

Timothy G. Pierce

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY N-10 Exploration, LLC

LEASE Medicine River Ranch 'B' #12

FIELD Landis

LOCATION W/2 SE SE

SEC 15 TWP 34S RGE 11W

COUNTY Barber STATE Kansas

CONTRACTOR Hardt Drilling Rig #1

SPUD 7-10-2013 COMP 7-19-2013

RTD 4982 LTD 4976

MUD UP 3002 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 4200 TO RTD

GEOLOGIST ON WELL Tim Pierce

ELEVATIONS

KB 1355'

DF _____

GL 1345'

Measurements Are All
From Kelly Bushing

CASING

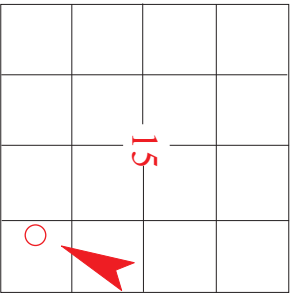
CONDUCTOR _____

SURFACE 8-5/8" at 266'

PRODUCTION 5-1/2" at 4964'

ELECTRICAL SURVEYS DIL / CN-CD Pioneer

| FORMATION TOPS | ELECTRIC LOG | SAMPLE |
|------------------------|---------------------|---------------------|
| <u>Heebner Sh.</u> | <u>3635 (2280)</u> | <u>NA</u> |
| <u>Iatan LS.</u> | <u>4074 (-2719)</u> | <u>4074 (-2719)</u> |
| <u>Stark Sh.</u> | <u>4322 (-2967)</u> | <u>4319 (-2964)</u> |
| <u>Cherokee Sh.</u> | <u>4545 (-3190)</u> | <u>4543 (-3188)</u> |
| <u>Mississippi</u> | <u>4594 (-3239)</u> | <u>4600 (-3245)</u> |
| <u>Chattanooga Sh.</u> | <u>4880 (-3525)</u> | <u>4880 (-3525)</u> |
| <u>Viola</u> | <u>4938 (-3583)</u> | <u>4936 (-3581)</u> |
| <u>Simpson</u> | | |



API # 15-007-24,039

REMARKS Samples and electric logs indicate probable production from the Mississippi from 4595'- 4664'.

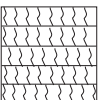
A gas kick was recorded in the Pawnee LS at approx 4505' - 4508', electric logs indicate a possible productive zone at 4503'- 4508'

A slight show of gas was observed in the Chattanooga Shale from 4880'- 4905'.

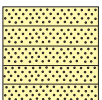
There were no other zones of interest indicated by samples or electric logs.

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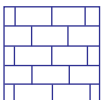
LEGEND



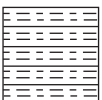
Anhydrite



Sandstone



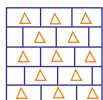
Limestone



Shale



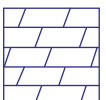
Carb Sh



Cherty LS



Chert



Dolomite

DRILLING TIME IN
MINUTES PER FOOT

Rate of Penetration Decreases



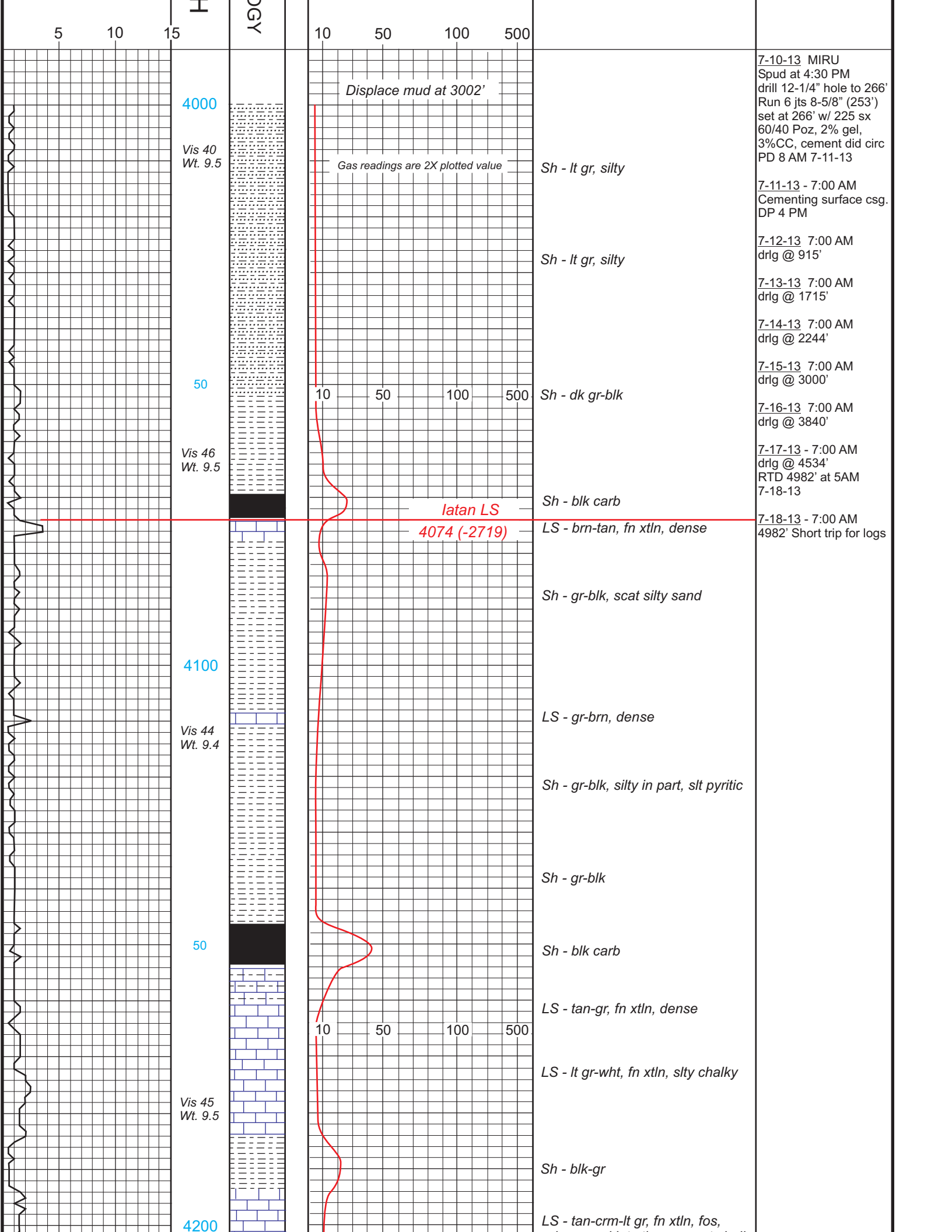
DEPTH

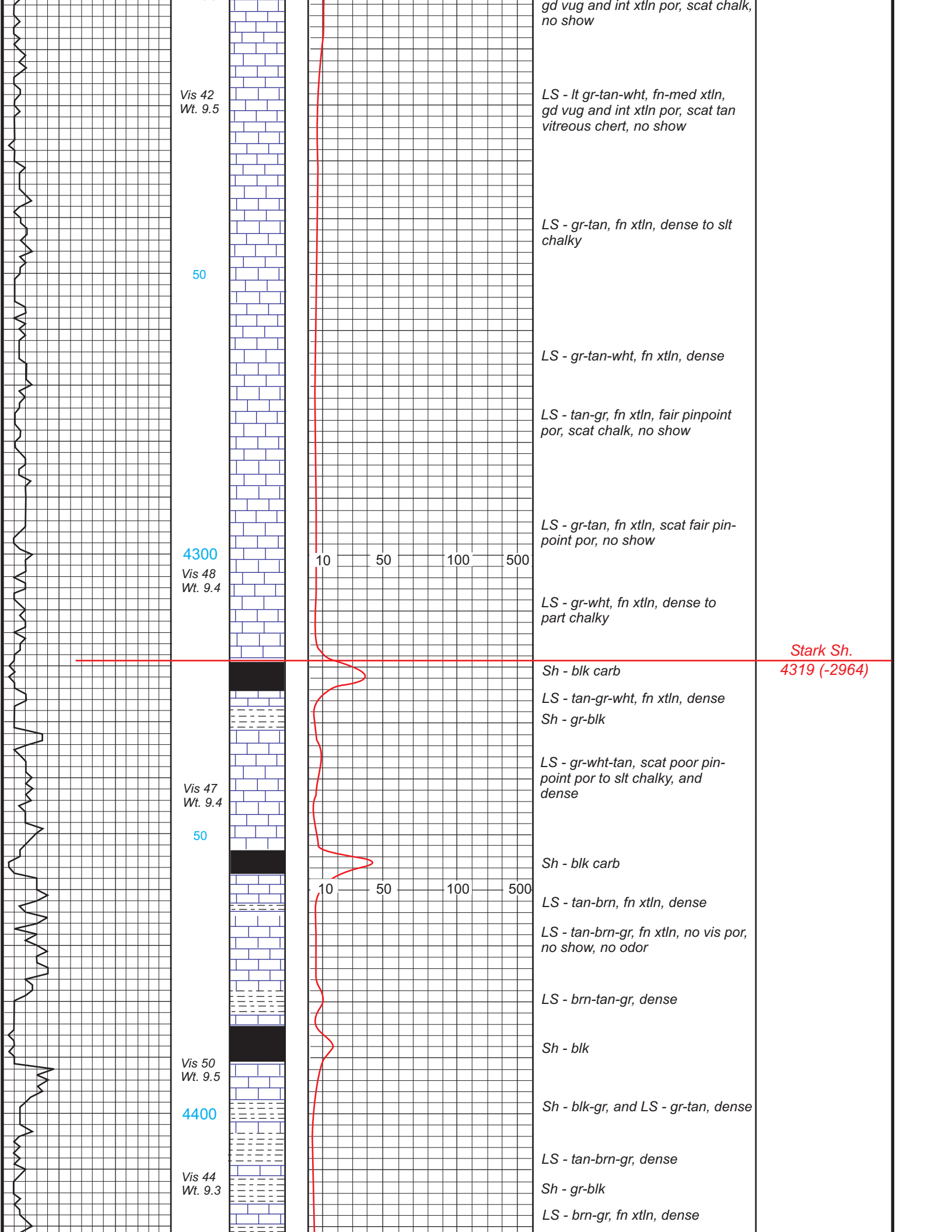
LITHOLOG

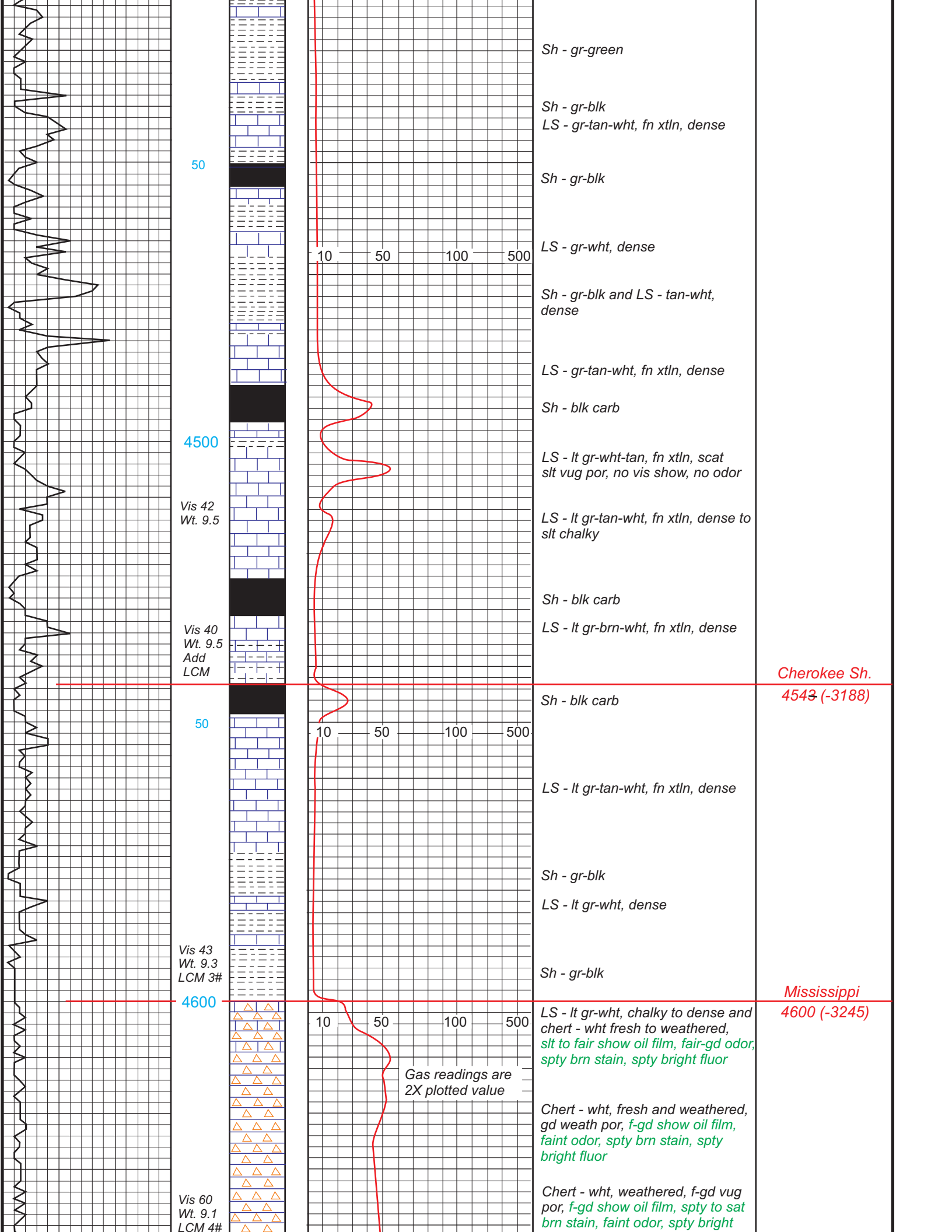
GAS SCALE

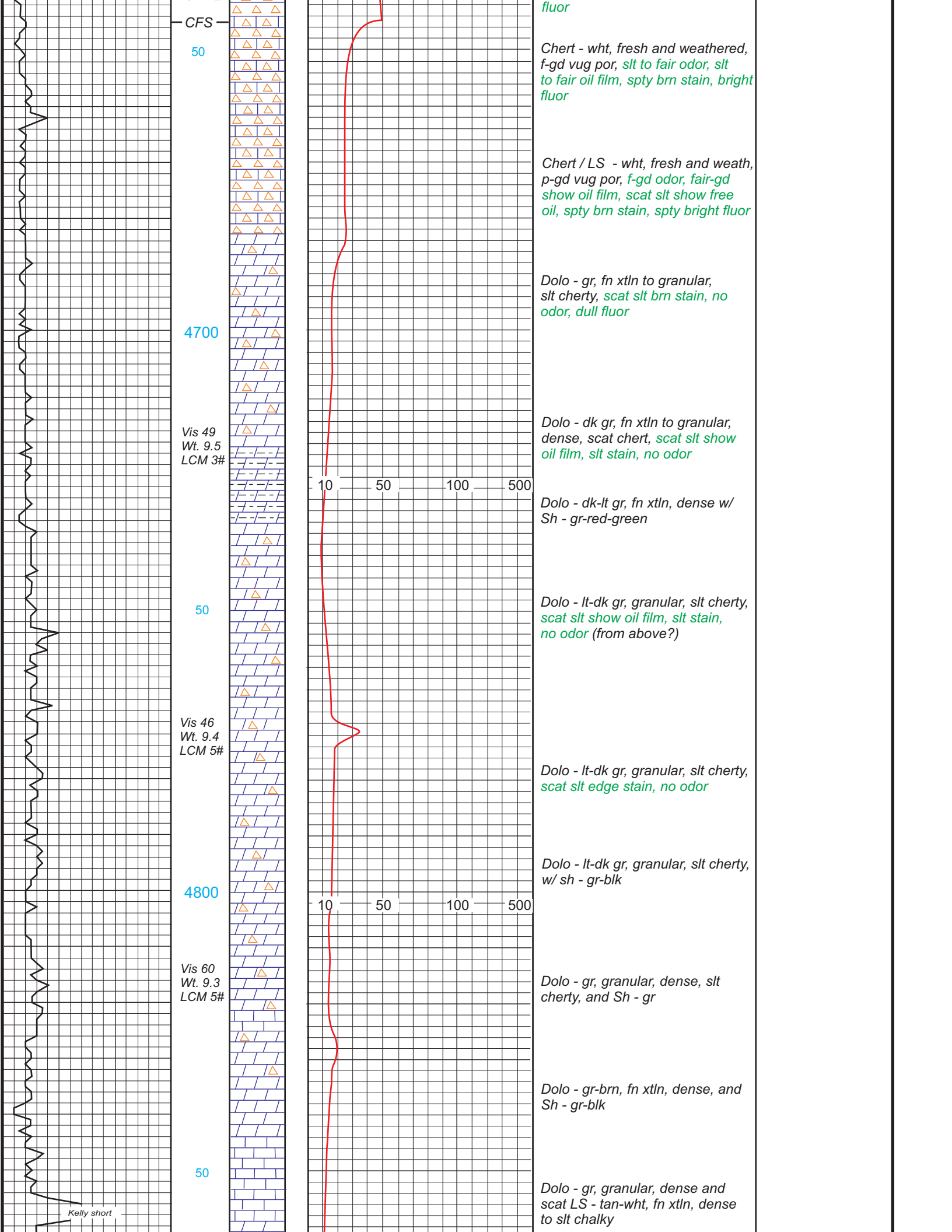
SAMPLE DESCRIPTION

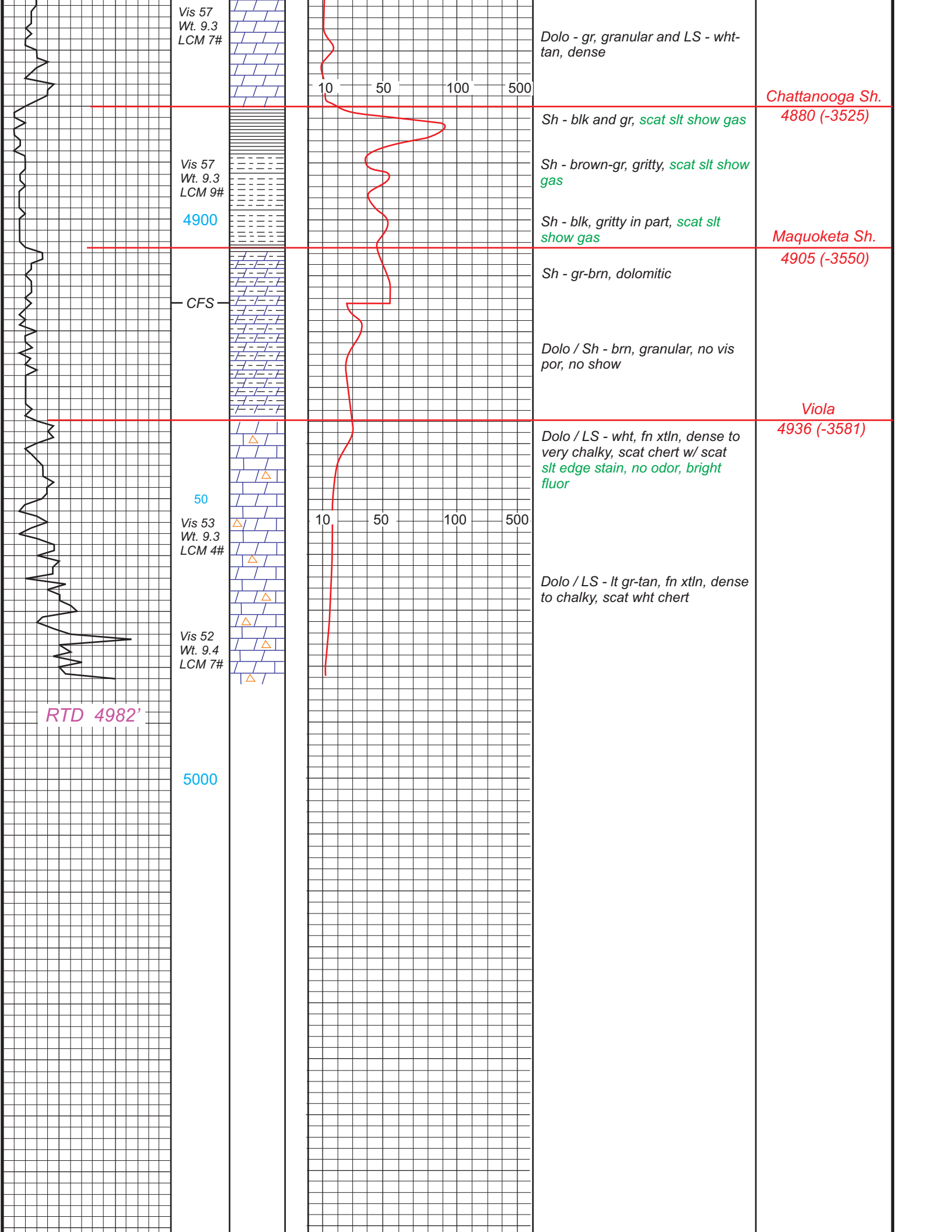
REMARKS











Vis 57
Wt. 9.3
LCM 7#

Dolo - gr, granular and LS - wht-tan, dense

Chattanooga Sh.
4880 (-3525)

Vis 57
Wt. 9.3
LCM 9#

Sh - blk and gr, scat slt show gas

Sh - brown-gr, gritty, scat slt show gas

4900

Sh - blk, gritty in part, scat slt show gas

Maquoketa Sh.
4905 (-3550)

CFS

Sh - gr-brn, dolomitic

Dolo / Sh - brn, granular, no vis por, no show

Viola
4936 (-3581)

50

Dolo / LS - wht, fn xtl, dense to very chalky, scat chert w/ scat slt edge stain, no odor, bright fluor

Vis 53
Wt. 9.3
LCM 4#

10 50 100 500

Dolo / LS - lt gr-tan, fn xtl, dense to chalky, scat wht chert

Vis 52
Wt. 9.4
LCM 7#

RTD 4982'

5000

