

Covey

The Well Watchers

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

Well Name: GATES #1

Location: Section 27 - Township 34 South - Range 10 West

License Number: 15-007-23,599 - 00-00

Region: Barber County, KS.

Spud Date: 29 September 2010

Drilling Completed: 11 October 2010

Surface Coordinates: 660' FNL & 1,980' FEL
(C NW NE)

Bottom Hole Coordinates:

Ground Elevation (ft): 1,323' K.B. Elevation (ft): 1,332'

Logged Interval (ft): 3,400' To: 5,380' Total Depth (ft): 5,380'

Formation: Kanwaka Shale -----> Arbuckle

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

Wichita, Kansas 67202

(316) 267-4379

Geologist:

Brian Wilhite

GEOLOGIST

Name: Curtis Covey

Company: COVEY - The Well Watchers

Address: 6548 Bedford Circle

Derby, Kansas 67037

Office: (316) 776 - 0367

wellsitegeo1@gmail.com

Cell: (316) 217-4679

KB: 1,332'

FORMATION TOPS

GL: 1,323'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Heebner SH	3,590' (-2,258')	3,584' (-2,252')
Toronto LS	3,608' (-2,276')	3,600' (-2,268')
Douglas Gp	3,627' (-2,295')	3,620' (-2,288')
Haskell Lm	3,853' (-2,521')	3,846' (-2,514')
Stalnakar Sd	3,901' (-2,569')	3,894' (-2,562')
KC	4,175' (-2,843')	4,170' (-2,838')
Stark SH	4,325' (-2,993')	4,316' (-2,984')
Hushpuckney SH	4,369' (-4,037')	4,360' (-3,028')
B / KC	4,424' (-3,092')	4,413' (-3,081')
Pawnee LS	4,527' (-3,195')	4,522' (-3,190')
Cherokee Gp	4,576' (-3,244')	4,566' (-3,234')
Mississippian	4,674' (-3,342')	4,666' (-3,334')
Kinderhook Sh	NC	4,916' (-3,584')
Woodford Sh	5,006' (-3,674')	4,996' (-3,664')
Viola	5,070' (-3,738')	5,060' (-3,728')
Wilcox Sand	5,296' (-3,864')	5,184' (-3,852')
McLish Sand	5,294' (-3,962')	5,283' (-3,951')
Arbuckle	5,321' (-3,989')	5,312' (-3,980')

RTD: 5,380' LTD: 5,370' ATD: 5,370'

E-Loggers: Halliburton
Liberal, Kansas

Rotary sample depth is 5' to 10' low to E-logger's depth.

2010

DAILY DRILLING STATUS -- SEPTEMBER & OCTOBER

2010

14-3/4" Hole	7-7/8" Hole	7-7/8" Hole
29 Sept -- Spud @ 11:30am. Drill to 218'. Run 10-3/4" casing. Set casing @ 218'. Cemented w/ 230 sx 60/40 Poz (2% gel+3%CC). [Allied] Cement did circulate. Plug down @ 8:15pm. WOC.	30 Sept -- WOC. 7am @ 218'. Under surface casing @ 8am with PDC bit. 1 Oct -- 7am @ 1,749'. 2 -- 7am @ 3,034'. Bit Trip @ 3,379'. Resumed Drilling @ 9pm. Drilling with Tri-Cone Bit. 3 -- 7am @ 3,614'. 4 -- 7am @ 4,186'. 5 -- S/T: 15 stands. 7am @ 4,550'. Start & ... 6 -- 7am @ 4,687'. Finish DST #1: MISS (4,550'-4,687'). Relevel Rig. Resumed Drilling @ 9:32am.	7 Oct -- DST #2: MISS (4,688'-4,703'). Resumed Drilling @ 7:30pm. 7am @ 4,703'. Start & ... 8 -- 7am @ 4,723'. Finish DST #3: MISS (4,704'-4,723'). Resumed Drilling @ 7pm. 9 -- 7am @ 4,883'. 10 -- 7am @ 5,206'. Bit Trip @ 5,332'. 11 -- Resumed Drilling @ 3:40am. 7am @ 5,360. RTD (5,380') @ 8:10am. Work on Drawwork chain. E-LOG (Halliburton)

DST #1 - MISS CHERT

Rotary Depth: 4,550' - 4,687'
Logger's Depth: 4,541' - 4,678'

Recovery: GTS 15" 2OP
60' Wtr Mud (30%M,70%W)
60' Mud

Recovery Water: (35,000 ppm)
System Water: (3,500 ppm)

IFP: 138# -130# /30"
ISIP: 1,278# / 60"
FFP: 117# -121# / 60"
FSIP: 1,621# / 120"
129 deg F
MH: 2,328# - 2,058#

IF: Strong Blow. BOB in 15 minutes.
ISI: Very Weak Surface Blow back.
FF: Strong Blow. BOB in 1 minutes. GTS in 15 minutes.
FSI: No Blow back.

Total Fluid: 120'

Reported Rw =
0.15 ohms @ 72 deg F

Gas Guage -- 2OP
15" Gas to Surface
20" - 1.68 MCF/D
30" - 1.87 MCF/D
40" - 2.25 MCF/d
50" - 2.62 MCF/D

Superior Testing, Inc.
Great Bend, KS.

DST #2 - MISS CHERT

Rotary Depth: 4,688' - 4,703'
Logger's Depth: 4,679 - 4,694'

Recovery: 3,640' Gas in Pipe
120' SI Wtr cut Muddy OIL (10%M, 20%W,70%O)
80' SI Wtr cut Muddy OIL (10%G,10%W,30%M,50%O)

Recovery Water: (25,000 ppm)
System Water: (3,500 ppm)

IFP: 41# -68# / 30"
ISIP: 1,773# / 60"
FFP: 50# -91# / 60"
FSIP: 1,781# / 120"
126 deg F
MH: 2,352# - 2,170#

IF: Strong Blow. BOB in 9 minutes.
ISI: Very Weak Surface Blow back.
FF: Strong Blow. BOB in 1 minutes. GTS in 15 minutes.
FSI: No Blow back.

Total Fluid: 200'

Reported Rw =
0.15 ohms @ 72 deg F

Superior Testing, Inc.
Great Bend, KS.

DST #3 - MISS

Rotary Depth: 4,704' - 4,723'
Logger's Depth: 4,795' - 4,714'

Recovery:
120' SI OIL cut Muddy Wtr (5%O, 30%M,65%W)
60' SI OIL cut Wtry Mud (5%O,15%W,80%M)

Recovery Water: (45,000 ppm)
System Water: (14,000 ppm)

IFP: 48# -110# / 30"
ISIP: 1,371# / 60"
FFP: 95# -127# / 60"
FSIP: 1,435# / 120"
127 deg F
MH: 2,284# - 2,234#

IF: Very Weak Surface Blow building to 1/2 inch in 30 minutes.
ISI: No Blow back.
FF: Strong Blow. BOB in 1 minutes. .
FSI: Very Weak Surface Blow building to 3-1/2 inches in 60 minutes.

Total Fluid: 180'

Recovery Water -
Mud Engineer: (35,000 ppm)

Reported Rw =
0.1 ohms @ 72 deg F

Superior Testing, Inc.
Great Bend, KS.

Note: Intermittent Plugging on both flow periods.

HOLE DEVIATION (218' - 5,380')

DEPTH / TVD	— INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
218' /	-- 0.50 (Surface)						
1,058' /	-- 0.75						
1,496' /	-- 0.50						
1,998' /	-- 0.75						
2,504' /	-- 0.25						
3,034' /	-- 0.25						
3,379' /	-- 0.25 (Bit Trip)						
4,007' /	-- 0.75						
4,569' /	-- 0.25						
4,687' /	-- 1.00 (DST #1)						
5,332' /	-- 1.25 (Bit Trip)						
5,380' /	-- 1.00 (RTD)						

TOMCAT DRILLING, LLC.

100 South Main, # 508
Wichita, Kansas 67202

(316) 262-8554

Drilling Rig #1 - (620) 309-8164

Toolpusher: Glenn Payne (620) 282-9164

Mud Pump(s):
Main: Ideco MM-550
6" x 15" @ 60 SPM.

Standby: National K-538
6-1/2" x 14 @ 48 SPM.

Pump Pressure: 900 psi @ standpipe.

Weight Indicator Check @ 4,514':
String Weight calculates 112,297#.

Weight Indicator shows 110M; therefore,
weight indicator light by about 2 %.

Dry Wt of Collars: 52,239#
[547" x 95.5#/ft = 52,239#]
Drill Collars: 6-7/16" OD x 2-3/8" ID
Buoyancy Wt of Collars: 45,160#
[51,212# x .860 (9.2ppg) = 45,160#]
Available WOB: 38,386#
[45,160# x .85 = 38,386#]
Contractor reports running
38M/40M on bit
[At & See Conc @ 3,671' for details]
Tension on drill string - 6,774#
[15% Design Factor]
to keep drill string straight.

Weight Indicator light by 17.6%; therefore,
38M/40M showing has true WOB 44+/47M

On main hole (tri-cone), 70 - 90 RPM.

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
29 Sept	14-3/4"	HTC GTX-91	16 - 16 - 16	0' / 218'	218'	6.25	34.9
30 Sept	7-7/8"	HTC DP506E	6 / 15's	218' / 3,379'	3,161'	48.50	65.2
2 Oct	7-7/8"	HTC GXE-28C	15 - 15 - 15	3,379' / 5,332'	1,953'	100.00	19.5
11 Oct	7-7/8"	HTC GXE-28C	15 - 15 - 15	5,332' / 5,380'	48'	4.50	10.7

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
	Till
	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

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

SHOW

	Oil
	Spotted
	Ques
	Dead
	Gas
	Oil/gas
	Bed contact

STRINGER

	Calc dol
--	----------

ACCESSORIES

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa

	Cephal
	Coral
	Spore
	Crin
	Echin
	Fish

	Foram
	Fossil
	Gastro
	Oolite
	Ostra
	Pelec

	Pellet
	Pisolite
	Plant
	Strom

OTHER SYMBOLS

ACTIVITY

	Lost circluation
	Circulate for sample 2
	Circulate for samples
	Rtd

Bit trip

INTERVAL

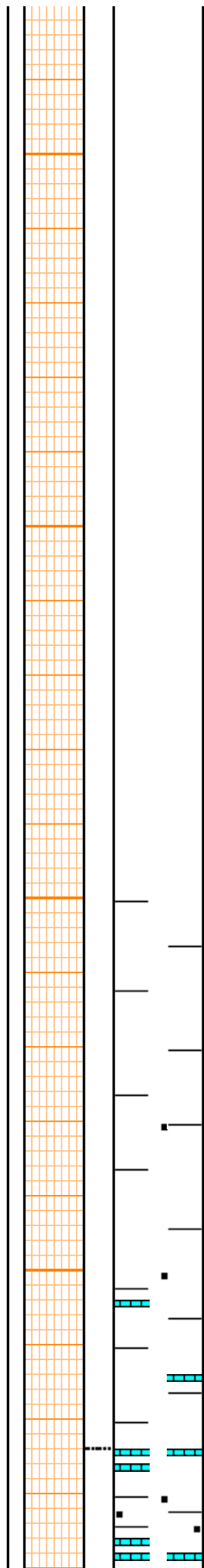
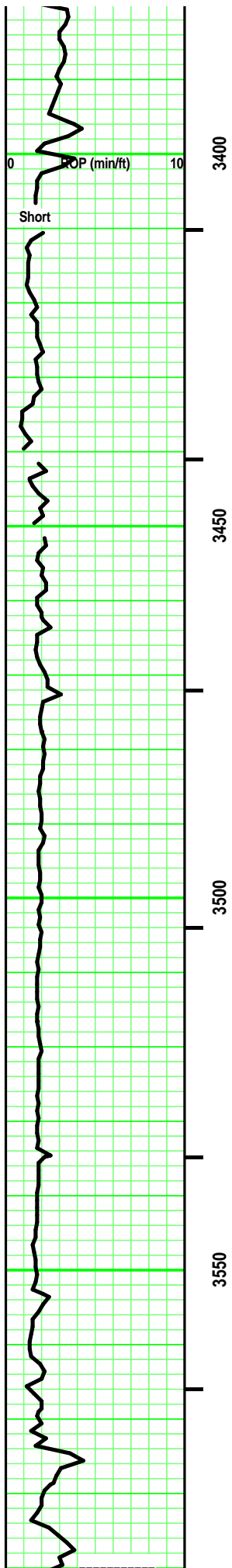
	Core
	Dst

Jammed core

Sidewall

EVENT

	Connection
	Rft



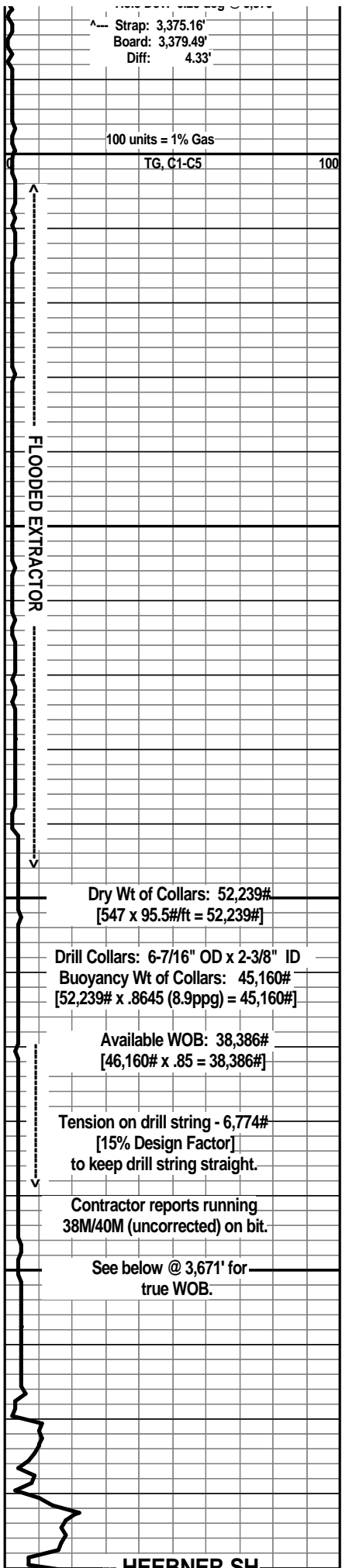
Misc Caving

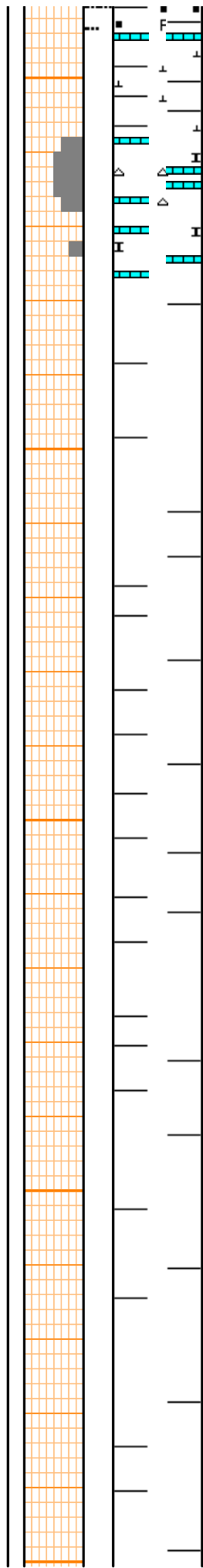
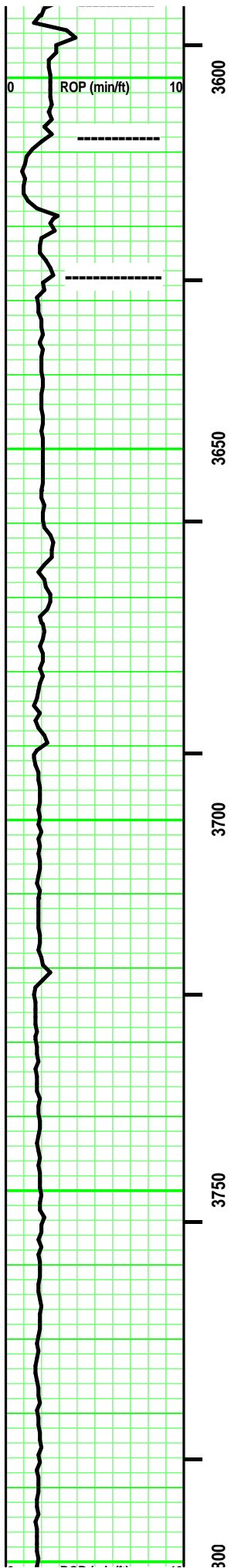
Misc Caving

SH - Med/ Dark Gray. Sing. silty & soft. Massive. limy streaks at depth.

Misc Caving

Interbedded SH & LS:
 SH - Med / Dark Gray. Black, carb with depth. Sing. tr calc. some Black & carb with depth. tr pyritic.
 LS - some Off Tan, mostly Grays - Mot. Micro-some XF-xln. xln por. argil/shaly in part. rare Re-xln. Firm. No/ tr vis por.





SH - Black. Carb. Fissile. tr pyritic. Grays, limy streaks & in part with depth.

Misc Caving

few pcs LS - Off White/ Tan. Sing/ tr Mot. tr Crypto-, few Micro- few XF-xln. xln por. some Re-xln. [CHERT - Tan/ White. Sing. Opaque. No Inclusions. No tripolitic. Fresh.] Chalky in part. Argil/ shaly in part near top. No/ tr vis por.

SH - Med/ Dark Gray. Sing. Massive. Silty in part. few dark specks in part.

Misc Caving

few pcs SS - Clear/ Off White/ Pale Lt Gray. Mot. rare Sil/ mostly VF qtz/ tr F qtz grains. SR. Hi/ tr mod sort. Mod sph. some Vitreous/ mostly Frosted luster. Calc/Si cement. argil infill in part. Soft. No/ most tr vis por.

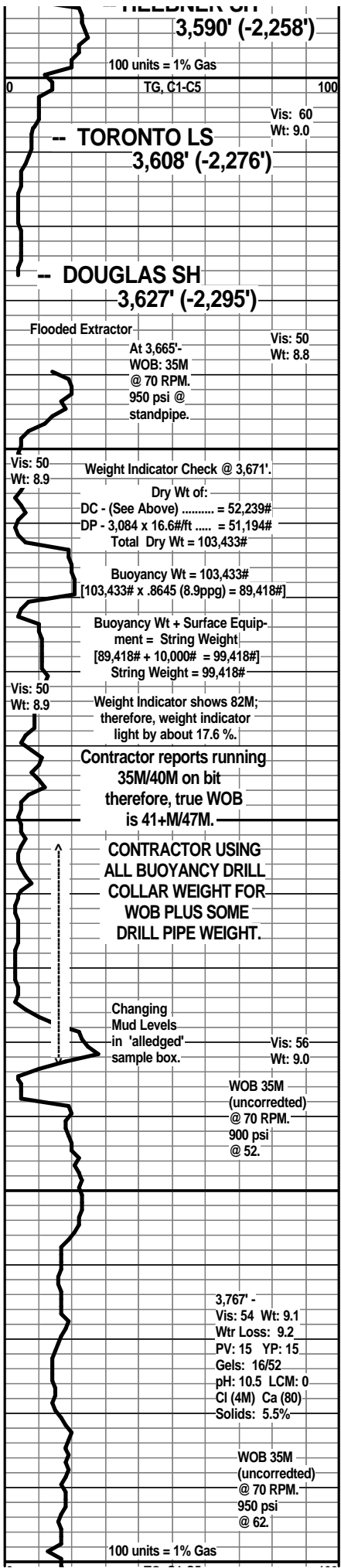
SH - Med/ Dark Gray. Sing. Massive. Silty in part. few dark specks in part.

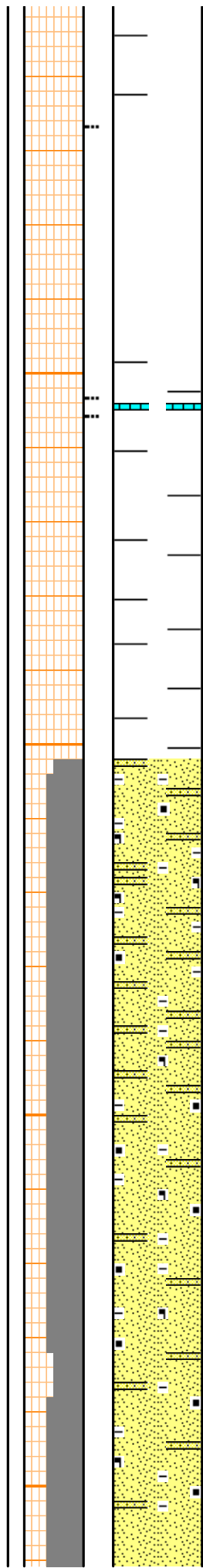
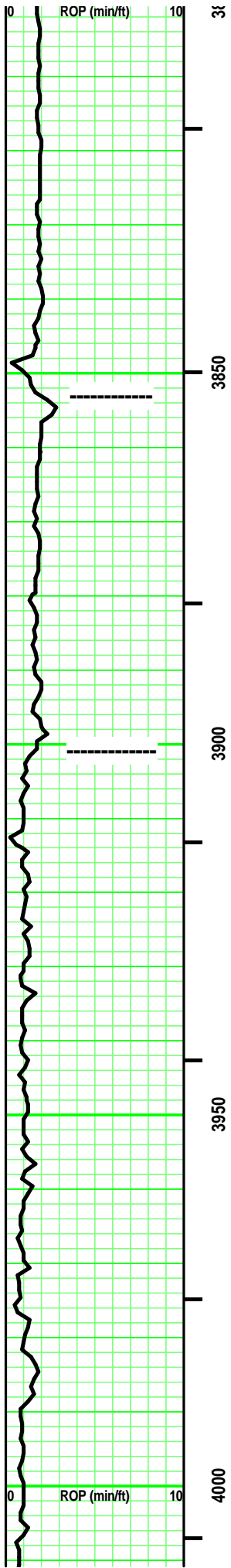
Misc Caving

SH - Med/ Dark Gray. Sing. Massive. Silty in part. few dark specks in part.

Misc Caving

SH - Med/ Dark Gray. Sing. Massive. Silty in part. few dark specks in part.



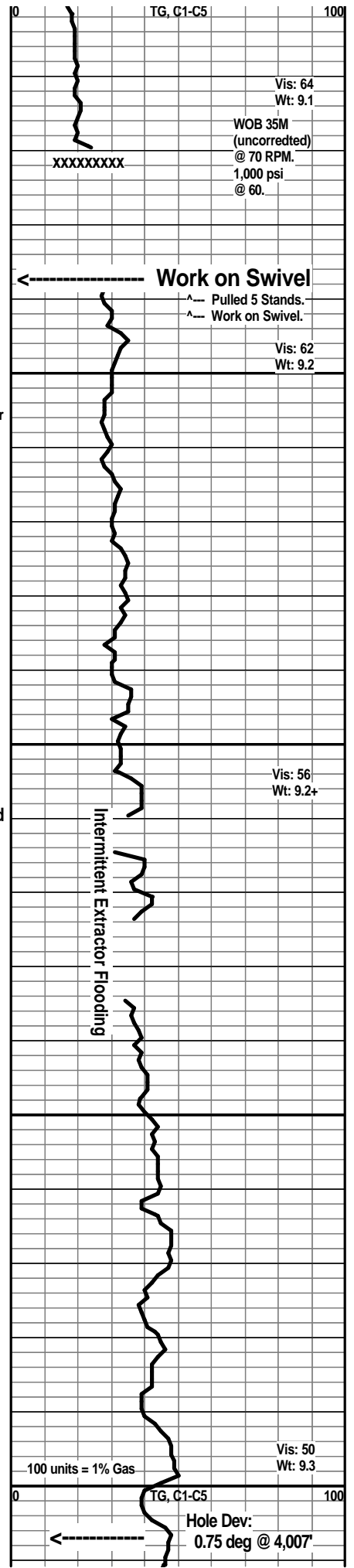


Misc Caving

HASKELL LM 3,853' (-2,521')
 few pcs: LS - Tan/Dark Tan. Sing. Crypto/Micro-xln. xln por. tr
 Re-xln. Dense. No/ tr vis por.

SH - Med/ Dark Gray, Silverish Gray. Sing. Soft. Massive.
 misc minute inclusions. tr silty in part.

STALNAKER SD 3,901' (-2,569')
 SS - Clear/ Lt Gray/ some Off White. some Sing/
 mostly Mot. Silt/ XF qtz grains. SA/SR. Hi sort to
 Mod sort with depth. Mod sph. tr Vit/ mostly frosted
 luster. Hi argil/ shaly. tr minute dark specks/ some
 carb flecks. some micaeous mat'l. rare pyritic in
 part. Si & some Calc cement. Point/ some sutured
 grain contact. Tr/ mostly Fair vis por. mostly
 clusters/ some grains.



Vis: 64
 Wt: 9.1

WOB 35M
 (uncorrected)
 @ 70 RPM.
 1,000 psi
 @ 60.

Work on Swivel

^-- Pulled 5 Stands.
 ^-- Work on Swivel.

Vis: 62
 Wt: 9.2

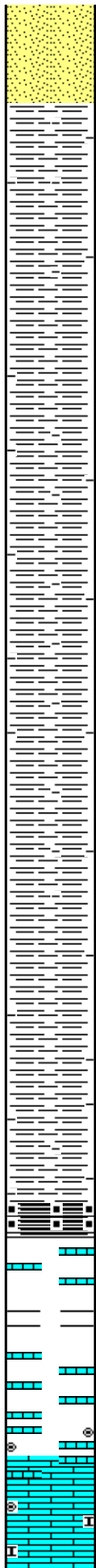
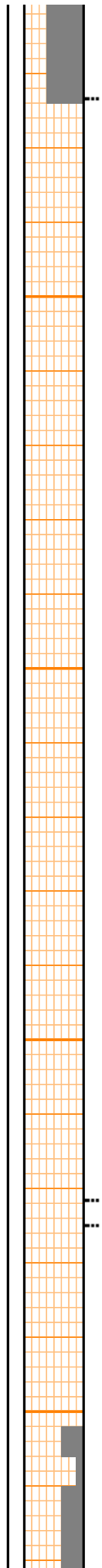
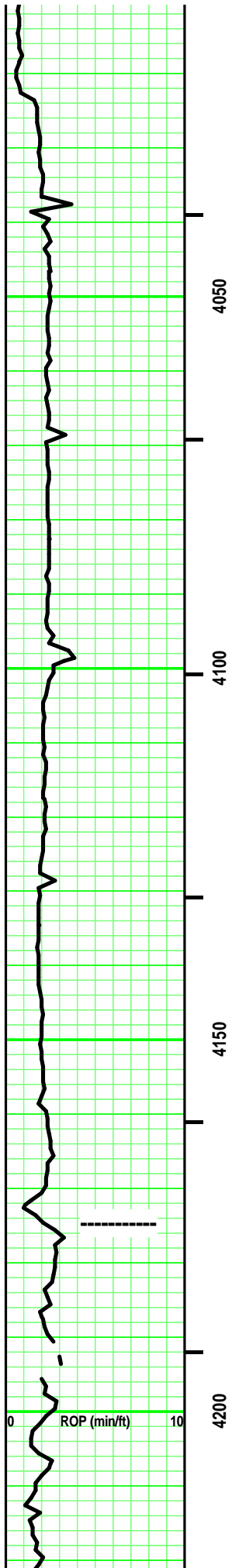
Vis: 56
 Wt: 9.2+

Intermittent Extractor Flooding

100 units = 1% Gas

Vis: 50
 Wt: 9.3

Hole Dev:
 0.75 deg @ 4,007'



SH - Med/ Dark Gray, some Silver Gray/ tr Greenish Gray. Sing. Soft. Massive. misc minute inclusions. tr silty in part.

SH - Med/ Dark Gray, some Silver Gray/ tr Greenish Gray. Sing. Soft. Massive. tr/ some misc minute inclusions. Blocky in part.

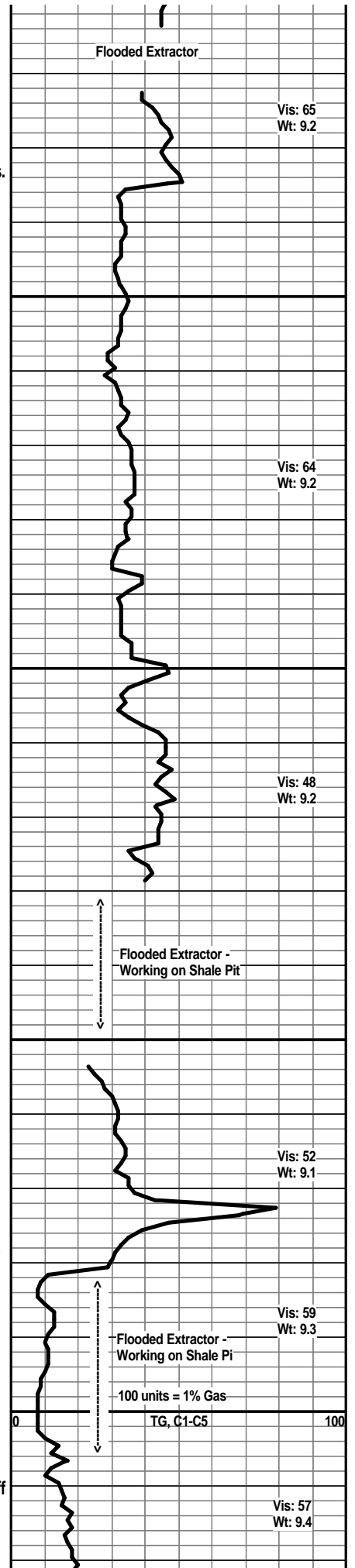
SH - Med/ Dark Gray, some Silver Gray/ tr Greenish Gray. Sing. Soft. Massive. tr/ some misc minute inclusions.

----- KC 4,175' (-2,843')
 few pcs: LS - Med/ Dark Tan. Sing. XF/ Micro-xln. xln por. tr argil in part. Firm. No/ tr vis por.

SH - Med/ Dark Gray. Sing.

Intermixed / Interbedded LS's
 LS - Tan/ Off White. Mot. Micro- VF Oolites and tr to some Oolcasts. rare Clear/ mostly Tan Matrix (mostly Opaque). tr/ some subchalky in part. Fair/ Good vis por.

LS - Tans/ some Off White. Sing/ tr Mot. VF/ Micro-xln. xln por. rare Re-xln. [tr CHERT - Tan/ Off White. Sing. Opaque to semitransparent. No tripolitic.] Firm in part. No/ tr vis por.



Vis: 65
Wt: 9.2

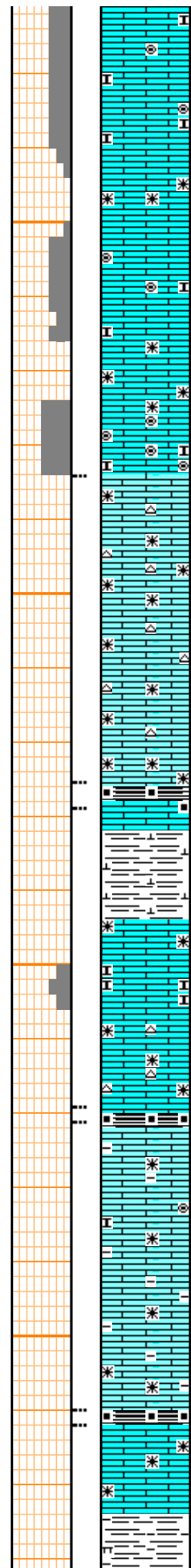
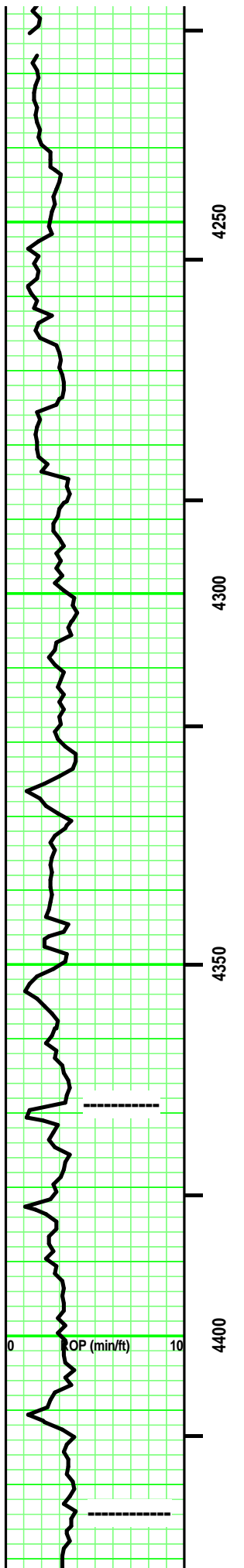
Vis: 64
Wt: 9.2

Vis: 48
Wt: 9.2

Vis: 52
Wt: 9.1

Vis: 59
Wt: 9.3

Vis: 57
Wt: 9.4



LS - Tans (Grayish, Greenish, Lt & Dark) / Off White. tr Light Gray. Sing/ mostly Mottled. mixture of Crypto-/ Micro-/ tr XF - xln. xln por. (some Chert: Clear/ Tan/ Lt Gray. Mot. Opaque to Transparent. tr Inclusions. No tripolitic.) Subchalky / VF Oolites in part. some Re-xln. tr/ some argil in part or interbedded. mostly Firm. No/ tr vis por.

----- STARK SH 4,325' (-2,993')

SH - Black. Sing. Carb. Soft.
 LS - Similar to (1) below.
 SH - Med Gray. Sing. calc in part. Firm.

LS (1) - Tan/ Off White. Sing/ tr Mot. Micro-/ XF-xln. xln por. tr subchalky. some Re-xln. rare fossil frag. tr argil/ shale interbedded. (some Chert: Clear/ Tan/ Lt Gray. Mot. Opaque to Transparent. No Inclusions. No tripolitic.) Firm. No/ tr vis por.

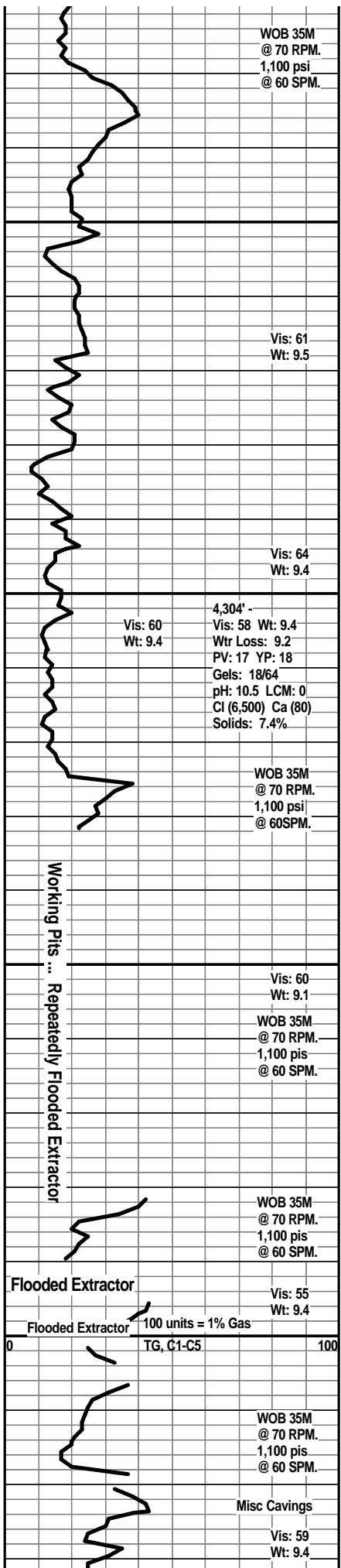
----- HUSHPUCKNEY SH 4,369' (-3,037')

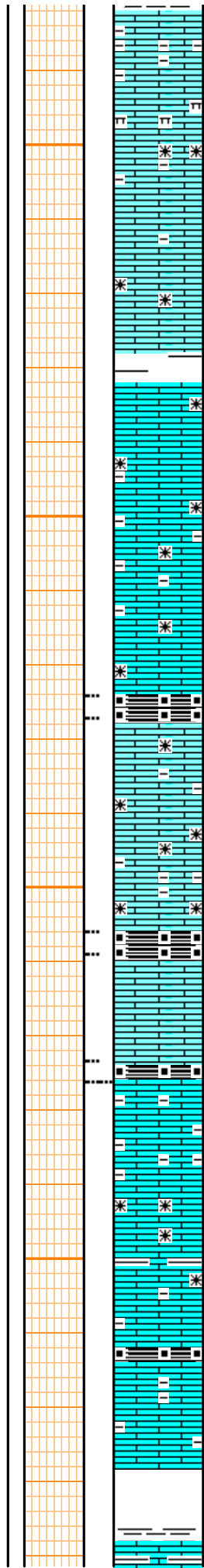
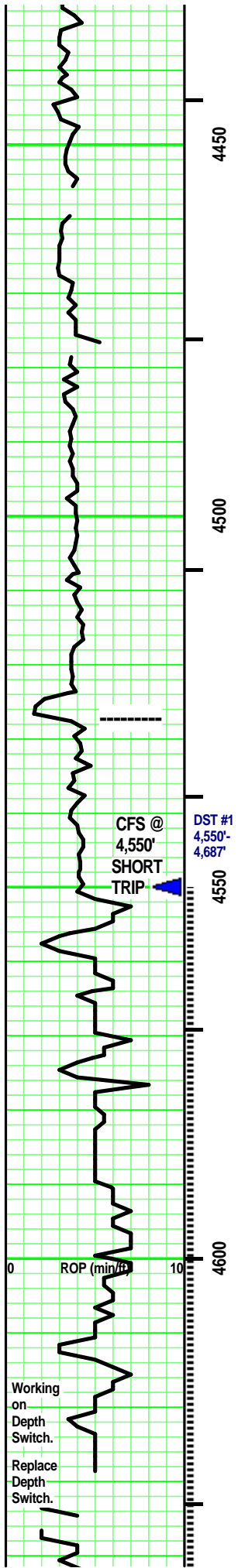
SH - Black. Sing. Carb. Soft. tr pyritic.
 LS - Tans/ Off White. tr/ some Lt/ Med Gray. Sing/ some Mot. XF-/ Micro-xln. xln por. some argil/ shaly in part. [rare chalky/ VF Oolites (ghost) in part.] some Re-xln. Firm. No/ tr vis por.

SH - Black. Sing. Carb.
 LS - Tans/ Lt Gray. Mot. VF-/ XF-xln. xln por. argil in part. Firm. No/ tr vis por.

----- B / KC 4,424' (-3,092')

Interbedded / Intermixed LS & SH





LS - Tan/ Grays. Sing/ Mot. XF-/ Micro-xln. xln por. argil/ shaly in part. misc 'rubble' inclusions. Marly in part. No/ tr vis por.

SH - Lt / Med Gray, some Greenish Gray. some limy streaks.

SH - Black. Sing. carb. tr fissile.

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

SH - Black. Sing. Carb. Soft. PAWNEE 4,527' (3,195')

LS - Med & Dark Tan/ Lt Gray. Sing/ some Mot. XF-/ some Micro-xln. xln por. some Re-xln. some argil/ shaly in part. No/ tr vis por.

SH - Black, Carb. Sing. Soft.

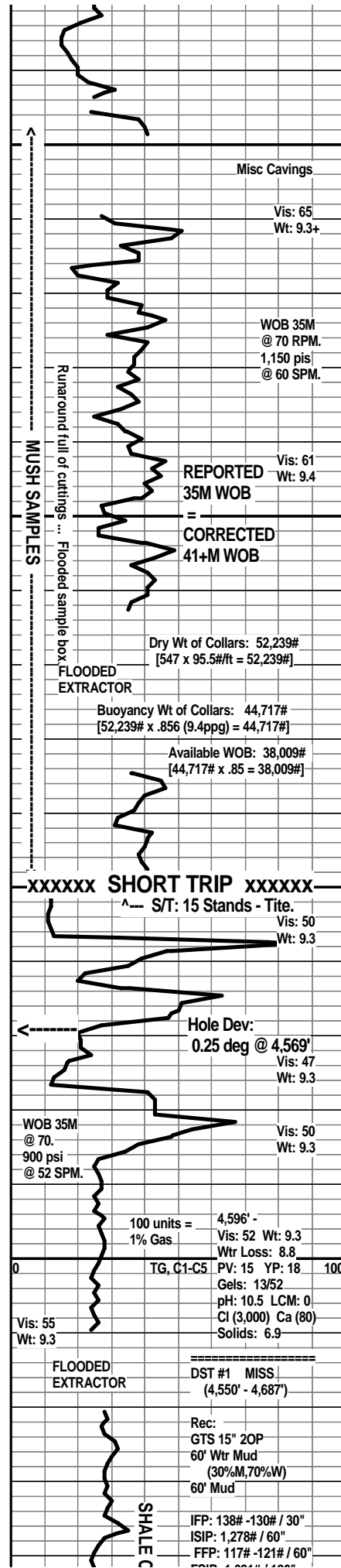
LS - Tan/ some Lt Gray. Sing. Micro-/ XF-xln. xln por. Re-xln. tr argil/shale. mostly Firm. No/ tr vis por.

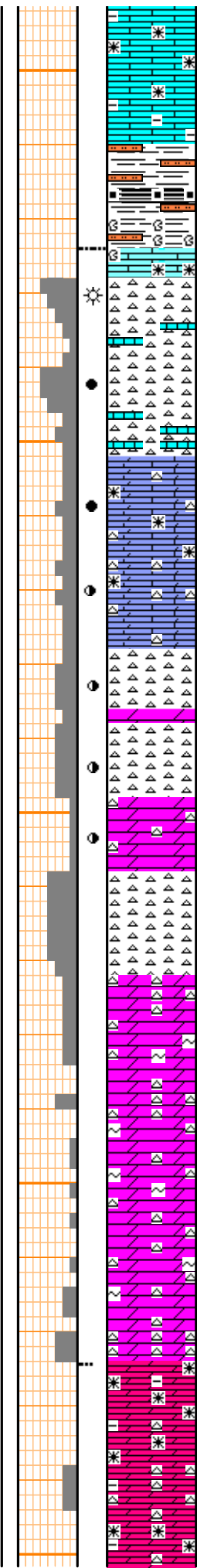
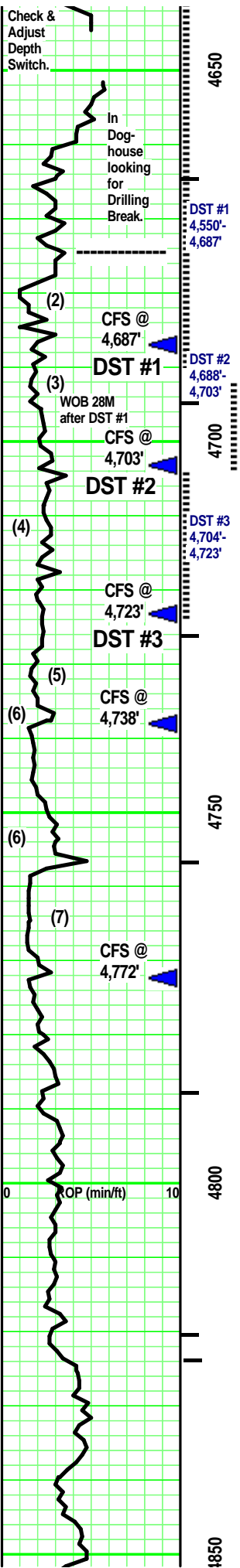
SH - Black, Carb. Sing. Soft CHEROKEE GP 4,576' (-3,244')

Interbedded & Intermixed SH & LS

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

LS - Tans/ some Lt 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.





Siltstone - Pale Blue/ tr Greenish Blue. Sing. some highly limy. misc inclusions minute (pellets/ nodules/ rare fossil frags).

Add Siltstone at depth - Dark Green/ some orangish tan, greenish brown. rare brownish red, brown. Grays (mixed).

MISS 4,674' (-3.342')

CHERT (2) - Tans/ Off White. Mot. Opaque to some semi-transparent. mostly No/ rare inclusions (fossil frags, tr glauc frags. Spotted/ some Uniform Tripolitic. Fair/ Good vis por on trip por. ?/ Faint odor. Barren/ some Spotted/ rare Uniform Yellow fluorescence. No free oil. two minute gas bubble. Mixture of: some Barren, some spotted & rare Uniform Lt Brown stain on tripolitic porosity. No/ some cut & residual. No/ some acid & residual.

CHERT (3) - similar to (2) above. No glauc. ?/ Faint odor. Barren/ some Spotted/ rare Uniform Yellow fluorescence. some minute spheres of Black free oil & tr minute gas bubbles in tripolitic por. Mixture of: some Barren, some spotted & rare Uniform Lt Brown stain on tripolitic porosity. No/ some cut & residual. No/ some acid & residual.

LS (Dol) (4) - Off White/ Lt Tan. Sing. Micro-xln. xln & mostly sucrosic por. (CHERT - White/ Tan. some Barren/ some spotted & uniform tripolitic. Opaque to semitransparent. tr/ some fossil frags.) partly Firm. tr/ Fair vis por.

?/ Faint odor. some spotted/ some uniform Yellow fluorescence. A/C, some minute Dark Brown to Black free oil spheres on por. No free gas. some spotted/ some uniform Lt Brown Stain. tr Med Brown 'tarry' smears. Weak Pos/ Pos cut & residual. Weak Pos/ Pos acid/ residual.

CHERT (5) - White/ Tan/ some Dark Tan, some Lt Silverish Gray. Sing/ Mot. some Barren/ some spotted & uniform tripolitic. Opaque to semitransparent. some/ lots white fossil frags. ? odor. some spotted/ rare uniform Yellow fluorescence. No free oil or gas. some spotted/ some uniform Lt Brown Stain. Weak Pos/ Pos cut & residual. Weak Pos/ Pos acid/ residual.

DOL (6) - Off White/ Tan. Sing. tr XF-/ Micro-Re-xln. xln por. (few pcs with Lt Tan irregular, spotted stain. No other show.) Firm. [intermixed/ interbedded with CHERT (5). rare pcs with irregular, spotted Lt Tan stain. No other show.] tr/ some Fair vis por.

CHERT (7) - Tan/ Off White. Sing/ tr Mot. Opaque to some semitransparent. mixture of No tripolitic and some Spotted Tripolitic. misc fossil white inclusions. mostly Fresh, sharp edges.

DOL - Off White/ Tan. Sing. tr XF-/ Micro-Re-xln. xln por. Firm. [intermixed/ interbedded with CHERT (5). rare pcs with irregular, spotted Lt Tan stain. No other show.] rare, (silt sized, SA) glauc grains. tr/ some Fair vis por

DOL - mostly Lt & some Med Gray/ tr Tan. Sing/ tr Mot. XF-/ Micro-Re-xln. xln por. tr argil. [some CHERT - Off White/ Brownish Gray, Drusy Gray. Silvery Blue. Sing/ mostly Mot. Opaque to some semitransparent. tr/ some tripolitic. mixture of: No/ some fossil frags. Fresh/Angular.] Firm. No/ tr vis por.

Vis: 65
Wt: 9.3

FSIP: 1,621# / 120"
129 deg F
MH: 2,328# - 2,058#

FLOODED EXTRACTOR - PLUGGED BUBBLE JAR, CANISTER, & SAMPLE LINE TO GAS DETECTION TRAILER.

DERRICK MAN FLOODED EXTRACTOR AGAIN DUE TO RAISING MUD LEVEL IN SAMPLE BOX.

Vis: 52
Wt: 9.3

After DST #1, bottoms up 331u.

WOB 35M @ 70 RPM. 900 psi @ 50 SPM.

Vis: 69
Wt: 9.2+

Hole Dev: 1 deg @ 4,687'

Board: 4,694.59'
Strap: 4,689.99
Diff: 4.6'

Vis: 65
Wt: 9.3

After DST #2, bottoms up 238u.

4,687' (DST #1) - Vis: 65 Wt: 9.3
Wtr Loss: 9.0
PV: 24 YP: 20 Gels: 18/44
pH: 10.5 LCM: 0#
Cl (3,500) Ca (80)
Solids: 6.9%

4,703' (DST #2) - Vis: 52 Wt: 9.0
Wtr Loss: 12.8
PV: 11 YP: 31
Gels: 24/52
pH: 10.0
LCM: 4#
Cl (14,000)*
Ca (200)
Solids: 4.2%

4,723' (DST #3) - Vis: 50 Wt: 9.0 LCM: 5#

4,738' (DST #2) - Vis: 45 Wt: 9.0 Wtr Loss: 12.0
PV: 14 YP: 16
Gels: 9/28
pH: 10.0
LCM: 5#
Cl (10,000)*
Ca (200)
Solids: 4.4%
* Driller not keeping hole full on trips.

4,772' (DST #3) - Vis: 52 Wt: 9.0 Wtr Loss: 12.8
PV: 11 YP: 31
Gels: 24/52
pH: 10.0
LCM: 4#
Cl (14,000)*
Ca (200)
Solids: 4.2%

4,790' (DST #2) - Vis: 52 Wt: 9.1 LCM: 4#

DST #2 MISS (4,688' - 4,703')

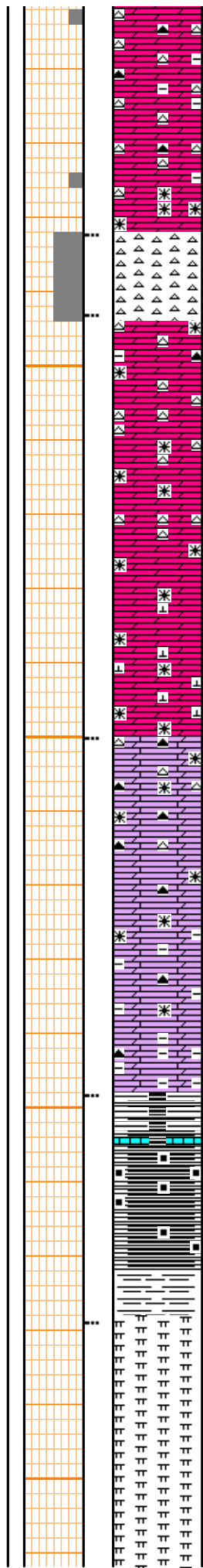
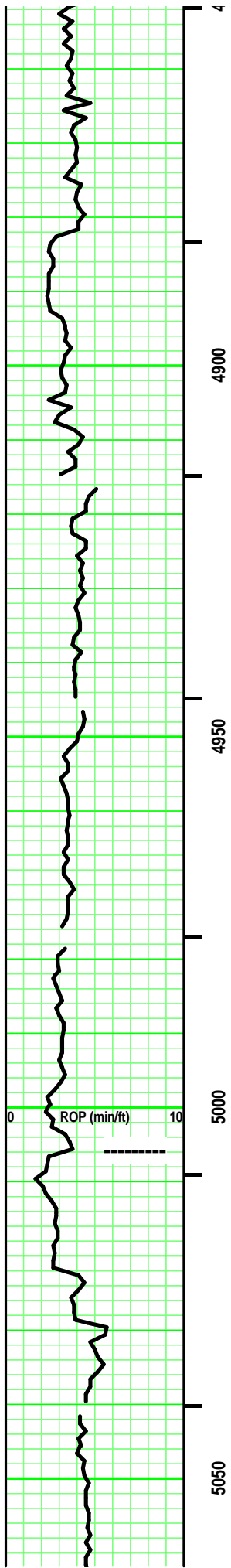
Rec: 3,640' Gas in Pipe 120' SI Wtr cut Muddy OIL (10%M, 20%W, 70%O) 80' SI Wtr cut Muddy OIL (10%G, 10%W, 30%M, 50%O)

Vis: 52
Wt: 9.1
LCM: 5#

IFP: 41# - 68# / 30"
ISIP: 1,773# / 60"
FFP: 50# - 91# / 60"
FSIP: 1,781# / 120"
126 deg F
MH: 2,352# - 2,170#

100 units = 1% Gas

TG, C1-C5



CHERT - rare Clear/ mostly Lt Grays/ Brownish Tan/ Brownish Gray. Mot. Opaque to semi-transparent. misc minute fossil frags. No/ tr tripolitic.

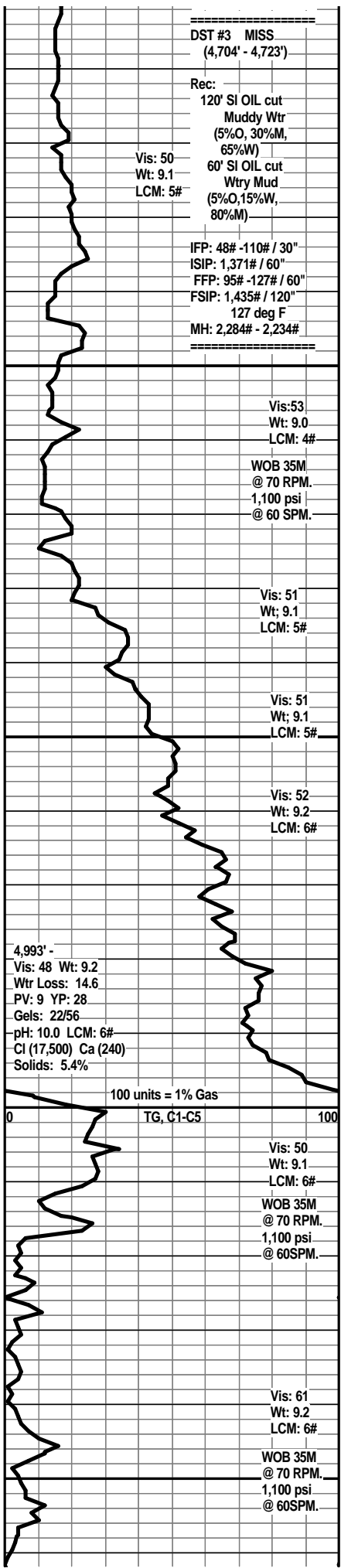
DOL - mostly Lt & some Med Gray/ tr Tan. Sing/ tr Mot. XF-/ Micro-Re-xln. xln por. tr argil. [some CHERT - Off White/ Brownish Gray, Drusy Gray. Sing/ mostly Mot. Opaque to some semitransparent. tr/ some tripolitic. mixture of: No/ some fossil frags. Fresh/Angular.] Firm. No/ tr vis por.

Add: calc streaks.

DOL (Calc) - Tans/ Grays/ 'Drusy' Gray/ Tannish Gray, tr Tannish Off White. Sing/ mostly Tan. XF-/ Micro-Re-xln. xln por. [some CHERT - Off White/ Brownish Gray, Drusy Gray. Sing/ mostly Mot. Opaque to some semitransparent. tr tripolitic. mixture of: No/ tr fossil frags. Fresh/Angular.] argil/ shaly (Greenish Gray) in part increasing with depth. tr vis por.

WOODFORD SH 5.006' (-3.674')
SH - Black. Sing. carb. (Brown hue scratch.) Massive. some blocky. some hi argil at top. tr hi limy interbedded.

MARL - Pale Lt Brown/ Lt Gray. Sing/ some Mot. Micro-xln. xln por. 65% carbonate/ 35% argil. After HCl acid, 'fluffy' argil sludge. Massive.



DST #3 MISS
(4,704' - 4,723')

Rec:
120' SI OIL cut
Muddy Wtr
(5%O, 30%M,
65%W)

Vis: 50
Wt: 9.1
LCM: 5#

60' SI OIL cut
Wtry Mud
(5%O, 15%W,
80%M)

IFP: 48# -110# / 30"
ISIP: 1,371# / 60"
FFP: 95# -127# / 60"
FSIP: 1,435# / 120"
127 deg F
MH: 2,284# - 2,234#

Vis: 53
Wt: 9.0
LCM: 4#

WOB 35M
@ 70 RPM.
1,100 psi
@ 60 SPM.

Vis: 51
Wt: 9.1
LCM: 5#

Vis: 51
Wt: 9.1
LCM: 5#

Vis: 52
Wt: 9.2
LCM: 6#

4,993' -
Vis: 48 Wt: 9.2
Wtr Loss: 14.6
PV: 9 YP: 28
Gels: 22/56
pH: 10.0 LCM: 6#
Cl (17,500) Ca (240)
Solids: 5.4%

100 units = 1% Gas

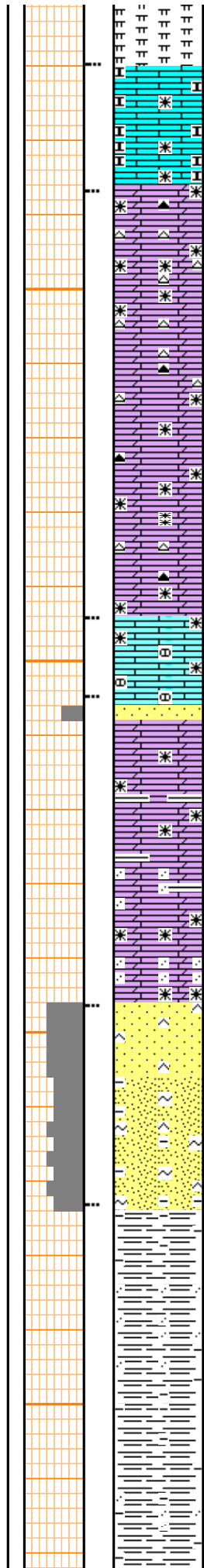
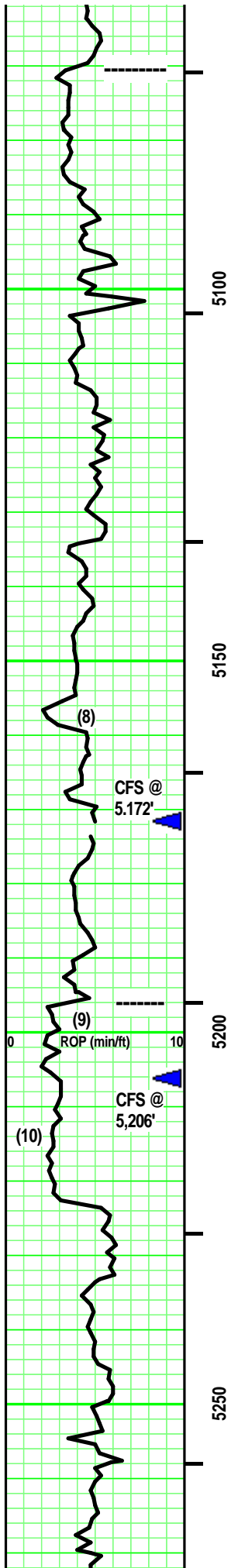
TG, C1-C5

Vis: 50
Wt: 9.1
LCM: 6#

WOB 35M
@ 70 RPM.
1,100 psi
@ 60SPM.

Vis: 61
Wt: 9.2
LCM: 6#

WOB 35M
@ 70 RPM.
1,100 psi
@ 60SPM.



VIOLA 5070' (-3,738')
 LS - Tans. Mot. VF-/XF-xln. xln & part por. Dark Tan (VF, RA) carbonate frags/ nodules. some Re-xln. [White. Sing. Micro-xln. xln por. Chalky. soft. Friable. No vis por. -intermixed-] partly Firm. No/ tr vis por.

DOL (Calc in part) - Off White/ Tans. Sing/ Mot. mixture of Crypto- Micro-xln. adding F-xln with depth. xln por. some Re-xln. (some CHERT - Clear/ White, Mottled -or- Tan, Grays, White, Clear - Mottled. Opaque to mixed Transparent. misc Inclusions: sponge, fossil hash/ fragments. No/ some tripolitic.) Firm. No/ tr vis por. some mineral fluorescence.

LS - Lt Brownish Tan. Sing. VF/F-xln. xln & tr part por. Re-xln. tr VF, SR nodules. Firm. No/ tr vis por.

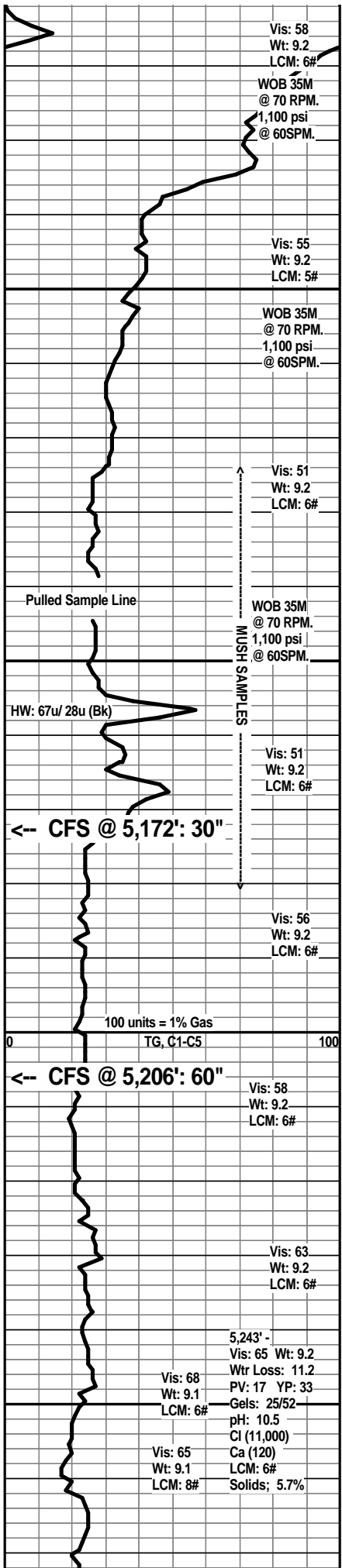
SS (8) - Clear/ Lt Gray. Mot. Mixture of Silt/ some VF qtz grains. SA/SR. Mod sort. Mod sph. tr Vitreous/ mostly Frosted luster. tr Point/ mostly Sutured grain contact. argil in part. Calc Dol/ Si cement. Dolomitic infill in part. Partly Friable to Firm. Tr vis por.

DOL (Calc) - Brown/ some Lt Gray & Tan. Sing/ som Mot. XF-/ Micro-Re-xln. xln por. [some interbedded SH - Blue Green, Grayish Green.] tr Sandy similar to (8) above. Firm. No/ tr vis por.

Wilcox Sd 5,196' (-3,864')
 SS (9) - Clear/ Off White/ Lt Gray mixed with some Greenish Gray. Mot/ Mixed. Mixture of some Silt/ mostly VF qtz grains. SA/SR. Mod sort. Mod sph. tr Vitreous/ mostly Frosted luster. tr Point/ mostly Sutured grain contact. argil in part. Dol/ Si cement. Dolomitic infill in part. Partly Friable to Firm. Tr/ Fair vis por.

SS (10) - Clear/ mostly Off White. Mot. Lt Green speckled. tr to some Lt Greenish Gray at depth. Mot/ Mixed. Mixture of some Silt/ mostly VF qtz grains. Silt/ rare VF glauc grains. SA/SR. Mod sort. Mod sph. tr Vitreous/ mostly Frosted luster. tr Point/ mostly Sutured grain contact. argil in part. Si cement. argil/shaly in part. Partly Friable to Firm. Tr/ Fair/ tr Good vis por.

SH - Med/ Dark Gray, some Greenish-Gray. rare Tannish-Grays. some sandy lensing in part (similar to above). Ductile. Blocky to tr splintery. mostly Massive with depth.



Vis: 58
 Wt: 9.2
 LCM: 6#

WOB 35M @ 70 RPM. 1,100 psi @ 60SPM.

Vis: 55
 Wt: 9.2
 LCM: 5#

WOB 35M @ 70 RPM. 1,100 psi @ 60SPM.

Vis: 51
 Wt: 9.2
 LCM: 6#

WOB 35M @ 70 RPM. 1,100 psi @ 60SPM.

Vis: 51
 Wt: 9.2
 LCM: 6#

← CFS @ 5,172': 30"

Vis: 56
 Wt: 9.2
 LCM: 6#

100 units = 1% Gas

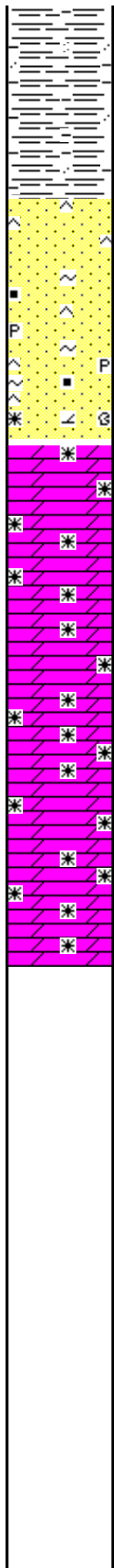
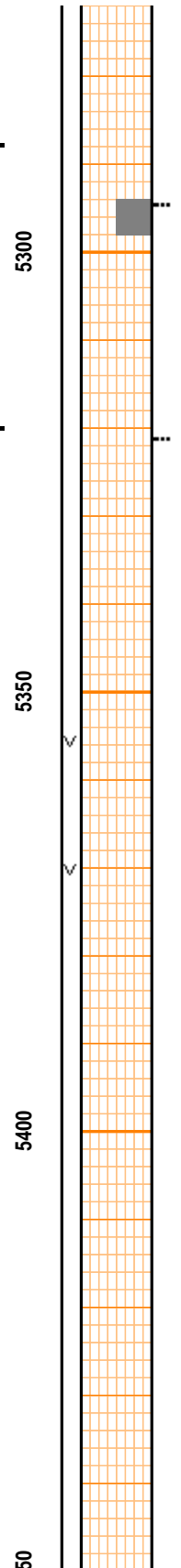
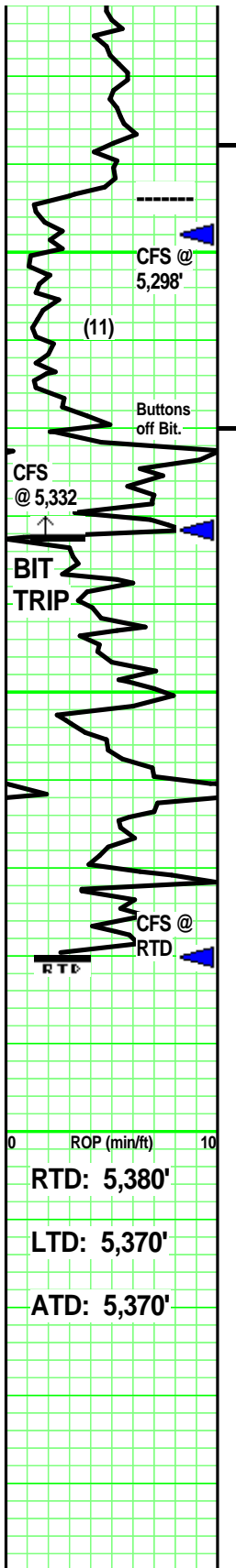
TG, C1-C5

← CFS @ 5,206': 60"

Vis: 58
 Wt: 9.2
 LCM: 6#

Vis: 63
 Wt: 9.2
 LCM: 6#

5,243' -
 Vis: 65 Wt: 9.2
 Wtr Loss: 11.2
 PV: 17 YP: 33
 Gels: 25/52
 pH: 10.5
 Cl (11,000)
 Ca (120)
 LCM: 6#
 Solids: 5.7%
 Vis: 65 Wt: 9.1 LCM: 8#



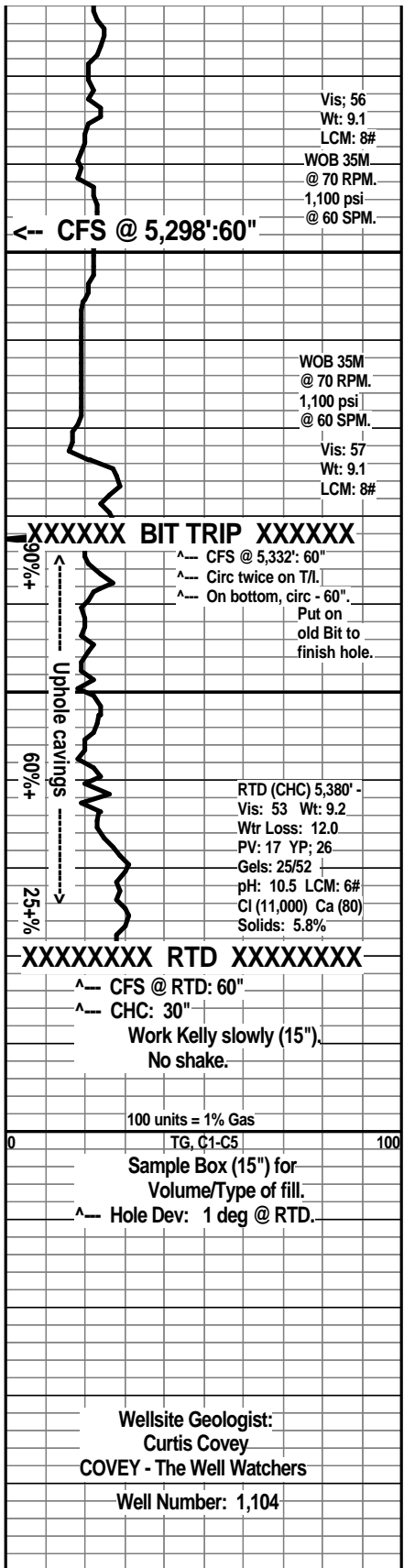
McLish Sh 5,294' (-3,962')
 SS (11) - Clear/ Grays/ some White, Greens. Mot/ Mixed. tr Silt/ mostly VF & F qtz grain. SA/SR. Mod sort. Mod sph. Vitreous/ Frosted luster. mixture of: some point/ mostly sutured grain contact. Si/ tr Calc cement. mixture of: rare - no inclusions, mostly - minute dark flecks, pale green (VF, SA) inclusions, and/or Med Gray shale fragments, black carb flecks. barren/ tr/ rare some pyrite. mostly friable. tr Firm/dense. tr/ Fair/ rare Good vis por.

ARBUCKLE 5,321' (-3,989')
 DOL - Lt & Med Brown/ Brownish Gray. Sing. some VF-/ XF-/ some Micro-Re-xln. Firm. No/ tr vis por.

Add: Dark Brown. Sing. VF/XF- Re-xln. xln & tr vuggy (some resealed) por. Firm. No/ tr/ some Fair por.

GATES #1
 660' FNL & 1,980' FEL 27-T34S-T10W
 Barber County, Kansas

WOOLSEY OPERATING CO.
 Wichita, Kansas



Wellsite Geologist:
 Curtis Covey
 COVEY - The Well Watchers