

Tops & Drill Report

TOPS: DRILLING REPORT

Sample Tops

Anhydrite: 1801'+941
B/Anhydrite: 1863'+879
Stotler: 3560'-818
Heebner: 4121'-1379
Lansing: 4207'-1465
Muncie Sh: 4380'-1638
Stark: 4520'-1778
Hush: 4559'-1817
BKC: 4611'-1869
Altamont: 4647'-1905
Pawnee: 4743'-2001
Myrick: 4777'-2035
Fort Scott: 4795'-2053
Cherokee Sh: 4819'-2077
Atoka: 4886'-2144
Miss: 4914'-2172
RTD: 5135'-2393

E-Log Tops

Anhydrite: 1802'+940
B/Anhydrite: 1863'+879
Stotler: 3560'-818
Heebner: 4121'-1379
Lansing: 4215'-1473
Muncie Sh: 4384'-1642
Stark: 4520'-1778
Hush: 4560'-1818
BKC: 4612'-1870
Altamont: 4653'-1911
Pawnee: 4744'-2002
Myrick: 4777'-2035
Fort Scott: 4795'-2053
Cherokee Sh: 4820'-2078
Atoka: 4887'-2145
Miss: 4925'-2183
LTD: 5136'-2394

DAILY DRILLING REPORT:

DATE DEPTH @ 7AM:

09/02 SPUD
09/03 335'
09/04 1720'
09/05 2745'
09/06 3353'
09/07 3933'
09/08 4265'
09/09 4617'
09/10 4765'
09/11 4950'
09/12 5092'

Misc

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

RIG: DUKE DRILLING RIG #9
TOOL PUSHER: Emidgio Rojas
MUD: MUD CO. (JUSTIN WHITING)
GAS DETECTOR: MBC (M-7)

DRILL STEM TEST'S: Diamond Testing

LOGS: NABORS (Jason Capellucci)

OFFICE: Mike Engelbrecht

Comments

Moved in and rigged up. Spud at 8:00 p.m. Ran 8 jts new 23# 8-5/8" surface casing. Tally at 335.80', set at 346'. Cemented with 200 sacks common, 3% cc, 2% gel. Cement did not circulated. Plug down at 2:30 a.m. Ran 1" to 80' cemented with 150 sacks common, 3% cc, 2% gel. Did circulate. Drilled out plug at 11:30 a.m.

After review of all geologic samples as examined, Electric logs, and all Drill Stem Tests (DST) analysis & calculations; It was Elected by Ritchie Exploration to Plug & Abandon #1 Vachal-Bruns Trust.

RTD 5135'. Ran Electric Log. LTD 5136'. Plug and Abandon. 1st plug set at 1830' with 50 sacks 60/40 Poz, 4% gel, ¼# flocele; 2nd plug set at 1020' with 80 sacks; 3rd plug set at 270' with 30 sacks; 4th plug set at 60' with 20 sacks; 180 total sacks. Plugged the rat hole with 30 sacks and the mouse hole with 20 sacks. Job complete at 6:00 a.m. on 9/13/14. Plugging orders by Eric MacLaren with the KCC.


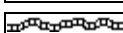
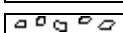


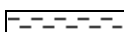







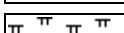
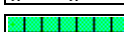
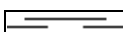
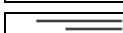
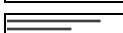



Well Log Surveys BY: NABORS. Compensated Denisty/ Neutron Log, Dual Induction.

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
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ACCESSORIES

MINERAL  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 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
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OTHER SYMBOLS

- POROSITY**
- E Earthy
 - F Fenest
 - F Fracture
 - X Inter
 - M Moldic
 - O Organic
 - P Pinpoint

- V Vuggy
- SORTING**
- W Well
 - M Moderate
 - P Poor

- ROUNDING**
- R Rounded
 - r Subrnd
 - a Subang
 - A Angular

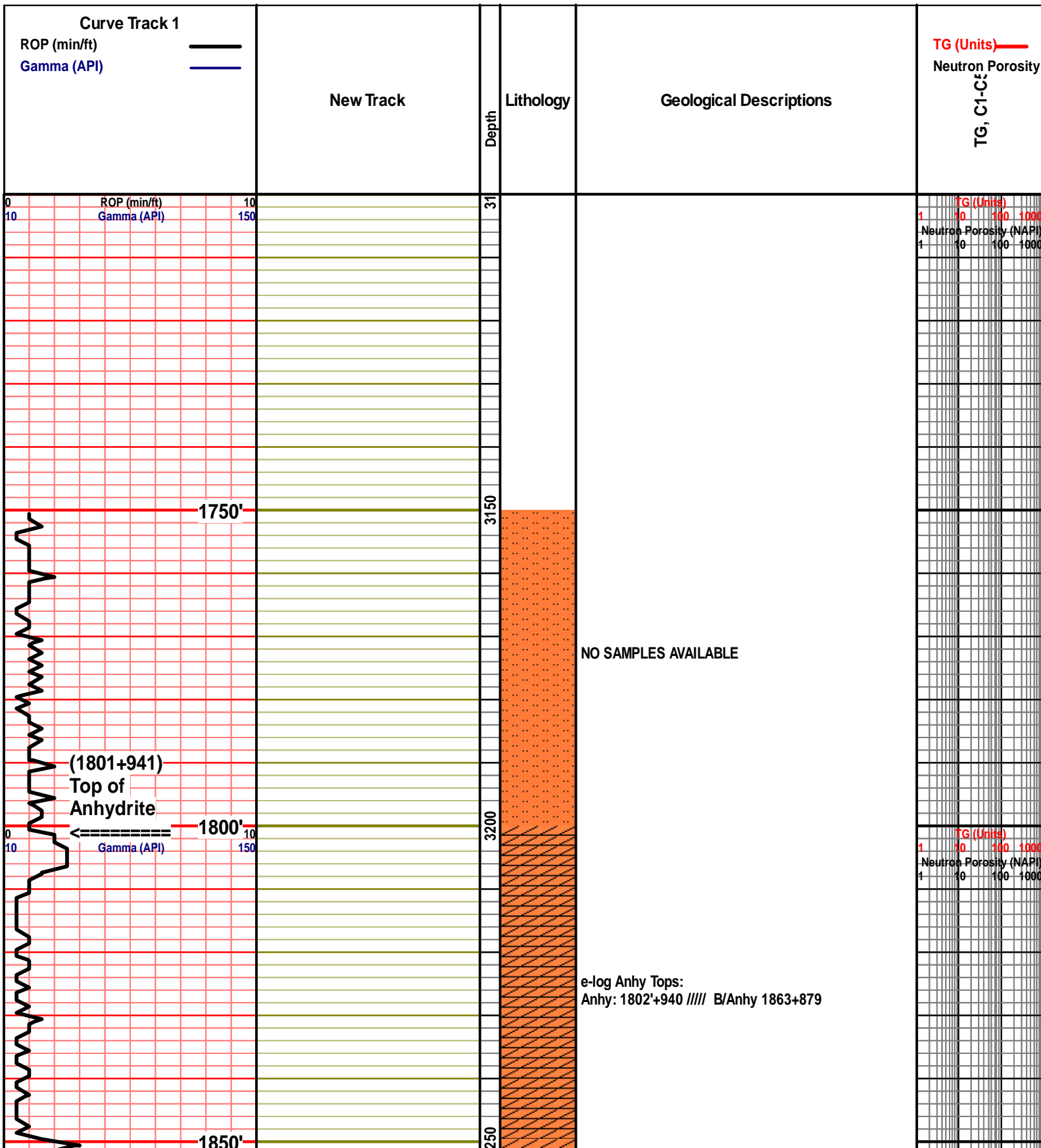
- Even
- Spotted
- Ques
- Dead

- Dst_alt
- Dst

- EVENT**
- ▽ Rft
 - ▾ Sidewall

- OIL SHOW**
- ✖ aiming_1

- INTERVAL**
- Core
 - Dst



B/ Anhydrite
(1863+879)

1900'

1950'

ROP (min/ft)
Gamma (API)

10
150

09/06/2014
mud info.
wt: 8.6
Funnel Vis. 55
Filtrate API: 9.2
Chloride 1,900
LCM # 0

3300

3350

3400

3450

NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

NO SAMPLES AVAILABLE

	1G (Units)	10	100	1000
1	Neutron Porosity (NAPI)			
1		10	100	1000

NO SAMPLES AVAILABLE

MUD DISPLACMENT @ 3500

3500

NO SAMPLES AVAILABLE

3550

← Stotler 3560-818

NO SAMPLES AVAILABLE

3600

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

1 10 100 1000
Neutron Porosity (NAPI) 1 10 100 1000

NO SAMPLES AVAILABLE

3650

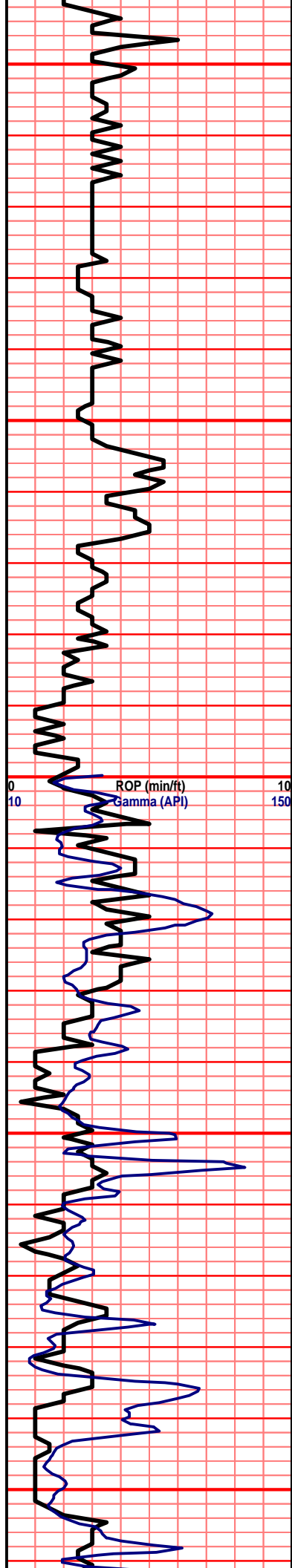
NO SAMPLES AVAILABLE

After irregular drill time rate of penetration, the tool pusher decided to bit trip for bit examination/change.

GEOLOGIST ON LOCATION @ 3692'

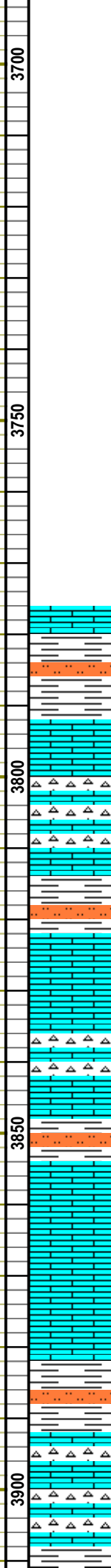
Location sits near an electric power station center. Less than half a mile to the east & west lays an electric generating windmill farm... Rig sits on a harvested pasture.

NO SAMPLES AVAILABLE



09/07/2014
mud info.
wt: 9.0
Funnel Vis. 44
Filtrate API: 10.0
Chloride 3,000
LCM # 0

PUMP PRESSURE 950+



3800: lots of gry and red sh mstly gry-tan foss lm, poor por, some fn xln lm, dense, no odr, ns.

3810: incrs in gry and aqua sh, mstly tan-lght crm xln-fn xln lm, poor-no por no odr, ns.

3820: aa, shw of foss gry chrt incrs in wht chlk-chlky lm, no odr, ns.

3830: incrs in gry sh, lots of chlk & gry mud stn, lm aa, no odr, ns.

3840: mstly crm-lght gry chlky lm, tan-gry xln lm, poor xln por, no odr, ns.

3850: incrs in gry & maroon sh, lots of crm chlky lm, crm xln lm, sli micrtic, no odr, ns.

3860: aa, incrs in gry chrt- foss chrt lm, dense, no odr, ns.

3870: lots of gry & maroon sh, crm chlky lm, crm micrtic lm, sli xln, no odr, ns.

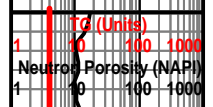
3880: aa, sig incrs in tan foss lm, sli xln, dense, poor-no por, no odr, ns.

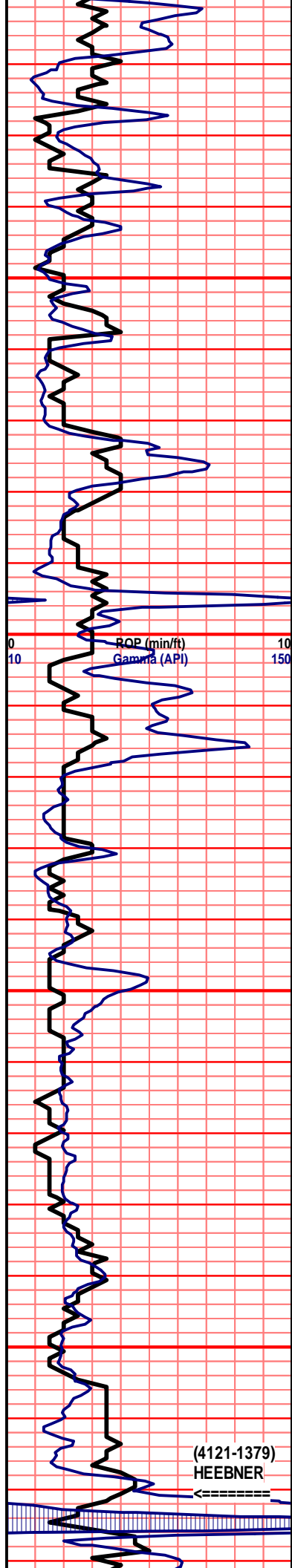
3890: incrs in chlky lm, cr/tan-gry xln lm, v. dense, no vis por, no odr, ns.

3900: aa, incrs in wht chlk, tan fn xln lm, cemnt flooded fracs, no vis por, no odr, ns.

3910: mstly maroon & aqua sh, tan xln lm, sli foss, sli wacke stn, fair por, no odr, ns.

3920: aa, incrs in chlk-chlky lm, crm chrt, tan-brwn inxln lm, dense, no vis por, no odr, ns.

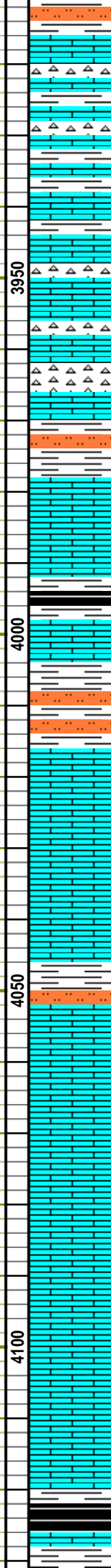




PUMP PRESSURE 950+

Gas sniffer not working properly ... MBC staff on site

PUMP PRESSURE 950+



3930: incrs in wht chrt, lght crm fn xln lm, no vis por, no odr, ns.

3940: sig incrs in chlk-chlky lm, crm inxln lm, wht chrt, no odr, ns.

3950: aa, sli incrs in wht chrt, no odr, ns.

3960: mstly wht chrt, lots of chlky lm, tan inxln lm, dense, no odr, ns.

3970: aa, no sig change.

3980: mstly wht chlky lm, lots of wht-clear chrt, dense, lots of gry sh, crm xln lm, no odr, ns.

3990: lots of gry, aqua & maroon sh, wht chlky-chlky lm, lght gry chrt, crm xln lm, poor-no por, no odr, ns.

4000: gry & maroon sh, lots of wht chlky, clr-wht chrt, brwn xln lm, dense, no odr, ns.

4010: lots of gry & maroon sh, wht chlky, tan xln-pack stn lm, poor-fair por, no odr, ns.

4020: incrs in sh aa, wht chlky, tan xln lm, poor-no por, no odr, ns.

4030: aa, sig incrs in wht chlky, lots of wht chrt, no odr, ns.

4040: lots of crm chlky lm, tan-gry xln lm, sli foss, v. dense, no odr, ns.

4050: incrs in gry & maroon sh, crm-tan xln lm, fn xln in prt, no odr, ns.

4060: incrs in aqua sh, incxrs in lght gry slt stn, lm aa, no odr, ns.

4070: mstly chlky lm, mstly tan-crm xln-wacke stn, poor por, no odr, ns.

4080: incrs in wht chlky, incrs in drk gry sh, tan wacke stn, sli xln dense, no odr, ns.

4090: incrs in brwn sh, incrs in tan xln lm, foss, lots of wht chlky, no odr, ns.

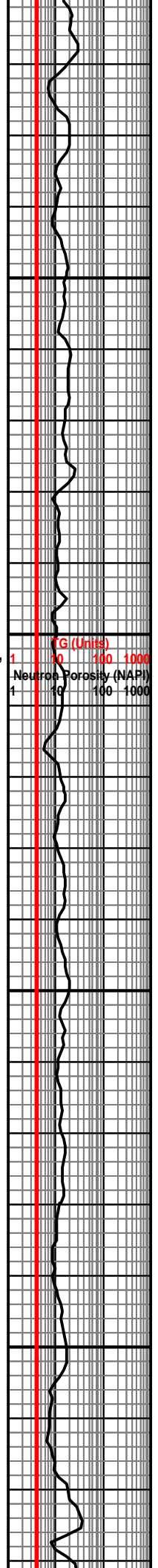
4100: aa, incrs in brwn xln lm, cemnt flooded fracs, sli foss, no vis por, no odr, ns.

4110: lots of chlky-chlky lm, tan-brwn xln lm, dense, no odr, ns.

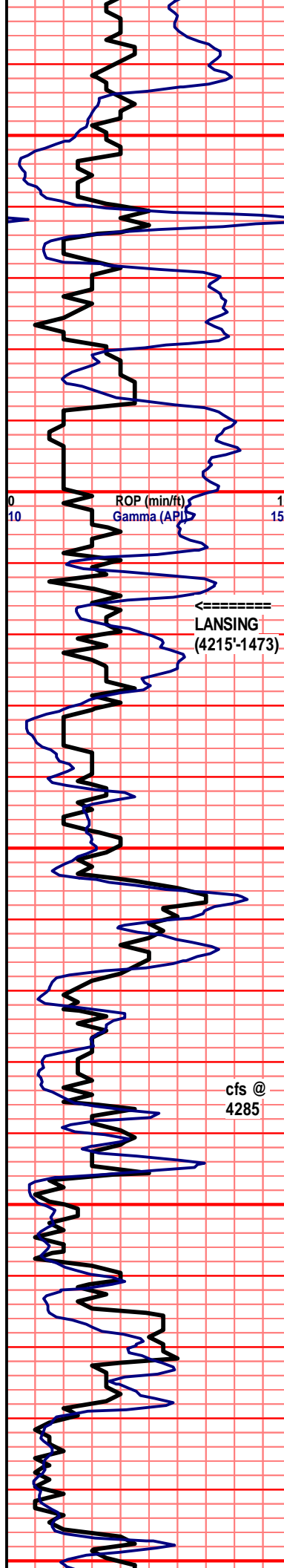
4120: mstly chlky lm, lots of tan xln lm, cemnt flooded, no odr, ns.

4130: aa, incrs in lght gry xln lm, demi dense, no odr, ns.

4140: slight incrs in gry sh, lots of drty crm chlky lm,



CG (Units)
Neutron Porosity (NAPI)



testing gas sniffer

LANSING (4215'-1473)

cfs @ 4285

30MIN: lots of wht chlk, crm-tan fn xln lm, no vis por, tan chrt, no odr, ns. 60MIN: aa, tan xln lm, frac rich, crm-gry oinxln lm, dense, no odr, ns.

testing gas sniffer

PUMP PRESSURE 950+



tan xln lm, no vis por, no odr, ns.

4150: shw of blk carb sh, tan crm chlky lm, lots of gummy chlk, tan xln lm, mno odr, ns.

4160: mstly crm chlky lm, matly tan xln lm, poor por, incrs in wht semi foss chrt, no odr, ns.

4170: aa, incrs in gry chrt lm, no vis por, no odr, ns.

4180: incrs in gry sh, lots of tan chlky lm, wht chrt, incrs in gry inxln lm, v. dense, no odr, ns.

4190: lots of wht chlk, lght crm-crm chrt lm, no vis por, no odr, ns.

4200: incrs in drk gry-blk sh, wht chlk, crm-lght gry xln lm, cemnt rich, no odr, ns.

4210: lots of gry sh, gry chrt, wht chlk, tan chrt lm, no vis por, no odr, ns.

4220: mstly gry-drk gry sh, crm xln lm, poor xln por, no odr, ns.

4230: aa, incrs in lght crm chrt lm, crm-tan xln lm, no vis por, no odr, ns.

4240: sig incrs in gry-drk gry sh, lots of tan fn xln lm, no vis por, no odr, ns.

4250: aa, incrs in chlk-chlky lm, incrs in gry xln lm, v. dense, no vis por, no odr, ns.

4260: lots of chlky lm, wht-clr chrt, lots of chrt lm, no odr, ns.

4270: aa, tan xln lm, tan, wht & gry chrt, sli foss, no odr, ns.

4280: lots of chlk & gry sh, brwn-gry xln lm, no odr, ns.

4290: lots of chlk, crm-lght gry xln lm, poor por, no odr, ns.

4300: sli incrs in gry sh, incrs in tan xln lm, sli chrt, incrs in gry chert, no odr, ns.

4310: incrs in chlk, incrs in gry xln lm, sli foss, no odr, ns.

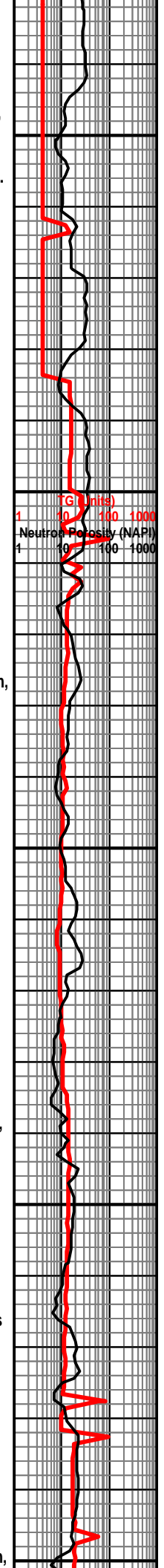
4320: mstly chlk-chlky lm, sig incrs in lght crm chrt, no odr, ns.

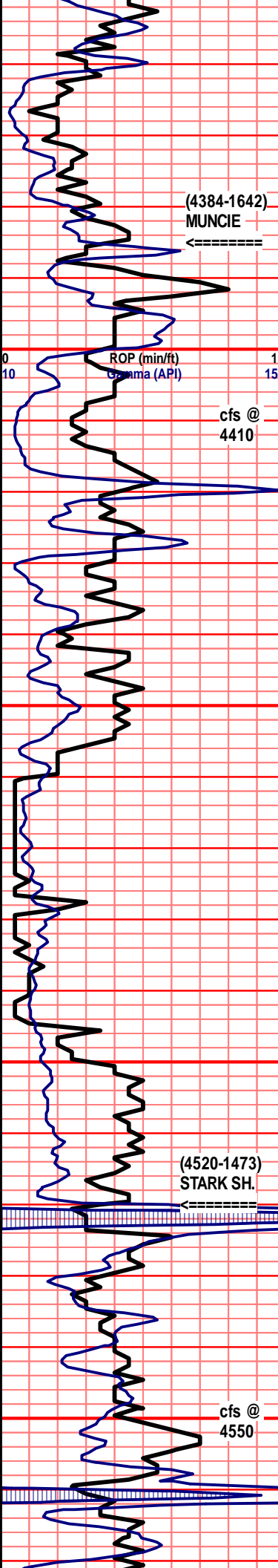
4330: incrs in gry sh, sig incrs in gry-blk chert, incrs in gry inxln lm, no odr, ns.

4340: aa, sli incrs in gry xln lm, foss, chrt, dense, no odr, ns.

4350: show of blk carb sh, sig incrs in wht chlk, brwn-tan xln lm, poor-no por, no odr, ns.

4360: mstly wht chlk, lots of gry sh, lots of tan xln lm,





flase reading on gas sniffer

(4384-1642)
MUNCIE

ROP (min/ft)
Gamma (API)

cfs @
4410

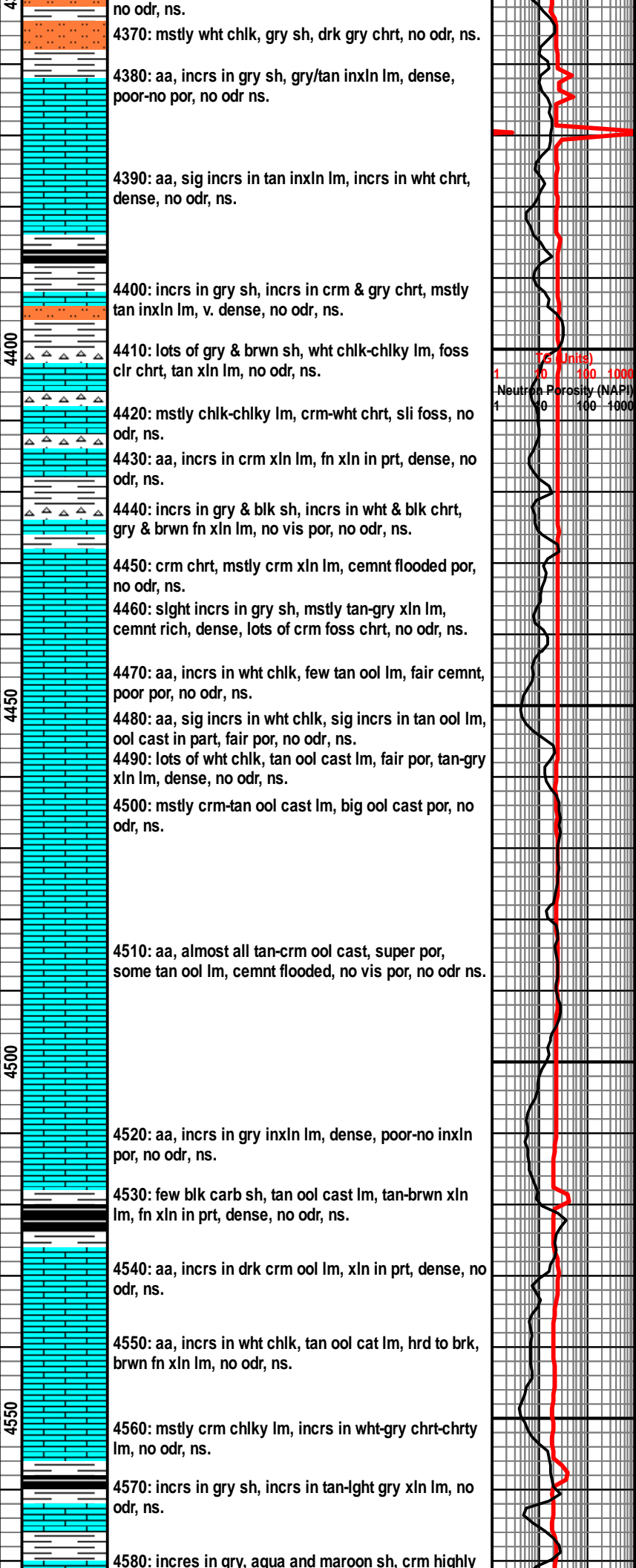
30MIN: lots of gry sh, crm-tan chlkly lm, tan xln lm, no vis por, no odr, ns. 60MIN: same as thirty min, incrs in brwn fn xln lm, no vis por, sig incrs in wht & brwn chrt, no odr, ns.

PUMP PRESSURE 950+

(4520-1473)
STARK SH.

cfs @
4550

30MIN: few blk carb sh, mstly wht chlk-chlky lm, crm-lght gry inxln lm, no odr, ns. 60MIN: same as thirty in, sig incrs in wht chrt, no odr, ns.



no odr, ns.
4370: mstly wht chlk, gry sh, drk gry chrt, no odr, ns.

4380: aa, incrs in gry sh, gry/tan inxln lm, dense, poor-no por, no odr, ns.

4390: aa, sig incrs in tan inxln lm, incrs in wht chrt, dense, no odr, ns.

4400: incrs in gry sh, incrs in crm & gry chrt, mstly tan inxln lm, v. dense, no odr, ns.

4410: lots of gry & brwn sh, wht chlk-chlky lm, foss clr chrt, tan xln lm, no odr, ns.

4420: mstly chlk-chlky lm, crm-wht chrt, sli foss, no odr, ns.

4430: aa, incrs in crm xln lm, fn xln in prt, dense, no odr, ns.

4440: incrs in gry & blk sh, incrs in wht & blk chrt, gry & brwn fn xln lm, no vis por, no odr, ns.

4450: crm chrt, mstly crm xln lm, cemnt flooded por, no odr, ns.

4460: slight incrs in gry sh, mstly tan-gry xln lm, cemnt rich, dense, lots of crm foss chrt, no odr, ns.

4470: aa, incrs in wht chlk, few tan ool lm, fair cemnt, poor por, no odr, ns.

4480: aa, sig incrs in wht chlk, sig incrs in tan ool lm, ool cast in part, fair por, no odr, ns.

4490: lots of wht chlk, tan ool cast lm, fair por, tan-gry xln lm, dense, no odr, ns.

4500: mstly crm-tan ool cast lm, big ool cast por, no odr, ns.

4510: aa, almost all tan-crm ool cast, super por, some tan ool lm, cemnt flooded, no vis por, no odr, ns.

4520: aa, incrs in gry inxln lm, dense, poor-no inxln por, no odr, ns.

4530: few blk carb sh, tan ool cast lm, tan-brwn xln lm, fn xln in prt, dense, no odr, ns.

4540: aa, incrs in drk crm ool lm, xln in prt, dense, no odr, ns.

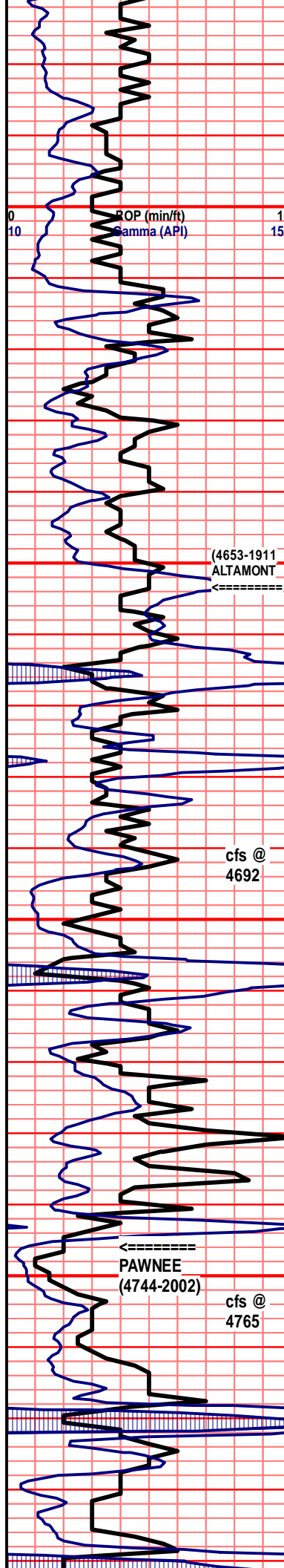
4550: aa, incrs in wht chlk, tan ool cat lm, hrd to brk, brwn fn xln lm, no odr, ns.

4560: mstly crm chlky lm, incrs in wht-gry chrt-chrty lm, no odr, ns.

4570: incrs in gry sh, incrs in tan-lght gry xln lm, no odr, ns.

4580: incrs in gry, aqua and maroon sh, crm highly

Gamma (API)
Neutron Porosity (NAPI)



09/09/2014
mud info.
wt: 9.1
Funnel Vis. 51
Filtrate API: 8.4
Chloride 3,400
LCM # 2 1/2

cfs @ 4692

30MIN: mstly chlk-chlky lm, brwn-tan xln lm, cemnt rich, foss, sli ool, poor por, no odr, ns. 60MIN: same as thirty min, incrs in wht, gry & tan chrt, incrs in tan inxln lm, cemnt flooded, no odr, ns.

DST #1: 4737' - 4765' (Pawnee) Recovered 1' clean oil, 4' slight oil and water cut mud (8% oil, 30% water, 62% mud) and 120' mud cut water (37% mud, 63% water). Chlorides 36,000 IFP: 6-34#/30" ISIP: 1293#/45" FFP: 42-70#/50" FSIP: 1258#/60"

30MIN: blk sh, crm ool lm, some ool cast, fair intr prtcl por, slight shw of v. lght brwn oil stn, lots of tan chrt-chrty lm, fn xln in prt, dense, strng odr. 60MIN: same as thirty min sample, slight incrs in drk gry sh, gry chrt, strng odr strng flour shw same as thirty min.

Straight hole test 1-1/4°

Gas sniffer not working after properly after DST



pyrtzd xln lm, no odr, ns.

4590: aa, sig incrs in crm-gry fn xln lm, no vis por, no odr, ns.

4600: aa, slight incrs in blk & gry sh, incrs in crm chlky lm, no odr, ns.

4610: aa, shw of crm chrt-chrty lm, no odr, ns.

4620: sig incrs in wht, gry & blk chrt, no odr, ns.

4630: aa, incrs in gry ninxln lm, poor-no por, no odr, ns.

4640: incrs in wht chlk, gry sh & gry chrt, no odr, ns.

4650: sig incrs in gry sh, incrs in gry fn xln lm, no odr, ns.

4660: aa, incrs in crm chlky lm, incrs in crm inxln lm, no odr, ns.

4670: mstly gry & crm xln lm, dense, no odr, ns.

4680: incrs in gry & aqua sh, incrs in crm xln lm, incrs in crm chlky lm, no odr, ns.

4690: incrs in blk sh, incrs in chlky lm, brwn inxln lm, sli foss, no odr, ns.

4700: lots of gry slty sh, mstly tan foss lm, mstly xln, no vis por, no odr, ns.

4710: incrs in drk gry sh, mstly wht chlk, crm chrty lm, no vis por, no odr, ns.

4720: very gummy sample, chlk & drk gry-blk sh.

4730: crm ool lm, cemnt flooded, no vis por, no odr, ns.

4740: scat blk carb sh, gry-brwn fn xln lm, no vis por, dense, no odr, ns.

4750: mstly tan-crmish brwn fn xln lm, sli chrty, no odr, ns.

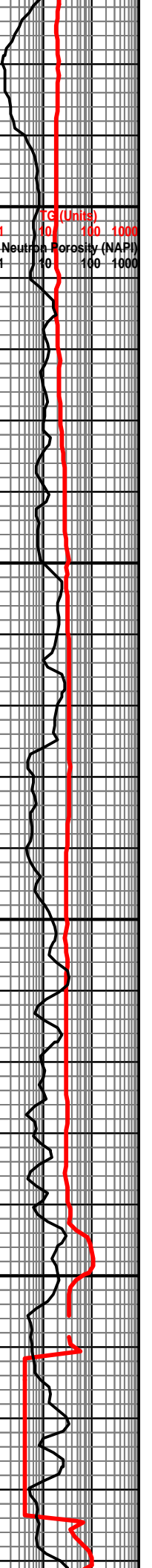
4760: sig shw of blk carb sh, lots of drk sh, tan fn xln lm, flash odr, nsfo.

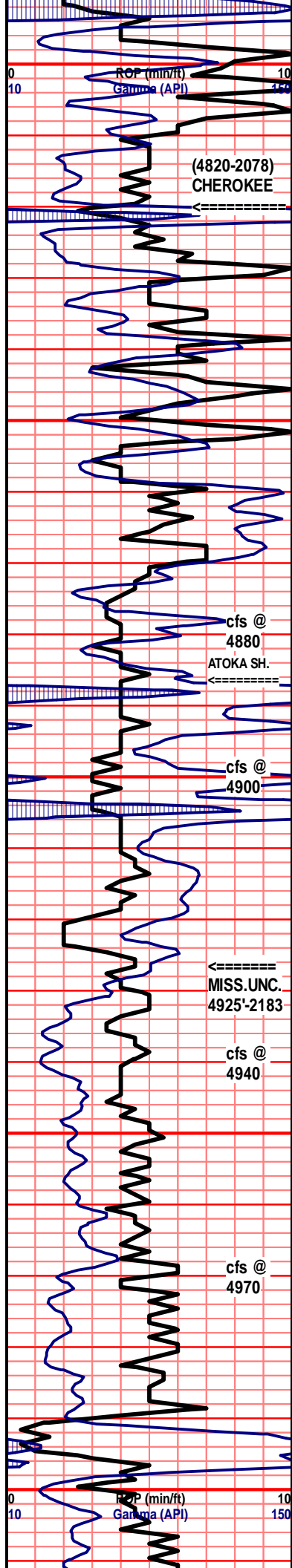
4770: mstly gry, maroon, & aqua sh, tan xln lm, cemnt rich, no odr, ns.

4780: aa, sig incrs in blk carb sh, tan xln lm, cemnt flooded, no odr, ns.

4790: incrs in wht chlk-chlky lm, incrs in brwn fn xln lm, chrty, no odr, ns.

4800: incrs in blk carb sh, incrs in crm ool lm, no odr, ns.





09/10/2014
 mud info.
 wt: 9.1
 Funnel Vis. 53
 Filtrate API: 8.8
 Chloride 3,100
 LCM # 2

(4820-2078)
 CHEROKEE

DST #2: 4835' -4970'
 (Huck-Mississippian)
 Recovered 10' mud.
 IFP: 10-12#/30" ISIP:
 106#/30"
 FFP: 12-23#/30" FSIP:
 107#/30"

cfs @ 4880
 ATOKA SH.

cfs @ 4900

MISS. UNC.
 4925'-2183

cfs @ 4940

cfs @ 4970

09/11/2014
 mud info.
 wt: 9.2
 Funnel Vis. 54
 Filtrate API: 8.4



4800: incrs in blk carb sn, incrs in crm-gry xln lm, poor por, no odr, ns.

4810: aa, incrs in wht chlk-chlky lm, sig incrs in gry foss chrt, semi translucnt, no odr, ns.

4820: mstly blk & gry sh, lots of gry-brwn foss sh, no odr, ns.

4830: sig incrs in brwn xln lm, chrt, cemnt flooded por, no odr, ns.

4840: sig incrs in crm inxln lm, incrs in crm fn xln lm, no vis por, no odr, ns.

4850: slight incrs in blk sh, incrs in gry inxln lm, poor inxln por, gry fn xln lm, no odr, ns.

4860: incrs in gry sh, incrs wht chlk, shw of tan ool chrt, no vis por, no odr, ns.

4870: aa, incrs in crm-tan inxln lm, brwn mineral stn, no odr, ns.

4880: incrs in gry sh, incrs in wht chlk, mstly crmish/tan xln-inxln lm, poor por, no odr, ns.

4890: lots of gry xln lm, crm lm, no odr, ns.

4900: incrs in chlk lm, mstly gry inxln lm, dense, no odr, ns.

4910: brwn-gry inxln lm, v. dense, no vis por, no odr, ns.

4920: aa, incrs in chlky lm, tan xln lm, cemnt flooded, pyrtzd, no odr, ns.

4930: aa, incrs in crm chrt, incrs in brwn-gry sli foss xln lm, no odr, ns.

4940: aa, chlky lm, tan fn xln lm, no vis por, slight incrs in wht slit stn, no odr, ns.

4950: aa, incrs in wht-crm chrt, sig incrs in crm chrt lm, no odr, ns.

4960: aa, mstly crm-orange chert, crm chrt lm, no vis por, no odr, ns.

4970: aa, incrs in chlky lm, incrs in tan inxln lm, poor inxln por, no odr, ns.

4980: incrs in maroon & aqua sh, incrs in crm chrt, inxln lm, no odr, ns.

4990: incrs in wht chlk, tan wacke-pack stn lm, mstly xln, poor-fai por, no odr, ns.

5000: aa, incrs in chlk, incrs in maroon sh, no odr, ns.

5010: lots of chlk, incrs in crm-oragne chrt, no odr, ns.

5020: lots of chlk-chlky lm incrs in wht slit stn tan

