



## Woolsey Operating Company, LLC

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

Well Name: Pinkney #1  
API: 15-097-21830-0000  
Location: Section 34 - Township 27 South - Range 20 West  
License Number: Region: Kiowa County, Kansas  
Spud Date: November 6, 2017 Drilling Completed: November 16, 2017  
Surface Coordinates: N 1/2 NW SW SE  
1000' FSL & 2310' FEL  
Bottom Hole Coordinates:  
Ground Elevation (ft): 2285' K.B. Elevation (ft): 2297'  
Logged Interval (ft): 4060' To: TD Total Depth (ft): 5100'  
Formation: Topeka >> Mississippian  
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, Joel Gearhart  
Company: Woolsey Operating Co. LLC  
Address: 125 N. Market, Wichita Kansas, 67202

### COMMENTS

Surface Casing: Set 8 joints 8 5/8" x 24#/ft new surface casing at 334' KB (tally 322') w/170 sx 60/40 poz, 2% gel, 3% cc, 1/4# celoflake. Cement did circulate. Plug down 7 pm on 11/6/2017.

Production Casing:

Deviation Surveys: 1/4 at 335', 1/4 at 875', 3/4 at 1381', 1/4 at 1651', 1/2 at 2165', 1 at 2666', 3/4 at 3137', 1/4 at 3639', 1/4 at 4171', 3/4 at 4888', 1 at 5100'

Pipe Strap @

Fossil Drilling Rig 3 Bit Record:

- 1) 12 1/4" RR in at 0' out at 335', 3.5 hrs
- 2) 7 7/8" Varel V516 PX (PDC) in 335', out 4888', 120.75 hrs
- 3) 7/78" T60-5X in 4888', out 5100', 33 hrs

Gas Detector: Pason Gas Analyzer

Mud System: Mud-Co

DST: Triobite Testing - Leal Cason

**DSTs**

1: Miss (4850-4888) 30-60-60-90, (1) WB, (2) WB, 20' GCM, [140-264], FP 22-32/32-35, HP 2525-2476




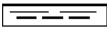
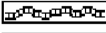



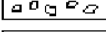



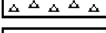

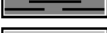

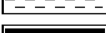
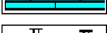














2: Miss (48852-4906) 30-60-60-90, (1) FB, (2) FB, 62' M, [471-515], FP 47-34/80-51, HP 2572-2576

**CREWS**

**Fossil Drilling Rig 3**











Tool Pusher: Rick Barringer  
 Daylight: Pablo Luna  
 Evening: Gary Axtell  
 Morning: Chris Slaats





**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






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





**MINERAL**

	Anhy
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chttt
	Dol



	Chlorite
	Dol
	Sand
	Sly

**FOSSIL**

	Algae
	Amph
	Belm
	Bioclst
	Brec




	Pelec
	Pellet
	Pisolite
	Plant
	Strom
	Fuss
	Oomoldic

**STRINGER**

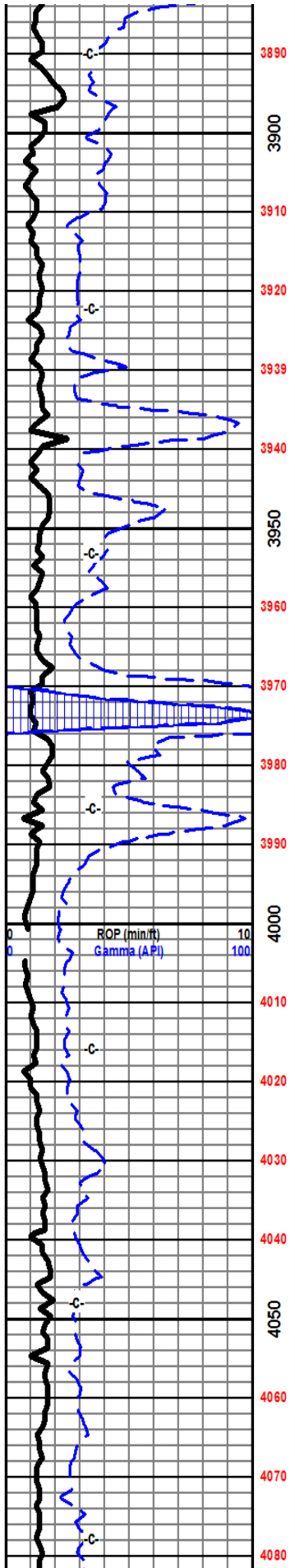
	Anhy
	Arg

	Grysh
	Grysit
	Lms
	Sandylms
	Sh
	Sltstn

**TEXTURE**

	Boundst
	Chalky
	Congl

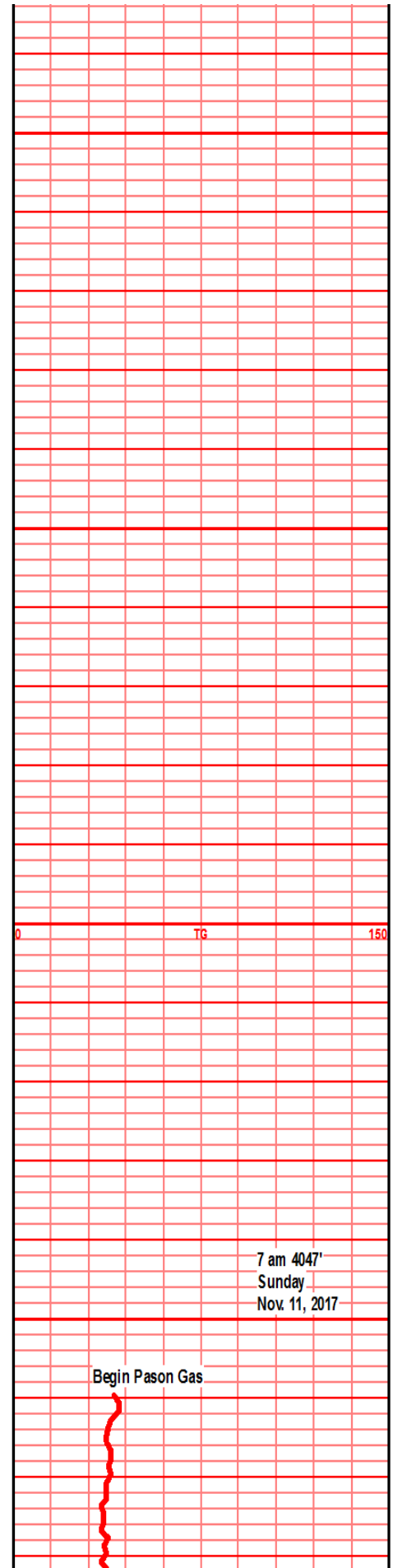


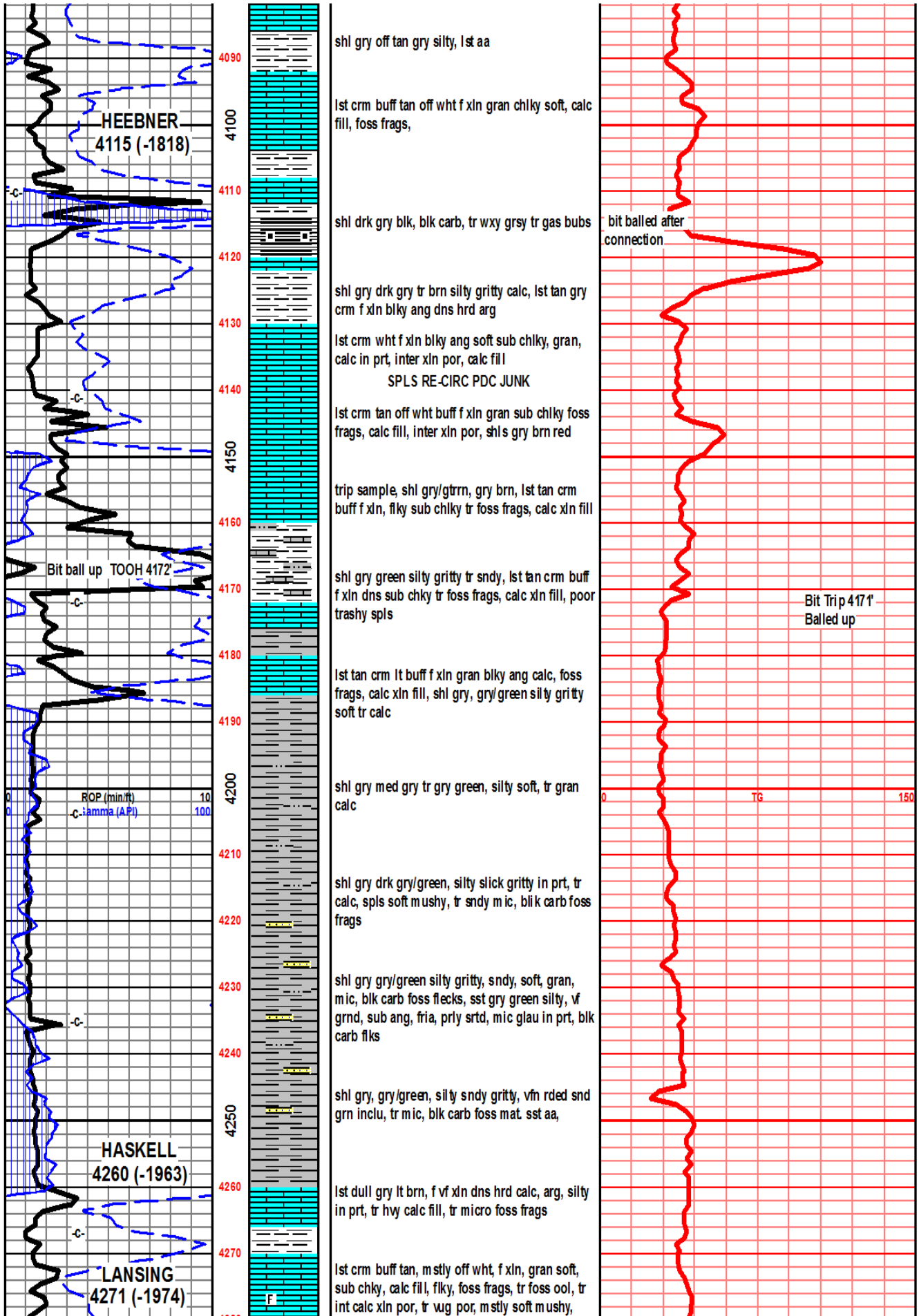


Daily Drilling Progress:  
 November 3, 2017 MIRT  
 November 6, 2017 Spud  
 November 7, 2017 Under surface  
 November 8, 2017 Drilling at 1475'  
 November 9, 2017 Drilling at 2180'  
 November 10, 2017 Drilling at 3026'  
 November 11, 2017 Drilling at 3255'  
 November 12, 2017 Drilling at 4047'  
 November 13, 2017 Drilling at 4386'  
 November 14, 2017 Drilling at 4769'  
 November 15, 2017 HD: 4888', DST #1  
 November 16, 2017 Drilling at 4921'

Formation	Sample	E-log
Heebner	4108 (-1811)	4111 (-1968)
Toronto	4130 (-1833)	4129 (-1834)
Douglas	4154 (-1857)	4150 (-1855)
Haskell	4260 (-1963)	4263 (-1968)
Lans A	4271 (-1974)	4274 (-1979)
Lans B	4298 (-2001)	4301 (-2006)
Stark	4542 (-2245)	4545 (-2250)
Swope	4551 (2254)	4558 (-2263)
Hush	4586 (-2289)	4589 (-2294)
Hertha	4594 (-2297)	4600 (-2305)
BKC	4664 (-2367)	4666 (-2371)
Pawnee	4756 (-2459)	4757 (-2462)
Ck Grp	4806 (-2509)	4806 (-2511)
Miss	4868 (-2571)	4871 (-2576)
Spergen	4868 (-2571)	4868 (-2571)
Warsaw	4876 (-2579)	4875 (-2580)

1st crm off wht lt buff f xln gran soft chlky crsly  
 calc fill foss frags,





HEEBNER  
4115 (-1818)

Bit ball up TOOH 4172

ROP (min/ft) 10  
gamma (API) 100

HASKELL  
4260 (-1963)

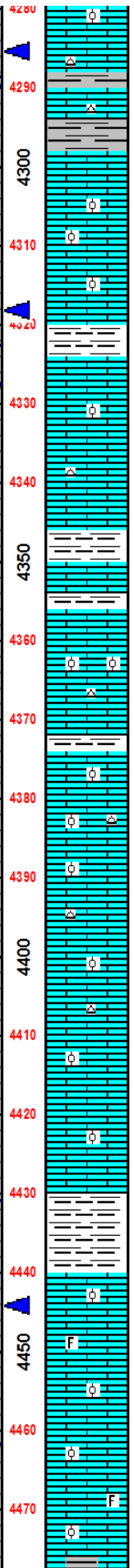
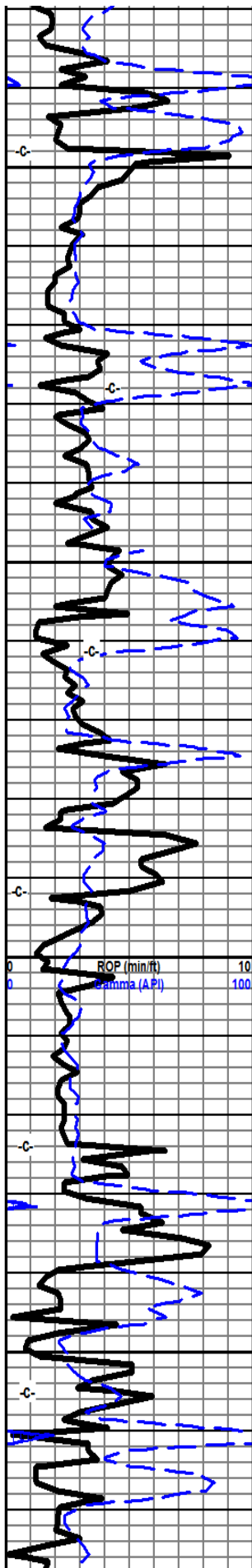
LANSING  
4271 (-1974)

bit balled after  
connection

Bit Trip 4171'  
Balled up

TG

150



NS, 1-2 pcs gry smoky opa shrp frsh chrt

shl gry lt gry calc, 1st crm wht f xln soft gran sub chiky, foss frags tr ool, calc xln fill, msly chiky soft dns

1st crm tan off wht, buff f xln blk ang, sub chiky, calc xln fill, msly soft chiky, foss frags, calc xln fill, inter xln tr small vug por, tr foss ool/frags, chrt wht lt gry shrp frsh opa

1st buff tan crm f xln gran soft sub chiky, inter xln por, calc xln fill, foss frags, chrt wht lt gry shrp frsh opa

1st wht buff, cr/brn mott, f xln gran soft, sub chiky calc xln fill, tr arg silty, inter xln por, foss frags, tr foss ool/frags,

1st crm buff drk tan f xln gran soft sub chiky foss frags, inter xln por, calc xln fill, chrt wht lt gry shrp frsh

shl gry, gry brn silty gritty calc, calc inclu, 1st aa

1st crm buff tan f xln gran soft, sub chiky, calc fill, inter xln por, foss mold por, msly soft/chiky, foss frags, tr ool, chrt wht lt gry shrp opa, foss inclu

1st crm buff tan, msly wht, f xln gran soft sub chiky foss frags, inter xln calc fill, pp foss mold por, chrt wht lt gry shrp frsh opa

1st crm buff tan lt gry f xln blk dns sub chiky foss frags, foss ool, inter xln por, calc xln fill, chrt lt gry tan shrp frsh opa

1st crm tan buff f xln gran sub chiky pp foss mold por, calc xln fill, chrt wht tan lt gry shrp frsh

1st crm tan lt brn f vf xln gran sub chiky, calc, sucr text, gd inter xln por, foss frags

1st crm tan lt brn f xln gran, crsly calc in prt, tr hrd sucr text, gd inter xln por, foss frags/calc filled vugs

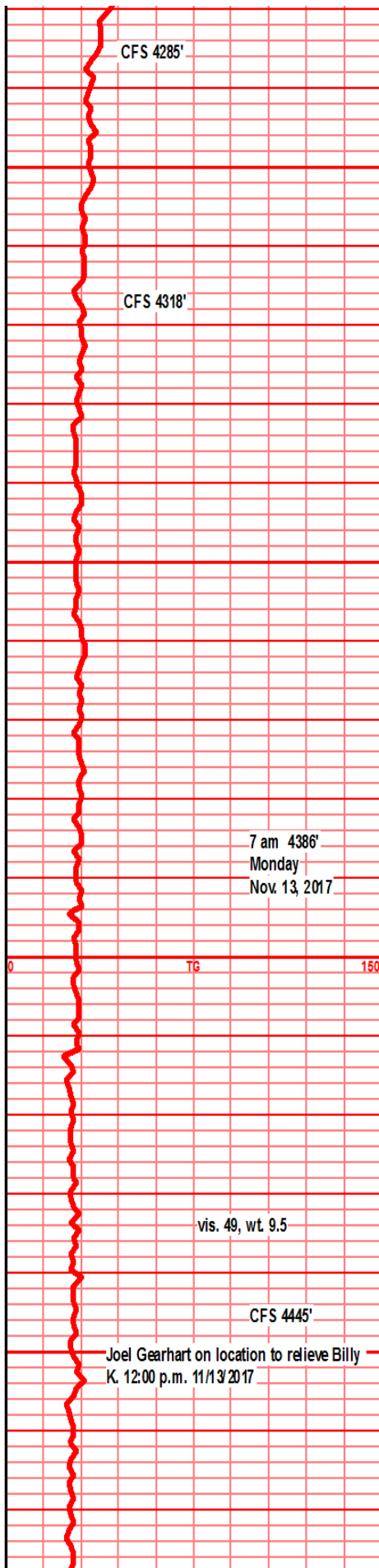
shl gry gry brn calc, gritty, silty, 1st tan brn f vf xln dns hrd blk ang arg silty

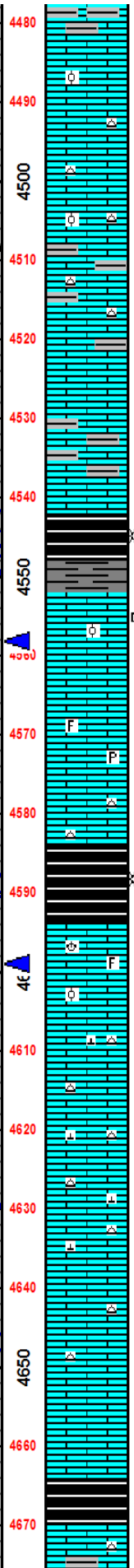
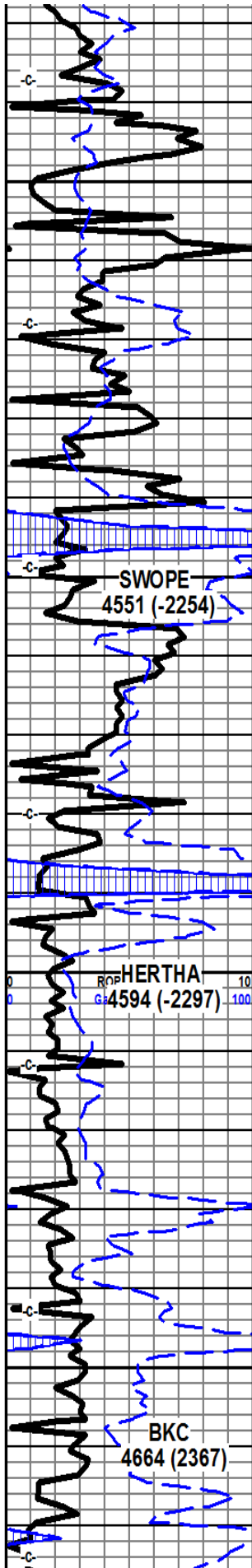
shl gry green brn ratty silty, 1st tan crm lt brn f sli med xln, blk ang dns, calc fill, foss ool, oom old por, inter oomold por, calc fill, sli chiky/gran.

LS: lt brn-tan, fn xln, gr-gd oolcastic por, oomoldic, cal fill, fossil frags, sub ang, rounded, brittle, sm all chunks of brt wt chrt, vry granular, nsfo, nsg

LS: tan, fn xln, fr-gd oolmoldic por, oolcastic text, cal fill, fossil frags, sub ang, sub rnd, brittle, vry granular, nsfo, nsg

SH: lt-drk gry, tabular, ang tr poritic hrd nsfo nsg





ang, dr pyritc, hrd, nso, nsg

LS: tan-lt brn, micro-fn xln, crsly cal in part, trc foss frags, trc oolitic text, pr por, blkly, hrd, sub ang, nsfo, no flour, nsg

LS: tan-lt brn, micro-fn xln, crsly cal in part, trc foss frags, trc oolitic text, pr por, chrty, blkly, hrd, sub ang, nsfo, no flour, nsg CHT brt wt, weathered, blkly, sub ang, firm, nso&g

LS: drk tan-drk brn, fn xln, cal fill, trc oolitic text, pr por, little argill due to sh inclus, chrty, blkly, hrd, sub ang, nsfo, no flour, nsg CHT brt wt, weathered, blkly, sub ang, firm, nso&g SH: drk gry, silty, pyritic, dirty look, trc blk shl inclus, blkly, hrd, nsfo&g

LS: drk tan-drk brn, fn xln, cal fill, pr por, argill due to sh inclus, blkly, hrd, sub ang, nsfo, no flour, nsg SH: drk gry, silty, pyritic, dirty look, trc blk shl inclus, blkly, hrd, nsfo&g

SH: drk gry-blk, carb, silty/gritty text, tabular, sub ang, firm, nsfo, gas bubs on brk. SH: drk gry-lt gry, silty/gritty text, trc drk blk shl inclus, brt red shl inclus, tabular, firm, sub ang, nsfo, trc gas bubs on brk

LS: tan-drk brn, fn xln, gd oolitic text, pr-fr oolmoldic por, por interxln por, sli argill, drk gry shl, blkly, vry hrd, nsfo&g, gd show of drk blk tar dead stain

LS: lt brn-tan, fn xln, chrty, crsly cal in prt, trc gritty text, trc foss frags, trc of pyrite specks, blkly, sub ang, hrd, nsfo&g

LS: lt brn-tan, fn xln, chrty, sft brt wt weathered chrt, trc chiky edges, trc foss frags, blkly, sub ang, hrd, nsfo&g

SH: drk brn-blk, carb, trc pyrite, tabular, sub ang, firm, nsfo, gas bubs on brk

LS: lt tan-drk gry ls, pr oomoldic por, cal fill, fossil frags, brachiopod fossil cast, pr interxln por, trc argill, sub ang, blkly, hrd, nsfo&g

LS: tan-lt gry tan, micro-fn xln, trc cal fill, brt wt trans chrt, chiky edges, trc gritty text, blkly, vry hrd, nsfo&g CHT brt wt, fresh, trans, chrt and brt wt chiky, weathered look, sub ang, hrd, nsfo&g

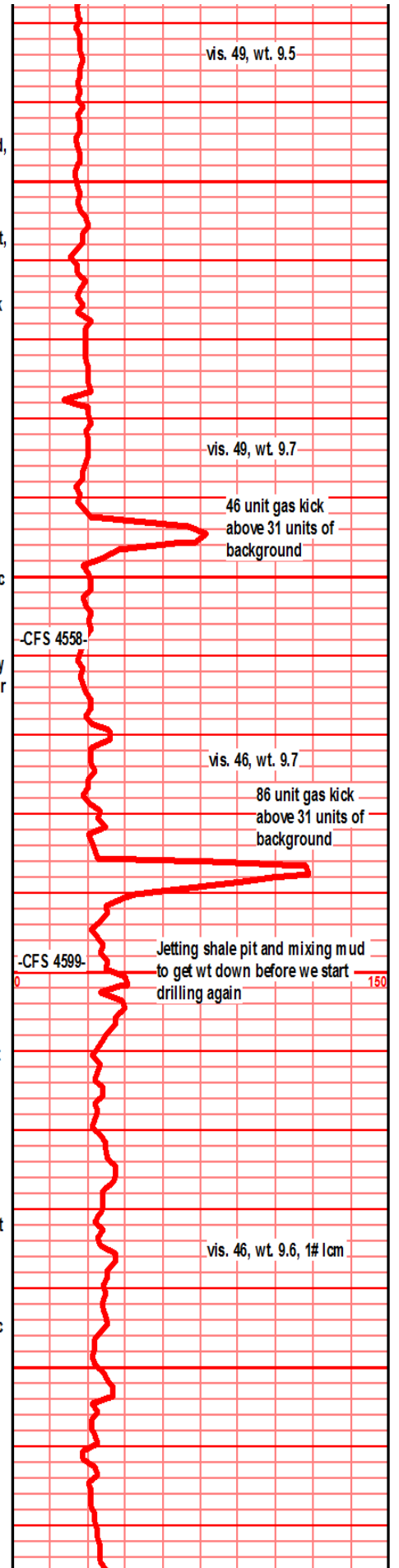
LS: tan-lt gry tan, micro-fn xln, crsly cal in part, trc brt wt trans chrt, chiky edges, blkly, vry hrd, nsfo&g CHT brt wt, fresh, trans, chrt and brt wt chiky, weathered look, sub ang, hrd, nsfo&g

LS: tan-lt gry tan, micro-fn xln, trc brt wt trans chrt, chiky edges, blkly, vry hrd, nsfo&g CHT brt wt, fresh, trans, chrt and brt wt chiky, weathered look, sub ang, hrd, nsfo&g

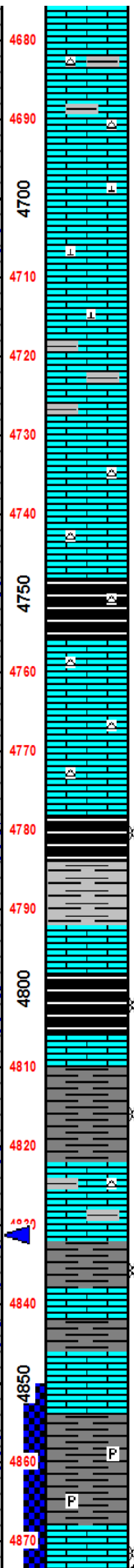
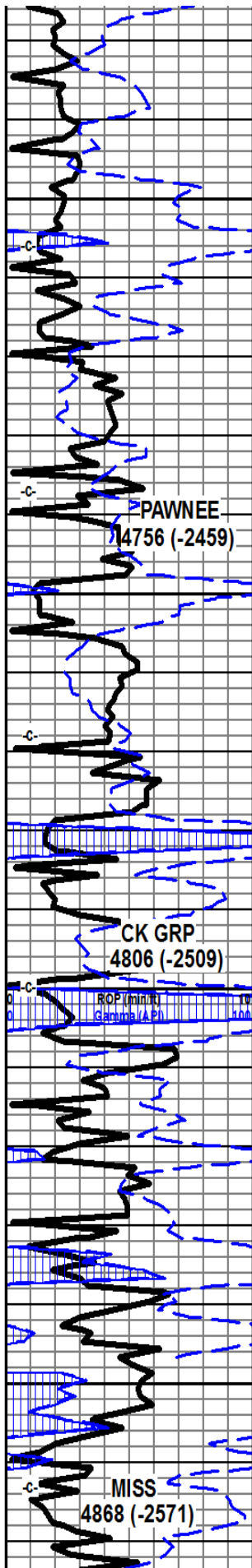
LS: brn-drk gry, fn xln, dull look, sli gritty text, argill, drk gry silty shl, sub ang, brittle, nsfo&g

SH: drk gry-blk, silty, carb, tabular, sub ang, firm, nsfo&g

LS: brn-drk gry, fn xln, dull look, sli gritty text, argill, drk gry silty shl, brt wt lt brn trans chrt







argil, drk gry silty shl, brt wt brn trans chrt, chlky wt edges, sub ang, hrd, nsfo&g

LS: brn-drk gry, fn xln, dull look, sli gritty text, argil, drk gry silty shl, brt wt-lt brn trans chrt, chlky wt edges, sub ang, hrd, nsfo&g SH: drk gry-blk, carb, silty, tabular, brittle, nsfo&g

LS: lt tan-tan, mirco-fn xln, crsly cal in parts, chlky edges, blk, hrd, nsfo&g

LS: lt tan-tan, mirco-fn xln, crsly cal in parts, chlky edges, blk, hrd, nsfo&g

LS: brn-drk gry, fn xln, dull look, sli gritty text, argil, drk gry silty shl, sub ang, brittle, nsfo&g

LS: tan-lt gry tan, micro-fn xln, trc brt wt trans chrt, chlky edges, blk, vry hrd, nsfo&g CH T trc brt wt, fresh, trans, chrt and brt wt chlky, weathered look, sub ang, hrd, nsfo&g

SH: drk gry-blk, silty, carb, tabular, sub ang, firm, nsfo&g

LS: tan-lt gry tan, micro-fn xln, trc brt wt trans chrt, chlky edges, blk, vry hrd, nsfo&g CH T brt wt-lt tan, fresh, sharp, trans, chrt and trc brt wt chlky, weathered look, sub ang, hrd, nsfo&g

SH: drk gry-blk, silty, gritty, trc pyrite, tabular, firm, sub ang, trc gas bubs on brk

SH: gry-drk gry, trc lt grn gry, silty, gritty, pyrite specks, nsfo&g

LS: lt tan-lt gry tan, fn xln, rough concoidal fractures, chlky, wt wthrd chrt, blk, sub ang, hrd, nsfo&g

SH: drk gry-blk, silty, gritty, trc pyrite, tabular, firm, sub ang, trc gas bubs on brk

SH: drk gry, silty, gritty, trc drk blk carb shl inclus, blk, firm, nsfo, trc gas bubs on brk

LS: lt gry-drk gry brn, fn xln, silty, gritty text, sli lt gry brn chrt inclus, blk, sub ang, brittle, nsfo&g

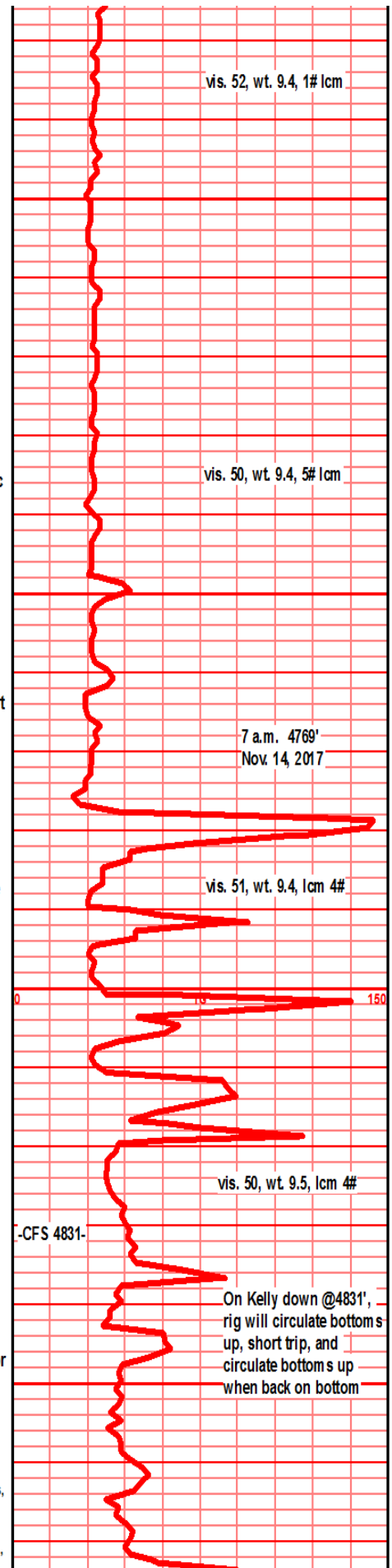
SH: drk gry, silty, gritty, trc drk blk carb shl inclus, blk, firm, nsfo, trc gas bubs on brk

LS: tan-brn tan, fn xln, sli shlky edges, cal fill, pr interxln por, sub ang, blk, hrd, sli brittle, nsfo&g

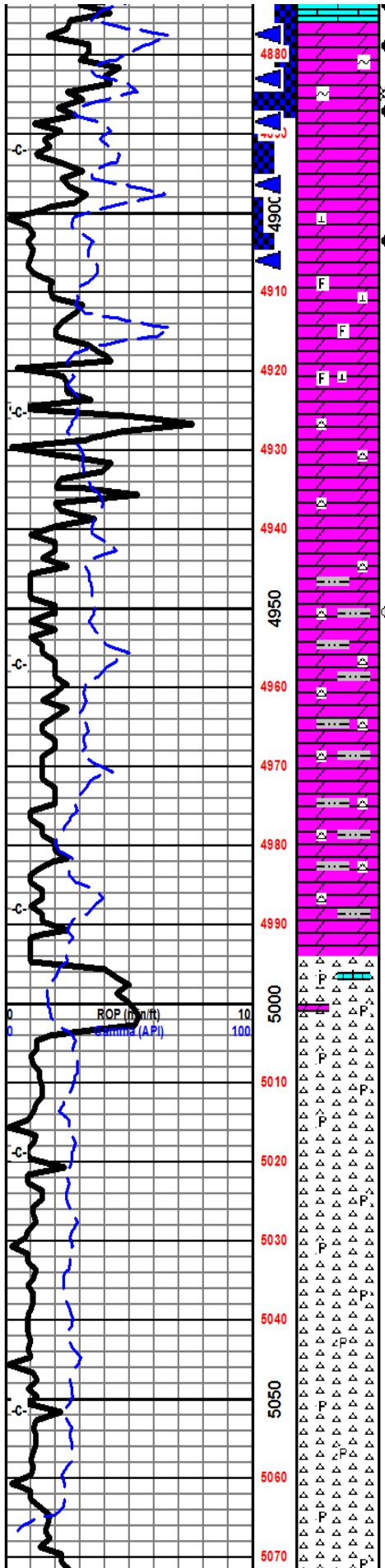
SH: gry-drk gry, sli grn hue, trc red pcs, silty, gritty, drk blk shl inclus, small pyrite specks, tabular, firm, nsfo&g

SH: yellow, carb, silty-sli sndy, blk, trc drk gry shl inclus, blk, firm, nsfo&g

LS: lt tan, tan, crsly xnl cal, bt wt trc ch, wt xln cal, good odor, frin tex in por, rough weathered text, concoidal brk, blk, sub ang, sli odor, trc gas bubs on brk, good brm-drk







bm stain, sli show free oil, light rainbow show in sample water, lt yellow-ellow gm flour

DOL: lt tan-drk tan, fn xln, grainy/pitted text, crsly cal fill in part, grn glauc strks, pr vug por, fr interxln por, gd lt bm-bm even oil stain, blkly, hrd-brittle, sli odor, sli show free oil in sample wtr, no show gas

CF S 4888 DOL: lt tan-drk tan, fn xln, grainy text, sndy look, crsly cal fill in part, grn glauc strks, fr interxln por, gd lt bm even oil stain, blkly, hrd-brittle, sli odor, sli show free oil in sample wtr, trc gas bubs on brk, lt yellowy ellow gm flour

CF S 4898 DOL: some pieces as above, most pieces lt gry-frsty wt, fn xln, gritty/sndy text, powdered suger look, grainy, heavily cmntd, v pr interxln por, trcs grn strks, blkly, hrd, nsfo&g

CF S 4906 DOL: lt tan-tan, fn xln, trc cal fill, trc of pieces that look limey, pr fr vuggy por, pr interxln por, blkly, brittle, vry sli lt bm oil stain along interxln contact and vuggy pore edges, vry sli sfo on brk, rainbow show in sample wtr, no show gas, sli odor yellow gm flour

4910 DOL: lt gry-tan, fn xln, limey, trc crsly cal fill, trc foss frags, tite, no vis por, blkly, vry hrd, nsfo&g

4920 DOL: lt gry-tan, fn xln, limey, trc crsly cal fill, trc foss frags, tite, no vis por, blkly, vry hrd, nsfo&g

4930 DOL: lt gry-lt tan, fn xln, gritty text, foss frags, crsly silca xln in part, chrty, lg-sml chrt in clus, blkly, hrd, nsfo&g, CHRT: brt frsty wt-smoky wt, fresh, shrp, trans-opaque, blkly, sub ang, brittle, nsfo&g

4940 DOL: lt gry-lt tan, fn xln, silty/gritty text, foss frags, crsly silca xln in part, chrty, lg-sml chrt in clus, blkly, hrd, nsfo&g, CHRT: brt frsty wt-smoky wt, fresh, shrp, trans-opaque, blkly, sub ang, brittle, nsfo&g

4950 DOL: lt gry-lt tan, fn xln, silty/gritty text, foss frags, crsly silca xln in part, chrty, lg-sml chrt in clus, blkly, hrd, nsfo&g, CHRT: brt frsty wt-smoky wt, fresh, shrp, trans-opaque, blkly, sub ang, brittle, trc pr pitted por w/ spttd lt bm oil stain, nsfo&g

4960 DOL: lt fry-gry, fn xln, gritty, silty, trc drk gry shl inclus, chrty, blkly, sub ang, hrd, nsfo&g CHRT: frsty wt-smoky wt, fresh, sharp, trans, small pcs, blkly, brittle, nsfo&g

4970 DOL: lt fry-gry, fn xln, gritty, silty, trc drk gry shl inclus, chrty, blkly, sub ang, hrd, nsfo&g CHRT: frsty wt-smoky wt, fresh, sharp, trans, small pcs, blkly, brittle, nsfo&g

4980 DOL: lt fry-gry, fn xln, gritty, silty, trc drk gry shl inclus, chrty, blkly, sub ang, hrd, nsfo&g CHRT: frsty wt-smoky wt, fresh, sharp, trans, small pcs, blkly, brittle, nsfo&g

4990 DOL: lt fry-gry, fn xln, gritty, silty, trc drk gry shl inclus, chrty, blkly, sub ang, hrd, nsfo&g CHRT: frsty wt-smoky wt, fresh, sharp, trans, small pcs, blkly, brittle, nsfo&g

5000 CHT: smoky wt-brt frsty wt, micro xln, pyrite inclus, streaks of dolls in inclus, fresh, shrp edges, cubic form, vry hrd, nsfo&g

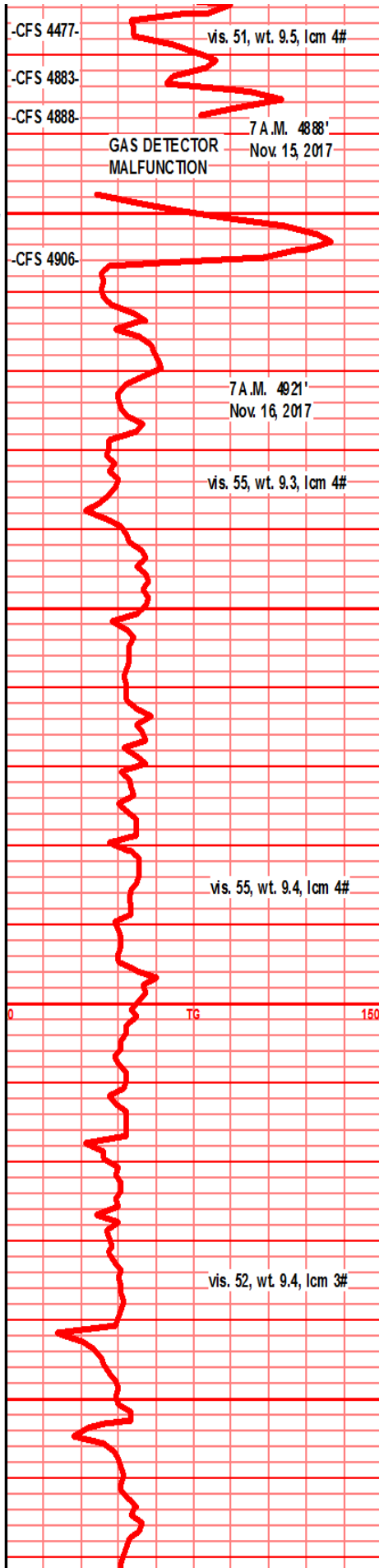
5010 CHT: brt wt-off wt, trans-sli opa, micro xln, fresh, sharp edges, tabular-blky conchoidal brks, trc pyrite, hrd-brittle, nsfo&g

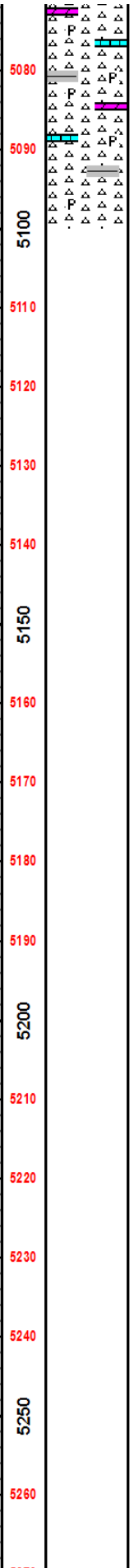
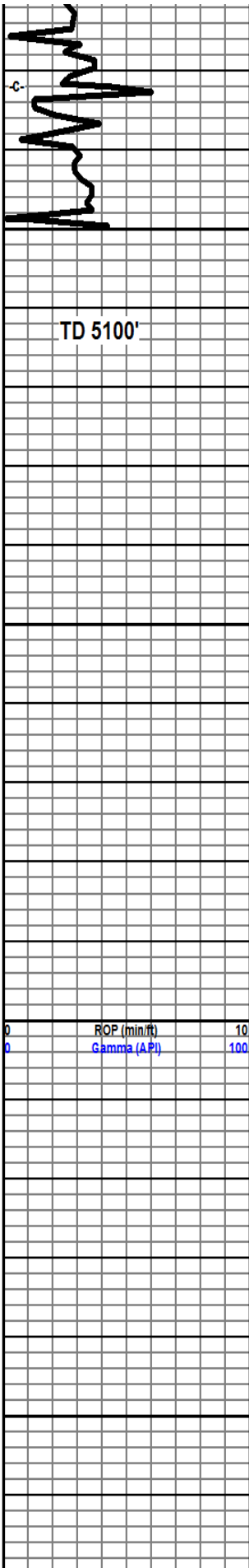
CHT: brt wt-off wt, trans, micro xln, fresh, sharp edges, trc wt weathered chert along the sharp edges of the fresh chrt, trc pyrite inclus, blkly, ang, brittle, nsfo&g

5030 CHT: brt wt-off wt, trans, micro xln, fresh, sharp edges, trc wt weathered chert along the sharp edges of the fresh chrt, blkky, ang, brittle, nsfo&g

5040 CHT: brt wt-off wt, trans, micro xln, fresh, sharp edges, trc wt weathered chert along the sharp edges of the fresh chrt, blkky, ang, brittle, nsfo&g

5050 CHT: brt wt-off wt, trans, micro xln, fresh, sharp edges, trc wt weathered chert along the sharp edges of the fresh chrt, trc pyrite inclus, blkly, ang, brittle, nsfo&g





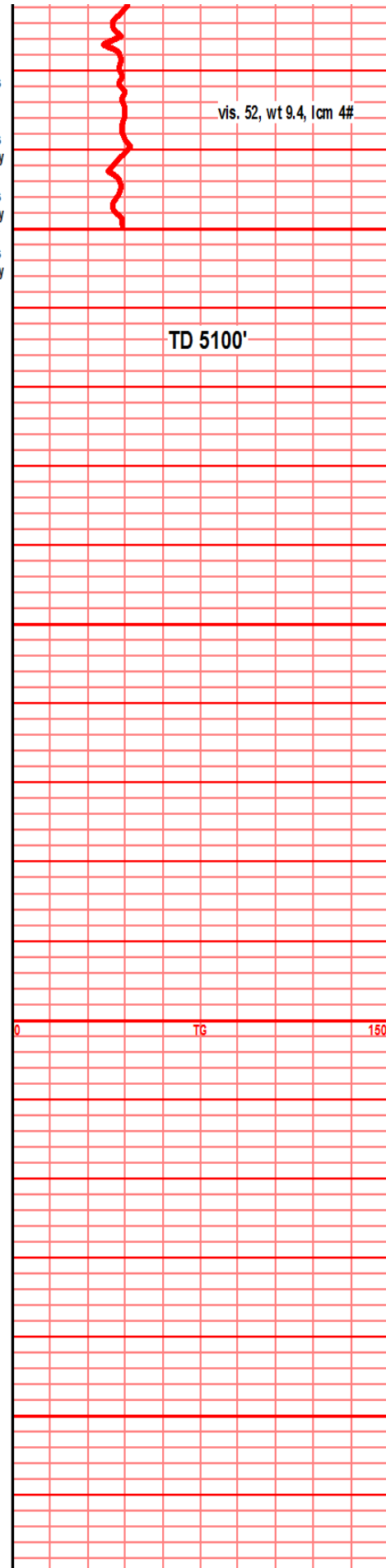
5060 CHT: brt wt-off wt, trans, micro xln, fresh, sharp edges, trc wt weathered chert along the sharp edges of the fresh chrt, trc pyrite inclus, blk, ang, brittle, nsfo&g

5070 CHT: lt gry-drk gry, micro xln, carb look, trc of dollis stringers, trc pyritie, cubic, ang, vry hrd, nsfo&g

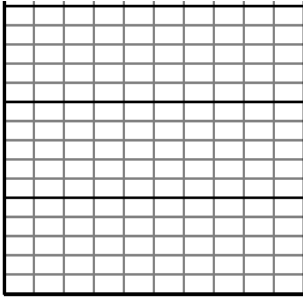
5080 CHT: lt gry-drk gry, micro xln, carb look, trc of dollis stringers, trc drk gry shl inclus, trc pyritie, cubic, ang, vry hrd, nsfo&g

5090 CHT: lt gry-drk gry, micro xln, carb look, trc of dollis stringers, trc drk gry shl inclus, trc pyritie, cubic, ang, vry hrd, nsfo&g

5100 CHT: lt gry-drk gry, micro xln, carb look, trc of dollis stringers, trc drk gry shl inclus, trc pyritie, cubic, ang, vry hrd, nsfo&g



vis. 52, wt 9.4, lcm 4#



5270

5280

5290

00

Sec 34 - Twp 27 S - Rge 20W  
Kiowa County, Kansas  
Fralick West Field  
API # 15-097-21830  
GL 2285' KB 2297'

