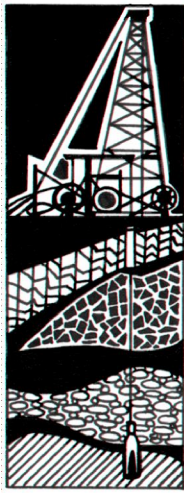


H · E · S · S



O · I · L
C · O

Scale 1:240 Imperial

Well Name:	#1 McCurdy	
Surface Location:	1600' FSL_950' FWL	
Bottom Location:		
API:	15-135-25666	
License Number:	5663	
Spud Date:	9/19/2013	Time: 3:10 PM
Region:	Ness County sec 16 T17S R22W	
Drilling Completed:	9/27/2013	Time: 12:00 AM
Surface Coordinates:	1600' FSL & 950' FEL	
Bottom Hole Coordinates:		
Ground Elevation:	2296.00ft	
K.B. Elevation:	2301.00ft	
Logged Interval:	1550.00ft	To: 4400.00ft
Total Depth:	4400.00ft	
Formation:	Lower Cherokee sandstone	
Drilling Fluid Type:	Chemical mud	

OPERATOR

Company: Hess Oil Company
 Address: PO Box 1009
 McPherson, KS 67460

Contact Geologist: James C. Hess
 Contact Phone Nbr: (620) 241-4640

Well Name: #1 McCurdy
 Location: 1600' FSL_950' FWL
 Pool: Wildcat
 State: Kansas

API: 15-135-25666
 Field: Wildcat
 Country: United States

ELEVATIONS

K.B. Elevation:	2301.00ft	Ground Elevation:	2296.00ft
K.B. to Ground:	5.00ft		

CONTRACTOR

Contractor: Company Tools
 Rig #: Standard Double
 Rig Type: Standard Double
 Spud Date: 9/19/2013
 TD Date: 9/27/2013
 Rig Release: 9/29/2013

Time: 3:10 PM
 Time: 12:00 AM
 Time: 9:00 AM

LOGGED BY

Company: S.L.E
 Address: 225 N. Market Suite 300
 Wichita, KS 67202

Phone Nbr: (620) 953-2066
 Logged By: Geologist

Name: Seth L. Evenson

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.7678917 Latitude: 38.5716547
 N/S Co-ord: 1600' FSL
 E/W Co-ord: 950' FEL

CASING SUMMARY

	Surface	Intermediate	Main		
Bit Size					
Hole Size					
	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8 5/8 in	217 ft	na	na	9/20/2013 5:00 AM
Int Casing	na in	na ft	na	na	
Prod Casing	5 1/2 in	4394 ft	J-55	107	10/7/2013 2:00 PM

CASING SEQUENCE

Type	Hole Size	Casing Size	At
	0.00 in	0.00	0.00 ft

OPEN HOLE LOGS

Logging Company: Pioneer
 Logging Engineer: Robert Barnhart
 Truck #: 15
 Logging Date: 9/28/2013 Time Spent: 2
 # Logs Run: 2 # Logs Run Successful: 2

LOGS RUN

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
Dual Compensa	3600.00ft	4375.00ft	2.00		1
Dual Induction	217.00ft	4395.00ft	2.00		1

LOGGING OPERATION SUMMARY

Date	From	To	Description Of Operation
9/28/2013	0.00ft	4396.00ft	

NOTES

DST #1	DST #2	DST #3
4202'-4265'	4264'-4318'	4290'-4341'
30-30-15-pulled test	45-45-45-60	60-60-60-90
IHP 2082# IFP 23#-29# ISIP 341# FFP 29#-38# FSIP NA FHP 2042#	IHP 2129# IFP 29#-141# ISIP 364# FFP 143#-196# FSIP 364# FHP 2087#	IHP 2146# IFP 26#-126# ISIP 1285# FFP 139#-201# FSIP 1300# FHP 2057#
Rec: 55' mud	Rec: 70' MCW 300' Wtr	Rec: 200' GO (10% G, 90% O) 120' SOCM (10% O) 60' SOCWM (10% O, 30% W) 60' VSOCWM (5% O, 30% W) 40' GIP

ROCK TYPES

 Anhyprim	 Lmst fw<7	 Shblk	 Cht vari
 Coal	 Ss	 Shcol	 Chtcongl
 Dolprim	 Shgy	 Ool grnst	

ACCESSORIES

MINERAL

△ Chert White

FOSSIL

○ Oolites

STRINGER

Limestone

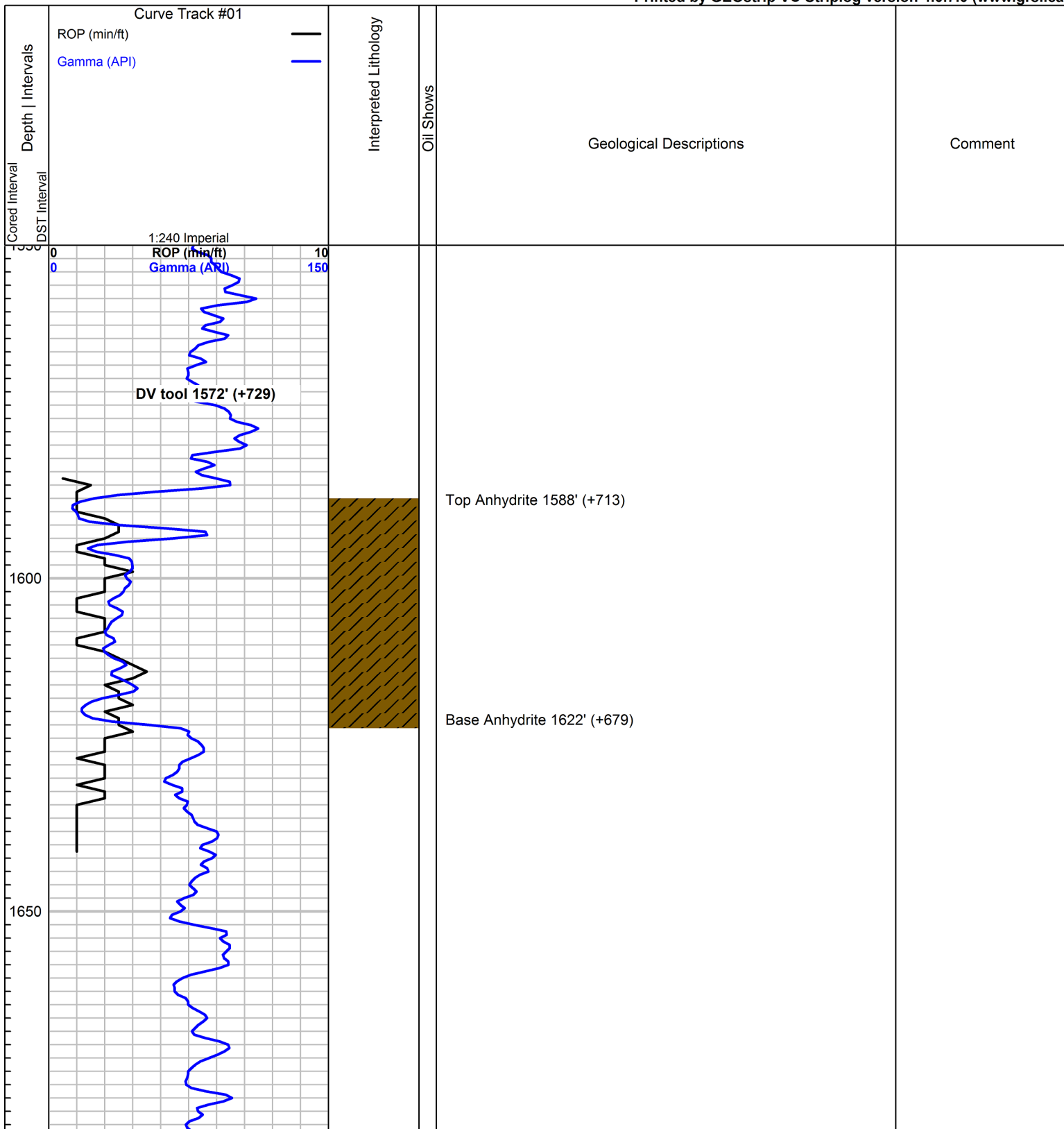
Siltstone

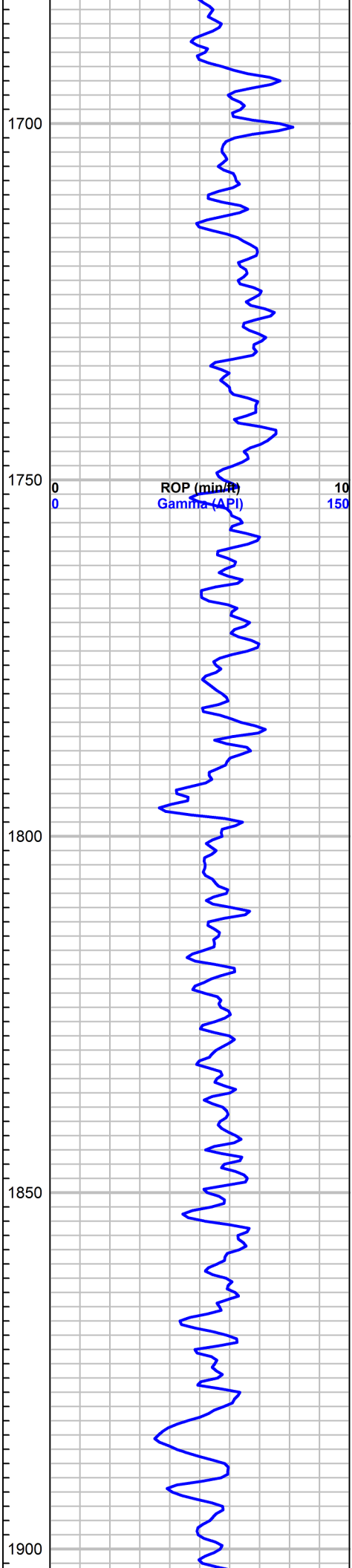
OTHER SYMBOLS

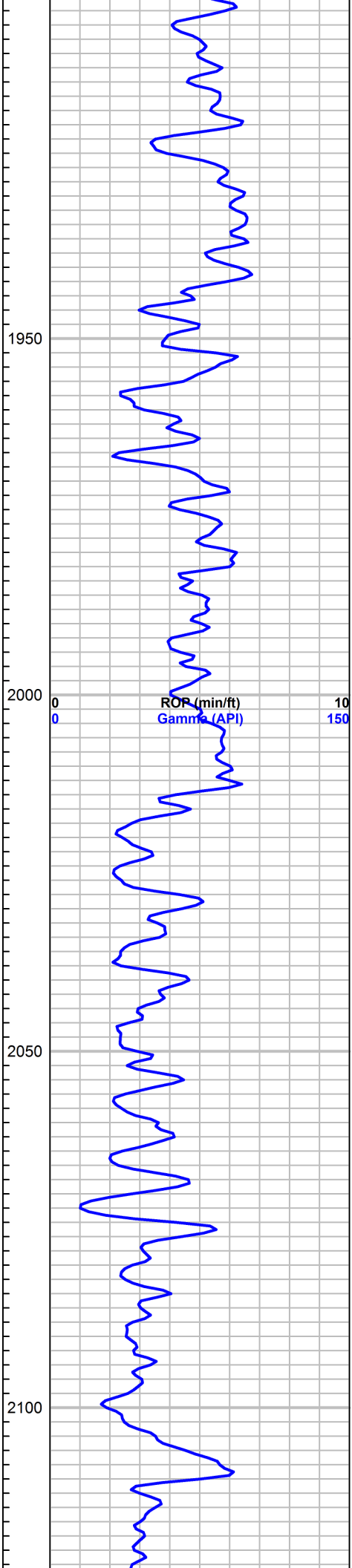
OIL SHOWS

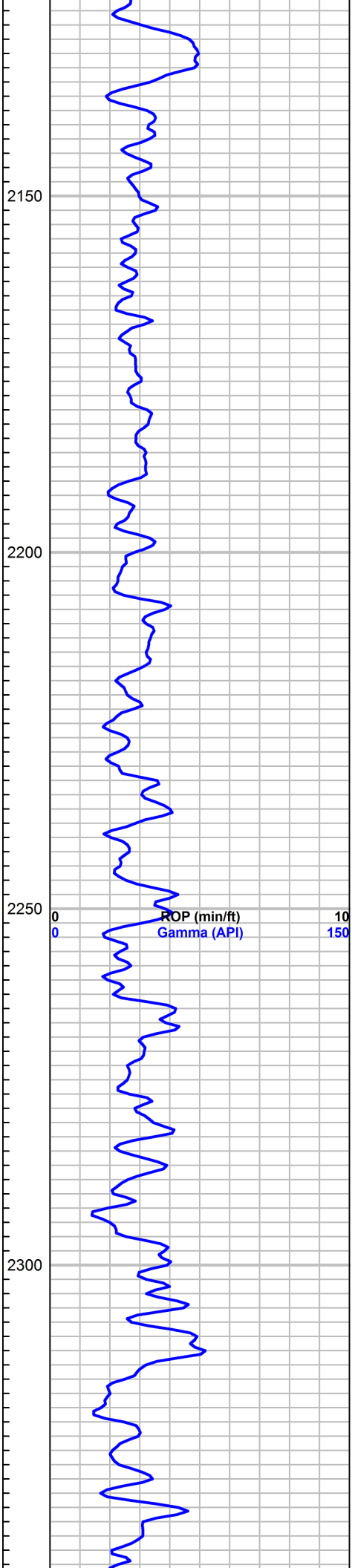
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- Questionable Stn
- D Dead Oil Stn
- Fluorescence

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

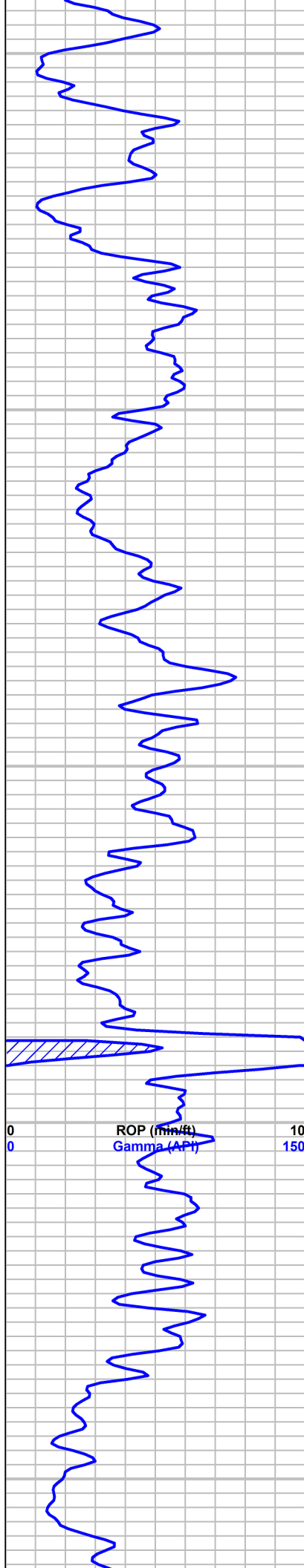






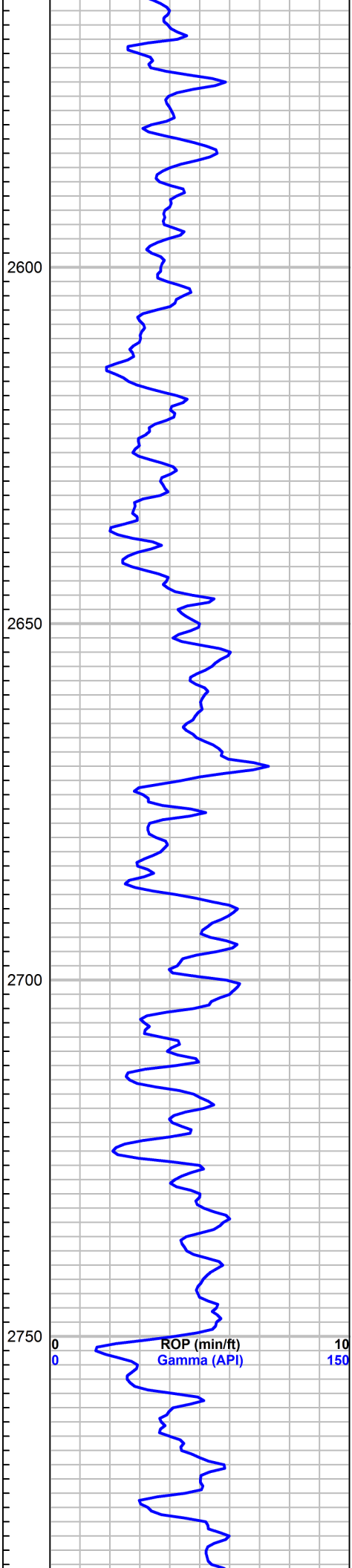


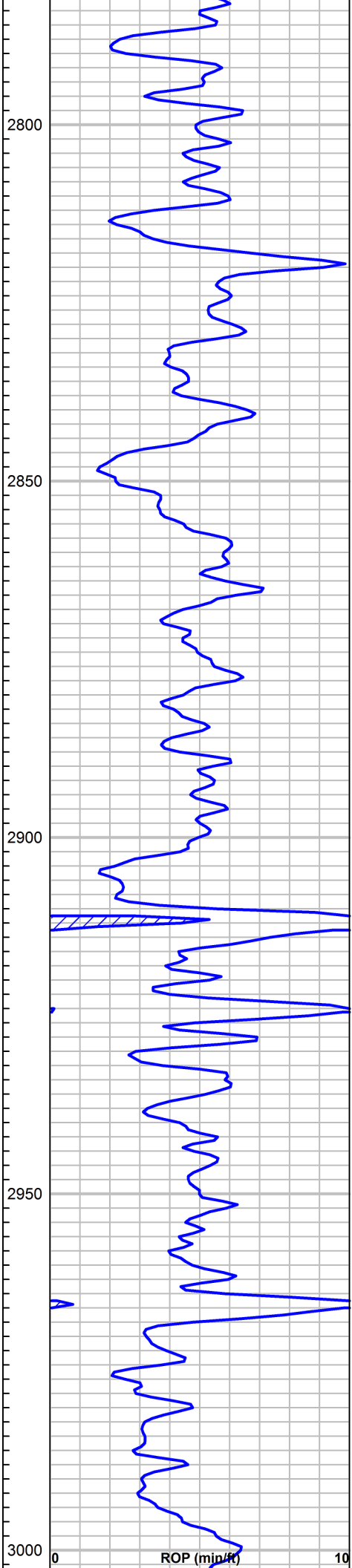
2350
2400
2450
2500
2550

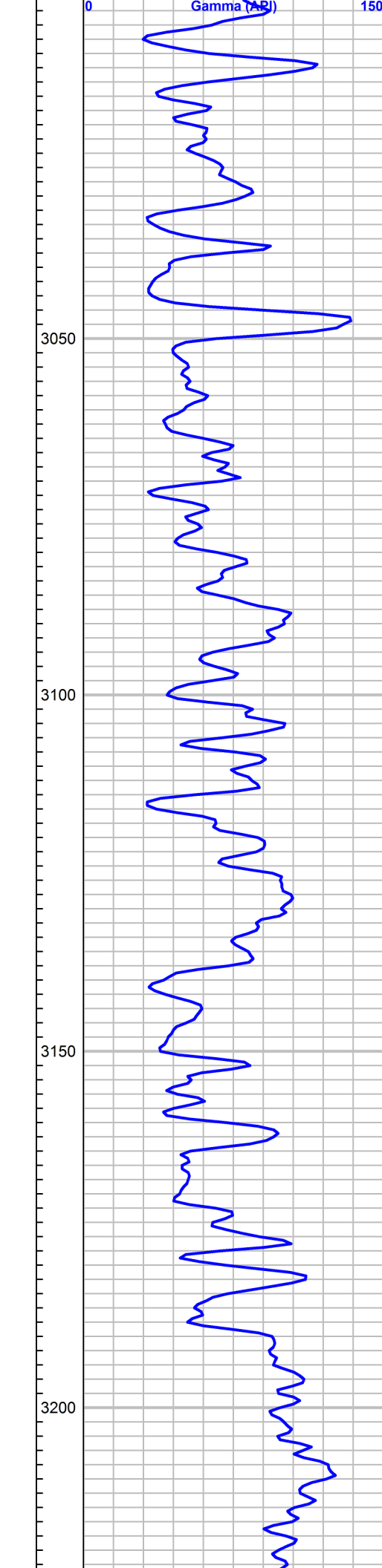


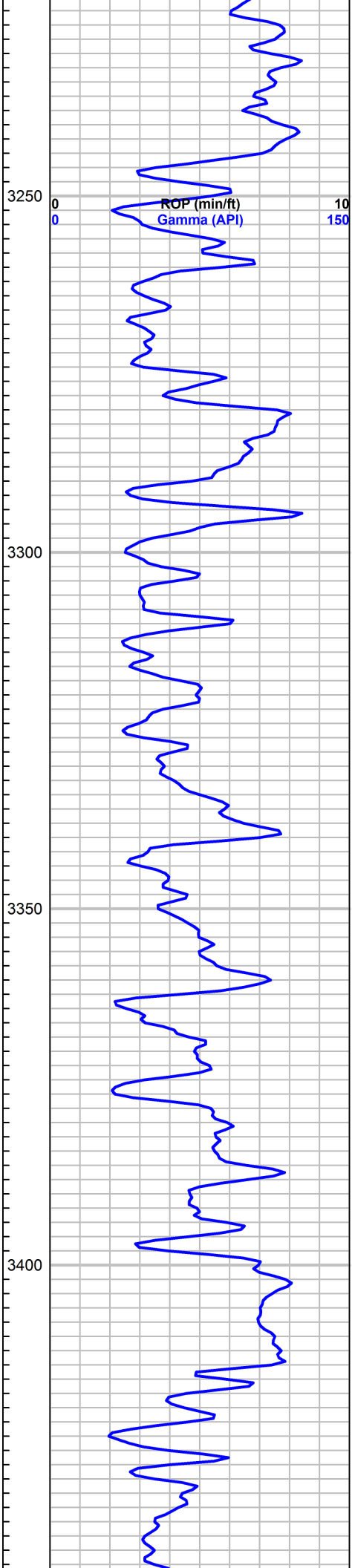
ROP (min/ft)
Gamma (API)

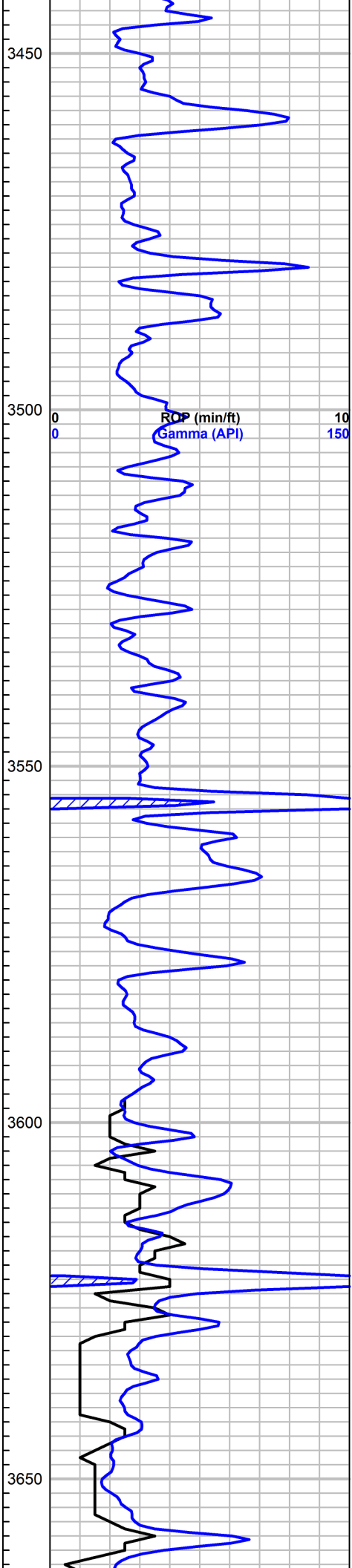
0 10
0 150



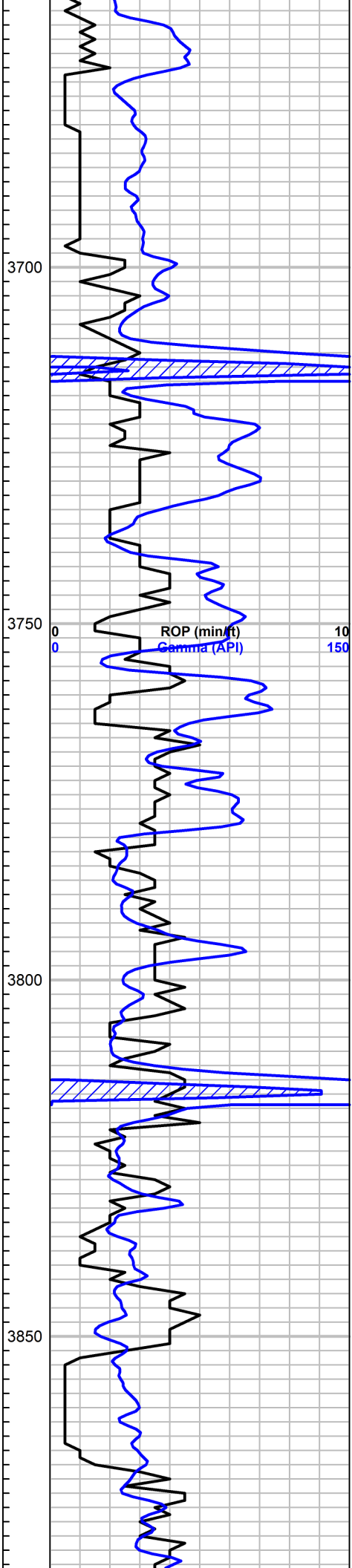








Oread 3630' (-1329)

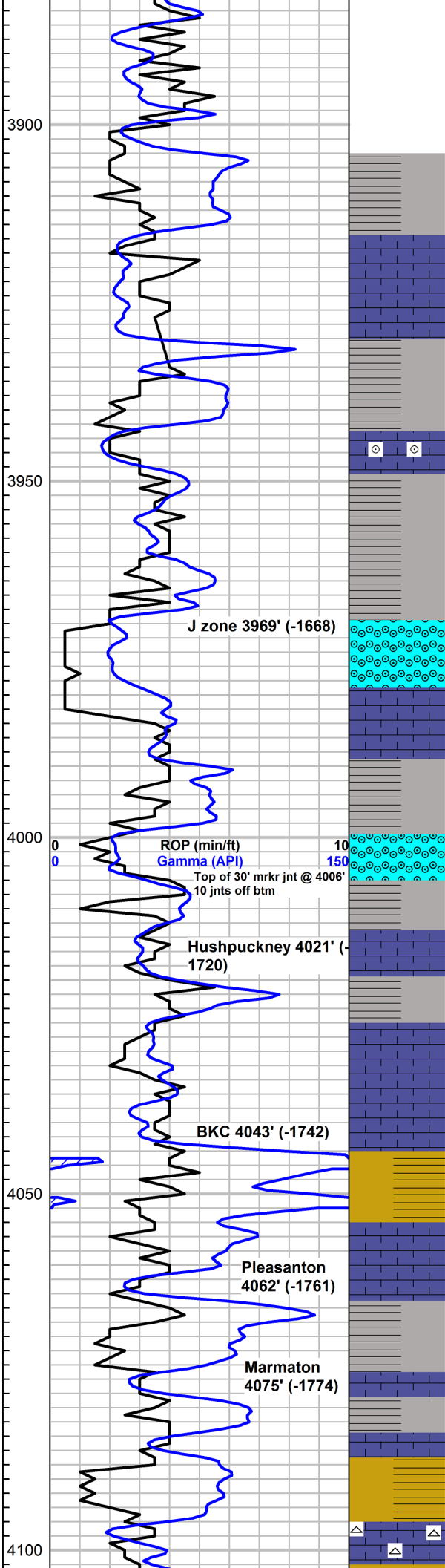


Heebner 3711' (-1410)

Toronto 3735' (-1434)

Lansing 3754' (-1453)

G zone porosity 3852' (-1551)



3900'-10': Lms, crm-lt gry, micro-vfn xtln, med res, no vis por.

3910'-20': Lms, gry, vfn xtln, med res, no vis por.

3920'-30': Lms, mstly gry as abv, some crm, chlky, sft, all no vis porosity.

3930'-40': Lms, crm, vfn xtln, med res, pr-no vis porosity.

3940'-50': Lms, crm-tan-lt gry, vfn xtln, med res, no vis por. Also some colored shales.

3950'-60': Shale, drk gry, gry, gry/grn, maroon, trc brwn, mstly tite lms as abv. Trc tan ool lms w/vry pr porosity. NS.

3960'-70': Shale, vry drk gry, gry, blu/grn & maroon. Mstly lms, crm-tan, vfn xtln, some sli ool, trc foss, all pr-no vis por. NS.

3970'-80': Shale, drk gry, gry, maroon, grn & red/orng.

3980'-90': Shale, as abv.

3990'-4000': Lms, tan, micro xtln, oomoldic vuggular, abndt rnd, med-lrg vugs, med res, fr-gd vuggular porosity, NS.

4000'-10': Lms, crm-gry, off-wht, sft & chlky; mstly gry micro-vfn xtln, med res, no vis porosity.

4010'-20': Lms, crm, micro xtln, brtl-med res, sprsly-abndtly ool, vry small ooids, trc vugs only, some vry sli chlky, pr-no vis por.

4020'-30': Lms, lt gry, micro-vfn xtln, med res, non-allochemical, no vis porosity.

4030'-40': Lms, lt gry, micro-vfn xtln, med-hrd res, no vis porosity, some chert, gry, shrp & frsh.

4040'-50': Lms, crm-lt gry, micro-vfn xtln, some sli chlky, all pr-no visible porosity. Also some shale.

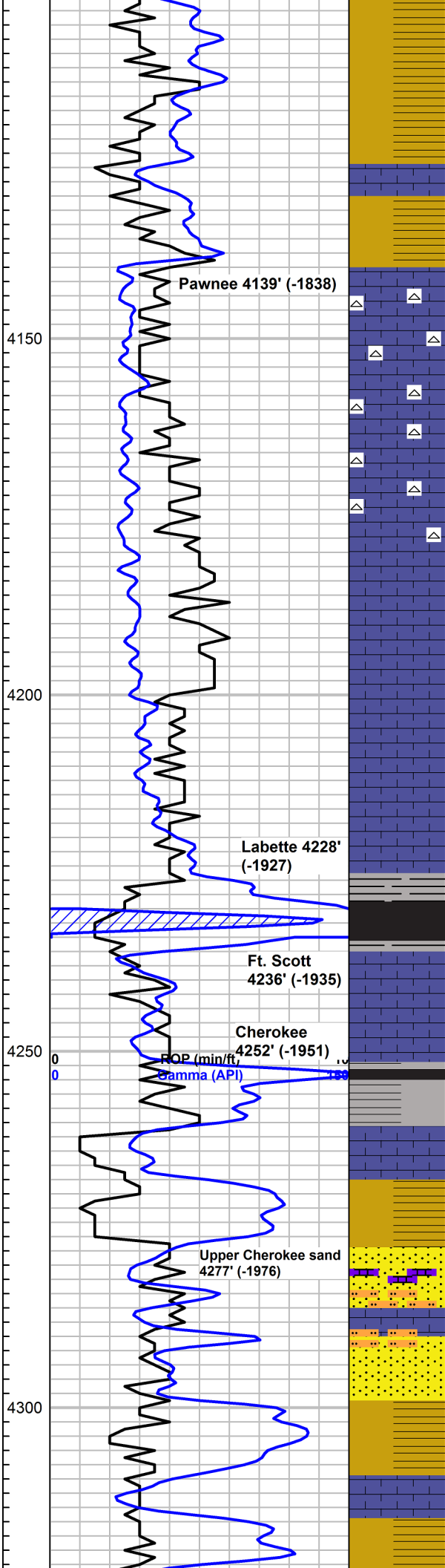
4050'-60': Lms, crm, micro xtln, brtl-med res, some sli chlky, all no vis por. Some shale, drk gry-gry, maroon, & trc grn.

4060'-70': Lms, gry-drk brwn, micro-vfn xtln, hrd-vry hrd res, no vis porosity. Trc blk carb shale.

4070'-80': Lms, tan-lt gry, vfn xtln, med res, no vis porosity. Some shale, gry, maroon, trc blk carb, red & grn.

4080'-90': Lms gry-lt gry, micro-vfn xtln, med-hrd res, vry sli shaley, no vis porosity. Some shale, gry, maroon, prpl & grn.

4090'-4100': Shaley lms, mottled, lt gry/maroon, tan/maroon, gry/yell, micro-vfn xtln, med-hrd res, no vis por. Much shale, gry, maroon, lt gry/grn, red/orng, some mottled, trc lmy shale.



4100'-10': Shale, lmy shale & shaley lms. Vari-colored as abv, gry, prpl, maroon, grn, red, yellow. All no vis porosity.

4110'-20': Shale, maroon, gry, prpl, trc gry/grn, sli earthy. Much lms, tan micro xtln, hrd res, smooth text, no vis porosity.

4120'-30': Lms, lt gry-gry, micro-vfn xtln, med-hrd res, no vis por. Some chert, orng-orng/red, shrp frsh.

4130'-40': Lms & trc chrt as abv. Much shale, gry, prpl, trc blk.

4140'-50': Shale, gry, maroon, prpl, gry/grn, yell/grn, brwn, trc grn & blu/grn. Mst all sft shale. Also some chrt, tan, orng, red.

4150'-60': Lms, lt gry-gry, micro-vfn xtln, med-hrd res, no vis por.

4160'-70': Lms, off-wht to crm, mst micro-vfn xtln, sft, chlky, some highly silicified lms vry hrd res. Much chrt, lt gry semi-trans, off-wht, tan, red/orng, sli yell/tan, shrp & frsh. All no vis porosity.

4170'-80': Lms, crm-lt gry, micro-vfn xtln, some sft & chlky, mst pcs micro xtln, hrd res, some sli silicified. Much chrt lt gry, off-wht, tan, shrp & frsh. All no vis porosity.

4180'-90': Lms, crm-tan-lt gry, micro xtln, hrd res, smooth text, no vis por. Trc shrp chrt.

4190'-4200': Lms, tan, micro-vfn xtln, hrd res, non-allochemical, no vis por. Some gry & maroon sft shale.

4200'-10': Lms, tan-gry, micro xtln, hrd res, non-allochemical, no vis porosity. Trace shale.

4210'-20': Shaley lms, drk gry, micro xtln, hrd res no vis por. Abndt shale, gry, maroon, yell/grn, prpl.

4220'-30': Shale, drk gry, vry sli silty. Also small amount maroon, red & prpl shales. Trc loose, fn, rnd, reddish qtz grains.

4230'-40': Shale, gry, prpl, maroon, trc grn & yellow. Much lms, crm, micro xtln, tite, no visible porosity, mstly small pcs.

4240'-50': Shale, blk, gry, maroon, prpl, grn. Some lms, crm-lt gry, micro xtln, med-hrd res, some sli chlky, no vis porosity.

4250'-60': Lms, crm-lt gry, micro-vfn xtln, med res, some sft, chlky, no vis por. A couple pcs lt gry lms w/fr scat lt brwn stn & sat, SSFO, lt tan droplets free oil on brk, fr-gd yell-brt wht fluor, gd strming cut, vry sli odr in cup. Stn & fluor in about 5% of pcs. Poor porosity.

4265'-70': Lms crm-lt gry, micro-vfn xtln, hrd res, some sli chlky/shaley w/crs blk crinoid foss. No vis por. Much shale in sample, may be trash. Vry abndt loose rnd fn-med qtz sand grains w/lt red/orng tint in tray. 1 clst fn grained tite ss, vry hrd res, NS.

4270'-80': Shale, gry, maroon, grn, trc red. vry much abndt loose qtz sand grains as circulated. A few clst qtz ss, gry-vry lt gry, sli shaley, med res, prly friable. pr-fr intr gran por. NS

4280'-90': Shale, maroon, gry, grn. Trc clst gry ss, vfn grained, vry hrd res, shaley, no vis por. 1 pc clr vry crs, sub ang qtz grain.

4290'-4300': Lms, crm, tite, as circulated. Also increase in shale, gry, maroon, grn, prpl & some blk carbonaceous, brtl.

4300'-10': Shale, gry, maroon & grn, some blk, sli carbonaceous. Also, some sli shaley lms as abv. No vis por.

Short trip @ 4180' CTCH 1.25 hrs.

4230' CFS 20 min: Shale drk gry, much sli lmy, hrd res. Also maroon, blu/grn, red/orng & prpl shales. Some lms crm tite, no vis por.

4230' CFS 40 min: Shale, blk sli carbonaceous, much drk gry shale. Many small chips crm lms as abv.

4230' CFS 60 min: Shale, gry, maroon, grn. Some blk carb shale as abv. Also lms, gry hrd tite & crm micro xtln, med-hrd res, no vis por.

4240' CFS 20 min: Shale, blk, drk gry, maroon, prpl, etc.

4240' CFS 40 min: Shale, blk carbonaceous, sft-med res, sli brtl.

4240' CFS 60 min: Shale, drk gry, blk, maroon, prpl, etc. Many small chips lms, crm, tite & chrt shrp, frsh

4265' Sample: Lms, lt gry-tan, vfn xtln, med res, sli-FSFO, mstly pr, but a few w/fr scat intr xtln/spicular vugs. Fluor in 8% pcs

4265' CFS 20 min: Lms, crm-lt gry, micro-vfn xtln, med-hrd res, mst pr-no vis por. Lms w/shw as abv, less than 3% of pcs, loosing show.

4265' CFS 40 min: Lms, crm-lt gry, micro-vfn xtln, med-hrd res, pr-no vis por. Scat wk, lv stn & brt wk fluor in about 5% pcs. pr vry sprs pnprt intr xtln porosity at best in some pcs.

4265' CFS 60 min: Lms gry, micro-vfn xtln, med-hrd res, vry sli chlky, pr-no vis por. 1 pc w/ vgd lv stn in fr vuggy por, from up-hole.

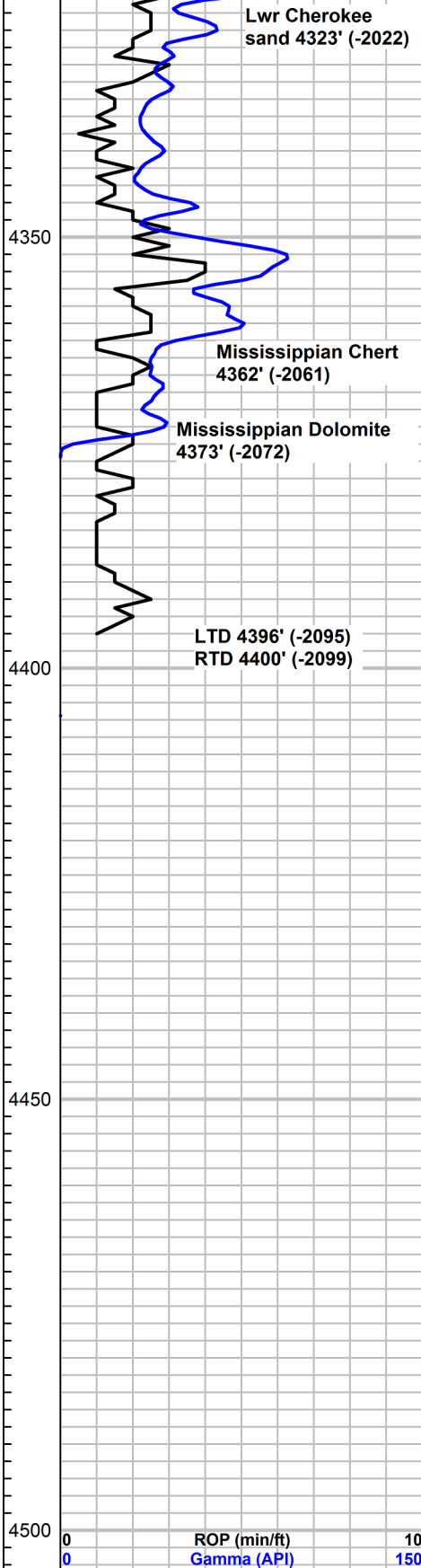
4275' CFS 20 min: Shale, lrg chips gry, maroon & blu gry. Mstly finer pcs lms crm, tite as abv.

4275' CFS 40 min: Shale, gry, maroon, lt gry, red, blu/grn. Some silty. Some lt blu/grn sndy shale & shaley ss. med sub rnd grains, abndt clay matrix, brtl-med res. NS. Abndt loose qtz sand grains in tray. Increase in crs grains.

4275' CFS 60 min: Shale gry, maroon, prlp, grn. Several clst ss, lt grn/gry, shaley, fn-med qtz grains, brtl-med res, semi-fri, NS. one clst made of abndt ambr colored long shaft shaped xtls, brt w/wht matrix pr-no vis por. NS

4280' CFS 20 min: Shale as abv. Much loose sand grains as abv. NS

4280' CFS 40 min: Mixed shale & vry abndt loose fn qtz sand



4318'-30': Shale, vari-colored, gry, drk gry, prpl, maroon, prpl, gry/yellow, red. Also, vari-colored sli shaley lms, no vis por.

4330'-40': Shale, vari-colored as abv. Many pcs mottled. Also vari-colored shaley lms/lmy shale, no vis por. Trc chrt, drk tan, red-orng, off-wht, shrp & frsh.

4340'-50': Much trip trash shale. Some chrt, sli tripolitic, off-wht to yell/tan as abv. Med-hrd res. Trc pcs w/scat blk sptd edge stn, trc small vry sprs vugs. Vry pr vis por, wk-fr dull yell/grn fluor. Fr strming cut on brk only. Trc sndy chrt, NS.

4350'-60': Chrt & sale, vari-colored. Chrt, off-wht, tan, yell, red/orng. Shrp & frsh, NS. trc ool colored chrt. Shale, gry, maroon, prpl, red, grn, some mottled. Likely conglomeritic section.

4360'-70': Vari-colored shale & chrt as abv. Poss trc dead spty stn in some pcs ool chrt, NSFO. Otherwise NS.

4370'-78': Vari-colored shale as abv. Much shrp & frsh chrt, mstly off-wht, tan & yellowish. NS.

4378'-90': Dolomite, tan-lt gry, vfn xtl, med res, no vis por. Chrt, mstly off-wht, also tan to yellowish, shrp & frsh no vis por.

4390'-4400': Dolomite, crm-tan vfn xtl, no vis por, as abv. Also chrt, increase in sli tripolitic, off-wht, crm, yellowish. 1 small pc trip chrt w/FSFO on brk, brtl, likely from uphole. Rest no show.

4400' CFS 20 min: Dolomite, crm, fn xtl, med res, pr-no vis por. NS. Much chrt off-wht to vry lt gry & semi trans lscent, shrp & frsh.

4400' CFS 40 min: Dolomite crm-tan sft-med res, some drk brwn hrd res. vfn xtl, pr-fr intr xtl por. pr-no vis por in hrd brwn pcs. NS. Much chrt, off-wht, crm- tan, mst shrp & frsh some sli weathered, NS.

4400' CFS 60 min: Dolomite, tan-drk brwn, fn-med xtl, hrd res, sli silicaceos, pr vis por. A few pcs tan dolo w/scat med sized vugs. NS. Much chert, off-wht, tan, lt gry, shrp & frsh as abv.

grains, trc tiny clst. NS. Some silty shale.

4280' CFS 60 min: Shale, maroon, gry, gry/grn & prpl. ,

4290' CFS 20 min: Lms crm, micro-vfn xtl, med res, pr-no vis por.

4290' CFS 40 min: Lms, crm, micro-vfn xtl, med-hrd res, some sli chiky, all no vis por.

4300' CFS 20 min: Lms, off-wht to crm, micro-vfn xtl, some sli chiky, med res, all no vis por. A few pcs lt gry micro xtl, sli shaley lms w/smooth texture, no vis por.

4300' CFS 40 min: Lms, mstly crm as abv, much lt gry & brwn, micro-vfn xtl, med-hrd res, sli shaley, gry pcs often sli glauc, no vis por.

4300' CFS 60 min: Lms gry, brwn, trc prpl & yell/grn, sli shaley lms, micro-vfn xtl, hrd res, no vis por. Increase in shales, gry, maroon, prpl, grn, blk.

4315': Mix of vari-colored shales, & shaley lms as abv. Also much crm colored lms as abv, all no vis por.

4315' CFS 20 min: Mix of shale & tite lms as abv, NS.

4315' CFS 40 min: Lms, sli shaley, gry, tan, brwn, lt grnish/sli glauc, yellowish. Micro-vfn xtl, hrd res, no vis por. Also shale as abv.

4315' CFS 60 min: Shale, gry, maroon, grn, some blk carb, brtl. Trc vivid yellow conglomeritic looking shale.

4318' CFS 40 min: Shale, vari-colored, gry, maroon, prpl, blk, grn, blu/grn, yellow.

4318' CFS 60 min: Vari-colored shales, great increase in grn, prpl, & turquoise shales. Some mottled shale. Trc vari-colored shaley lms.

4341' CFS 20 min: SS, off-wht/cht, fn grained, sub ang, well strtd, fr well cmntd many pcs friable, gd overall intr gran por. Fr even lv brwn stn & sat, gd dull yell/grn even fluor. Gd shw film rainbow oil on brk, some scat flky drk brwn stn on brk, fr-gd strming cut on brk, gd bloom. 1 pc trip chrt, med res w/ gd lv oil stn in intrnal pinpnt vugs. No odr.

4341' CFS 40 min: SS, clr fn-med grained, cln, fr-well strtd. Med-hrd res firm, but many pcs sli friable to vry easily friable fr-gd intr granular por. Fr, vry even lt stn & sat mst pcs. FSFO, brwn free oil on brk. Some gassy free oil, occ flky stn. Gd vry even dull yell fluor. Gd-vgd strming cut on brk, Fr-excln bloom, vry sli odr in cup. Sample mstly chrt, off-wht to wht tripolitic, med res, pr-no vis por. Trc pcs trip chrt w/uneven blk dead stn on edges. Mstly no show in chrt. Also much shrp & frsh chrt, tan to off-wht/yellowish tint to lt yellow. A few pcs w/ss & chrt attached.

4341' CFS 60 min: SS & chrt as abv. SS is hrd, more tightly cmntd & trc-SSFO only in mst sat pcs. Still well sat mst pcs. fluor as abv, Sli to gd strming cut. Instant cut & vry thick nlm on brk. Mst hrd pcs appear to have vry good internal sat. Much chrt as abv, no shw in chrt. Vry sli odor in cup.

4355': Vry much vari-colored shale & ss w/shw from abv. A few pcs hrd res trip chrt w/scat lv to dead stn. 1 pc w/FSFO, unable to brk, vry hrd, vry pr vis por. Mst chrt NS. trc sndy chrt as abv..

4355' CFS 20 min: Chrt, vry sli tripolitic. Off-wht, bone, scat vry lt yell spts to lt yellowish/tan. Shrp, hrd res, mst no vis por & no shw. A few pcs w/pr vry sprs dead stn.

4550

4600

4355' CFS 40 min: Chrt, mstly, off-wht, tan, yellow, trc red/orng. Shrp & frsh. several pcs w/vry scat sprs, dead blk edge stn, NSF0. Trc ool chrt w/med-lrg rnd vugs, fr blk stn, fr strming cut. Much ss, cir, fn-med grnd, med-hrd res, fr-gd even blk stn, FR-GSFO on brk some pcs, much more blk flaky stn than abv. Lacking even brwn sat & stn.

4355' CFS 60 min: Chrt & shale, vari-colored. Chrt, off-wht, tan, yellow & trc lt grn, also red/orng ool. Several clst lt gry ss, fn grained well srtd, hrd res, tite clst w/pr-fr por. Scat pinpnt blk stn in intr gran por to gd friy even gry-blk stn. GSFO on brk. SS differs from that at top of porosity, especially in stn and free oil show. Trc gd scat blk stn & fr strming cut in chrt.

4378' CFS 20 min: Chrt, off-wht, crm, tan, sli yellow. Mstly shrp & frsh. Some sli tripolitic.

4378' CFS 40 min: Dolo & chrt. Dolo, crm, vfn xtin, med-hrd res, pr-no vis por. NS. Chrt, wht, off-wht, tan, mstly shrp & frsh. Some sli tripolitic weathered chert.