



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

Well Name: WELLS-WHITHAM
Well Id: #1
Location: 2029' FSL, 149' FWL, Sec 09-T17S-R36W, Wichita County, Kansas
License Number: API: 15-203-20358 **Region:** Wichita County
Spud Date: 05/28/2019 **Drilling Completed:** 06/10/2019
Surface Coordinates: Lat: 38.5891722
Long: -101.3123389
Bottom Hole Coordinates: Vertical hole
Ground Elevation (ft): 3287' **K.B. Elevation (ft):** 3295'
Logged Interval (ft): 3600' **To:** RTD **Total Depth (ft):** 4930'
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

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OPERATOR

Company: Ritchie Exploration, Inc.
Address: 8100 E. 22nd Street N., Bldg 700
Wichita, KS 67226
316-691-9500

GEOLOGIST

Name: Kent R. Matson
Company: Matson Geological Services, LLC
Address: 33300 W. 15th Street S.
Garden Plain, Kansas 67050
316-644-1975; kent4m@hotmail.com



COMMENTS

Ritchie Exploration Company Geologist: John Goldsmith, 316-640-0236 (cell).

Contractor: WW Drilling Company, Rig #12.

Tool Pusher: Calvin Pfannenstiel, 785-743-8120 (cell).

Surface Casing: 8 5/8" set at 253' (KB) w/200sx cement.

Production Casing: Based on field observations of drill cuttings, DST results and electric log evaluation, production casing was not installed.

Mud by: Mud-Co/Service Mud, Inc., Tony Maestas, 316-772-6679 (cell) and Matt Smith, 316-640-1039 (cell).

DST's by: Trilobite Testing, Mike Roberts, 785-650-5123 (cell).

Logs by: Pioneer (DI w/GR, CND, Micro, and Sonic), Justin Herrickson, 785-625-3858 (office).

RTD= 4930'

LTD= 4928'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Stotler	3577'	-282	3577'	-282
Heebner Shale	3946'	-651	3946'	-651
Lansing	3992'	-697	3994'	-699
Muncie Creek Shale	4168'	-873	4170'	-875
Stark Shale	4271'	-976	4268'	-973
Hushpuckney Shale	4322'	-1027	4322'	-1027
Base of KC	4362'	-1067	4363'	-1068
Marmaton	4412'	-1117	4406'	-1111
Altamont	4422'	-1127	4417'	-1132
Pawnee	4504'	-1209	4504'	-1209
Myrick Station	4546'	-1251	4550'	-1255
Fort Scott	4560'	-1265	4560'	-1265
Cherokee Shale	4586'	-1291	4587'	-1292
Johnson	4690'	-1395	4691'	-1396
Morrow	4742'	-1447	4739'	-1444
Mississippian	4851'	-1556	4849'	-1554
RTD	4930'	-1635		
LTD			4928'	-1633

ROCK TYPES

LITHOLOGY

	Anhy
	Cht
	Coal
	Congl
	Dol
	Gyp
	Lmst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Carb sh
	Dol
	Dtd
	Gry sh
	Sandy lms
	Shale
	Sltstn
	Shlyslts

	Sitysh
	Sdy dolo
	Silty dolo
	Shy dolo
	Shaly ls

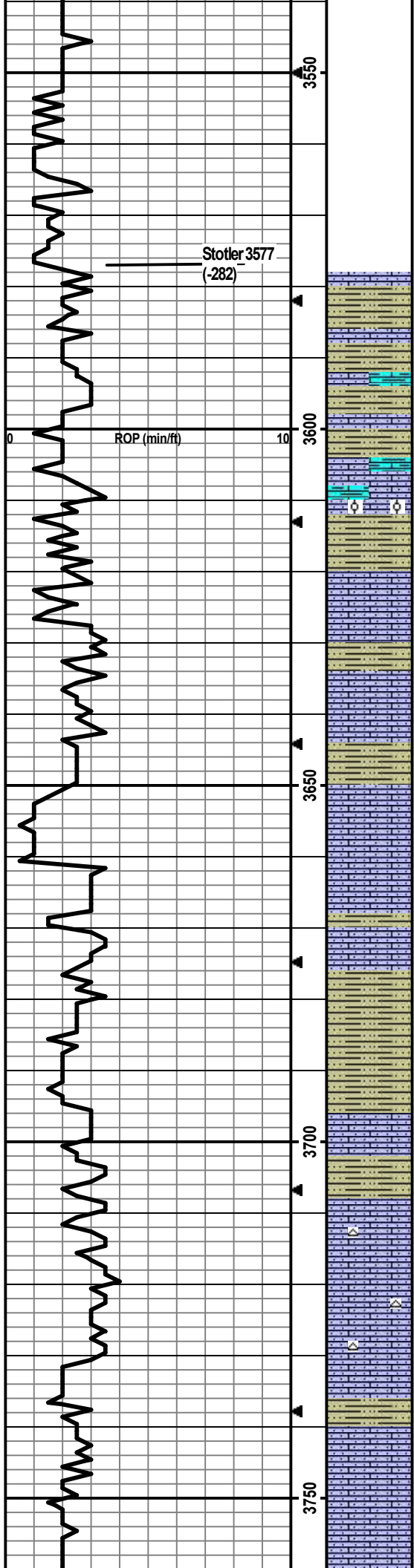
FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite

MINERAL

	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom
	Fuss
	Oomold
	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
	Chlorite
	Dol
	Sand
	Sity



Drill cutting samples at 10' intervals start at 3600'.

SH: lt-m gry, vry silty, slt carb, soft-fim, no odor, ns. LS: lt-m gry bm, vf-f xtal, vry silty, carb, min foss frags, no vis por, no odor, ns.

SH: m-dk gry, some vry silty, slt carb, soft-fim, no odor, ns. LS: cm/lt-m gry, micro-f xtal, some vry silty, some arg, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/min lt green-gry, some vry silty, slt carb, soft-fim, no odor, ns. LS: cm/lt gry w/dk gry mottling, vry silty/sndy, arg, no vis por, no odor, ns.

LS: cm/lt bm/gry, micro-m xtal, some vry silty, min foss frags/fine dense ool, no vis por, no odor, ns.

SH: lt-dk gry, vry silty, slt carb, soft-fim, no odor, ns.

LS: cm/lt-m bm/dk gry, micro-m xtal, vry silty/sndy, no vis por, no odor, ns.

SH: lt-dk gry, silty, slt carb, fim, no odor, ns.

LS: cm/lt bm/some dk gry mottling, micro-m xtal, vry silty, some chalky, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/bm, some vry silty, carb, no odor, ns.

LS: cm/lt bm, micro-f xtal, some vry silty, foss frags, no vis por, no odor, ns.

LS: cm/lt bm, micro-m xtal w/some 2ndry xtals, some vry silty, foss frags, no vis por, no odor, ns.

SH: gry-bm, vry silty, carb, soft-fim, no odor, ns.

LS: cm/bm/lt gry, micro-med xtal, silty, arg, foss frags, no vis por, no odor, ns.

SH: lt-med gry, vry silty, slt carb, fim, fissile, no odor, ns.

LS: cm/lt bm/lt gry, micro-med, vry silty/sndy, some chalky, min wht/lt bm chert, foss frags, min ppt-vf in-xtal por, no odor, ns.

SH: lt-dk gry, silty/sndy, carb, fim, no odor, ns.

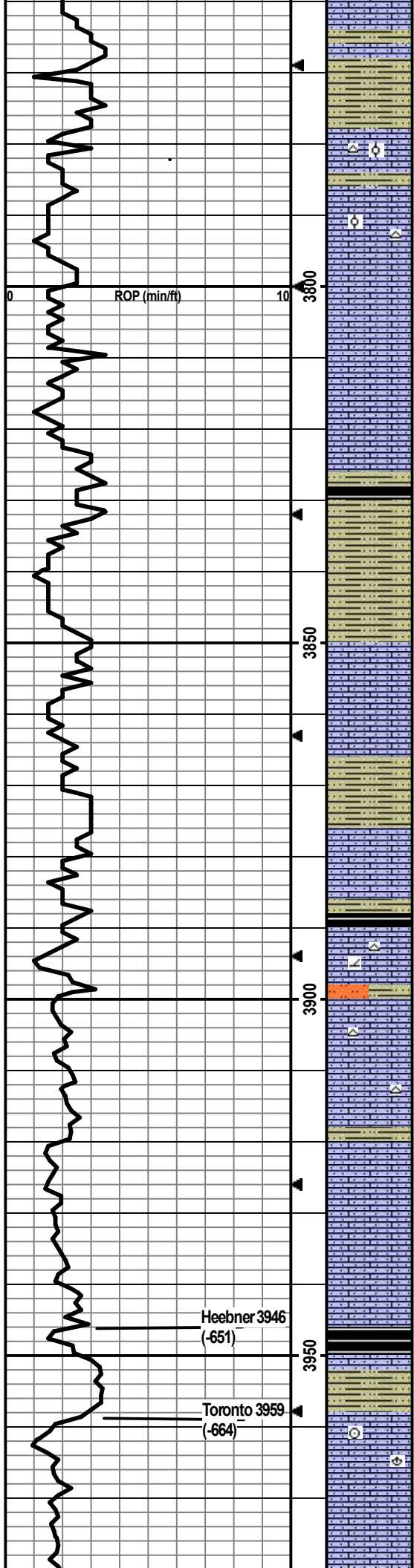
LS: wht/cm/lt-m bm, micro-med xtal, vry silty, some vry chalky, foss frags, no vis por, no odor, ns.

#11 @4470' 06/08/19 10:00am
wt vis pH chl
9.1 72 10.0 9000
Filt LCM
10.4 2

Mud-Co/Service Mud Inc. Check
#12 @4733' 06/09/19 04:00pm
wt vis pH chl
9.3 70 10.0 9500
Filt LCM
10.6 2

Mud-Co/Service Mud Inc. Check
#13 @4863' 06/10/19 07:00am
wt vis pH chl
9.4 80 10.0 9000
Filt LCM
10.2 2

**Survey Record
Deg @ Ft
0.5 @ 253'
0.75 @ 4020'
0.75 @ 4930'**



SH: med-dk gry, some vry silty/sndy, carb, soft-firm, no odor, ns.

LS: cm/lgt gry/bm/dk gry mottling, micro-med xtal, some vry silty/sndy, some chalky, min bm chert, foss frags/some dense crs ool, no vis por, no odor, ns

LS: cm/lgt bm, micro-med xtal, some silty/sndy, some dolomitic, foss frags, min ppt-f in-xtal por, no odor, ns.

SH: lt-dk gry/bm-gry, vry silty, carb, soft-firm, no odor, ns.

SH: lt-dk gry/lt green-gry/bm, silty, carb, soft-firm, no odor, ns.

LS: cm/lgt-m bm, micro-m xtal, some vry silty/sndy, some chalky, some arg, foss frags, some ppt-vf in-xtal por, no odor, ns.

SH: lt-med gry/bm, silty, carb, firm, no odor, ns.

LS: cm/lgt bm/lt gry, micro-med xtal, vry silty/sndy, chalky foss frags, no vis por, no odor, ns.

SH: lt-dk gry/lt gry-bm, vry silty, carb, firm, no odor, ns.

LS: lt-m bm, micro-med xtal, vry silty/sndy, some chalky, some dolo, min wht chert, foss frags, min ppt-f in-xtal por, no odor, ns. Some Sltstr: lt gry/lt bm, pred qtz, arg, friable, no odor, ns.

LS: cm/lgt bm/gry, micro-med xtal, silty/sndy, chalky, wht/cm chert, foss frags/grainy, some ppt-fn in-xtal por, no odor, ns.

LS: cm/lgt gry/gry mottling, micro-med xtal, vry silty/sndy, some vry chalky pcs, foss frags, min ppt-fn in-xtal por, no odor, ns.

LS: cm/lgt bm/lt gry/some gry mottling, micro-med, vry silty/sndy, some vry chalky, foss frags, no vis por, no odor, ns.

min SH: dk gry/blk, slt carb, firm, fissile, no odor, ns.

LS: cm/lgt bm/lt gry/some gry mottling, micro-med, vry silty/sndy, some vry chalky, foss frags, no vis por, no odor, ns. Min SH: lt-dk gry, silty, slt carb, firm, no odor, ns.

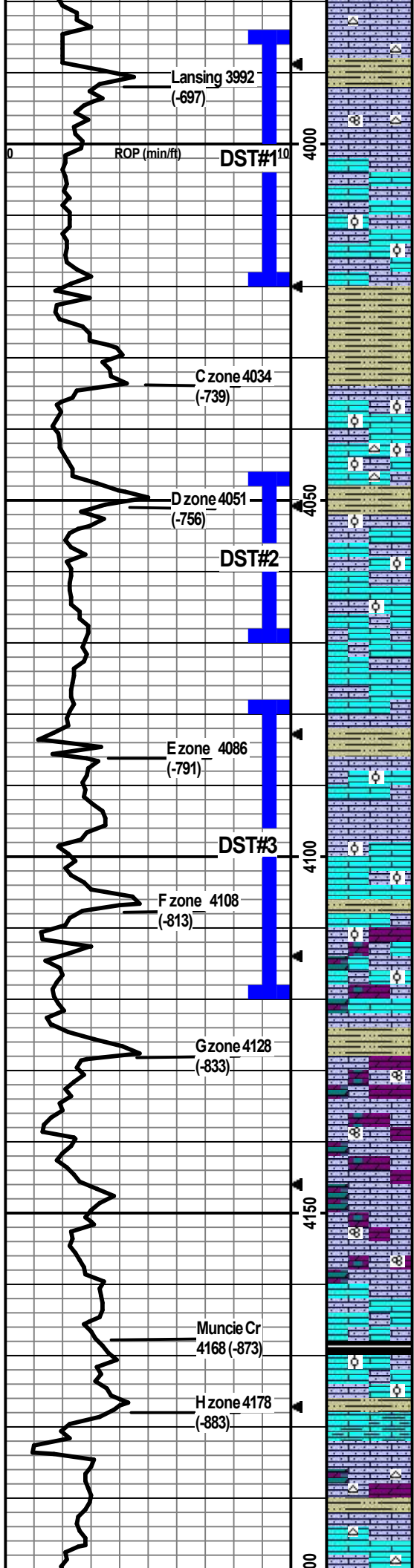
LS: cm/lgt bm/lt gry/some gry mottling, micro-med xtal, vry silty/sndy, some arg, some chalky, foss frags/crin/brac, min ppt-f in-xtal por, no odor, ns.

LS: cm/lgt bm/lt gry-bm, micro-med xtal, vry silty/sndy, some vry chalky, foss frags/grainy, ppt-m in-xtal por, no odor, ns.

Made wiper/short trip at the 3894' connection.

**DST1) 3984-4020
Lansing A-zone**

30/45/45/60
1st) built to BOB in 8min w/37.5" total blow; no BB.
2nd) built to BOB in 10min w/45" total blow; no BB.
IFP 36-255#
ISIP 1079#
FFP 255-447#
FSIP 1076#
HP 2067-1991#
Recvd: 950' Total Fluid: 268'
OWM (2%O, 30%W, 50%M), 310'
OMW (5%O, 20%M, 75%W), 372'
MW (4%M, 96%W).



LS: cm/lt gry-bm, micro-med xtal, some vry silty/sndy, some vry chalky, wht chert, foss frags, ppt-med in-xtal por, 2 pcs w/sfo w/dul yel flor, slt crush odor, ssfo.
 SH: bm/med gry, vry silty, slt carb, soft-firm, no odor, ns.
 LS: crm/lt brn, micro-med, vry silty/sndy, some chalky, min wht/crm chert, foss frags/min fusln, some fmed in-xtal por, no odor, ns.
 LS: cm/lt gry, micro-med xtal, some silty/sndy, some chalky, foss frags, 14 pcs w/sfo wf-m in-xtal por w/min crs por, dul yel flor, gd odor, gsfo.
 LS: cm/lt brn, micro-med xtal, some silty/sndy, some chalky, foss frags/ool, 24 pcs w/sfo wf-crs in-xtal/in-ool por, gd odor, gsfo.
 SH: lt-dk gry/lt green-gry/bm, some vry silty, slt carb, soft-firm, some fissile, no odor, ns. (Some LS as above, 2 pcs w/sfo assume from above, no odor)
 LS: crm/lt brn/lt-med gry, micro-med xtal, some silty/sndy, foss frags/dense ool, min pptf in-xtal por/some fn in-oolitic por, 1 pce w/sfo in in-ool por, slt odor, ssfo. SH as above.
 LS: crm/lt brn, micro-med xtal, some silty/sndy, some chalky, crm/lt gry/wht chert, foss frags/ool, 15 pcs wf-crs in-xtal/in-ool por w/sfo, some fluid oil some thick/tarry, dul yel flor, slt crush odor, sfo. (32 pcs in 60min sample).
 SH: lt-dk gry, some vry silty, slt carb, soft-firm, no odor, ns.
 LS: crm/lt brn, micro-med xtal, some sandy, some chalky, foss frags/some grainy/ool, some pyritic, 9 pcs w/sfo wf-fmed/some crs in-xtal/in-ool por, dul yel flor, no odor, sfo.
 LS: wht/crm/min lt gry, micro-med xtal, some vry sndy, some vry chalky, foss frags/min ool, 2 pcs w/sfo (1 pce wfo, 1 pce w/tar oil), ppt-med in-xtal por, dul yel flor, no odor, ssfo.
 LS: wht/crm/lt brn, micro-med xtal, some silty/sndy, some chalky, foss frags, no vis por, (2 ool w/sfo assumed from above), no odor, ns.
 SH: lt-m gry, silty, slt carb, soft-firm, fissile, no odor, ns.
 LS: crm/min lt gry, micro-med xtal, some silty, some chalky, foss frags/min ool, some f-m in-xtal/in-ool por, 3 pcs w/sfo (2 pcs in in-ool matrix), dul yel flor, slt odor, ssfo.
 LS: crm/lt-m brn, micro-med xtal, some silty/sndy, some chalky, foss frags/dense chalky ool, 2 pcs w/sfo w/ppt-vf in-xtal por, slt odor, ssfo.
 LS: wht/crm/lt brn, micro-med xtal, some vry sndy, some dolomitic, foss frags/dense ool, 1 ool pce w/sfo in ppt-f matrix por, dul yel flor, slt crush odor, ssfo.
 LS: crm/lt brn, vf-f xtal, silty/sndy, dolomitic, f-m in-xtal por, 1 pce w/sfo, dul yel flor, no odor, ssfo.
 SH: lt-dk gry/brn/mustard yel, some vry silty, slt carb, soft-firm, fissile.
 LS: wht/crm/min lt gry, vf-med xtal, silty/sndy, some vry chalky, dolomitic, foss frags/fusln, no vis por, no odor, ns.
 LS: wht/crm, vf-med xtal, some calcite xtals, sandy, some chalky, some dolomitic, foss frags, f-crs in-xtal por, no odor, ns.
 LS: crm/tan, micro-f w/min med xtal, some sndy, sample vry chalky, dolomitic, foss frags/fusln, some f-m in-xtal por, no odor, ns.
 LS: crm/lt gry, micro-f xtal w/some 2ndry xtals, some chalky, some silty/sndy, min foss frags, min vf-m in-xtal por, no odor, ns.
 SH: m-dk gry, silty, slt carb, soft-firm, fissile.
 LS: lt brn/lt-m gry/some gry mottling, micro-med xtal, some silty/sndy, some arg, some chalky, foss frags/dense ool, no vis por, no odor, ns.
 LS: crm/tan/lt brn, micro-f xtal, some silty/sndy, some grainy, some chalky, some dolomitic, wht/crm chert, min foss frags, no vis por, no odor, ns.
 SH: med-dk gry/blk, some silty, slt carb, soft-firm, fissile.
 LS: wht/crm, mostly micro-f xtal, some silty/sndy, some chalky, min wht/lt gry chert, min foss frags, no vis por, no odor, ns.

CFS @ 3990'
 Stop/30"/60"

CFS @ 4020'
 Stop/30"/60"
DST2) 4046-4070
Lansing D-zone
 30/45/45/60
 1st SB built to 4.25" blow; no BB.
 2nd) SB built to 6"; no BB.
 IFP 19-92#
 ISIP 1094#
 FFP 94-132#
 FSIP 1091#
 HP 2107-1998
 Recvd: 249' WM (5%W, 95%M).

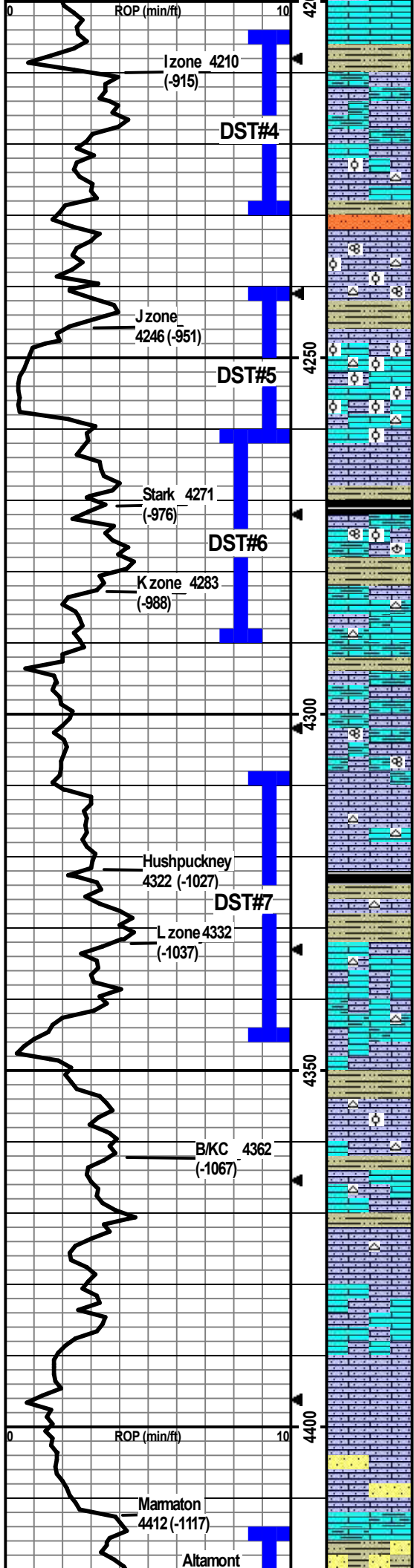
CFS @ 4050'
 Stop/30"/60"
 Pipe strap TOH for DST #2 at 4070' was 0.94' short to the board.

CFS @ 4070'
 Stop/30"/60"

CFS @ 4095'
 Stop/30"/60"

CFS @ 4120'
 Stop/30"/60"
DST3) 4078-4120
Lansing E & F-zones
 30/45/45/60
 1st built to BOB in 17min w/18" total blow; no BB.
 2nd) built to BOB in 22min w/24" total blow; no BB.
 IFP 23-196#
 ISIP 1142#
 FFP 198-345#
 FSIP 1134#
 HP 2131-2079#
 Recvd: 682' Total Fluid: 496' WM (30%W, 70%M), 186' MW (10%M, 90%W).

CFS @ 4150'
 Stop/30"/60"
DST4) 4204-4230
Lansing I-zone
 30/30/30/30
 1st) built to 1/4" then died; no BB.
 2nd) no blow - flushed tool - no blow; no BB.
 IFP 16-21#
 ISIP 1002#
 FFP 22-27#
 FSIP 1061#
 HP 2174-2098#
 Recvd: 5' OM (2%O, 98%M)



LS: crm/tan/lt gry, micro-med, some silty/sndy, some chalky, some dolomitic, wht/lt gry chert, min foss frags, no vis, no odor, ns.

SH: med gry/red brn, vry silty/sndy, slt carb, firm, fissile.

LS: crm/lt-m brn/lt-m gry, f-m xtal, vry silty/sndy, arg, min wht/crm chert, foss frags, no vis por, no odor, ns.

LS: crm/lt brn/lt gry/gry mottling, micro-med xtal, some chalky, some sndy, foss frags/some dense ool, min wht chert, 8 pcs w/sfo w/ppt-f w/min med in-xtal por, gd odor, sfo.

60min smpl had 14 pcs w/sfo, f-crs in-xtal/in-ool por, stg odor.

SH: lt-dk gry, silty, slt carb, soft-firm; min sltstn: gry, vf-f, pred qtz, glauc, friable.

LS: crm/lt gry/lt-m brn, micro-med xtal, silty/sndy, chalky, foss frags/fusin/dense ool, min crm/lt gry chert, no vis por, cup odor, 3 pcs in 60min w/sfo, ppt-f in-xtal por, fo on break, yel cut, ssfo.

SH: med-dk gry, some vry silty, soft-firm.

LS: crm/lt gry, f-med xtal, some sndy, some chalky, foss frags w/abund ool, min wht/lt gry chert, 15 pcs w/sfo w/f-crs in-xtal/in-ool por, crs oo-castic por but oil is in matrix, stg odor, dul yel flor, gsfo. Less pcs in 60min sample.

SH: lt-dk gry/lt green-gry/min blk, silty, slt carb, soft-firm, fissile, no odor, ns.

LS: crm/lt gry, micro-m xtal, some silty/sndy, foss frags, no vis por, no odor, ns.

LS: lt-m brn/lt-m gry, micro-med xtal, vry silty/sndy, some chalky, some arg, foss frags/brac/fusin/dense ool, 1 pce w/sfo wf-m in-xtal por, slt odor, ssfo.

LS: crm/lt-med brn/lt gry, micro-med, some silty/sndy, some arg, some chalky, some wht chert, foss frags, 4 pcs w/sfo wf-m in-xtal por, several oil saturated chalk balls in 30min smpl, 60min had abund oil sat chalk balls, gd odor, ns.

Flood of SH: lt-dk gry, lt green-gry, some vry silty, some pyritic, soft-firm, no odor, ns.

LS: crm/lt gry/lt-med brn, micro-med xtal, silty/sndy, some chalky, arg, foss frag, 2 pcs w/sfo wf-m in-xtal por, gd odor, sfo.

LS: crm/lt-gry, micro-med xtal, silty/sndy, vry chalky, arg, foss frags/fusin, 15 pcs w/sfo thk dk brn, f-crs in-xtal por, gd odor, some soft oil sat chalk balls, sfo.

LS: wht/crm/lt gry, micro-med xtal, some silty/sndy, vry chalky, wht/lt gry chert, foss frags, 9 pcs w/sfo thk dk brn w/f-crs in-xtal por, several soft oil sat chalk balls, gd odor, sfo.

SH: med-dk gry/brn, some vry silty, slt carb, soft-firm, fissile.

LS: crm/lt-m brn/gry, micro-med xtal, some chalky, some silty/sndy, foss frags, wht/lt gry chert, 2 pcs w/thk dk brn oil w/f-crs in-xtal por, slt odor, ssfo.

SH: med-dk gry/blk, silty, slt carb, soft-firm, fissile.

LS: crm/lt-med brn/lt gry, micro-med xtal, some chalky, some silty/sndy, foss frags/fusin, wht/lt gry chert, 5 pcs w/th dk brn oil, f-crs in-xtal por, slt odor, sfo.

LS: crm/lt-m brn/lt gry, micro-med xtal, some chalky, some silty/sndy, some arg, foss frags, wht/lt gry chert, 4 pcs w/med-crs in-xtal por w/sfo thk dk brn, slt odor, ssfo.

LS: crm/lt brn/lt gry, micro-med xtal, some silty, some chalky, min wht chert, foss frags/min dense ool, no vis por, no odor, ns. (1 pce w/sfo w/crs por assume from above.)

SH: lt-dk gry/lt green-gry/brn, some vry silty, slt carb, soft-firm, no odor, ns.

LS: lt brn/lt gry/some dk gry mottling, micro-med xtal, few pcs w/crs 2ndry xtals, some silty/sndy, some chalky, some wht chert, foss frags, chert, no vis por, no odor, ns.

LS: crm/lt brn/lt gry-brn, micro-med xtal, silty/sndy, some chalky, min lt brn chert, foss frags, no vis por, no odor, ns.

1 pce in 60min sampl w/sfo, LS w/abund foss, m-crs por, gd odor.

LS: lt-m brn/lt gry, micro-med xtal, some silty/sndy, some chalky, some arg, foss frags, no vis por, no odor, ns.

LS: lt-m brn/lt-m gry, micro-m xtal, vry silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

LS: crm/lt-m brn/gry-brn, micro-m xtal, vry silty/sndy, arg, foss frags, no vis por, no odor, ns. Some SS: lt-m gry/lt brn, vf-f, pred qtz, carb, arg, friable, no odor, ns.

LS: crm/lt-m brn/gry-brn, micro-med xtal, some vry silty/sndy, some arg, foss frags, no vis por, no odor, ns. SS as above, no odor, ns. SH: lt-m gry/brn/mustard yel, vry silty/sndy, soft-firm, no odor, ns.

CFS @ 4210'
Stop/30"/60"

CFS @ 4230'
Stop/30"/60"

CFS @ 4245'
Stop/30"/60"

CFS @ 4262'
Stop/30"/60"

CFS @ 4290'
Stop/30"/60"

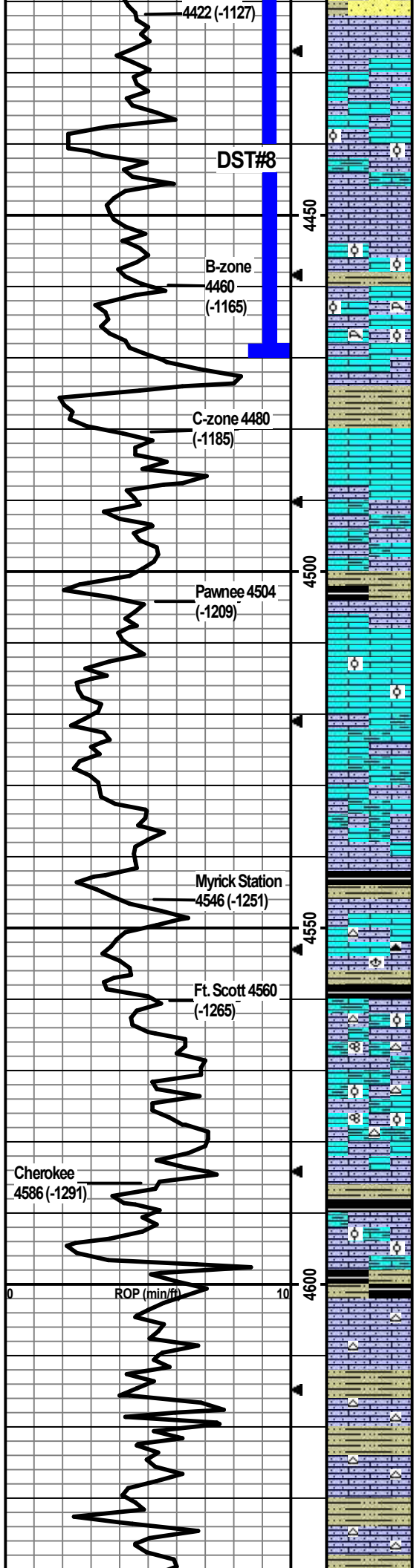
DST5) 4240-4262
Lansing J-zone
30/45/45/60
1st) built to BOB in 26min w/12.25" total blow; no BB.
2nd) built to BOB in 32min w/16" total blow; no BB.
IFP 23-134#
ISIP 1130#
FFP 137-224#
FSIP 1109#
HP 2245-2049#
Recvd: 464' Total Fluid: 5'O, 149' OWM (10%O, 30%W, 60%M), 310' OMM (4%O, 10%M, 86%W).

CFS @ 4345'
Stop/30"/60"

DST6) 4260-4290
Lansing K-zone
30/45/45/60
1st) built to BOB in 1min w/424" total blow; no BB.
2nd) built to BOB in 2min w/63" total blow; no BB.
IFP 416-1099#
ISIP 1213#
FFP 1100-1213#
FSIP 1219#
HP 2189-2030#
Recvd: 2728' Total Fluid: 310' WM (5%W, 95%M), 2418' W (100%W).

CFS @ 4380'
Stop/30"/60"

DST7) 4308-4345
Lansing L-zone
30/45/45/60
1st) built to 6.75" total blow; no BB.
2nd) built to 6.25" total blow; no BB.
IFP 60-125#
ISIP 1246#
FFP 127-184#
FSIP 4246#



LS: w/lt cm/lt brn/gry, micro-m w/some crs xtals, some vry silty/sndy, foss frags, no vis por, no odor, ns. Flood of SH/SS as above.

FSIP 1240#
HP 2124-2075#
Recvd: 372' Total Fluid: 186' WM (3%W, 97%M), 186' MW (40%M, 60%W).

LS: cm/lt brn/lt gry, micro-m xtal, some vry silty/sndy, foss frags, 1 pce w/staining and sfo on break, ppt-vf in-xtal por, no odor, ssfo. Flood of SH and SS as above.

CFS @ 4440'
Stop/30"/60"

DST8) 4414-4470
Altamont A & B-zones
30/45/45/60

1st) built to 1.25" total blow; no BB.
2nd) built to 1" total blow; no BB.
IFP 45-71#
ISIP 1201#
FFP 82-113#
FSIP 1177#
HP 2310-2174#
Recvd: 186' OM (2%O, 98%M).

LS: cm/lt-m brn/lt-m gry, micro-m xtal, vry silty/sndy, some arg, foss frags/dense ool, no vis por, no odor, ns.

SH: lt-m gry/dk maroon, vry silty, soft-firm, fissile.

LS: lt-m gry/lt-m brn/gry-brn, micro-med xtal, some chalky, some silty/sndy, foss frags/min ool, 2 pcs w/staining and fo on break w/ppt-f in-xtal/in-ool por, no odor, ns.

LS: cm/lt-m brn/lt gry, micro-med xtal, some silty/sndy, some chalky, foss frags/dense ool/wht lattice coral, coral has med-crs laminar por, no odor, ns.

LS: lt brn/lt-m gry, micro-med xtal, some vry silty/sndy, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry, some vry silty/sndy, carb, firm, fissile, no odor, ns.

LS: cm/lt-med brn, micro-m w/some crs xtal, some 2ndry xtals, foss frags some abund, min ppt-f in-xtal por, no odor, ns.

LS: cm/lt-m brn/lt-med gry, micro-m w/some crs xtal, some vry silty/sndy, some arg, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/lt brn, silty, carb, soft-firm, fissile.

LS: cm/lt-m brn w/some wht mottling, micro-med xtal, some vry silty/sndy, foss frags, no vis por, no odor, ns.

LS: cm/lt-m brn, micro-m xtal, foss frags/dense ool/grainy, no vis por, no odor, ns.

LS: cm/lt-m brn/lt gry, vf-m xtal, some silty, some chalky, some arg, foss frags, no vis por, no odor, ns.

LS: cm/lt-m brn/lt-m gry, micro-f xtal, some silty, some chalky, some arg, foss frags, no vis por, no odor, ns.

SH: med-dk gry/blk, some silty, slt carb, soft-firm, no odor, ns.

LS: cm/lt-m brn/lt-m gry, micro-med xtal, some silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m brn/lt-m gry, micro-m xtal, some silty/sndy, some chalky, wht/lt-dk brn chert, foss frags/brac, no vis por, no odor, ns.

SH: med-dk gry/blk, some vry silty, soft-firm, fissile.

LS: lt-med brn/gry/gry mottling, micro-m xtal, some silty/sndy, some chalky, some arg, abund wht/lt gry/lt brn foss chert, arg, abund foss frags/fusln/ool, no vis por, no odor, ns.

LS: cm/lt-m brn/lt-m gry, micro-med xtal, some silty/sndy, some chalky, some arg, wht/lt gry foss chert, foss frags/fusln/ool, no vis por, no odor, ns.

LS: cm/lt-m brn/gry, micro-m xtal, some silty/sndy, some lt gry/lt brn chert, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk, some vry silty, slt carb, soft-firm, no odor, ns.

LS: cm/lt brn/lt gry/gry mottling, micro-med, some silty/sndy, some chalky, some arg, foss frags/dense ool, no vis por, no odor, ns.

SH: lt-dk gry/blk, slt carb, some silty, firm, no odor, ns.

LS: cm/lt-m brn/lt gry, micro-med, some silty/sndy, some chalky, wht/lt brn/lt gry chert, foss frags, no vis por, no odor, ns.

SH: med-dk gry/blk/gry-brn, slt carb, some silty, firm, fissile, no odor, ns.

LS: cm/lt gry/lt brn, micro-m xtal, some silty, lt-brn chert, foss frags, no vis por, no odor, ns.

SH: m-dk gry, some silty, slt carb, soft-firm, fissile, no odor, ns.

LS: cm/lt gry/lt brn, micro-m xtal, vry silty, some chalky, lt brn chert, min foss frags, no vis por, no odor, ns.

SH: med-dk gry/dk maroon, some silty, slt carb, firm, fissile, no odor, ns.

LS: cm/lt gry/lt brn, micro-med xtal, silty/some vry sndy w/crs snd, some arg, lt brn chert, foss frags, no vis por, no odor, ns.

CFS @ 4470'
Stop/30"/60"

CFS @ 4500'
Stop/30"/60"

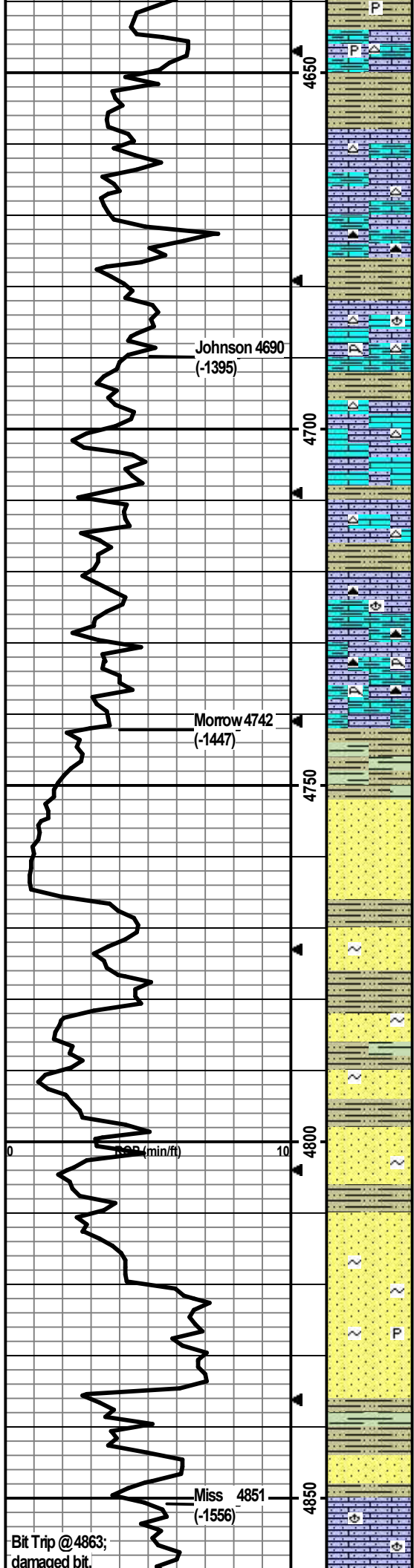
CFS @ 4540'
Stop/30"/60"

CFS @ 4550'
Stop/30"/60"

CFS @ 4580'
Stop/30"/60"

CFS @ 4600'
Stop/30"/60"

CFS @ 4620'
Stop/30"/60"



SH: m-dk gry/lt green-gry/dk maroon, some silty, some pyritic, silt carb, firm, no odor, ns.

LS: lt-m brn/lt-m gry, micro-med xtal, some vry silty/sndy, some arg, min lt brn chert, pyritic, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/dk maroon, some silty, silt carb, firm, no odor, ns.

LS: lt-dk brn/m-dk gry, micro-med xtal, some silty, min m-dk brn chert, foss frags, no vis por, no odor, ns.

LS: lt-m brn/gry, micro-med xtal, some vry silty, min chalky, some arg, brn chert, foss frags/some grainy, no vis por, no odor, ns.

LS: lt gry/lt-m brn, micro-m xtal, some silty, some arg, some chalky, dk brn chert, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk, some silty, soft-firm, fissile, no odor, ns.

LS: cm/lt-m brn, micro-med xtal, some 2ndry xtals, some silty, min wht/brn chert, foss frags/brac/coral, no vis por, no odor, ns.

SH: m-dk gry, silty, carb, firm, no odor, ns.

LS: lt-med brn/min gry, micro-m xtal, some silty/sndy, some chalky, some arg, lt gry/brn chert, min foss frags, no vis por, no odor, ns.

LS: lt-m brn/gry-brn, micro-med xtal, some vry silty, min chalky, some foss frags/some grainy, no vis por, no odor, ns.

LS: lt-med brn/gry, some silty, some arg, min foss frags, some lt gry/brn chert, no vis por, no odor, ns.

LS: cm/lt-m brn/lt-dk gry, micro-m xtal, some silty, some chalky, some arg, dk brn/dk gry chert, min foss frags/brac, no vis por, no odor, ns.

LS: cm/lt-m brn/lt-dk gry, micro-m xtal, some silty, some chalky, some arg, dk gry chert, min foss frags/opaque coral, no vis por, no odor, ns.

SH: m-dk gry/lt green-gry/blk, some vry silty, silt carb, firm, no odor, ns. (Flood of LS as above.)

SH: as above w/SS: lt gry, vf-f, pred qtz, friable, no odor, ns

SS: lt gry, vf-f, pred qtz, friable, no odor, ns. Min SH: dk gry/min mustard yel, vry silty, carb, firm-hard, no odor, ns.

SH: m-dk gry, some silty, silt carb, soft-firm, no odor, ns.

SS: lt gry, vf-f, pred qtz, some glauc, friable, no odor, ns.

SH: lt-dk gry/lt green-gry/dk maroon/min mustard yel, some silty, firm, no odor, ns.

SS: wht/lt gry, vf-m, pred qtz, silt glauc, hard, some friable, no vis por, no odor, ns.

SH: lt-dk gry/lt gry-green/lt brn mottling, some vry silty/sndy, silt carb, soft-firm.

SH: lt-dk gry/lt gry-green/brn, silt carb, some silty, firm, no odor, ns. SS: wht/lt gry, f-m, sr-wr, pred qtz, silt glauc, hard, some friable, no vis por, no odor, ns.

SS: wht/lt gry, f-crs, sr-wr, pred qtz, silt glauc, silt pyritic, hard, some friable, no vis por, no odor, ns. SH: as above.

SH: lt-dk gry/green-gry/lt red-brn, some silty, carb, firm, no odor, ns. SS: as above, no odor, ns.

SH: m-dk gry/green-gry/red-brn, some silty/sndy, carb, pyritic, no odor, ns.

SS: wht/lt gry, opaque, f-m, sr-wr, min glauc w/gry inclusions, hard, friable, no odor, ns.

LS: wht/lt-m brn, vf-m xtal, some vry sndy, some vry chalky, some friable, min foss frags/brac, no vis por, no odor, ns. (Flood of SH and SS from above.)

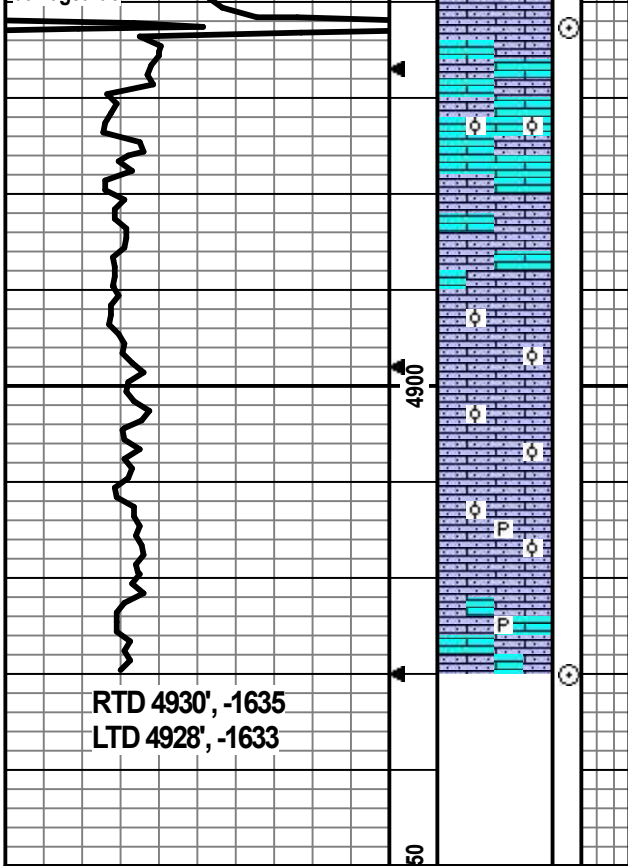
CFS @ 4670'
Stop/30"/60"

CFS @ 4709'
Stop/30"/60"

CFS @ 4741'
Stop/30"/60"

DST4) 4608-4630
Myrick Station
 30/30/30/30
 1st) WSB built to 1/2", died back to 0.15"; no BB.
 2nd) No blow, flushed tool, no blow; no BB.
 IFP 13-15#
 ISIP 462#
 FFP 19-26#
 FSIP 108#
 HP 2275-2240#
 Recvd: 1' O, 10' OCM (6%O, 94%M).

Bit Trip @ 4863;
damaged bit.



LS: cm/lt-m bm/gry, micro-m xtal, some silty/sndy, some chalky, min foss frags, no vis por, no odor, ns.

LS: lt-dk bm/lt gry-bm, micro-m xtal, some 2ndry xtals, some vry silty/sndy, min chalky, foss frags/min dense ool, no vis por, no odor, ns. (Cont flood of SH/SS from above.)

LS: lt-m bm/lt-dk gry-bm, micro-med xtal, some 2ndry xtals, some vry silty/sndy, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/min lt-dk gry, micro-med xtal, some vry silty/sndy/chalky/ool, foss frags/chalky ool, no vis por, no odor, ns.

LS: cm/lt-m bm, micro-med xtal, some vry silty/sndy, some chalky, foss frags/dense ool, no vis por, no odor, ns.

LS: cm/lt bm/lt gry bm, micro-med xtal, some vry silty/sndy, some chalky, crushes easily, slit pyritic, foss frags/dense ool, no vis por, no odor, ns.

LS: cm/lt-m bm/min gry, micro-med, some silty/sndy, some vry chalky, some pyritic, some m-dk bm chert, foss frags, no vis por, no odor, ns.

TD @4930'

CFS @4863'
30"/60"

Made bit trip @ 4863'.

CFS @4930'
Stop/30"/60"
1.5 hr total, TOH for logging.

RTD 4930', -1635
LTD 4928', -1633

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