

# Timothy G. Pierce

## Petroleum Geologist

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

**COMPANY** N-10 Exploration, LLC  
**LEASE** Medicine River Ranch 'D' #5  
**FIELD** Landis  
**LOCATION** 1980' FNL & 1855' FWL  
**SEC** 10 **TWSP** 34S **RGE** 11W  
**COUNTY** Barber **STATE** Kansas  
**CONTRACTOR** Hardt Drilling Rig #1  
**SPUD** 4-23-2012 **COMP** 5-01-2012  
**RTD** 4891 **LTD** 4892  
**MUD UP** 3000 **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** 1354'  
**DF** \_\_\_\_\_  
**GL** 1344'

Measurements Are All  
 From Kelly Bushing

#### CASING

**CONDUCTOR** \_\_\_\_\_  
**SURFACE** 8-5/8" **at** 256'  
**PRODUCTION** 5-1/2" **at** 4857'

#### ELECTRICAL SURVEYS

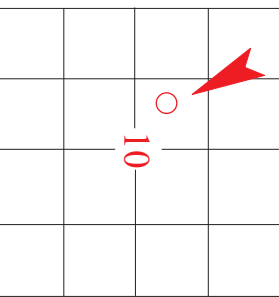
**DIL / CN-CD** \_\_\_\_\_  
**Log-Tech** \_\_\_\_\_

#### FORMATION TOPS

#### ELECTRIC LOG

#### SAMPLE

Heebner Sh.	3587 (-2233)	NA
Stark Sh.	4276 (-2922)	4275 (-2921)
Cherokee Sh.	4493 (-3139)	4492 (-3138)
Mississippi	4531 (-3177)	4536 (-3182)
Kinderhook Sh.	4734 (-3380)	4734 (-3380)
Chattanooga Sh.	4818 (-3464)	4816 (-3462)
Viola	4861 (-3507)	4865 (-3511)


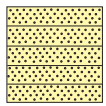
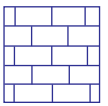
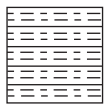

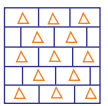

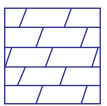



API # 15-007-23,858

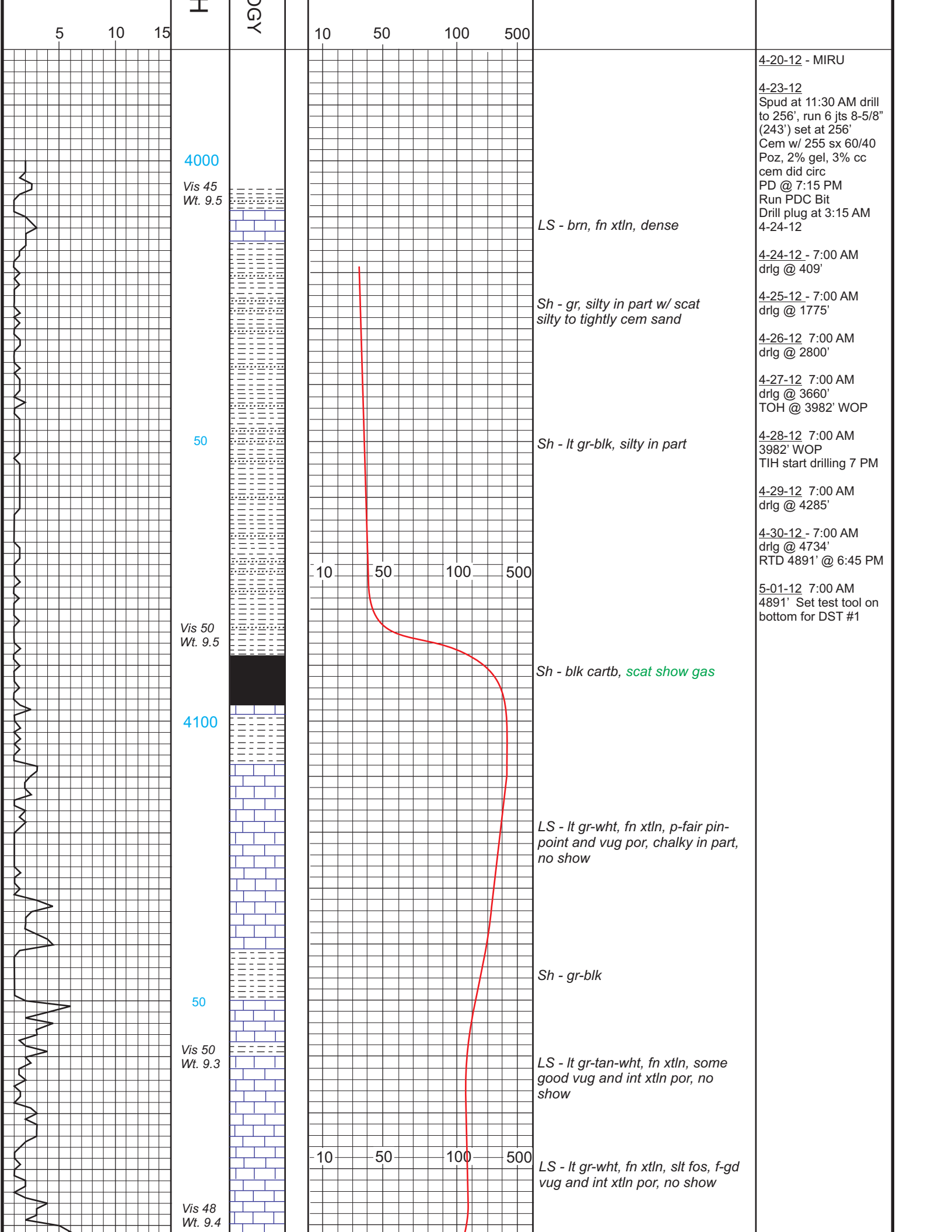
**REMARKS** Samples and electric logs indicate a productive zone in the Mississippi from 4540'-4600'.  
The Cherokee Sand from 4521'-4526' carried a show of oil, this zone should be perforated and treated before this well is abandoned.  
The Pawnee LS from 4450'-4453' carried a gas kick, however no sample show was observed, this zone should be considered  
The Hushpuckney shale at 4306'-4312' carried a slight show of gas and oil, and the black shale at 4088'-4095' carried a show of gas  
A gas increase was noted in the Indian Cave section from 2582'-2600', electric logs indicate this zone could be gas productive.  
A slight show was noted in the Meisner section, this interval was evaluated by DST after electric logs were run.  
There were no other zones of interest indicated by samples or electric logs

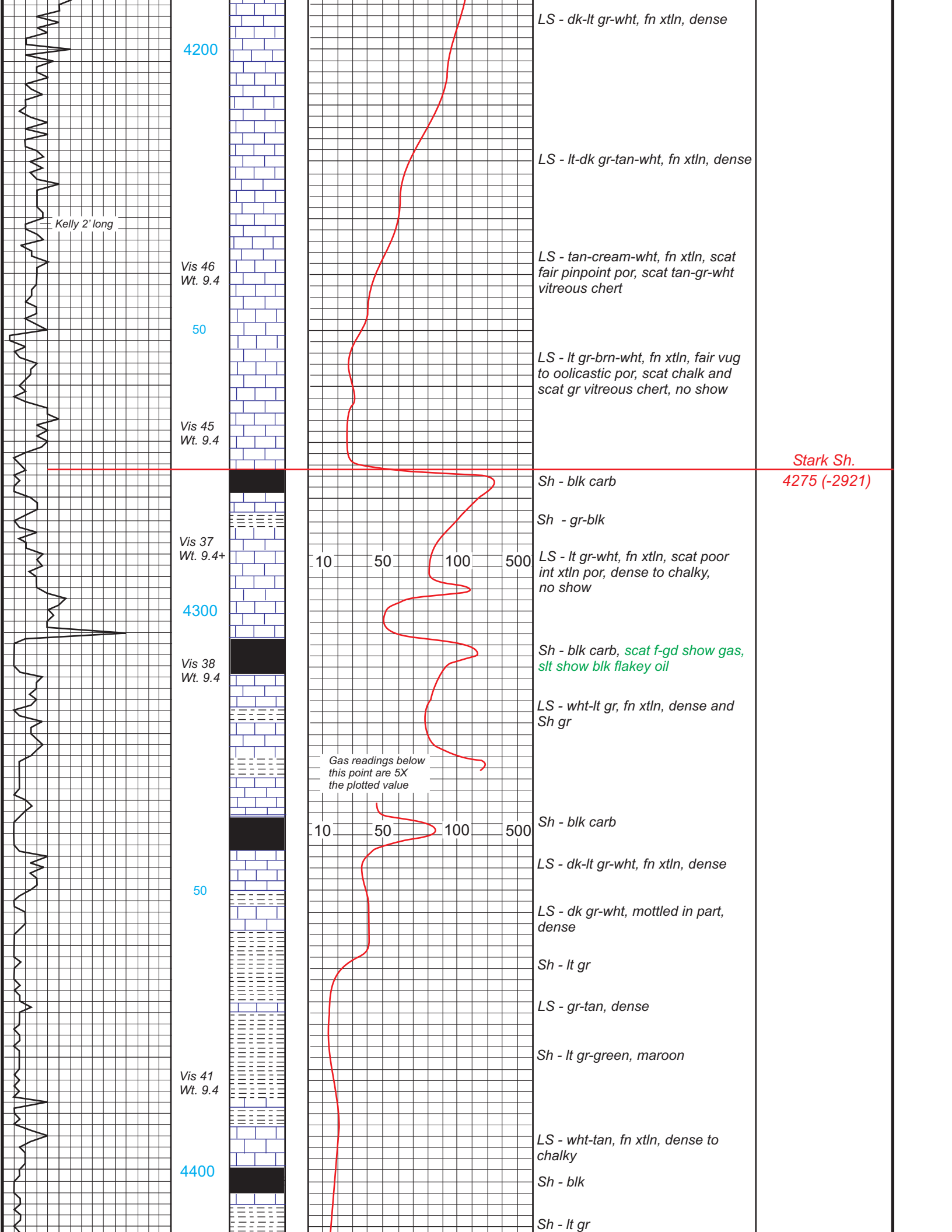
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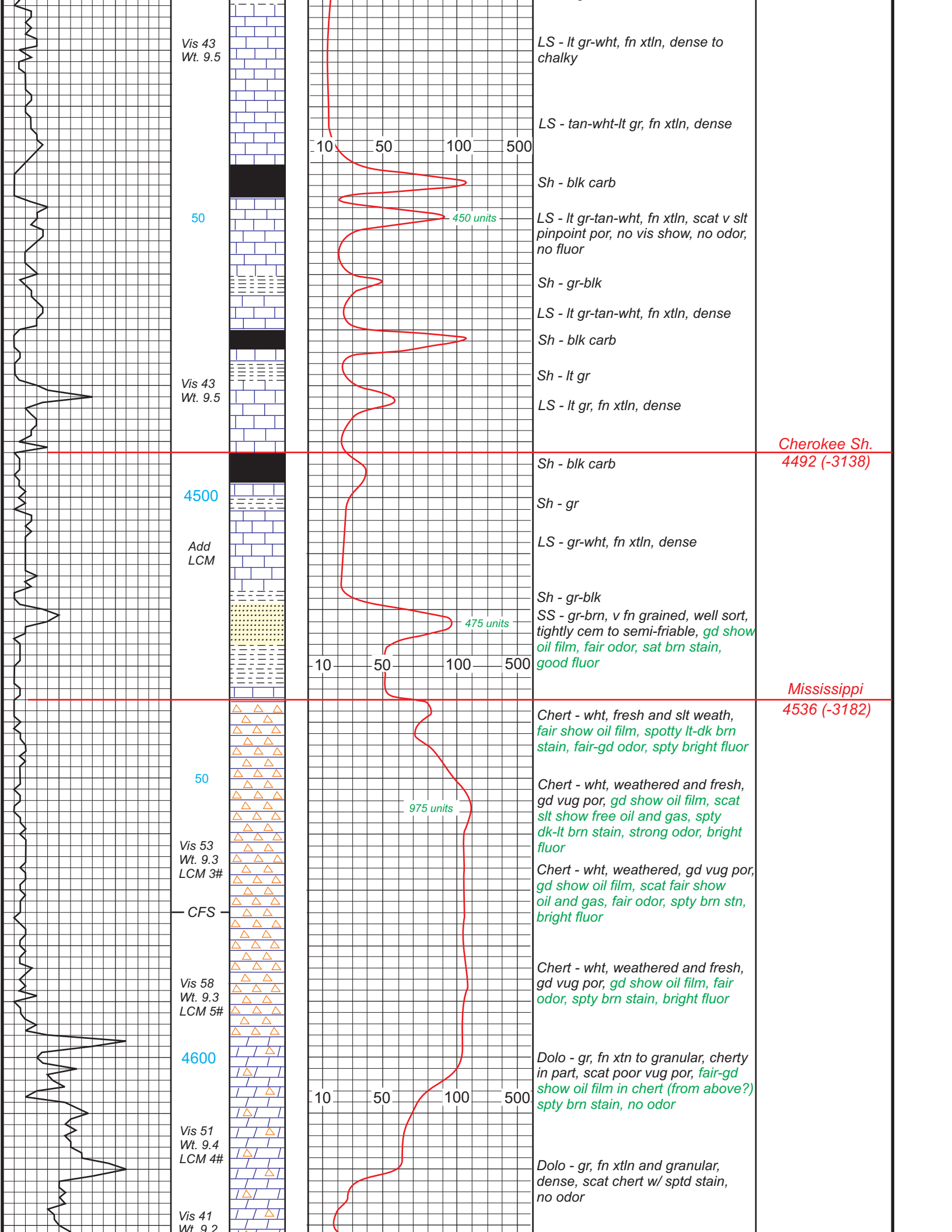
### LEGEND

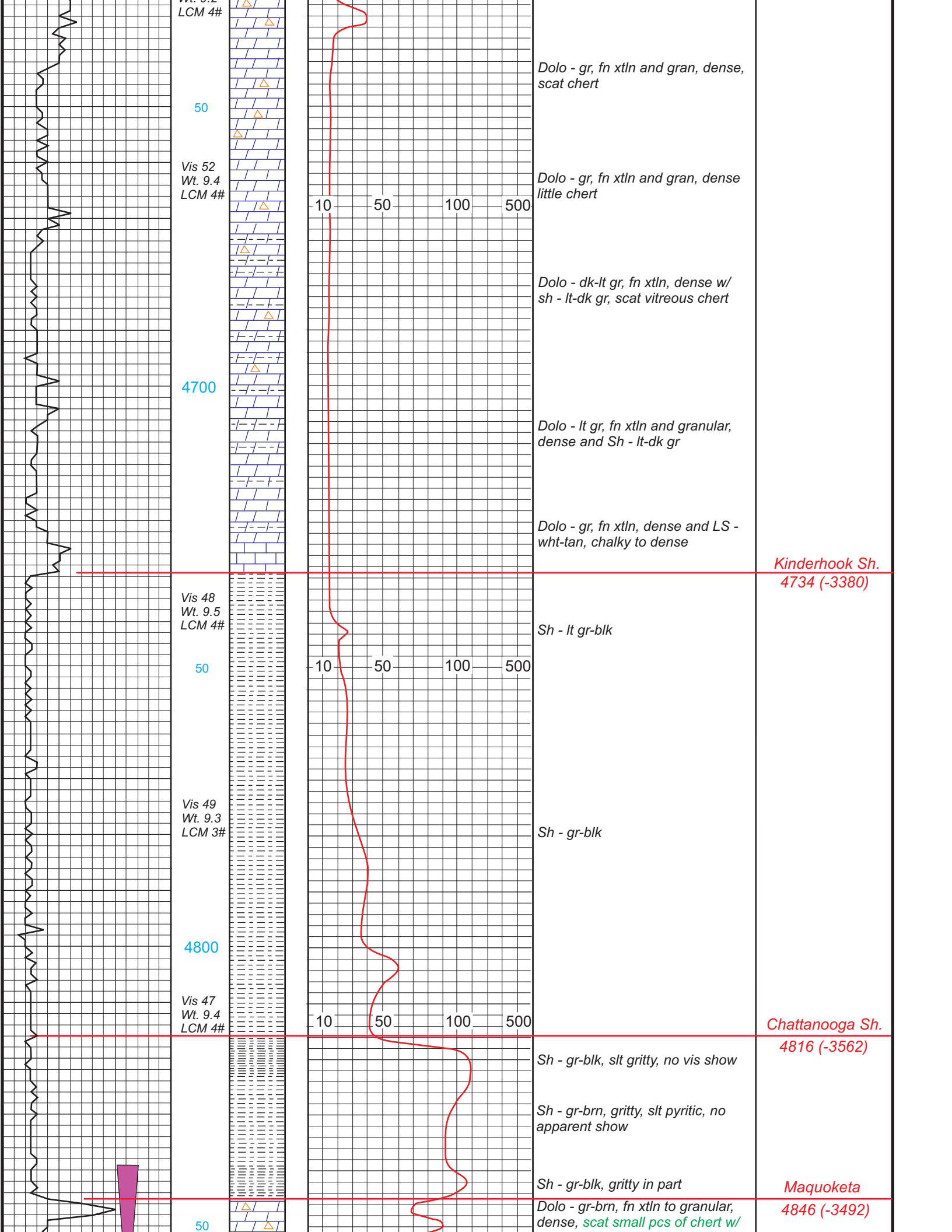
							
Anhydrite	Sandstone	Limestone	Shale	Carb Sh	Cherty LS	Chert	Dolomite

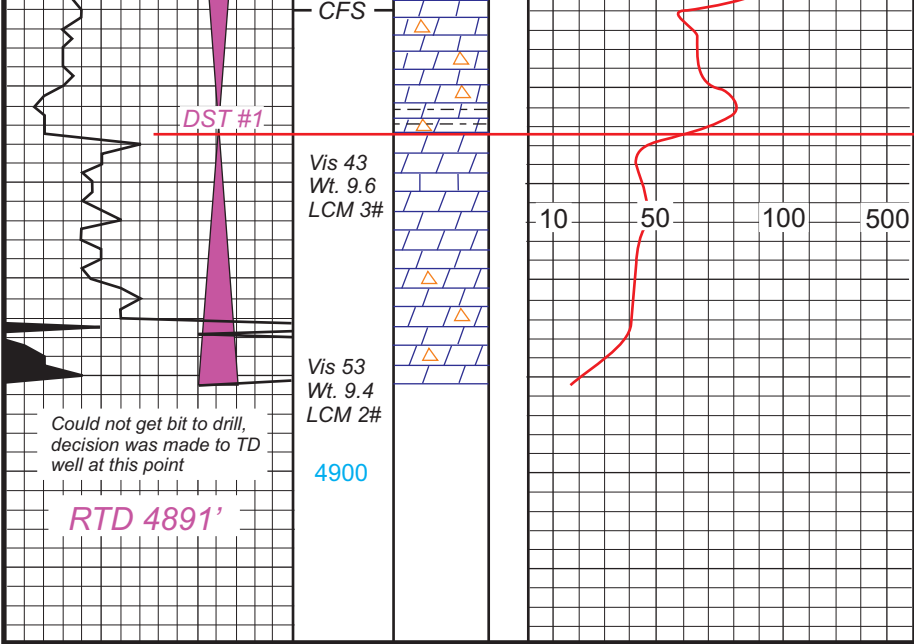
<b>DRILLING TIME IN MINUTES PER FOOT</b> Rate of Penetration Decreases 	<b>DEPTH</b>	<b>LITHOLOG</b>	<b>GAS SCALE</b>	<b>SAMPLE DESCRIPTION</b>	<b>REMARKS</b>
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*slt show oil, spty stain, bright fluor, no odor, scat tightly cem sand w/ no show*  
*Dolo - gr-brn, fn xtlm and gran, w/ sh - gr-blk, scat chert*

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*Dolo / LS - lt gr-tan-wht, fn xtlm, dense to very chalky, no vis por, no show*

*Dolo / LS - lt gr-wht, mottled in part, dense to chalky, scat gr vitreous chert, no show*

**Viola**  
**4865 (-3511)**

**DST #1**  
**4839-4891**  
**30-60-30-60**

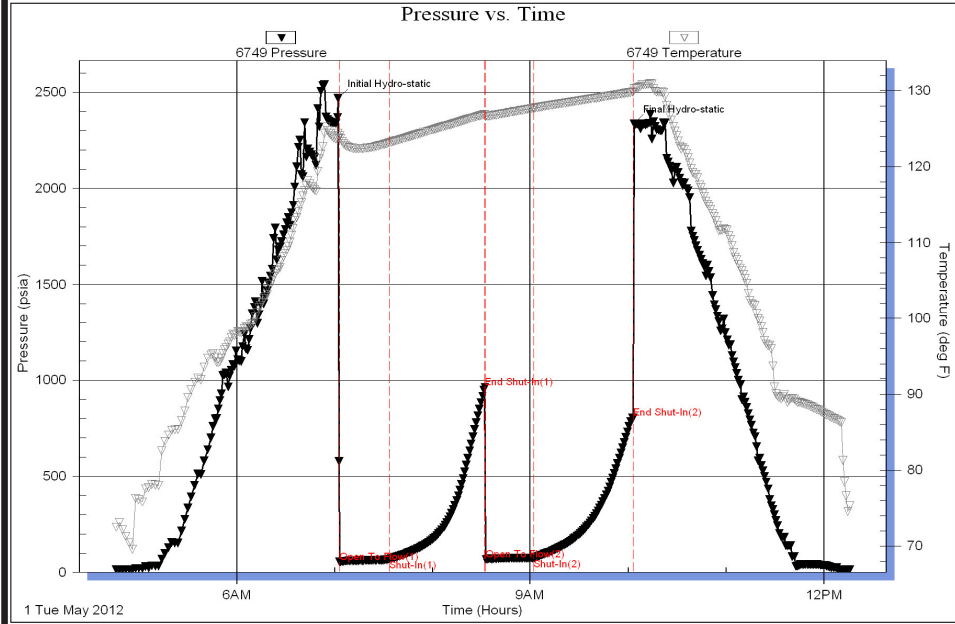
*1st open: Wk blow incr to 3 inches*

*2nd open: Wk blow incr to 1-1/4 inches*

*Rec. - 90' GIP*  
*30' Mud w/ show of oil in tool*

*IFP: 54-68#*  
*FFP: 68-75#*  
*SIP: 962-805#*  
*HP: 2468-2335#*  
*BHT: 130 degrees*

Serial #: 6749    Inside    N-10 Exploration LLC    Medicine River/Ran D5    DST Test Number: 1



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