



Woolsey Operating Company, LLC

Scale 1:240 (5"=100') Imperial

Measured Depth Log

Well Name: Unruh A-1
Location: Section 11 - Township 29 South - Range 19 West
License Number: 15-097-21832-00-00 Region: Kiowa County, Kansas
Spud Date: November 21, 2017 Drilling Completed: December 2, 2017
Surface Coordinates: 1020' FSL & 1980' FEL
N 1/2 SW 1/4 SE 1/4

Bottom Hole Coordinates:

Ground Elevation (ft): 2327' K.B. Elevation (ft): 2339'
Logged Interval (ft): 3800' To: 5300' Total Depth (ft): 5300'
Formation: Topeka >> Mississippi
Type of Drilling Fluid: Chemical Mud

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Woolsey Operating Company, LLC
Address: 125 N. Market, Suite 1000
Wichita, KS 67202

GEOLOGIST

Name: Bill Klaver
Company: Woolsey Operating Co. LLC
Address: 125 N. Market, Wichita Kansas, 67202

COMMENTS

Surface Casing: spud at 9 pm on 11/21/17, set 15 joints 9 5/8" X 24#/ft casing to 717' (tally) 701.7) w/ 200 sx A-con, 3% cc, 1/4# celloflake. Cement did not circulate. Lost circulation drilling surface hole, cemented with 1" Production Casing: No casing ran

Deviation Surveys: 1/2 at 721', 1/2 at 1001', 3/4 at 1348', 1 at 1913', 1 at 2415', 1/4 at 2917', 1 at 3638', 1 at 4234', 1/2 at 4590', 1/2 at 4792', 1 at 5061', 1/2 at 5300'

Pipe Strap @ 4590', Board: 4611.07, Strap: 4609.53, 1.54' short, no correction was made to the board.

Fossil Drilling Rig 3 Bit Record:

- 1) 12 1/4" RT RR in at 0' out at 721', 4 hours
- 2) 7 7/8" Varel Tool Co. PDC in at 721' out at 5300', 112 hrs

Gas Detector: Pason

Mud System: Mud Co. Justin Whiting, Mud Engineer

DSTs: Trilobite Testing, Brannon Lonsdale, Tester

E-Logs: ELI, Jeff Luebbers, Master Logger

DSTs

DST #1 Kansas City "Iola", 4560'-4590', 30"-60"-60"-60", weak 1" blow dec to 1/4" blow, Rec: 93' WM (40%W, 60%M), IHP 2430, IFP 37-50, ICIP 1544, FFP 66-91, FCIP 1507, FHP 2299, BHT 114 deg

DST #2 Kansas City "Hertha", 4760'-4792', 30"-60"-60"-60", weak 4" blow, Rec: 110' GIP, 15' Mud, IHP 2568, IFP 39-50, ICIP 1309, FFP 51-69, FCIP 1303, FHP 2463, BHT 118 deg

DST #3 Mississippi, 4952'-5046', 30"-60"-30"-60", wk 3/4" blow died, Rec: 10' Mud, IHP 2571, IFP 44-49, ICIP 92, FFP 49-52, FCIP 80, FHP 2533, BHT 118 deg

DST #4 Mississippi, 5046'-5061', 30"-60"-30"-60", SB BOB in 5 min, Rec: 141' GIP, 47' Mud, 248' MW (Chlorides 85,000 ppm, API Rw .12 @ 46 deg F), IHP 2689, IFP 59-119, ICIP 1219, FFP 131-173, FCIP 1199, FHP 2542, BHT 124 deg

CREWS

Fossil Drilling Rig 3

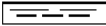
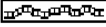
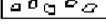
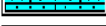
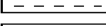
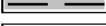
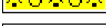
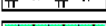
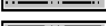
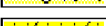
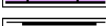
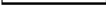
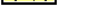
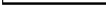
Rick Barriger, Tool Pusher

Chris Staats, Morning

Pablo Luna, Days

Gary Axtell, Evening

ROCK TYPES

	Anhy		Shy dolo		Sltst		Shale 3
	Bent		Dol		Ss		Silty dol
	Brec		Gyp		Black sh		Dol lmst
	Cht		Sdy lmst		Gry sh		Dol 2
	Clyst		Lmst		Shale		Granite wash
	Coal		Mrlst		Shysltst		Lmst
	Congl		Salt		Sltysht		Calc dol
	Sdy dolo		Shale		Ss 2		Shale 3

ACCESSORIES

MINERAL



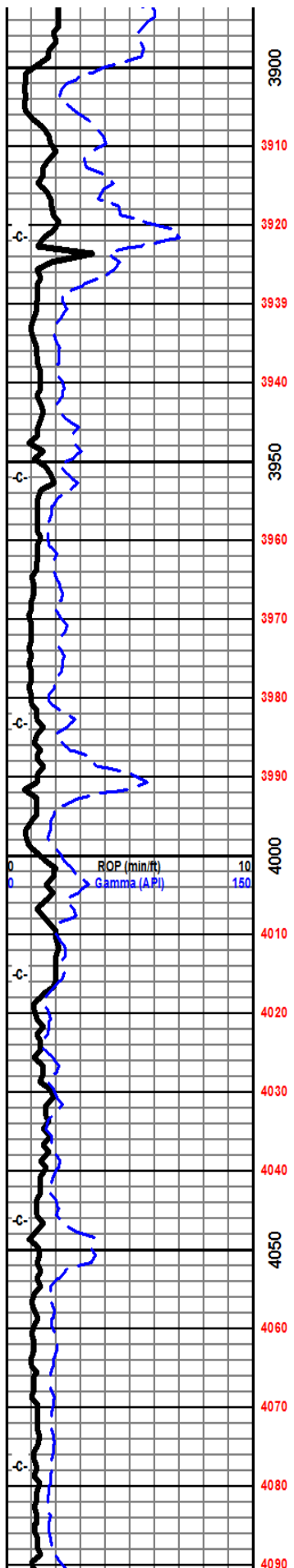
Chlorite



Pelec



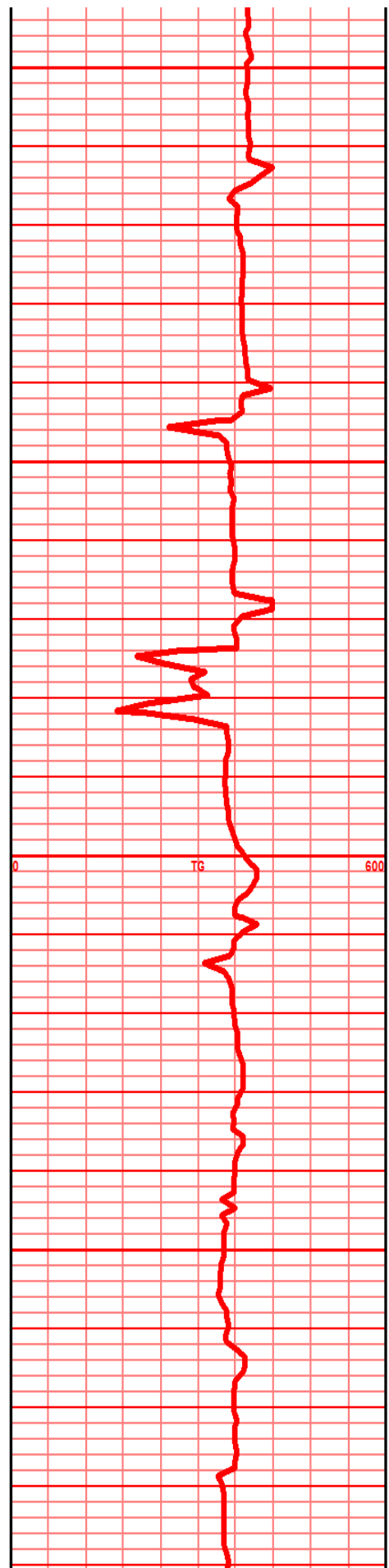
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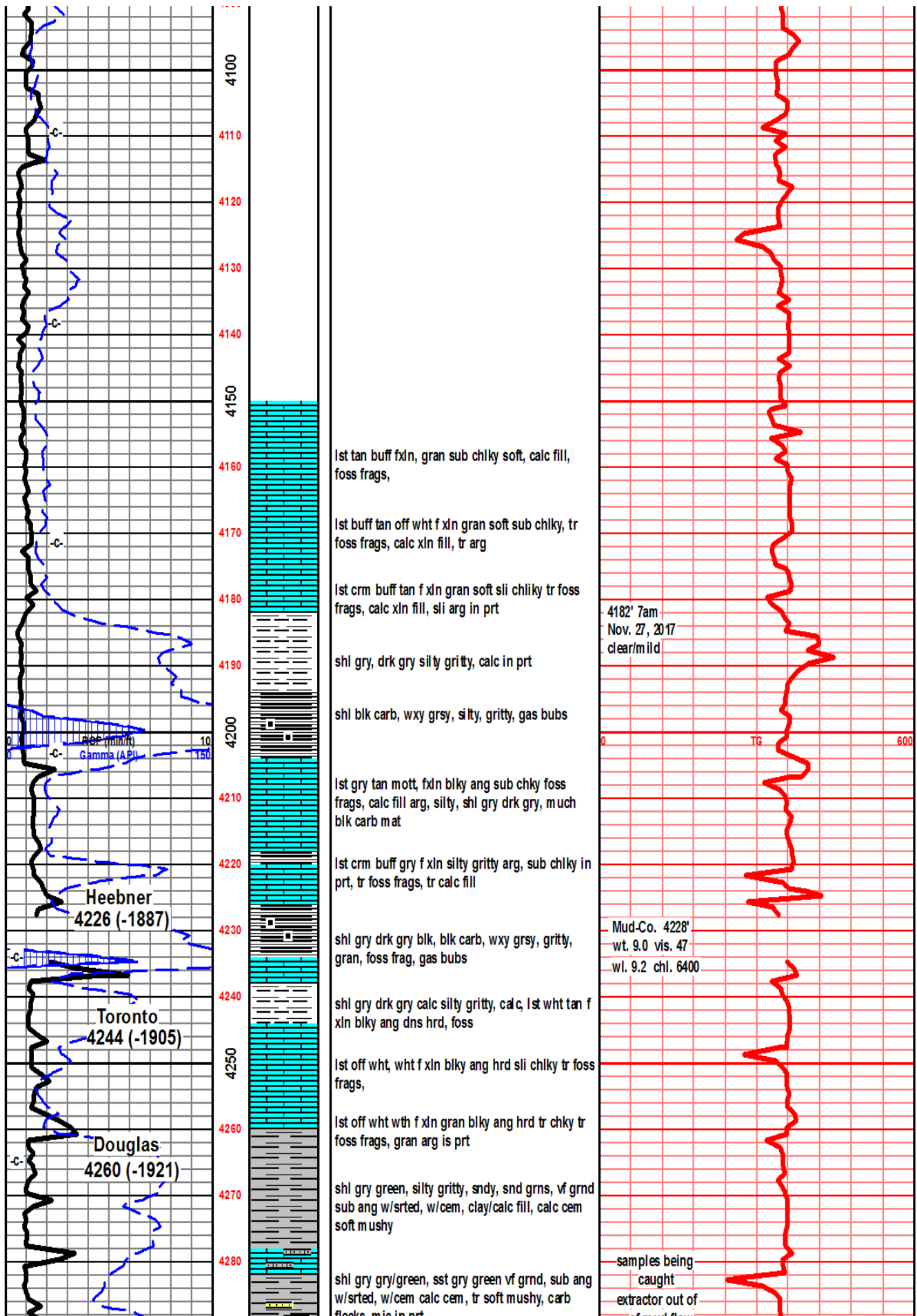


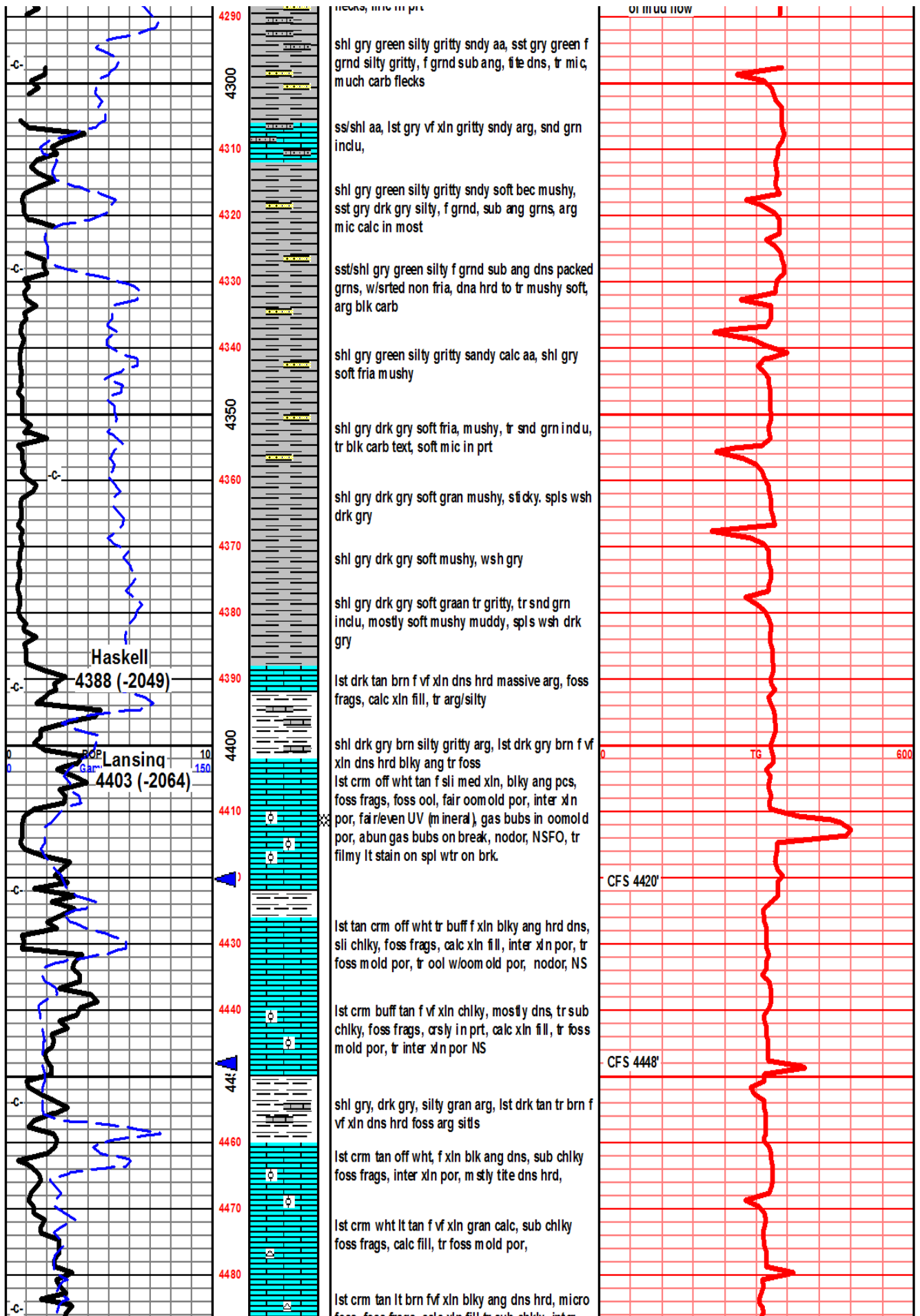
December 1, 2017 100H/DS I #3 at 5046'
 December 2, 2017 Drilling at 5092'
 December 3, 2017 E-Logs out 6 am

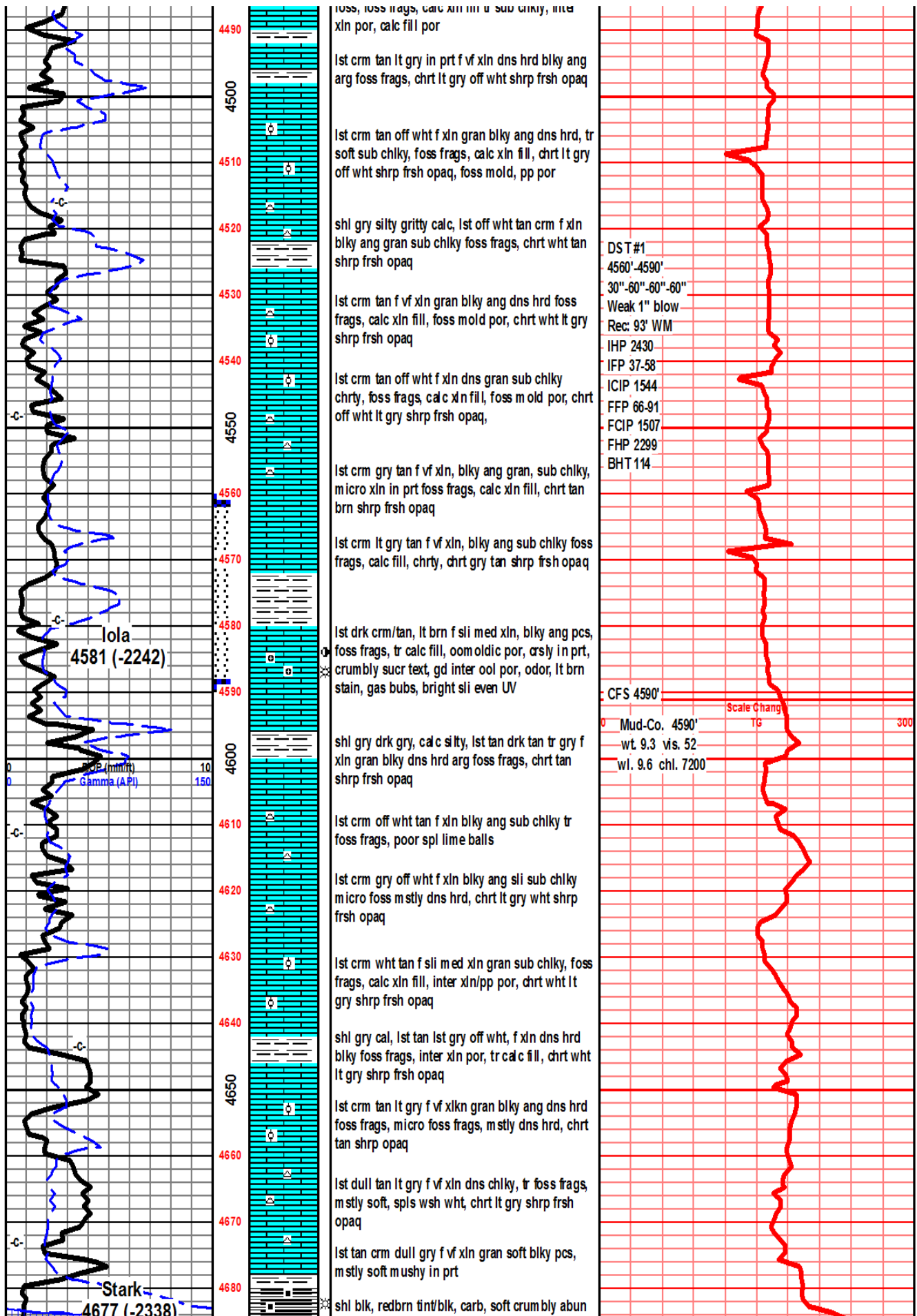
E-log Tops

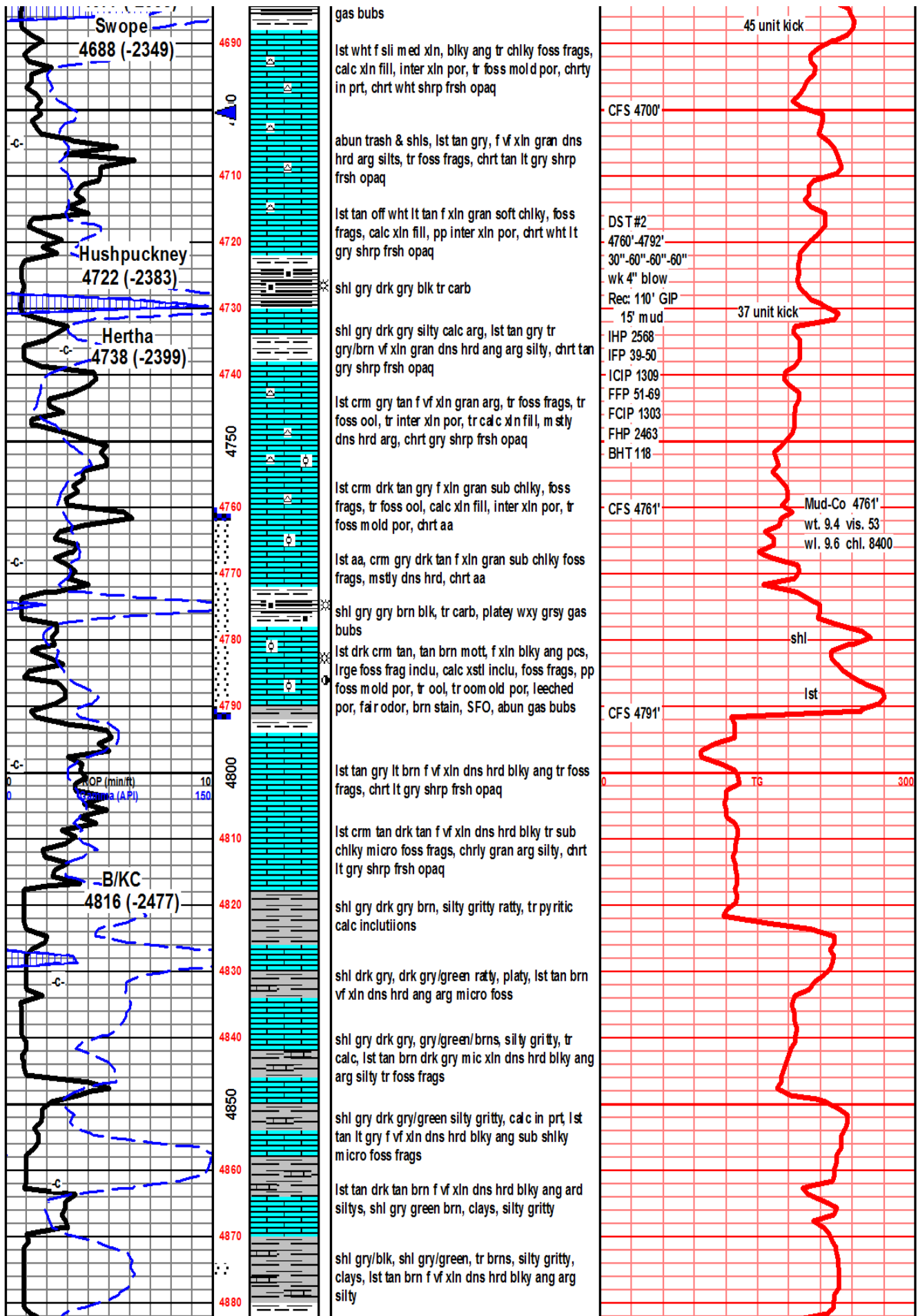
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 Onaga 3514 (-1175)
 Wabaussee 3580 (-1241)
 Heebner 4229 (-1890)
 Toronto 4247 (-1908)
 Douglas Grp 4262 (-1923)
 Haskell 4396 (-2057)
 Stanton 4411 (-2072)
 Plattsburg 4434 (-2095)
 Iola 4580 (-2241)
 Dennis 4661 (-2322)
 Stark 4680 (-2341)
 Swope 4694 (-2355)
 Hushpuckney 4725 (-2386)
 Hertha 4739 (-2400)
 B/Kanss City 4818 (-2479)
 Pawnee 4913 (-2574)
 Cherokee Grp 4961 (-2622)
 Mississippi Unc. 5031 (-2692)
 Warsaw 5044 (-2705)
 Osage 5085 (-2746)
 Compton 5244 (-2905)
 LTD 5302 (-2963)

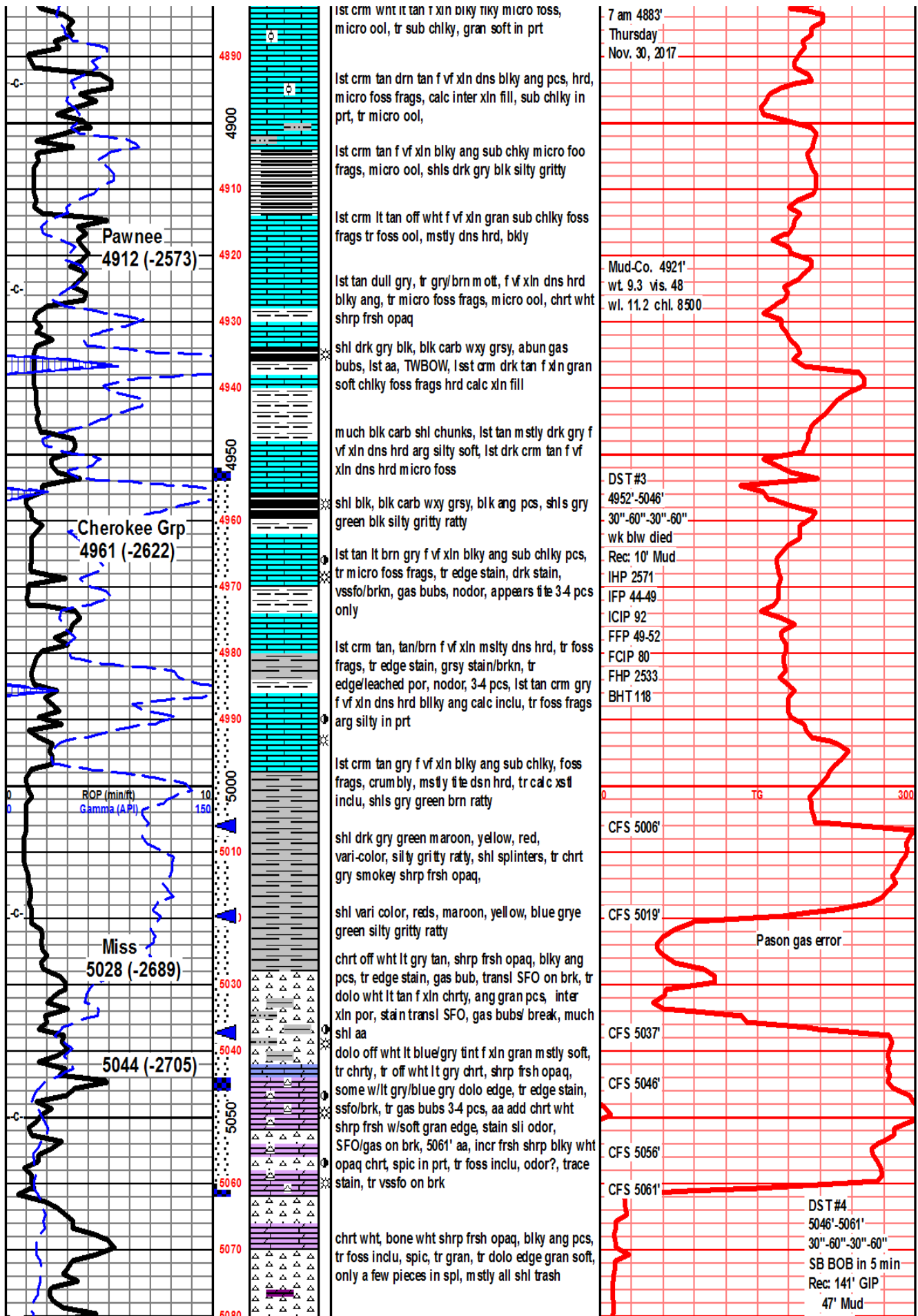


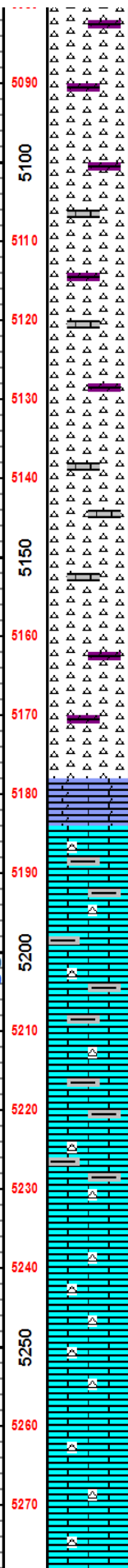
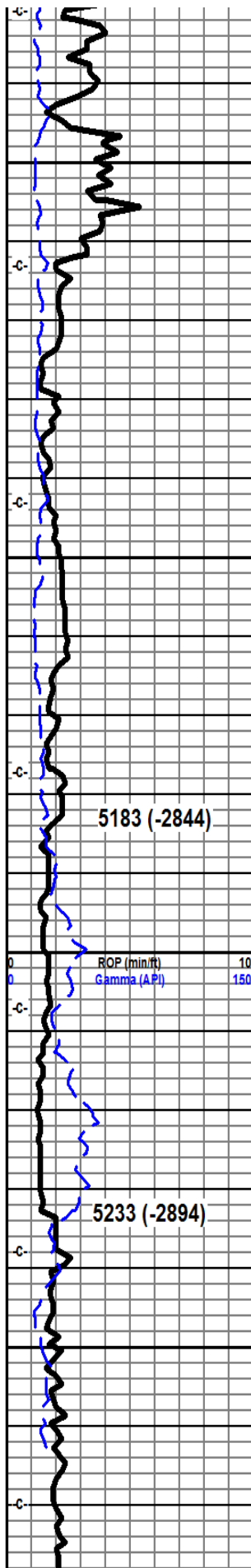












chrt wht off wht boney, soft gran sli chiky limy
trip text, chrt wht oof wht shrp frsh opa, blk
ang shrp edges

chrt wht, tr boney, shrp frsh blk with weath
gran soft trip text edge, inter gran por

chrt wht off wht shrp frsh opa spic, blkky ang
shrp pcs, chrt wht bone wht gran weath sli trip
text/edges

chrt wht off wht shrp frsh opa blkky ang pcs,
chrt wht bone wht gran weath text, trip text, gran
soft chiky edges, 1st wht off wht f vln gran soft
chiky

chrt wht shrp frsh opa, shrp ang pcs, tr spic, tr
gran weath text edge, tr gran trip text edge, tr
dolo wht off wht f xln gran suc text, chrt in prt

chrt wht shr frsh opa, shrp blkky ang pcs,
w/gran weath trip text, tr chiky soft crumbly,
dolo off wht f xln gran suc text, inter xln por, tr
glau, chrt

chrt wht shrp frsh opa, blkky ang shrp pcs,
w/weath text edge, sli trip text edge, soft crumbly
sli soft chalky edge, 1st/dolo wht tan lt gry f xln
blkky ang gran suc text in prt

chrt aa, shl gry brn/red, red calc shl w/wht calc
inclu, dolo lt gry tan f vln gran soft suc text

chrt dolo chrt aa, shl dkr gry brn, brn, calc
limy, red gritty, w/1st calc inclu soft mushy, shl
gry brn red maroon

chrt aa, shl dkr gry blk, hrd calc, drk brn/red soft
mushy, red clay/shl w/wht 1st calc inclu, shl brn
maroon

aa, 1st gry brn red, f vln gran gritty silty, arg,
shl gry green blk, shl lt gry lt green silty micro sd
grns gritty silty soft

shl drk gry/lt green silty gritty calc, soft mushy,
dolo lt gry/grn vln/grnd gritty silty, micro
sandy in prt

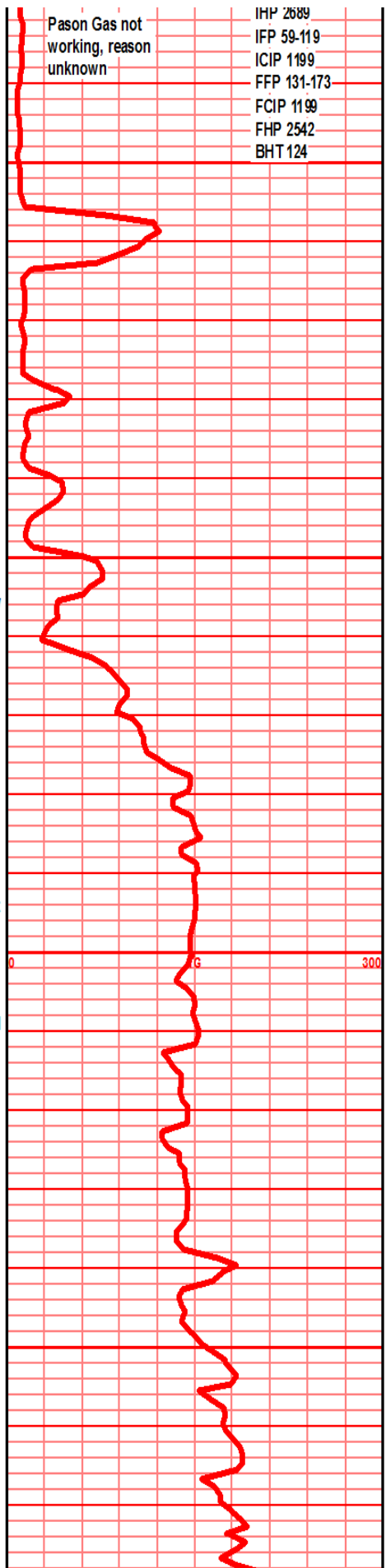
shl aa, shl gry drk gry blk, tr platy ang pcs, tr
silty gritty

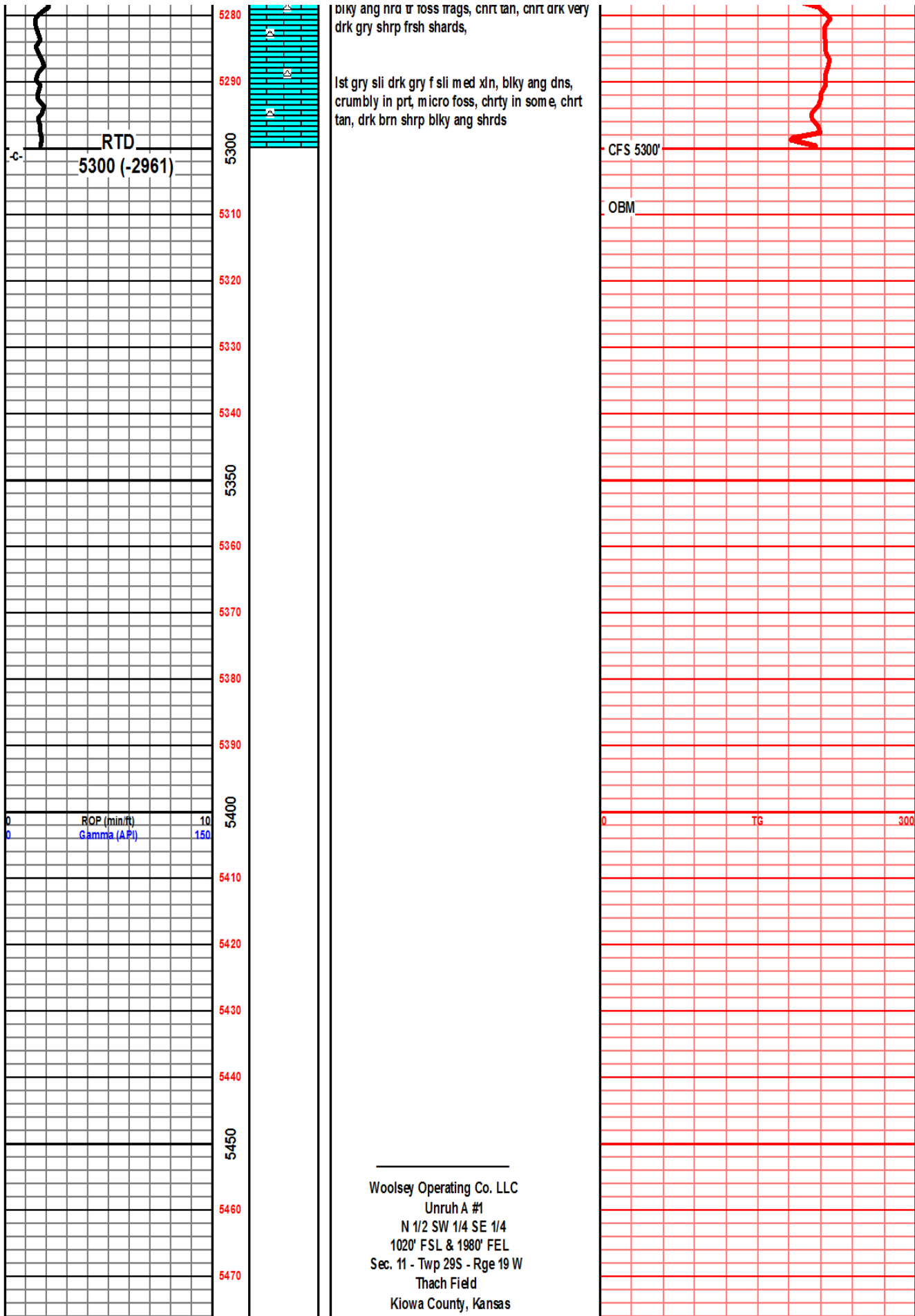
flood wht lt tan shrp frsh opa chrt, shrp ang
blkky, 1st wht off wht tan f sli med xln foss frags,
chrt inclu, soft crumbly

1st wht off wht tan f sli med xln blkky ang soft
crumbly foss inclu, chrt, chrt wht shrp frsh
foss, 1st edge

1st drk crm lt gry f sli med xln gran crumbly blkky
soft, tr foss frag imbeds, chrt wht tan shrp frsh

1st tan bec drker gry f xln bec sli med xln, dns





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