAL BLOW: Sf: h.o.b. 7 min (no b.b.)
 FINAL BLOW: Sf: b.o.b. 7 min (2" b.b.)
 IWP 1872 FWP 1772
 IEP 47-132 FEP 134-236
 IHP 1046 FHP 1057
 TEMPERATURE: 107° F
 REC: 550' Total Fluid, 107' gas in pipe
 130' qocm: 90% oil, 10% mud
 300' qumco: 10% oil, 50% wt, 15% mud, 25% wtr
 120' qumco: 10% oil, 45% wt, 20% mud, 25% wtr



DST # 2 INTERVAL: 3952 - 4025
 FORMATION: LKC H, I
 TIME: 30-45-45-90
 INITIAL BLOW: Fr: built to 9" i.d. (no b.b.)
 FINAL BLOW: Sf: b.o.b. 4.7 min (no b.b.)
 IWP 1964 FWP 1889
 IEP 25-68 FEP 102-96.4
 IHP 1217 FHP 1223
 TEMPERATURE: 108
 REC: 210' Total Fluid
 90' mca: 50% oil, 50% mud
 120' smco: 90% oil, 10% mud
 * slight plugging on FEP

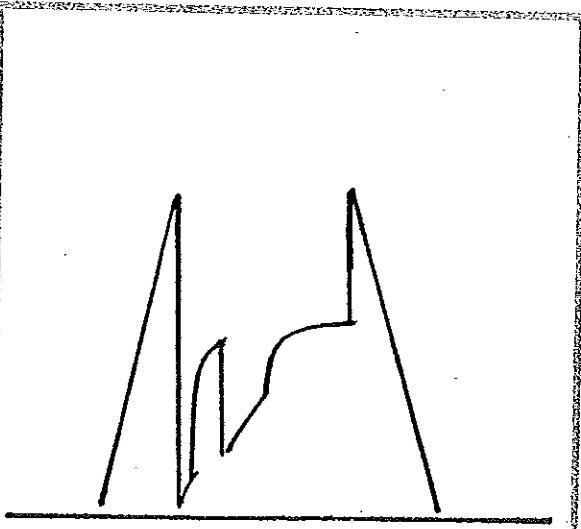


DST # 3 INTERVAL: 4024 - 4070
 FORMATION: LKC J, K
 TIME: 30-30-45-90
 INITIAL BLOW: Fr: built to 8" (no b.b.)
 FINAL BLOW: Fr: built to 8 1/2" (no b.b.)
 IWP 1246 FWP 126-
 IEP 24-9.2 FEP 9.5-15.3
 IHP 1246 FHP 126.2
 TEMPERATURE: 115° F
 REC: 300' Total Fluid
 60' mca: 70% wtr, 30% mud
 240' smca: 90% wtr, 10% mud
 Chl/wtr: 28,500 ppm (Chl/mud) 3400 ppm



DST # 4 INTERVAL: 4074-4100
 FORMATION: LKC "L"
 TIMES: 15-30-45-90
 INITIAL BLOW: Stg: b.o.b. 1/2 min. (8" b.b.)
 FINAL BLOW: Stg: b.o.b. 1 1/2 min. (7" b.b.)
 IHP 2074 NHP 2029
 IEP 355-459 NEP 524-589
 IBIP 1218 NBIP 1292
 TEMPERATURE: 117°K
 REC: 2418' Total Fluid, 500' gas in pipe

1242' vs mcs:	gas	oil	wtr	fluid
	-	25%	-	55%
992' smgas:	25%	73%	-	02%
172' mgcs:	20%	70%	-	10%
10' mcs:	-	50%	-	50%



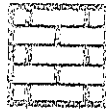
DST # _____ INTERVAL: _____
 FORMATION: _____
 TIMES: _____
 INITIAL BLOW: _____
 FINAL BLOW: _____
 IHP _____ NHP _____
 IEP _____ NEP _____
 IBIP _____ NBIP _____
 TEMPERATURE: _____
 REC: _____

DST # _____ INTERVAL: _____
 FORMATION: _____
 TIMES: _____
 INITIAL BLOW: _____
 FINAL BLOW: _____
 IHP _____ NHP _____
 IEP _____ NEP _____
 IBIP _____ NBIP _____
 TEMPERATURE: _____
 REC: _____

LEGEND



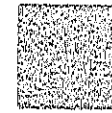
SANDSTONE



LIMESTONE



CHERT



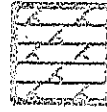
CARB. SH./
COAL



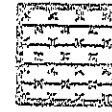
SILTSTONE



DOLOMITE



GRANITE
WASH



CONGLOM-
BRATE



SHALE



ANHYDRITE/
GYPSUM



GRANITE



OOITIC/
OOLOIDIC

DRILLING RATE
MINUTES/FOOT

5 10 15

DEPTH

2200

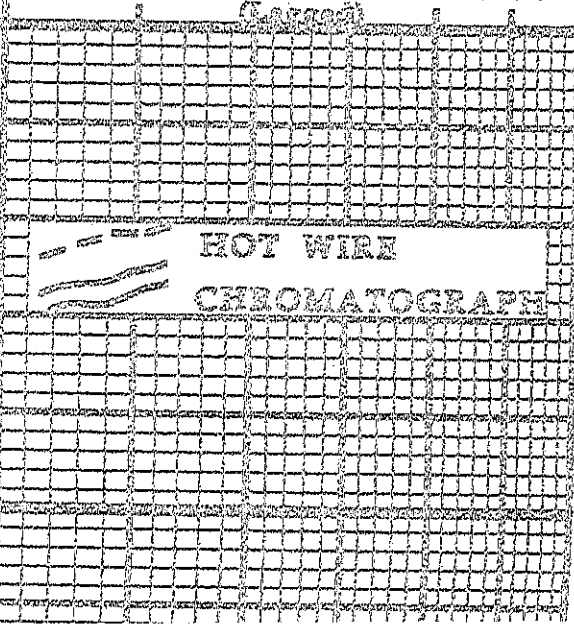
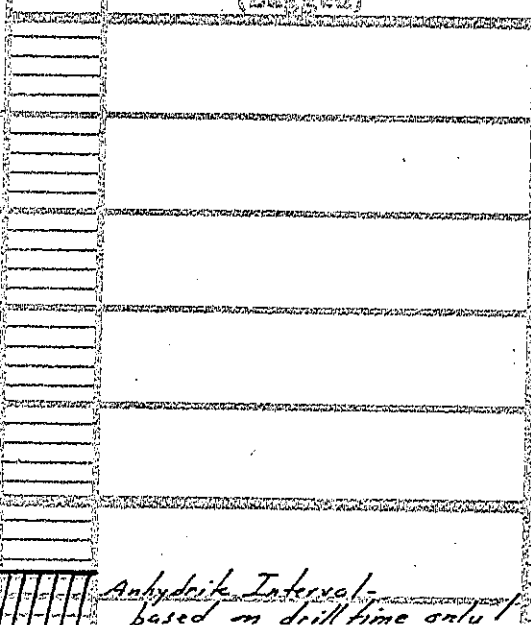
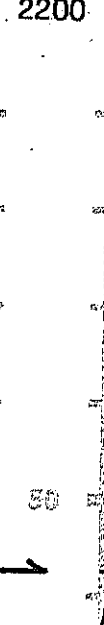
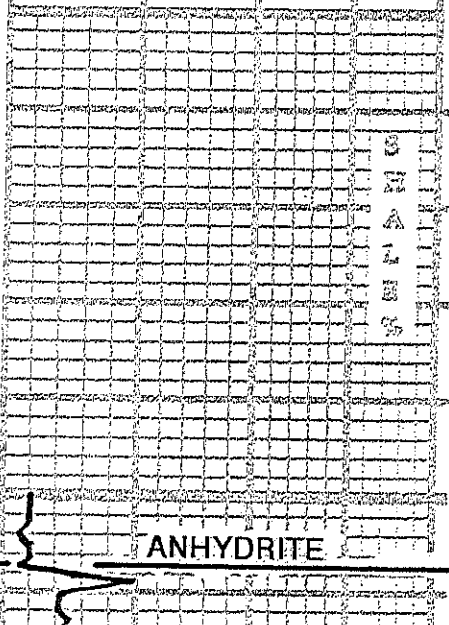
LITH-
OLOGY

SAMPLE
DESCRIPTIONS
(Logged)

GAS DETECTOR CURVE

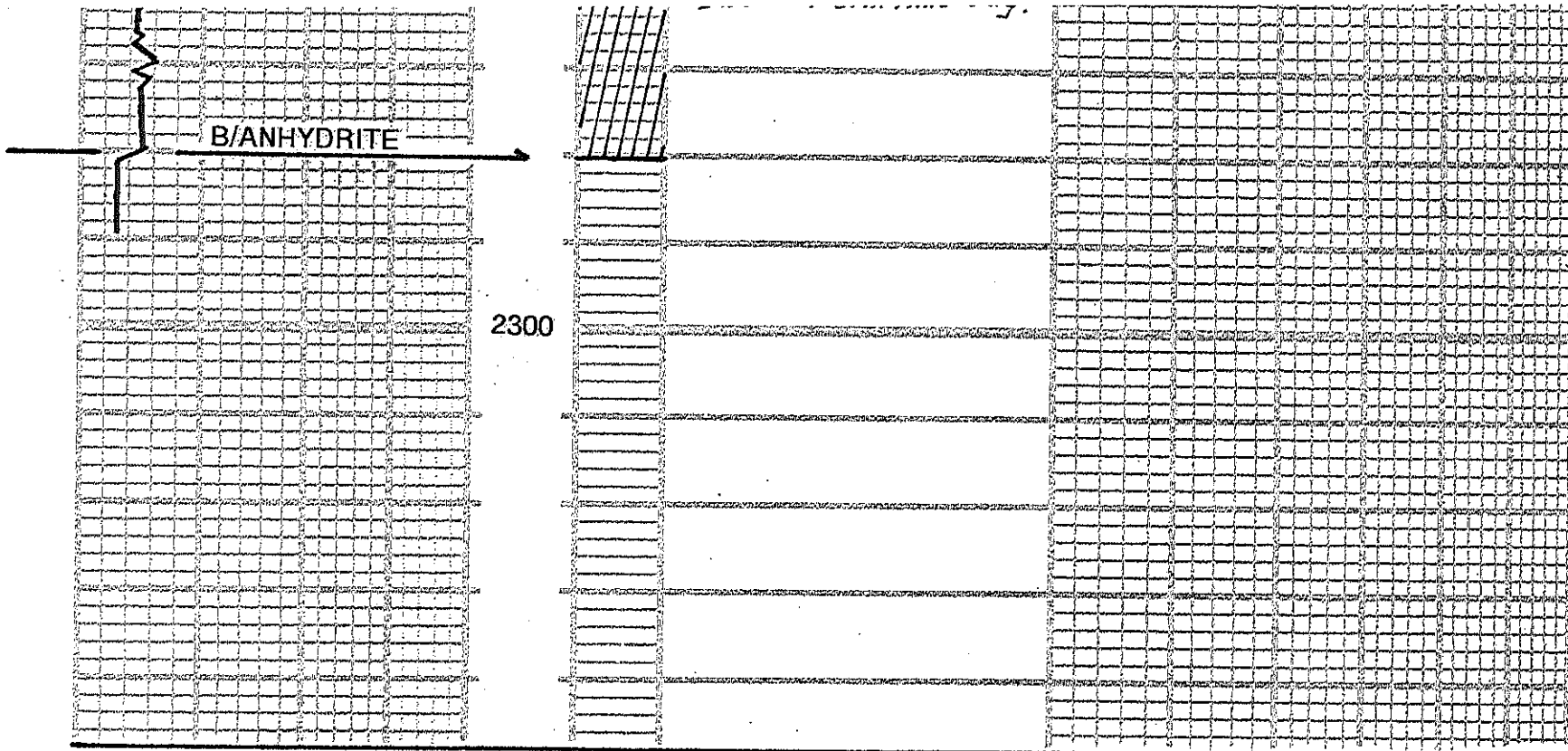
TOTAL GAS/WET GAS

25% 50% 75% 100% 125%

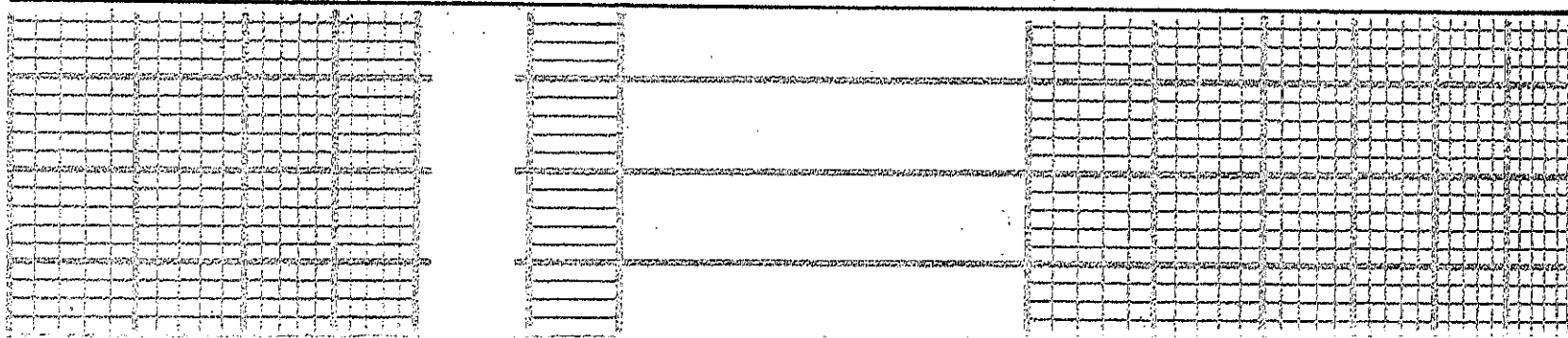


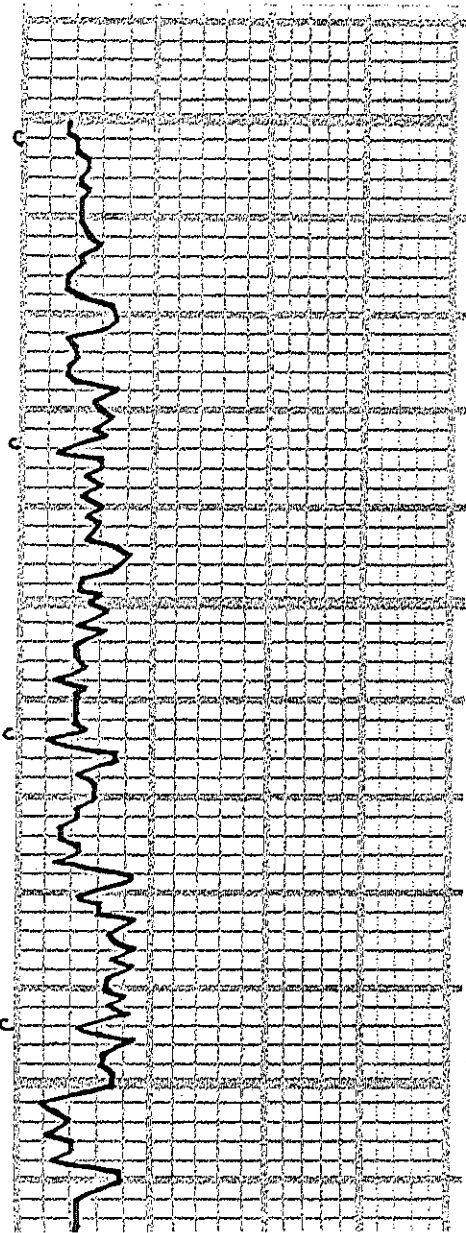
ANHYDRITE

*Anhydrite Interval -
based on drill time only*



*** DEPTH-BREAK ***





3600

(much red shale & pyr
in spls)

ls wh-cr
fnxln, pr x ln, g, fss with
scatt fr. inter fss

ls cr
fnxln, dss, fss
some dolom text
some gray-mealy bed

sh 24-dk gy

ls wh-cr-tan
fnxln, dss, pr vis, g,
fss, subgrainy text
in pt

sh 24-red

ls wh-cr-tan p
fnxln, dss, pr vis, g, in
pt, chaly in pt, fss

sh red-gy-granite

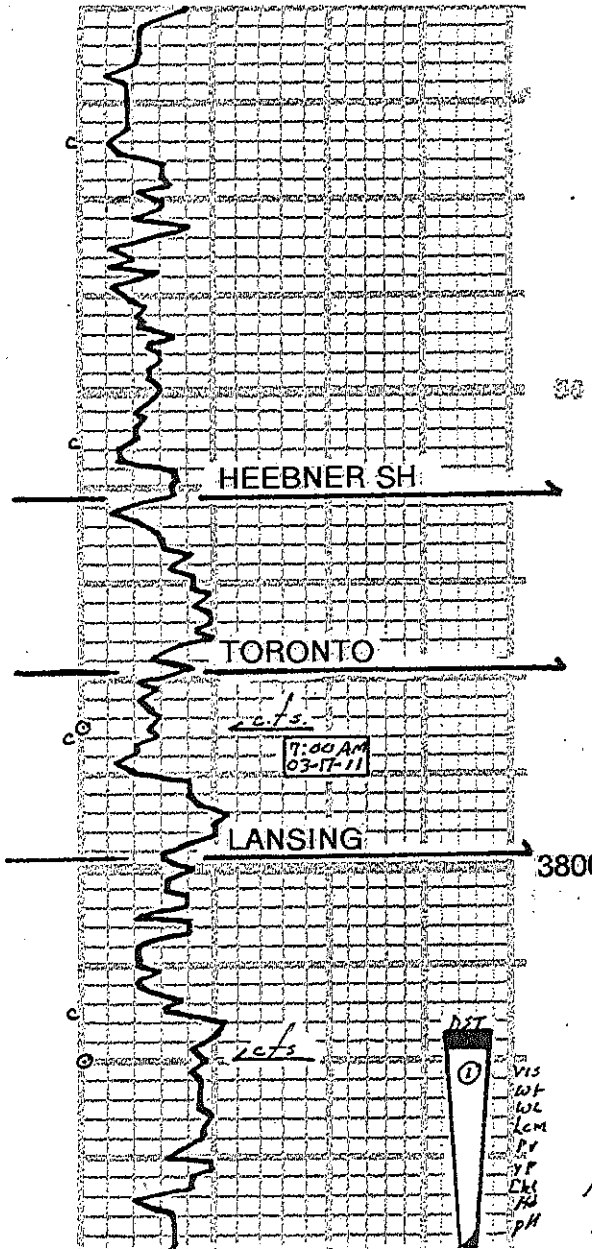
ls wh-cr
fnxln, dss-pr vis.
xln g, fss

sh 24-blk, carb

3700

ls wh-cr
fnxln, ool-packed ool
fr-gd inter-ool

ls wh-cr-pl gy
fnxln, pr x ln



Ls wh-cr-pl gy
Fxnln, pr-xln φ,
some cherty
foss

Sk 9y-med

Ls wh-cr
Fxnln, dus - pr xln φ,
foss
Rr Chert: wh, grainy, foss
n.s.

Ls wh-cr
Fxnln, dus in pf
pr-xln φ in pf
foss, some cherty pcs
n.s.

Sk black, carb,
(reptes in 3780's pl)

Sh 9y-green
soft

Ls wh-cr
Fxnln, pr-xln φ to Rr
Fxnln φ, foss
dus with depth
n.s.

Sk 9y

Ls wh-cr, dus to pr xln φ,
foss, ool in pf, scatt
pr inter-ool φ

Ls wh-cr tan
Fxnln, pr-xln φ - dus,
foss

Sk 9y-greenish

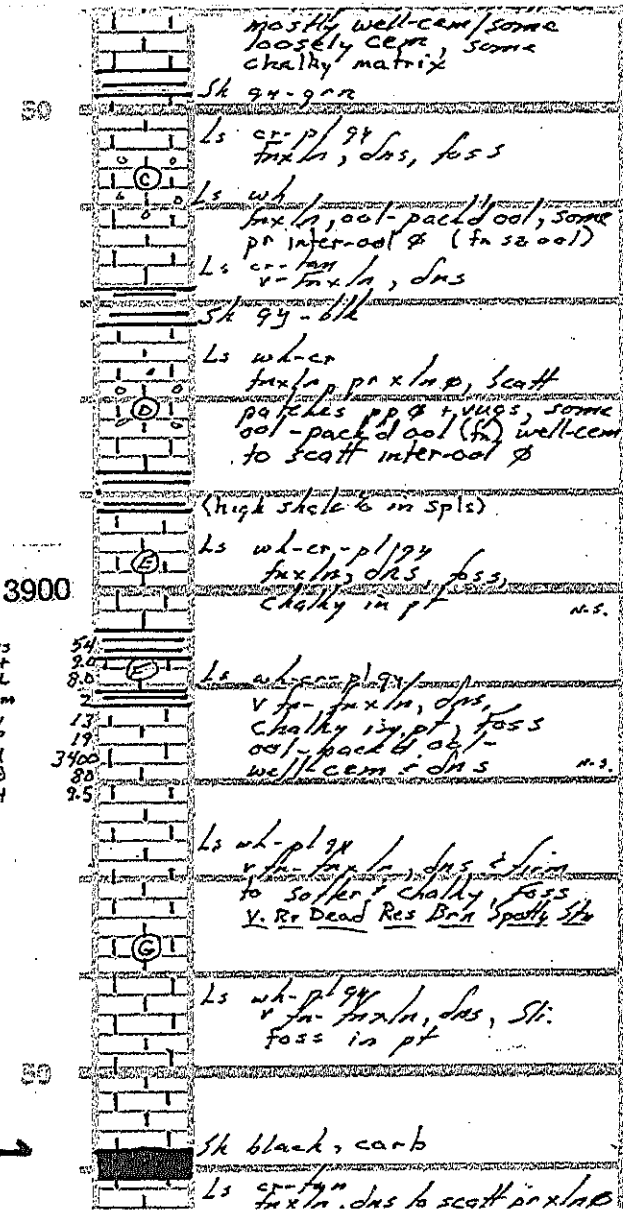
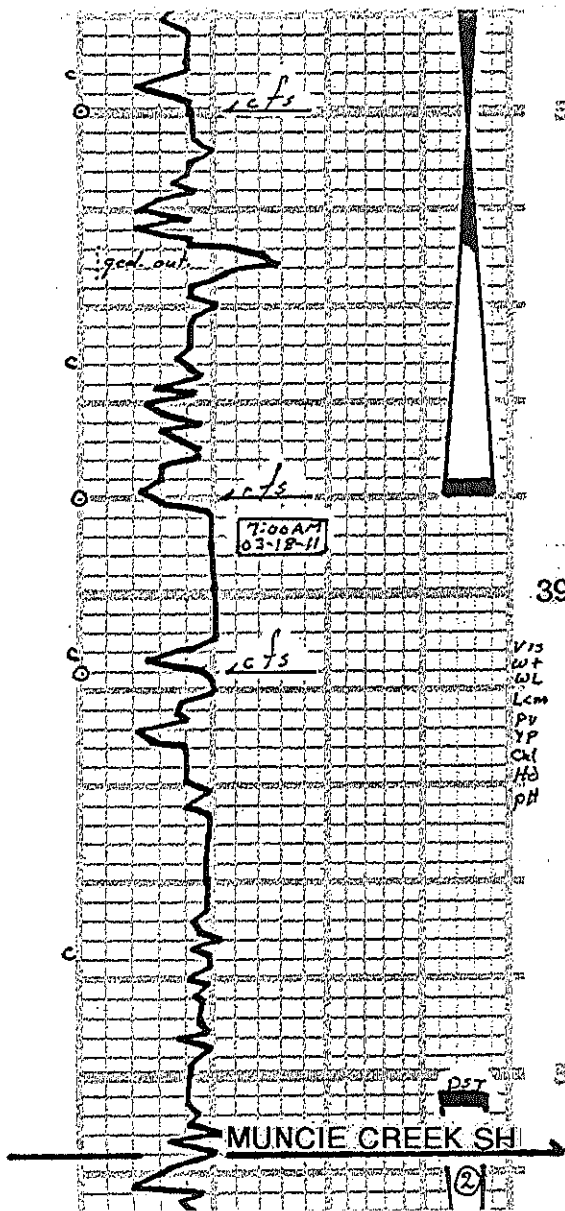
Ls wh-cr
Fxnln, dus in pf, scatt
pr-xln φ, foss in pf,
ool in pf

①
DST 1: 3817-3890
15-30-45-90
Rec. 180, 590cm
420 gumco
1EP: 47-132
1SIP: 1046
FEP: 134-236
FSIP: 1057

3807' +/-: Ls "R"
No odor, few pcs with dull
flour - bk spotty str of Hwy
Dead oil, No show FO.

3835' +/-: Ls "B"
V. fat odor, Rr Res/Mod. Flour,
few ool clusters with show
bk Res. str. & sh. flour

55
8.0
6.4
2
15
17
1200
40
105



mostly well-cem / some loosely cem, some chalky matrix

Sh 94-grn

Ls cr-p/98
fin ln, dns, foss

Ls wh
fin ln, ool-packed ool, some pr inter-ool & (fn ss ool)

Ls cr-lam
v-fin ln, dns

Sh 94-blk

Ls wh-cr
fin ln, pr x-lap, scatt patches pp & vugs, some ool-packed ool (fn) well-cem to scatt inter-ool &

(high shale in splis)

Ls wh-cr-pl/94
fin ln, dns, foss, Chalky in pt n.s.

Ls wh-cr-pl/94
v-fin ln, dns, Chalky in pt, foss ool-packed ool well-cem & dns n.s.

Ls wh-pl/94
v-fin ln, dns, sh to softer & chalky, foss v. Re Dead Res Brn Spall sh

Ls wh-pl/94
v-fin ln, dns, St. foss in pt

Sh black, carb

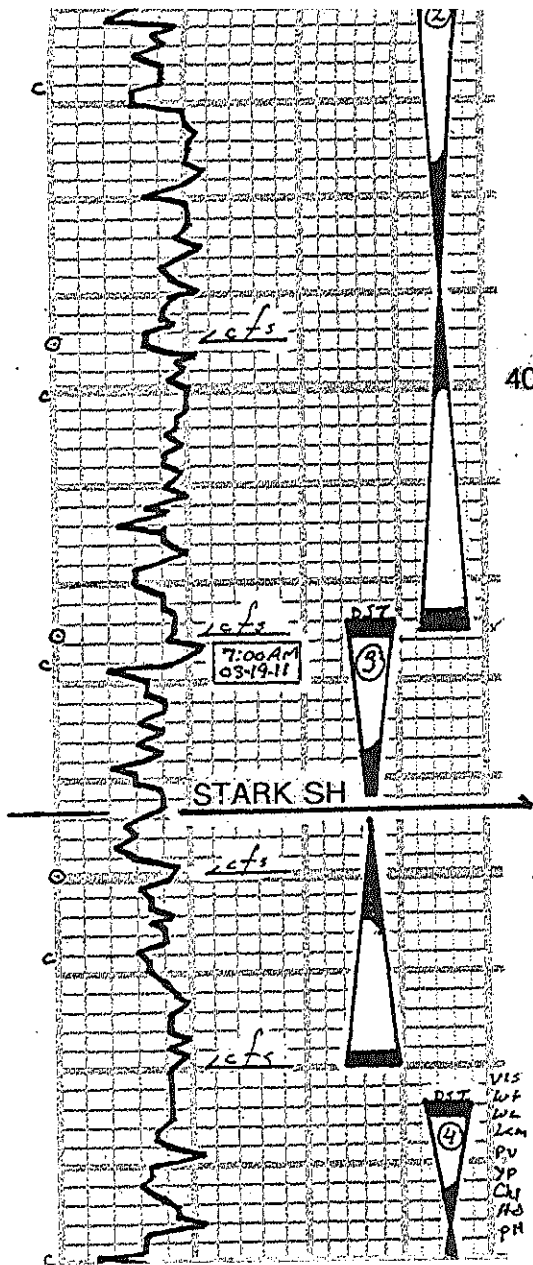
Ls cr-lam, dns to scatt pr x-lap

Brn F.O., some barren Por.

3860'41: L59' C
V. Fat odor, Scatt Mod Flour Brn Stn in ool & with St. show Brn F.O.

3880'41: L59' D
Fat odor, Scatt Mod-Brd Flour, Fat Brn-Brn Stn in & with St. shows F.O.

3965'41: M.C. L5
Fat odor, Scatt Mod Flour, Re Brn Stn with St. show NPL Dk Brn ool & Brn F.O.



Ls cr-lgn
fuxln, das to scatt pr xlap
foss

Sh 94-grnch

Ls wh-cr,
fuxln, das
to widely scatt pr xlap
to patchy pp & vug &
foss in pt., some od pc

Sh 94-blk
Ls wh-cr, fuxln, das

Sh 94-grn

Ls wh-gr-lgn
fuxln, das in pt
pr xlap in patches pcs,
foss - scatt patchy foss
scatt pp & vug &, few od pc

Sh 94-dkgr-grnch

Ls wh-cr,
fuxln, das in pt pr xlap
in pt, scatt patchy pr pp &
some subshaly pcs
pr - fr crush

Sh black, carb

Sh 94

Ls wh-gr-lgn
fuxln, das in pt
pr xlap in patches pcs,
Rr pp &, foss

Ls wh-cr,
fuxln, das, foss

Sh black, carb
(poorly repres. in 4100' sp)

Ls cr-lgn
fuxln, das in pt, scatt

NVL Dk Brn oil & Brn F.O.

3980'±: LKC "H"
Mod. Odor, Scatt Mod Flour
Low % pcs with patchy to
even It bin - brn Str with
Sli Show It brn F.O., Rr Dk
Brn Fat Spn.

DST2: 3952-4025
30-45-45-90
Rec: 90' mca
120' smca
IKP: 25-68
ISIP: 1217
FFP: 103-96
FSIP: 1223

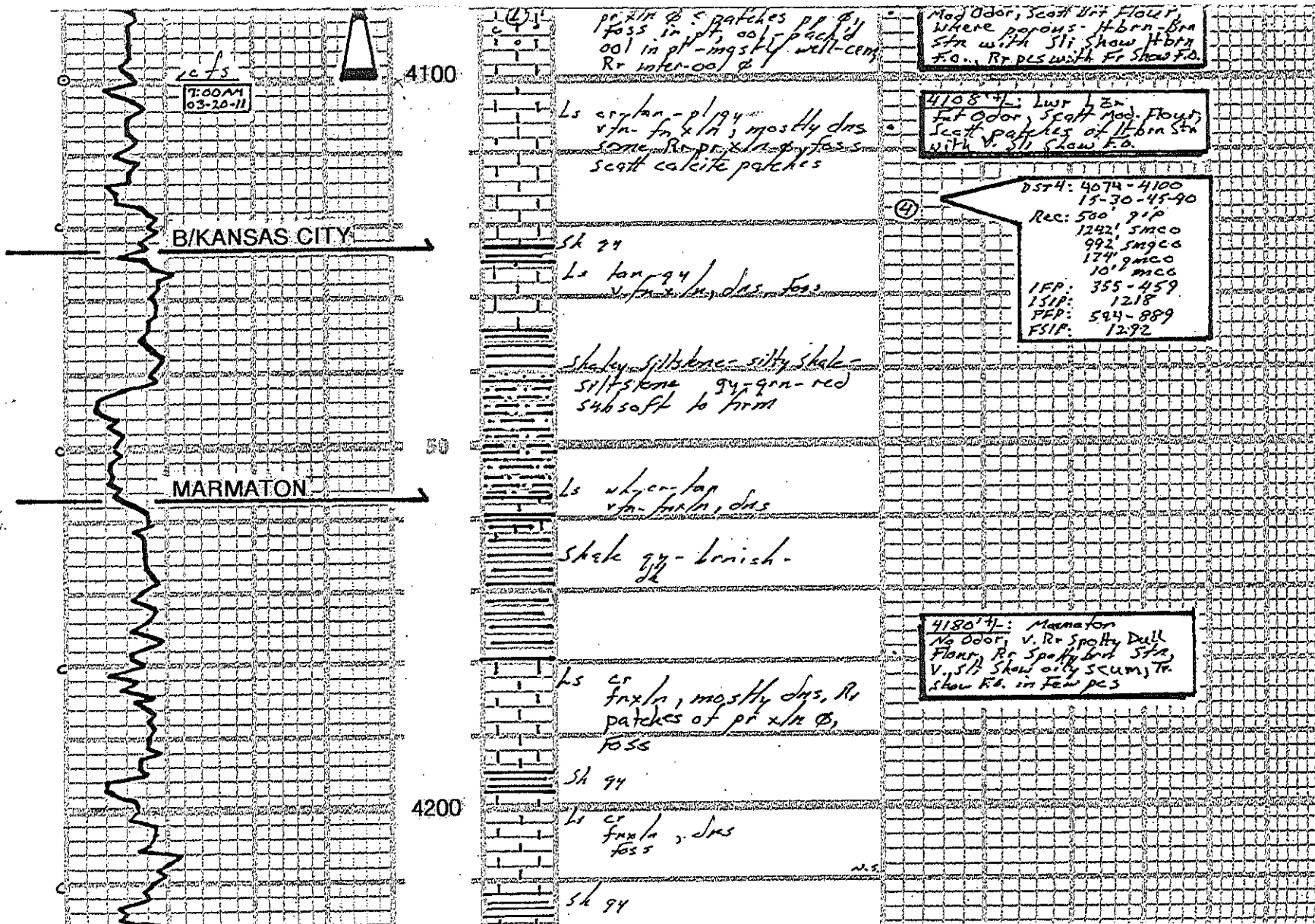
4015'±: LKC "I"
Stg Odor, Fr amt of Mod-
Bkt Flour, Mix of Sli-Fr
Show of brn gassy F.O.
Patchy - Even It bin - brn Str

4035'±: LKC "J"
V. Fat Odor, Rr Mod Flour,
Few pcs per tray with It-brn
brn Str & V. Sli - Sli Show F.O.

4060'±: LKC "K"
Fat Odor, Rr Scat Mod Flour,
Scat It-brn-brn Patchy to
Rr even Str with Sli Str. F.O.

DST3: 4024-4070
30-30-45-90
Rec: 60' mca
240' smca
IKP: 24-92
ISIP: 1246
FFP: 95-153
FSIP: 1262

4090'±: LKC "L"



PAWNEE

7:00 AM
03-21-11

MYRIC STATION

FT. SCOTT

CHEROKEE SH.

Ls cr-fan
v. fine, dng, scatt
calcite patches, foss

Ls wh-cr-fan
fine, dng, some thin in pt
chalky in pt, calcite
patches, sli foss

sh black-dk grn
carb in pt

Ls wh-cr
fine, mostly dng
some subchalky

Ls wh-cr
fine, mostly dng, to
subchalky, scatt patches
pr. r. r. s, ool in p

sh black, carb
R. l. repres in cfs in 4290' (pld)

Ls cr, fine, dng

sh gy, subshaly in pt

Ls wh-cr-fan
fine, dng, chalky in pt
foss, ool in pt (well fem)
pr. r. crush, R. pr. in sh

sh black, carb
(Abund in cfs)

Ls cr-fan
v. fine, dng, scatt
scatt calc patches

Ls cr-fan
fine, dng, some ool-
packed ool - mostly well fem
with v. R. pr. inter-ool sh

sh black, carb

Ls cr-fan-94
shaly in pt, dng in pt

4260' +/-: Pawnee
No ool, R. dull-med spotty
flour, in R. patches of pt
fine, spotty, brn s. with
v. sli show oily scum - d.a.
v. sli brn f.o. show

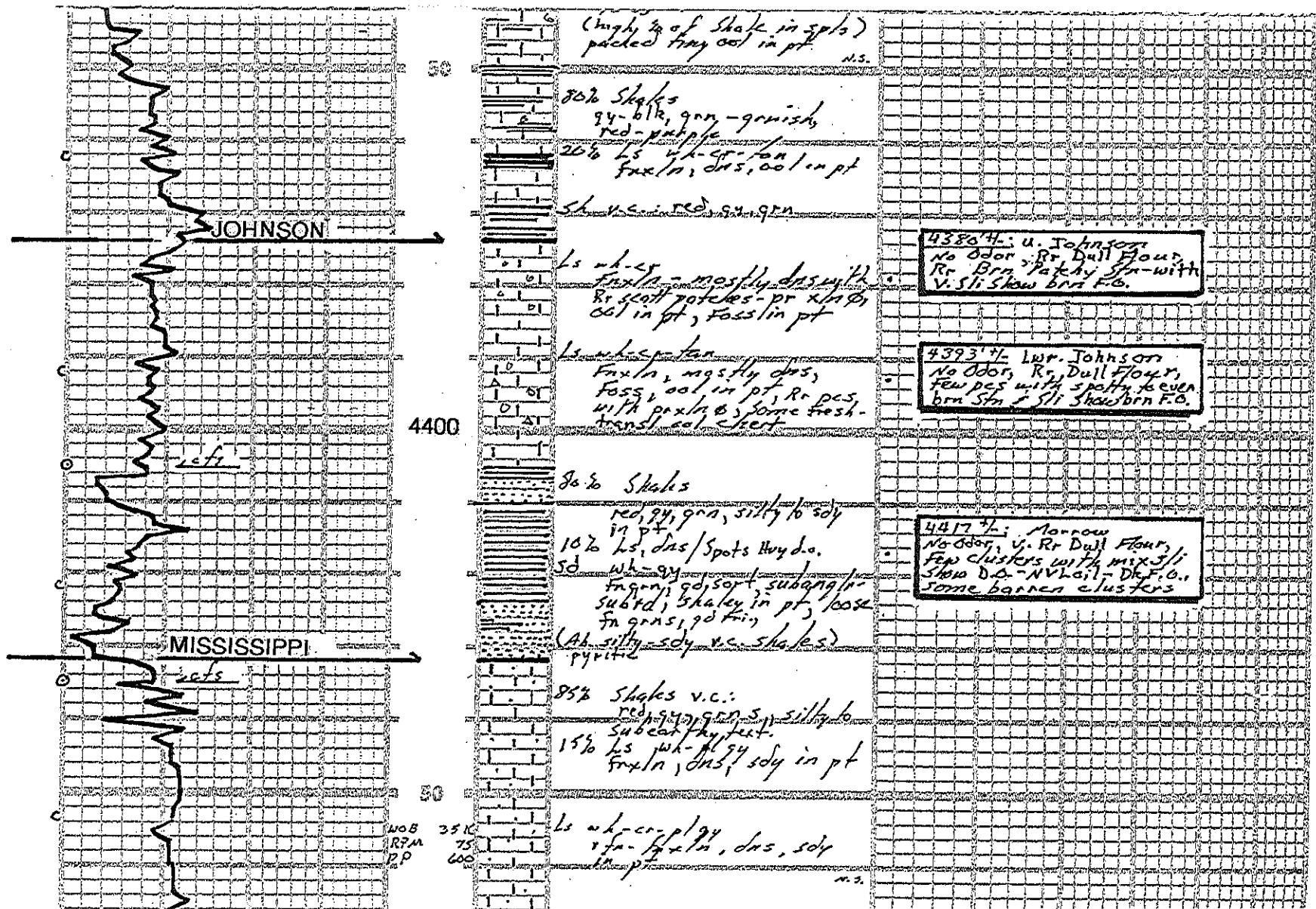
4294' +/-: Myric Station
No ool, few pcs with dull
patchy flour - R. patches
brn s. No show f.o.

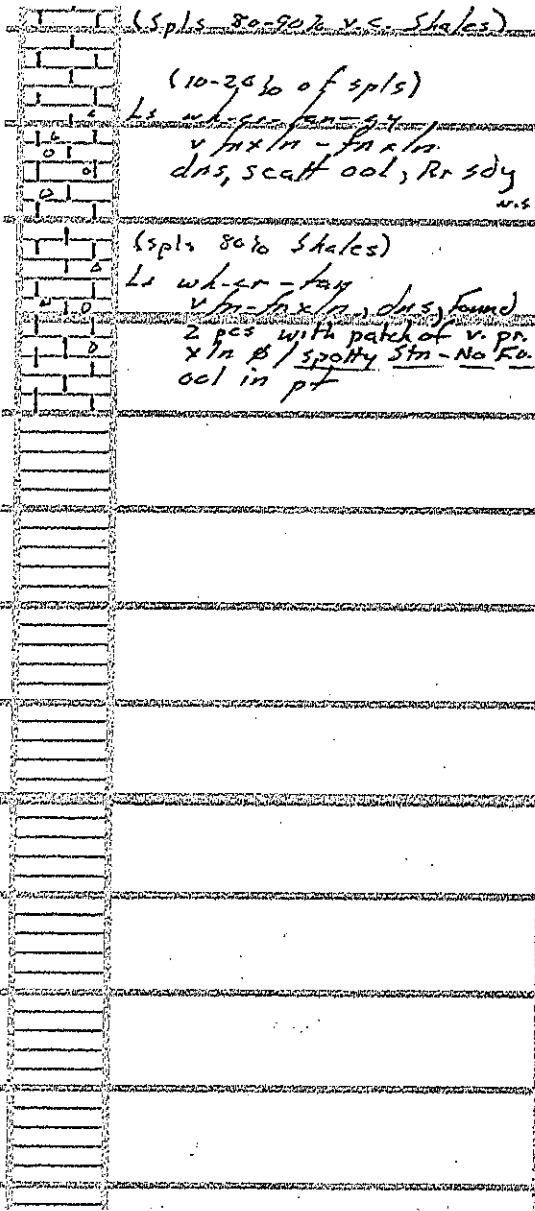
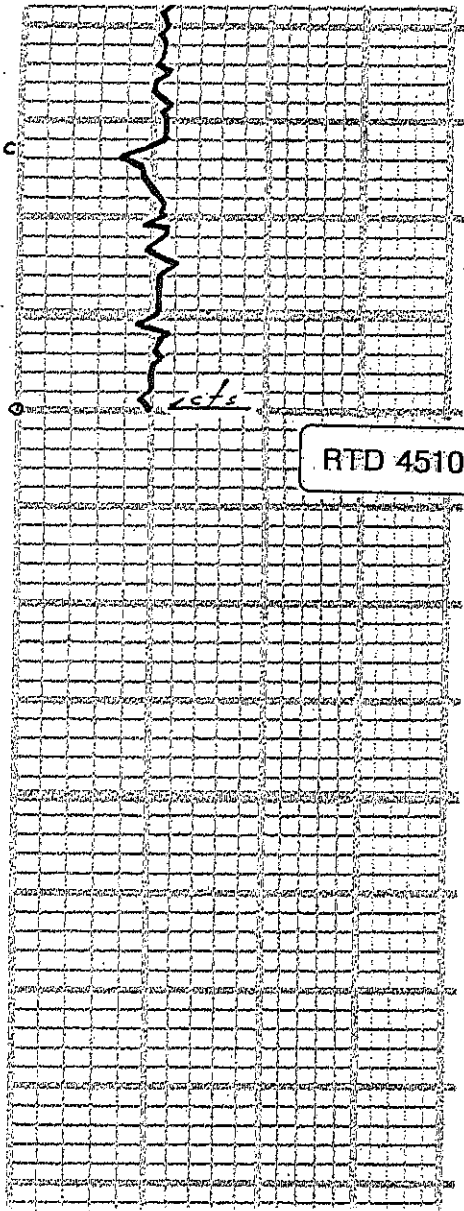
4317' +/-: Ft. Scott
No ool, few pcs v. dull flour,
v. R. dull patchy, brn s. -
spotty, 2, pcs / sli show f.o.

50

4300

50
9.3
10.4
2
12
15
4200
120
9.0





RTD 4510 FT

4500

50