



## Woolsey Operating Company, LLC

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

Well Name: CUNNINGHAM #6  
API: 15-007-24233-00-00  
Location: Section 10 - Township 32 South - Range 12 West  
License Number: Region: Barber County, Kansas  
Spud Date: October 21, 2014 Drilling Completed: October 29, 2014  
Surface Coordinates: 1850' FSL and 1750' FWL  
Apx. NE SW NE SW  
Bottom Hole  
Coordinates:  
Ground Elevation (ft): 1504' K.B. Elevation (ft): 1516'  
Logged Interval (ft): 3600' To: TD Total Depth (ft): 4740  
Formation: Douglas ----> Simpson Group  
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: Joel Gearhart  
Company: Woolsey Operating Company, LLC  
Address: 125 N. Market, Suite 1000  
Wichita, KS 67202

### COMMENTS

Surface Casing: Spud at 3:15 pm on 10/21/2014. Ran 7 joints of 13 3/8" X 48#/ft casing to 243' KB, cemented with 300 sx Class A, 2% gel, 3% cc. Plug down 11:15 pm. Cement did circulate.

Production Casing:

Deviation Surveys: 1 at 243', 3/4 at 1010', 1/4 at 1488', 3/4 at 1995', 3/4 at 2501', 3/4 at 3008', 3/4 at 3514', 1/2 at 3988', 3/4 at 4740'

Pipe Strap @

Fossil Drilling Rig #3 Bit Record:

- 1) 17 1/2" Smith RR, in at 0' out at 243', 3 hours.
- 2) 7 7/8" Varel HE-21 in at 243' out at 4740', 138.5 hours

Gas Detector: Woolsey Operating Co. Gas Shack #2

Mud System: Chemical Mud, Brad Bortz, Engineer

Company Man: Mike Tharp, Woolsey Operating Co.

E-logs: Nabors Completion and Production Services, Dual Induction Laterolog w/SP, CNL/FDC w/PE, Gamma Ray and Caliper.




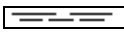
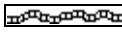



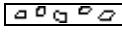



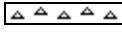



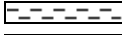




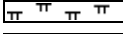







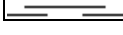


## DSTs

## CREWS

### Fossil Rig #3

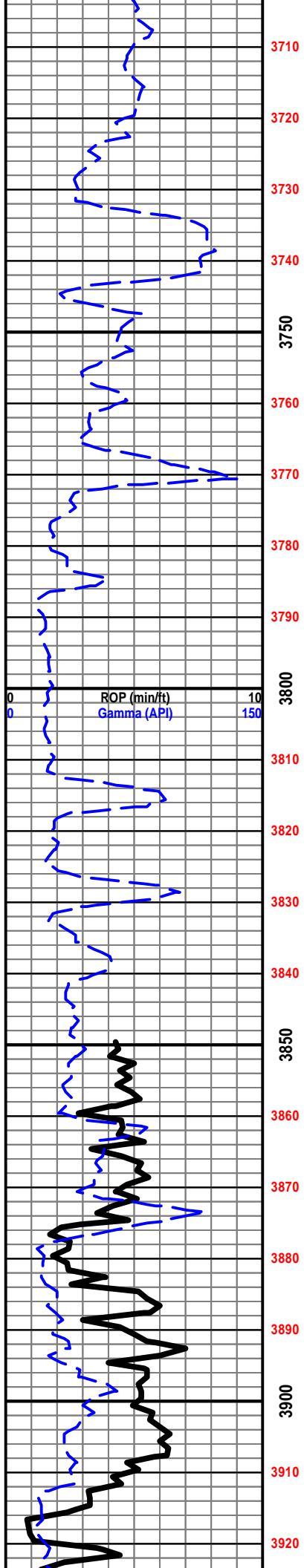
Jim Wenrich- Tool Pusher  
Kirk Shuman- Morning  
Daniel Orrantia- Daylight  
Ron Burns- Evening  
Chris Staats- Relief

## 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



October 26, 2014: 3830', CGS arrived 1 pm  
 October 27, 2014: 4086'  
 October 28, 2014: 4360'  
 October 29, 2014: 4659', RTD 5 pm

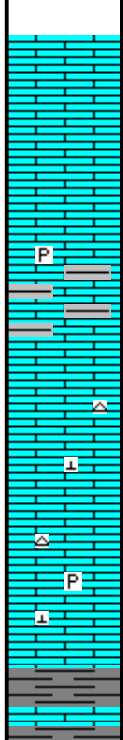


**E-Log Tops:**

- Herington: 1798 (-282)
- Onaga: 2615 (-1099)
- Wabaussee: 2670 (-1154)
- Stotler: 2816 (-1300)
- Topeka: 3079 (-1563)
- LeCompton: 3411 (-1895)
- Kanwaka: 3436 (-1920)
- Heebner: 3567 (-2051)
- Toronto: 3585 (-2069)
- Douglas Grp: 3601 (-2085)
- Haskell: 3743 (-2227)
- Lansing: 3753 (-2237)
- Drum: 4047 (-2531)
- Dennis: 4082 (-2566)
- Stark: 4114 (-2598)
- Swope: 4120 (-2604)
- Hushpuckney: 4148 (-2632)
- Hertha: 4160 (-2644)
- B/Kansas City: 4204 (-2688)
- Mississippi: 4332 (-2816)
- Compton: 4394 (-2878)
- Kinderhook: 4456 (-2939)
- Woodford: 4527 (-3011)
- Viola: 4559 (-3043)
- Simpson Group: 4668 (-3152)
- Wilcox: 4669 (-3153)
- LTD: 4740 (-3224)

0 TG 100

Geologist  
 Joel Gearhart  
 arrived on location  
 Oct. 26, 2014 1:00 p.m.  
 drilling @3830'



LS: tan-lt gry tan, fxln, trc clear xln cal, foss frags, trc pyrite, sub ang, blk, hrd, nso&g, Trc smoky gry xln chrt, ang, shrp, hrd, nso&g

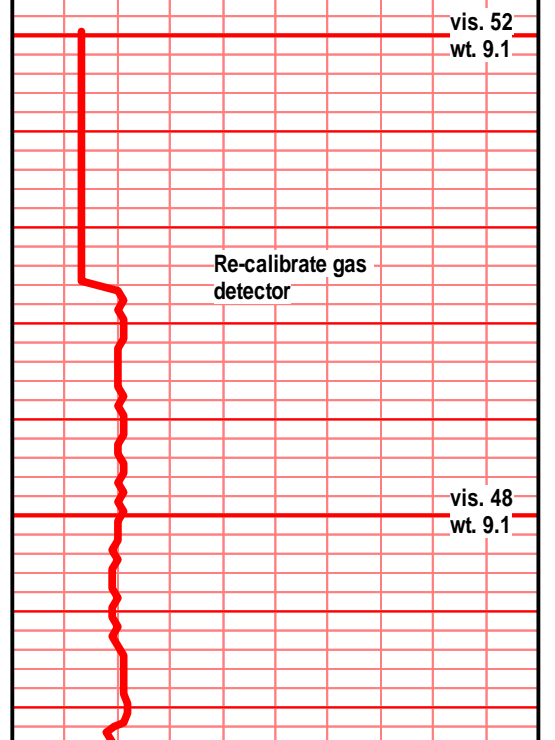
LS: tan-lt gry tan, fxln, clear xln cal fill, trc chlky, foss frags, trc pyrite, sub ang, blk, hrd, nso&g, Trc smoky gry xln chrt, ang, shrp, hrd, nso&g

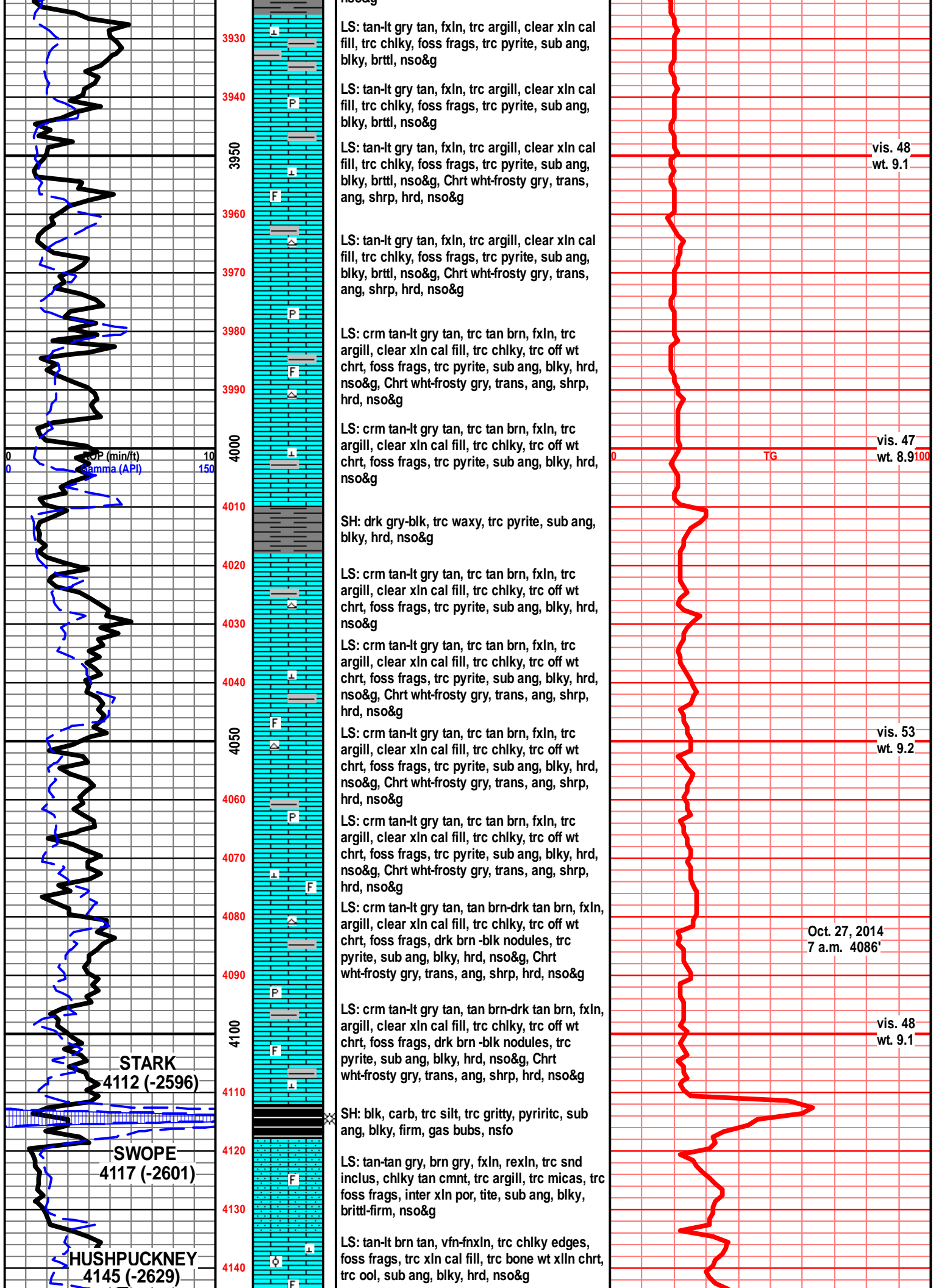
SH: gry-drk gry, waxy, pyritic, tabular, sft, nso&g

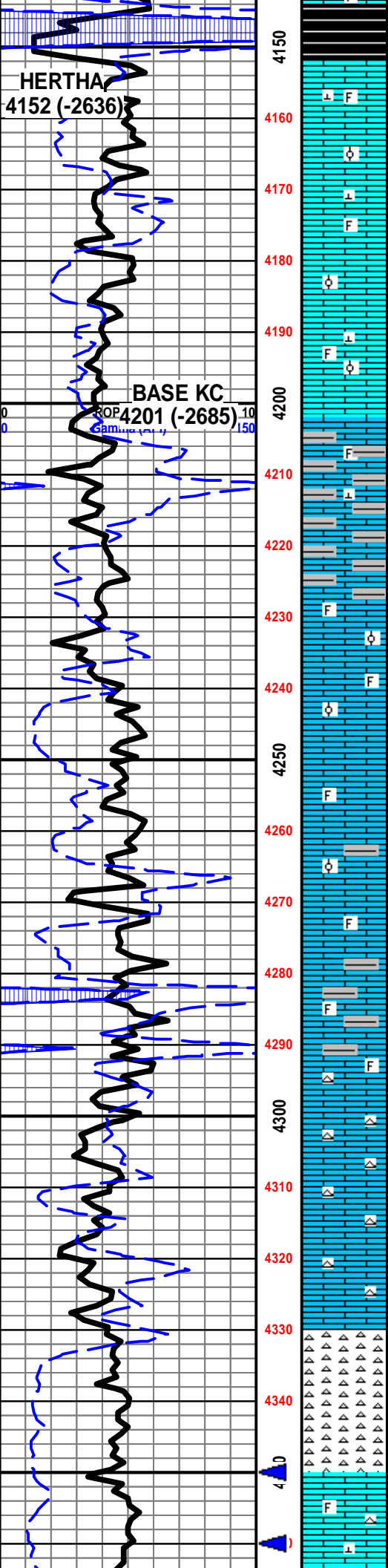
vis. 52  
 wt. 9.1

Re-calibrate gas detector

vis. 48  
 wt. 9.1







SH: blk, pyritic, sub ang, tabular, firm, spits gas, nsfo

LS: tan brn, vfn-fnxln, vuggy, trc mottl, foss frags, trc rexln, cal fill vugs, sub ang, hrd, nso&g

LS: lt tan-tan brn, vfn-fnxln, vuggy, trc mottl, foss frags, trc rexln, cal fill vugs, foss/oomoldic por, trc oolites, sub ang, hrd, nso&g

LS: lt tan-tan brn, vfn-fnxln, vuggy, trc mottl, foss frags, trc rexln, cal fill vugs, foss/oomoldic por, trc oolites, sub ang, hrd, nso&g

LS: lt tan-tan brn, vfn-fnxln, vuggy, trc mottl, foss frags, trc rexln, cal fill vugs, foss/oomoldic por, trc oolites, sub ang, hrd, nso&g

LS: tan gry-brn gry, drk gry, micro xln, dense, tite, very argill, drk gry limey shale chunks, trcc xln cal fill, trc foss frags, sub ang, blk, hrd, nso&g

LS: tan gry-brn gry, drk gry, micro xln, dense, tite, very argill, drk gry limey shale chunks, trcc xln cal fill, trc foss frags, sub ang, blk, hrd, nso&g

LS: lt gry-lt grn gry, fnxln, chlky, argill, slightly gritty, trc foss frags, oolites, xln cal fill, sub ang, brttl, nso&g

LS: lt gry-lt grn gry, fnxln, chlky, argill, slightly gritty, trc foss frags, oolites, xln cal fill, sub ang, brttl, nso&g

LS: tan gry-lt gry, microxln, dense, tite, dirty look, trc micas, trc foss frags, sub ang, blk, hrd, nso&g

LS: tan gry-lt gry, trc crm tan, chlky, microxln, dense, tite, dirty look, trc micas, oolitic, trc foss frags, sub ang, blk, hrd, nso&g

LS: tan gry-lt gry, microxln, dense, tite, dirty look, foss mold, trc micas, trc foss frags, sub ang, blk, hrd, nso&g

LS: tan gry-lt gry, microxln, argill, dense, tite, dirty look, foss mold, trc micas, trc foss frags, sub ang, blk, hrd, nso&g

LS: tan gry-lt gry, microxln, dense, tite, dirty look, foss mold, trc micas, trc foss frags, sub ang, blk, hrd, nso&g

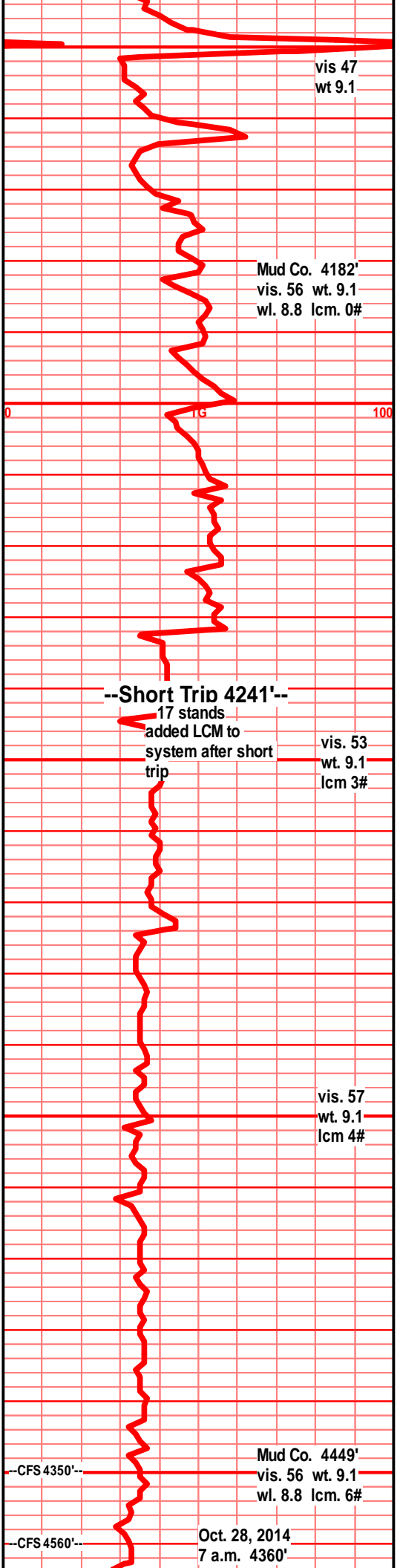
CHT: red, yellow, teal grn, gry, trc off wt-bone wt, lt gry, xln, fresh, dense, tite, trans, foss frags, shrp, ang, blk, nso&g

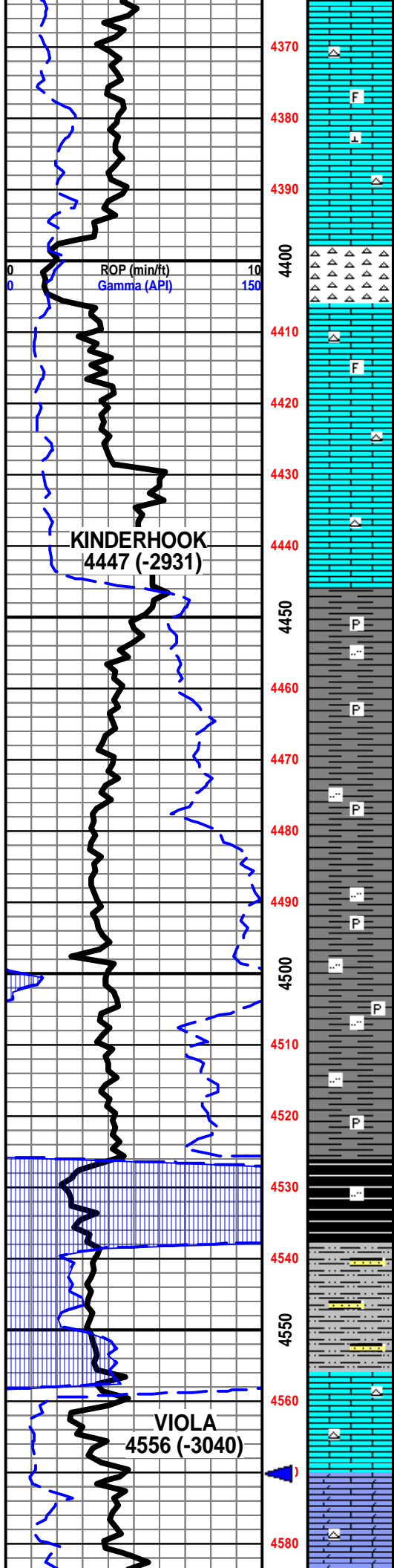
LS: tan gry-lt gry, microxln, dense, tite, dirty look, foss mold, trc micas, trc foss frags, sub ang, blk, hrd, nso&g

CHT: red, yellow, teal grn, gry, trc off wt-bone wt, lt gry, xln, fresh, dense, tite, trans, foss frags, shrp, ang, blk, nso&g

CHT: red, yellow, teal grn, gry, trc off wt-bone wt, lt gry, xln, fresh, dense, tite, trans, foss frags, shrp, ang, blk, nso&g

LS: tan-red tan, vn-fn xln, chlky, chrt, chlky wt-red wthrd chrt, trc milky wt frsh trans chrt, nodules, trc cal fill, trc foss frags, sub ang, blk, brttl, nso&g





4370 LS: tan-red tan, vn-fn xln, chlky, chrt, chlky wt-red wthrd chrt, trc milky wt frsh trans chrt, nodules, trc cal fill, trc foss frags, sub ang, blk, brttl, nso&g

4380 F

4390 LS: tan-red tan, vn-fn xln, chlky, chrt, chlky wt-red wthrd chrt, trc milky wt frsh trans chrt, nodules, trc cal fill, trc foss frags, sub ang, blk, brttl, nso&g

4400 CHT: mily wt-smokey gry, xln, trans, fresh, sharp, dense, tite, ang, blk, hrd, nso&g

4410 LS: crm off wt-tan, microxln, dense, tite, trc chlky edges, chrt inclus, trc foss frags, trc cal xln fill, sub ang, blk, hrd, nso&g

4420 F

4430 CHT: milky tan, trans, frsh, shrp, ang, blk, nso&g

4440 LS: tan-gry tan, vfn xln, trc chlky edges, dense, tite, sub ang, blk, brttl, nso&g

4450 CHT: milky tan-smokey tan, trans, frsh, shrp, ang, blk, nso&g

4460 SH: gry-drk gry, trc teal grn, silty, trc gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4470 SH: gry-drk gry, trc silty, trc gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4480 SH: drk gry, trc silty, trc gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4490 SH: drk gry, silty, gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4500 SH: gry-drk gry, lt brn hue, silty, gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4510 SH: gry-drk gry, lt brn hue, silty, gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

4520 SH: gry-drk gry, lt brn hue, silty, gritty, trc pyrite, sub ang, tabular, firm, waxy brk, nso&g

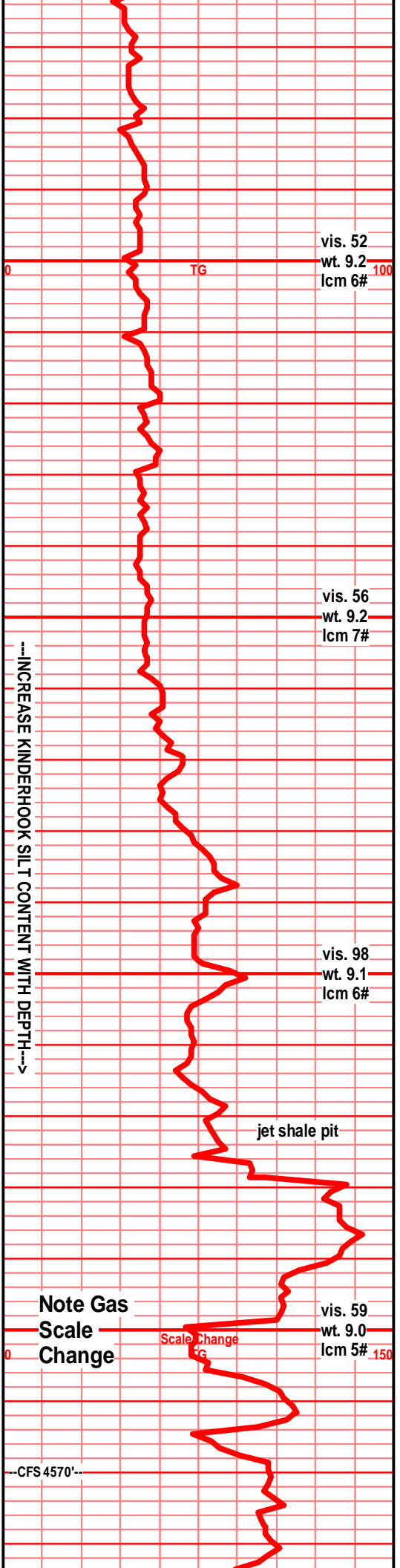
4530 SH: blk, carb, silty, gritty, brn hue, sub ang, blk, hrd, trc gas bubs on brk, nsfo

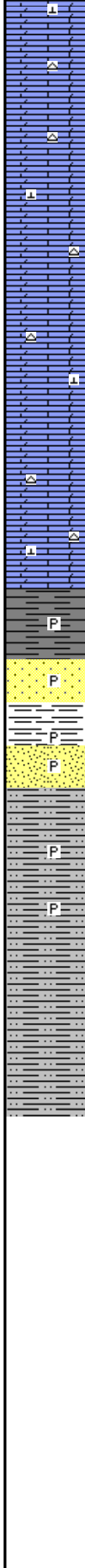
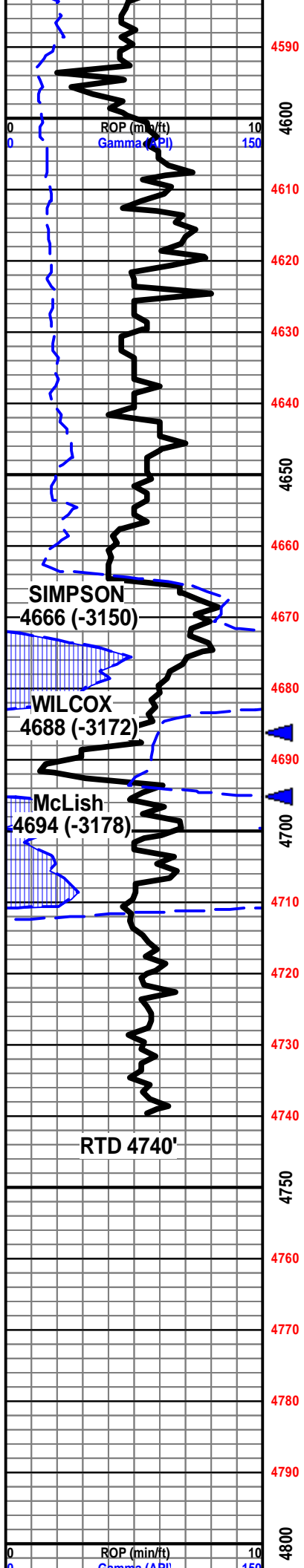
4540 SH: gry-drk gry, very silty, trc vfn snd inclus, gritty, waxy, sub ang, blk, hrd, nso&g

4550 SH: gry-drk gry, very silty, trc vfn snd inclus, gritty, waxy, sub ang, blk, hrd, nso&g

4560 LS: off wt-lt tan, fn xln, slight mottld, chlky, vry chrt, wt-off wt wthrd mushy chrt, interxln por, trc foss frags, sub ang, blk, sft, nso&g, very slight lt brn spot stain, no odor, no flour

4580 LS: brn tan-gry tan, dolomitic, fn grn, trc argill, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, sub ang, blk, hrd, nso&g





LS: brn tan-gry tan, dolomitic, fn grn, trc argill, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, trc pyrite, sub ang, blk, hrd, nso&g

LS: brn tan-gry tan, dolomitic, fn grn, trc argill, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, trc pyrite, sub ang, blk, hrd, nso&g

LS: brn tan-gry tan, dolomitic, fn grn, trc argill, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, trc pyrite, sub ang, blk, hrd, nso&g

LS: brn tan-gry tan, dolomitic, fn grn, trc argill, trc vfn snd inclus, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, trc pyrite, sub ang, blk, hrd, nso&g

LS: brn tan-gry tan, dolomitic, fn grn, trc argill, trc vfn snd inclus, gritty/mottled text, dirty look, brt wt-smokey gry chrt inclus, coarse xln cal fill, trc pyrite, sub ang, blk, hrd, nso&g

SH: gry-drk gry, waxy, trc pyritic, tabular, hrd, nso&g

SS: tan gry-brn gry clstrs, fn grn, fair srted, fair rnd, off wt-lt tan cloudy grns, well cmntd, off wt chlky cmnt, very tite, brn gry-drk gry lithics, pyritic, blk clusters, hrd, nso&g

SH: teal grn, waxy, trc fn snd inclus, pyritic, tabular, firm, nso&g

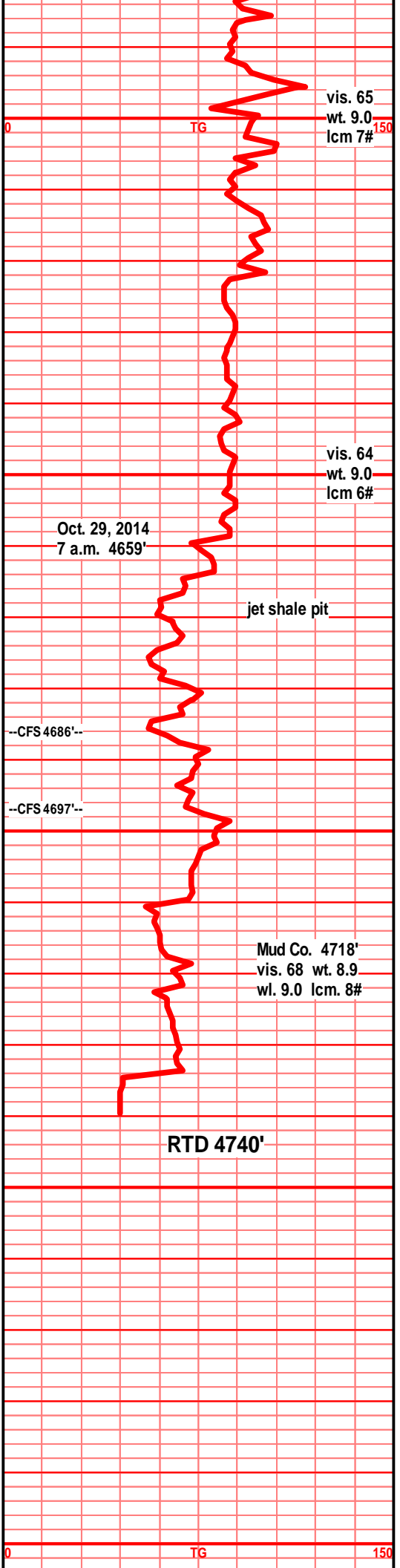
SS: teal grn clstrs, vfn grn, fair srted, clear grns, fair cmntd, chlky teal grn-wt cmnt, teal grn lithics, trc pyrite, tite, small clusters, brttl, nso&s

SH: gry-drk gry, silty, gritty, pyritic, sub ang, blk, hrd, nso&g

SH: gry-drk gry, silty, gritty, pyritic, sub ang, blk, hrd, nso&g

SH: gry-drk gry, silty, gritty, pyritic, sub ang, blk, hrd, nso&g

SH: gry-drk gry, silty, gritty, pyritic, sub ang, blk, hrd, nso&g





4810  
4820  
4830  
4840  
4850  
4860  
4870  
4880  
4890  
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Woolsey Operating Company  
Cunningham #6  
1850' FSL and 1750' FWL  
Approx: NE SW NE SW  
Sec. 10 - T32S - Rge 12W  
Bloom North Field  
Barber County, Kansas  
API # 15-007-24233-00-00  
GL 1504' KB 1516'

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