

MAXWELL LAFON WELLSITE GEOLOGY**WELL INFO**

Well Name: Ketterl #1
 Location: NW SE SE NW sec. 24, T. 2S, R. 32W
 Footage: 2210' FWL, 2000' FNL
 County/State: Rawlins Co., Kansas
 Field: Wildcat
 Coordinates: N 39.866430 , W 100.862512
 API #: 15-153-21237

Ground Elev: 2875' KB Elev: 2881'
 Logged Interval: 3000' - TD Total Depth: 4130'

OPERATOR INFO

Company: Meridian Energy Inc.
 Address: 1475 Ward Cir.
 Franktown, CO 80116

CONTRACTOR

Contractor: Flex Drilling
 Rig #: 1
 Rig Type: Rotary Double
 Spud Date: 7/15/2019 Time: 10:45 AM
 TD Date: 7/21/2019 Time: 3:47 AM
 Rig Release: Time:

WELLSITE GEOLOGIST

Geologist: Maxwell LaFon
 Address: PO Box 9867
 Denver, CO 80209
 Phone: 303-594-0515
 Email: mjlafon@gmail.com

DRILL STEM TESTS

No.	Interval	Formation	Recovery
No DSTs run			

FORMATIONS

Formation	Depth - Samples	Depth - Logs	Subsea
Stone Corral	2650' (+231)	2652'	+229
Neva	3236' (-355)	3240'	-359
Red Eagle	3315' (-434)	3318'	-437
Foraker	3360' (-479)	3362'	-481
Topeka	3630' (-749)	3636'	-755
Oread	3682' (-801)	3686'	-805
Heebner	3717' (-836)	3716'	-835
Toronto	3786' (-905)	3784'	-903
Lansing A/KC	3840' (-959)	absent	absent
Lansing B	3870' (-989)	3870'	-989
Lansing C	3929' (-1048)	3923'	-1042

Lansing C	3925' (-1040)	3925'	-1042
Lansing D	3974' (-1093)	3963'	-1082
Lansing E	4007' (-1126)	4004'	-1123
Lansing F	4052' (-1171)	4041'	-1160
Base Lansing/KC	4083' (-1202)	4082'	-1201
TD	4130'	4130'	

ROCK TYPES

Cht	Lmst fw>7	Shgy	Shcol	Anhy vert
Lmst fw<7	Ss	Shbck	Slst	

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

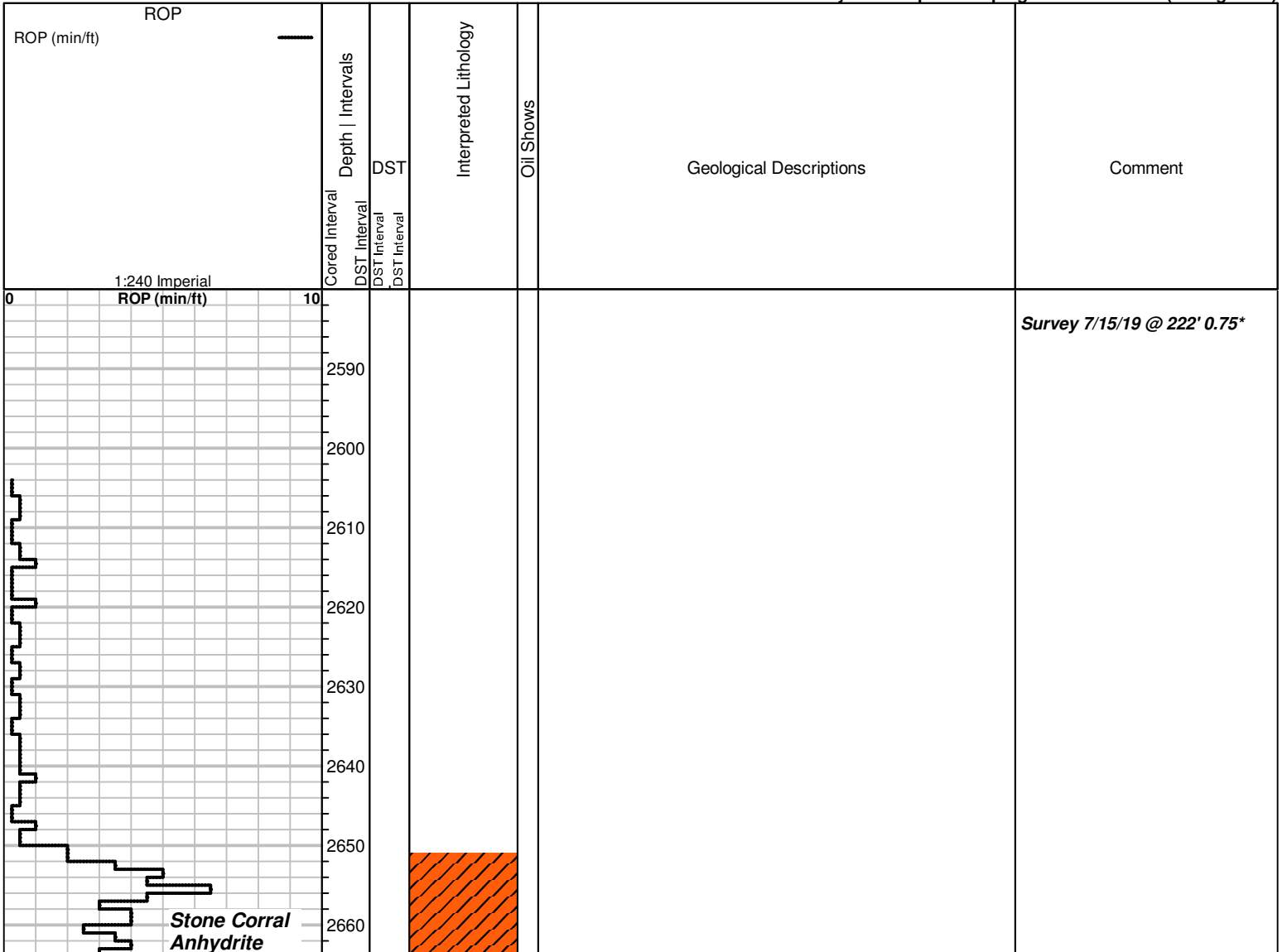
MISC

- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

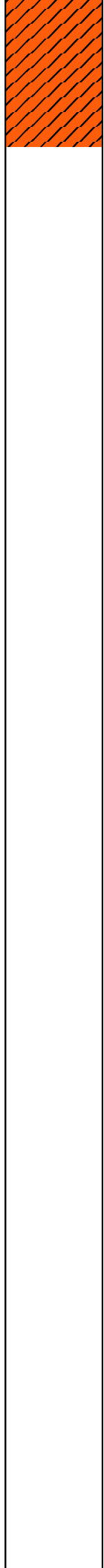
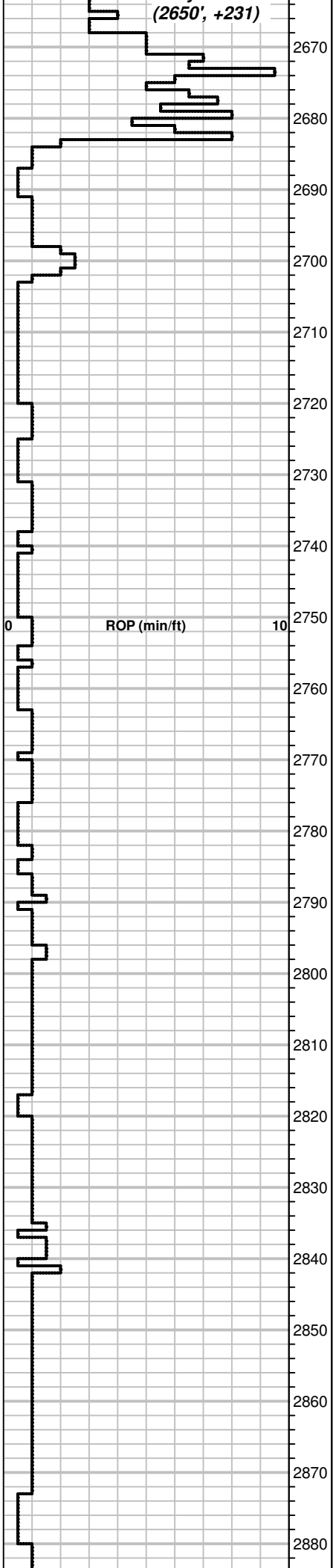
DST

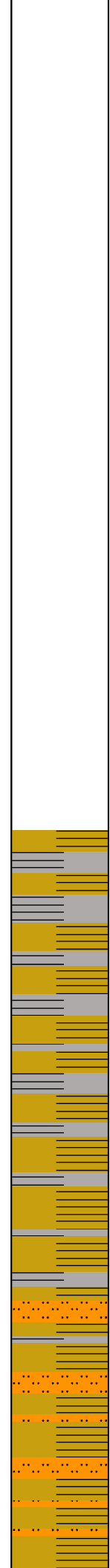
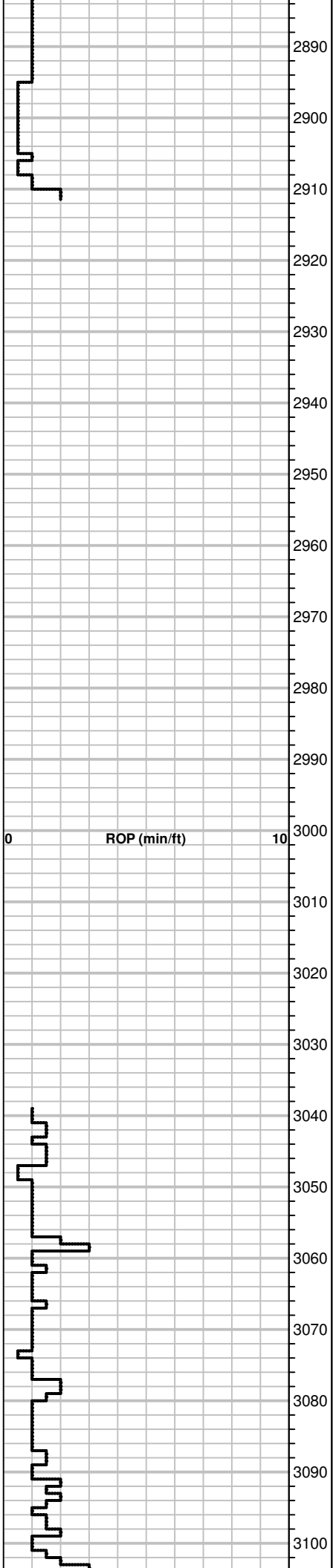
- DST Interval
- DST Interval

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)



(2650', +231)



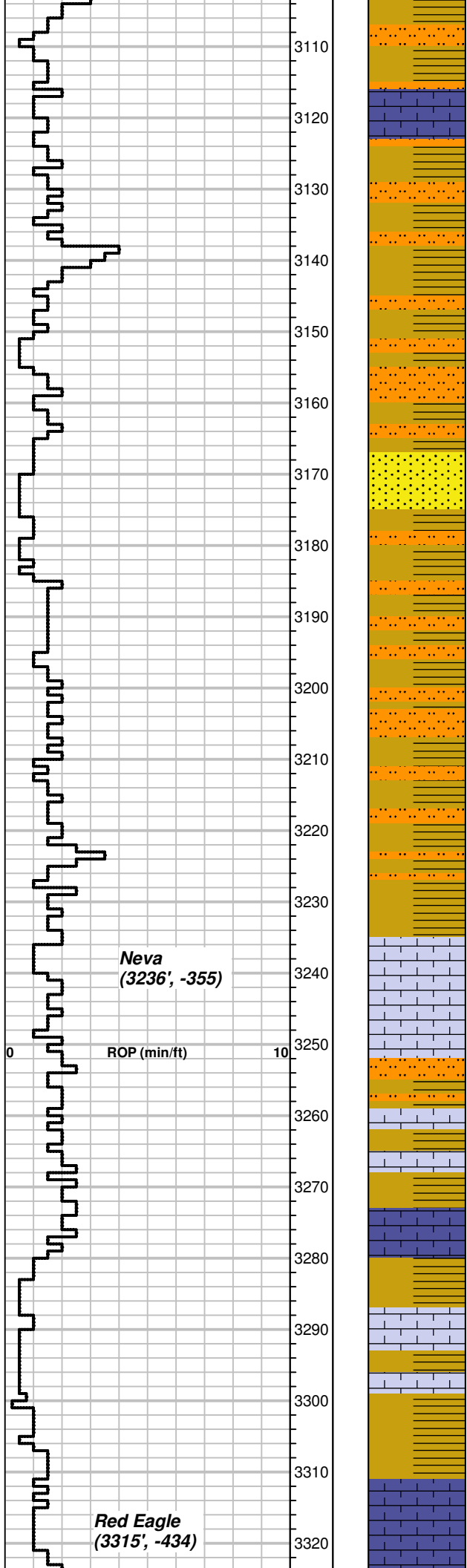


3000-3032 Sh dk gry/grn/red

3032-63 As above

3063-98 Sh arg red, Tr Sh grn

**Bit trip, PDC for cone
Survey 7/19/19 @ 3000' 0.5*
Pipe Strap - 1.5' short**



3098-3133 Sh arg red, Tr LS lt. gry xtlN, very hard, no por, NS

3133-49 Sh arg red

3149-60 Sh arg red beds

3160-73 As above, Tr SS white very fine grnd, friable, fair por, NS

3173-90 Sh arg red

3190-3201 As above, Tr Sh grn

3201-14 Sh arg red beds, cly

3214-22 Sh arg red

3222-30 As above

3230-43 50/50 Sh/LS. Sh arg red, LS lt. gry/white grnstr, some oolitic, hard, no por, NS

**Neva
(3236', -355)**

3243-54 Mostly LS as above, LS lt. gry very fine grnstr, slightly friable, no por, NS. Tr Sh red

ROP (min/ft)

3254-65 LS white - lt. tan coarse grnstr, hard, no por, NS. Sh arg red, LS lt. gry fine xtlN, very hard, no por, NS

3265-68 As above

3268-71 As above

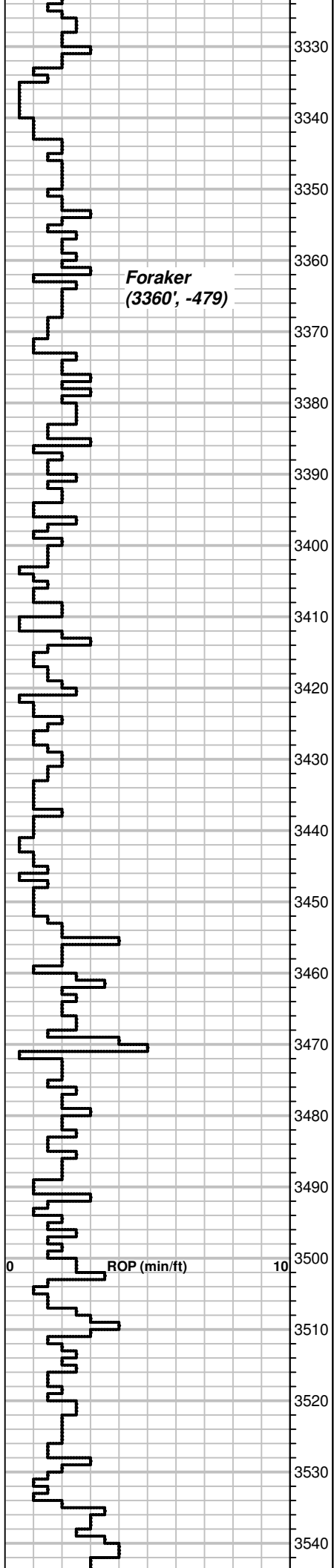
3271-76 Sh arg red, LS white very fine xtlN, chlky, very friable, no por, NS, Mostly Sh

3276-85 Mostly Sh red, LS gry xtlN, very hard, no por, NS. LS cream med grnstr, very hard, no por, NS

3285-3311 Sh red, LS grnstr as above, fossiliferous

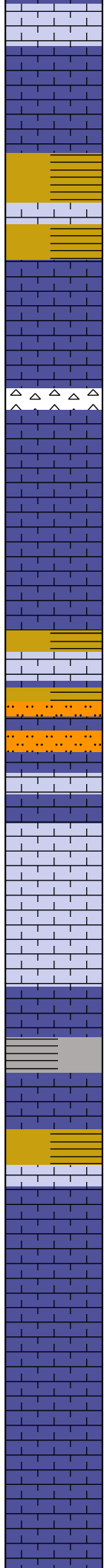
**Red Eagle
(3315', -434)**

3311-20 Good slug Lime, LS lt. gry xtlN, very hard, no por, NS



**Foraker
 (3360', -479)**

ROP (min/ft) 0 10



3320-29 LS lt. gry opaque fine xtlN, very hard, no por, NS. LS lt. gry grnstn, partly rextlzd, very hard, no por, NS

3329-45 LS lt. gry xtlN and very fine xtlN, very hard, no por, NS

3345-55 50/50 Sh/LS, Sh red, LS lt. tan xtlN, very hard, no por, NS, LS lt. tan grnstn, very hard, no por, NS

3355-65 LS lt. gry fine xtlN, very hard, no por, NS. Sh red

3365-76 LS cream xtlN, very hard, no por, NS. LS multi colored, brwn/gry/tan grnstn, very hard, no por, NS. Tr LS white chlk

3376-83 LS lt. tan xtlN very hard, no por, NS. LS dk gry xtlN, very hard, no por, NS. Tr Chert clear/orange

3383-90 LS gry - dk gry med xtlN, very hard, no por, NS

3390-99 As above

3399-3409 LS lt. gry very fine xtlN, hard, no por, NS. LS lt. gry xtlN, very hard, no por, NS.

3409-18 Tr Sh red cly, LS gry grnstn, hard, no por, NS, Some LS xtlN as above

3418-23 Sh arg red, dk gry, LS lt. tan xtlN, very hard, no por, NS

3423-38 LS lt. tan/gry microxtlN, Sh arg red, One cutting white grnstn, very hard, very poor por, slight dead bitumen stain, NSFO

3438-58 LS lt. gry med grnstn, very hard, poor por, NS

3458-66 As above, Also LS dk gry - gry dirty xtlN, very hard, no por, NS

3466-74 As above, Sh dk gry

3474-82 LS lt. gry xtlN, very hard, no por, NS. LS lt. gry coarse xtlN, very hard, no por, NS

3482-96 Sh red, cly, LS lt. tan/brwn microxtlN, very hard, no por, NS. LS cream grnstn, slightly friable, poor por, NS

3496-3506 LS lt. gry/grn microxtlN - xtlN, hard, no por, NS

3506-14 As above

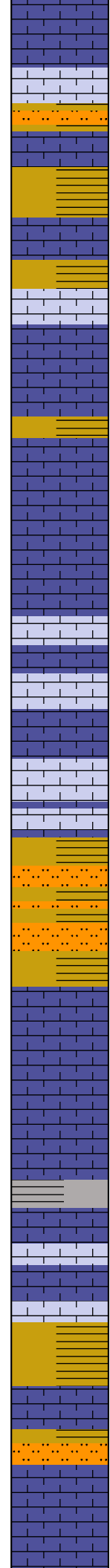
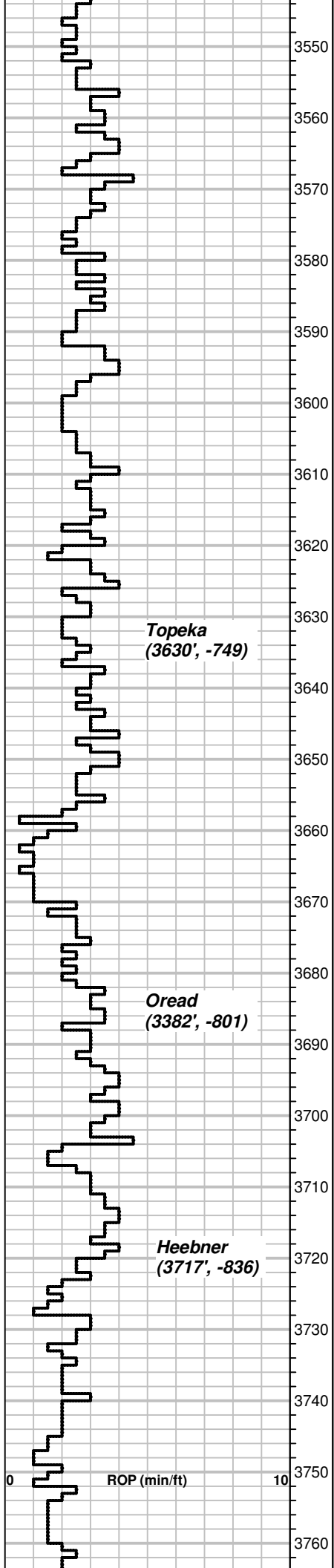
3514-27 LS gry - dk gry med xtlN, very hard, no por, NS. LS lt. gry xtlN, very hard, no por, NS

3527-39 As above

Wt. 8.6
 Vis 54

Wt. 8.6
 Vis 51

Wt. 8.6
 Vis 51



3539-49 LS dk gry xtl, very hard, no por, NS

3549-60 LS lt. gry xtl, very hard, no por, NS. LS lt. tan fine grnstn, hard, no por, NS. Tr Sh arg red

3560-69 All Lime, LS lt. gry and tan med xtl, very hard, no por, NS

3569-79 Sh red, LS lt. gry xtl, very hard, no por, NS. LS gry microxtln, very hard, no por, NS

3579-89 Sh red, LS cream grnstn, hard, no por, NS. LS lt tan microxtln, very hard, no por, NS

3589-98 LS cream med - coarse xtl, hard, poor por, few cuttings w/ **dead bitumen stain**, NSFO

3598-3609 LS lt. tan med xtl, hard, no por, NS. Tr Sh red

3609-18 LS as above

3618-28 LS lt. gry microxtln, very hard, no por, NS. LS lt. purple xtl, very hard, no por, NS

3628-40 Sh red, Mixture of LS, LS tan grnstn rextlzd, very hard, no por, NS. LS lt. gry microxtln, very hard, no por, NS. LS lt. purple arg xtl, hard, no por, NS

3640-48 Good slug Lime. LS cream grnstn, slightly friable, poor - no intrgrn por, **fair shw free oil in some cuttings when broken, very tight, poor sat**. LS white xtl, very hard, poor intrxtln por, very few cuttings w/ **dead oil stain, poor shw free oil when crushed**, no odor

3648-51 LS grnstn from above, rextlzd, very poor intr grnlr/xtln por w/ same **poor shw free oil**, very tight, no odor. LS lt. tan/cream med xtl, very hard, no por, NS

3651-61 LS grnstn from above, NS. LS white xtl, very hard, no por, NS

3661-79 Sh arg red

3679-91 50/50 Sh red, LS cream med xtl, very hard, no por, NS

3691-99 LS as above, LS lt. gry microxtln, very hard, no por, NS

3699-3711 LS lt. gry xtl and microxtln, very hard, no por, NS

3711-17 As above, Tr Sh dk gry

3717-25 LS cream fossiliferous grnstn rextlzd, very hard, no por, NS. LS gry microxtln, very hard, no por, NS

3725-32 LS lt. tan grnstn, slightly friable - hard, poor por, NS. Chert clear/white opaque, some Sh red and dk gry

3732-40 Sh red, mostly cly, LS gry xtl, very hard, no por, NS

3740-53 LS cream fine xtl, hard, no por, NS. Some Sh red arg

3753-65 As above, LS gry/brwn microxtln, very hard, no por, NS

Wt. 9.0
Vis 48

Topeka - 3648.JPG

Wt. 9.1
Vis 46

3770
3780
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3970
3980

Toronto
(3786', -905)

Lansing A
(3840', -959)

CFS - 20/40/60

Lansing B
(3870', -989)

Lansing C
(3929', -1048)

Lansing D
(3974', -1093)

3765-73 LS cream xtlN - med xtlN, hard, no por, NS

3773-83 LS gry microxtln, very hard, no por, NS. LS lt. tan grnstrn rextlzd, no por, NS. Sh dk gry

3783-93 LS white xtlN, very hard, no por, NS. Some Sh red

3793-3802 As above, Also LS gry microxtln, very hard, LS lt. tan microxtln, very hard, no por, NS

3802-12 LS white fine grnstrn, slightly friable, no por, NS

3812-22 As above, Sh red and dk gry

3822-34 As above, more Sh, Some LS w/ **dead tarry bitumen stain**

3834-42 Sh red, Trace LS cream xtlN, very hard, no por, NS

3842-51 Some Sh red, LS lt. tan microxtln, very hard, no por, NS. Tr LS lt. gry xtlN, very hard, very poor por, very few grains w/ **poor shw free oil, poor sat in cutting**. No clear Lime top in samples. Lots of Sh mixed with LS.

3851-59 LS cream/white xtlN, very hard, no por, NS. Some Sh red

3859-66 Sh red. Tr Sh dk gry

3866-79 Good slug Lime. LS lt. gry grnstrn, some fossiliferous grnstrn, slightly friable, poor intr grnlr por, **lots of oil stain when broken, fair shw free oil, good odor**, tight. **few drops oil in cup, weak cut**. Mostly LS gry/blue microxtln, very hard, no por, NS

3879-88 LS lt. tan/white microxtln, very hard, no por, NS. Tr LS grnstrn from above w/ **same show, slight odor**

3888-95 As above

3895-3906 LS lt. gry microxtln

3906-15 LS lt. tan xtlN, slightly friable, no por, NS. Tr Sh red, LS brwn coarse xtlN, very hard, no por, NS

3915-28 LS lt. gry microxtln, very hard, no intrxtln por, very small pinpoint vugs scattered on surfaces, some w/ **oil stain**, NSFO. Mix of other LS. LS lt. tan fine xtlN, very hard no por, NS, Sh red

3928-37 LS lt. gry microxtln, very hard, no por, NS. one cutting w/ small sparse vugs, **oil stained** when broken, **fair show free oil in vug**

3937-47 LS lt. tan xtlN and microxtln, very hard, no por, NS. Tr Sh black

3947-56 L dk gry xtlN, very hard, no por, NS. Tr LS lt. gry microxtln, very hard, no por, NS


3956-64 LS brwn/dk gry coarse xtlN, very hard, no por, NS. Some LS white xtlN, very hard, no por, NS. Sh red


3964-78 Good slug Lime. LS white xtlN, hard, no por. One cutting in 2 trays w/ **free oil shw**, very sparse, **bleeding when crushed**, looks wet and tight. LS white very fine xtlN chly, no por, NS.


3978-86 As above

KS Drilling Technologies
Mud check 7/209

Depth: 3791' Btms Up: 36 min
Wt: 9.1 Vis: 44 Filt: 12.8
Cake: 1/32" LCM: 1.5# YP: 15
Chlor: 1500 ppm Grad: 0.473 psi/ft

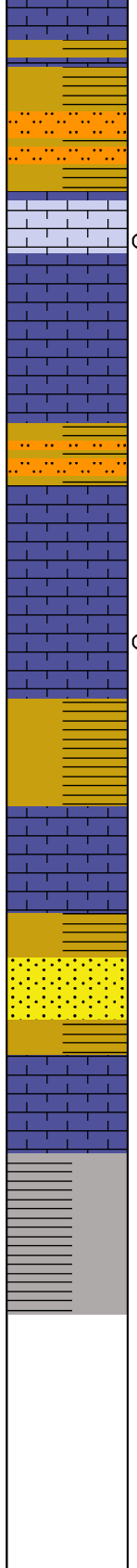
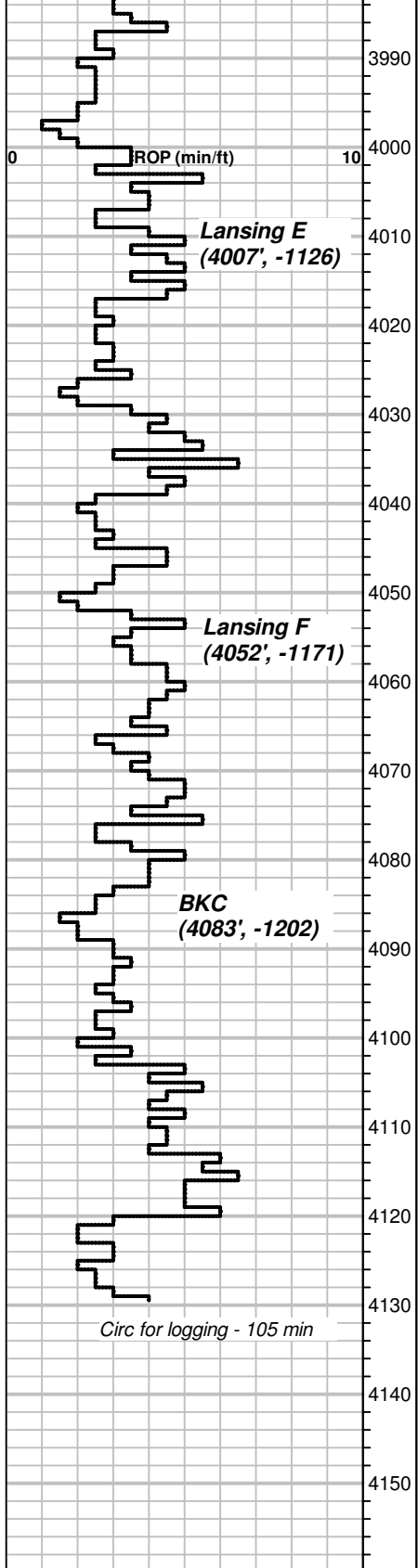
 Lansing A - 3851.JPG

 Lansing B - 3879 .JPG

 Lansing B - 3888.JPG

Wt. 9.1
Vis 55

 Lansing D - 3978.JPG



3978-86 As above

3986-92 Mostly Sh red, LS white xtn and fine xtn, very hard, no por, NS

3992-4001 Mostly Sh arg red. LS lt. tan xtn, ,very hard, no por, NS

4001-07 As above 50/50 Sh/LS

4007-11 Good slug Lime. LS cream fine grnstn, friable, poor por, poor shw free oil when crushed, low sat. appears wet, faint odor. LS lt. tan xtn, very hard, no por, NS

4011-17 LS lt. gry microxtln, very hard, no por, NS

4017-32 LS as above, LS white, very fine xtn chly, friable, no por, NS

4032-38 Sh arg red, Tr LS from above

4038-50 LS gry coarse xtn, very hard, no por, NS. LS white fine xtn, friable, no por, NS

4050-61 As above, LS white xtn, hard, poor intrxtln por. poor shw free oil when crushed, tight, no odor, sparse show

4061-71 Sh red cly, LS gry/brwn arg, very hard, no por, NS, Sh purple

4071-78 Ls white - lt. gry, xtn, very hard, no por, NS. Sh red

4078-87 LS gry microxtln, very hard, no por, NS

4087-4102 SS lt. gry fine grnd, very friable, good por, NS. Sh red

4102-13 LS gry xtn, very hard, no por, NS

4113-18 As above, Sh gry cly

4118-24 Sh gry cly

4124-30 As above

Driller TD 4130'
Logger TD 4130'

Lansing E - 4011.JPG

Wt. 9.3
Vis 52

Lansing F - 4061.JPG

KS Drilling Technologies
Mud check 7/21/19
Depth: 4130' Btms Up: 39 min
Wt: 9.2 Vis: 51 Filt: 10.4
Cake: 1/32" LCM: 1.5# YP: 20
Chlor: 1500 ppm Grad: 0.478 psi/ft

7/21/19 @ 4130'
Survey not run
Pipe Strap - 2' short

