

# Covey

## The Well Watchers

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

Well Name: TUCKER B GU 3  
Location: Section 11 - Township 34 South - Range 11 West  
License Number: 15-007-23,659. 0000 Region: Barber County, KS.  
Spud Date: 11 March 2011 Drilling Completed: 23 March 2011  
Surface Coordinates: 660' FNL & 660' FEL  
(C NE NE)  
Bottom Hole Coordinates:  
Ground Elevation (ft): 1,391' K.B. Elevation (ft): 1,402'  
Logged Interval (ft): 4,400' To: 5,090' Total Depth (ft): 5,090'  
Formation: Kansas City Group -----> McLish Shale  
Type of Drilling Fluid: Chemical; Low Solids (non-dispersed)  
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: WOOLSEY OPERATING COMPANY, LLC  
Address: 125 North Water, Suite 1000 Geologist: Dean Patisson  
Wichita, Kansas 67202  
(316) 267-4379

### GEOLOGIST

Name: Curtis Covey  
Company: COVEY - The Well Watchers  
Address: 6548 Bedford Circle  
Derby, Kansas 67037  
Office: (316) 776 - 0367 Cell: (316) 258-9976

### FORMATION TOPS

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Stark SH .....	4,314' (-2,912') .....	4,315' (-2,913')
Hushpuckney SH .....	4,347' (-2,945') .....	4,346' (-2,944')
B / KC .....	4,390' (-2,988') .....	4,390' (-2,988')
Pawnee LS .....	4,490' (-3,088') .....	4,490' (-3,088')
Cherokee Gp .....	4,537' (-3,135') .....	4,538' (-3,136')
Mississippian .....	4,563' (-3,161') .....	4,566' (-3,164')
Kinderhook Sh .....	4,752' (-3,350') .....	4,750' (-3,348')
Woodford Sh .....	4,830' (-3,428') .....	4,832' (-3,430')
Viola .....	4,867' (-3,468') .....	4,870' (-3,468')
Wilcox SS .....	4,975' (-3,573') .....	4,976' (-3,574')

RTD: 5,090' LTD: 5,092' ATD: 5,092'

E-log is 0' - 2' low to rotary sample depth.

Loggers:  
Superior Well Services  
Hays, Kansas

14-3/4" Hole

7-7/8" Hole

7-7/8" Hole

11 Mar -- Spud @ 7:30pm.  
 12 -- Drill to 223'.  
 Run 10-3/4" casing.  
 Set casing @ 218'.  
 Cemented w/ 240 sx Class A  
 (2% Gel + 3% CC). [Allied]  
 Cement did circulate.  
 Plug down @ 9:45pm.  
 WOC.

12 Mar -- Under surface casing @ 3:30pm..  
 13 -- 7am @ 623'.  
 14 -- 7am @ 1,735'.  
 15 -- 7am @ 2,470'.  
 16 -- 7am @ 3,200'.  
 Displaced Mud @ 3,371'.  
 17 -- 7am @ 3,615'.  
 18 -- 7am @ 4,214'.  
 19 -- S/T: 15 stands @ 4,510'.  
 R/R Gear Chain.  
 7am @ 4,510'.  
 Resumed Drilling @ 7:03am.  
 DST #1: MISS (4,496'-4,492')

20 Mar -- Resumed Drilling @ 6:15am.  
 7am @ 4,600'.  
 21 -- 7am @ 4,888'. Start & ....  
 22 -- Finish DST #2: Wilcox SS  
 (4,950'- 4,990').  
 7am @ 4,990'.  
 Resumed Drilling @ 5:35pm.  
 23 -- RTD (5,090') @ 3:22am.  
 Prep hole.  
 E-LOG.  
 [Superior Well Services]

DST #1: MISS

Rotary Depth: 4,496'-4,592'  
 Logger's Depth: 4,498' - 4,594'

Recovery: 792' Gas in Pipe  
 45' Gas cut Mud (5%G,95%M)

Recovery Water: NA  
 System Water: (4,000 ppm)

Total Fluid: 45'

Reported Rw = NA

IFP: 33# - 41# / 30"  
 ISIP: 320# / 60"  
 FFP: 35# - 44# ' 60"  
 FSIP: 533# / 120"  
 121 deg F  
 MH: 2,198# - 2,156#

IF: Fair Blow, built to 8 inch Blow in 30 minutes.  
 ISI: Bleed Off, built back to 1 inch Blow.  
 FF: Strong Blow, BOB in 30 seconds.  
 FSI: Bleed Off, No Blow.

Trilobite Testing, Inc.  
 Pratt, KS.

DST #2 - WILCOX

Rotary Depth: 4,950'-4,990'  
 Logger's Depth: 4,952' - 4,992'

Recovery: 490' Gas in Pipe  
 153' Gassy Water cut Mud (10%G,20%W,70%M)  
 279' Gassy Water cut Mud (30%G,35%W,35%M)  
 930' Gassy Mud cut Water (12%G,5%M,83%W)  
 2,358' Gassy Water (5%G,95%W)

Recovery Water: (94,000 ppm)  
 System Water: (4,000 ppm)

Total Fluid: 3,720'

Reported Rw =  
 0.08 ohms @ 75 deg F

IFP: 740# - 1,591# / 30"  
 ISIP: 1,798# / 60"  
 FFP: 1,639# -1,756# ' 30"  
 FSIP: 1,799# / 60"  
 136 deg F  
 MH: 2,504# - 2,368#

IF: Strong Blow, BOB in 30 minutes.  
 ISI: Bleed Off, Weak Surface Blow.  
 FF: Strong Blow, BOB in 1 minute.  
 FSI: Bleed Off, Weak Surface Blow.

Trilobite Testing, Inc.  
 Pratt, KS.

HOLE DEVIATION (223' - 5,090')

DEPTH / TVD	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
223' /	-- 0.50	(Surface Casing)					
1,180' /	-- 0.50						
1,715' /	-- 0.50						
2,218' /	-- 0.75						
2,747' /	-- 0.50						
3,245' /	-- 0.50						
3,713' /	-- 0.75						
4,592' /	-- 0.50	(DST #1)					
4,990' /	-- 0.75	(DST #2)					
5,090' /	-- 0.75	(RTD)					

## BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
11 Mar 2011	14-3/4"	VAREL L-117	3 / 15's	0' / 223'	223'	4.00	55.8
12 Mar 2011	7-7/8"	VAREL HE-21	15 - 15 - 15	223' / 4,592'	4,369'	104.00	42.0
20 Mar 2011	7-7/8"	VAREL HE-29	15 - 15 - 15	4,592' / 4,990'	398'	31.25	12.7
22 Mar 2011	7-7/8"	VAREL HE-21	15 - 15 - 15	4,990' / 5,090'	100'	9.75	10.3

## ROCK TYPES

### POROSITY

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

### LITHOLOGY

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Granite wash
	Congl
	Dol lmst
	Silty dol
	Calc dol
	Dol 2
	Dol
	Gyp
	Igne

	Lmst 2
	Lmst
	Meta
	Mrlst
	Salt
	Shale 3
	Shale 3
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Ss 2

### MINERAL

	Mica
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk

	Chtlt
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff
	Copper
	Ooliticastic
	Oolite
	Sucrosic
	Dark specks

### STRINGER

	Calc dol
	Silty dol
	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst
	Calc dol
	Sltstrg
	Ssstrg
	Chalk
	New symbol

### SHOW

	Oil
	Spotted
	Ques
	Dead
	Gas
	Oil/gas
	Bed contact

### ACCESSORIES

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Spore
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet

- Pisolite
- Plant
- Strom

#### MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr

- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic

- Dark specks

#### STRINGER

- Calc dol
- Silty dol
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Calc dol
- Sltstrg
- Ssstrg
- Chalk
- New symbol

### OTHER SYMBOLS

#### ACTIVITY

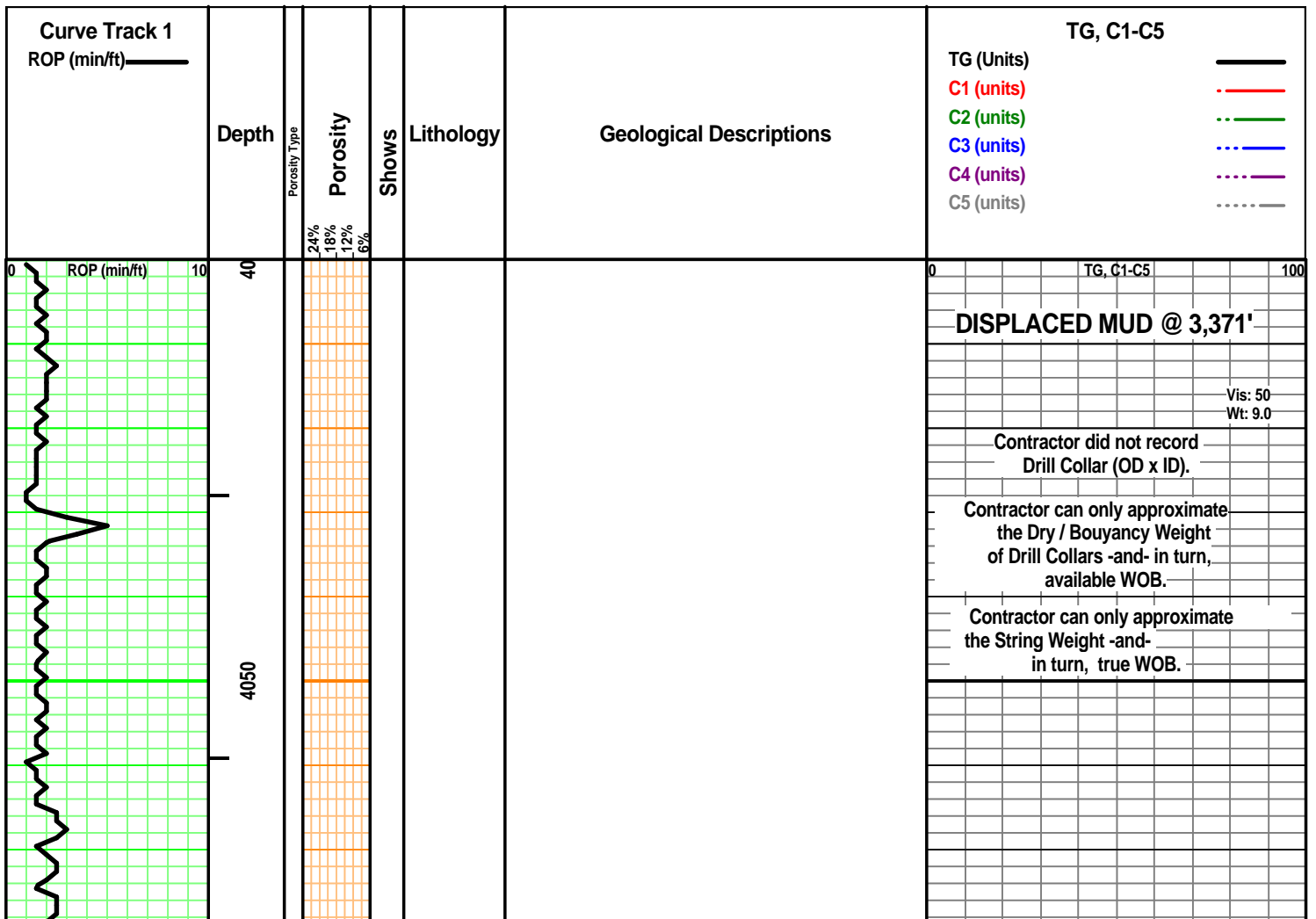
- Lost circulation
- Circulate for sample 2

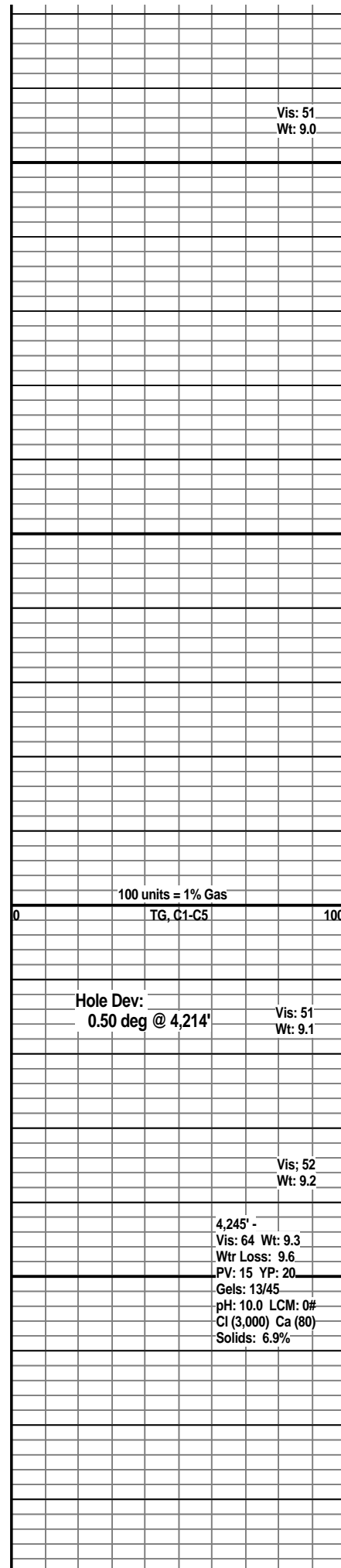
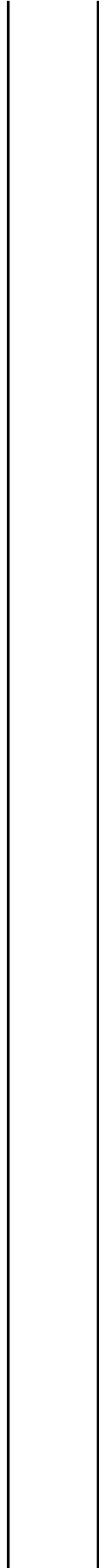
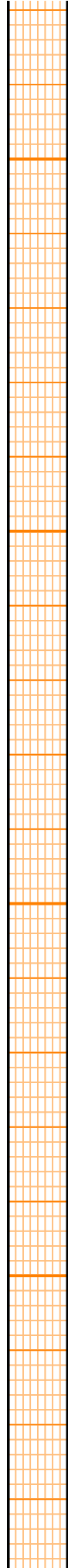
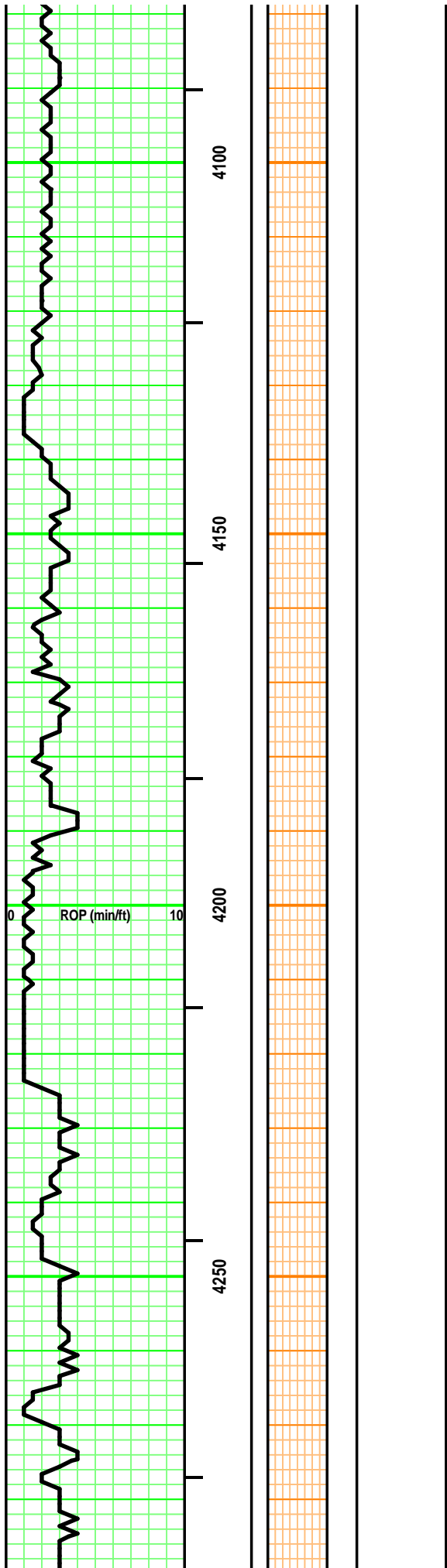
- Circulate for samples
- Rtd
- Trip

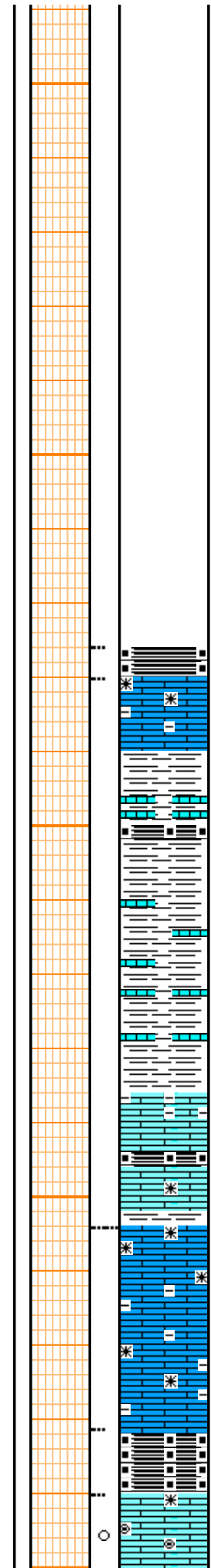
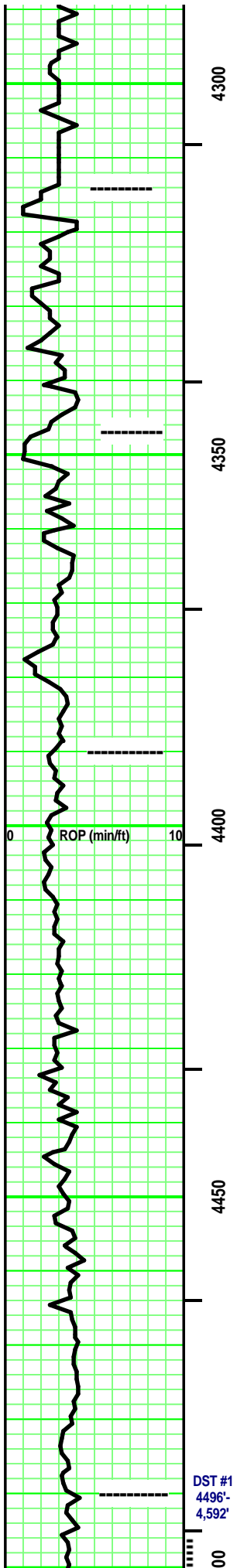
#### EVENT

- Connection
- Rft

- Sidewall







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SH - Black, Carb. rare pyritic. partly fissile. partly soft.

LS - Tans/ tr Off White & Grays. Sing/ tr Mot. XF- Micro-xln. xln por. some argil/ shaly in part. some Re-xln. Firm. No/ tr vis por.

**B / KC 4,390' (-2,988')**

Intermixed & interbedded SH & LS

SH - Med/ Dark Grays, Black - carb. Sing. some Ls interbedding / rare rubble.

LS - Tan/ Grays, rare Off White. Sing. Micro- tr crypto-xln. xln por. some Re-xln. some argil. Firm. No/ tr vis por.

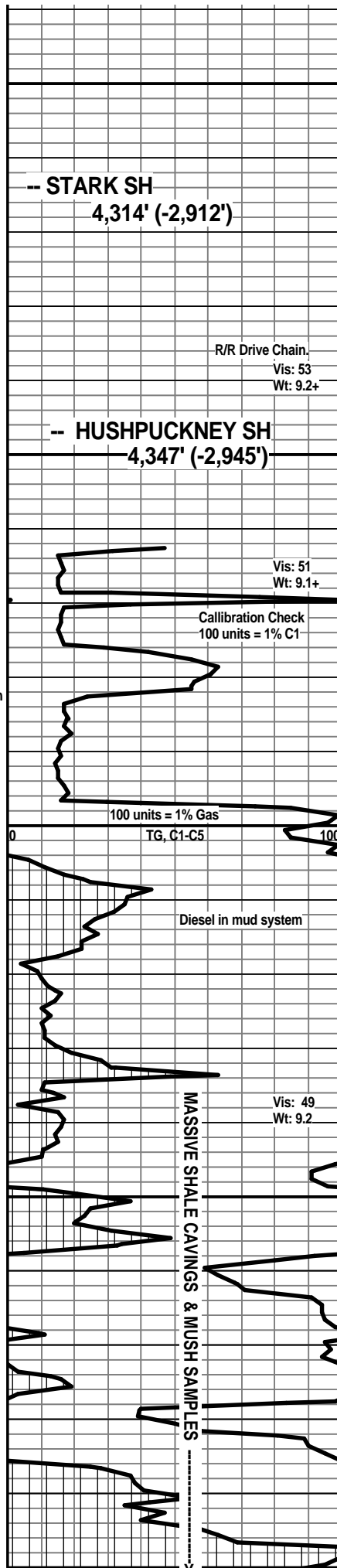
SH - Grays, Greenish Grays, Silverish Gray. Black & Carb. Sing. tr silty.

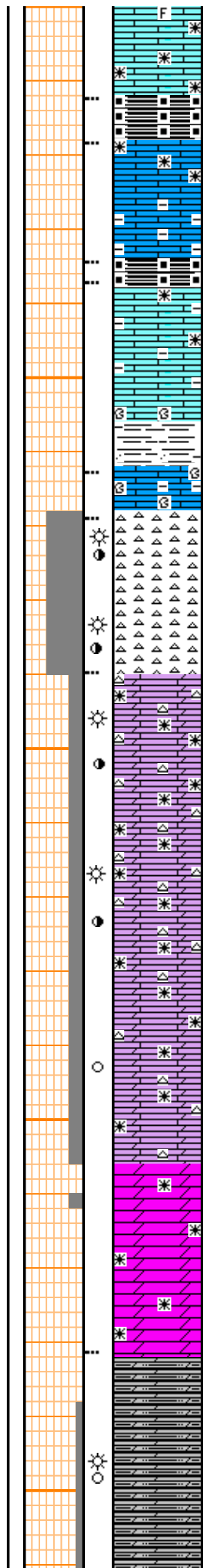
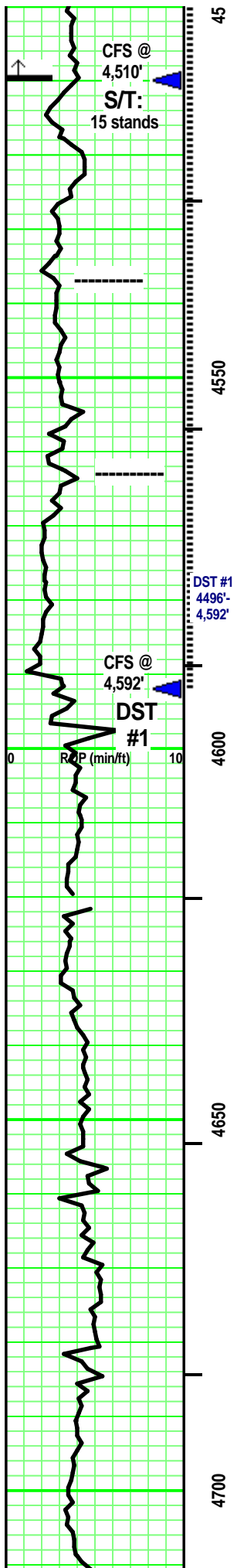
few LS - Tans/ Grays. tr Sing/ mostly Mot. mostly Micro-xln, tr XF-xln. xln por. tr Re-xln. some argil/shaly in part. Firm. No/ tr vis por.

SH - Black. Carb Soft.

**PAWNEE 4,490' (- 3,088')**

few LS - Tan, tr Dark Tan/ mixed with Off White XF- Micro-xln. tr Re-xln. tr fossil frags. [rare Micro- Oolites & Ooloids. Clear Matrix. Opaque to Transparent. some soft.] mostly Firm. No/ tr vis por. No/ tr silty. some Spotted yellow fluorescence. AF





tr vis por. no/r odor. rare Spotted yellow fluorescence. A/C, no free oil or gas. No stain. rare Weak Pos cut/ residual. rare Weak Pos acid/ residual.

SH - Black. Sing. Carb. Soft.

few LS - Tan/ some Lt & Med Gray. Sing/ some Mot. XF-/ Micro-xln. xln por. Re-xln. some argil/ shaly in part. mostly Firm. few pcs: subchalky. No/ tr vis por.

SH - Black. Sing. Carb. Soft.

**CHEROKEE GP 4,537' (- 3,135')**

few LS - Tans/ Lt & Med Gray, Med Gray with depth. Sing/ tr Mot. XF-/ Micro-xln. xln por. some Re-xln. argil in part. tr fossil frags. some, minute limy frags. mostly Firm. mostly No/ tr vis por.

SH - Med/ Dark Gray, some Greenish Gray. some Black, carb, soft. tr pyritic. some limy streaks in part.

Rubble

**MISS 4,563' (- 3,161')**

some slivers of CHERT - Off White/ White/ Tan/ some Silvery Gray. Mot. Opaque to semitransparent. some misc fossil frags/hash Inclusions. Spotted/ some Uniform Tripolitic with some Spotted/ uniform Lt/ Med Brown stain. rare Hghly limy dol or dol / frags in part. Tr/ fair vis por

Faint odor. Spotted/ some Uniform Yellow fluorescence. No free oil/ rare minute gas bubble. Stain as above (30% - 80%). Weak Pos/ Pos cut/ residual. Weak Pos/ Pos acid/ residual. few/ some Oil spots on wash water.

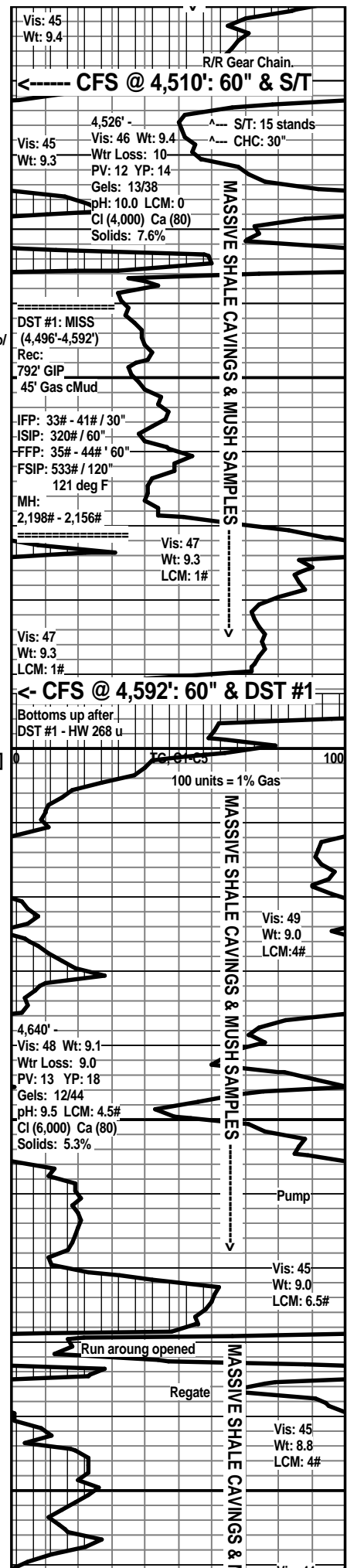
Dolomite (Calc) - Tans / Lt Gray & tr Med Gray. Sing. Re-xln. xln & tr sucrosic por. tr Silty in part. [tr CHERT - similiar to immediately above. Add: tr glauc grains/ Green. similiar show in part.] Massive. some No/ mostly tr vis por.

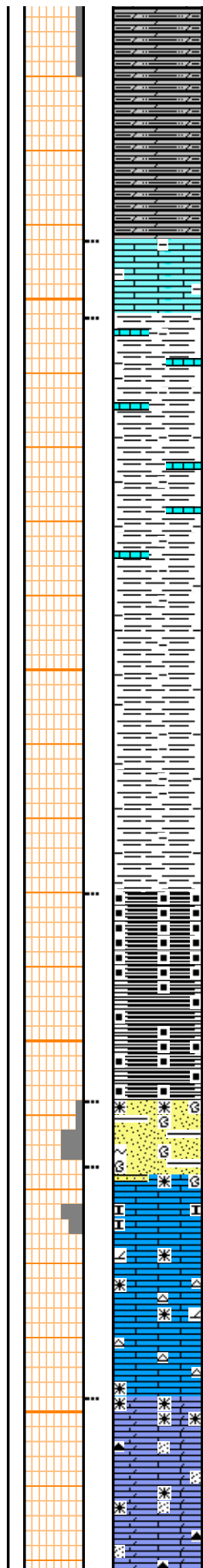
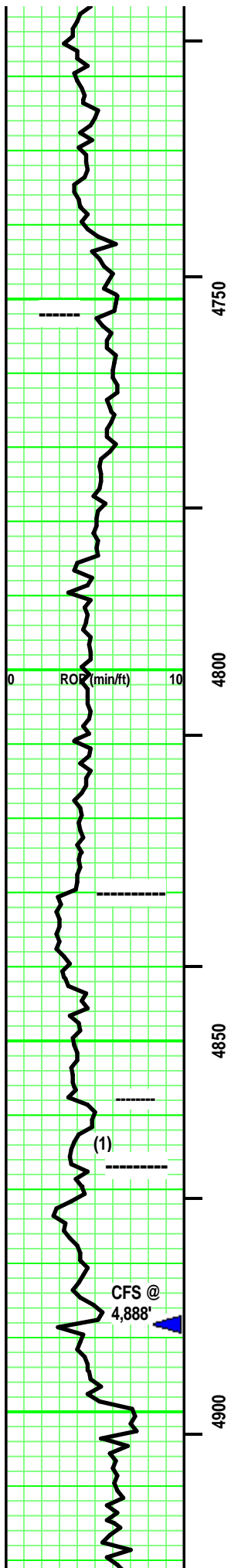
Dolomite (Calc) - Tans / Lt Gray & tr Med Gray. Sing. Re-xln. xln & tr sucrosic por. tr Silty in part. [tr CHERT - similiar to immediately above. Add: tr glauc grains/ Green.] Massive. some No/ mostly tr vis por.

Dolomite (tr calc) - Tans/ some Lt & Med Gray. Sing. XF-/ Micro-xln. xln & rare sucrosic por. some Re-xln. silty in part. Massive. tr vis por.

Dolomite - Med/ some Dark Gray. tr Lt Gray. - Sing. Micro-Re-xln. xln por. highly Silty. rare misc, minute inclusion. Massive. No/ tr vis por.

tr few pcs: similiar to immediately above. Add: rare, minute gas bubble.





LS - Tan/ Off White. Sing. Micro-/XF-xln. xln por. argil/shaly with depth. partly Firm. No/ tr vis por.

----- KINDERHOOK SH 4,752' (-3,350')

SH - Dark Gray, Greenish Gray. Sing/ tr Mot. Firm. tr calc stringers in part.

SH - Dark Gray/ Greenish Med & Dark Gray. Sing/ tr Mot. Firm. Massive. rare limy streak.

----- WOODFORD SH 4,830' (-3,428')

SH - Black. Sing. carb. (Brown hue scratch.) Massive. some blocky. tr pyritic.

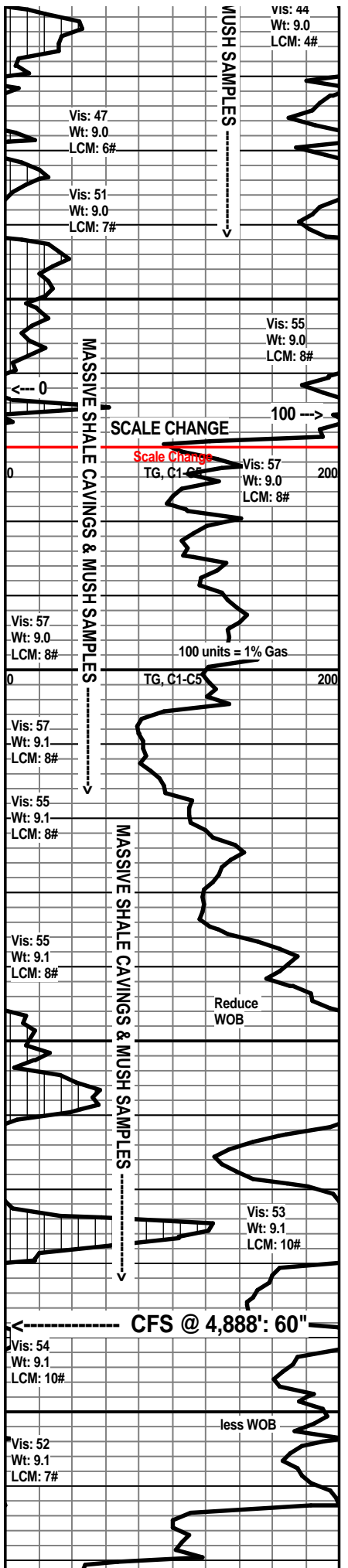
SH - Black/ Dark Grayish Black. Sing. carb in part. Blocky. Massive. some brec frags at depth.

SS (1) - Clear/ Grays/ tr Green. Mot. Silt/ VF qtz & tr glauc grains. SA/ SR. Mod sort & sph. Vitri/ some frosted luster. tr point/ mostly sutured grain contact. Calc/ Si cement. lots SR, oval argil frags. tr LS frags with depth. part Firm to Dense. No/ tr vis por.

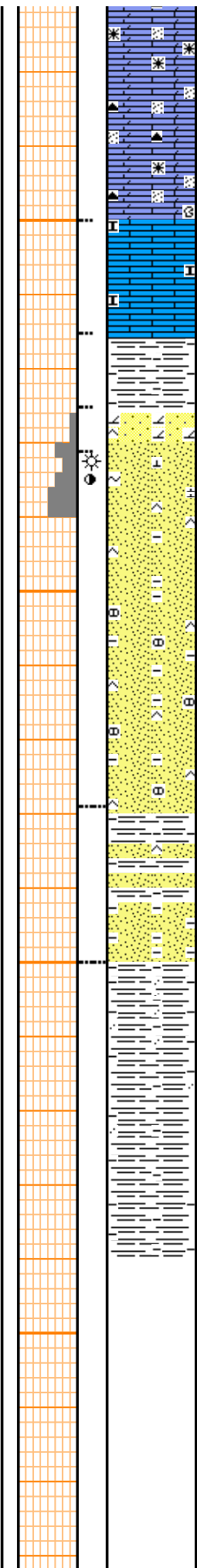
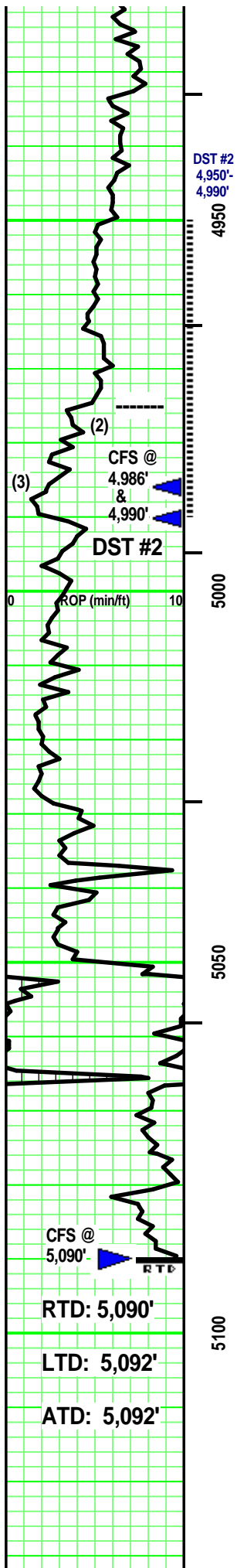
----- VIOLA 4,867' (-3,468')

LS (tr dolo in part) - Off White/ Tans. Sing/ Mot. mixture of Crypto-/ Micro-xln. xln por. subchalky at top. some highly dol in part. some Re-xln. (tr/some CHERT - Clear/ White, Mottled -or- Tan, Grays, White, Clear - Mottled. Opaque to mixed semitrans- parent. rare Inclusions: fossil hash/ fragments. No/ some tripolitic.) Firm. No/ tr vis por.

LS (tr Dol) - Tans/ Grays. Sing/ Mot. rare VF-/ mostly XF- & Micro-xln. xln por. some Re-xln. [ some CHERT - Tans/ Grays. Sing/ some Mot. Opaque. No/ rare White inclusions. No tripolitic.] tr/ some minute black specks in part. Firm. No/ tr vis por.







LS - Tans/ tr Lt Gray. Sing. Micro-xln. xln por. tr subchalky in part. Massive. No/ tr vis por.

SH - Green/ Greenish Gray. Sing. Firm. Massive. tr ductile.

**WILCOX SS 4,975' (-3,573')**  
SS (2) - Clear/ Pale Greenish Gray/ Lt Gray/ Off White. Mot. VF-/ tr silt sized qtz grains, tr glauc grains. SR/SA. Mod sort. Mod sph. Vitreous/ some frosted grain contact. Do/ tr sil cement. some Point/ mostly sutured grain contact. tr argil in part. partly Friable. Fair/ good vis por. I.

SS (3) - mostly Clear/ rare Lt Brownish Tan. Mot. VF-/ tr silt sized qtz grains. SR/SA. Mod sort. Mod sph. Vitreous/ some frosted grain contact. Calc/ tr sil cement. some/ highly sutured grain contact. some SR, VF obliterated argil grains in part. partly Friable. Fair/ Good vis por. No/? odor. rare Barren/ mostly spotted Yellow fluorescence. A/C, no free oil. On own & A/C, free minute gas bubbles. rare, spotted Lt Brown stain. Pos cut & residual. Pos acid & residual.

Add: argil frags/ pellets. tr glauc grains.

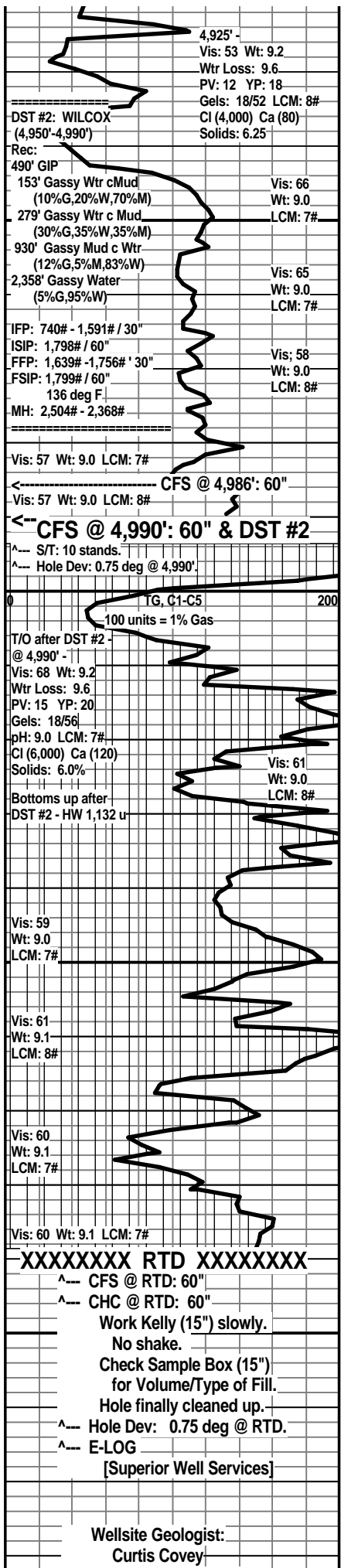
Interbedded SH & SS

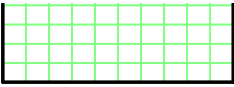
SH - Gray/ Greenish Gray. Sing. tr sandy.  
SS - similar to above. misc brec frags.

SH - Grays/ Green Gray/ tr Pale Greenish Gray. Sing/ tr Mot. highly sandy stringers in part (similar to immediately above). mixture of 'crumbly' / grainy / blocky / some waxy. Massive.

**TUCKER B GU 3**  
660' FNL & 660' FEL 11-T34S-R11W  
Barber County, Kansas

WOOLSEY OPERATING COMPANY  
Wichita, Kansas





COVEY - The Well Watchers			
Well Number: 1,112			