

Timothy G. Pierce

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY N-10 Exploration, LLC
 LEASE Medicine River Ranch 'E' #3
 FIELD Landis
 LOCATION SW NW SE
 SEC 22 TWSP 34S RGE 11W
 COUNTY Barber STATE Kansas
 CONTRACTOR Hardt Drilling Rig #1
 SPUD 2-20-2014 COMP 3-06-2014
 RTD 4986 LTD 4985
 MUD UP 2911 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 4125 to RTD
 GEOLOGIST ON WELL Tim Pierce

ELEVATIONS

KB 1335'
 DF _____
 GL 1325'
 Measurements Are All
 From Kelly Bushing

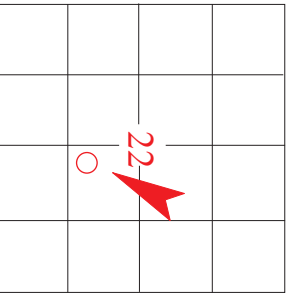
CASING

CONDUCTOR 13-3/8" at 59'
 SURFACE 8-5/8" at 550'
 PRODUCTION 5-1/2" at 4966'

ELECTRICAL SURVEYS DIL / CN-CD Pioneer Energy Svcs.

FORMATION TOPS

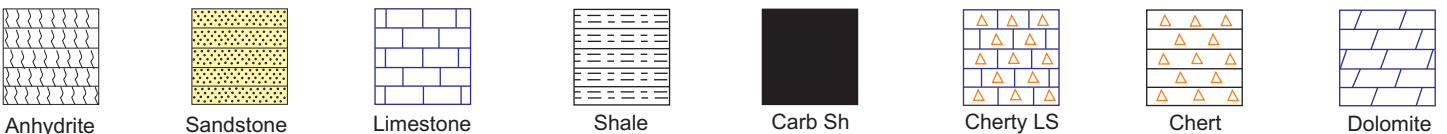
FORMATION TOPS	ELECTRIC LOG	SAMPLE
Heebner Sh.	3646 (-2311)	NA
Iatan LS.	4072 (-2737)	4070 (-2735)
Stark Sh.	4338 (-3003)	4334 (-2999)
Cherokee Sh.	4564 (-3229)	4559 (-3224)
Mississippi	4614 (-3279)	4616 (-3281)
Chattanooga Sh.	4896 (-3561)	4893 (-3558)
Viola	4958 (-3623)	4949 (-3614)



REMARKS The Mississippi chert reservoir was degraded significantly compared to other wells in the area, however there appears to be enough of the zone present to warrant a completion attempt. Recommended perforations from 4634'-4680'
Slight hydrocarbon fluorescence was observed in the KC Swope zone and Viola Dolomite.
A drill stem test covering the Viola Dolomite indicated a tight reservoir with oil shows but non-commercial.
Gas shows were observed in the Chattanooga Shale .
A gas kick was recorded at the approximate top of the Pawnee LS at 4524', this could have come from the black shale above but could have also come from the LS which is known to have production scattered through the area.
There were no other zones of interest indicated by samples or electric logs.

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LEGEND



DRILLING TIME IN MINUTES PER FOOT

Rate of Penetration Decreases



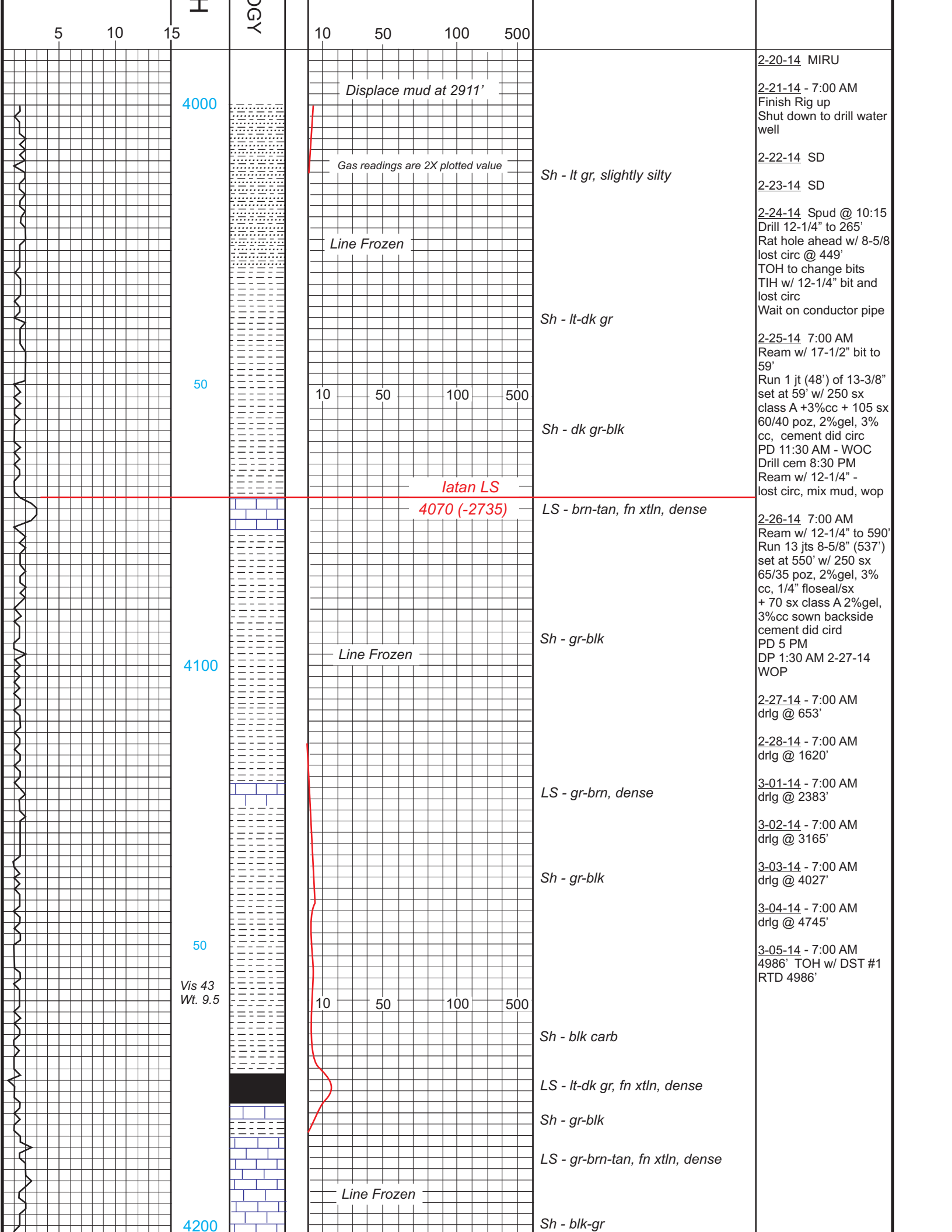
DEPTH

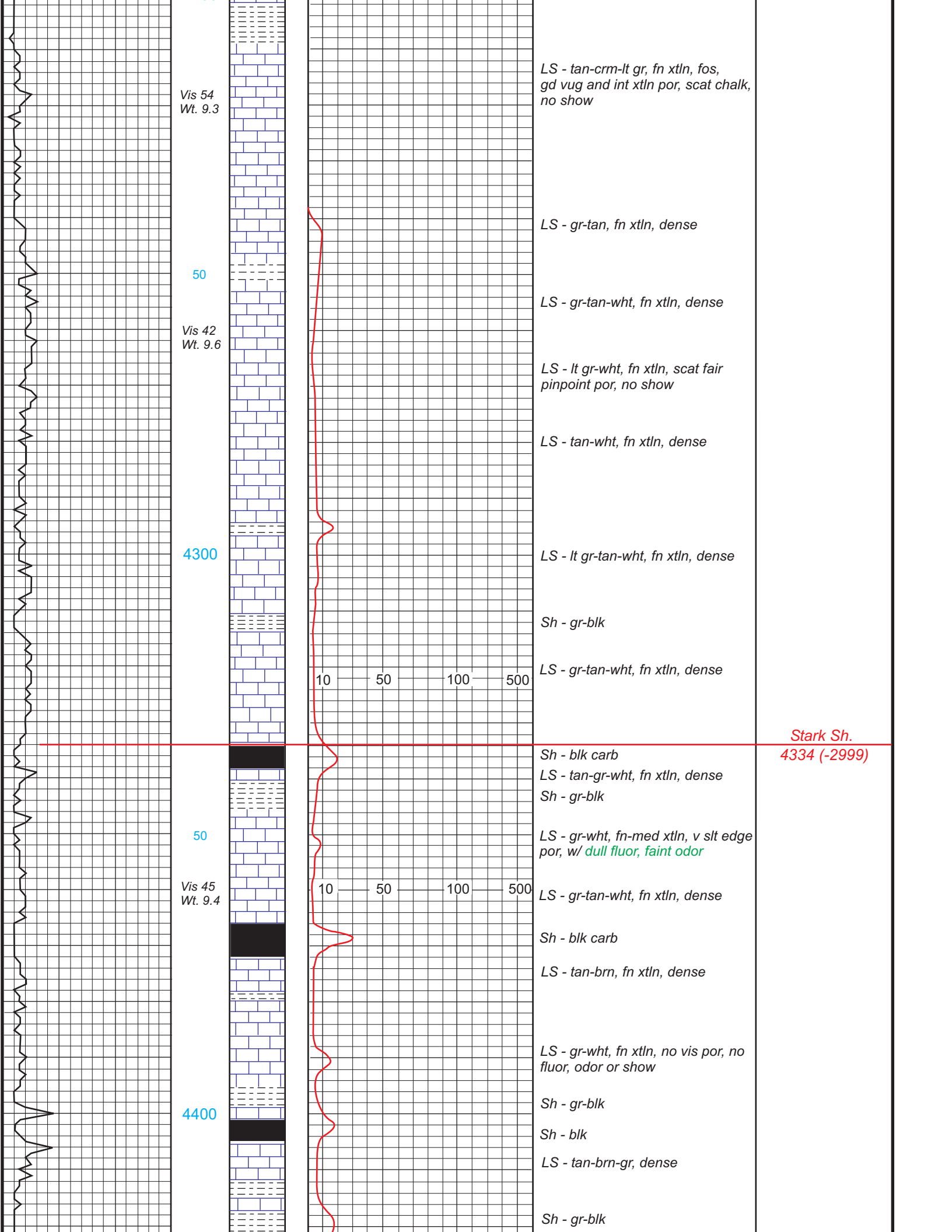
LITHOLOGY

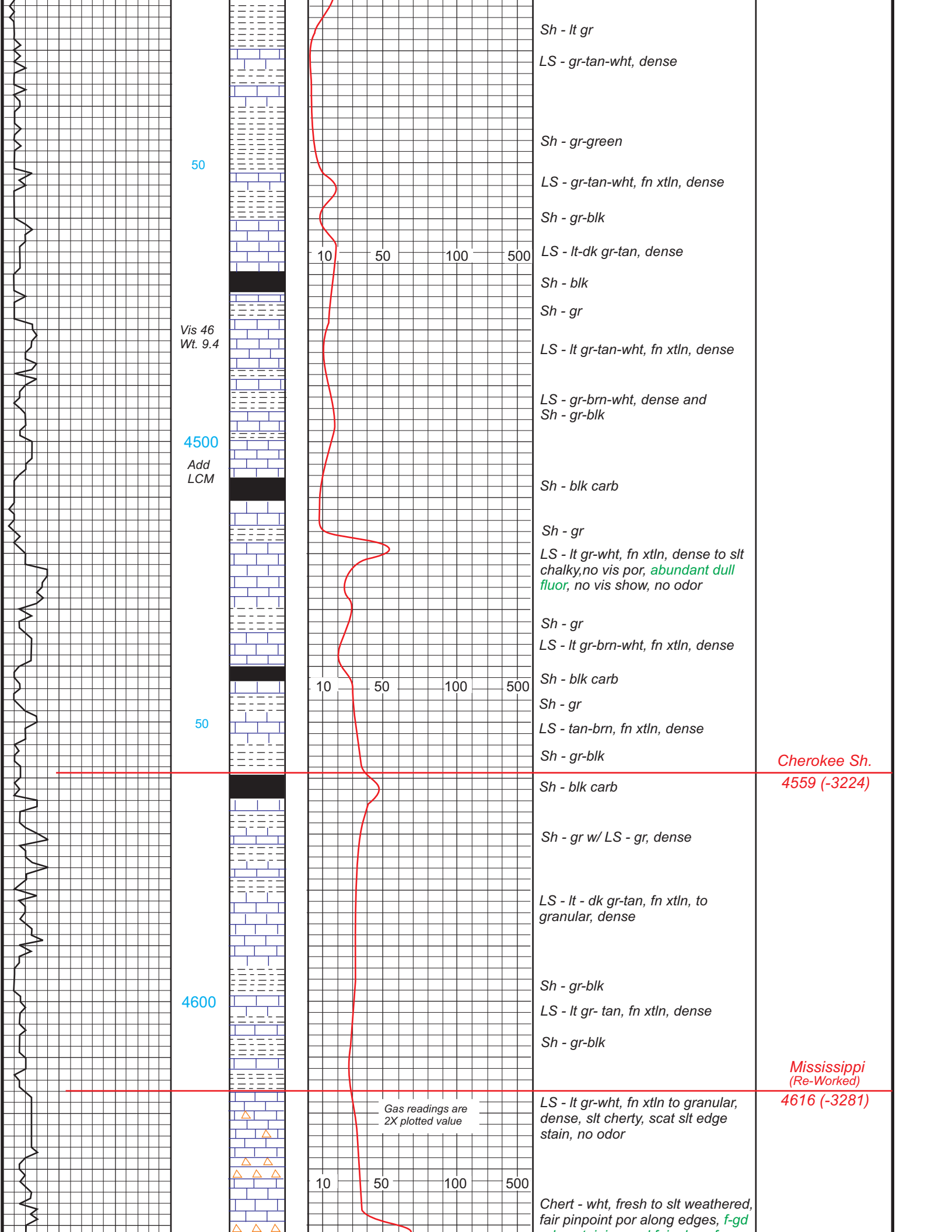
GAS SCALE

SAMPLE DESCRIPTION

REMARKS







50

Vis 46
Wt. 9.4

4500
Add
LCM

50

4600

10 50 100 500

10 50 100 500

10 50 100 500

Sh - lt gr

LS - gr-tan-wht, dense

Sh - gr-green

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

Sh - gr-blk

LS - lt-dk gr-tan, dense

Sh - blk

Sh - gr

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

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

Sh - blk carb

Sh - gr

LS - lt gr-wht, fn xtln, dense to slt
chalky, no vis por, abundant dull
fluor, no vis show, no odor

Sh - gr

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

Sh - blk carb

Sh - gr

LS - tan-brn, fn xtln, dense

Sh - gr-blk

Cherokee Sh.
4559 (-3224)

Sh - blk carb

Sh - gr w/ LS - gr, dense

LS - lt - dk gr-tan, fn xtln, to
granular, dense

Sh - gr-blk

LS - lt gr- tan, fn xtln, dense

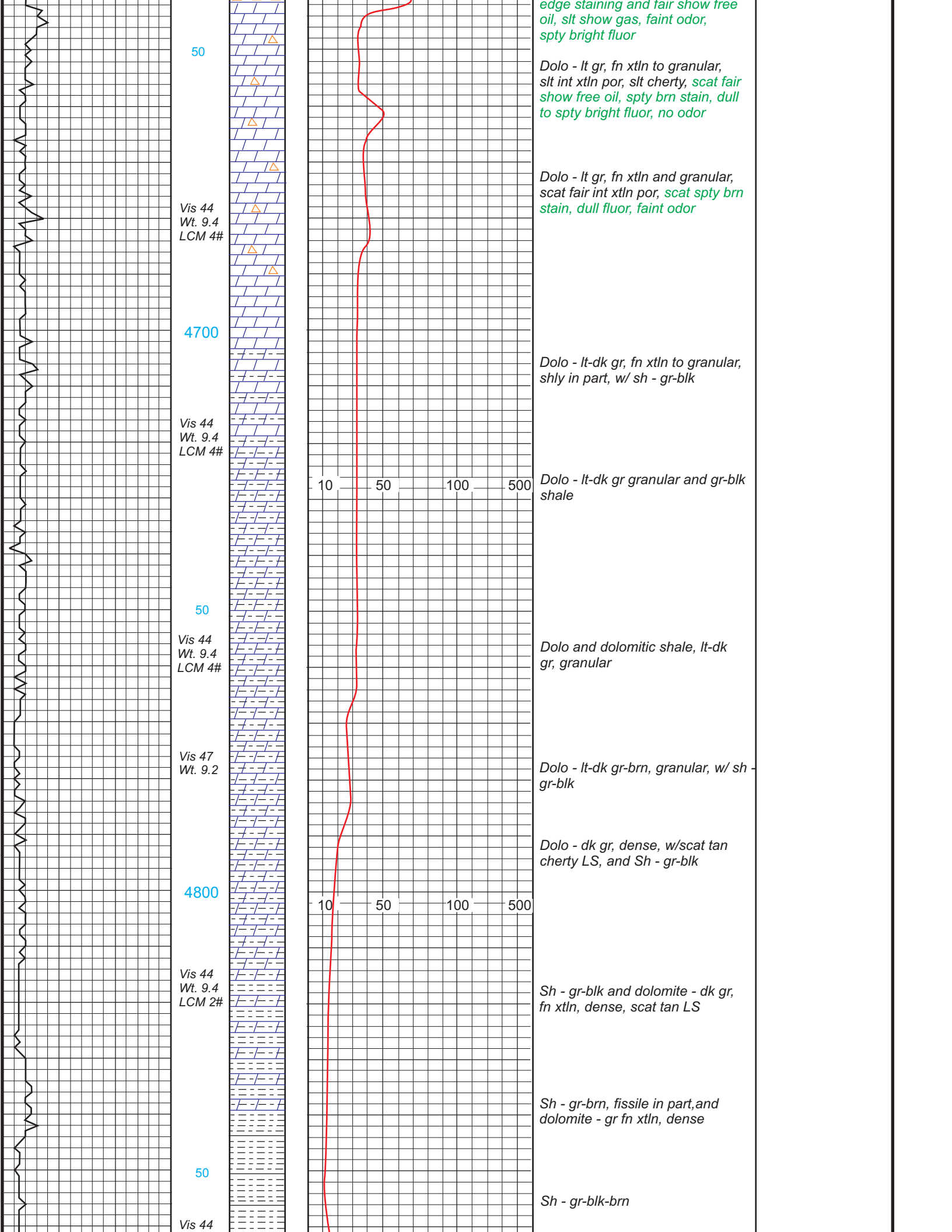
Sh - gr-blk

Mississippi
(Re-Worked)
4616 (-3281)

LS - lt gr-wht, fn xtln to granular,
dense, slt cherty, scat slt edge
stain, no odor

Gas readings are
2X plotted value

Chert - wht, fresh to slt weathered,
fair pinpoint por along edges, f-gd



50

Vis 44
Wt. 9.4
LCM 4#

4700

Vis 44
Wt. 9.4
LCM 4#

50

Vis 44
Wt. 9.4
LCM 4#

Vis 47
Wt. 9.2

4800

Vis 44
Wt. 9.4
LCM 2#

50

Vis 44

10 50 100 500

10 50 100 500

edge staining and fair show free oil, slt show gas, faint odor, spty bright fluor

Dolo - lt gr, fn xtln to granular, slt int xtln por, slt cherty, scat fair show free oil, spty brn stain, dull to spty bright fluor, no odor

Dolo - lt gr, fn xtln and granular, scat fair int xtln por, scat spty brn stain, dull fluor, faint odor

Dolo - lt-dk gr, fn xtln to granular, shly in part, w/ sh - gr-blk

Dolo - lt-dk gr granular and gr-blk shale

Dolo and dolomitic shale, lt-dk gr, granular

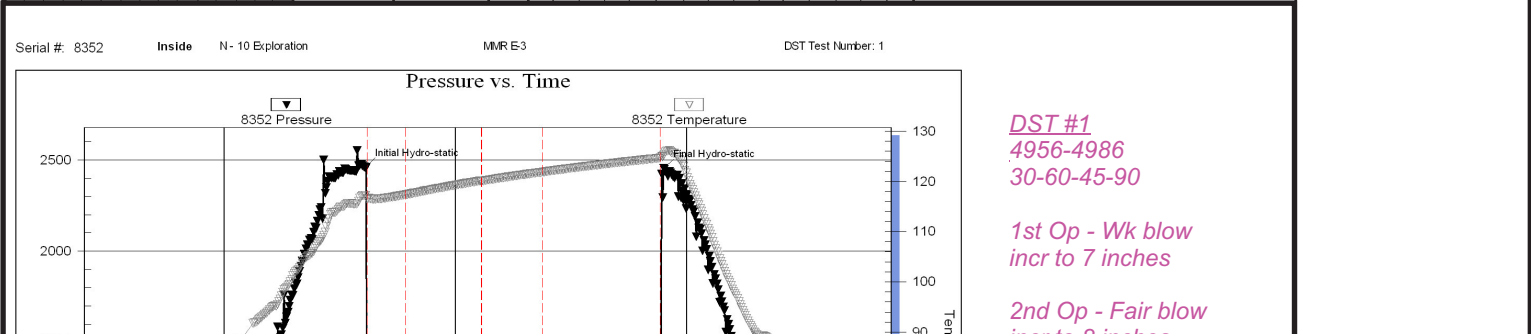
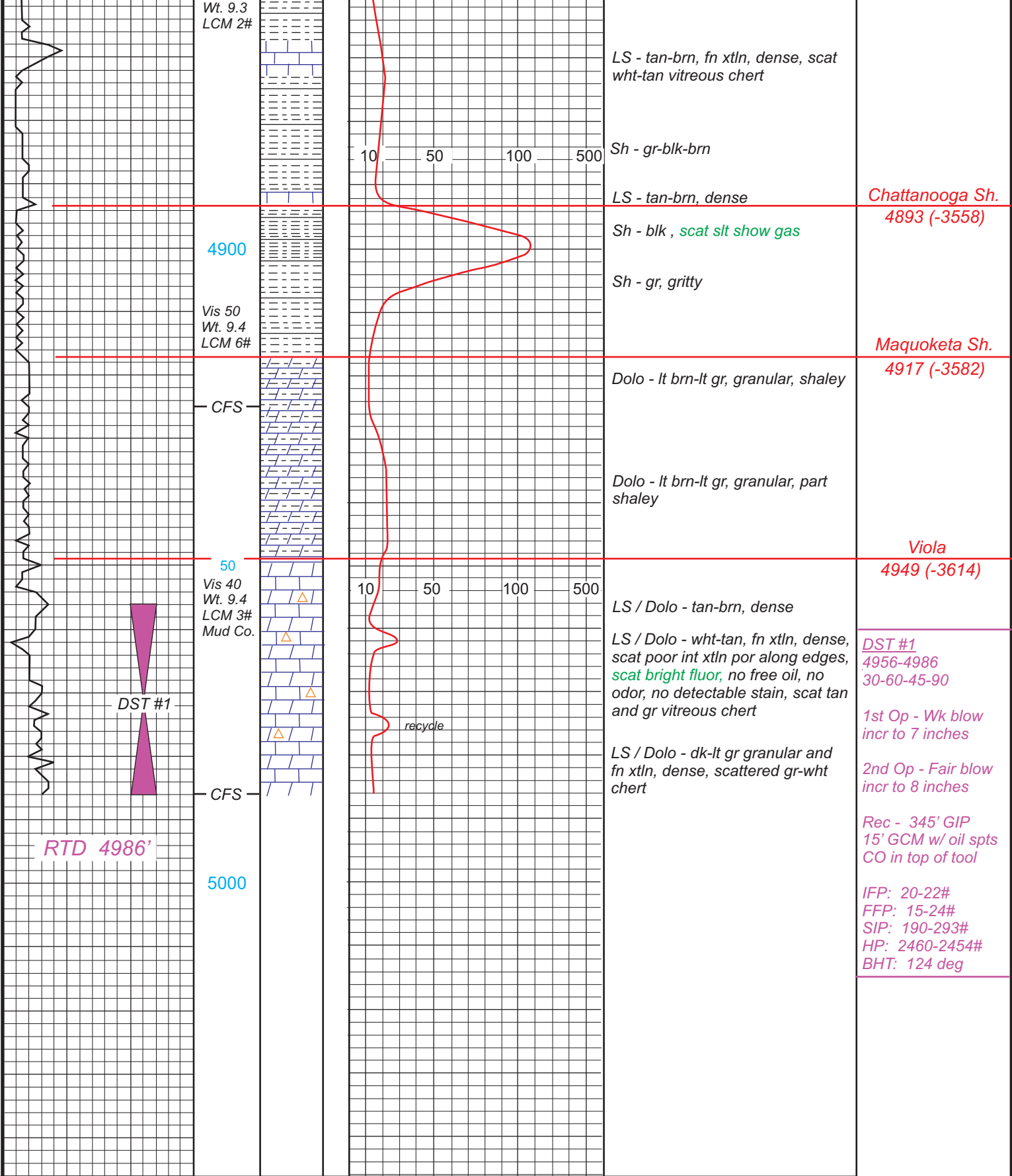
Dolo - lt-dk gr-brn, granular, w/ sh - gr-blk

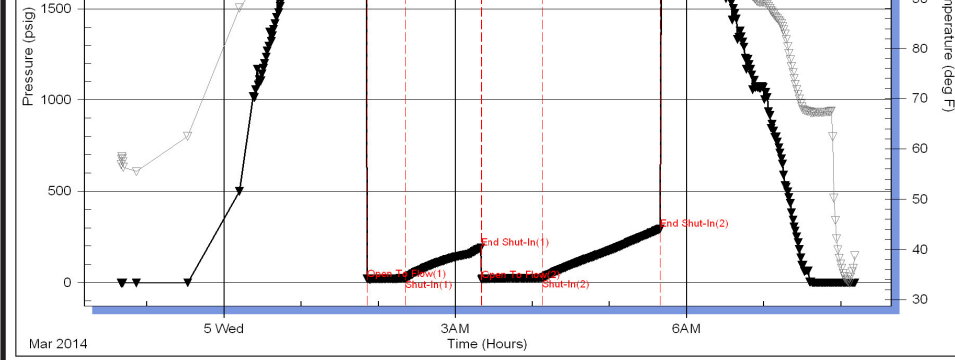
Dolo - dk gr, dense, w/scat tan cherty LS, and Sh - gr-blk

Sh - gr-blk and dolomite - dk gr, fn xtln, dense, scat tan LS

Sh - gr-brn, fissile in part, and dolomite - gr fn xtln, dense

Sh - gr-blk-brn





*incr to 8 inches
 Rec - 345' GIP
 15' GCM w/ oil spts
 CO in top of tool*

*IFP: 20-22#
 FFP: 15-24#
 SIP: 190-293#
 HP: 2460-2454#
 BHT: 124 deg*

