

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>HESS OIL COMPANY</u> LEASE <u>E. A. HETZKE * 13</u> FIELD <u>GRABER POOL</u> LOCATION <u>1650' FNL, 1320' FWL</u> SEC <u>29</u> TWP <u>21 S</u> RGE <u>1 W</u> COUNTY <u>McPHERSON</u> STATE <u>KANSAS</u>	ELEVATIONS KB <u>1490'</u> DF <u>1487'</u> GL <u>1485'</u> Measurements Are All From <u>KB</u>
CONTRACTOR <u>MALLARD J.V.</u> SPUD <u>6-4-14</u> COMP <u>6-10-14</u> RTD <u>3493'</u> LTD <u>none</u> MUD UP <u>2750'</u> TYPE MUD <u>CHEMICAL</u>	CASING SURFACE <u>8-5/8" at 209'</u> PRODUCTION <u>5-1/2"</u> ELECTRICAL SURVEYS <p style="text-align: center;"><u>none</u></p>

SAMPLES SAVED FROM	<u>2800'</u>	TO	<u>TD</u>
DRILLING TIME KEPT FROM	<u>2250'</u>	TO	<u>TD</u>
SAMPLES EXAMINED FROM	<u>2800'</u>	TO	<u>TD</u>
GEOLOGICAL SUPERVISION FROM	<u>2300'</u>	TO	<u>TD</u>
GEOLOGIST ON WELL <u>JAMES C. HESS</u>			

FORMATION TOPS	LOG	SAMPLES	
LANSING		2309 (-819)	1 W
KANSAS CITY		2393 (-903)	
BASE KANSAS CITY		2709 (-1219)	
MISSISSIPPI		2908 (-1418)	
KINDERHOOK		3221 (-1731)	
HUNTON		3287 (-1797)	29
VIOLA		3390 (-1900)	
SIMPSON SAND		3421 (-1931)	
R T D		3493 (-2003)	2 S

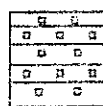
7505

REMARKS

LEGEND



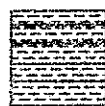
Anhydrite



Salt



Sandstone



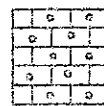
Shale



Carb sh



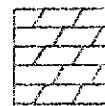
Limestone



Col. Lime



Chert



Dolomite

SCALE " = 100'

LOG 7703

Lithology	Drilling time in minutes					DEPTH	Sample Description	Remarks, drill stem tests, etc.
	0	5	10	15	20			
						2250		
						60		
						80		
						2300		
								LANSING 2309 (-819)

LANSING 2309 (-819)

20

40

60

80

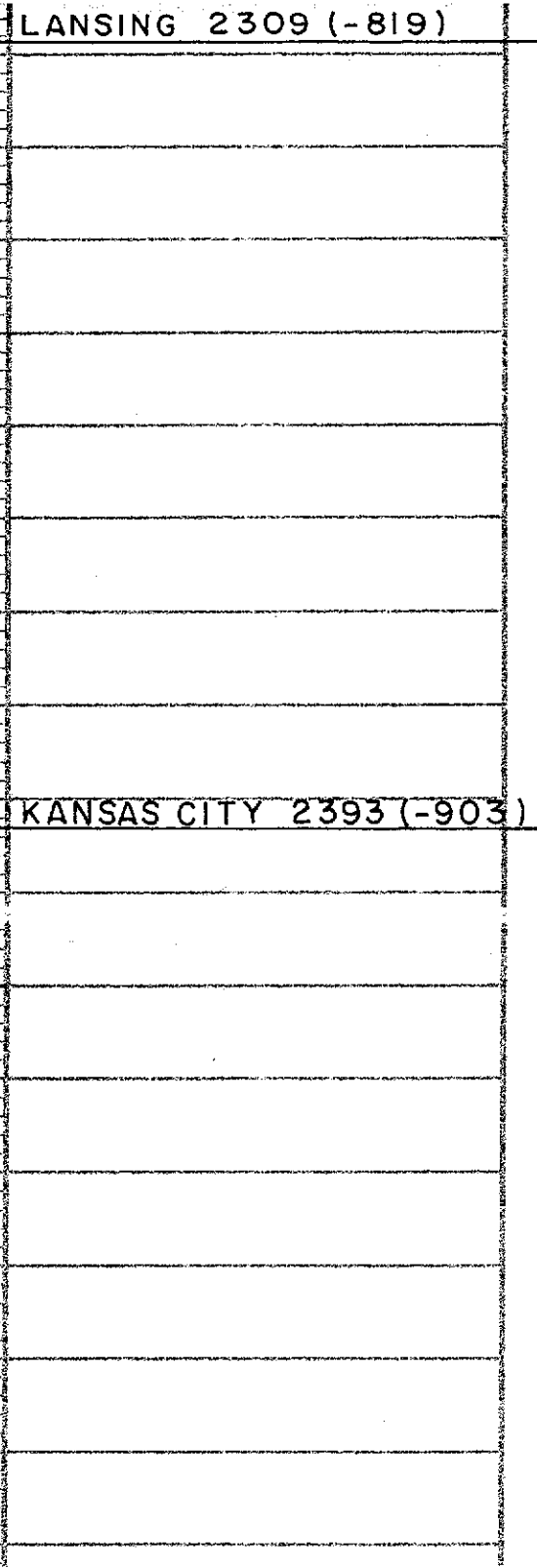
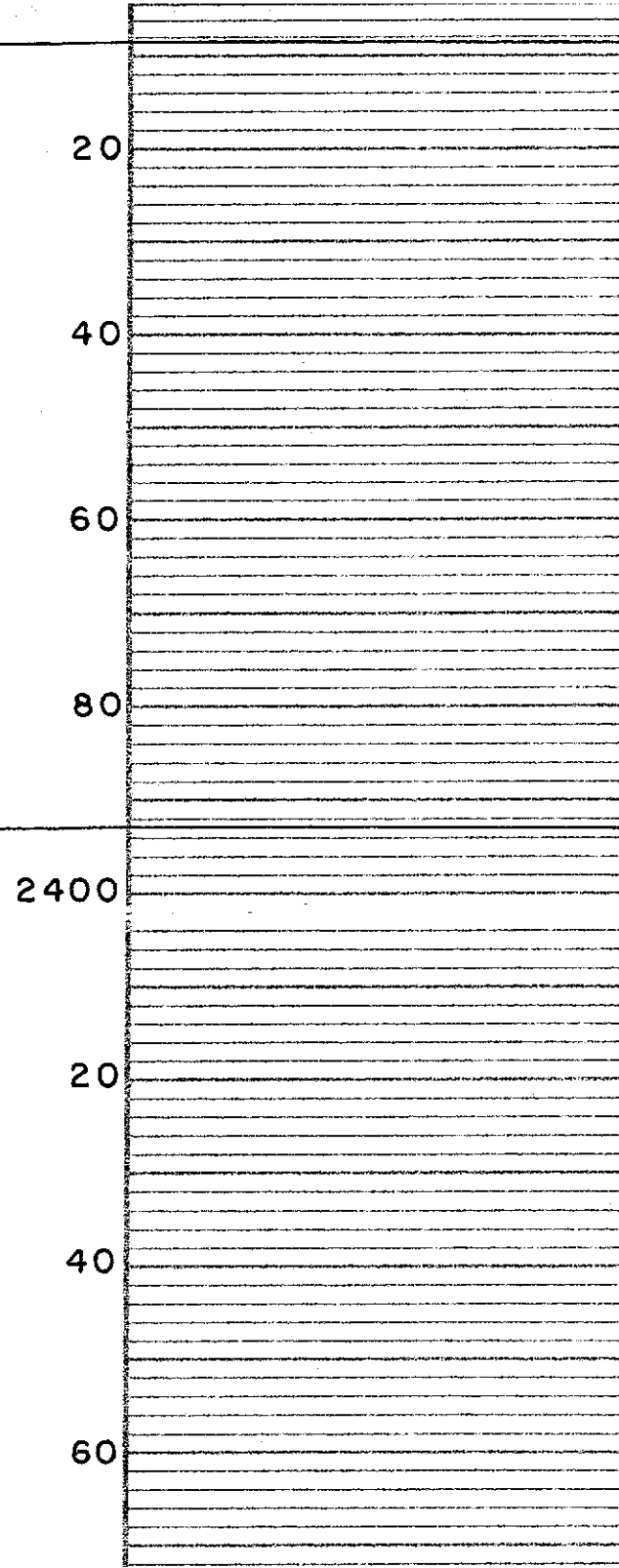
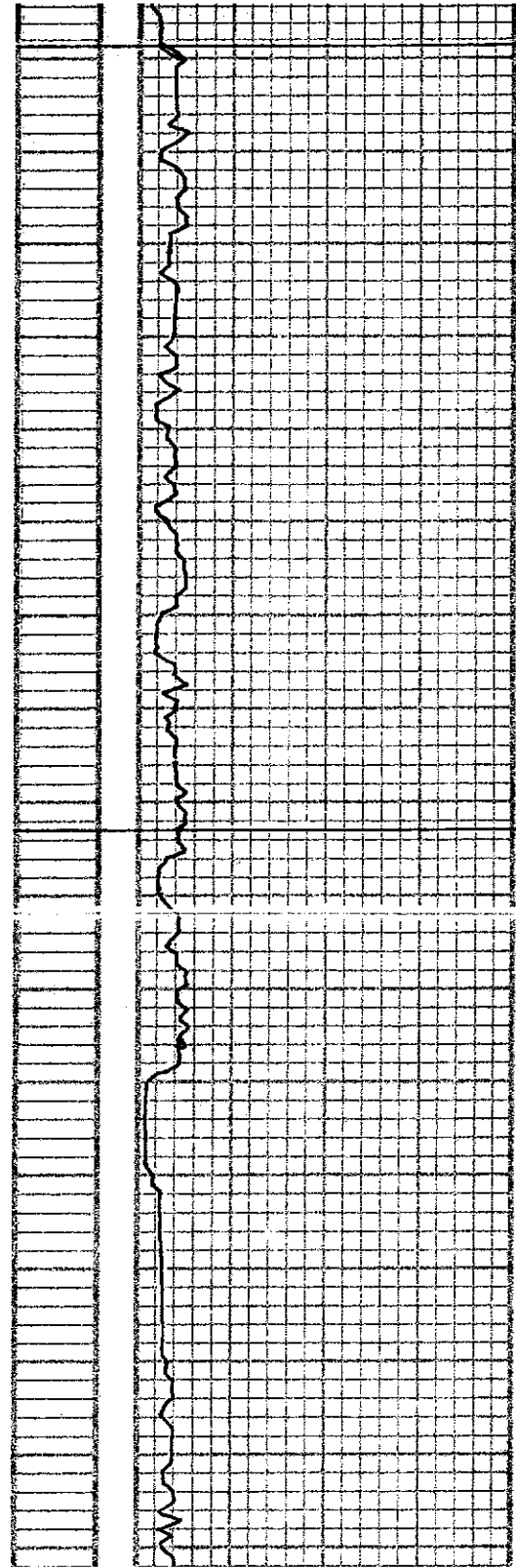
KANSAS CITY 2393 (-903)

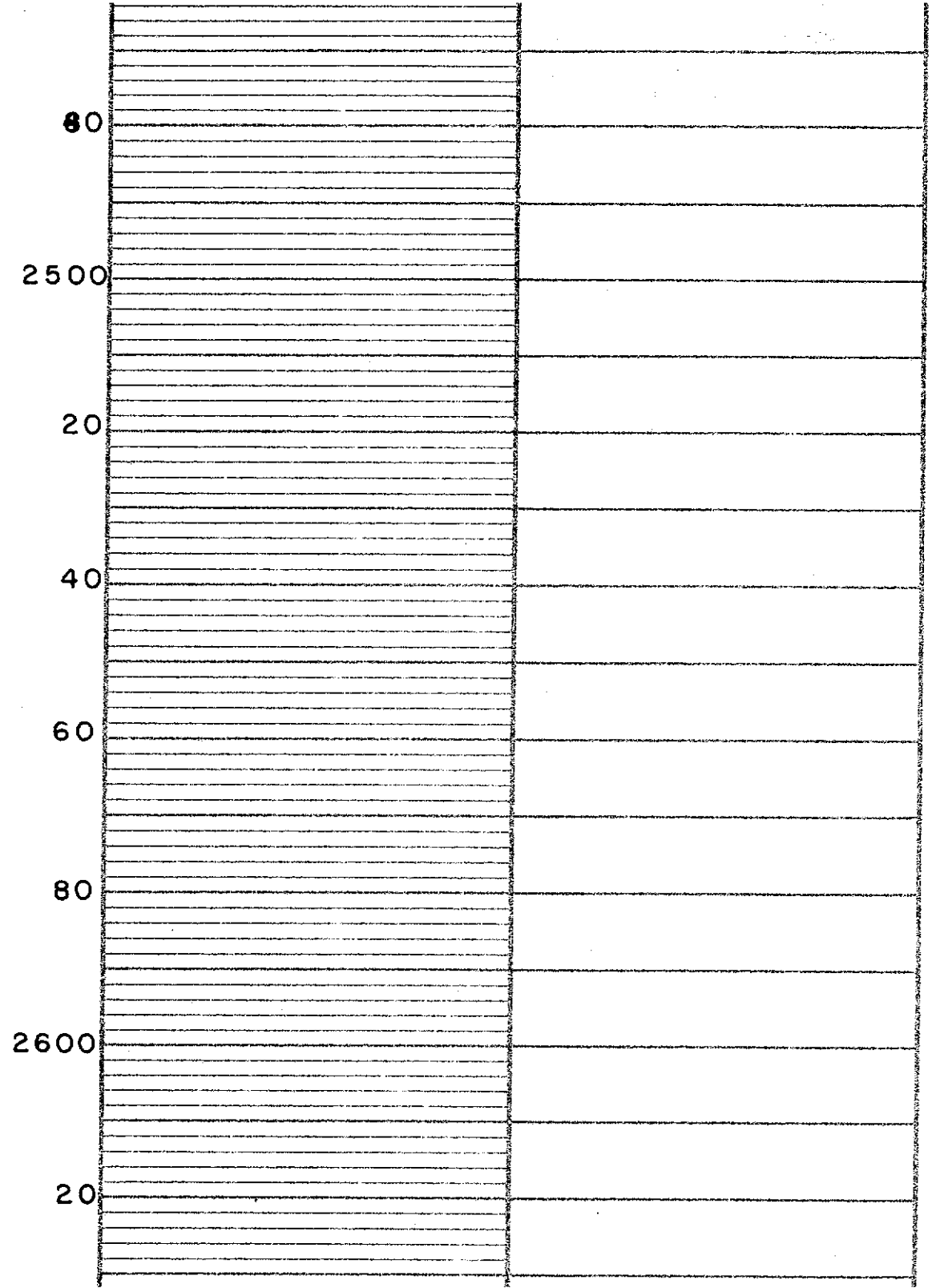
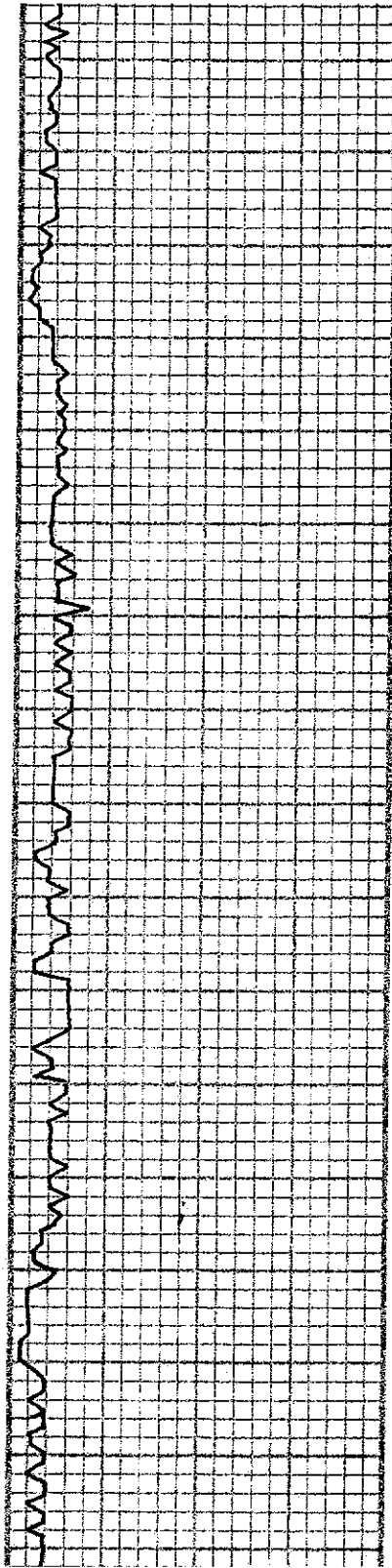
2400

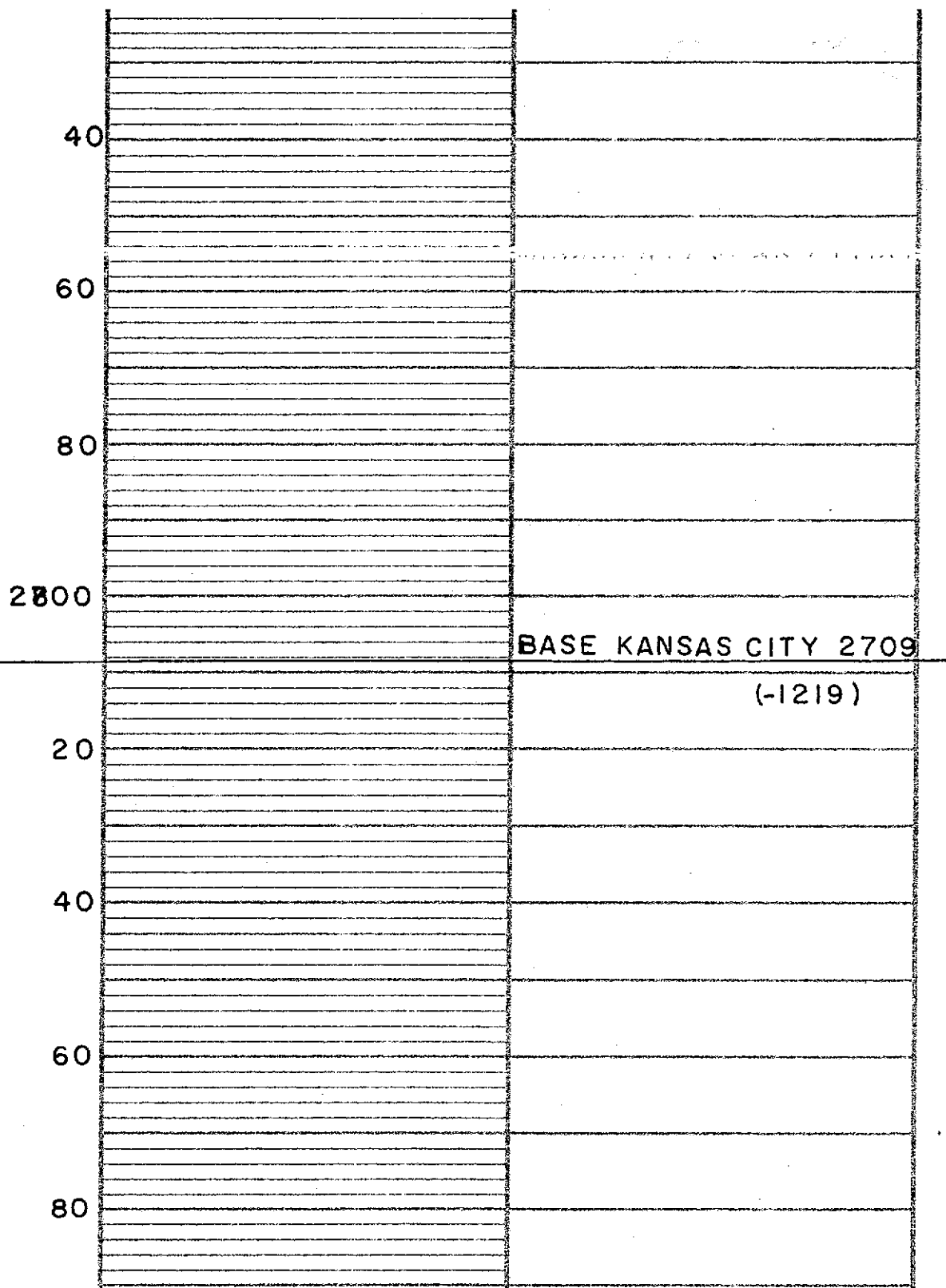
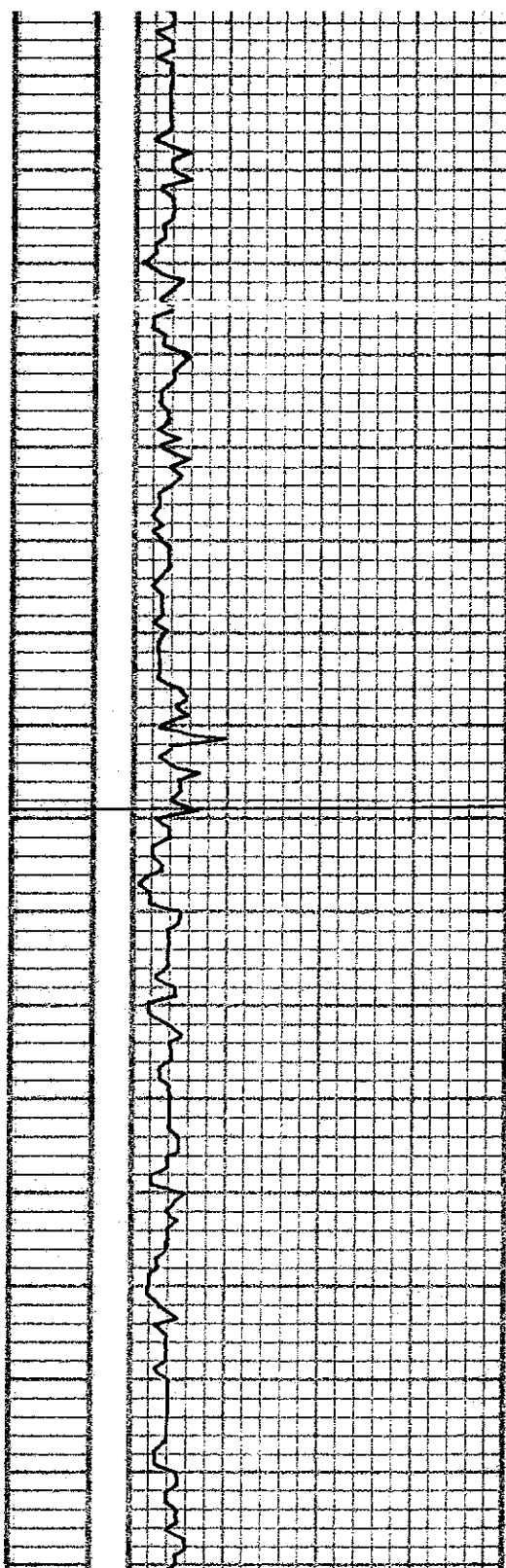
20

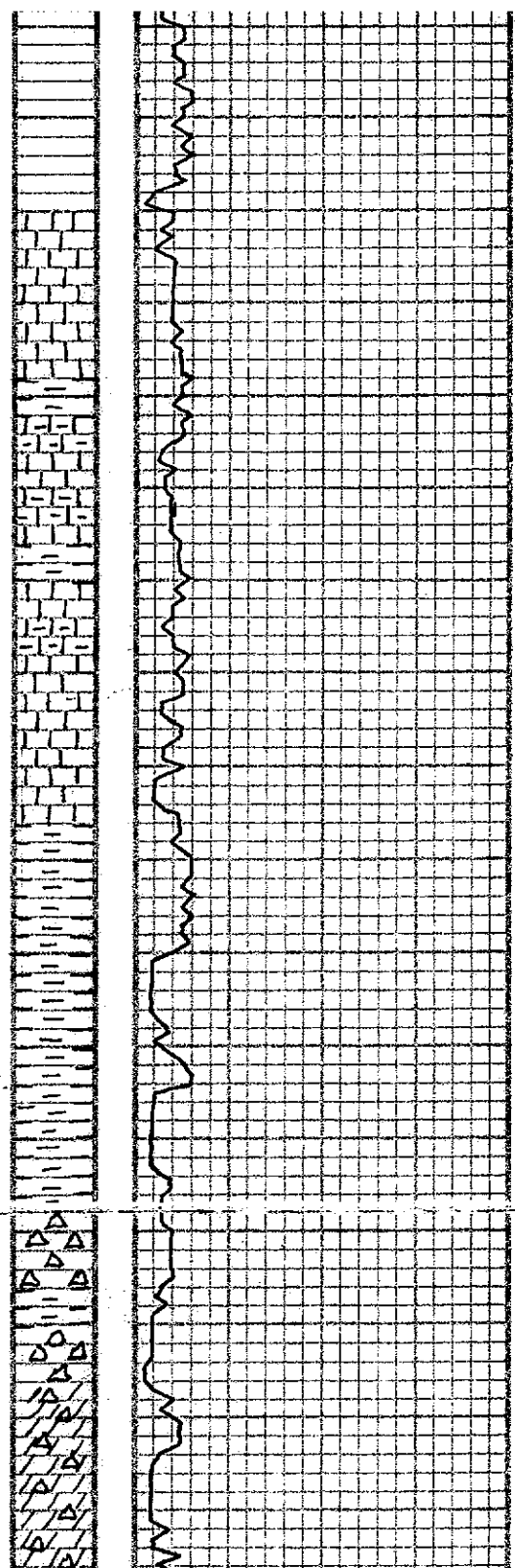
40

60

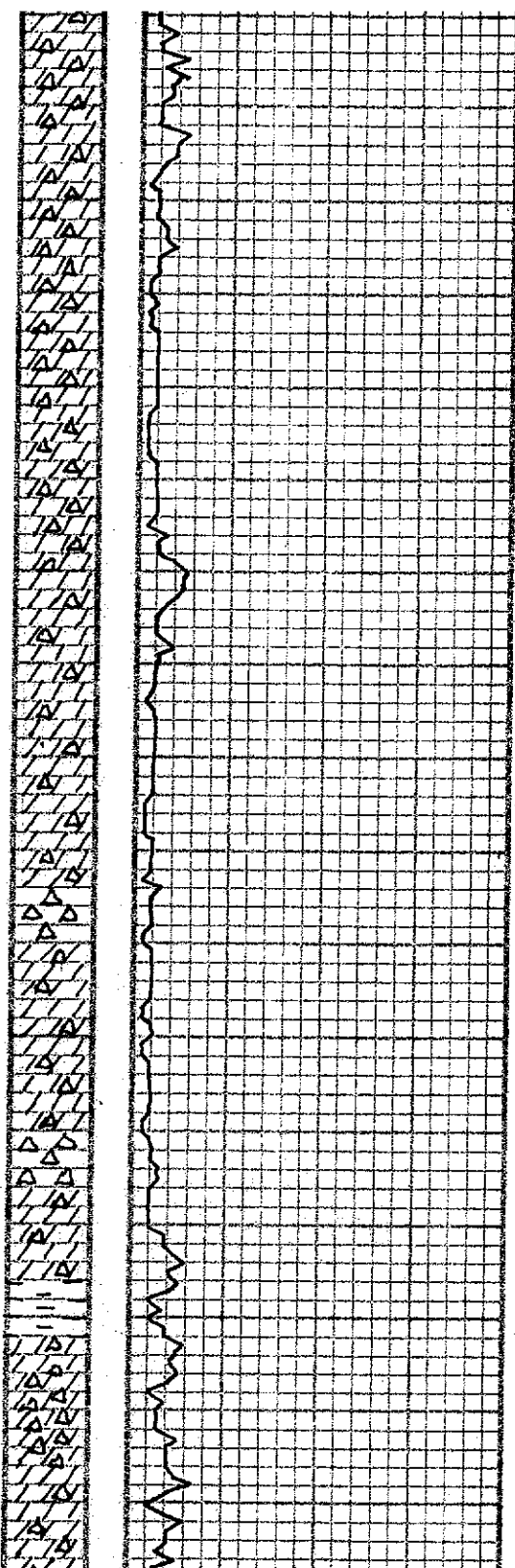




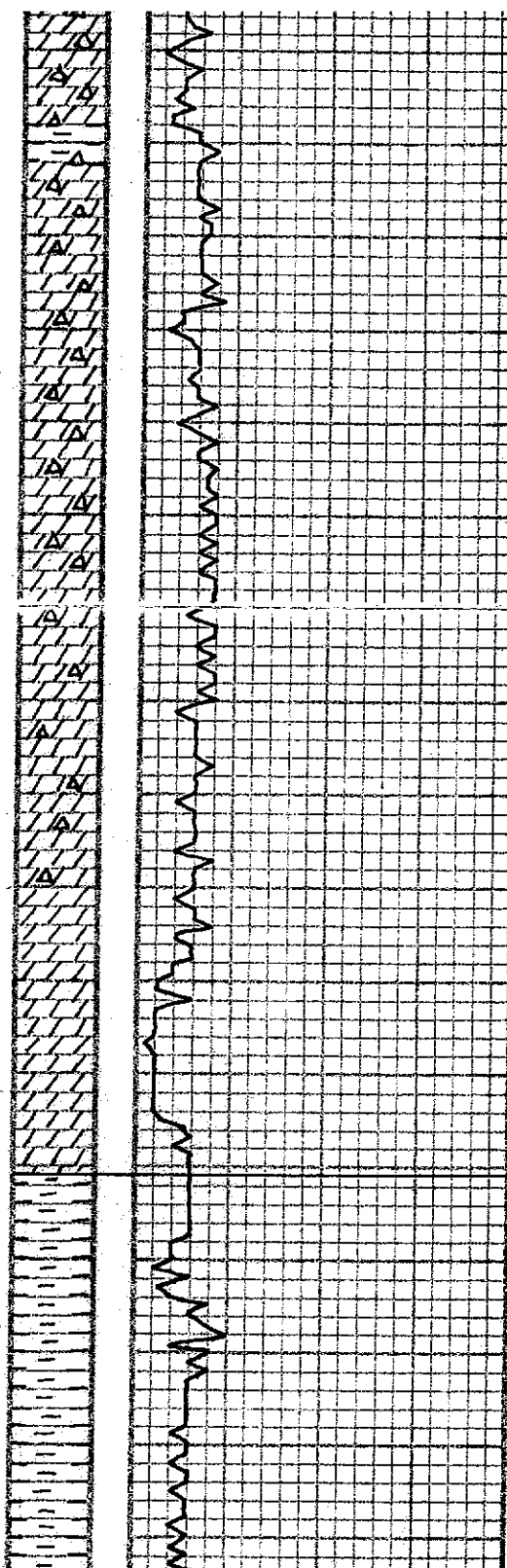




80		
2800	<p>Com - Br VF-Exl^a Chalky Lm w/ some green sh's</p> <p>AA</p>	Start Samples
20	<p>Lm - Tan VF-Exl^a Chalky Lm w/ lots green sh's</p> <p>AA w/more sh's</p>	
40	<p>Lm - Br VF-Fxln Chalky Lm w/some green sh's</p> <p>AA NO ϕ NO show</p>	
60	<p>Lm - Br VF-Fxln Chalky Lm w/ some green sh's</p> <p>Mostly green sh's NO ϕ NO show</p>	
80	<p>Mostly green sh's NO ϕ NO show</p> <p>AA NO ϕ NO show</p>	
2900	<p>Mostly green sh's NO ϕ NO show</p>	MISSISSIPPI 2908 (-1418)
20	<p>Miss Chat w/ chert sharp + Tr. politic Fair ϕ NO show NO odor</p> <p>AA NO Odor Fair ϕ NO show</p> <p>"Fire Spot"</p>	
40	<p>Dolomitic Lm + some Δ's NO show NO odor</p> <p>AA w/ load of NO show NO odor</p>	



40	AA w/ Good ϕ No show No odor
60	WT VEXLM DS Dolo. w/ some wt sharp Δ Tripartitic Δ
AA	w/ Fair - Good ϕ No show No odor
AA	w/ Good ϕ No show No odor
80	AA Good ϕ No show
3000	Lim - WT F-MXLM DS Dolo. Few PC's LM Some sharp wt sheet
AA	w/ Good ϕ No show
20	WT MXLM DS Dolo. w/ some wt sharp Δ 's
AA	w/ Good ϕ No show No odor
40	Mostly WT sharp Δ tripartitic Δ some Dolo ϕ 's only Fair
* Change to	Lim - WT MXLM DS Dolo. w/ PC's wt sharp Δ Fair ϕ No show
AA	w/ Fair ϕ No show No odor
60	AA w/ Fair ϕ No show No odor
* Change to	Lim - 17 Grey M/Ln Dolo. Poor ϕ PC's wt sharp Δ
80	AA w/ some Green sh's v. Poor ϕ No show
3100	Mostly WT sharp Δ Some wt - Tan M/LN DS Dolo. Few Green sh's
AA	w/ No ϕ No show



3100

SOME WT - 100% M. RIM DS Dolo.
FEW GREEN SH's

AA w/ NO β
NO SHOW NO odor

AA w/ NO β
NO SHOW NO odor

20

Lim - Grey VF-MIXIN DS Dolo.
w/ V. Poor INTERM β
PE'S WT SHARP Δ
FEW GREEN SH's

AA w/ V. Poor β
NO SHOW

40

Lim - R Grey VF-MIXIN DS Dolo.
w/ PE'S WT SHARP Δ
FEW GREEN SH's

AA w/ Poor - V. Poor β
NO SHOW NO odor

60

Lim - Grey VF-FIN DS Dolo.
w/ PE'S WT SHARP Δ
Some GREEN SH's

AA w/ MORE GREEN SH's
Weak - Fair β NO SHOW

80

Bl - Grey VF-FIN DS Dolo.
w/ PE'S WT SHARP Δ
PE'S WT SHARP Δ
Some GREEN SH's

AA w/ more sh's
Weak β NO SHOW

3200

Grey - Bl F-MIXIN DS Dolo.
PE'S WT SHARP Δ team above?
Some Green sh's

AA w/ Fair β
NO SHOW

20

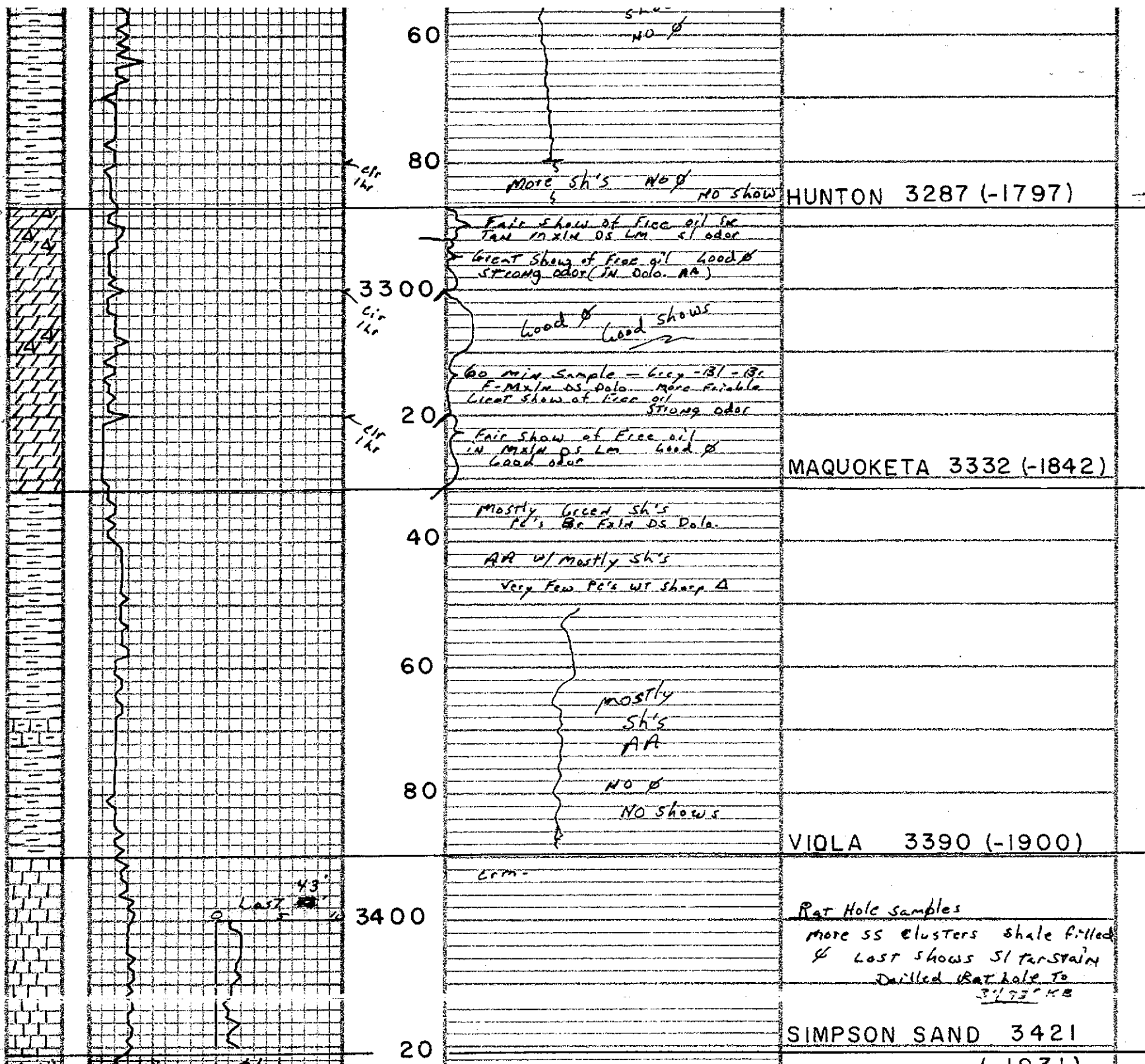
Lots of V.C. shales
Mostly Green + Grey

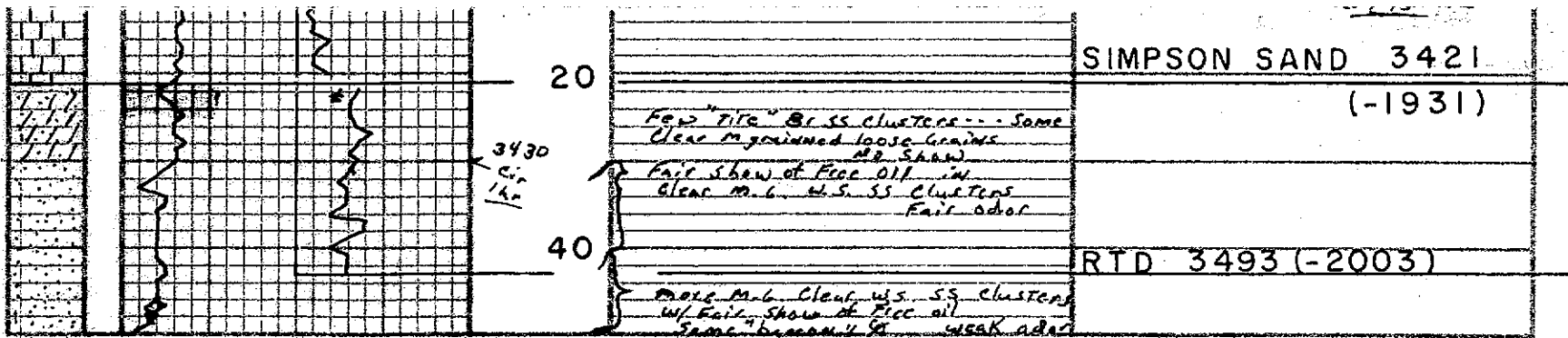
40

All shales
NO SHOWS
NO β

60

KINDERHOOK 3221 (-1731)





3430
cir
14"

↓ No more shows