LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name:	**HERMAN L. LOEB LLC. Banta F #120**		
Location:	**SE NW SE SE Sec. 20, T27S, R18W, Kiowa Co., Kansas**		
License Number:	**15-097-21747-00-00**	**Region:**	**Wildcat**
Spud Date:	**2/7/13**	**Drilling Completed:**	**2/17/13**
Surface Coordinates:	**840' FSL, 665' FEL, 665' FEL**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**2,186'**	**K.B. Elevation (ft):**	**2,199'**
Logged Interval (ft):	**3,200' To: 4,877'**	**Total Depth (ft):**	**4,877'**
Formation:	**Kinderhook**		
Type of Drilling Fluid:	**Native Mud To 3,092' and Chemical Gel To RTD**		

OPERATOR

Company: Herman L. Loeb LLC.
Address: PO Box 838
Lawrenceville IL 62439
Phone: 812-453-0385

GEOLOGIST

Name: Jame R. Hall Well Site Supervision
Company: Black Gold Petroleum
Address: 5530 N. Sedgwick
Wichita, Kansas 67204-1828
316-838-2574

Comments

Drilling contractor: Sterling Drilling, Rig #5, Tool Pusher: Alan Loftis.

Surface Casing: 8 5/8" set at 563' w/350sx, cement.
Cement did circulate.

Production Casing: 5 1/2", set on 2/18/13, cemented w/200sx 50/50 poz.

Prior to DST #1 @ 4,404' pipe strap 0.03' long to the board.
Prior to DST #2 @ 4,770' ran survey, see information below.

At 4,470' stopped drilling, to work on gas equipment. Changed out the filament on the hot wire and chromatograph and recalibrated the equipment. The chromatogrpah filament was bad, but hotwire could have been reading ok, through 4,405 thru 4,454' (mud contaminated with gas and oil).

Deviation Surveys: 0.75 @ 568', 1.5 @ 4,404', 1.0 @ 4,770'.

Bit Record:
#1 12 1/4" out @ 568'.
#2 7 7/8" JZ HA20-Q in @ 568', out @ 4,877', made 4,309' in 109.5hrs.

Drilling time commenced: @ 3,300'. Minimum 10' wet and dry samples commenced: @ 3,270' to RTD. Samples delivered to Kansas Geological Sample Library at Wichita, Kansas.

Gas Detector: Serling Rig unit # 5. Tooke Daq Drilling time and Hotwire gas values were placed on this Plotted Sample Strip log.

Mud System: Mud-Co/Service Mud. Chemical Gel system @ 3,092', Mud Engineer: Brad Bortz.

DST Co. Trilobite Testing Co., Tester: Chris Staats, (Pratt Kansas).

Open Hole Logs: Halliburton. (Liberal Kansas), Logging Engineer: J Bollom.
DIL, CDL/CNL/PE, MEL/SON.

E-Log Formation Tops: Stotler 3,379 (-1180), Howard 3,592 (-1393), Heebner 4,028 (-1829), Brown Lm 4,182 (-1983), Lansing "A" 4,190 (-1991), L/KC "H" 4,348 (-2149), K/C "I" 4,396 (-2197), Swope 4,494 (-2295), Hertha 4,541 (-2342), B/KC 4,576 (-2377), Marmaton 4,614 (-2415), Pawnee 4,663 (-2464), Labette Sh 4,686 (-2487), Cherokee Sh 4,701 (-2502), Mississippian 4,744 (-2545), Kinderhook Sh 4,780 (-2581), Kinderhook Sand 4,812 (-2613).

Note: The open hole log gamma ray and caliper curves have been placed on this sample strip log, for better correlation. No stip log shift was necessary, due to close correlation with the open hole logs.

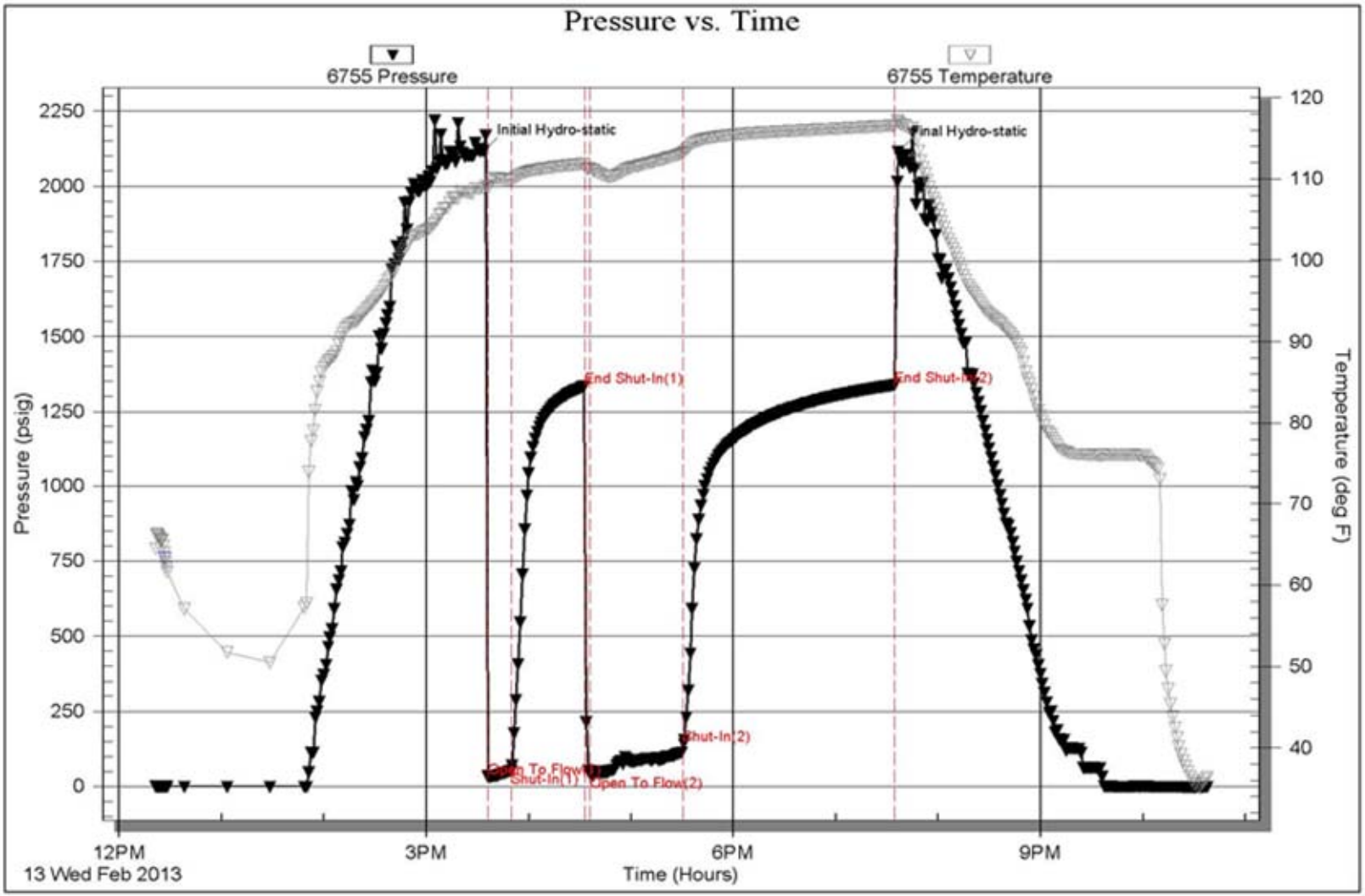
DSTs

DST #1 Kansas City "I" 4,386' to 4,404' (18' anchor), 15,45,60,120, IH 2117, IF 30-52 (BOB 2min), ISI 1332 (no blow), FF 40-139 (BOB 30sec, GTS 10min TSTM), FSI 1337 (weak blow), FH 2113, Rec; 4,375' GIP, 150' gasy mud (40%gas,60%mud), 180' gasy oil & water cut mud (20%gas,40%oil,20%water,20%mud), BHT 118F, Chl 80,000, Rwa 0.18 @ 38F (0.058 @ BHT).

DST #2 (Mississippi Chert), 4,723' to 4,770' (47'), 15,45,45,90, IH 2270, IF 40-63 (weak 4inch blow), ISI 260, FF 109-152 (fair 5inch blow), FSI 365, FH 2270, Rec: 620' gas in pipe, 280' gassy mud (2%gas, 98%mud), BHT 125F.

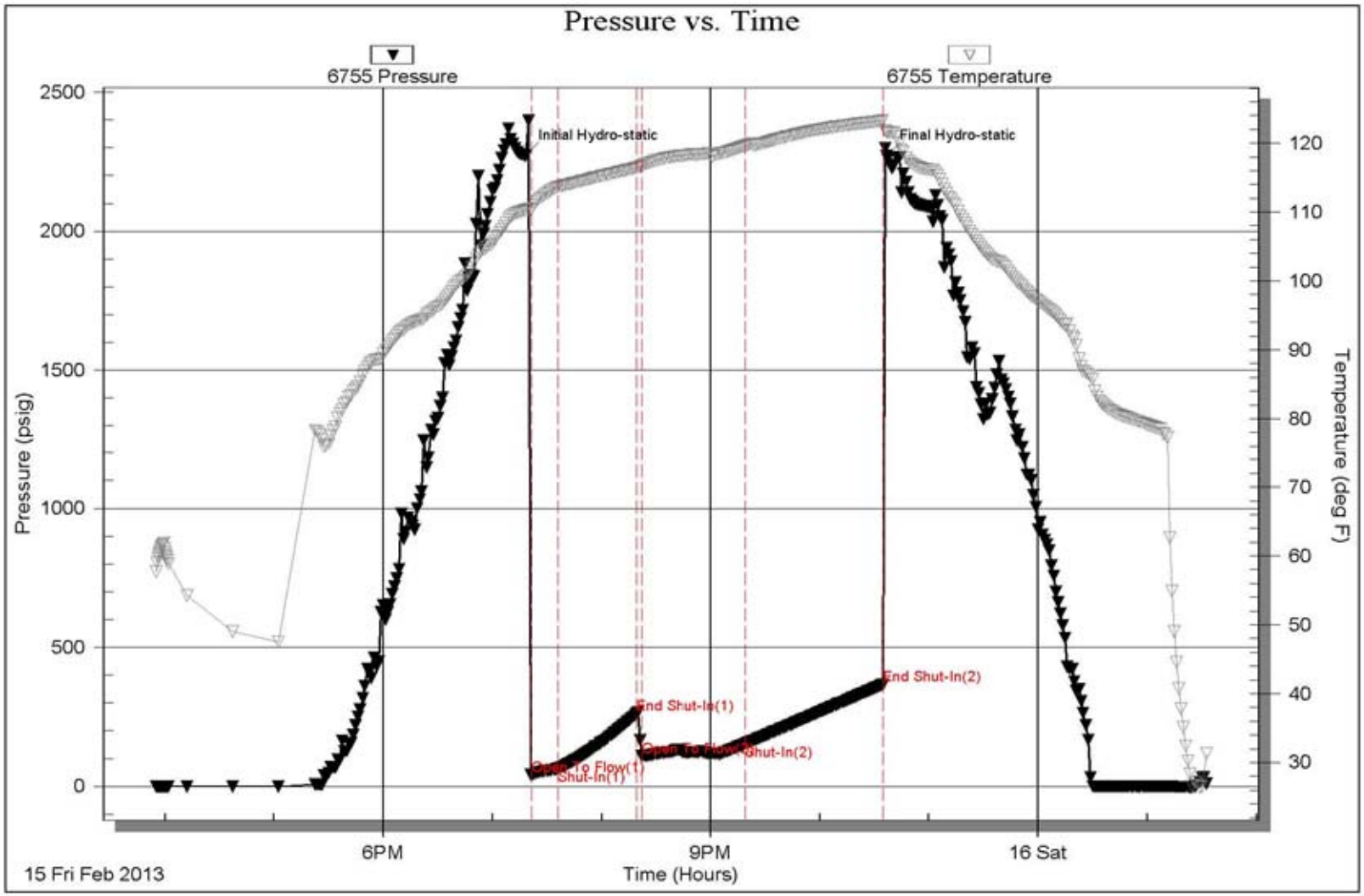
DST #3 Kinderhook Sand, 4,819' to 4,837' (18'), 15-45-30-90, IH 2282, IF 18-39 (1inch blow), ISI 1317, FF 38-65 (2inch blow), FSI 1300, FH 2236, Rec; 80' muddy water (80%water,20%mud), BHT 125, Rwa 0.30 @ 42F (0.10 @ BHT), Chl 40,000ppm (mud 5,000ppm).

Serial #: 6755 **Inside** Herman L Loeb LLC Banta F # 1-20 DST Test Number: 1



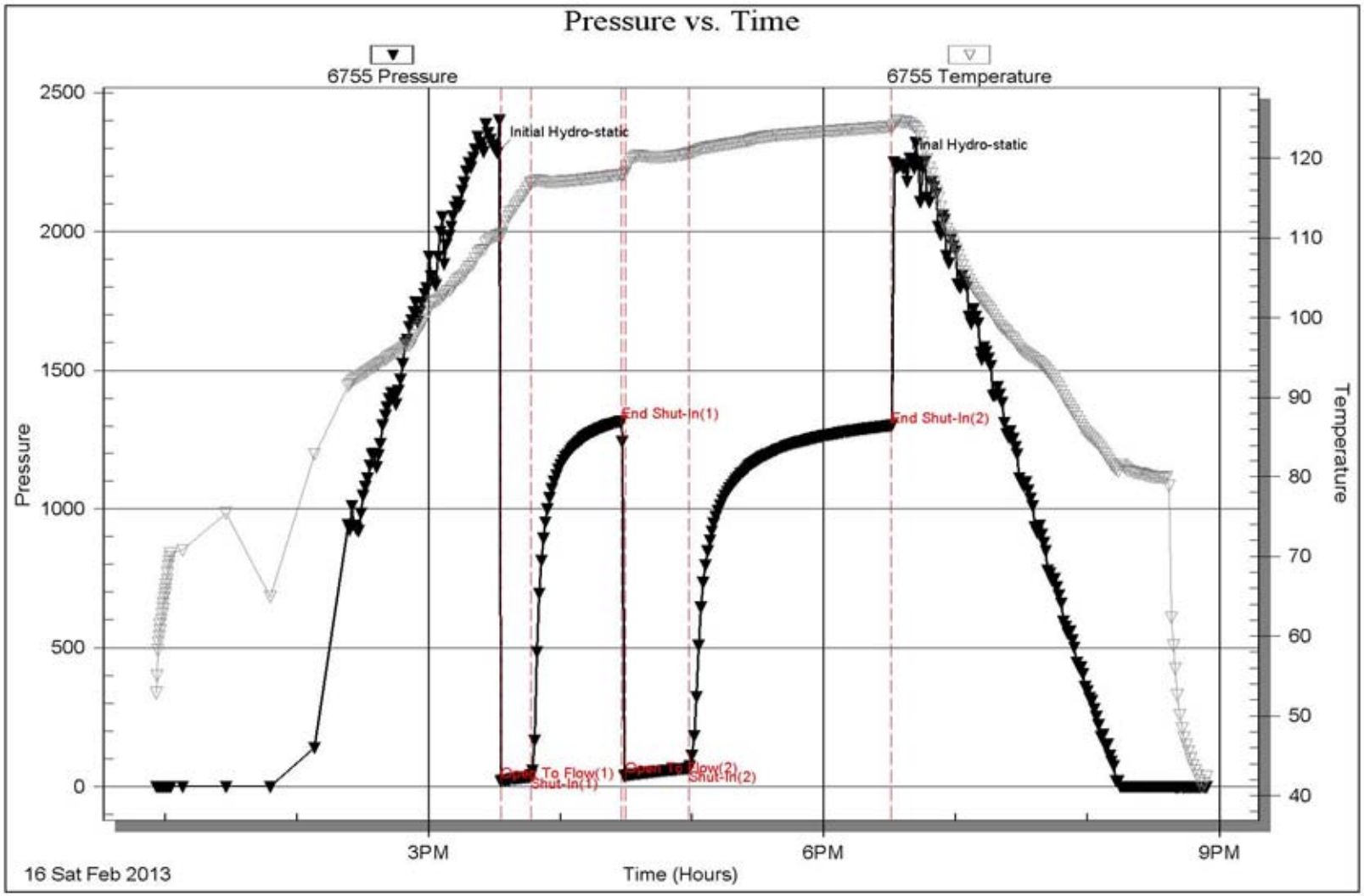
Trilobite Testing, Inc Ref. No: 50936 Printed: 2013.02.14 @ 07:21:59

Serial #: 6755 **Inside** Herman L Loeb LLC Banta F # 1-20 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50937 Printed: 2013.02.16 @ 06:34:04

Serial #: 6755 **Inside** Herman L Loeb LLC Banta F # 1-20 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50938 Printed: 2013.02.16 @ 21:53:38

Other

CARBONATE CLASSIFICATION:
AFTER DUNHAM: GRAIN; any fossil, fossil fragment, sand grain, or other rock fragment within the rock. MUDSTONE; muddy carbonate rocks containing less than 10% grains. WACKESTONE; mud supported carbonate rocks with more than 10% grains. PACKSTONE; grain supported muddy carbonate rocks. GRAINSTONE; mud free carbonate rock, grain supported. BOUNDSTONE; carbonate rock bound together at deposition (coral, etc.). CRYSTALLINE CARBONATE; carbonate rock retaining to little of their depositional texture to be classified.

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Sdy dolo
- Shy dolo
- Dol
- Gyp
- Sdy lmst
- Lmst
- Mrlst
- Salt
- Shale
- Sltst
- Ss
- Black sh
- Gry sh
- Shale
- Shysltst
- Sltysh

ACCESSORIES

MINERAL

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Chlorite
- Dol
- Sand
- Slty

FOSSIL

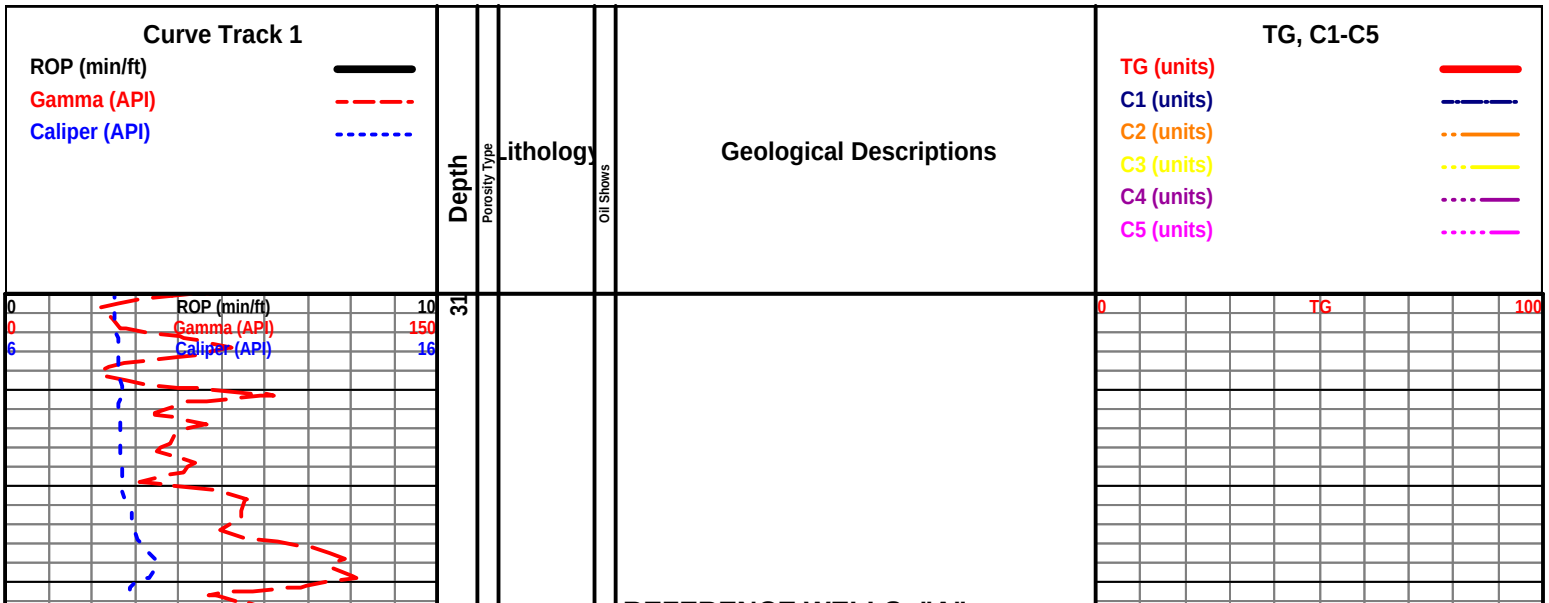
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pelloidal
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

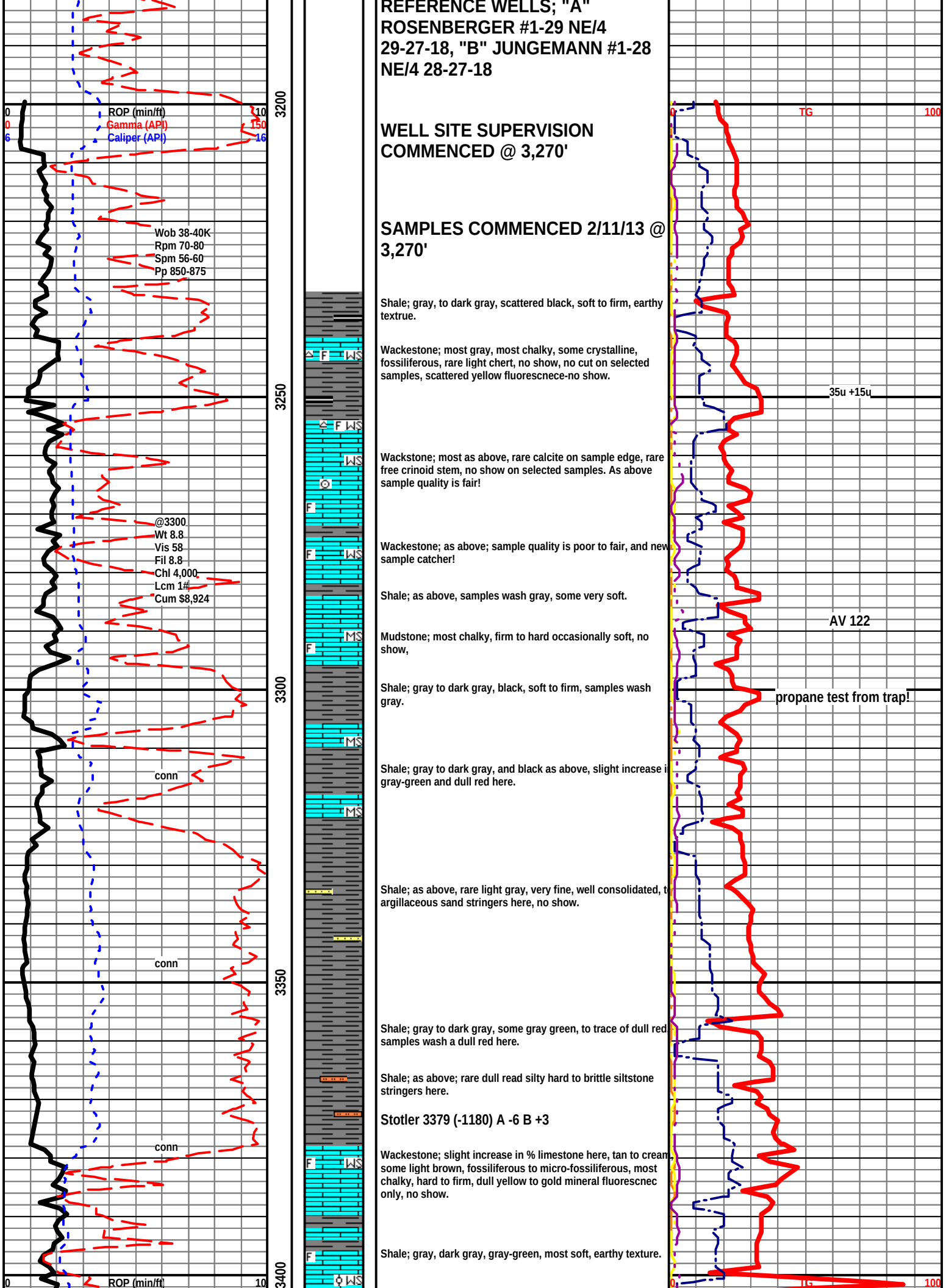
STRINGER

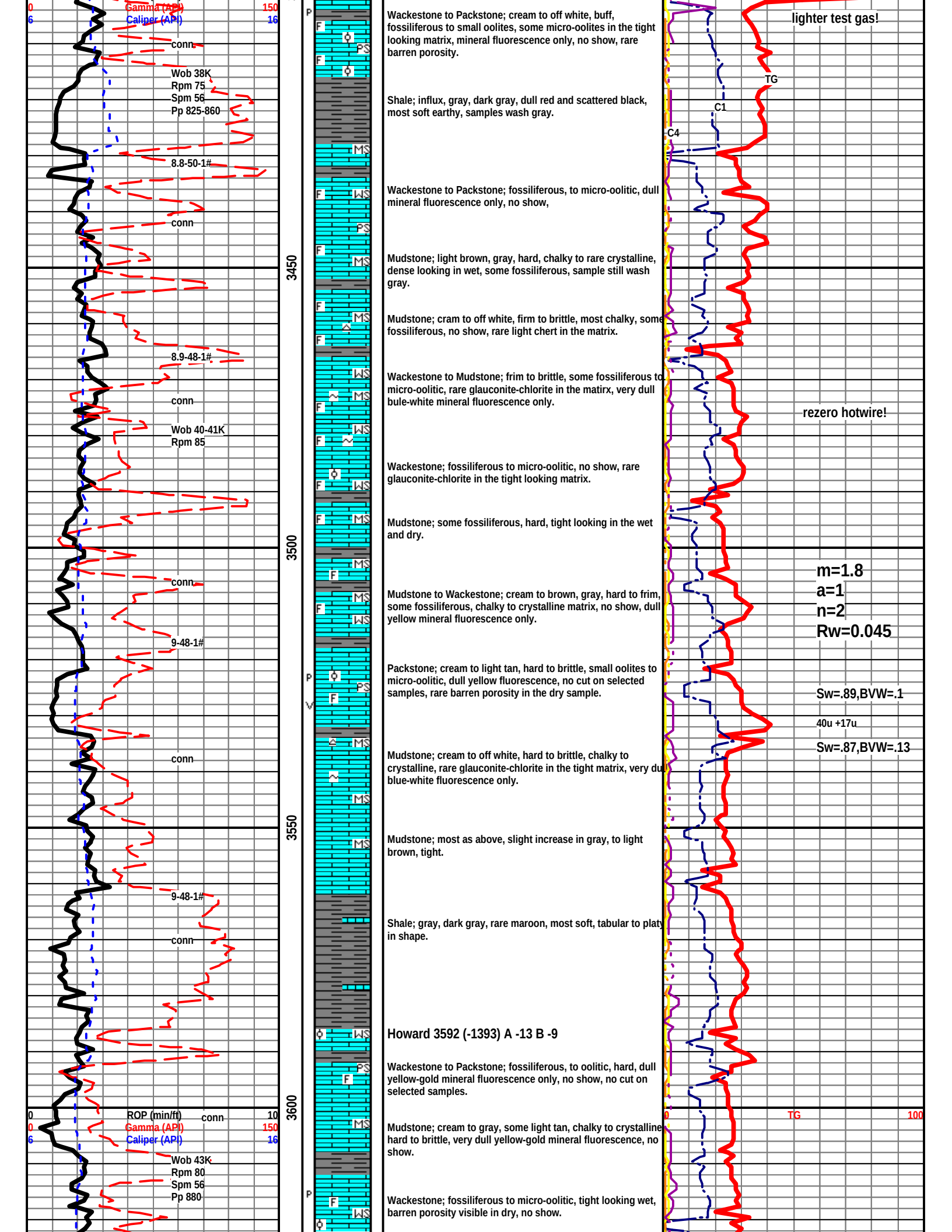
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

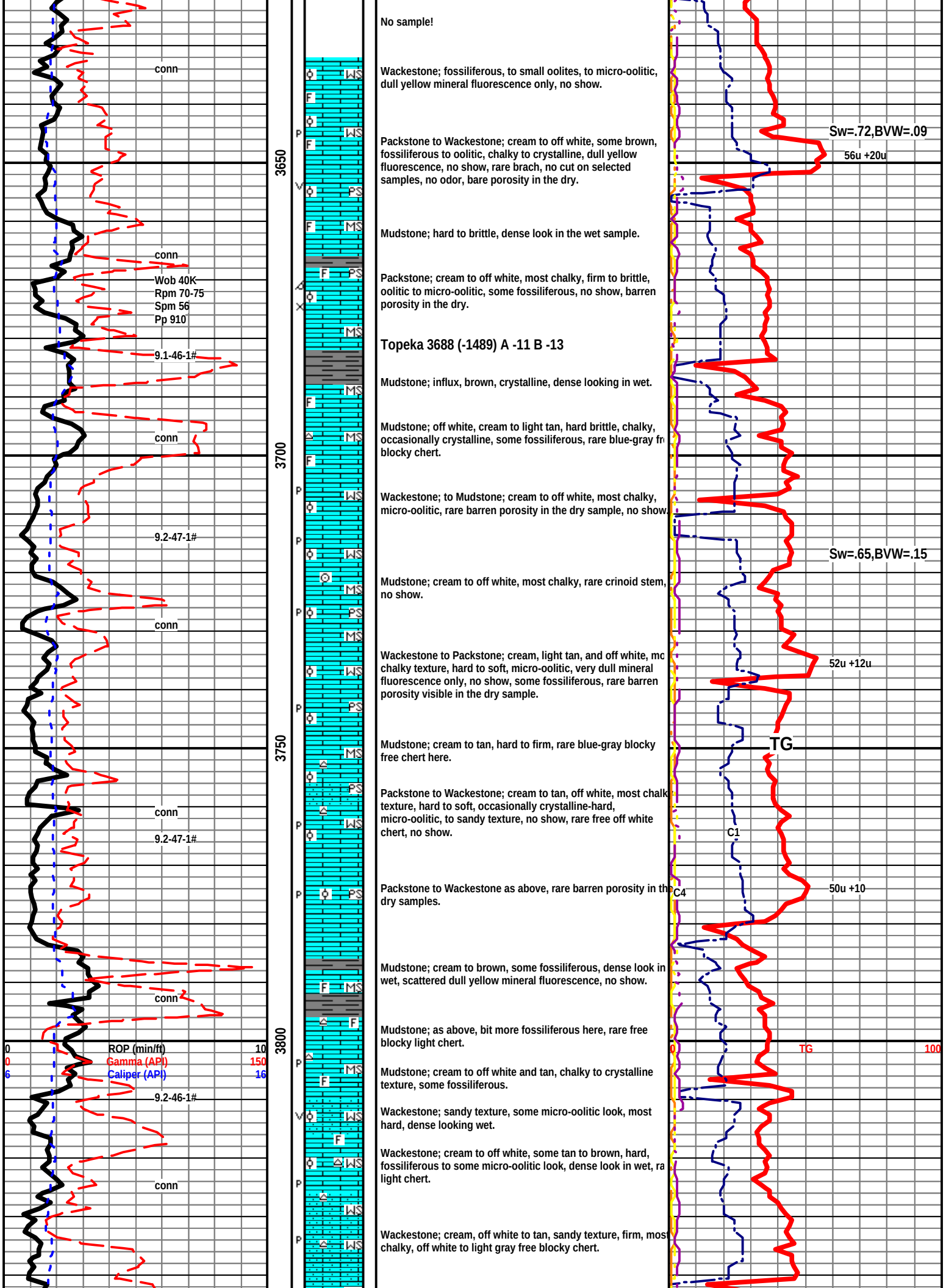
TEXTURE

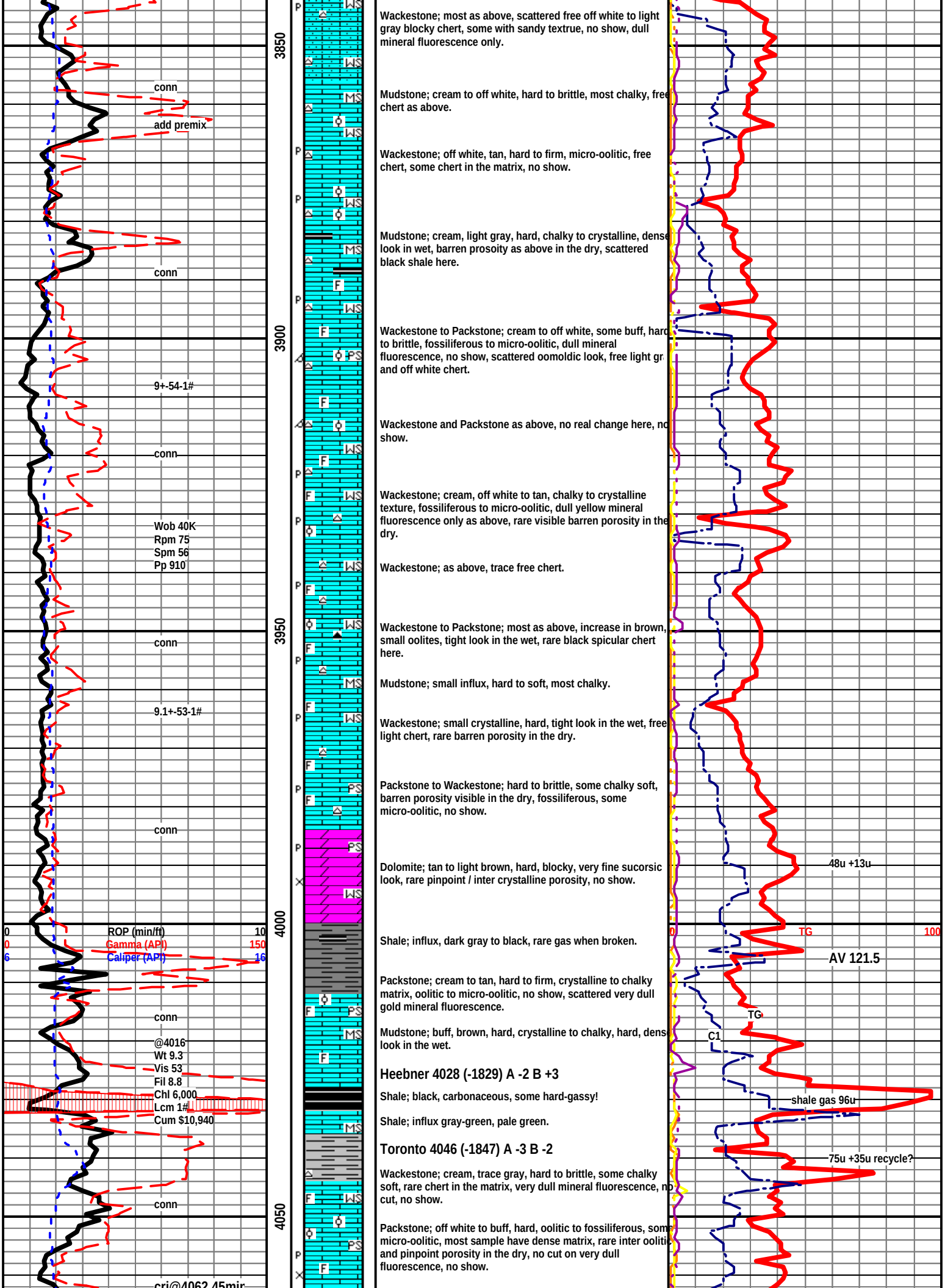
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

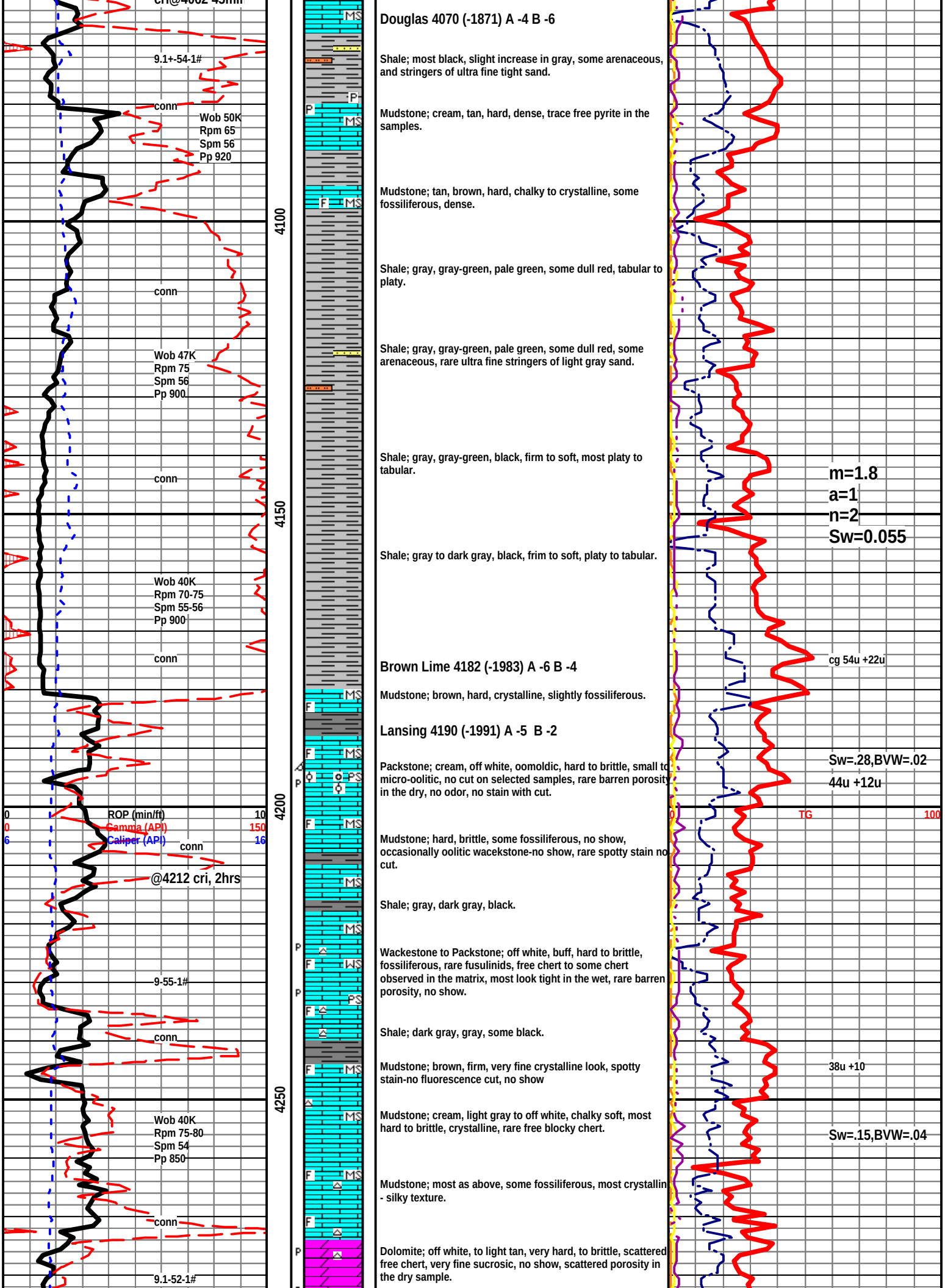


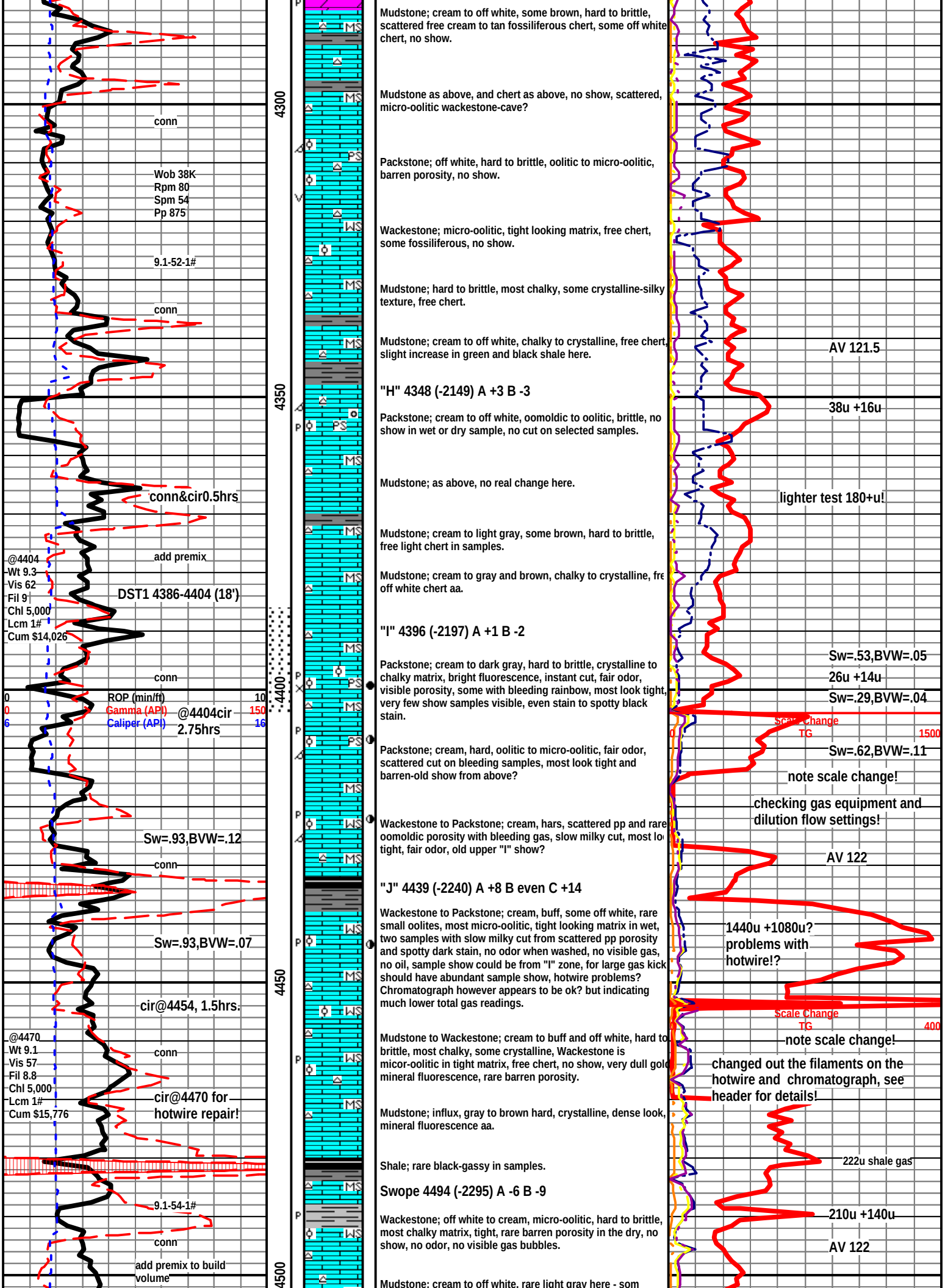

0
ROP (min/ft)
10
0
Gamma (API)
150
6
Caliper (API)
16
3200
Wob 38-40K
Rpm 70-80
Spm 56-60
Pp 850-875
3250
@3300
Wt 8.8
Vis 58
Fil 8.8
Chl 4,000
Lcm 1#
Cum $8,924
3300
conn
conn
3350
conn
0
ROP (min/ft)
10
3400
REFERENCE WELLS; "A" ROSENBERGER #1-29 NE/4 29-27-18, "B" JUNGEMANN #1-28 NE/4 28-27-18
WELL SITE SUPERVISION COMMENCED @ 3,270'
SAMPLES COMMENCED 2/11/13 @ 3,270'
Shale; gray, to dark gray, scattered black, soft to firm, earthy textrue.
Wackestone; most gray, most chalky, some crystalline, fossiliferous, rare light chert, no show, no cut on selected samples, scattered yellow fluorescnece-no show.
Wackstone; most as above, rare calcite on sample edge, rare free crinoid stem, no show on selected samples. As above sample quality is fair!
Wackestone; as above; sample quality is poor to fair, and new sample catcher!
Shale; as above, samples wash gray, some very soft.
Mudstone; most chalky, firm to hard occasionally soft, no show,
Shale; gray to dark gray, black, soft to firm, samples wash gray.
Shale; gray to dark gray, and black as above, slight increase i gray-green and dull red here.
Shale; as above, rare light gray, very fine, well consolidated, t argillaceous sand stringers here, no show.
Shale; gray to dark gray, some gray green, to trace of dull red samples wash a dull red here.
Shale; as above; rare dull read silty hard to brittle siltstone stringers here.
Stotler 3379 (-1180) A -6 B +3
Wackestone; slight increase in % limestone here, tan to crean some light brown, fossiliferous to micro-fossiliferous, most chalky, hard to firm, dull yellow to gold mineral fluorescnec only, no show.
Shale; gray, dark gray, gray-green, most soft, earthy texture.
F
WS
MS
0
TG
100
35u +15u
AV 122
propane test from trap!
0
TG
100

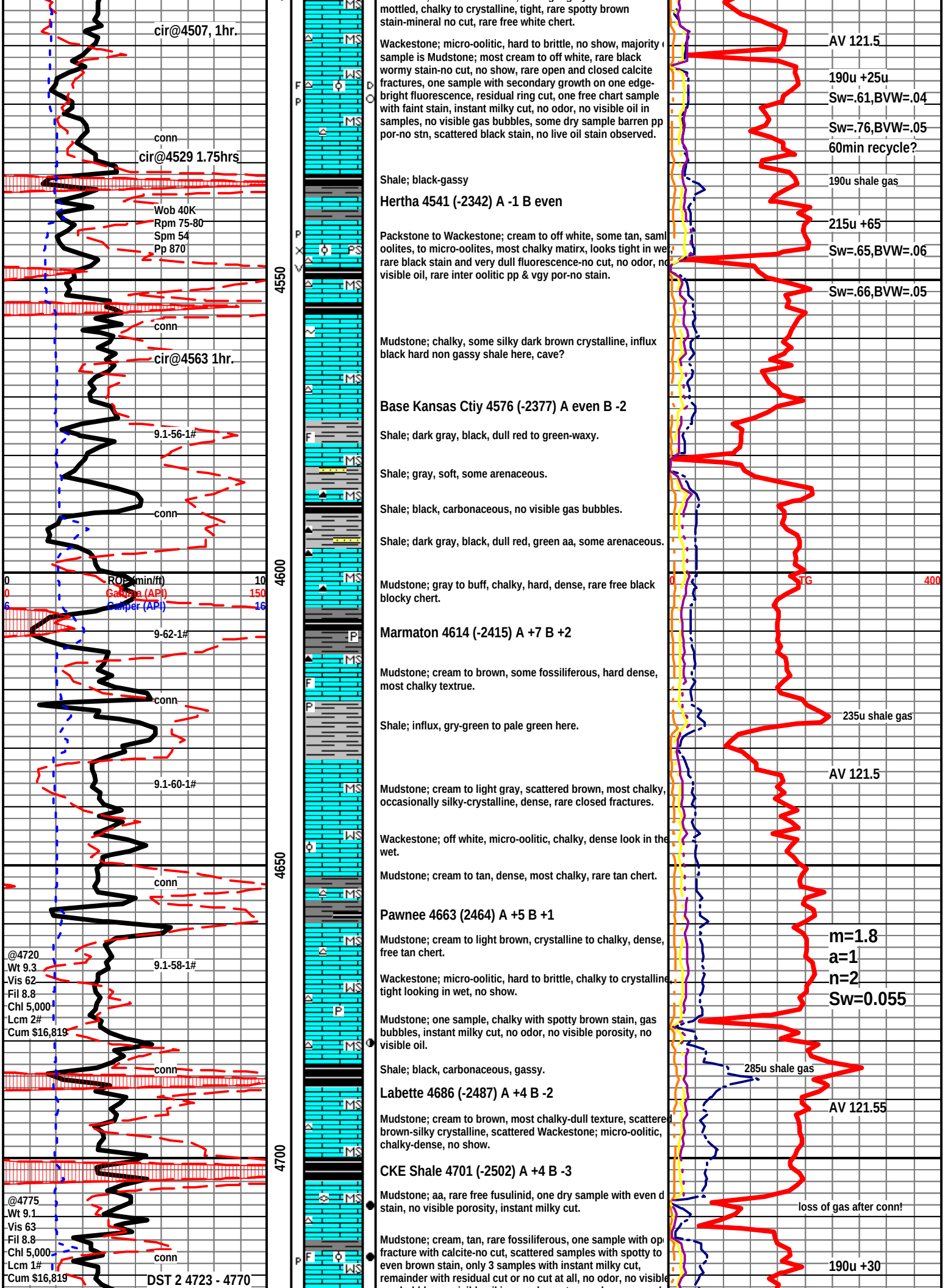

0
Gamma (API)
150
6
Caliper (API)
16
conn
Wob 38K
Rpm 75
Spm 56
Pp 825-860
8.8-50-1#
conn
8.9-48-1#
conn
Wob 40-41K
Rpm 85
conn
9-48-1#
conn
conn
9-48-1#
conn
0
ROP (min/ft)
conn
10
0
Gamma (API)
150
6
Caliper (API)
16
Wob 43K
Rpm 80
Spm 56
Pp 880
3450
3500
3550
3600
Wackestone to Packstone; cream to off white, buff, fossiliferous to small oolites, some micro-oolites in the tight looking matrix, mineral fluorescence only, no show, rare barren porosity.
Shale; influx, gray, dark gray, dull red and scattered black, most soft earthy, samples wash gray.
Wackestone to Packstone; fossiliferous, to micro-oolitic, dull mineral fluorescence only, no show,
Mudstone; light brown, gray, hard, chalky to rare crystalline, dense looking in wet, some fossiliferous, sample still wash gray.
Mudstone; cram to off white, firm to brittle, most chalky, some fossiliferous, no show, rare light chert in the matrix.
Wackestone to Mudstone; frim to brittle, some fossiliferous to micro-oolitic, rare glauconite-chlorite in the matirx, very dull bule-white mineral fluorescence only.
Wackestone; fossiliferous to micro-oolitic, no show, rare glauconite-chlorite in the tight looking matrix.
Mudstone; some fossiliferous, hard, tight looking in the wet and dry.
Mudstone to Wackestone; cream to brown, gray, hard to frim, some fossiliferous, chalky to crystalline matrix, no show, dull yellow mineral fluorescence only.
Packstone; cream to light tan, hard to brittle, small oolites to micro-oolitic, dull yellow fluorescence, no cut on selected samples, rare barren porosity in the dry sample.
Mudstone; cream to off white, hard to brittle, chalky to crystalline, rare glauconite-chlorite in the tight matrix, very dull blue-white fluorescence only.
Mudstone; most as above, slight increase in gray, to light brown, tight.
Shale; gray, dark gray, rare maroon, most soft, tabular to platy in shape.
Howard 3592 (-1393) A -13 B -9
Wackestone to Packstone; fossiliferous, to oolitic, hard, dull yellow-gold mineral fluorescence only, no show, no cut on selected samples.
Mudstone; cream to gray, some light tan, chalky to crystalline hard to brittle, very dull yellow-gold mineral fluorescence, no show.
Wackestone; fossiliferous to micro-oolitic, tight looking wet, barren porosity visible in dry, no show.
lighter test gas!
TG
C1
C4
rezero hotwire!
m=1.8
a=1
n=2
Rw=0.045
Sw=.89,BVW=.1
40u +17u
Sw=.87,BVW=.13
0
TG
100

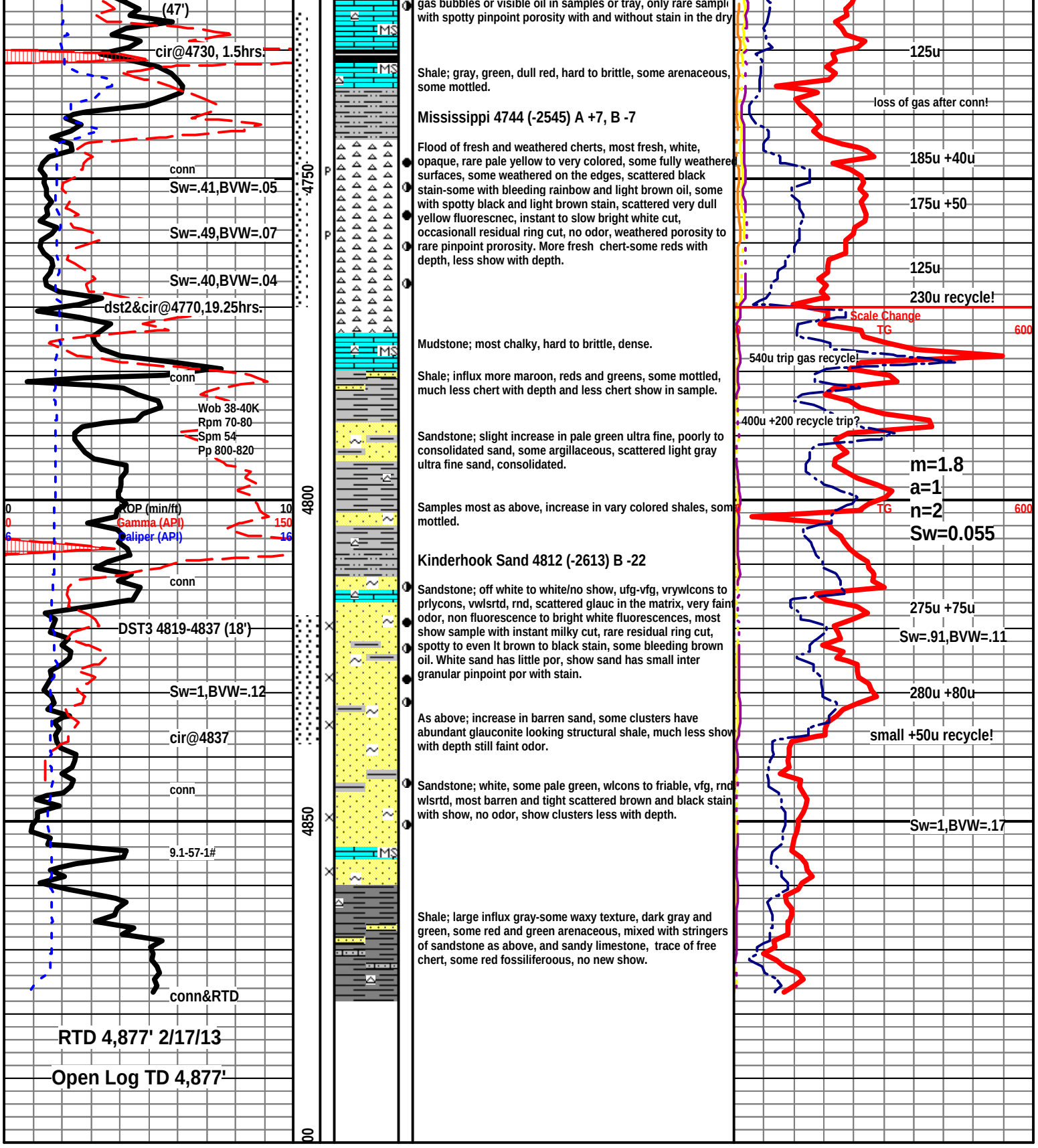

conn
Wob 40K
Rpm 70-75
Spm 56
Pp 910
9.1-46-1#
conn
9.2-47-1#
conn
conn
9.2-47-1#
conn
9.2-46-1#
conn
0
ROP (min/ft)
10
0
Gamma (API)
150
6
Caliper (API)
16
3650
3700
3750
3800
No sample!
Wackestone; fossiliferous, to small oolites, to micro-oolitic, dull yellow mineral fluorescence only, no show.
Packstone to Wackestone; cream to off white, some brown, fossiliferous to oolitic, chalky to crystalline, dull yellow fluorescence, no show, rare brach, no cut on selected samples, no odor, bare porosity in the dry.
Mudstone; hard to brittle, dense look in the wet sample.
Packstone; cream to off white, most chalky, firm to brittle, oolitic to micro-oolitic, some fossiliferous, no show, barren porosity in the dry.
Topeka 3688 (-1489) A -11 B -13
Mudstone; influx, brown, crystalline, dense looking in wet.
Mudstone; off white, cream to light tan, hard brittle, chalky, occasionally crystalline, some fossiliferous, rare blue-gray fr blocky chert.
Wackestone; to Mudstone; cream to off white, most chalky, micro-oolitic, rare barren porosity in the dry sample, no show
Mudstone; cream to off white, most chalky, rare crinoid stem, no show.
Wackestone to Packstone; cream, light tan, and off white, mo chalky texture, hard to soft, micro-oolitic, very dull mineral fluorescence only, no show, some fossiliferous, rare barren porosity visible in the dry sample.
Mudstone; cream to tan, hard to firm, rare blue-gray blocky free chert here.
Packstone to Wackestone; cream to tan, off white, most chalk texture, hard to soft, occasionally crystalline-hard, micro-oolitic, to sandy texture, no show, rare free off white chert, no show.
Packstone to Wackestone as above, rare barren porosity in th dry samples.
Mudstone; cream to brown, some fossiliferous, dense look in wet, scattered dull yellow mineral fluorescence, no show.
Mudstone; as above, bit more fossiliferous here, rare free blocky light chert.
Mudstone; cream to off white and tan, chalky to crystalline texture, some fossiliferous.
Wackestone; sandy texture, some micro-oolitic look, most hard, dense looking wet.
Wackestone; cream to off white, some tan to brown, hard, fossiliferous to some micro-oolitic look, dense look in wet, ra light chert.
Wackestone; cream, off white to tan, sandy texture, firm, most chalky, off white to light gray free blocky chert.
Sw=.72,BVW=.09
56u +20u
Sw=.65,BVW=.15
52u +12u
TG
C1
C4
50u +10
0
TG
100


3850
3900
3950
4000
4050
conn
add premix
conn
9+-54-1#
conn
Wob 40K
Rpm 75
Spm 56
Pp 910
conn
9.1+-53-1#
conn
conn
@4016
Wt 9.3
Vis 53
Fil 8.8
Chl 6,000
Lcm 1#
Cum $10,940
conn
cri@4062 45mir
0
ROP (min/ft)
10
0
Gamma (API)
150
6
Caliper (API)
16
Wackestone; most as above, scattered free off white to light gray blocky chert, some with sandy textrue, no show, dull mineral fluorescence only.
Mudstone; cream to off white, hard to brittle, most chalky, free chert as above.
Wackestone; off white, tan, hard to firm, micro-oolitic, free chert, some chert in the matrix, no show.
Mudstone; cream, light gray, hard, chalky to crystalline, dense look in wet, barren prosoity as above in the dry, scattered black shale here.
Wackestone to Packstone; cream to off white, some buff, hard to brittle, fossiliferous to micro-oolitic, dull mineral fluorescence, no show, scattered oomoldic look, free light gr and off white chert.
Wackestone and Packstone as above, no real change here, no show.
Wackestone; cream, off white to tan, chalky to crystalline texture, fossiliferous to micro-oolitic, dull yellow mineral fluorescence only as above, rare visible barren porosity in the dry.
Wackestone; as above, trace free chert.
Wackestone to Packstone; most as above, increase in brown, small oolites, tight look in the wet, rare black spicular chert here.
Mudstone; small influx, hard to soft, most chalky.
Wackestone; small crystalline, hard, tight look in the wet, free light chert, rare barren porosity in the dry.
Packstone to Wackestone; hard to brittle, some chalky soft, barren porosity visible in the dry, fossiliferous, some micro-oolitic, no show.
Dolomite; tan to light brown, hard, blocky, very fine sucorsic look, rare pinpoint / inter crystalline porosity, no show.
Shale; influx, dark gray to black, rare gas when broken.
Packstone; cream to tan, hard to firm, crystalline to chalky matrix, oolitic to micro-oolitic, no show, scattered very dull gold mineral fluorescence.
Mudstone; buff, brown, hard, crystalline to chalky, hard, dens look in the wet.
Heebner 4028 (-1829) A -2 B +3
Shale; black, carbonaceous, some hard-gassy!
Shale; influx gray-green, pale green.
Toronto 4046 (-1847) A -3 B -2
Wackestone; cream, trace gray, hard to brittle, some chalky soft, rare chert in the matrix, very dull mineral fluorescence, no cut, no show.
Packstone; off white to buff, hard, oolitic to fossiliferous, som micro-oolitic, most sample have dense matrix, rare inter oolitic and pinpoint porosity in the dry, no cut on very dull fluorescence, no show.
48u +13u
0
TG
100
AV 121.5
TG
C1
shale gas 96u
75u +35u recycle?


cri@4062 45min
9.1+-54-1#
conn
Wob 50K
Rpm 65
Spm 56
Pp 920
conn
Wob 47K
Rpm 75
Spm 56
Pp 900
conn
Wob 40K
Rpm 70-75
Spm 55-56
Pp 900
conn
0
ROP (min/ft)
10
0
Gamma (API)
150
6
Caliper (API)
16
conn
@4212 cri, 2hrs
9-55-1#
conn
Wob 40K
Rpm 75-80
Spm 54
Pp 850
conn
9.1-52-1#
4100
4150
4200
4250
Douglas 4070 (-1871) A -4 B -6
Shale; most black, slight increase in gray, some arenaceous, and stringers of ultra fine tight sand.
Mudstone; cream, tan, hard, dense, trace free pyrite in the samples.
Mudstone; tan, brown, hard, chalky to crystalline, some fossiliferous, dense.
Shale; gray, gray-green, pale green, some dull red, tabular to platy.
Shale; gray, gray-green, pale green, some dull red, some arenaceous, rare ultra fine stringers of light gray sand.
Shale; gray, gray-green, black, firm to soft, most platy to tabular.
m=1.8
a=1
n=2
Sw=0.055
Shale; gray to dark gray, black, frim to soft, platy to tabular.
Brown Lime 4182 (-1983) A -6 B -4
cg 54u +22u
Mudstone; brown, hard, crystalline, slightly fossiliferous.
Lansing 4190 (-1991) A -5 B -2
Packstone; cream, off white, oomoldic, hard to brittle, small to micro-oolitic, no cut on selected samples, rare barren porosity in the dry, no odor, no stain with cut.
Sw=.28,BVW=.02
44u +12u
0
TG
100
Mudstone; hard, brittle, some fossiliferous, no show, occasionally oolitic wacekstone-no show, rare spotty stain no cut.
Shale; gray, dark gray, black.
Wackestone to Packstone; off white, buff, hard to brittle, fossiliferous, rare fusulinids, free chert to some chert observed in the matrix, most look tight in the wet, rare barren porosity, no show.
Shale; dark gray, gray, some black.
Mudstone; brown, firm, very fine crystalline look, spotty stain-no fluorescence cut, no show
38u +10
Mudstone; cream, light gray to off white, chalky soft, most hard to brittle, crystalline, rare free blocky chert.
Sw=.15,BVW=.04
Mudstone; most as above, some fossiliferous, most crystallin - silky texture.
Dolomite; off white, to light tan, very hard, to brittle, scattered free chert, very fine sucrosic, no show, scattered porosity in the dry sample.


4300
4350
4400
4450
4500
conn
Wob 38K
Rpm 80
Spm 54
Pp 875
9.1-52-1#
conn
conn&cir0.5hrs
@4404
Wt 9.3
Vis 62
Fil 9
Chl 5,000
Lcm 1#
Cum $14,026
add premix
DST1 4386-4404 (18')
conn
0
0
6
ROP (min/ft)
Gamma (API)
Caliper (API)
10
150
16
@4404cir
2.75hrs
Sw=.93,BVW=.12
conn
Sw=.93,BVW=.07
cir@4454, 1.5hrs.
@4470
Wt 9.1
Vis 57
Fil 8.8
Chl 5,000
Lcm 1#
Cum $15,776
conn
cir@4470 for
hotwire repair!
9.1-54-1#
conn
add premix to build
volume
Mudstone; cream to off white, some brown, hard to brittle, scattered free cream to tan fossiliferous chert, some off white chert, no show.
Mudstone as above, and chert as above, no show, scattered, micro-oolitic wackestone-cave?
Packstone; off white, hard to brittle, oolitic to micro-oolitic, barren porosity, no show.
Wackestone; micro-oolitic, tight looking matrix, free chert, some fossiliferous, no show.
Mudstone; hard to brittle, most chalky, some crystalline-silky texture, free chert.
Mudstone; cream to off white, chalky to crystalline, free chert, slight increase in green and black shale here.
"H" 4348 (-2149) A +3 B -3
Packstone; cream to off white, oomoldic to oolitic, brittle, no show in wet or dry sample, no cut on selected samples.
Mudstone; as above, no real change here.
Mudstone; cream to light gray, some brown, hard to brittle, free light chert in samples.
Mudstone; cream to gray and brown, chalky to crystalline, fre
off white chert aa.
"I" 4396 (-2197) A +1 B -2
Packstone; cream to dark gray, hard to brittle, crystalline to chalky matrix, bright fluorescence, instant cut, fair odor, visible porosity, some with bleeding rainbow, most look tight, very few show samples visible, even stain to spotty black stain.
Packstone; cream, hard, oolitic to micro-oolitic, fair odor, scattered cut on bleeding samples, most look tight and barren-old show from above?
Wackestone to Packstone; cream, hars, scattered pp and rare
oomoldic porosity with bleeding gas, slow milky cut, most lo
tight, fair odor, old upper "I" show?
"J" 4439 (-2240) A +8 B even C +14
Wackestone to Packstone; cream, buff, some off white, rare small oolites, most micro-oolitic, tight looking matrix in wet, two samples with slow milky cut from scattered pp porosity and spotty dark stain, no odor when washed, no visible gas, no oil, sample show could be from "I" zone, for large gas kick should have abundant sample show, hotwire problems? Chromatograph however appears to be ok? but indicating much lower total gas readings.
Mudstone to Wackestone; cream to buff and off white, hard to brittle, most chalky, some crystalline, Wackestone is micor-oolitic in tight matrix, free chert, no show, very dull gold mineral fluorescence, rare barren porosity.
Mudstone; influx, gray to brown hard, crystalline, dense look, mineral fluorescence aa.
Shale; rare black-gassy in samples.
Swope 4494 (-2295) A -6 B -9
Wackestone; off white to cream, micro-oolitic, hard to brittle, most chalky matrix, tight, rare barren porosity in the dry, no show, no odor, no visible gas bubbles.
Mudstone; cream to off white, rare light gray here - som
AV 121.5
38u +16u
lighter test 180+u!
Sw=.53,BVW=.05
26u +14u
Sw=.29,BVW=.04
Scale Change
TG
0
1500
Sw=.62,BVW=.11
note scale change!
checking gas equipment and dilution flow settings!
AV 122
1440u +1080u?
problems with
hotwire!?
Scale Change
TG
400
note scale change!
changed out the filaments on the hotwire and chromatograph, see header for details!
222u shale gas
210u +140u
AV 122


cir@4507, 1hr.
conn
cir@4529 1.75hrs
Wob 40K
Rpm 75-80
Spm 54
Pp 870
conn
cir@4563 1hr.
9.1-56-1#
conn
0
ROP (min/ft)
10
0
Gamma (API)
150
6
Caliper (API)
16
9-62-1#
conn
9.1-60-1#
conn
@4720
Wt 9.3
Vis 62
Fil 8.8
Chl 5,000
Lcm 2#
Cum $16,819
9.1-58-1#
conn
@4775
Wt 9.1
Vis 63
Fil 8.8
Chl 5,000
Lcm 1#
Cum $16,819
conn
DST 2 4723 - 4770
4550
4600
4650
4700
Mudstone; cream to off white, mottled, chalky to crystalline, tight, rare spotty brown stain-mineral no cut, rare free white chert.
Wackestone; micro-oolitic, hard to brittle, no show, majority sample is Mudstone; most cream to off white, rare black wormy stain-no cut, no show, rare open and closed calcite fractures, one sample with secondary growth on one edge-bright fluorescence, residual ring cut, one free chart sample with faint stain, instant milky cut, no odor, no visible oil in samples, no visible gas bubbles, some dry sample barren pp por-no stn, scattered black stain, no live oil stain observed.
Shale; black-gassy
Hertha 4541 (-2342) A -1 B even
Packstone to Wackestone; cream to off white, some tan, saml oolites, to micro-oolites, most chalky matirx, looks tight in we rare black stain and very dull fluorescence-no cut, no odor, n visible oil, rare inter oolitic pp & vgy por-no stain.
Mudstone; chalky, some silky dark brown crystalline, influx black hard non gassy shale here, cave?
Base Kansas Ctiy 4576 (-2377) A even B -2
Shale; dark gray, black, dull red to green-waxy.
Shale; gray, soft, some arenaceous.
Shale; black, carbonaceous, no visible gas bubbles.
Shale; dark gray, black, dull red, green aa, some arenaceous.
Mudstone; gray to buff, chalky, hard, dense, rare free black blocky chert.
Marmaton 4614 (-2415) A +7 B +2
Mudstone; cream to brown, some fossiliferous, hard dense, most chalky textrue.
Shale; influx, gry-green to pale green here.
Mudstone; cream to light gray, scattered brown, most chalky, occasionally silky-crystalline, dense, rare closed fractures.
Wackestone; off white, micro-oolitic, chalky, dense look in the wet.
Mudstone; cream to tan, dense, most chalky, rare tan chert.
Pawnee 4663 (2464) A +5 B +1
Mudstone; cream to light brown, crystalline to chalky, dense, free tan chert.
Wackestone; micro-oolitic, hard to brittle, chalky to crystalline tight looking in wet, no show.
Mudstone; one sample, chalky with spotty brown stain, gas bubbles, instant milky cut, no odor, no visible porosity, no visible oil.
Shale; black, carbonaceous, gassy.
Labette 4686 (-2487) A +4 B -2
Mudstone; cream to brown, most chalky-dull texture, scattered brown-silky crystalline, scattered Wackestone; micro-oolitic, chalky-dense, no show.
CKE Shale 4701 (-2502) A +4 B -3
Mudstone; aa, rare free fusulinid, one dry sample with even d stain, no visible porosity, instant milky cut.
Mudstone; cream, tan, rare fossiliferous, one sample with op fracture with calcite-no cut, scattered samples with spotty to even brown stain, only 3 samples with instant milky cut, remainder with residual cut or no cut at all, no odor, no visible
AV 121.5
190u +25u
Sw=.61,BVW=.04
Sw=.76,BVW=.05
60min recycle?
190u shale gas
215u +65
Sw=.65,BVW=.06
Sw=.66,BVW=.05
0
TG
400
235u shale gas
AV 121.5
m=1.8
a=1
n=2
Sw=0.055
285u shale gas
AV 121.55
loss of gas after conn!
190u +30


(47')
cir@4730, 1.5hrs.
conn
Sw=.41,BVW=.05
Sw=.49,BVW=.07
Sw=.40,BVW=.04
dst2&cir@4770,19.25hrs.
conn
Wob 38-40K
Rpm 70-80
Spm 54
Pp 800-820
0 ROP (min/ft) 10
0 Gamma (API) 150
6 Caliper (API) 16
conn
DST3 4819-4837 (18')
Sw=1,BVW=.12
cir@4837
conn
9.1-57-1#
conn&RTD
RTD 4,877' 2/17/13
Open Log TD 4,877'
4750
4800
4850
MS
P
gas bubbles or visible oil in samples or tray, only rare sampl
with spotty pinpoint porosity with and without stain in the dry
Shale; gray, green, dull red, hard to brittle, some arenaceous, some mottled.
Mississippi 4744 (-2545) A +7, B -7
Flood of fresh and weathered cherts, most fresh, white, opaque, rare pale yellow to very colored, some fully weathered surfaces, some weathered on the edges, scattered black stain-some with bleeding rainbow and light brown oil, some with spotty black and light brown stain, scattered very dull yellow fluorescnec, instant to slow bright white cut, occasionall residual ring cut, no odor, weathered porosity to rare pinpoint prorosity. More fresh chert-some reds with depth, less show with depth.
Mudstone; most chalky, hard to brittle, dense.
Shale; influx more maroon, reds and greens, some mottled, much less chert with depth and less chert show in sample.
Sandstone; slight increase in pale green ultra fine, poorly to consolidated sand, some argillaceous, scattered light gray ultra fine sand, consolidated.
Samples most as above, increase in vary colored shales, som
mottled.
Kinderhook Sand 4812 (-2613) B -22
Sandstone; off white to white/no show, ufg-vfg, vrywlcons to prlycons, vwlsrtd, rnd, scattered glauc in the matrix, very faint odor, non fluorescence to bright white fluorescences, most show sample with instant milky cut, rare residual ring cut, spotty to even lt brown to black stain, some bleeding brown oil. White sand has little por, show sand has small inter granular pinpoint por with stain.
As above; increase in barren sand, some clusters have abundant glauconite looking structural shale, much less show with depth still faint odor.
Sandstone; white, some pale green, wlcons to friable, vfg, rnd wlsrtd, most barren and tight scattered brown and black stain with show, no odor, show clusters less with depth.
Shale; large influx gray-some waxy texture, dark gray and green, some red and green arenaceous, mixed with stringers of sandstone as above, and sandy limestone, trace of free chert, some red fossiliferoous, no new show.
125u
loss of gas after conn!
185u +40u
175u +50
125u
230u recycle!
Scale Change
TG 600
540u trip gas recycle!
400u +200 recycle trip?
m=1.8
a=1
n=2
Sw=0.055
TG 600
275u +75u
Sw=.91,BVW=.11
280u +80u
small +50u recycle!
Sw=1,BVW=.17