# Adam Eldani Geo-Log/Report
# WellSight Systems

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

| | | | |
|---|---|---|---|
| **Well Name:** | **#1 Moorhous 17D** | | |
| **Location:** | **SEC 17- twp 12S- rge 31W GOVE COUNTY** | | |
| **License Number:** | **API 15-063-22018** | **Region:** | **KANSAS** |
| **Spud Date:** | **07/12/2012** | **Drilling Completed:** | **07/23/2012** |
| **Surface Coordinates:** | **805' FSL 1525' FEL** | | |
| **Bottom Hole Coordinates:** | **Deviation Surveys are detailed through out the Geo-Report.** | | |
| **Ground Elevation (ft):** | **2922** | **K.B. Elevation (ft):** | **2932** |
| **Logged Interval (ft):** | **3700 To: 4685** | **Total Depth (ft):** | **4686** |
| **Formation:** | **Mississippian** | | |
| **Type of Drilling Fluid:** | **Mud-Co Chemical** | | |



## OPERATOR

**Company:** **Ritchie Exploration Inc. (drilled by MURFIN #14)**
**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:**

| E-LOG: | SAMPLE TOPS: |
|---|---|
| ANHY: 2439 +493 | ANHY: 2439 +493 |
| B/ANHY: 2462 +470 | B/ANHY: 2462 +470 |
| HEEBNER: 3957 -1022 | HEEBNER: 3954 -1022 |
| LANSING: 3998 -1066 | LANSING: 4002 -1070 |
| MUNCIE: 4133 -1201 | MUNCIE: 4132 -1200 |
| STARK: 4219 -1287 | STARK: 4217 -1285 |
| ALTAMONT: 4256-1324 | ALTAMONT: 4345 -1352 |
| PAWNEE: 4411-1479 | PAWNEE: 4409-1477 |
| CHEROKEE: 4496-1564 | CHEROKEE: 4495-1563 |
| MISS: 4573-1641 | MISS: 4591-1659 |

**DAILY MORNING DRILLING REPORT:**

| | |
|---|---|
| 7/12 | spud |
| 7/13 | 225' |
| 7/14 | 1277' |
| 7/15 | 2442' |
| 7/16 | 3527' |
| 7/17 | 4022' |
| 7/18 | 4078' |
| 7/19 | 4168' |
| 7/20 | 4203' |
| 7/21 | 4252' |
| 7/22 | 4444' |
| 7/23 | 4554' |

## Misc. Info.

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

**RIG: MURFIN CO. #14**
**DRILLPIPE: 4-1/2" XH**

**TOOLPUSHER: GREG UNRUH**
**MUD: MUDCO (REID ATKINS)**
**GAS DETECTOR: NONE**
**DRILL STEM TESTS: Diamond TESTING**
**LOGS: SUPERIOR**

**OFFICE: PETER FIORINI**
**FIELD: N/A**

## Comments

**SURFACE Casing: 8 5/8" @ '**

**Well Log Surveys BY SUPERIOR: Compensated Denisty/ Neutron Log, & Dual Induction.**

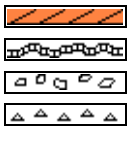
**STRUCTURALLY, THIS WELL RAN LOWER TO OFFSET, ALL SHOWS WERE TESTED.**

**After evaluation of electrical logs and drill stem test results, the operator's determined #1 MOORHOUS 17D to non-commercial and elected to plug and abandon the well as a dry hole.**

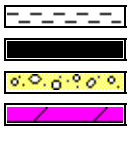
**SAMPLES WILL BE DEPOSITED WITH KANSAS GEOLOGICAL SURVEY.**

**RESPECTFULLY SUBMITTED**
**Adam M. A. Eldani**

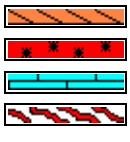
## ROCK TYPES



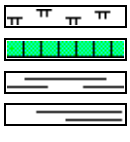
Anhy
Bent
Brec
Cht



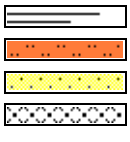
Clyst
Coal
Congl
Dol



Gyp
Igne
Lmst
Meta



Mrlst
Salt
Shale
Shcol



Shgy
Sltst
Ss
Till

## 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
- Gastro
- Oolite
- 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

### OIL SHOW

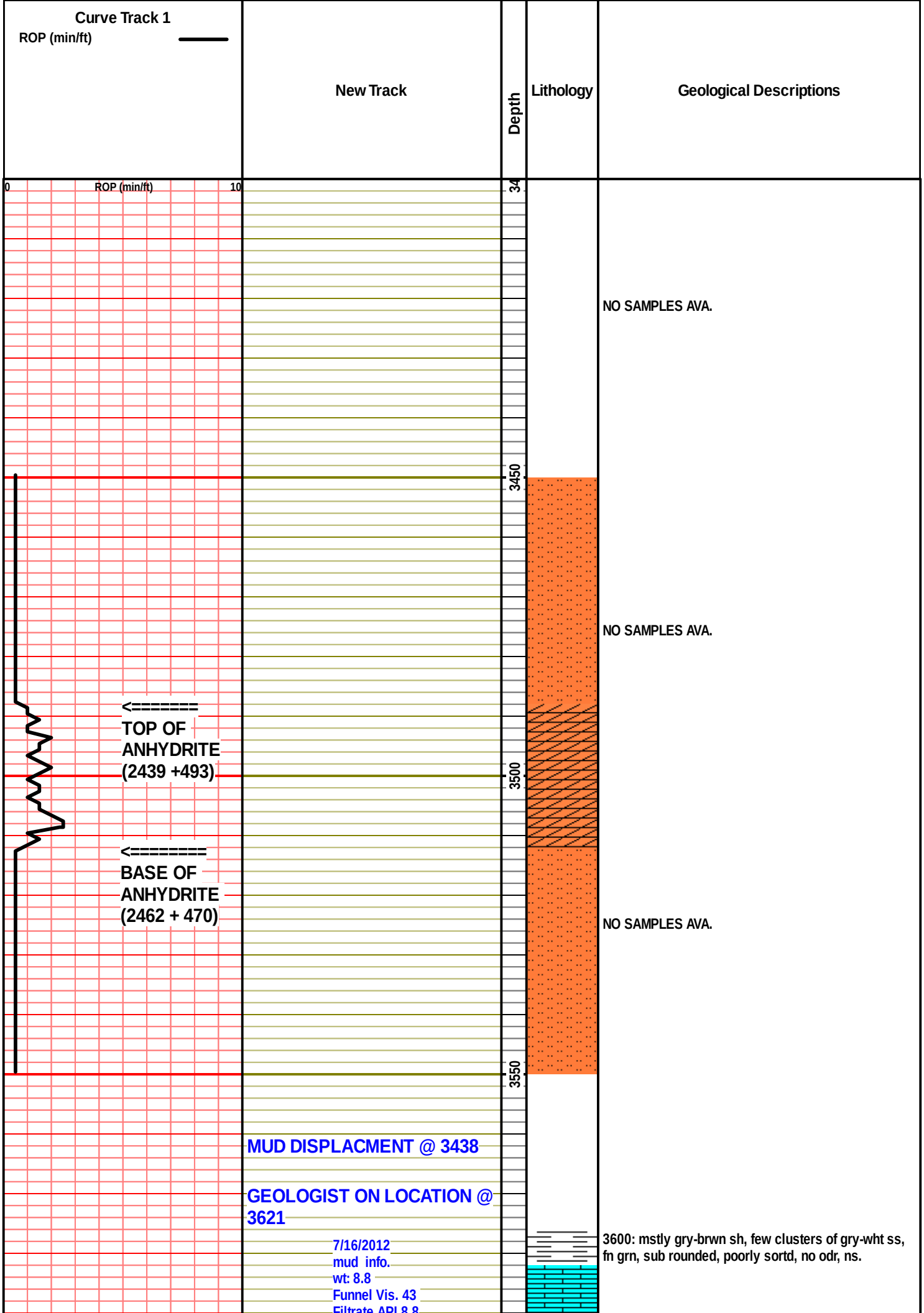
- Even
- Spotted
- Ques
- Dead

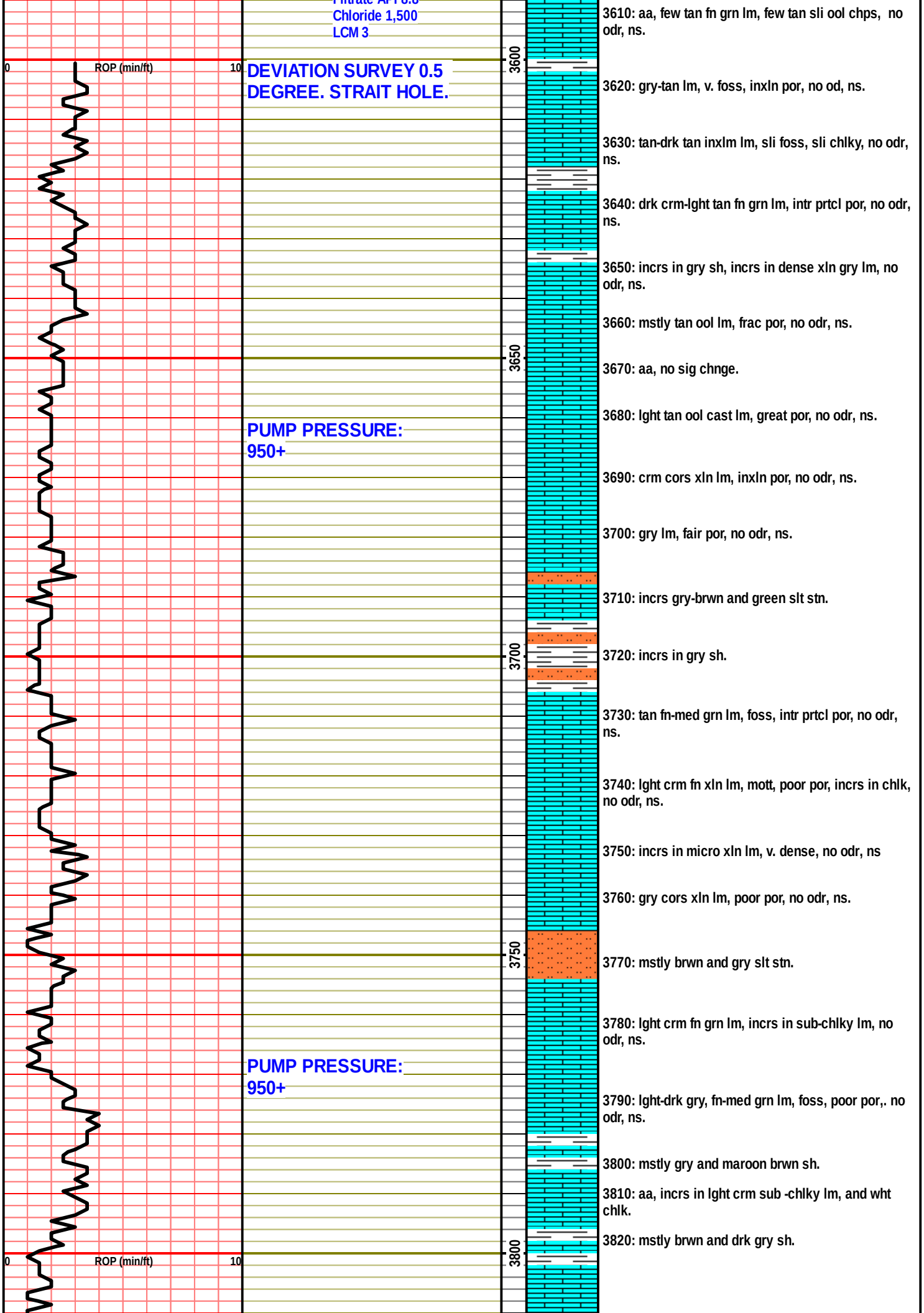
### INTERVAL

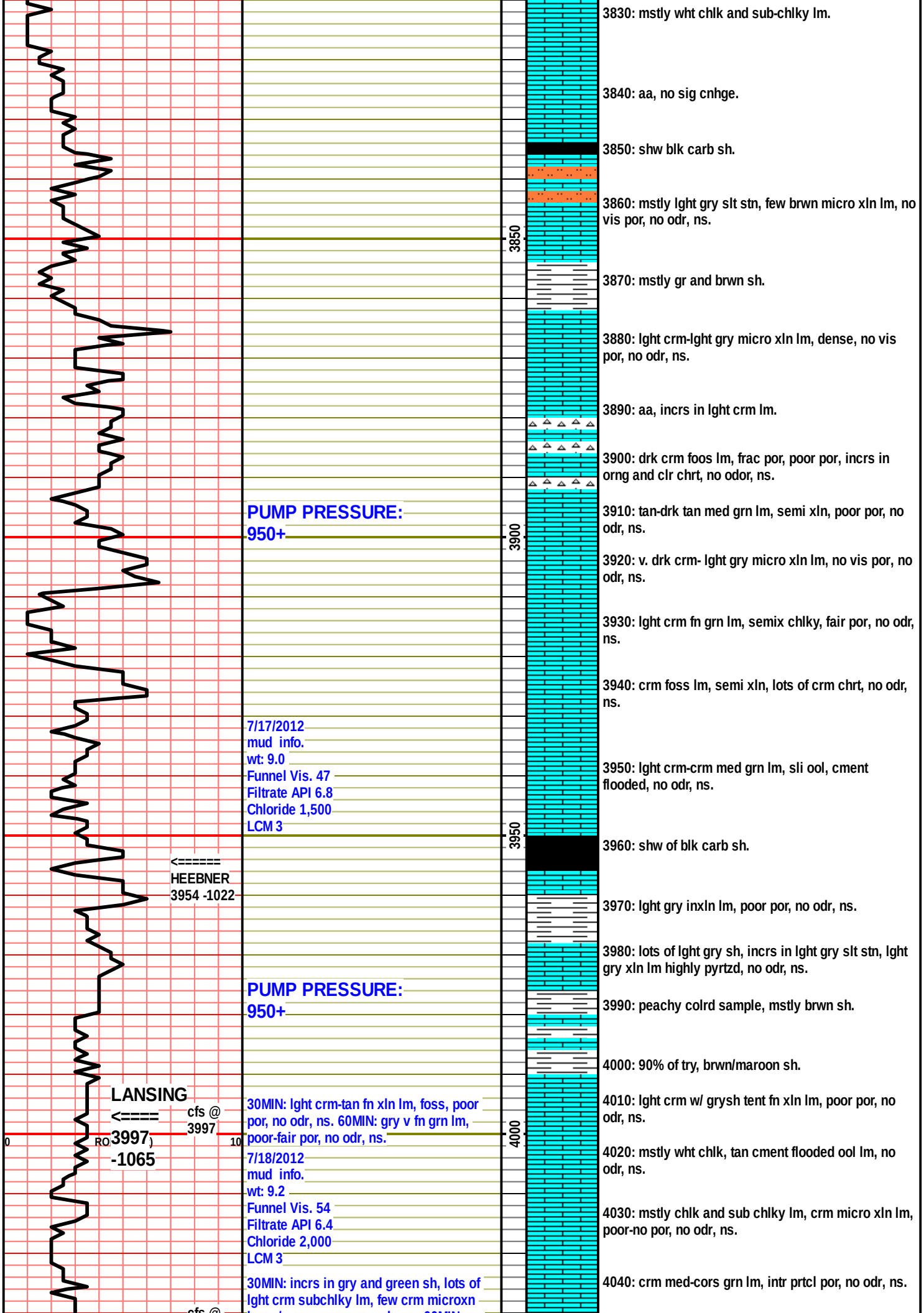
- Core
- Dst

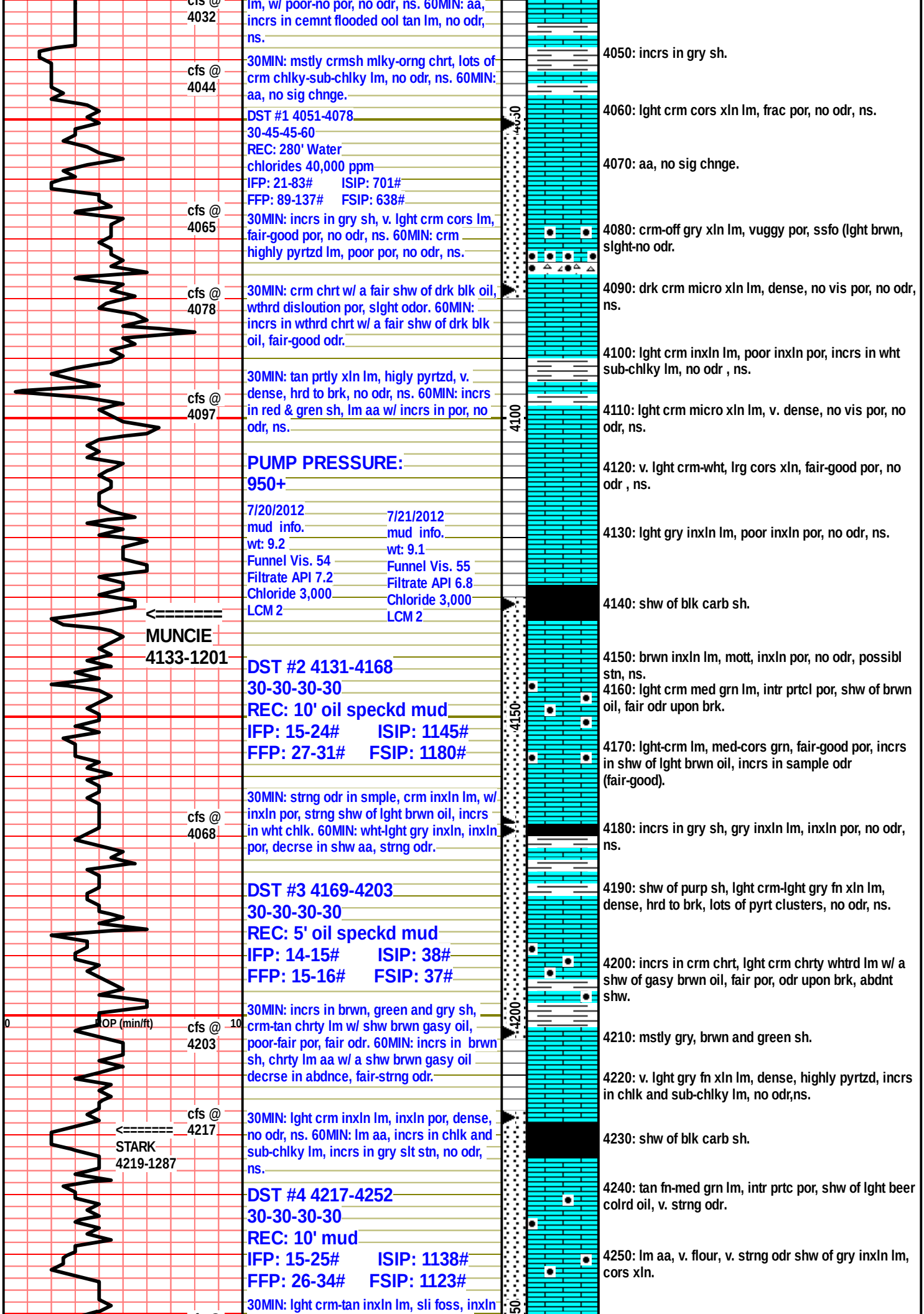
### EVENT

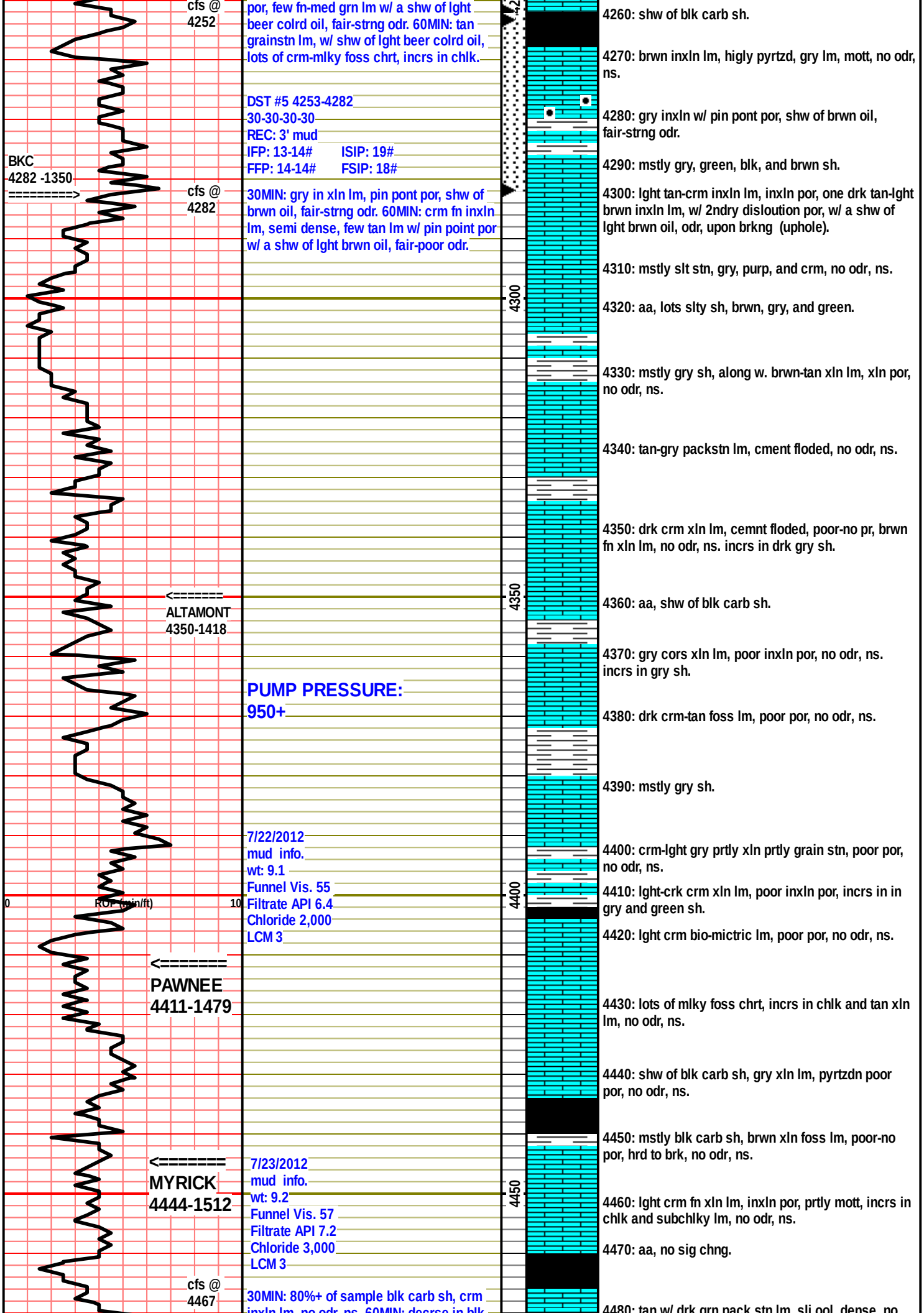
- Rft
- Sidewall

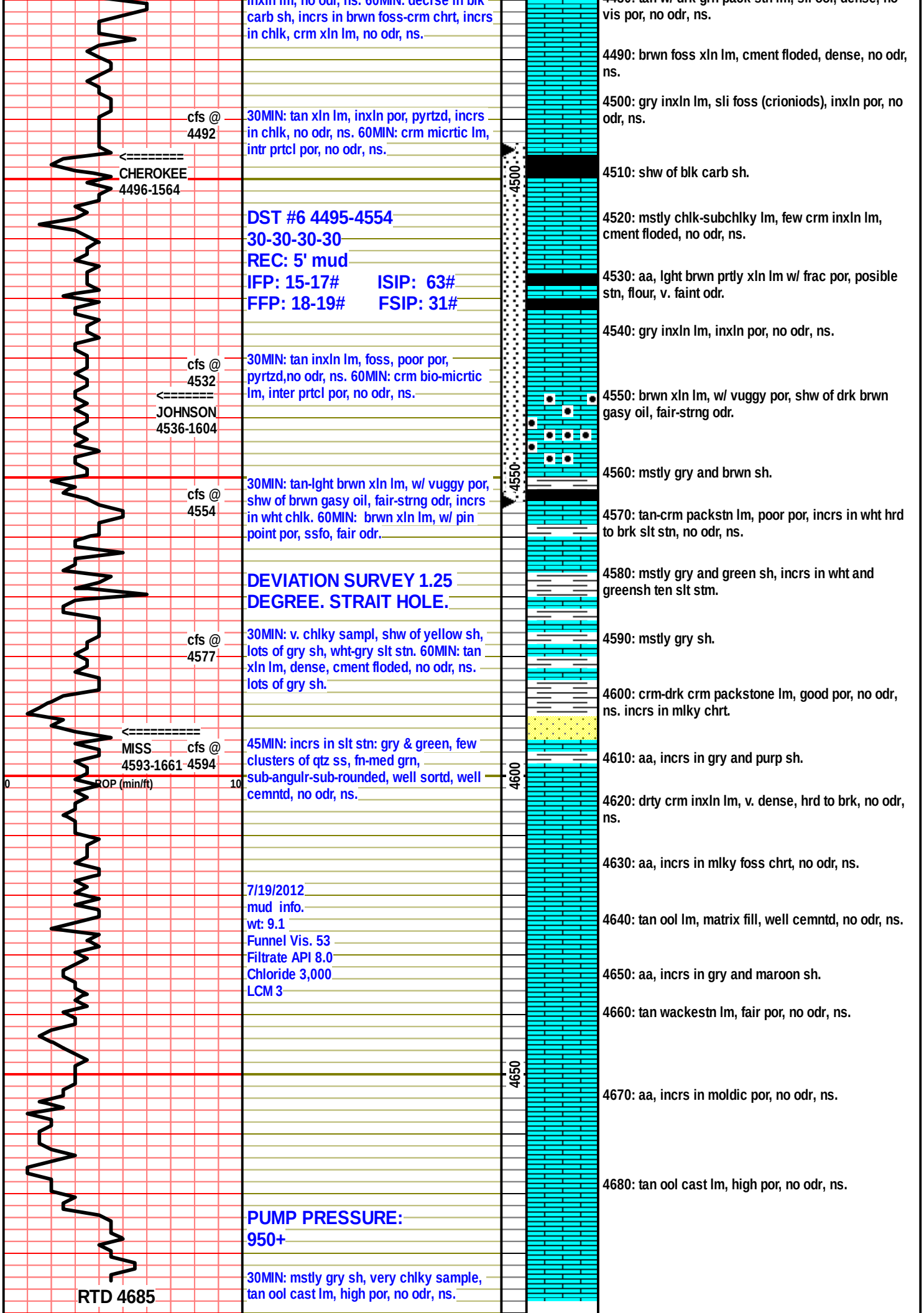

Curve Track 1
ROP (min/ft)
New Track
Depth
Lithology
Geological Descriptions
0
ROP (min/ft)
10
34
3450
3500
3550
NO SAMPLES AVA.
NO SAMPLES AVA.
NO SAMPLES AVA.
<=======
TOP OF
ANHYDRITE
(2439 +493)
<========
BASE OF
ANHYDRITE
(2462 + 470)
MUD DISPLACMENT @ 3438
GEOLOGIST ON LOCATION @
3621
7/16/2012
mud info.
wt: 8.8
Funnel Vis. 43
3600: mstly gry-brwn sh, few clusters of gry-wht ss,
fn grn, sub rounded, poorly sortd, no odr, ns.

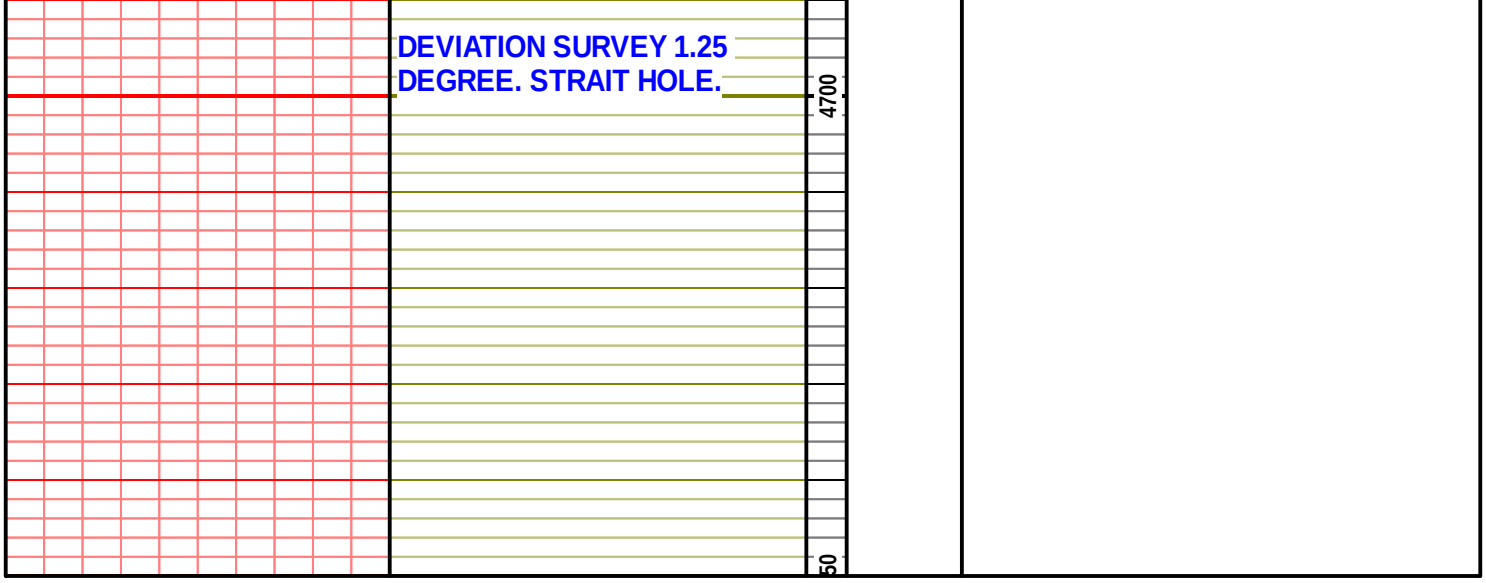

Chloride 1,500
LCM 3
0
ROP (min/ft)
10
DEVIATION SURVEY 0.5 DEGREE. STRAIT HOLE.
PUMP PRESSURE: 950+
PUMP PRESSURE: 950+
0
ROP (min/ft)
10
3600
3650
3700
3750
3800
3610: aa, few tan fn grn lm, few tan sli ool chps, no odr, ns.
3620: gry-tan lm, v. foss, inxln por, no od, ns.
3630: tan-drk tan inxlm lm, sli foss, sli chlky, no odr, ns.
3640: drk crm-lght tan fn grn lm, intr prtcl por, no odr, ns.
3650: incrs in gry sh, incrs in dense xln gry lm, no odr, ns.
3660: mstly tan ool lm, frac por, no odr, ns.
3670: aa, no sig chnge.
3680: lght tan ool cast lm, great por, no odr, ns.
3690: crm cors xln lm, inxln por, no odr, ns.
3700: gry lm, fair por, no odr, ns.
3710: incrs gry-brwn and green slt stn.
3720: incrs in gry sh.
3730: tan fn-med grn lm, foss, intr prtcl por, no odr, ns.
3740: lght crm fn xln lm, mott, poor por, incrs in chlk, no odr, ns.
3750: incrs in micro xln lm, v. dense, no odr, ns
3760: gry cors xln lm, poor por, no odr, ns.
3770: mstly brwn and gry slt stn.
3780: lght crm fn grn lm, incrs in sub-chlky lm, no odr, ns.
3790: lght-drk gry, fn-med grn lm, foss, poor por,. no odr, ns.
3800: mstly gry and maroon brwn sh.
3810: aa, incrs in lght crm sub -chlky lm, and wht chlk.
3820: mstly brwn and drk gry sh.


3850
3900
3950
4000
PUMP PRESSURE:
950+
7/17/2012
mud info.
wt: 9.0
Funnel Vis. 47
Filtrate API 6.8
Chloride 1,500
LCM 3
<======
HEEBNER
3954 -1022
PUMP PRESSURE:
950+
LANSING
<=====
cfs @
3997
0
RO
3997
-1065
10
30MIN: lght crm-tan fn xln lm, foss, poor por, no odr, ns. 60MIN: gry v fn grn lm, poor-fair por, no odr, ns.
7/18/2012
mud info.
wt: 9.2
Funnel Vis. 54
Filtrate API 6.4
Chloride 2,000
LCM 3
30MIN: incrs in gry and green sh, lots of lght crm subchlky lm, few crm microxn
3830: mstly wht chlk and sub-chlky lm.
3840: aa, no sig cnhge.
3850: shw blk carb sh.
3860: mstly lght gry slt stn, few brwn micro xln lm, no vis por, no odr, ns.
3870: mstly gr and brwn sh.
3880: lght crm-lght gry micro xln lm, dense, no vis por, no odr, ns.
3890: aa, incrs in lght crm lm.
3900: drk crm foos lm, frac por, poor por, incrs in orng and clr chrt, no odor, ns.
3910: tan-drk tan med grn lm, semi xln, poor por, no odr, ns.
3920: v. drk crm- lght gry micro xln lm, no vis por, no odr, ns.
3930: lght crm fn grn lm, semix chlky, fair por, no odr, ns.
3940: crm foss lm, semi xln, lots of crm chrt, no odr, ns.
3950: lght crm-crm med grn lm, sli ool, cment flooded, no odr, ns.
3960: shw of blk carb sh.
3970: lght gry inxln lm, poor por, no odr, ns.
3980: lots of lght gry sh, incrs in lght gry slt stn, lght gry xln lm highly pyrtzd, no odr, ns.
3990: peachy colrd sample, mstly brwn sh.
4000: 90% of try, brwn/maroon sh.
4010: lght crm w/ grysh tent fn xln lm, poor por, no odr, ns.
4020: mstly wht chlk, tan cment flooded ool lm, no odr, ns.
4030: mstly chlk and sub chlky lm, crm micro xln lm, poor-no por, no odr, ns.
4040: crm med-cors grn lm, intr prtcl por, no odr, ns.


cfs @ 4032
lm, w/ poor-no por, no odr, ns. 60MIN: aa, incrs in cemnt flooded ool tan lm, no odr, ns.
4050: incrs in gry sh.
cfs @ 4044
30MIN: mstly crmsh mlky-orng chrt, lots of crm chlky-sub-chlky lm, no odr, ns. 60MIN: aa, no sig chnge.
DST #1 4051-4078
30-45-45-60
REC: 280' Water
chlorides 40,000 ppm
IFP: 21-83# ISIP: 701#
FFP: 89-137# FSIP: 638#
4060: lght crm cors xln lm, frac por, no odr, ns.
4070: aa, no sig chnge.
cfs @ 4065
30MIN: incrs in gry sh, v. lght crm cors lm, fair-good por, no odr, ns. 60MIN: crm highly pyrtzd lm, poor por, no odr, ns.
4080: crm-off gry xln lm, vuggy por, ssfo (lght brwn, slght-no odr.
cfs @ 4078
30MIN: crm chrt w/ a fair shw of drk blk oil, wthrd disloution por, slght odor. 60MIN: incrs in wthrd chrt w/ a fair shw of drk blk oil, fair-good odr.
4090: drk crm micro xln lm, dense, no vis por, no odr, ns.
4100: lght crm inxln lm, poor inxln por, incrs in wht sub-chlky lm, no odr , ns.
30MIN: tan prtly xln lm, higly pyrtzd, v. dense, hrd to brk, no odr, ns. 60MIN: incrs in red & gren sh, lm aa w/ incrs in por, no odr, ns.
cfs @ 4097
4110: lght crm micro xln lm, v. dense, no vis por, no odr, ns.
PUMP PRESSURE:
950+
7/20/2012
mud info.
wt: 9.2
Funnel Vis. 54
Filtrate API 7.2
Chloride 3,000
LCM 2
7/21/2012
mud info.
wt: 9.1
Funnel Vis. 55
Filtrate API 6.8
Chloride 3,000
LCM 2
4120: v. lght crm-wht, lrg cors xln, fair-good por, no odr , ns.
4130: lght gry inxln lm, poor inxln por, no odr, ns.
<=======
MUNCIE
4133-1201
4140: shw of blk carb sh.
DST #2 4131-4168
30-30-30-30
REC: 10' oil speckd mud
IFP: 15-24# ISIP: 1145#
FFP: 27-31# FSIP: 1180#
4150: brwn inxln lm, mott, inxln por, no odr, possibl stn, ns.
4160: lght crm med grn lm, intr prtcl por, shw of brwn oil, fair odr upon brk.
4170: lght-crm lm, med-cors grn, fair-good por, incrs in shw of lght brwn oil, incrs in sample odr (fair-good).
30MIN: strng odr in smple, crm inxln lm, w/ inxln por, strng shw of lght brwn oil, incrs in wht chlk. 60MIN: wht-lght gry inxln, inxln por, decrse in shw aa, strng odr.
cfs @ 4068
4180: incrs in gry sh, gry inxln lm, inxln por, no odr, ns.
DST #3 4169-4203
30-30-30-30
REC: 5' oil speckd mud
IFP: 14-15# ISIP: 38#
FFP: 15-16# FSIP: 37#
4190: shw of purp sh, lght crm-lght gry fn xln lm, dense, hrd to brk, lots of pyrt clusters, no odr, ns.
4200: incrs in crm chrt, lght crm chrty whtrd lm w/ a shw of gasy brwn oil, fair por, odr upon brk, abdnt shw.
0
ROP (min/ft)
10
cfs @ 4203
30MIN: incrs in brwn, green and gry sh, crm-tan chrty lm w/ shw brwn gasy oil, poor-fair por, fair odr. 60MIN: incrs in brwn sh, chrty lm aa w/ a shw brwn gasy oil decrse in abdnce, fair-strng odr.
4210: mstly gry, brwn and green sh.
4220: v. lght gry fn xln lm, dense, highly pyrtzd, incrs in chlk and sub-chlky lm, no odr,ns.
cfs @ 4217
<=======
STARK
4219-1287
30MIN: lght crm inxln lm, inxln por, dense, no odr, ns. 60MIN: lm aa, incrs in chlk and sub-chlky lm, incrs in gry slt stn, no odr, ns.
4230: shw of blk carb sh.
DST #4 4217-4252
30-30-30-30
REC: 10' mud
IFP: 15-25# ISIP: 1138#
FFP: 26-34# FSIP: 1123#
4240: tan fn-med grn lm, intr prtc por, shw of lght beer colrd oil, v. strng odr.
4250: lm aa, v. flour, v. strng odr shw of gry inxln lm, cors xln.
30MIN: lght crm-tan inxln lm, sli foss, inxln
4030
4100
4150
4200
4250


cfs @
4252
por, few fn-med grn lm w/ a shw of lght
beer colrd oil, fair-strng odr. 60MIN: tan
grainstn lm, w/ shw of lght beer colrd oil,
lots of crm-mlky foss chrt, incrs in chlk.
DST #5 4253-4282
30-30-30-30
REC: 3' mud
IFP: 13-14# ISIP: 19#
FFP: 14-14# FSIP: 18#
BKC
4282 -1350
=========>
cfs @
4282
30MIN: gry in xln lm, pin pont por, shw of
brwn oil, fair-strng odr. 60MIN: crm fn inxln
lm, semi dense, few tan lm w/ pin point por
w/ a shw of lght brwn oil, fair-poor odr.
4300
<=======
ALTAMONT
4350-1418
4350
PUMP PRESSURE:
950+
7/22/2012
mud info.
wt: 9.1
Funnel Vis. 55
Filtrate API 6.4
Chloride 2,000
LCM 3
0
ROP (min/ft)
10
4400
<=======
PAWNEE
4411-1479
<=======
MYRICK
4444-1512
7/23/2012
mud info.
wt: 9.2
Funnel Vis. 57
Filtrate API 7.2
Chloride 3,000
LCM 3
4450
cfs @
4467
30MIN: 80%+ of sample blk carb sh, crm
4260: shw of blk carb sh.
4270: brwn inxln lm, higly pyrtzd, gry lm, mott, no odr, ns.
4280: gry inxln w/ pin pont por, shw of brwn oil, fair-strng odr.
4290: mstly gry, green, blk, and brwn sh.
4300: lght tan-crm inxln lm, inxln por, one drk tan-lght brwn inxln lm, w/ 2ndry disloution por, w/ a shw of lght brwn oil, odr, upon brkng (uphole).
4310: mstly slt stn, gry, purp, and crm, no odr, ns.
4320: aa, lots slty sh, brwn, gry, and green.
4330: mstly gry sh, along w. brwn-tan xln lm, xln por, no odr, ns.
4340: tan-gry packstn lm, cment floded, no odr, ns.
4350: drk crm xln lm, cemnt floded, poor-no pr, brwn fn xln lm, no odr, ns. incrs in drk gry sh.
4360: aa, shw of blk carb sh.
4370: gry cors xln lm, poor inxln por, no odr, ns. incrs in gry sh.
4380: drk crm-tan foss lm, poor por, no odr, ns.
4390: mstly gry sh.
4400: crm-lght gry prtly xln prtly grain stn, poor por, no odr, ns.
4410: lght-crk crm xln lm, poor inxln por, incrs in in gry and green sh.
4420: lght crm bio-mictric lm, poor por, no odr, ns.
4430: lots of mlky foss chrt, incrs in chlk and tan xln lm, no odr, ns.
4440: shw of blk carb sh, gry xln lm, pyrtzdn poor por, no odr, ns.
4450: mstly blk carb sh, brwn xln foss lm, poor-no por, hrd to brk, no odr, ns.
4460: lght crm fn xln lm, inxln por, prtly mott, incrs in chlk and subchlky lm, no odr, ns.
4470: aa, no sig chng.
4480: tan w/ drk grn pack stn lm, sli ool, dense, no


inxln lm, no odr, ns. 60MIN: decrse in blk carb sh, incrs in brwn foss-crm chrt, incrs in chlk, crm xln lm, no odr, ns.
cfs @ 4492
30MIN: tan xln lm, inxln por, pyrtzd, incrs in chlk, no odr, ns. 60MIN: crm micrtic lm, intr prtcl por, no odr, ns.
<========
CHEROKEE
4496-1564
DST #6 4495-4554
30-30-30-30
REC: 5' mud
IFP: 15-17# ISIP: 63#
FFP: 18-19# FSIP: 31#
cfs @ 4532
30MIN: tan inxln lm, foss, poor por, pyrtzd,no odr, ns. 60MIN: crm bio-micrtic lm, inter prtcl por, no odr, ns.
<=======
JOHNSON
4536-1604
cfs @ 4554
30MIN: tan-lght brwn xln lm, w/ vuggy por, shw of brwn gasy oil, fair-strng odr, incrs in wht chlk. 60MIN: brwn xln lm, w/ pin point por, ssfo, fair odr.
DEVIATION SURVEY 1.25 DEGREE. STRAIT HOLE.
cfs @ 4577
30MIN: v. chlky sampl, shw of yellow sh, lots of gry sh, wht-gry slt stn. 60MIN: tan xln lm, dense, cment floded, no odr, ns. lots of gry sh.
<==========
MISS
4593-1661
cfs @ 4594
0
ROP (min/ft)
10
45MIN: incrs in slt stn: gry & green, few clusters of qtz ss, fn-med grn, sub-angulr-sub-rounded, well sortd, well cemntd, no odr, ns.
7/19/2012
mud info.
wt: 9.1
Funnel Vis. 53
Filtrate API 8.0
Chloride 3,000
LCM 3
PUMP PRESSURE:
950+
30MIN: mstly gry sh, very chlky sample, tan ool cast lm, high por, no odr, ns.
RTD 4685
4500
4550
4600
4650
vis por, no odr, ns.
4490: brwn foss xln lm, cment floded, dense, no odr, ns.
4500: gry inxln lm, sli foss (crioniods), inxln por, no odr, ns.
4510: shw of blk carb sh.
4520: mstly chlk-subchlky lm, few crm inxln lm, cment floded, no odr, ns.
4530: aa, lght brwn prtly xln lm w/ frac por, posible stn, flour, v. faint odr.
4540: gry inxln lm, inxln por, no odr, ns.
4550: brwn xln lm, w/ vuggy por, shw of drk brwn gasy oil, fair-strng odr.
4560: mstly gry and brwn sh.
4570: tan-crm packstn lm, poor por, incrs in wht hrd to brk slt stn, no odr, ns.
4580: mstly gry and green sh, incrs in wht and greensh ten slt stm.
4590: mstly gry sh.
4600: crm-drk crm packstone lm, good por, no odr, ns. incrs in mlky chrt.
4610: aa, incrs in gry and purp sh.
4620: drty crm inxln lm, v. dense, hrd to brk, no odr, ns.
4630: aa, incrs in mlky foss chrt, no odr, ns.
4640: tan ool lm, matrix fill, well cemntd, no odr, ns.
4650: aa, incrs in gry and maroon sh.
4660: tan wackestn lm, fair por, no odr, ns.
4670: aa, incrs in moldic por, no odr, ns.
4680: tan ool cast lm, high por, no odr, ns.


DEVIATION SURVEY 1.25
DEGREE. STRAIT HOLE.
4700
50