

# Timothy G. Pierce

## Petroleum Geologist

### GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY R & B Oil and Gas, Inc.  
 LEASE Lenkner 'A' #1  
 FIELD McGire  
 LOCATION NW NW SE  
 SEC 28 TWP 32S RGE 11W  
 COUNTY Barber STATE Kansas  
 CONTRACTOR Hardt Drilling Rig #1  
 SPUD 12-12-2013 COMP 12-23-2013  
 RTD 4816 LTD 4789  
 MUD UP 2920 TYPE MUD Chemical  
 SAMPLES SAVED FROM 2500 TO RTD  
 DRILLING TIME KEPT FROM 2500 TO RTD  
 SAMPLES EXAMINED FROM 2500 TO RTD  
 GEOLOGICAL SUPERVISION FROM 2400 TO RTD  
 GEOLOGIST ON WELL Tim Pierce

#### ELEVATIONS

KB 1500'  
 DF \_\_\_\_\_  
 GL 1490'

Measurements Are All  
 From Kelly Bushing

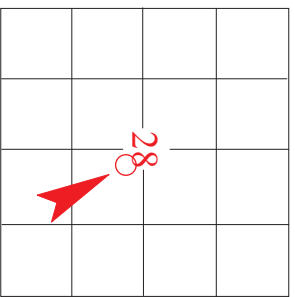
#### CASING

CONDUCTOR \_\_\_\_\_  
 SURFACE 8-5/8" at 268'  
 PRODUCTION 5-1/2" at 4813'

#### ELECTRICAL SURVEYS

Pioneer Energy Svcs.  
DIL / DUCP


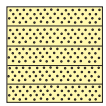
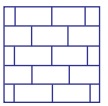
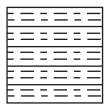

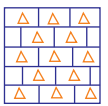

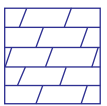
FORMATION TOPS	ELECTRIC LOG	SAMPLE
<u>Onaga Sh.</u>	<u>2570 (-1070)</u>	<u>2565 (-1065)</u>
<u>Heebner Sh.</u>	<u>3566 (-2066)</u>	<u>3563 (-2063)</u>
<u>Lansing</u>	<u>3737 (-2237)</u>	<u>3737 (-2237)</u>
<u>Stark Sh.</u>	<u>4158 (-2658)</u>	<u>4160 (-2660)</u>
<u>Cherokee Sh.</u>	<u>4360 (-2860)</u>	<u>4356 (-2856)</u>
<u>Mississippi</u>	<u>4393 (-2893)</u>	<u>4394 (-2894)</u>
<u>Viola</u>	<u>4610 (-3110)</u>	<u>4610 (-3110)</u>
<u>Simpson Sh.</u>	<u>4686 (-3186)</u>	<u>4686 (-3186)</u>
<u>Arbuckle</u>	<u>NA</u>	<u>4814 (-3314)</u>




API # 15-007-24,116

REMARKS DST's indicate probable production from the Arbuckle and Upper Douglas Sand.  
Sample shows were observed in several zones that were not tested, these should be evaluated before this well is abandoned.  
Loggers hit a bridge at 4789', no attempt was made to get logging tools below this depth.  
  
Timothy G. Pierce

#### LEGEND

							
Anhydrite	Sandstone	Limestone	Shale	Carb Sh	Cherty LS	Chert	Dolomite

DRILLING TIME IN  
 MINUTES PER FOOT  
 Rate of Penetration Decreases  


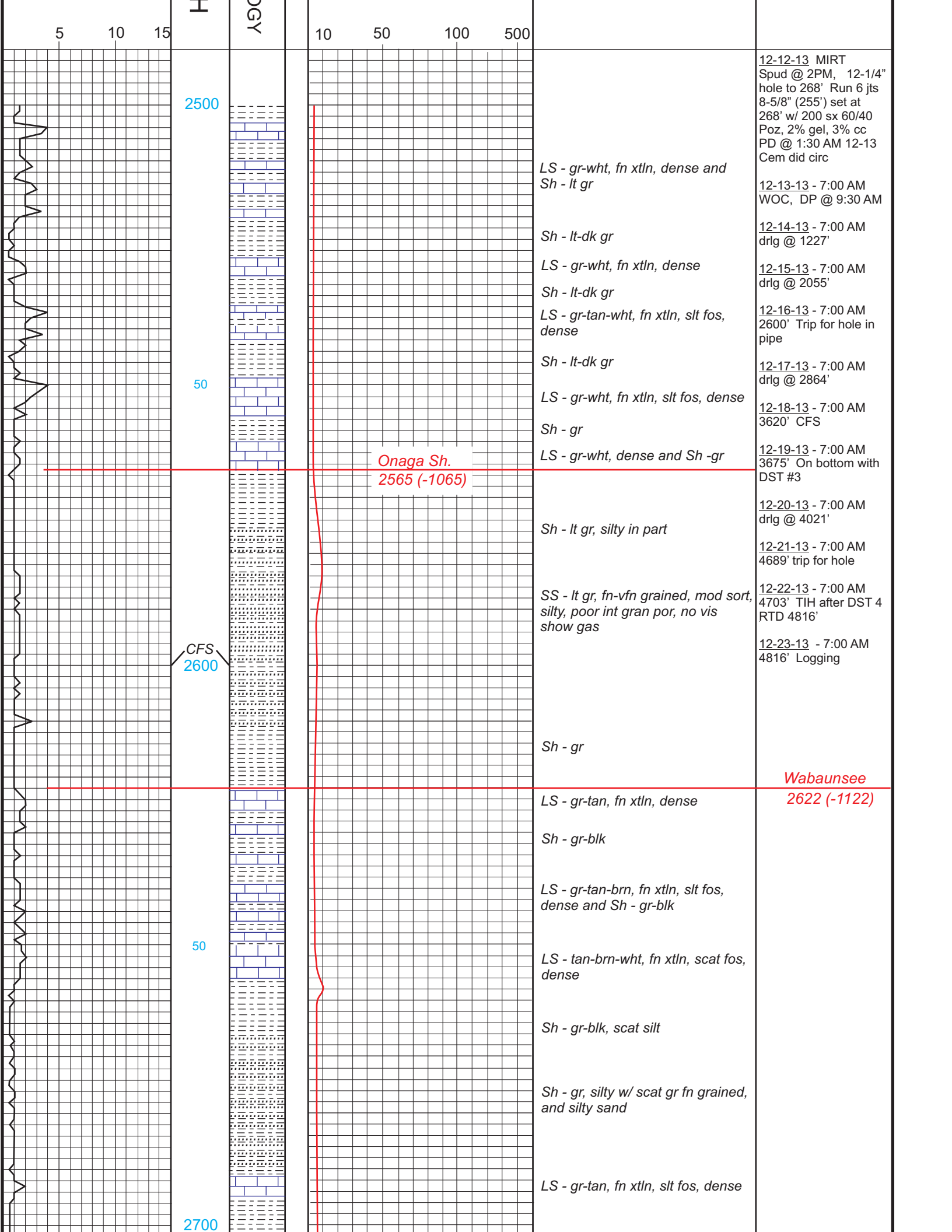
DEPTH

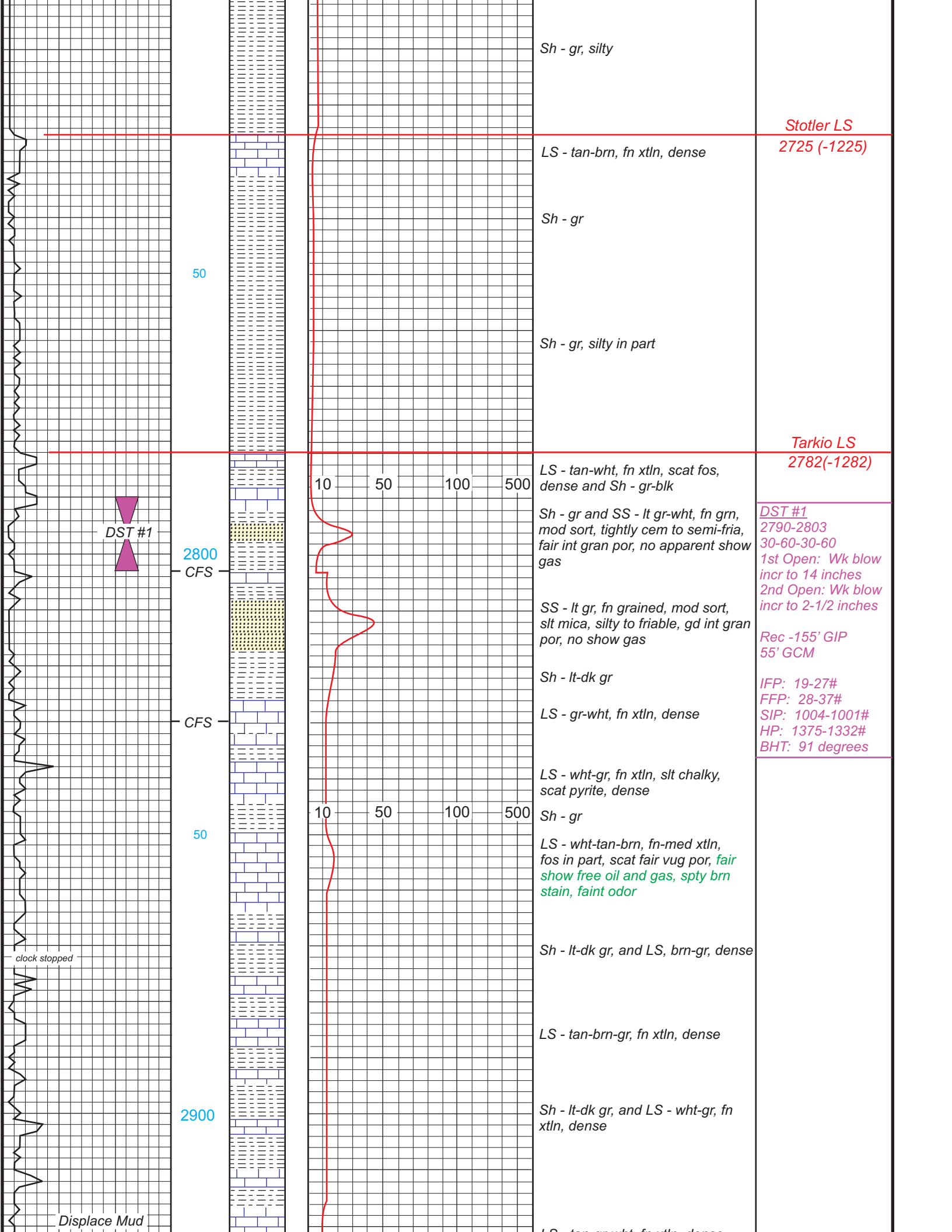
LITHOLOG

GAS SCALE

SAMPLE DESCRIPTION

REMARKS





Sh - gr, silty

Stotler LS  
2725 (-1225)

LS - tan-brn, fn xtln, dense

Sh - gr

50

Sh - gr, silty in part

Tarkio LS  
2782(-1282)

LS - tan-wht, fn xtln, scat fos, dense and Sh - gr-blk



2800  
CFS

Sh - gr and SS - lt gr-wht, fn grn, mod sort, tightly cem to semi-fria, fair int gran por, no apparent show gas

DST #1  
2790-2803  
30-60-30-60  
1st Open: Wk blow  
incr to 14 inches  
2nd Open: Wk blow  
incr to 2-1/2 inches

SS - lt gr, fn grained, mod sort, slt mica, silty to friable, gd int gran por, no show gas

Rec -155' GIP  
55' GCM

Sh - lt-dk gr

IFP: 19-27#  
FFP: 28-37#  
SIP: 1004-1001#  
HP: 1375-1332#  
BHT: 91 degrees

LS - gr-wht, fn xtln, dense

CFS

LS - wht-gr, fn xtln, slt chalky, scat pyrite, dense

10 50 100 500

Sh - gr

50

LS - wht-tan-brn, fn-med xtln, fos in part, scat fair vug por, fair show free oil and gas, spty brn stain, faint odor

clock stopped

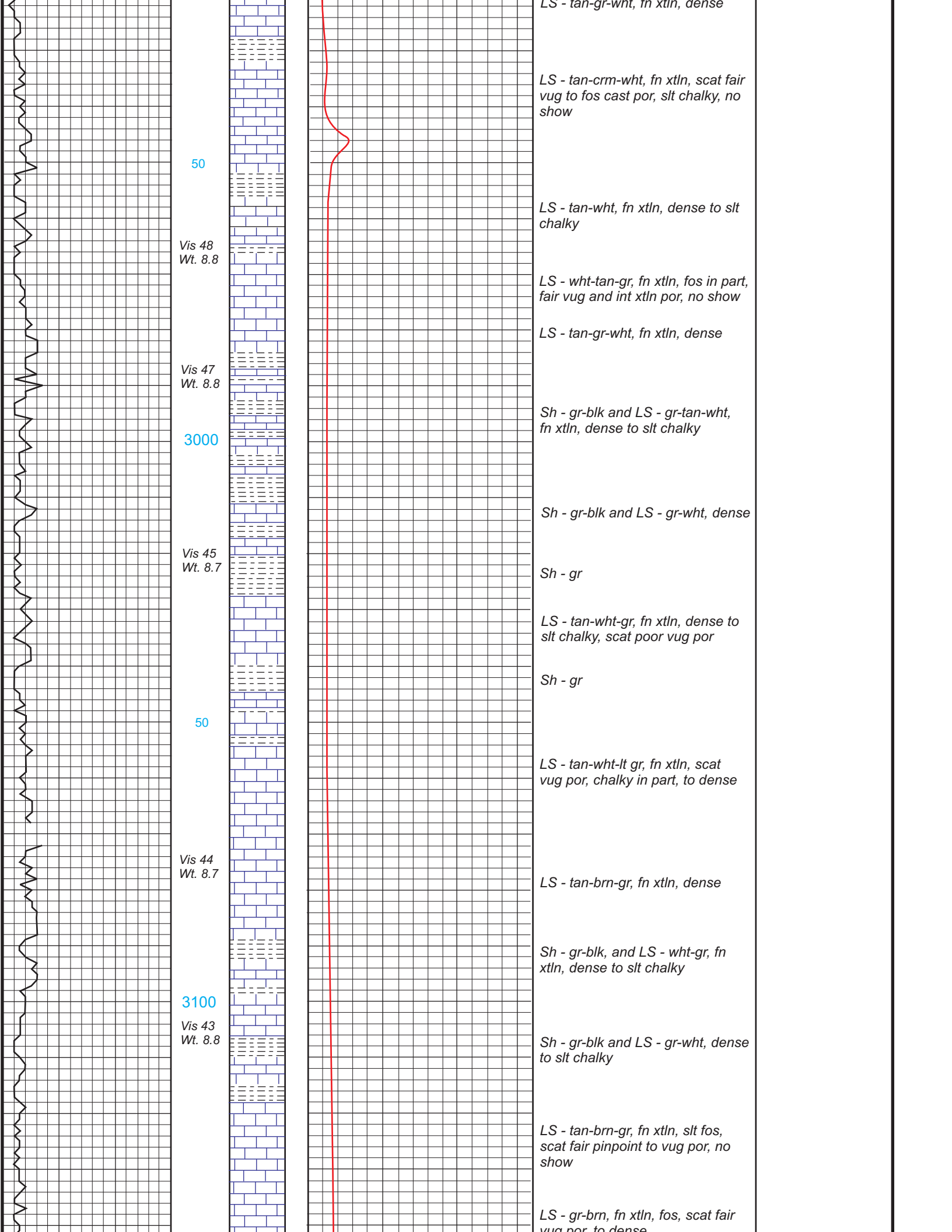
Sh - lt-dk gr, and LS, brn-gr, dense

LS - tan-brn-gr, fn xtln, dense

2900

Sh - lt-dk gr, and LS - wht-gr, fn xtln, dense

Displace Mud



LS - tan-gr-wht, fn xtln, dense

LS - tan-crm-wht, fn xtln, scat fair vug to fos cast por, slt chalky, no show

50

LS - tan-wht, fn xtln, dense to slt chalky

Vis 48  
Wt. 8.8

LS - wht-tan-gr, fn xtln, fos in part, fair vug and int xtln por, no show

LS - tan-gr-wht, fn xtln, dense

Vis 47  
Wt. 8.8

3000

Sh - gr-blk and LS - gr-tan-wht, fn xtln, dense to slt chalky

Sh - gr-blk and LS - gr-wht, dense

Vis 45  
Wt. 8.7

Sh - gr

LS - tan-wht-gr, fn xtln, dense to slt chalky, scat poor vug por

Sh - gr

50

LS - tan-wht-lt gr, fn xtln, scat vug por, chalky in part, to dense

Vis 44  
Wt. 8.7

LS - tan-brn-gr, fn xtln, dense

Sh - gr-blk, and LS - wht-gr, fn xtln, dense to slt chalky

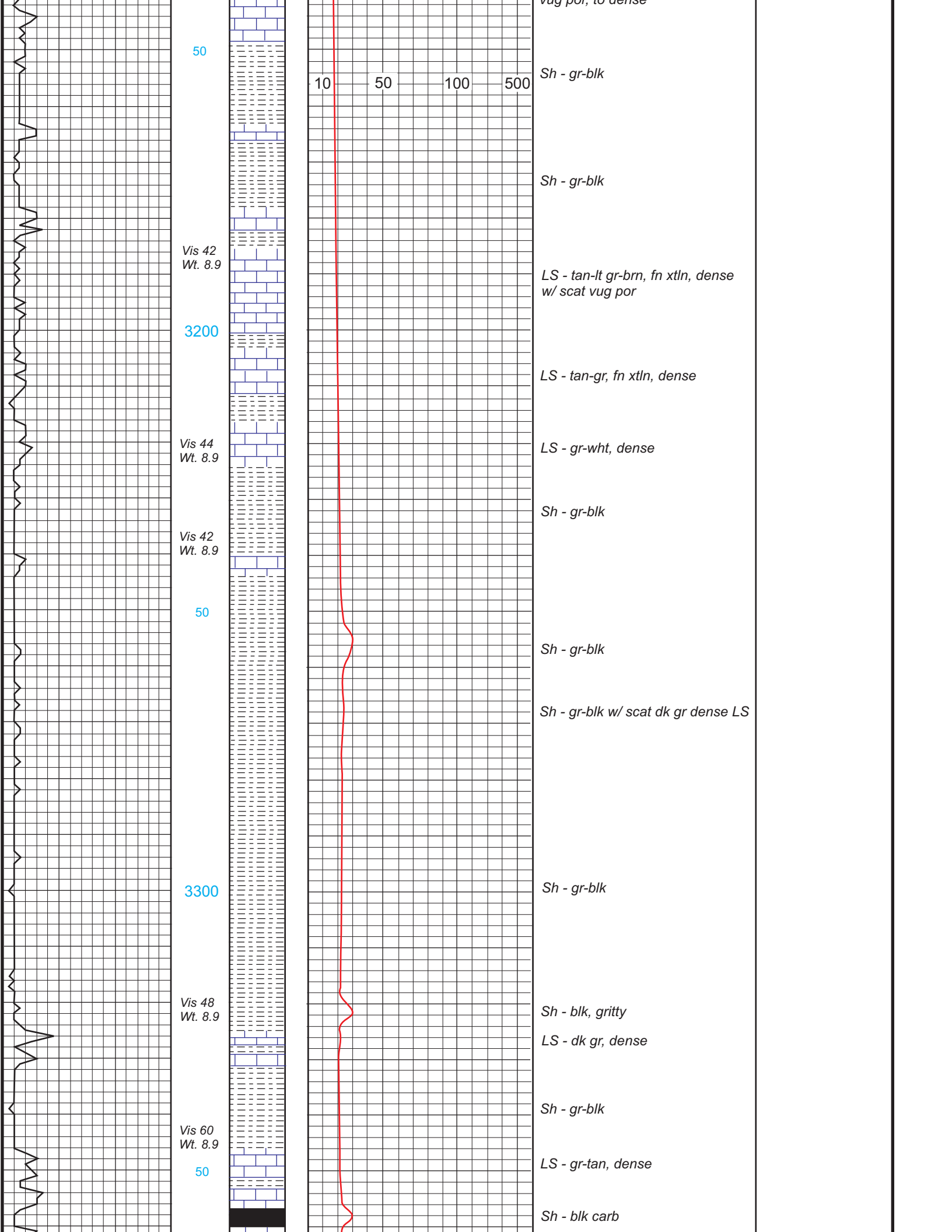
3100

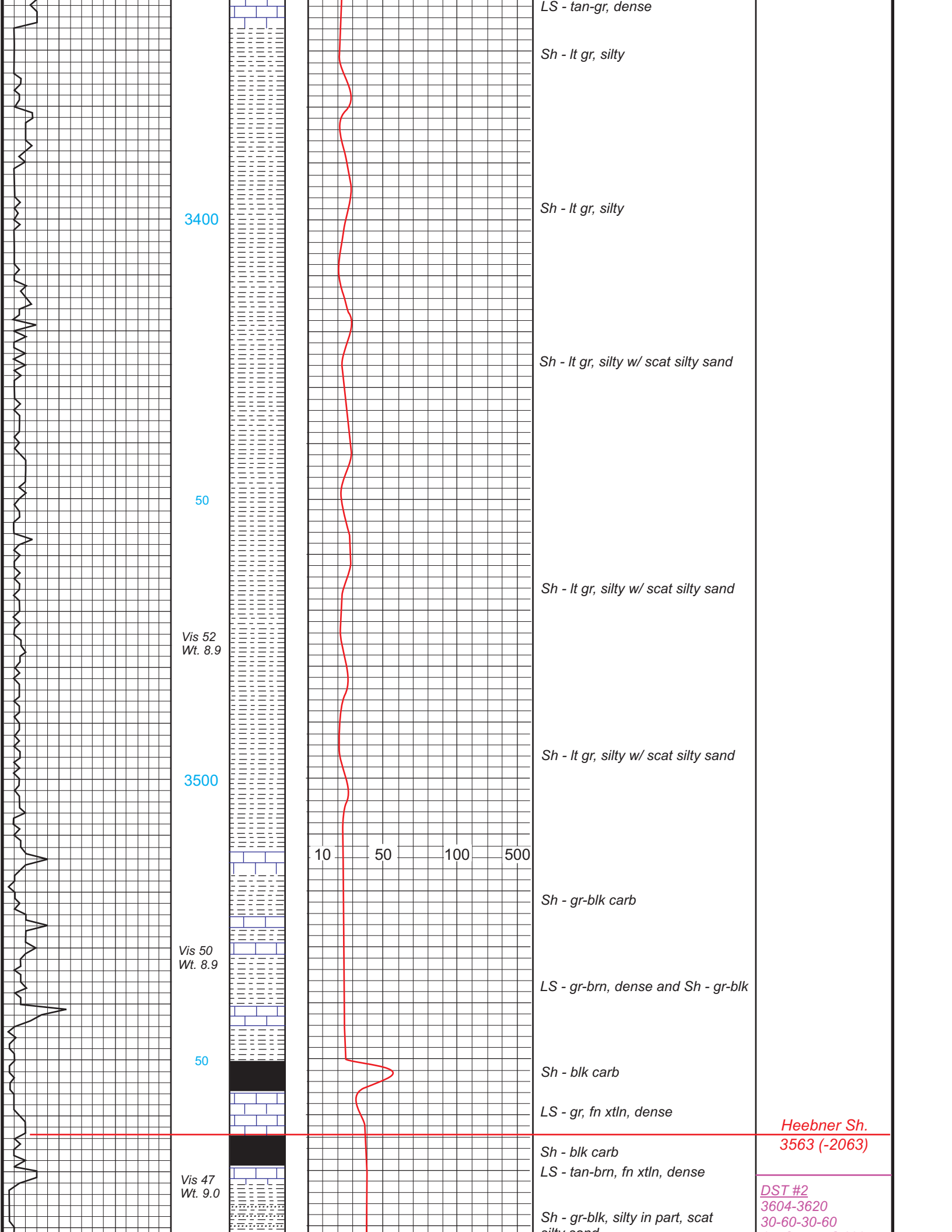
Vis 43  
Wt. 8.8

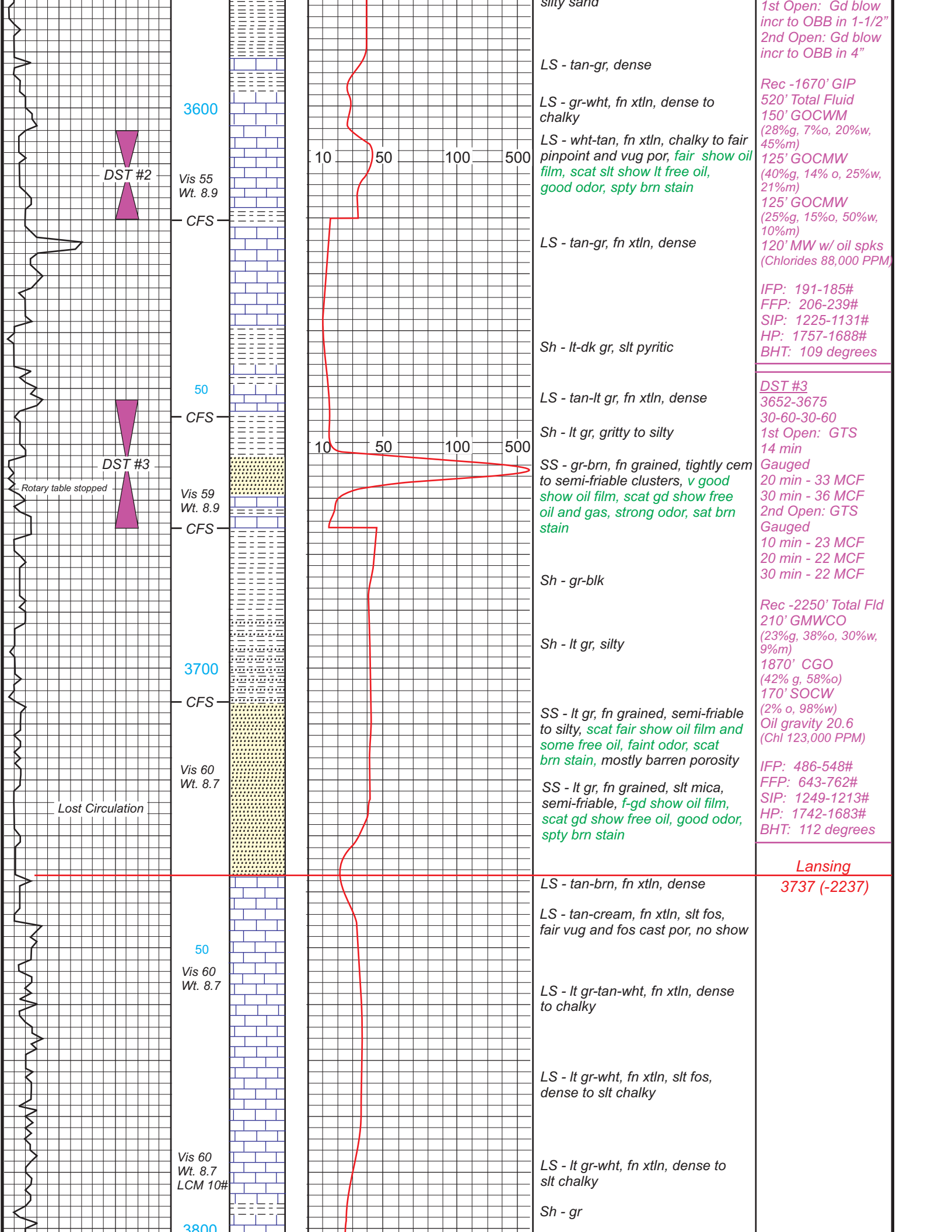
Sh - gr-blk and LS - gr-wht, dense to slt chalky

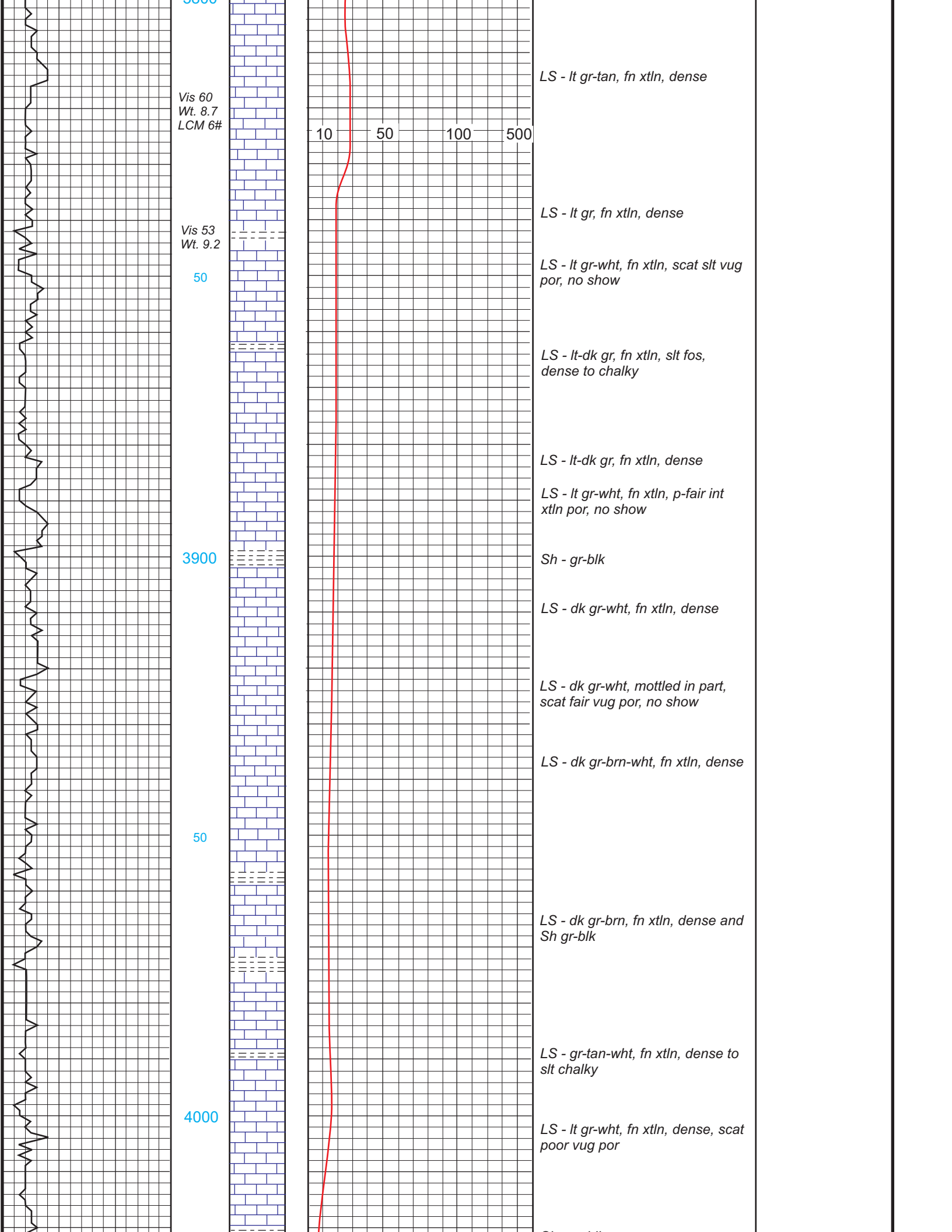
LS - tan-brn-gr, fn xtln, slt fos, scat fair pinpoint to vug por, no show

LS - gr-brn, fn xtln, fos, scat fair vug por, to dense

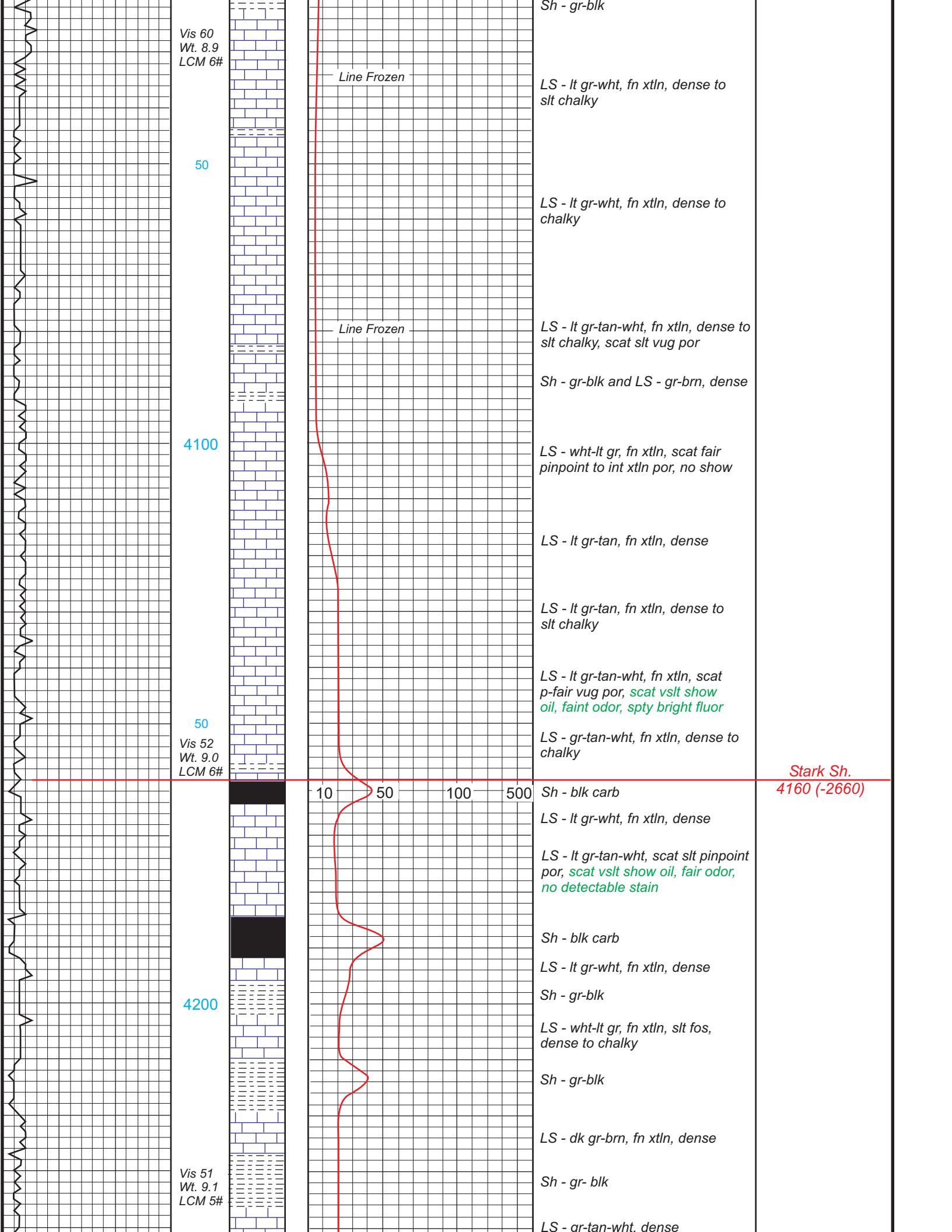












Vis 60  
Wt. 8.9  
LCM 6#

Line Frozen

Sh - gr-blk

LS - lt gr-wht, fn xtln, dense to slt chalky

50

LS - lt gr-wht, fn xtln, dense to chalky

Line Frozen

LS - lt gr-tan-wht, fn xtln, dense to slt chalky, scat slt vug por

4100

Sh - gr-blk and LS - gr-brn, dense

LS - wht-lt gr, fn xtln, scat fair pinpoint to int xtln por, no show

LS - lt gr-tan, fn xtln, dense

LS - lt gr-tan, fn xtln, dense to slt chalky

LS - lt gr-tan-wht, fn xtln, scat p-fair vug por, *scat vslt show oil, faint odor, spty bright fluor*

50

Vis 52  
Wt. 9.0  
LCM 6#

LS - gr-tan-wht, fn xtln, dense to chalky

**Stark Sh.**  
4160 (-2660)

10 50 100 500

Sh - blk carb

LS - lt gr-wht, fn xtln, dense

LS - lt gr-tan-wht, scat slt pinpoint por, *scat vslt show oil, fair odor, no detectable stain*

Sh - blk carb

LS - lt gr-wht, fn xtln, dense

4200

Sh - gr-blk

LS - wht-lt gr, fn xtln, slt fos, dense to chalky

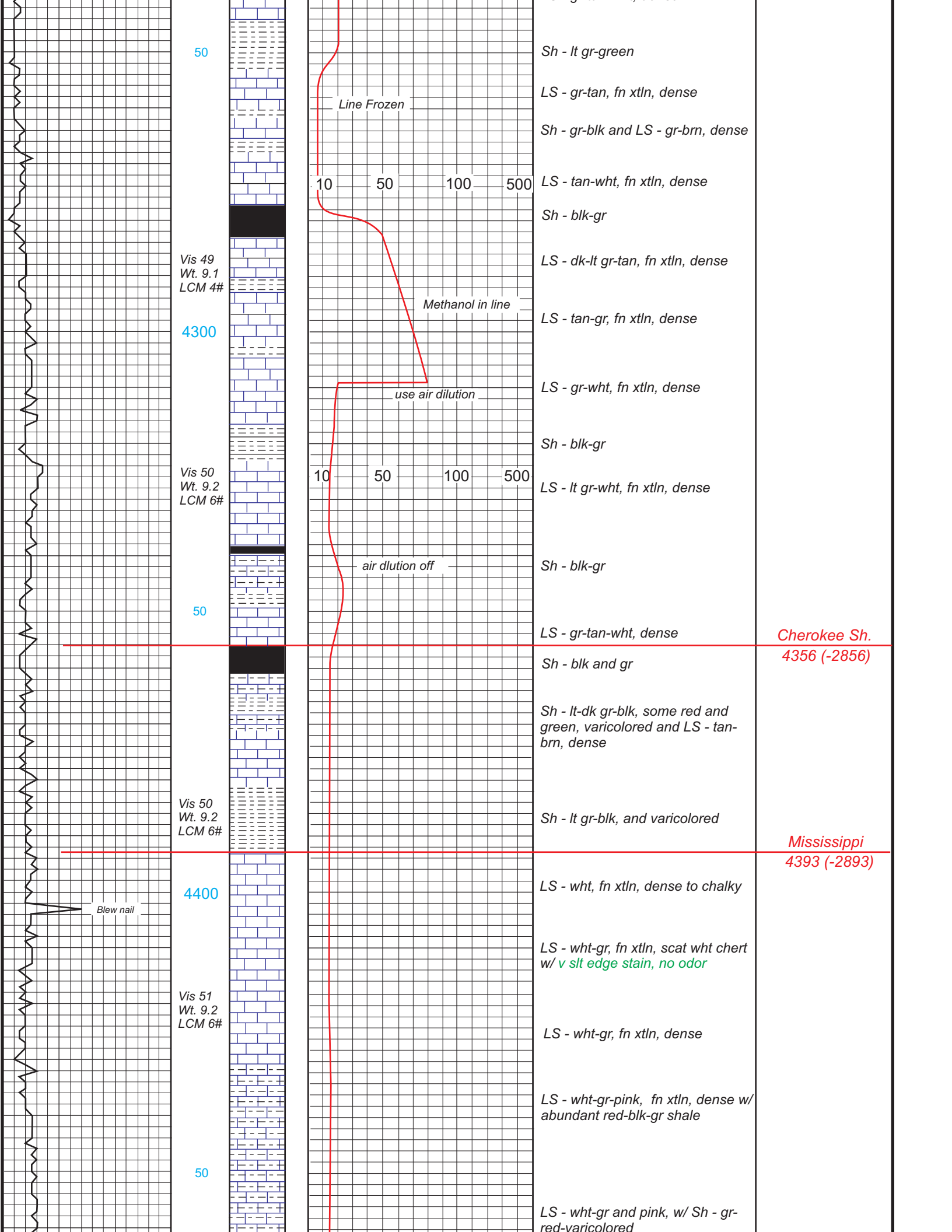
Sh - gr-blk

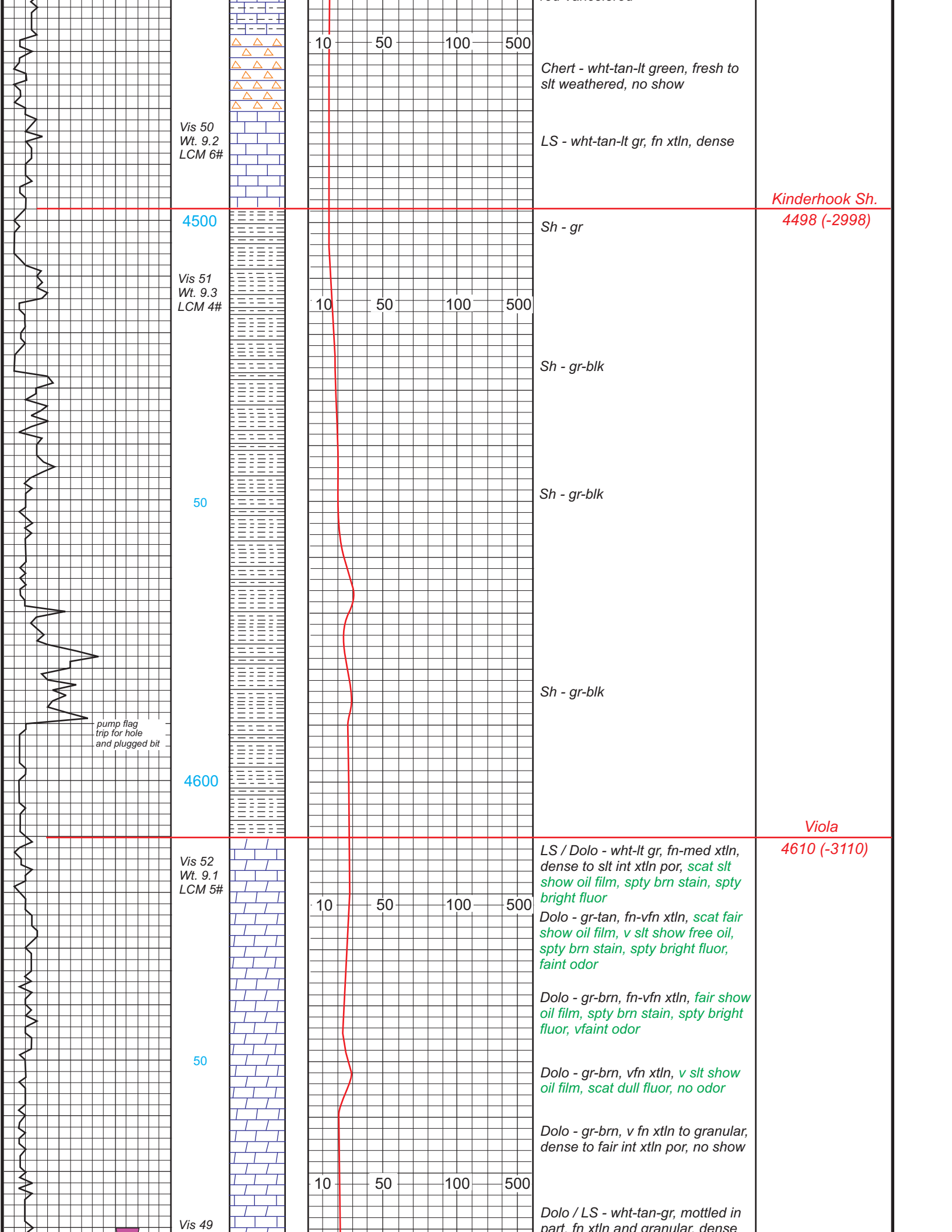
LS - dk gr-brn, fn xtln, dense

Vis 51  
Wt. 9.1  
LCM 5#

Sh - gr- blk

LS - ar-tan-wht, dense





Vis 50  
Wt. 9.2  
LCM 6#

10 50 100 500

Chert - wht-tan-lt green, fresh to slt weathered, no show

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

Kinderhook Sh.  
4498 (-2998)

4500

Vis 51  
Wt. 9.3  
LCM 4#

10 50 100 500

Sh - gr

Sh - gr-blk

50

Sh - gr-blk

Sh - gr-blk

pump flag  
trip for hole  
and plugged bit

4600

Viola  
4610 (-3110)

Vis 52  
Wt. 9.1  
LCM 5#

10 50 100 500

LS / Dolo - wht-lt gr, fn-med xtln, dense to slt int xtln por, scat slt show oil film, spty brn stain, spty bright fluor

Dolo - gr-tan, fn-vfn xtln, scat fair show oil film, v slt show free oil, spty brn stain, spty bright fluor, faint odor

Dolo - gr-brn, fn-vfn xtln, fair show oil film, spty brn stain, spty bright fluor, vfaint odor

Dolo - gr-brn, vfn xtln, v slt show oil film, scat dull fluor, no odor

Dolo - gr-brn, v fn xtln to granular, dense to fair int xtln por, no show

50

Vis 49

10 50 100 500

Dolo / LS - wht-tan-gr, mottled in part. fn xtln and granular. dense

