

Adam Eldani Geo-Log/Report

WellSight Systems

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

Measured Depth Log

Well Name: #1 Frink 32C
Location: SEC 32-TOWNSHIP 28S- RANGE 23W FORD COUNTY
License Number: API 15-057-20925 Region: KANSAS
Spud Date: 03/05/2014 Drilling Completed: 03/18/2014
Surface Coordinates: 1380' FSL & 480' FWL
60' N & 150' E of W/2 W/2 SW
Bottom Hole Deviation Surveys are detailed through out the Geo-Report.
Coordinates:
Ground Elevation (ft): 2514 K.B. Elevation (ft): 2525
Logged Interval (ft): 4000' To: 5416' Total Depth (ft): 5420'
Formation: Mississippian
Type of Drilling Fluid: Mud-Co Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Ritchie Exploration Inc. (drilled by VAL RIG#5)
Address: 8100 E. 22nd ST. N. #700
Wichita, KS, 67278-3188

GEOLOGIST

Name: Adam M.A. Eldani
Company: Ritchie Exploration Inc.
Address: 8100 E. 22nd ST. N. #700
Wichita, KS, 67278-3188

Tops & Drill Report

TOPS:

DRILLING REPORT

Sample Tops:

Anhydrite: N/A	Anhydrite: 1482'+1043
B/Anhydrite: N/A	B/Anhydrite: 1530'+995
Stotler: 3672'-1147	Stotler: 3649'-1124
Heebner: 4332'-1807	Heebner: 4323'-1798
Toronto: 4348'-1823	Toronto: 4330'-1805
Lansing: 4484'-1959	Lansing: 4470'-1945
Muncie Sh: 4678'-2153	Muncie Sh: 4670'-2145
Stark: 4820'-2295	Stark: 4810'-2285
Hush: 4864'-2339	Hush: 4853'-2328
BKC: 4948'-2423	BKC: 4942'-2417
Marmaton: 4967'-2442	Marmaton: 4964'-2439
Altamont: 4982'-2457	Altamont: 4982'-2457
Pawnee: 5050'-2525	Pawnee: 5046'-2521
Cherokee Sh: 5100'-2575	Cherokee Sh: 5092'-2567
Huck: 5192'-2667	Huck: 5184'-2659
Atoka: 5201'-2676	Atoka: 5198'-2673
Morrow: 5234'-2709	Morrow: 5224'-2699
Mississippian: 5252'-2727	Mississippian: 5284'-2759
RTD: 5420'-2895	LTD: 5416'-2891

DAILY DRILLING REPORT:

DATE DEPTH:

3/5	Spud
3/6	338'
3/7	1100'
3/8	2025'
3/9	2900'
3/10	3530'
3/11	4180'
3/12	4630'
3/13	5032'
3/14	5072'
3/15	5135'
3/16	5200'
3/17	5250'
3/18	5420'

Misc

All DST's info. are NEAR the correct log depth.

RIG: VAL RIG #5

TOOL PUSHER: Randy Smith

MUD: MUD CO. (Terry Ison)

GAS DETECTOR: MBC Well Services

DRILL STEM TEST'S: Superior Testing, Inc.

LOGS: NABORS (Ian Nabb)

OFFICE: Peter Fiorini

Comments

Ran 8 jts new 23# 8-5/8" surface casing. Tally at 338', set at 352'. Cemented with 225 sacks common, 2% gel, 3% cc. Cement did circulate. Plug down at 8:15 a.m. Drilled out plug at 4:15 p.m.

AFTER THE RESULTS OF SAMPLE LOGGING, ELECTRIC LOGGING, AND ALL DST TESTS ANALYSIS & CALCULATIONS; It was elected to Plug & Abandon-

RTD 5420'. Ran Electric Log. LTD 5416'. Plug and Abandon. 1st plug set at 1530' with 50 sacks 60/40 Poz, 4% gel, 1/4# flocele; 2nd plug set at 600' with 50 sacks; 3rd plug set at 380' with 50 sacks; 4th plug set at 60' with 20 sacks; 170 total sacks. Plugged the rat hole with 30 sacks and the mouse hole with 20 sacks. Job complete at 10:30 p.m. Plugging orders by Dan Sellers with the KCC.

Well Log Surveys BY: NABORS. Compensated Denisty/ Neutron Log, Dual Induction.

SAMPLES WILL BE DEPOSITED WITH KANSAS GEOLOGICAL SURVEY.

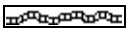
RESPECTFULLY SUBMITTED

Adam M. A. Eldani

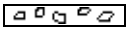
ROCK TYPES



Anhy



Bent



Brec



Carb sh



Cht



Clyst



Coal



Congl



Dol



Gyp



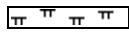
Igne



Lmst



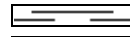
Meta



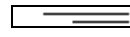
Mrlst



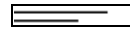
Salt



Shale



Shcol



Shgy



Sltst



Ss



Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp

- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph

- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Fuss
- Gastro
- Oolite
- Oomold
- Ostra
- Pelec

- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint

- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

- Even
- Spotted
- Ques
- Dead

- Dst_alt
- Dst

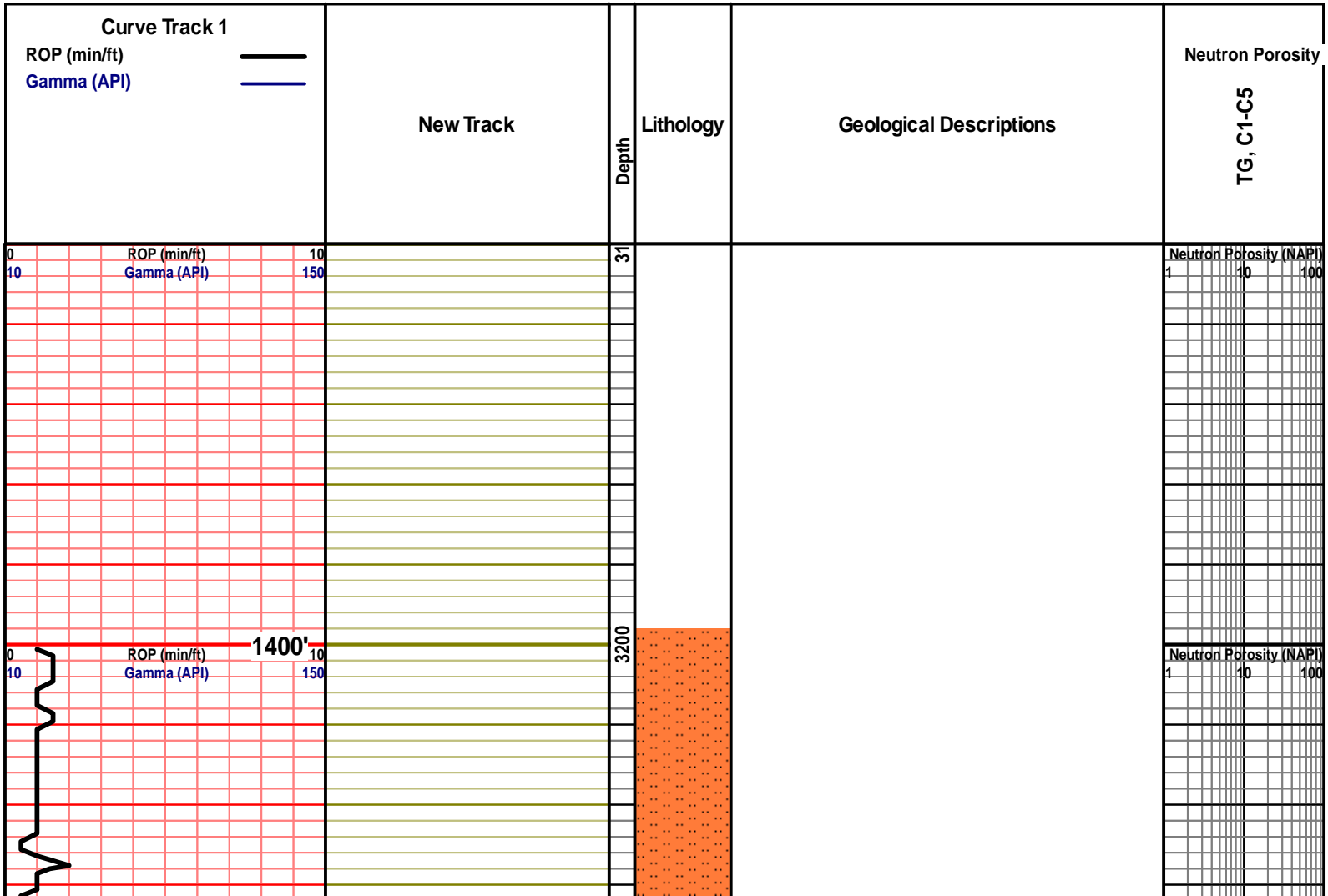
EVENT

- Rft
- Sidewall

INTERVAL

- Core
- Dst

- OIL SHOW
- aimimg_1



1450'

3250

NO SAMPLES AVAILABLE

←-----
Top of
Anhydrite
(1500'+1018)

1500'

3300

e-log Anhy Tops:
Anhy: 1482+1043 // B/Anhy: 1530+995

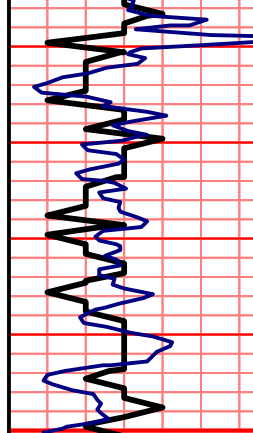
←-----
B/ Anhydrite
(1496'+966)

1550'

3350

NO SAMPLES AVAILABLE

ROP (min/ft)
Gamma (API)

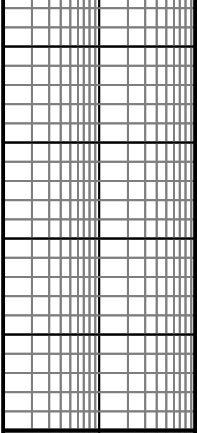


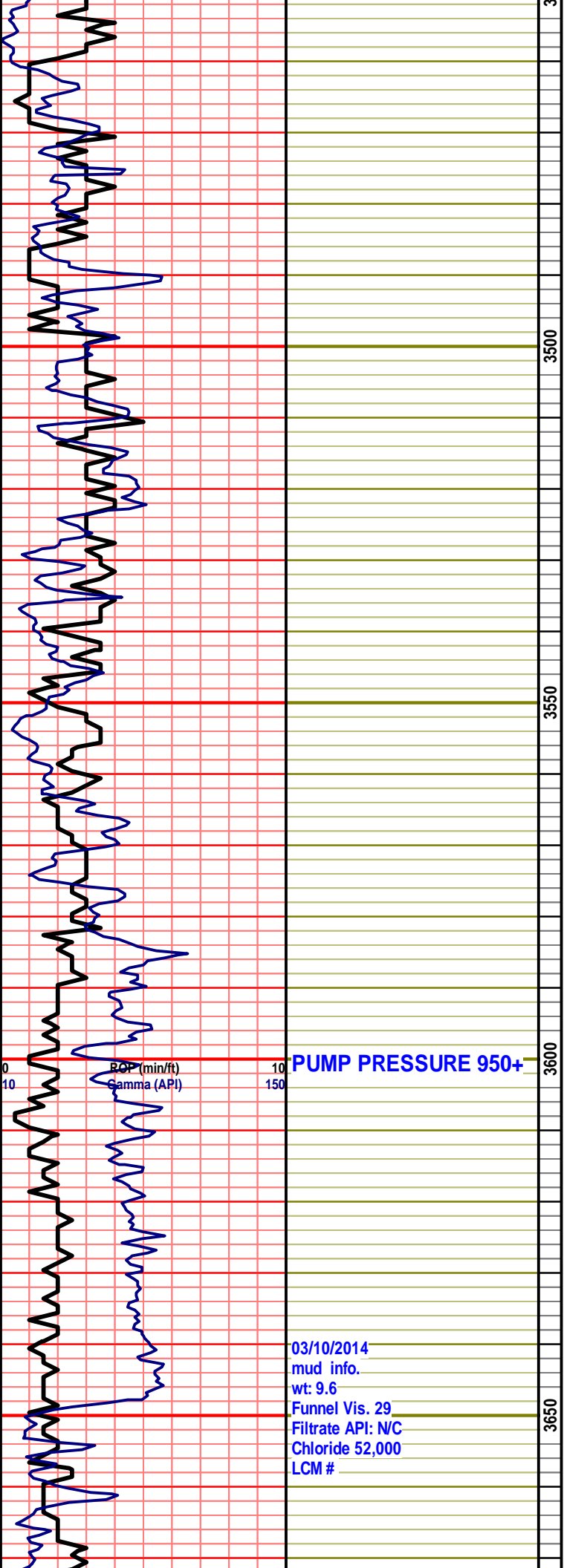
GEOLOGIST ON
LOCATION @ 4677'

3400

4500

Neutron Porosity (NAPI)





PUMP PRESSURE 950+

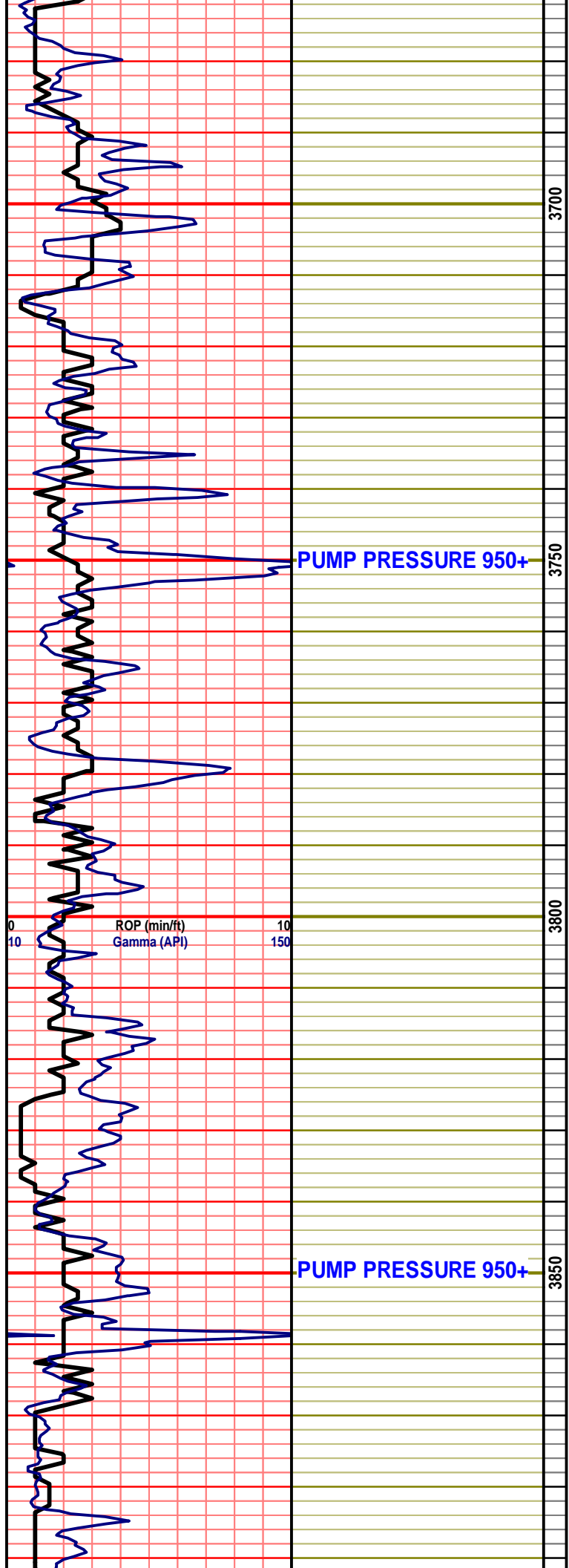
03/10/2014
mud info.
wt: 9.6
Funnel Vis. 29
Filtrate API: N/C
Chloride 52,000
LCM #

NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

Neutron Porosity (NAPI)
1 10 100



NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

Neutron Porosity (NAPI)
1 10 100

MUD DISPLACMENT @
3900

NO SAMPLES AVAILABLE

ROP (min/ft) 10
Gamma (API) 150

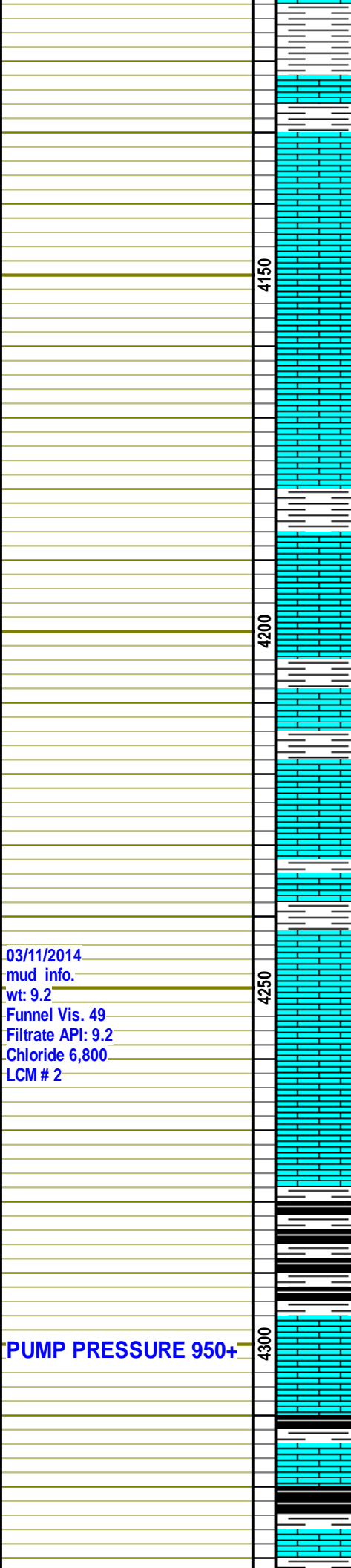
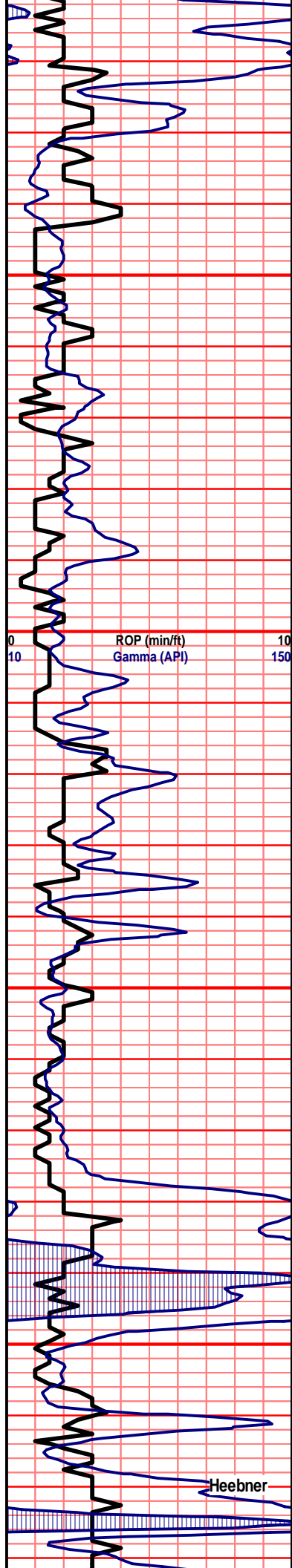
Neutron Porosity (NAPI)
1 10 100

4100: mstly ramroon & gry sh, mstly crm xln lm, poor-no por, few tan ool lm, poor ool cast por, no odr, ns.

4110: aa, incrs in maroon & gry (slty) sh, incrs tan ool lm aa, shw of wht-crm chrty lm, foss, no vis por, no odr, ns.

4120: sig incrs in wht chlk, lots crm-lght tan foss lm, no odr, ns.

4130: sig slght incrs in maroon sh no odr, ns.



4130: aa, slight incrs in maroon sh no odr, ns.

4140: lots of gry & maroon sh, chlk, tan-lght brwn xln lm cemnt flooded, sli micrtic, poor-no por, no odr, ns.

4150: aa, no sig change.

4160: incrs in maroon & gry sh, mostly tan crm micrtic-chlky lm, few crm xln lm, no vis por, no odr, ns.

4170: aa, incrs in crm xln lm, poor-no xln por, no odr, ns.

4180: lots of xln lm aa, incrs in chlk-chlky lm, few crm ool cast lm, super por, no odr, ns.

4190: sig incrs in aqua & gry sh, tan ool lm, cemnt flooded, no vis por, sli chrty, no odr, ns.

4200: crm cors xln lm, v. foss, cemnt flooded, poor no por, lots of chlk, no omdr, ns.

4210: mstly crm xln lm, poor por, lots of gry inxln lm, dense, no vis por, o odr, ns.

4220: sig incrs in maroon sh, incrs in chlky lm, lots of tan foss lm, poor foss por, no odr, ns.

4230: lots of crm xln lm, aa, poor por, few tan pack stnlm, fair intr prtcl por, no odr, ns.

4240: sig incrs in wht chlk, incrs in crm xln lm, dense, no vlis por, no odr, ns.

4250: aa, incrs in crm chlky lm, incrs in crm-tan pack stn lm, poor intr prtcl por, no odr, ns.

4260: incrs in gry slty & maroon sh, mstly tan-crm fn xln lm, no vis por, no odr, ns.

4270: drk crm-nrwm chrty lm no vis por, no odr, ns.

4280: incrs in gry-brwn sh, lots of micrtic lm, few brwn-crm fn xln lm, cmnt flooded por, no odr, ns.

4290: crm xln lm, cemnt flooded, sli chrty, lots of crm chlky-sub chlky lm, no odr, ns.

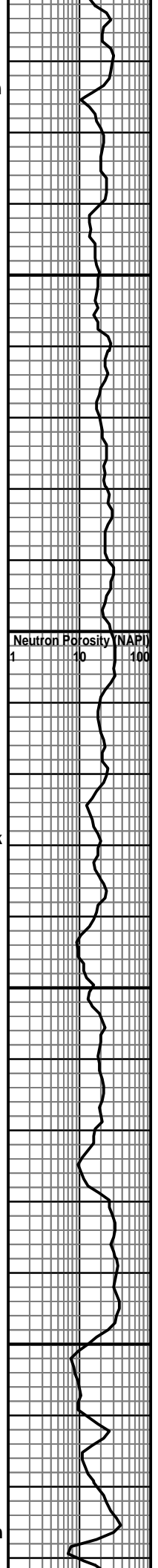
4300: incrs in drk slty sh, incrs in wht chlk, lots of crm-tan fn-cors xln lm, dense, no vis por, no odr, ns.

4310: lots of gry & moroon sh, lots of crm dese xln lm, no vis por no odr, ns.

4320: shw of blk carb sh, lots of chlk, lght crm xln lm, v. dense, no vis por, no odr, ns.

4330: mstly blk carb sh, lots of wht chlk, no odr, ns.

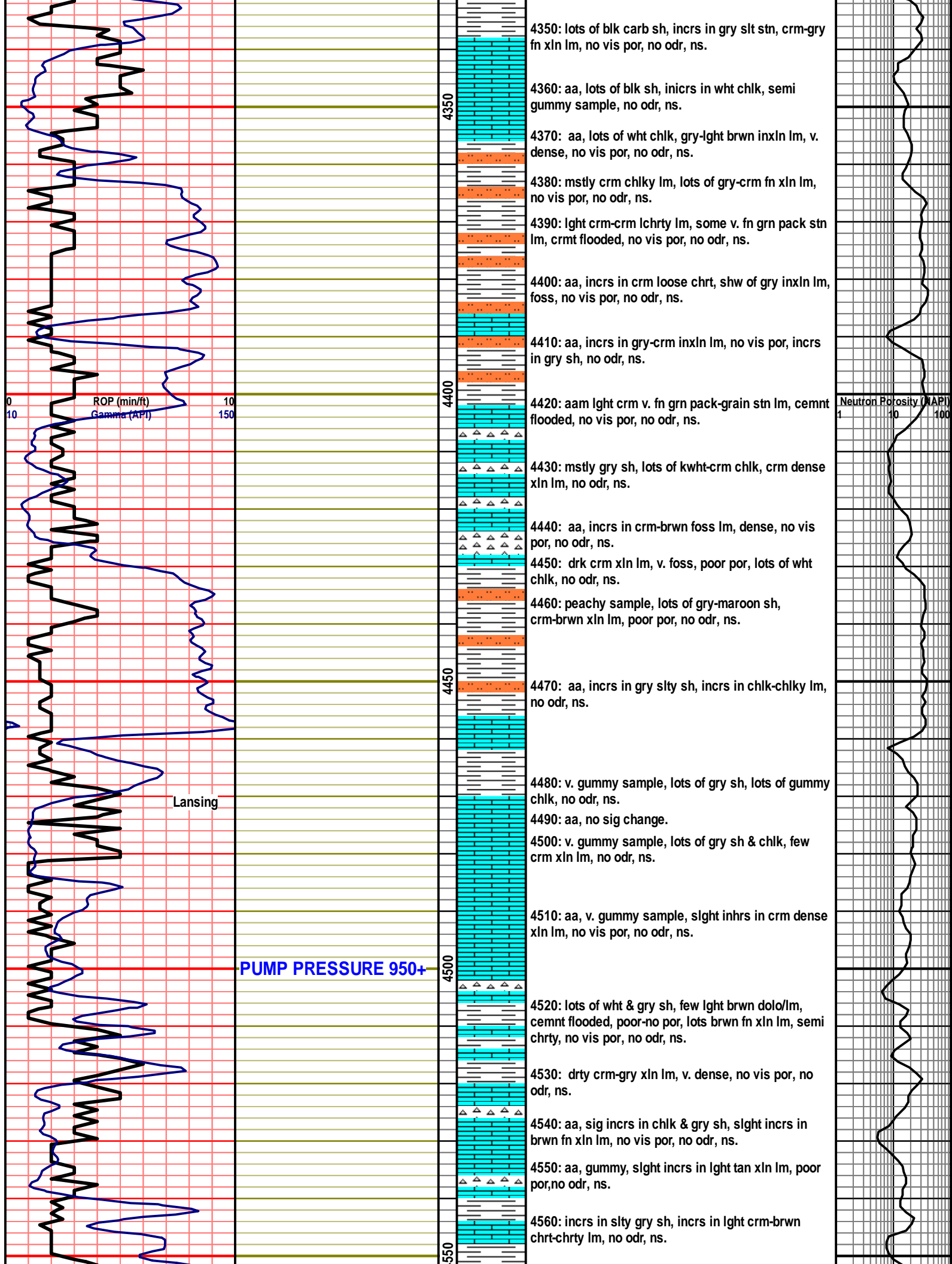
4340: mstly blk carb sh, lots of wht chlk, lght crm xln lm, dense, no odr, ns.



03/11/2014
mud info.
wt: 9.2
Funnel Vis. 49
Filtrate API: 9.2
Chloride 6,800
LCM # 2

PUMP PRESSURE 950+

Heebner



4350: lots of blk carb sh, incrs in gry slt stn, crm-gry fn xln lm, no vis por, no odr, ns.

4360: aa, lots of blk sh, incrs in wht chlk, semi gummy sample, no odr, ns.

4370: aa, lots of wht chlk, gry-lght brwn inxln lm, v. dense, no vis por, no odr, ns.

4380: mstly crm chlky lm, lots of gry-crm fn xln lm, no vis por, no odr, ns.

4390: lght crm-crm lchrtly lm, some v. fn grn pack stn lm, crmt flooded, no vis por, no odr, ns.

4400: aa, incrs in crm loose chrt, shw of gry inxln lm, foss, no vis por, no odr, ns.

4410: aa, incrs in gry-crm inxln lm, no vis por, incrs in gry sh, no odr, ns.

4420: aam lght crm v. fn grn pack-grain stn lm, cemnt flooded, no vis por, no odr, ns.

4430: mstly gry sh, lots of kwht-crm chlk, crm dense xln lm, no odr, ns.

4440: aa, incrs in crm-brwn foss lm, dense, no vis por, no odr, ns.

4450: drk crm xln lm, v. foss, poor por, lots of wht chlk, no odr, ns.

4460: peachy sample, lots of gry-maroon sh, crm-brwn xln lm, poor por, no odr, ns.

4470: aa, incrs in gry slty sh, incrs in chlk-chlky lm, no odr, ns.

4480: v. gummy sample, lots of gry sh, lots of gummy chlk, no odr, ns.

4490: aa, no sig change.

4500: v. gummy sample, lots of gry sh & chlk, few crm xln lm, no odr, ns.

4510: aa, v. gummy sample, slight inhrcs in crm dense xln lm, no vis por, no odr, ns.

4520: lots of wht & gry sh, few lght brwn dolo/lm, cemnt flooded, poor-no por, lots brwn fn xln lm, semi chrtly, no vis por, no odr, ns.

4530: drty crm-gry xln lm, v. dense, no vis por, no odr, ns.

4540: aa, sig incrs in chlk & gry sh, slight incrs in brwn fn xln lm, no vis por, no odr, ns.

4550: aa, gummy, slight incrs in lght tan xln lm, poor por, no odr, ns.

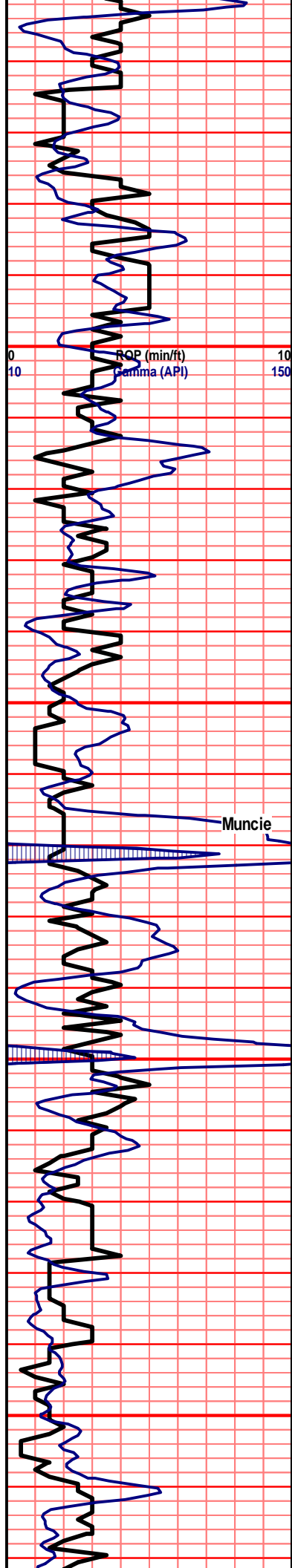
4560: incrs in slty gry sh, incrs in lght crm-brwn chrt-chrtly lm, no odr, ns.

ROP (min/ft)
Gamma (API)

Neutron Porosity (NAPI)

Lansing

PUMP PRESSURE 950+



PUMP RESSURE 950+



4570: aa, incrs in wht chlk-chlky lm, crm xln lm, sli foss, no odr, ns.

4580: aa, incrs in gry & blk carb sh, incrs in transclnt chrt, incrs in brwn-gry xln lm, no vis por, no odr, ns.

4590: chrt aa, brwn xln lm, sli foss, cemnt flooded por, no odr, ns.

4600: incrs in chlk, brwn-gry xln lm, dense, no vis por, no odr, ns.

4610: sig incrs in chlk-chlky lm, gry-brwn xln lm, v. dense, no odr, ns.

4620: incrs in gry slty sh, brwn dense xln lm, no vis por, no odr, ns.

4630: shw of blk carb sh, brwn xln lm, foss, v. dense, well cemntd, no vis por, no odr, ns.

4640: incrs in gry & blk sh, mstly brwn-crm/gry inxln lm, poor inxln por, no odr, ns.

4650: lots of drk gry sh, brwn-gry foss inxln lm, v. dense, no vis por, no odr, ns.

4660: sh aa, lots of crm-brwn inxln lm, dense, no odr, ns.

4670: aa, incrs in chlky lm, incrs in drty crm micrtic lm, no odr, ns.

4680: mstly wht chlk, lots of gry inxln lm, dense, foss, no vis por, no odr, ns.

4690: crm-gry fn xln-inxln lm, poor-no por, no odr, ns.

4700: aa, incrs in blk & gry sh, incrs in crm xln lm, few brwn chrty lm, no vis por, no odr, ns.

4710: aa, brwn xln lm, pyrtzd, v. dense, no odr, ns.

4720: incrs in crmy chlky lm, lots crm-tan xln lm, v. dense, no vis por, no odr, ns.

4730: crm-gry xln lm, pyrtzd, dense, no vis por, no odr, ns.

4740: incrs in drk gry sh, brwn-gry inxln lm, no inxln por, dense, no vis por, no odr, ns.

4750: incrs in aqua & blk sh, crm inxln lm, dense no vis por, no odr, ns.

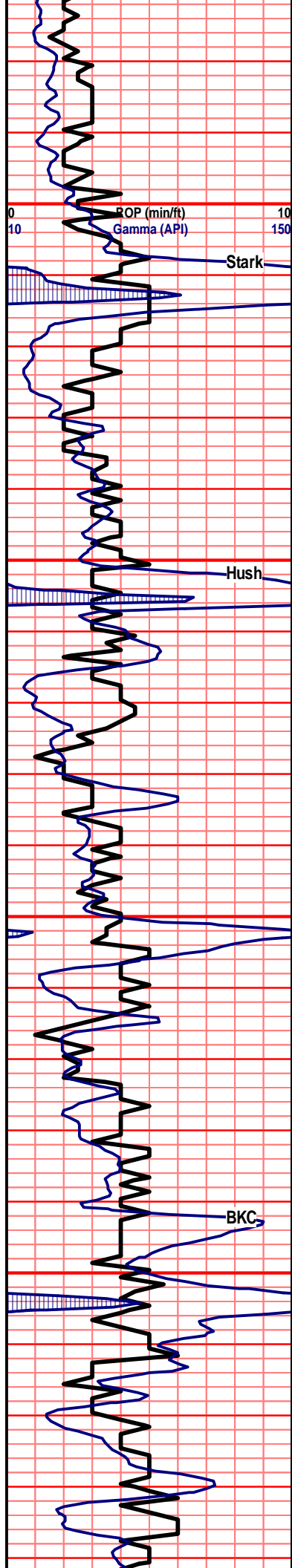
4760: incrs in blk carb sh, tan-crm xln lm, dense, poor-no por, lots of crm chlky lm, no odr, ns.

4770: aa, brwn-tan fn xln-inxln lm, v. poor-no por, no odr, ns.

4780: tan ool lm, cemnt rich, v. poor ool cast por, no odr, ns.

4790: aa, tan-brwn xln lm, v. dense, no vis por, no

Neutron Porosity (NAPI)



03/12/2014
 mud info.
 wt: 9.3
 Funnel Vis. 44
 Filtrate API: 10.8
 Chloride 8,000
 LCM # 2

03/13/2014
 mud info.
 wt: 9.3
 Funnel Vis. 50
 Filtrate API: 8.8
 Chloride 7,200
 LCM # 2



odr, ns.

4800: incrs in chlk, incrs in gry & aqua sh, mstly tan xln lm, no vis por, no odr, ns.

4810: aa, brwn xln lm, v. dense, no vis por, wht&gry chrt, no vis por, no odr, ns.

4820: brwn xln lm, v. dense, no vis por, few crm-gry chrtly lm, no vis por, no odr, ns.

4830: incrs in gry & aqua sh, brwn-tan xln lm, v. dene, no vis por, no odr, ns.

4840: sig incrs in blk carb & gry sh, brwn xln lm, cemnt flooded, fracs, no odr, ns.

4850: sig incrs in chlk-chlky lm, crm xln lm, dense, few wht pyrtzd chrt, no odr, ns.

4860: mstly crm xln lm, fn xln in prt, v. poor por, no odr, ns.

4870: aa, shw of blk carb sh, incrs in gry inxln lm, foss, dense, no odr, ns.

4880: aa, sig incrs in gry & aqua sh, no odr, ns.

4890: incrs in blk carb sh, mostly crm-gry xln lm, fn xln in prt, dense, no vis por, no odr, ns.

4900: sig incrs in wht chlk, sig incrs in wht chrt, no vis por, no odr, ns.

4910: aa, lots of chrt, mstly tan/crm chrtly lm, no vis por, no odr, ns.

4920: sig incrs in blk-drk gry sh, lots of lght gry inxln lm, cemnt overgrowth, lots of blk chrt, no odr, ns.

4930: aa, incrs in chlky-sub chlky lm, no odr, ns.

4940: v. gummy sample, lots of wht chlk, gry & blk sh, no odr, ns.

4950: lots of chlk-gry sh, mstly gry inxln lm, v. dense, no odr, ns.

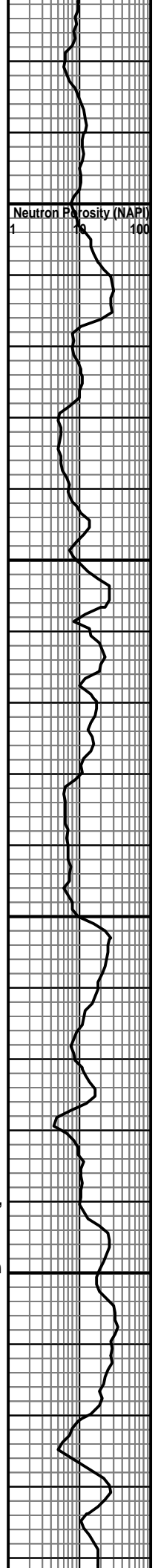
4960: sig incrs in gry-tan brwn inxln lm, poor-no inxln por, no odr, ns.

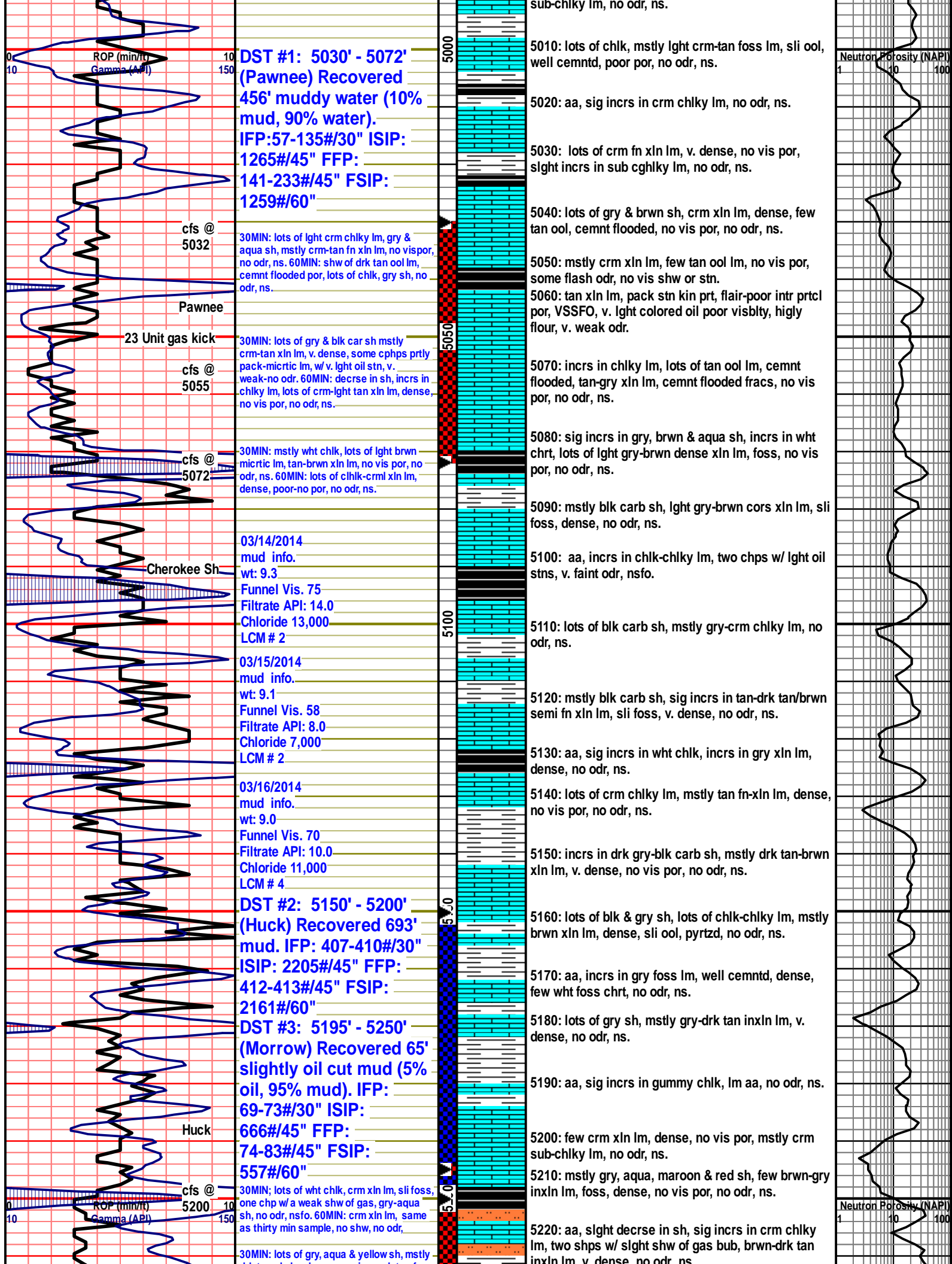
4970: aa, sig incrs in gry sh-gry shly lm, incrs in drk gry chrt, no vis por, no odr, ns.

4980: v. gummy sample, lots of gummy chlk, few gry inxln lm, no odr, ns.

4990: incrs in gummy chlk, no sig change

5000: v. gummy, incrs in gry & aqua sh, incrs in crm





DST #1: 5030' - 5072' (Pawnee) Recovered 456' muddy water (10% mud, 90% water). IFP: 57-135#/30" ISIP: 1265#/45" FFP: 141-233#/45" FSIP: 1259#/60"

30MIN: lots of lght crm chlky lm, gry & aqua sh, mstly crm-tan fn xln lm, no vispor, no odr, ns. 60MIN: shw of drk tan ool lm, cemnt flooded por, lots of chlck, gry sh, no odr, ns.

30MIN: lots of gry & blk car sh mstly crm-tan xln lm, v. dense, some cphps prtly pack-micritic lm, w/v. lght oil stn, v. weak-no odr. 60MIN: decrse in sh, incrs in chlky lm, lots of crm-lght tan xln lm, dense, no vis por, no odr, ns.

30MIN: mstly wht chlck, lots of lght brwn micritic lm, tan-brwn xln lm, no vis por, no odr, ns. 60MIN: lots of chlck-crm xln lm, dense, poor-no por, no odr, ns.

03/14/2014 mud info. wt: 9.3 Funnel Vis. 75 Filtrate API: 14.0 Chloride 13,000 LCM # 2

03/15/2014 mud info. wt: 9.1 Funnel Vis. 58 Filtrate API: 8.0 Chloride 7,000 LCM # 2

03/16/2014 mud info. wt: 9.0 Funnel Vis. 70 Filtrate API: 10.0 Chloride 11,000 LCM # 4

DST #2: 5150' - 5200' (Huck) Recovered 693' mud. IFP: 407-410#/30" ISIP: 2205#/45" FFP: 412-413#/45" FSIP: 2161#/60"

DST #3: 5195' - 5250' (Morrow) Recovered 65' slightly oil cut mud (5% oil, 95% mud). IFP: 69-73#/30" ISIP: 666#/45" FFP: 74-83#/45" FSIP: 557#/60"

30MIN: lots of wht chlck, crm xln lm, sli foss, one chp w/ a weak shw of gas, gry-aqua sh, no odr, nsfo. 60MIN: crm xln lm, same as thirty min sample, no shw, no odr, ns.

5010: lots of chlck, mstly lght crm-tan foss lm, sli ool, well cemntd, poor por, no odr, ns.

5020: aa, sig incrs in crm chlky lm, no odr, ns.

5030: lots of crm fn xln lm, v. dense, no vis por, slight incrs in sub cghlky lm, no odr, ns.

5040: lots of gry & brwn sh, crm xln lm, dense, few tan ool, cemnt flooded, no vis por, no odr, ns.

5050: mstly crm xln lm, few tan ool lm, no vis por, some flash odr, no vis shw or stn.

5060: tan xln lm, pack stn kin prt, flair-poor intr prtcl por, VSSFO, v. lght colored oil poor visbly, highly flour, v. weak odr.

5070: incrs in chlky lm, lots of tan ool lm, cemnt flooded, tan-gry xln lm, cemnt flooded fracs, no vis por, no odr, ns.

5080: sig incrs in gry, brwn & aqua sh, incrs in wht chrt, lots of lght gry-brwn dense xln lm, foss, no vis por, no odr, ns.

5090: mstly blk carb sh, lght gry-brwn cors xln lm, sli foss, dense, no odr, ns.

5100: aa, incrs in chlck-chlky lm, two chps w/ lght oil stns, v. faint odr, nsfo.

5110: lots of blk carb sh, mstly gry-crm chlky lm, no odr, ns.

5120: mstly blk carb sh, sig incrs in tan-drk tan/brwn semi fn xln lm, sli foss, v. dense, no odr, ns.

5130: aa, sig incrs in wht chlck, incrs in gry xln lm, dense, no odr, ns.

5140: lots of crm chlky lm, mstly tan fn-xln lm, dense, no vis por, no odr, ns.

5150: incrs in drk gry-blk carb sh, mstly drk tan-brwn xln lm, v. dense, no vis por, no odr, ns.

5160: lots of blk & gry sh, lots of chlck-chlky lm, mstly brwn xln lm, dense, sli ool, pyrtzd, no odr, ns.

5170: aa, incrs in gry foss lm, well cemntd, dense, few wht foss chrt, no odr, ns.

5180: lots of gry sh, mstly gry-drk tan inxln lm, v. dense, no odr, ns.

5190: aa, sig incrs in gummy chlck, lm aa, no odr, ns.

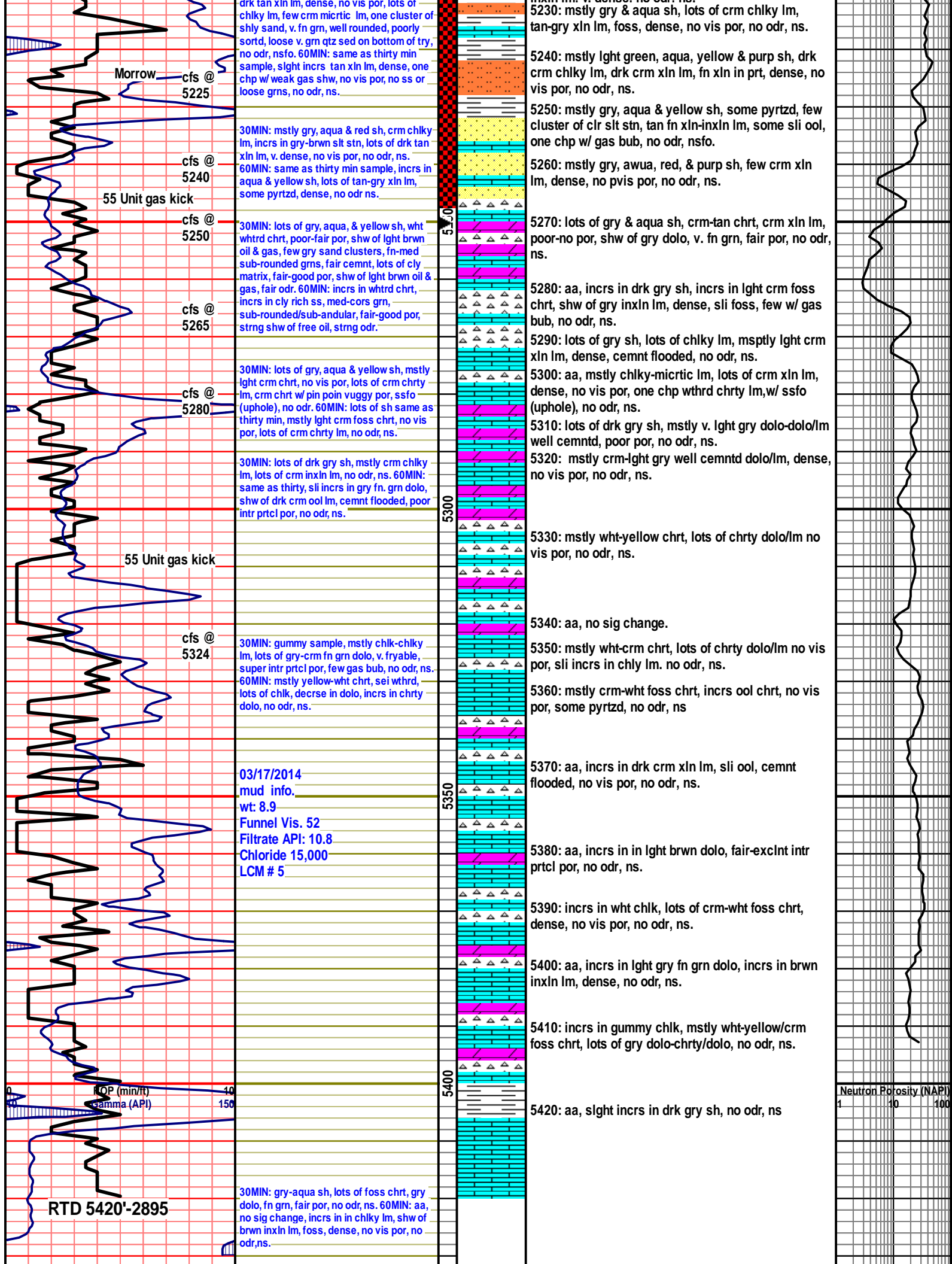
5200: few crm xln lm, dense, no vis por, mstly crm sub-chlky lm, no odr, ns.

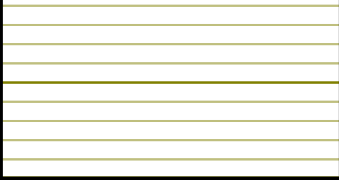
5210: mstly gry, aqua, maroon & red sh, few brwn-gry inxln lm, foss, dense, no vis por, no odr, ns.

5220: aa, slight decrse in sh, sig incrs in crm chlky lm, two shps w/ slight shw of gas bub, brwn-drk tan inxln lm v. dense, no odr, ns.

Neutron Porosity (NAPI) 1 10 100

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