# Timothy G. Pierce

## Petroleum Geologist

# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

COMPANY N-10 Exploration, LLC
LEASE Medicine River Ranch 'E' #1
FIELD Landis
LOCATION 890' FNL & 1750' FWL
SEC 22 TWSP 34S RGE 11W
COUNTY Barber STATE Kansas
CONTRACTOR Hardt Drilling Rig #1
SPUD 5-03-2011 COMP 5-09-2011
RTD 4839 LTD 4844
MUD UP 3811 TYPE MUD Chemical

SAMPLES SAVED FROM 4000 TO RTD
DRILLING TIME KEPT FROM 4000 TO RTD
SAMPLES EXAMINED FROM 4200 TO RTD
GEOLOGICAL SUPERVISION FROM 4257 to RTD
GEOLOGIST ON WELL Tim Pierce

### ELEVATIONS

KB 1334'
DF
GL 1324'
Measurements Are All From Kelly Bushing

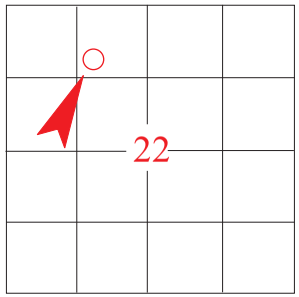
### CASING

CONDUCTOR
SURFACE 8-5/8" at 282'
PRODUCTION 5-1/2" at 4819'

### ELECTRICAL SURVEYS

DIL / CN-CD
Log-Tech

| FORMATION TOPS | ELECTRIC LOG | SAMPLE |
|---|---|---|
| Heebner Sh. | 3630 (-2296) | NA |
| Iatan LS. | 4060 (-2726) | 4056 (-2722) |
| Stark Sh. | 4319 (-2985) | 4313 (-2979) |
| Cherokee Sh. | 4539 (-3205) | 4533 (-3199) |
| Mississippi | 4584 (-3250) | 4579 (-3245) |
| Kinderhook Sh. | NA | 4803 (-3469) |




API # 15-007-23,682

REMARKS *Samples and electric logs indicate a probable commercial zone in the Mississippi. Electric logs indicate a possible zone in the Pawnee LS at 4500-4503, this zone had a slight increase on the gas chart, however no sample shows were observed. This zone has produced in the general area and should be considered before this well is plugged. The Swope zone at 4330-4337 carried a slight odor in samples and a small gas increase, no visible shows were observed. There were no other zones of interest indicated by samples or electric logs.*

*Timothy G. Pierce*

LEGEND

REMARKS

SAMPLE DESCRIPTION

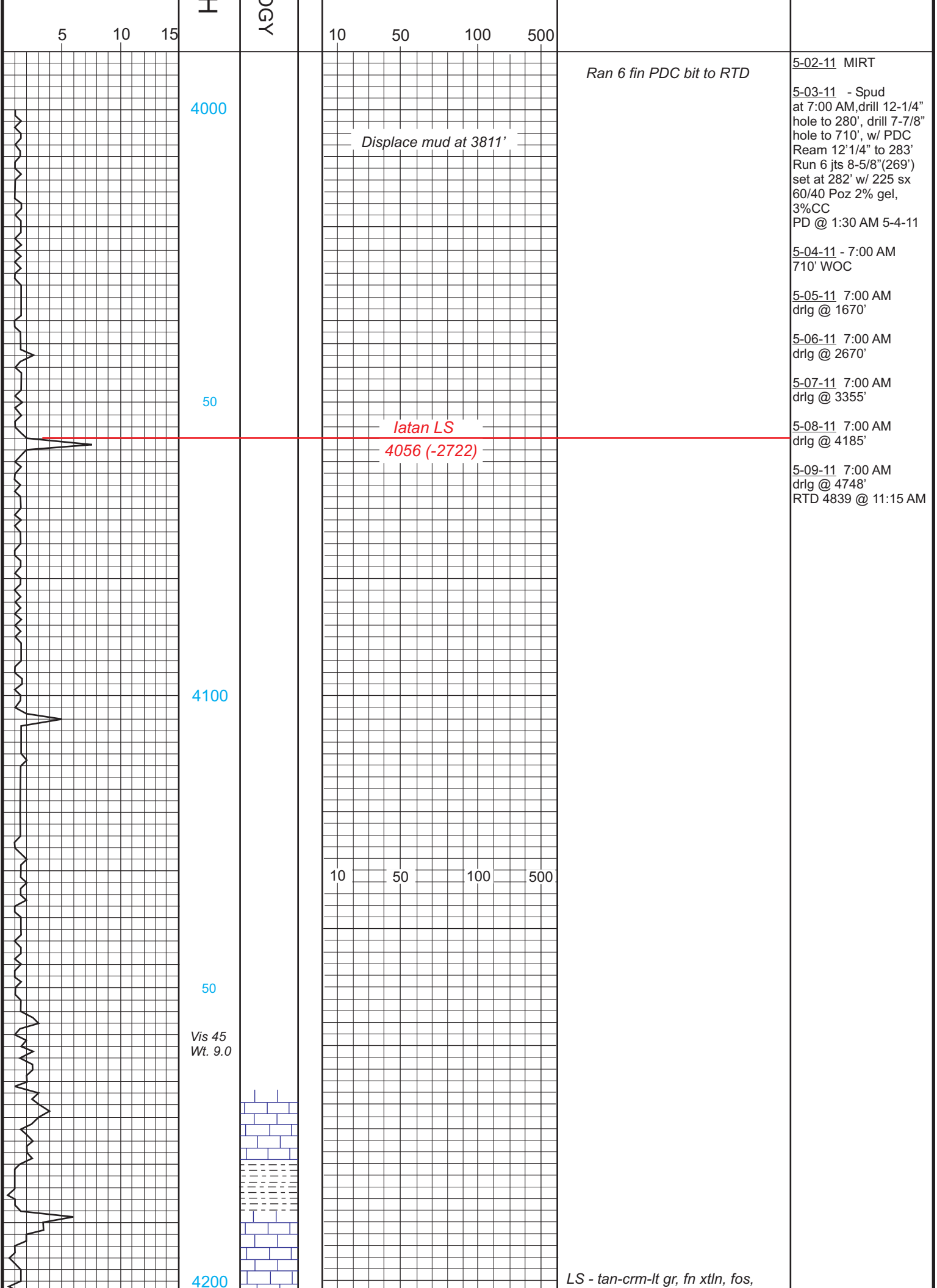
GAS SCALE

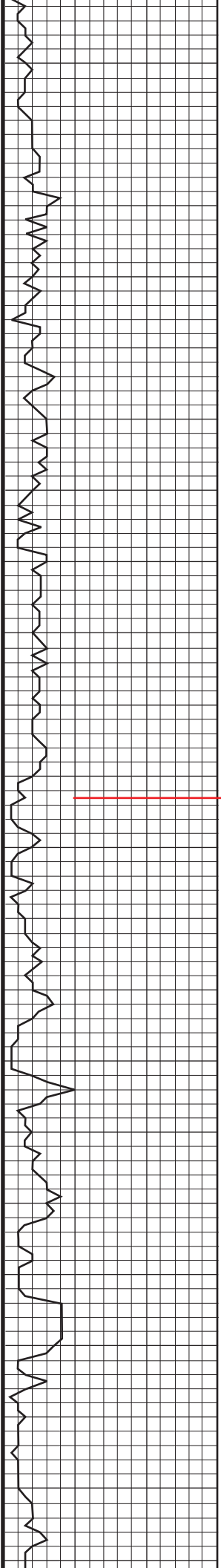
LITHOLO

DEPTH

DRILLING TIME IN MINUTES PER FOOT

Rate of Penetration Decreases


5
10
15
H
OGY
10
50
100
500
4000
50
4100
50
4200
Displace mud at 3811'
Iatan LS
4056 (-2722)
10
50
100
500
Vis 45
Wt. 9.0
Ran 6 fin PDC bit to RTD
LS - tan-crm-lt gr, fn xtln, fos,
5-02-11 MIRT
5-03-11 - Spud
at 7:00 AM,drill 12-1/4"
hole to 280', drill 7-7/8"
hole to 710', w/ PDC
Ream 12'1/4" to 283'
Run 6 jts 8-5/8"(269')
set at 282' w/ 225 sx
60/40 Poz 2% gel,
3%CC
PD @ 1:30 AM 5-4-11
5-04-11 - 7:00 AM
710' WOC
5-05-11 7:00 AM
drlg @ 1670'
5-06-11 7:00 AM
drlg @ 2670'
5-07-11 7:00 AM
drlg @ 3355'
5-08-11 7:00 AM
drlg @ 4185'
5-09-11 7:00 AM
drlg @ 4748'
RTD 4839 @ 11:15 AM



Vis 42
Wt. 9.0

50

Vis 42
Wt. 9.1

4300

Vis 50
Wt. 9.1

50

Vis 51
Wt. 9.2

4400

10 50 100 500

10 50 100 500

gd vug and int xtln por, no show

LS - gr-tan, fn xtln, dense

LS - gr-tan-wht, fn xtln, dense to chalky, scat poor vug por, no show

LS - tan-gr, fn xtln, dense, scat chalk

Stark Sh.
4313 (-2979)

Sh - blk carb

Sh - gr-blk

LS - tan-gr, fn xtln, scat fair vug to int xtln por, scat spty bright fluor, faint odor, no show free oil, no vis stain

Sh - blk carb

LS - tan-brn, fn xtln, dense

Sh - blk-gr

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

Sh - blk-gr

LS - gr-wht, dense

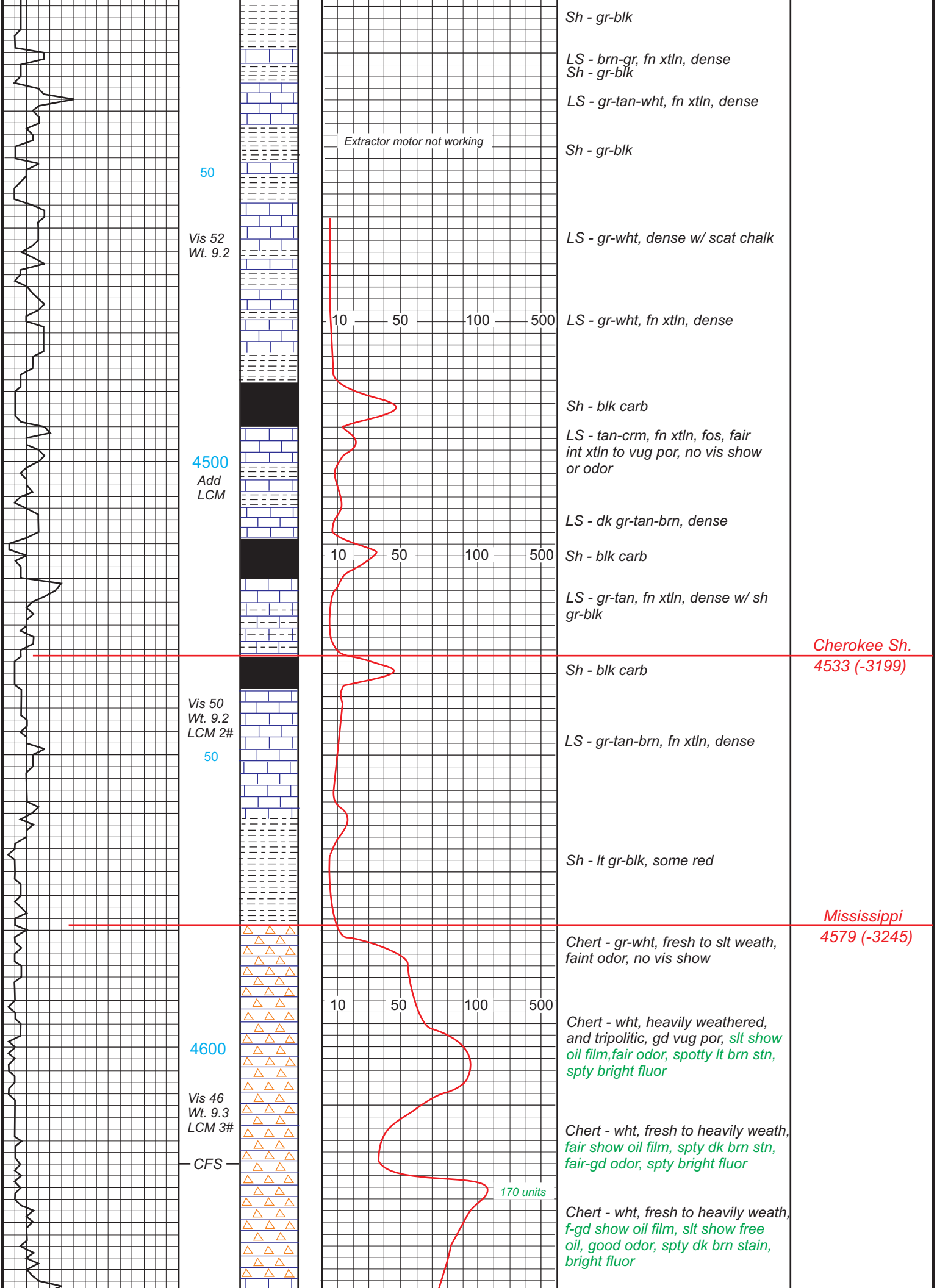
Sh - blk

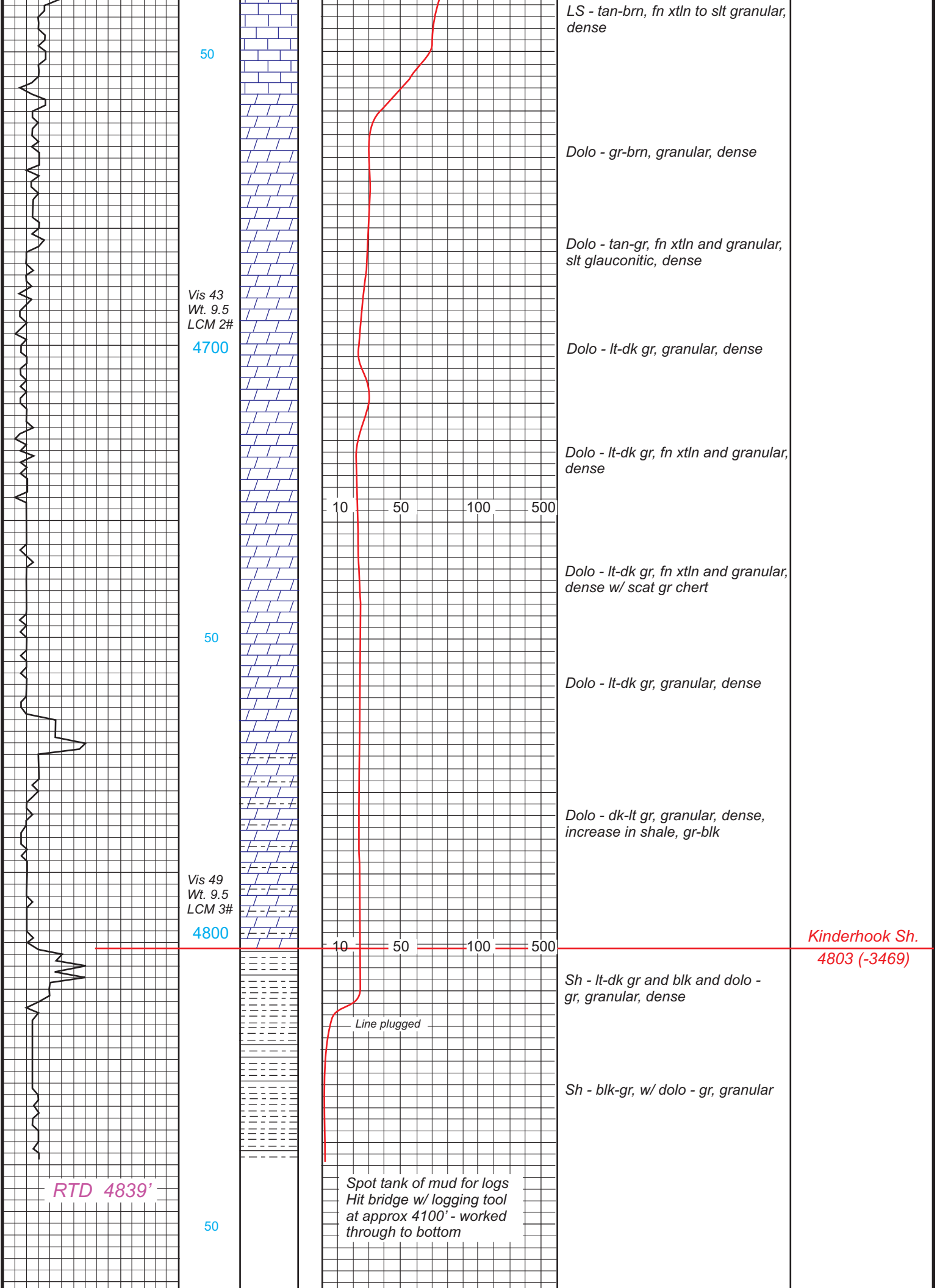
LS - brn-tan-gr, dense

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

Sh - blk-gr-green

LS - lt gr-tan, fn xtln, dense


Sh - gr-blk
LS - brn-gr, fn xtln, dense
Sh - gr-blk
LS - gr-tan-wht, fn xtln, dense
Extractor motor not working
Sh - gr-blk
50
Vis 52
Wt. 9.2
LS - gr-wht, dense w/ scat chalk
10 50 100 500
LS - gr-wht, fn xtln, dense
Sh - blk carb
LS - tan-crm, fn xtln, fos, fair int xtln to vug por, no vis show or odor
4500
Add
LCM
LS - dk gr-tan-brn, dense
10 50 100 500
Sh - blk carb
LS - gr-tan, fn xtln, dense w/ sh gr-blk
Cherokee Sh.
4533 (-3199)
Sh - blk carb
Vis 50
Wt. 9.2
LCM 2#
50
LS - gr-tan-brn, fn xtln, dense
Sh - lt gr-blk, some red
Mississippi
4579 (-3245)
Chert - gr-wht, fresh to slt weath, faint odor, no vis show
10 50 100 500
Chert - wht, heavily weathered, and tripolitic, gd vug por, slt show oil film,fair odor, spotty lt brn stn, spty bright fluor
4600
Vis 46
Wt. 9.3
LCM 3#
CFS
Chert - wht, fresh to heavily weath, fair show oil film, spty dk brn stn, fair-gd odor, spty bright fluor
170 units
Chert - wht, fresh to heavily weath, f-gd show oil film, slt show free oil, good odor, spty dk brn stain, bright fluor


LS - tan-brn, fn xtln to slt granular, dense
50
Dolo - gr-brn, granular, dense
Dolo - tan-gr, fn xtln and granular, slt glauconitic, dense
Vis 43
Wt. 9.5
LCM 2#
4700
Dolo - lt-dk gr, granular, dense
Dolo - lt-dk gr, fn xtln and granular, dense
10
50
100
500
Dolo - lt-dk gr, fn xtln and granular, dense w/ scat gr chert
50
Dolo - lt-dk gr, granular, dense
Dolo - dk-lt gr, granular, dense, increase in shale, gr-blk
Vis 49
Wt. 9.5
LCM 3#
4800
Kinderhook Sh.
4803 (-3469)
10
50
100
500
Sh - lt-dk gr and blk and dolo - gr, granular, dense
Line plugged
Sh - blk-gr, w/ dolo - gr, granular
RTD 4839'
Spot tank of mud for logs
Hit bridge w/ logging tool at approx 4100' - worked through to bottom
50