

# Timothy G. Pierce

## Petroleum Geologist

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

COMPANY N-10 Exploration, LLC  
 LEASE Medicine River Ranch 'D' #4  
 FIELD Landis  
 LOCATION 1940' FSL & 450' FEL  
 SEC 10 TWPSP 34S RGE 11W  
 COUNTY Barber STATE Kansas  
 CONTRACTOR Hardt Drilling Rig #1  
 SPUD 2-24-2012 COMP 3-03-2012  
 RTD 5090 LTD 5094  
 MUD UP 3061 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 4171' to RTD  
 GEOLOGIST ON WELL Tim Pierce

#### ELEVATIONS

KB 1377'  
 DF \_\_\_\_\_  
 GL 1367'  
 Measurements Are All  
 From Kelly Bushing

#### CASING

CONDUCTOR \_\_\_\_\_  
 SURFACE 8-5/8" at 268'  
 PRODUCTION 5-1/2" at 5086'

#### ELECTRICAL SURVEYS

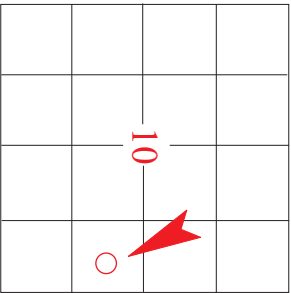
DIL / CN-CD  
 Log-Tech

#### FORMATION TOPS

#### ELECTRIC LOG

#### SAMPLE

Heebner Sh.	3630 (-2253)	NA
Latan LS.	4045 (-2668)	4042 (-2665)
Stark Sh.	4313 (-2936)	4310 (-2933)
Cherokee Sh.	4533 (-3156)	4529 (-3152)
Mississippi	4569 (-3192)	4568 (-3191)
Viola	4912 (-3535)	4910 (-3533)
Simpson	5002 (-3625)	4998 (-3621)



API # 15-007-23,807

**REMARKS** Samples and electric logs indicate a probable productive zone in the top of the Mississippi from 4584'-4672', this interval should be perforated and fracture treated for production.

A sample show in the Meisner Sand at 4886'-4888' was evaluated by DST, results indicate a possible productive zone, this should be perforated and tested further.

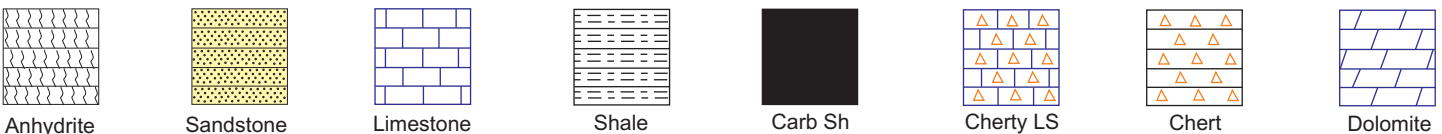
A gas kick and sample show were observed in the Chattanooga Sh. at 4854'-4883', this zone is potentially productive and should be considered for further treatment.

A very slight sample show was observed in the Simpson sand in the 5060' sample, electric logs indicate a water productive sand.

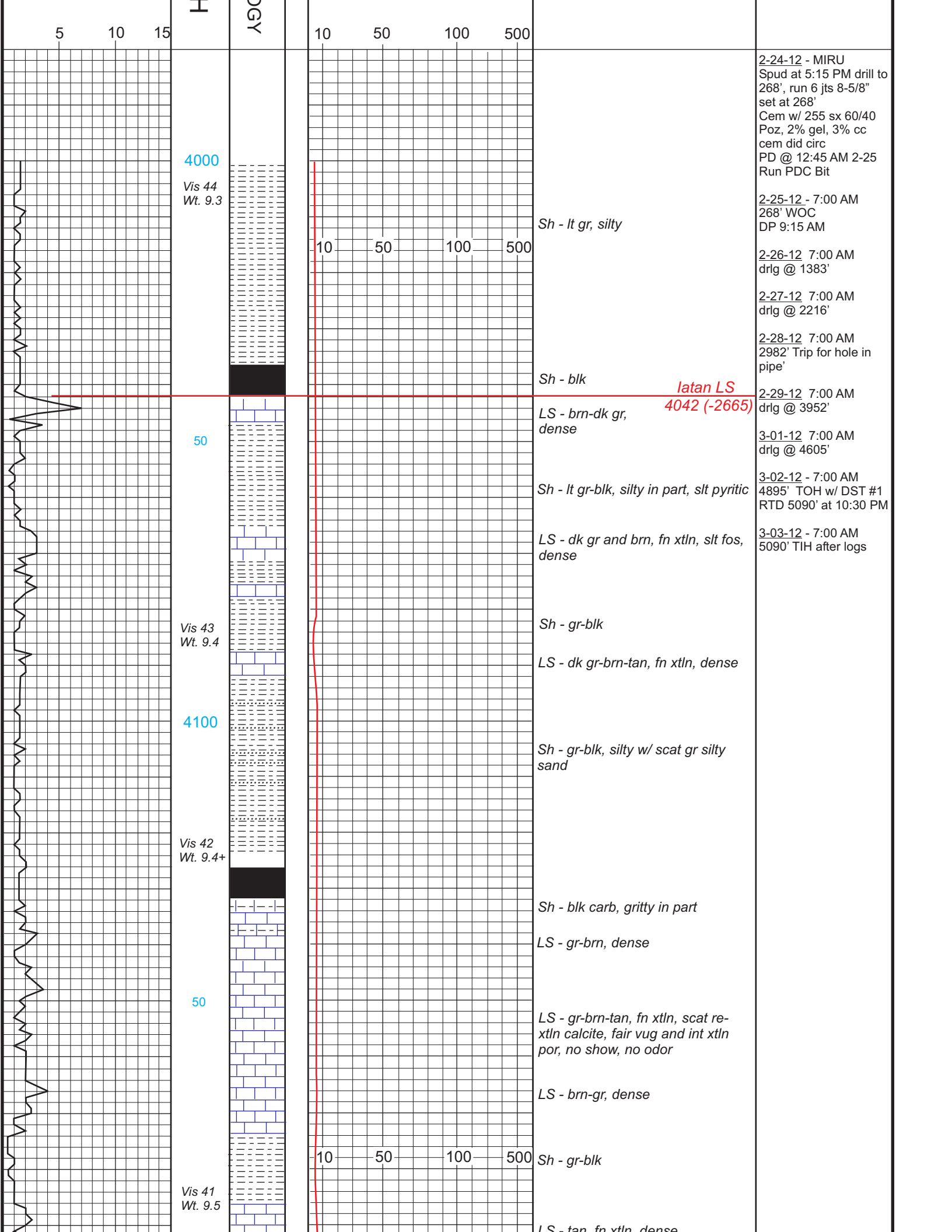
The Pawnee LS at 4489-96 had a slight increase on the gas chart and electric logs indicate possible zone development, this should be considered before abandonment. There were no other zones of interest indicated by samples or electric logs

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### LEGEND



DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases →	DEPTH	LITHOLOG	GAS SCALE	SAMPLE DESCRIPTION	REMARKS
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4000

Vis 44  
Wt. 9.3

50

Vis 43  
Wt. 9.4

4100

Vis 42  
Wt. 9.4+

50

Vis 41  
Wt. 9.5

10

50

100

500

10

50

100

500

10

50

100

500

Sh - lt gr, silty

Sh - blk

LS - brn-dk gr,  
dense

Sh - lt gr-blk, silty in part, slt pyritic

LS - dk gr and brn, fn xtl'n, slt fos,  
dense

Sh - gr-blk

LS - dk gr-brn-tan, fn xtl'n, dense

Sh - gr-blk, silty w/ scat gr silty  
sand

Sh - blk carb, gritty in part

LS - gr-brn, dense

LS - gr-brn-tan, fn xtl'n, scat re-  
xtln calcite, fair vug and int xtl'n  
por, no show, no odor

LS - brn-gr, dense

Sh - gr-blk

LS - tan, fn xtl'n, dense

Iatan LS  
4042 (-2665)

2-24-12 - MIRU  
Spud at 5:15 PM drill to  
268', run 6 jts 8-5/8"  
set at 268'  
Cem w/ 255 sx 60/40  
Poz, 2% gel, 3% cc  
cem did circ  
PD @ 12:45 AM 2-25  
Run PDC Bit

2-25-12 - 7:00 AM  
268' WOC  
DP 9:15 AM

2-26-12 7:00 AM  
drlg @ 1383'

2-27-12 7:00 AM  
drlg @ 2216'

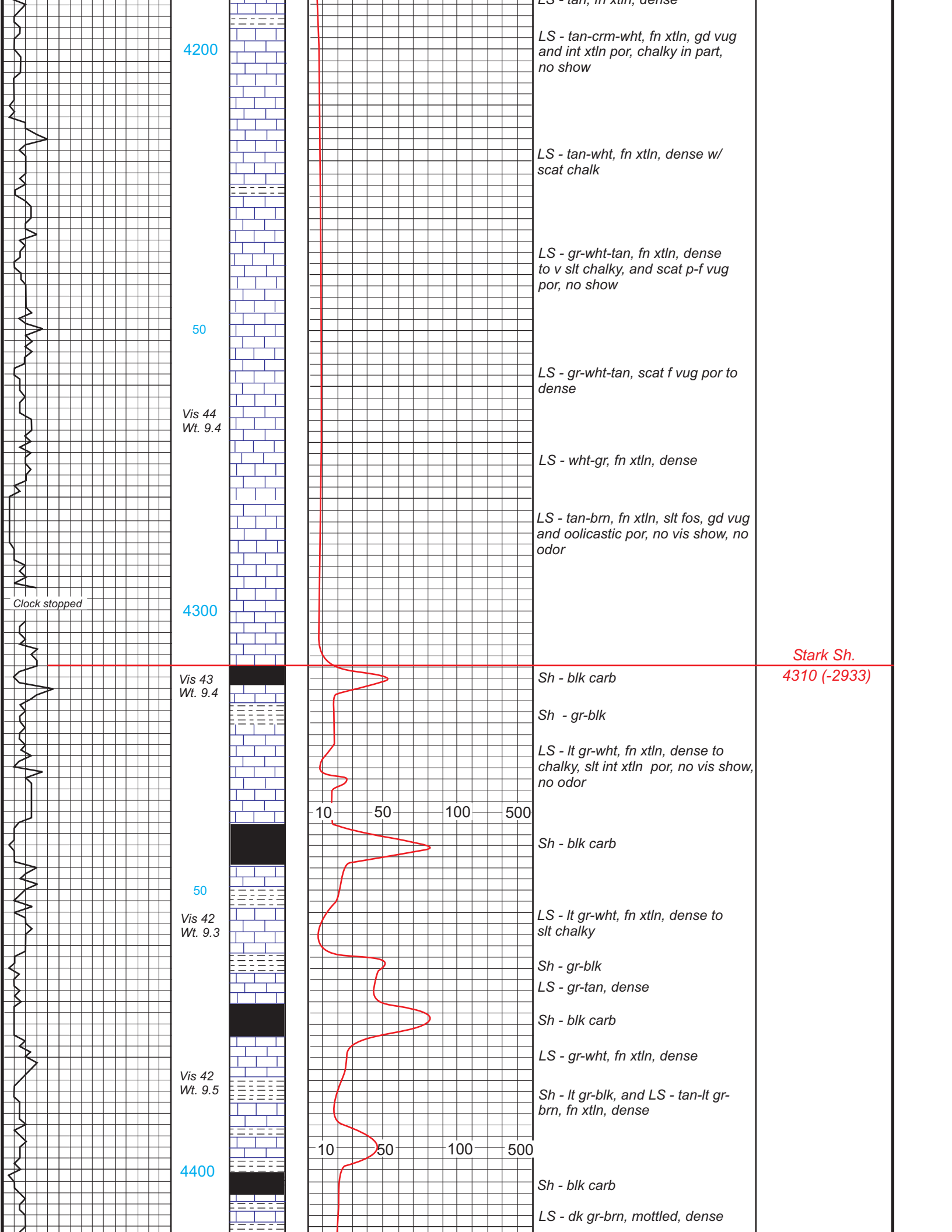
2-28-12 7:00 AM  
2982' Trip for hole in  
pipe'

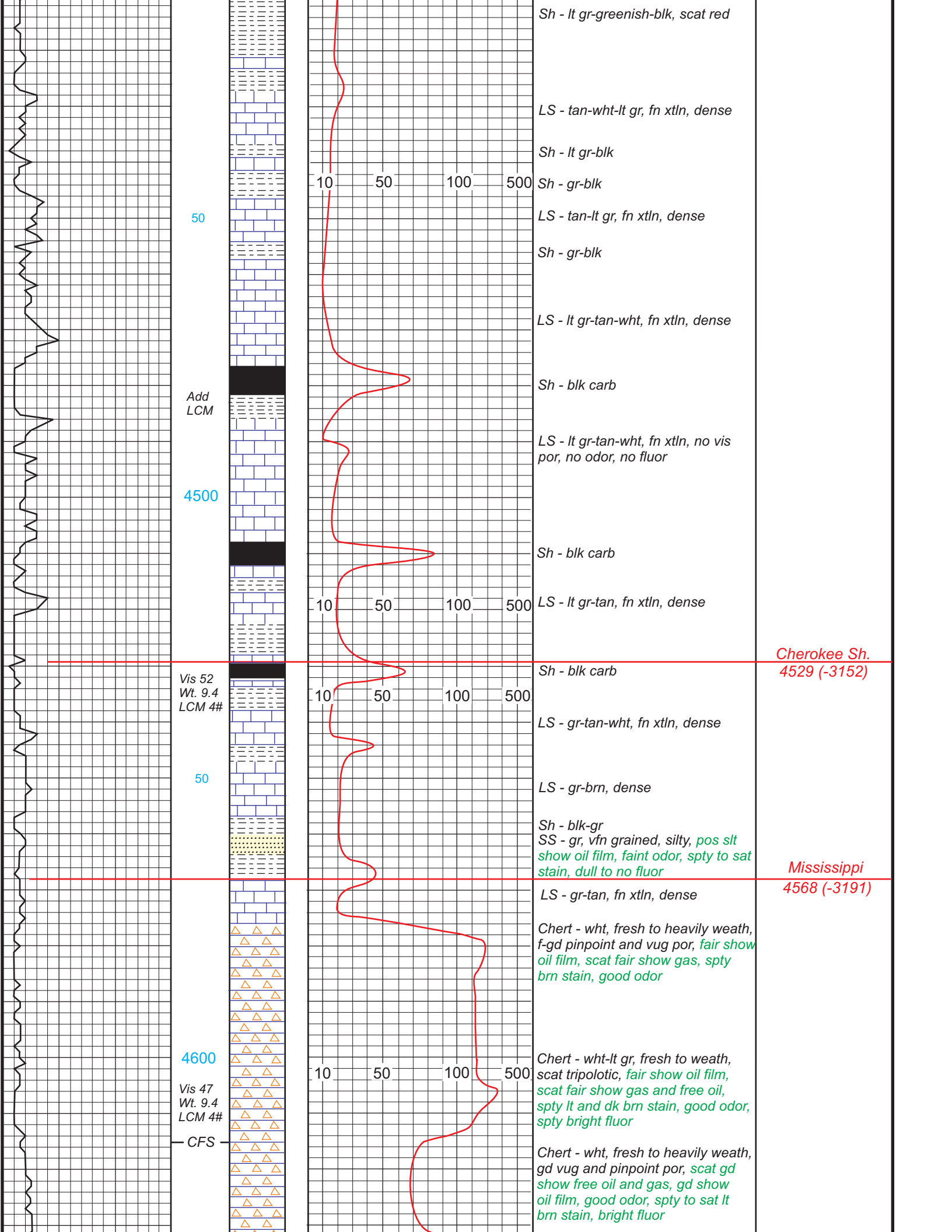
2-29-12 7:00 AM  
drlg @ 3952'

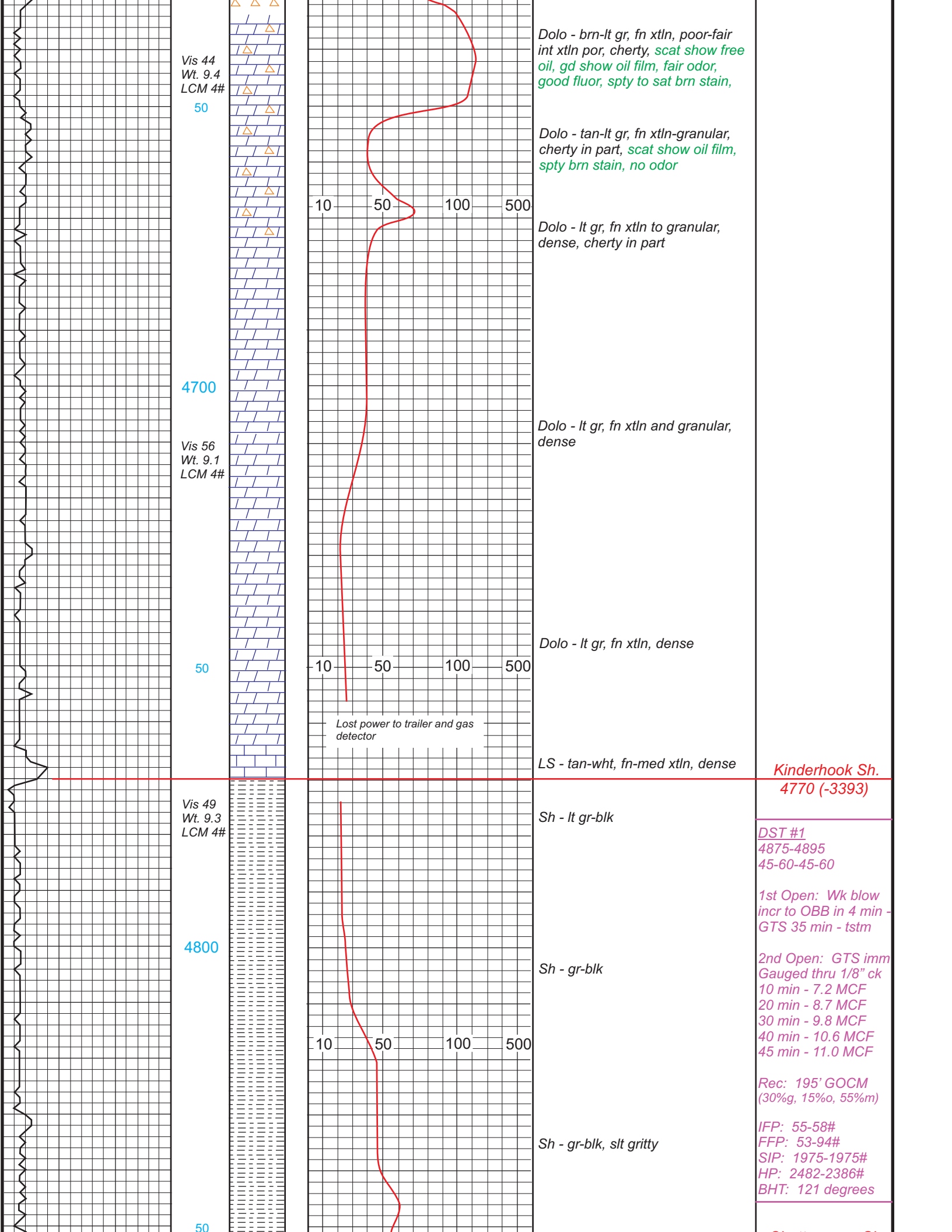
3-01-12 7:00 AM  
drlg @ 4605'

3-02-12 - 7:00 AM  
4895' TOH w/ DST #1  
RTD 5090' at 10:30 PM

3-03-12 - 7:00 AM  
5090' TIH after logs







Vis 44  
Wt. 9.4  
LCM 4#

50

Dolo - brn-lt gr, fn xtl, poor-fair int xtl por, cherty, *scat show free oil, gd show oil film, fair odor, good fluor, spty to sat brn stain,*

Dolo - tan-lt gr, fn xtl-granular, cherty in part, *scat show oil film, spty brn stain, no odor*

Dolo - lt gr, fn xtl to granular, dense, cherty in part

4700

Vis 56  
Wt. 9.1  
LCM 4#

Dolo - lt gr, fn xtl and granular, dense

Dolo - lt gr, fn xtl, dense

50

Lost power to trailer and gas detector

LS - tan-wht, fn-med xtl, dense

**Kinderhook Sh.**  
4770 (-3393)

Vis 49  
Wt. 9.3  
LCM 4#

4800

Sh - lt gr-blk

*DST #1*  
4875-4895  
45-60-45-60

*1st Open: Wk blow  
incr to OBB in 4 min -  
GTS 35 min - tstm*

Sh - gr-blk

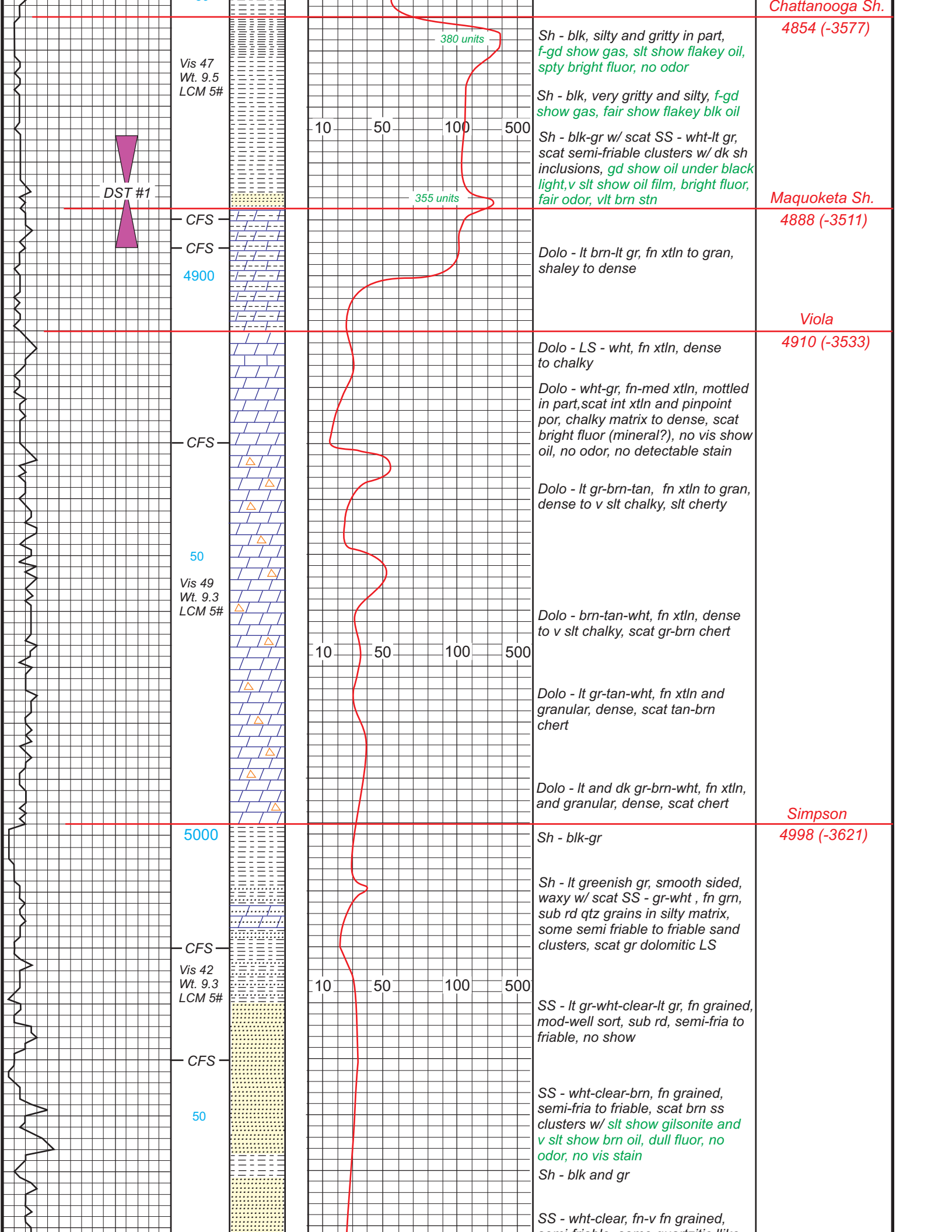
*2nd Open: GTS imm  
Gauged thru 1/8" ck  
10 min - 7.2 MCF  
20 min - 8.7 MCF  
30 min - 9.8 MCF  
40 min - 10.6 MCF  
45 min - 11.0 MCF*

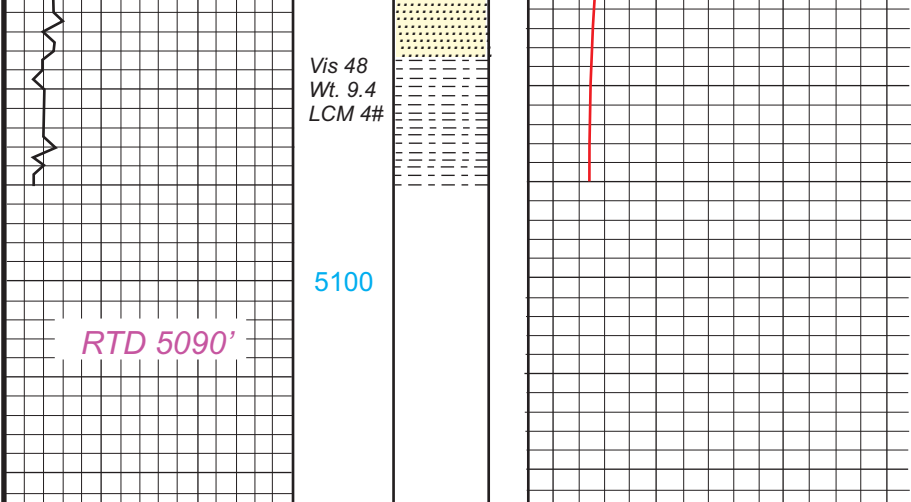
*Rec: 195' GOCM  
(30%g, 15%o, 55% m)*

Sh - gr-blk, slt gritty

*IFP: 55-58#  
FFP: 53-94#  
SIP: 1975-1975#  
HP: 2482-2386#  
BHT: 121 degrees*

50





semi-riable, some quartzitic like,  
slt glauconitic,

Sh - blk-gr, some green

