

Timothy G. Pierce

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY N-10 Exploration, LLC
LEASE Medicine River Ranch 'B' #14
FIELD Landis
LOCATION 825' FSL & 1980' FEL
SEC 15 **TWSP** 34S **RGE** 11W
COUNTY Barber **STATE** Kansas
CONTRACTOR Hardt Drilling Rig #1
SPUD 5-09-2014 **COMP** 5-18-2014
RTD 5046 **LTD** 5046
MUD UP 2920 **TYPE MUD** Chemical
SAMPLES SAVED FROM 4000 **TO** RTD
DRILLING TIME KEPT FROM 4000 **TO** RTD
SAMPLES EXAMINED FROM 4000 **TO** RTD
GEOLOGICAL SUPERVISION FROM 4000 **TO** RTD
GEOLOGIST ON WELL Tim Pierce

ELEVATIONS

KB 1347'
DF _____
GL 1337'
 Measurements Are All
 From Kelly Bushing

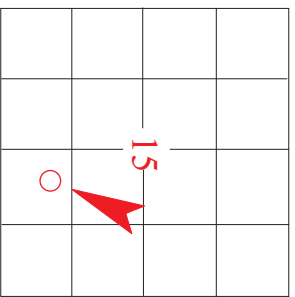
CASING

CONDUCTOR _____
SURFACE 8-5/8" at 268'
PRODUCTION 5-1/2" at 5022'

ELECTRICAL SURVEYS

DIL / CN-CD Pioneer


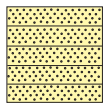
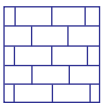
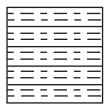

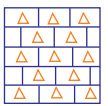

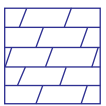
FORMATION TOPS	ELECTRIC LOG	SAMPLE
Heebner Sh.	3624 (-2277)	NA
Latan LS.	4053 (-2706)	4049 (-2702)
Stark Sh.	4310 (-2963)	4305 (-2958)
Cherokee Sh.	4533 (-3186)	4529 (-3182)
Mississippi	4586 (-3239)	4592 (-3245)
Chattanooga Sh.	4876 (-3529)	4872 (-3525)
Viola	4933 (-3585)	4926 (-3579)
Simpson	5022 (-3675)	5017 (-3670)




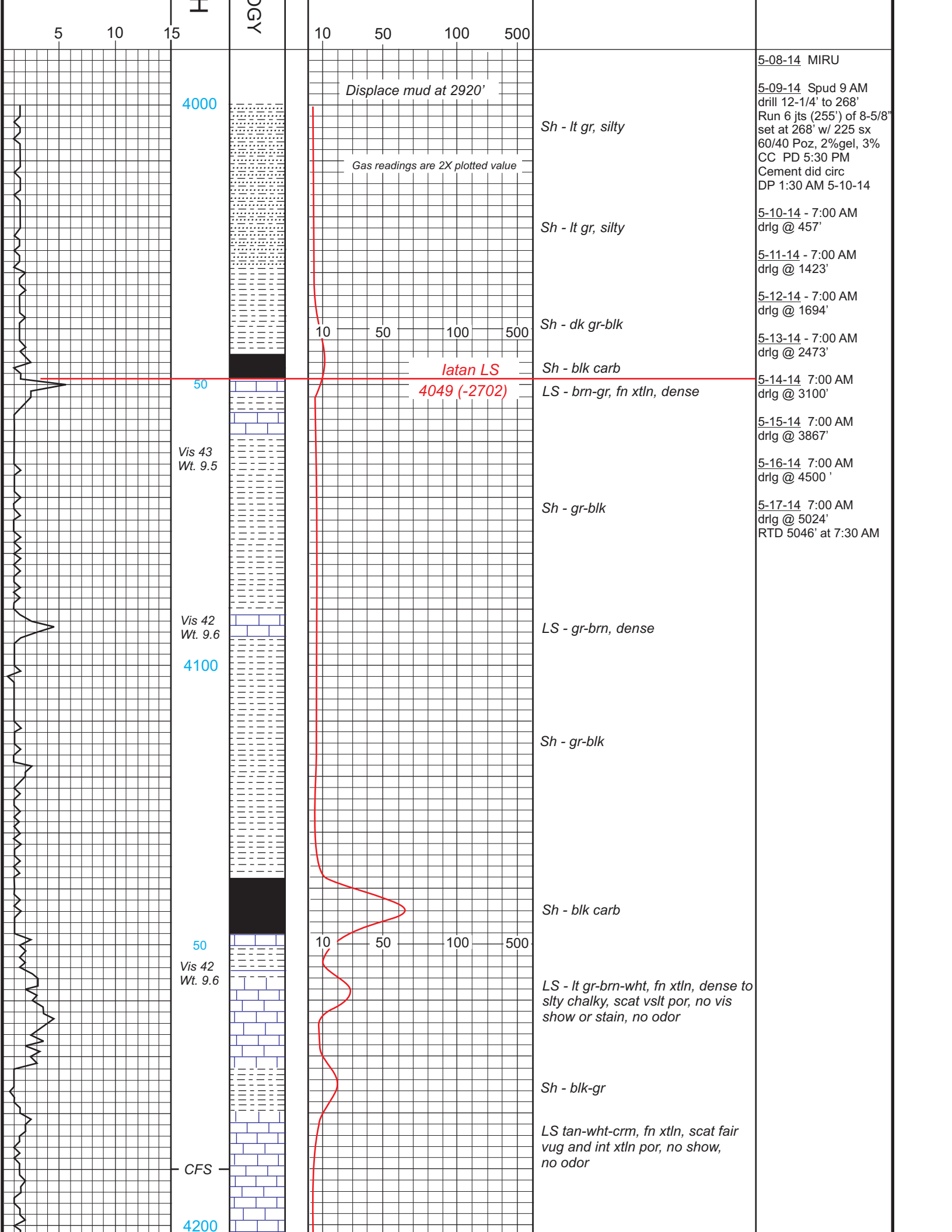
REMARKS Samples and electric logs indicate probable production from the Mississippi from 4594'- 4653'.
A slight show of oil was observed in the Meisner Sand at 4899'-4902', electric logs confirm the presence of sand and this zone should be tested for production.
A slight show of gas was observed in the Chattanooga Shale from 4876'- 4882'.
Electric logs indicate a possible zone in the Hertha LS at 4354'-4359', a very slight sample show (fluorescence) was observed in this interval along with a faint odor, a slight gas increase was recorded.
There were no other zones of interest indicated by samples or electric logs.

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LEGEND

							
Anhydrite	Sandstone	Limestone	Shale	Carb Sh	Cherty LS	Chert	Dolomite

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases 	DEPTH	LITHOLOG	GAS SCALE	SAMPLE DESCRIPTION	REMARKS
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5 10 15

OGY

10 50 100 500

4000

Displace mud at 2920'

Sh - lt gr, silty

5-08-14 MIRU
5-09-14 Spud 9 AM drill 12-1/4' to 268' Run 6 jts (255') of 8-5/8" set at 268' w/ 225 sx 60/40 Poz, 2%gel, 3% CC PD 5:30 PM Cement did circ DP 1:30 AM 5-10-14

Gas readings are 2X plotted value

Sh - lt gr, silty

5-10-14 - 7:00 AM drlg @ 457'

5-11-14 - 7:00 AM drlg @ 1423'

5-12-14 - 7:00 AM drlg @ 1694'

Sh - dk gr-blk

5-13-14 - 7:00 AM drlg @ 2473'

latan LS
4049 (-2702)

Sh - blk carb

LS - brn-gr, fn xtln, dense

5-14-14 7:00 AM drlg @ 3100'

5-15-14 7:00 AM drlg @ 3867'

5-16-14 7:00 AM drlg @ 4500'

5-17-14 7:00 AM drlg @ 5024' RTD 5046' at 7:30 AM

Vis 43
Wt. 9.5

Sh - gr-blk

Vis 42
Wt. 9.6

LS - gr-brn, dense

4100

Sh - gr-blk

50
Vis 42
Wt. 9.6

Sh - blk carb

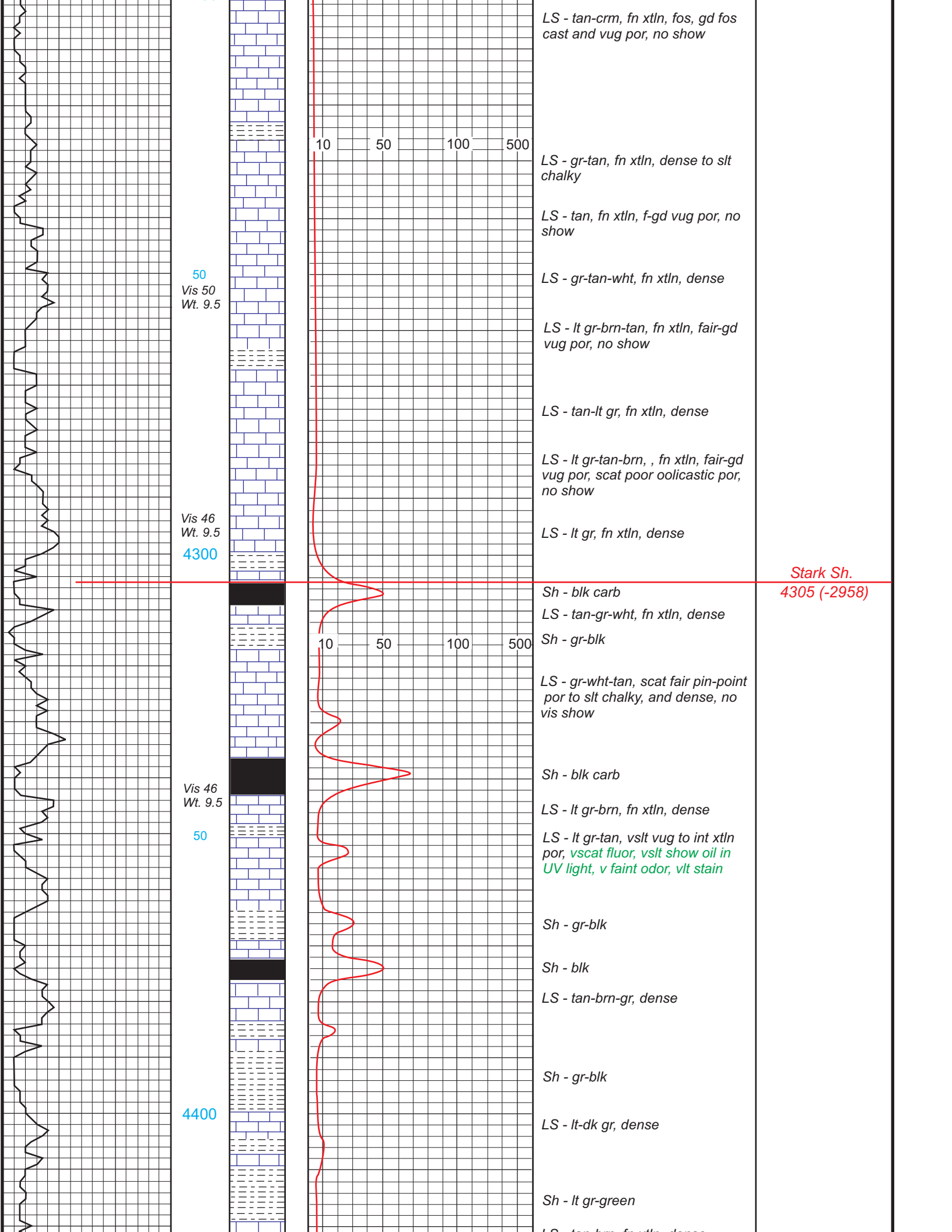
LS - lt gr-brn-wht, fn xtln, dense to silty chalky, scat vslt por, no vis show or stain, no odor

Sh - blk-gr

LS tan-wht-crm, fn xtln, scat fair vug and int xtln por, no show, no odor

CFS

4200

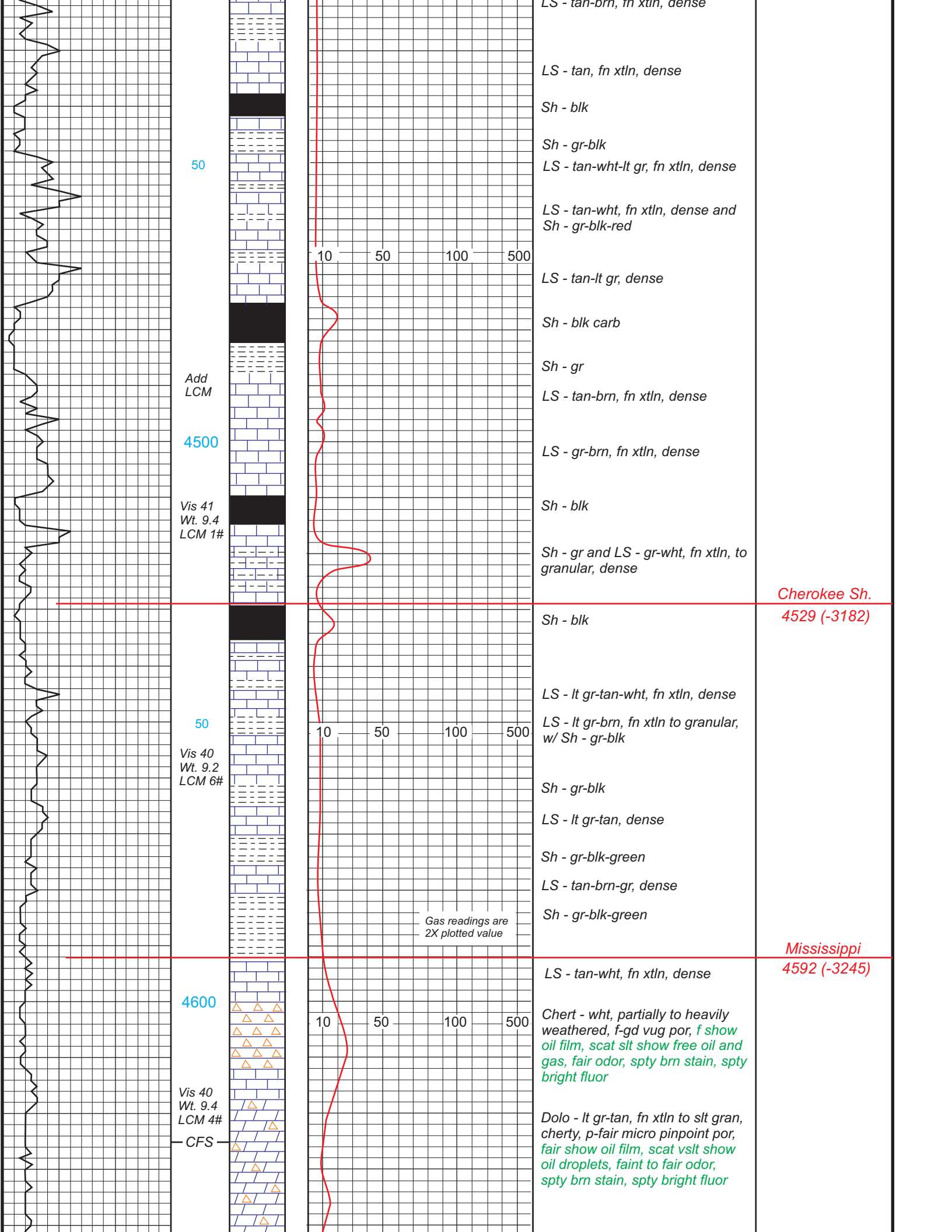


50
Vis 50
Wt. 9.5

Vis 46
Wt. 9.5
4300

Vis 46
Wt. 9.5
50

4400



LS - tan-brn, fn xtl, dense

Sh - blk

Sh - gr-blk

LS - tan-wht-lt gr, fn xtl, dense

LS - tan-wht, fn xtl, dense and
Sh - gr-blk-red

10 50 100 500

LS - tan-lt gr, dense

Sh - blk carb

Sh - gr

LS - tan-brn, fn xtl, dense

Add
LCM

4500

LS - gr-brn, fn xtl, dense

Vis 41
Wt. 9.4
LCM 1#

Sh - blk

Sh - gr and LS - gr-wht, fn xtl, to
granular, dense

Cherokee Sh.
4529 (-3182)

Sh - blk

LS - lt gr-tan-wht, fn xtl, dense

LS - lt gr-brn, fn xtl to granular,
w/ Sh - gr-blk

10 50 100 500

Sh - gr-blk

LS - lt gr-tan, dense

Sh - gr-blk-green

LS - tan-brn-gr, dense

Sh - gr-blk-green

Gas readings are
2X plotted value

Vis 40
Wt. 9.2
LCM 6#

50

Mississippi
4592 (-3245)

LS - tan-wht, fn xtl, dense

4600

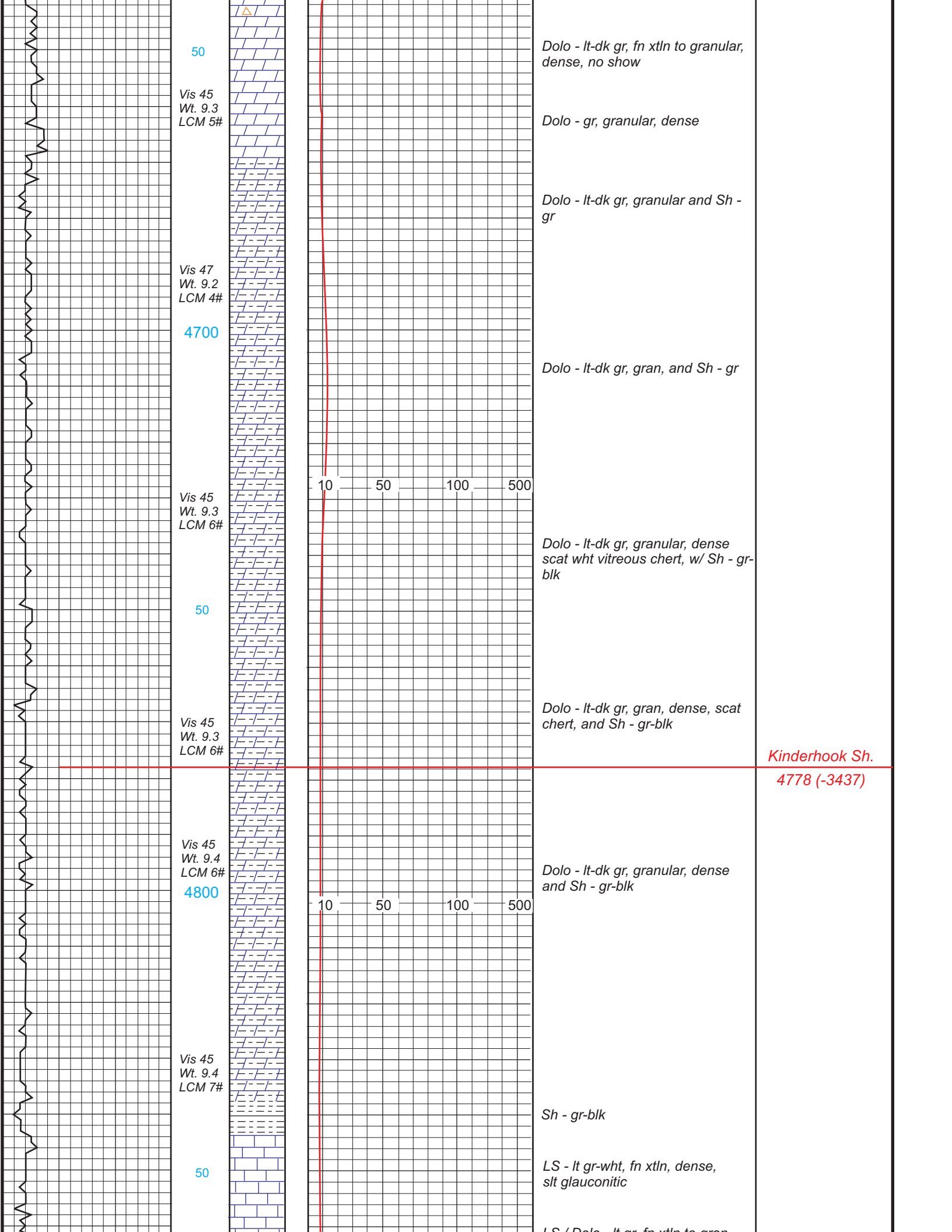
Chert - wht, partially to heavily
weathered, f-gd vug por, f show
oil film, scat slt show free oil and
gas, fair odor, spty brn stain, spty
bright fluor

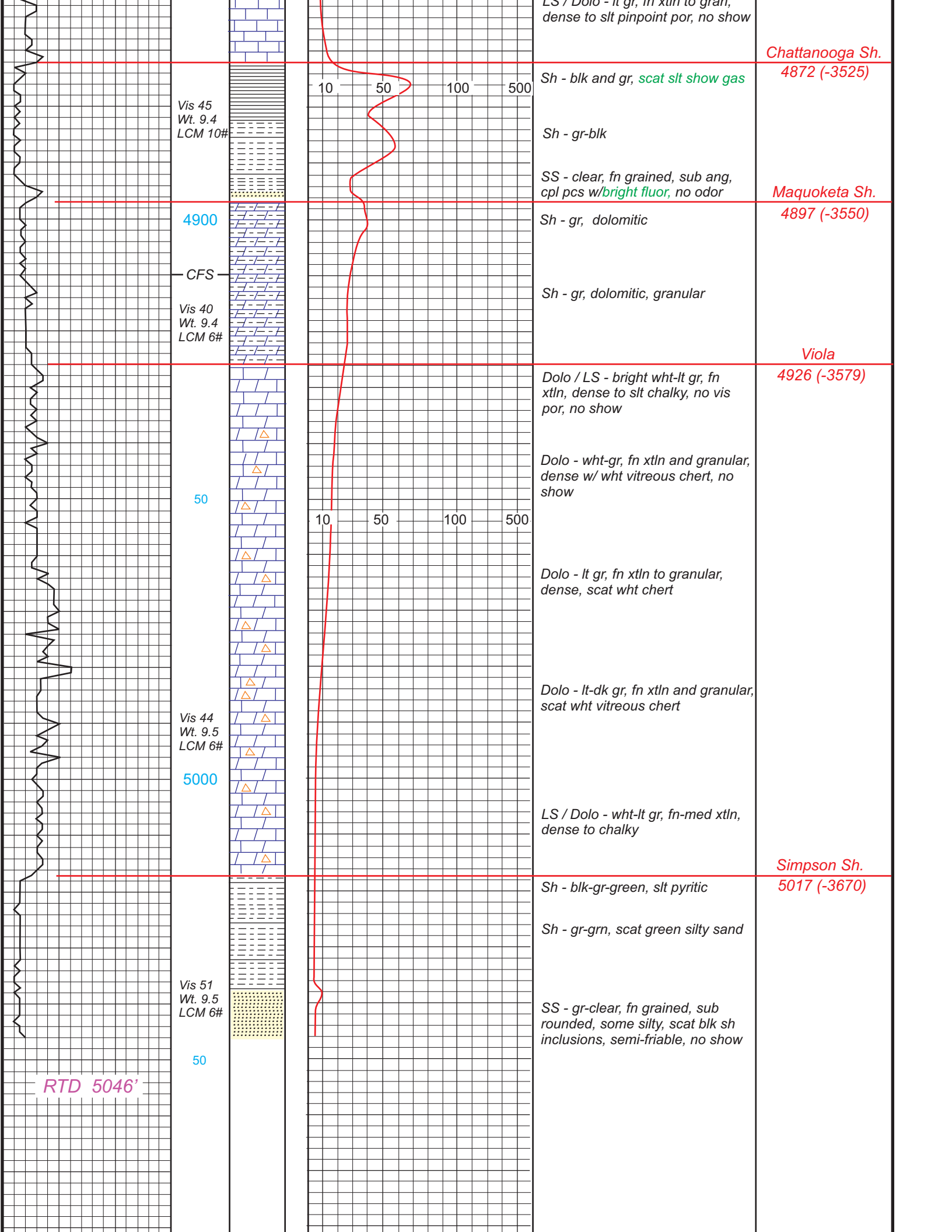
10 50 100 500

Vis 40
Wt. 9.4
LCM 4#

Dolo - lt gr-tan, fn xtl to slt gran,
cherty, p-fair micro pinpoint por,
fair show oil film, scat vslt show
oil droplets, faint to fair odor,
spty brn stain, spty bright fluor

CFS





Chattanooga Sh.
4872 (-3525)

Vis 45
Wt. 9.4
LCM 10#

Sh - blk and gr, *scat slt show gas*

Sh - gr-blk

SS - clear, fn grained, sub ang,
cpl pcs w/*bright fluor*, no odor

Maquoketa Sh.
4897 (-3550)

4900

CFS

Vis 40
Wt. 9.4
LCM 6#

Sh - gr, dolomitic

Sh - gr, dolomitic, granular

Viola

4926 (-3579)

50

Dolo / LS - bright wht-lt gr, fn
xtln, dense to slt chalky, no vis
por, no show

Dolo - wht-gr, fn xtln and granular,
dense w/ wht vitreous chert, no
show

Dolo - lt gr, fn xtln to granular,
dense, scat wht chert

Dolo - lt-dk gr, fn xtln and granular,
scat wht vitreous chert

Vis 44
Wt. 9.5
LCM 6#

5000

LS / Dolo - wht-lt gr, fn-med xtln,
dense to chalky

Simpson Sh.
5017 (-3670)

Vis 51
Wt. 9.5
LCM 6#

50

Sh - blk-gr-green, slt pyritic

Sh - gr-grn, scat green silty sand

SS - gr-clear, fn grained, sub
rounded, some silty, scat blk sh
inclusions, semi-friable, no show

RTD 5046'

