

Timothy G. Pierce

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY R & B Oil and Gas, Inc.

LEASE Goetz 'A' #1

FIELD Spivey-Grabs

LOCATION 1090' FNL & 660' FEL

SEC 18 TWSP 30S RGE 9W

COUNTY Kingman STATE Kansas

CONTRACTOR WW Drilling Rig #4

SPUD 4-19-2018 COMP 4-25-2018

RTD 4200 LTD 4201

MUD UP 2845 TYPE MUD Chemical

SAMPLES SAVED FROM 2460 TO RTD

DRILLING TIME KEPT FROM 2450 TO RTD

SAMPLES EXAMINED FROM 2460 TO RTD

GEOLOGICAL SUPERVISION FROM 2300 to RTD

GEOLOGIST ON WELL Tim Pierce

ELEVATIONS

KB 1700'

DF _____

GL 1705'

Measurements Are All
From Kelly Bushing

CASING

CONDUCTOR _____

SURFACE 8-5/8" at 245'

PRODUCTION None

ELECTRICAL SURVEYS

DIL / DuCP

Pioneer Energy Svcs.

FORMATION TOPS

ELECTRIC LOG

SAMPLE

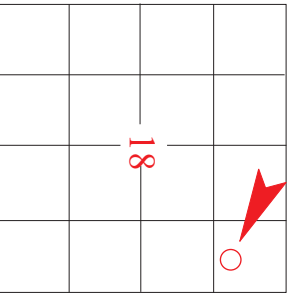
Onaga Sh. 2490 (-784) 2495 (-790)

Topoka LS 3050 (-1344) 3051 (-1346)

Heebner Sh. 3372 (-1762) 3460 (-1755)

Lansing 3628 (-2018) 3691 (-1986)

Stark Sh. 4030 (-2420) 4057 (-2352)

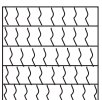


API # 15-095-22,321

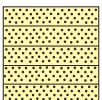
REMARKS Due to negative drill stem results this well was plugged and abandoned on 4-25-2018

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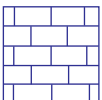
LEGEND



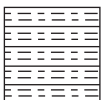
Anhydrite



Sandstone



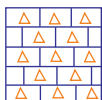
Limestone



Shale



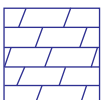
Carb Sh



Cherty LS



Chert



Dolomite

DRILLING TIME IN
MINUTES PER FOOT

Rate of Penetration Decreases



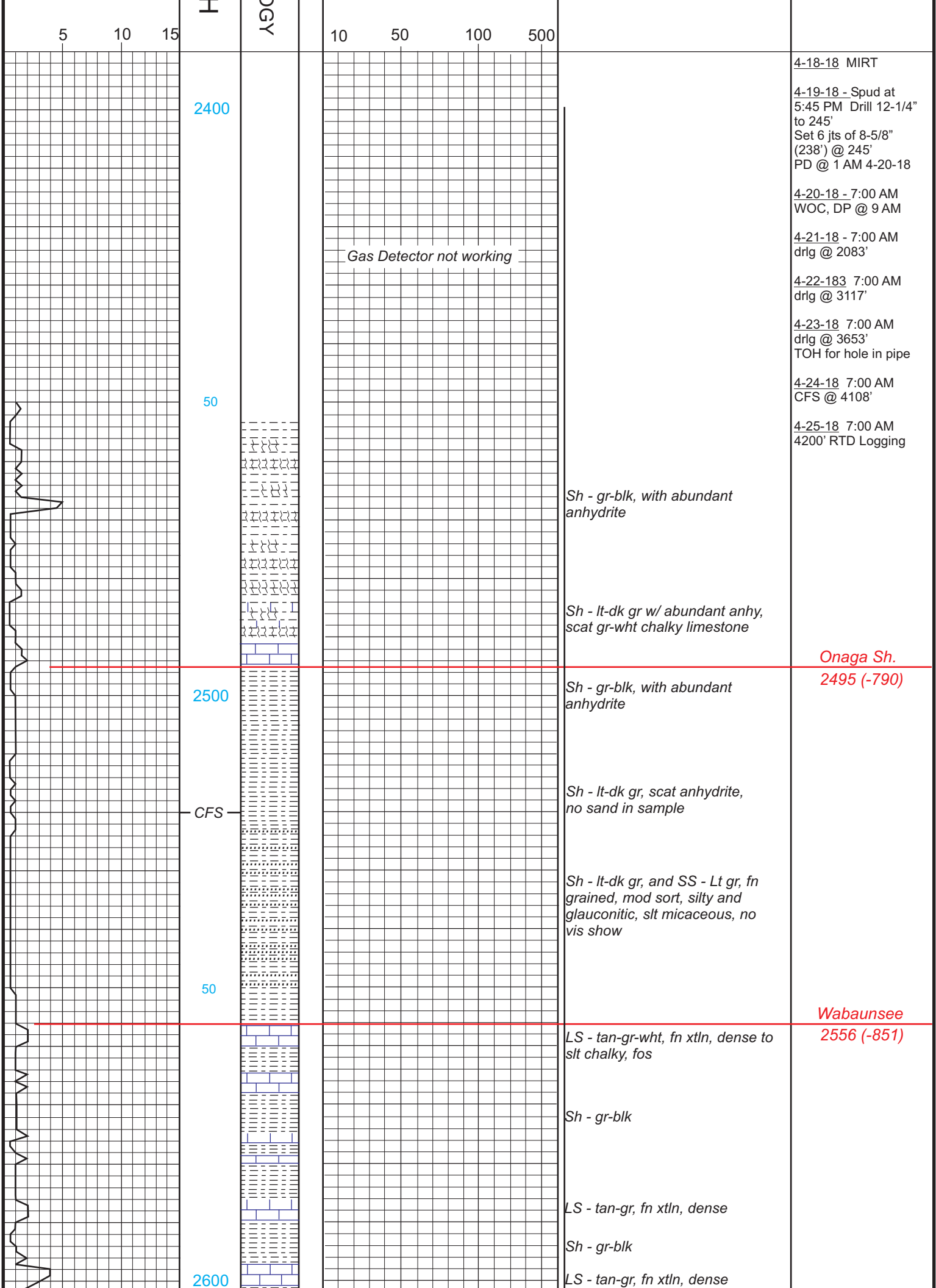
DEPTH

LITHOLOG

GAS SCALE

SAMPLE DESCRIPTION

REMARKS



4-18-18 MIRT
 4-19-18 - Spud at 5:45 PM Drill 12-1/4" to 245' Set 6 jts of 8-5/8" (238') @ 245' PD @ 1 AM 4-20-18
 4-20-18 - 7:00 AM WOC, DP @ 9 AM
 4-21-18 - 7:00 AM drlg @ 2083'
 4-22-18 7:00 AM drlg @ 3117'
 4-23-18 7:00 AM drlg @ 3653' TOH for hole in pipe
 4-24-18 7:00 AM CFS @ 4108'
 4-25-18 7:00 AM 4200' RTD Logging

Gas Detector not working

Sh - gr-blk, with abundant anhydrite

Sh - lt-dk gr w/ abundant anhy, scat gr-wht chalky limestone

Onaga Sh.
 2495 (-790)

Sh - gr-blk, with abundant anhydrite

Sh - lt-dk gr, scat anhydrite, no sand in sample

Sh - lt-dk gr, and SS - Lt gr, fn grained, mod sort, silty and glauconitic, slt micaceous, no vis show

Wabaunsee
 2556 (-851)

LS - tan-gr-wht, fn xtln, dense to slt chalky, fos

Sh - gr-blk

LS - tan-gr, fn xtln, dense

Sh - gr-blk

LS - tan-gr, fn xtln, dense

2400

50

2500

CFS

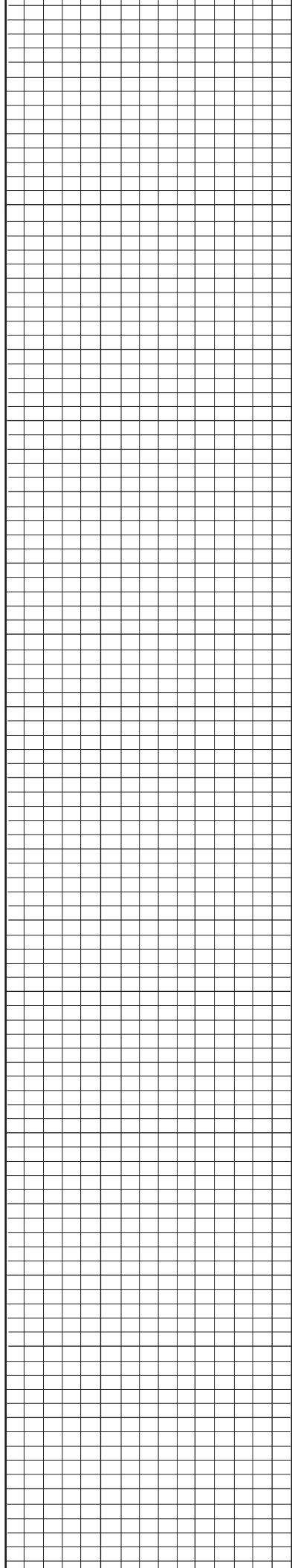
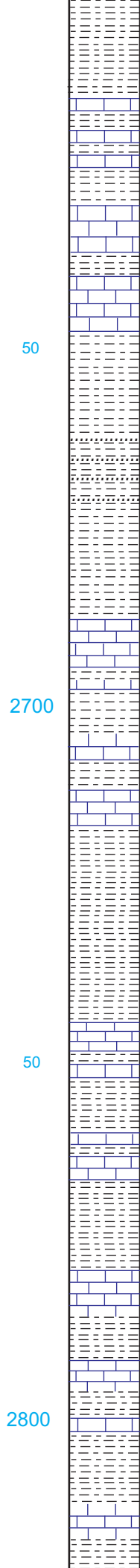
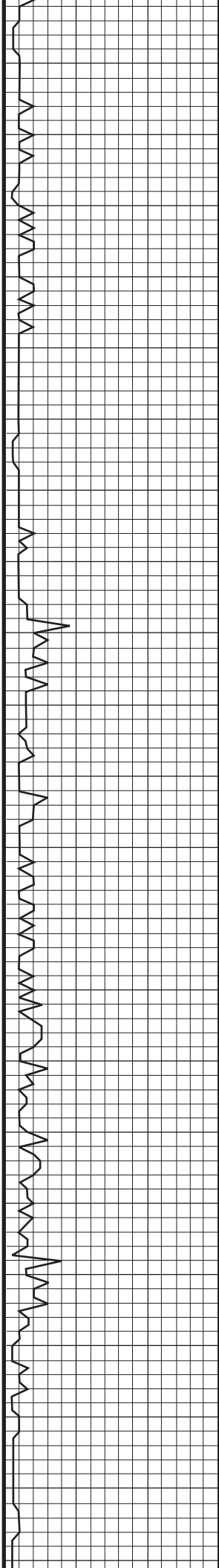
50

2600

5 10 15

H
 GY

10 50 100 500



Sh - lt-dk gr

LS - tan-brn, fn xtl, dense and
Sh - gr

Sh - lt gr

LS - tan-brn-gr, fn xtl, dense

LS - gr-tan, fn xtl, dense to chalky

50

Sh - lt gr

Sh - gr-blk, silty in part, w/ scat
gr fn grained, silty sand

Sh - lt-dk gr

LS - tan-gr, fn xtl, dense

2700

Sh - gr

LS - gr-tan, dense

Sh - lt-dk gr

LS - tan-gr, fn xtl, dense

50

Sh - gr and red, w' scat ss - gr, fn
grained, tightly cem to silty, no
vis por

Sh - lt-dk gr

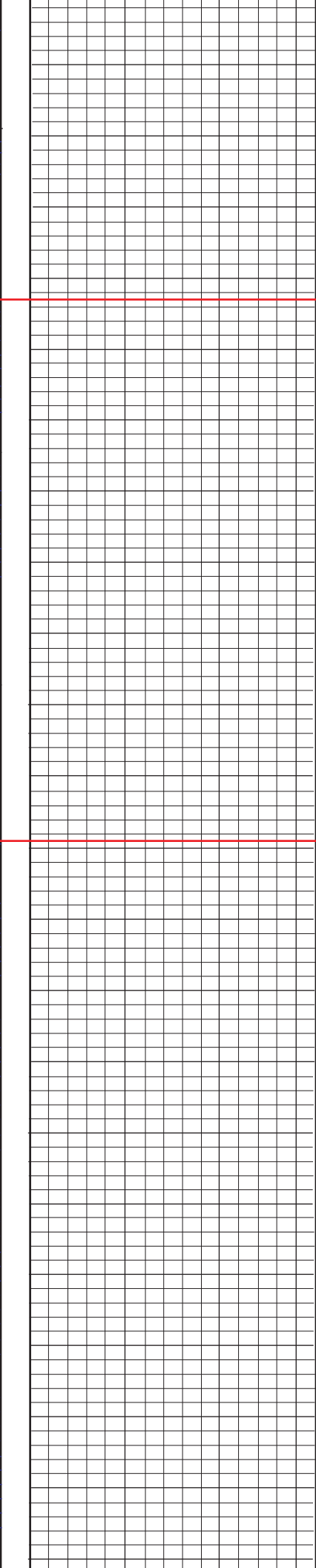
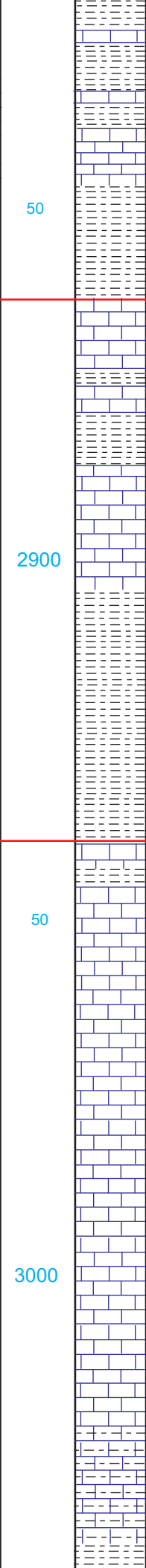
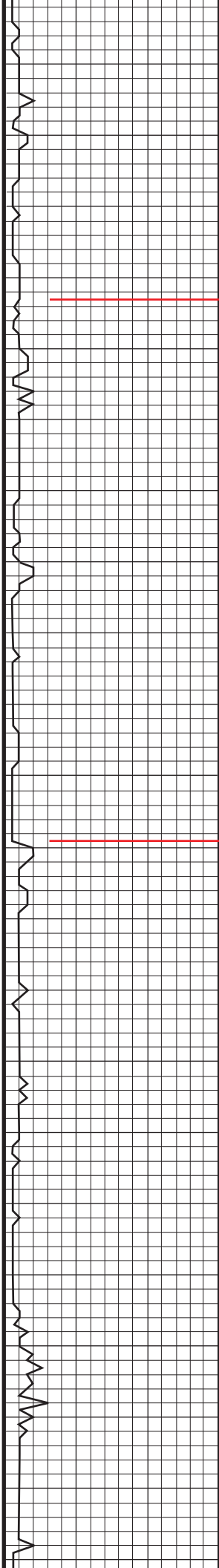
LS - lt gr, fn xtl, dense

Sh - gr

LS - tan-gr, fn xtl, dense

2800

Sh - gr



LS - tan-wht-lt gr, fn xtln, dense
 LS - tan-crm-wht, fn xtln, scat fair
 vug to fos cast por, slt chalky, no
 show
 LS - lt gr-wht, fn xtln, dense
 LS - tan-wht, fn xtln, dense to slt
 chalky

Burlingame LS
 2863 (-1158)

LS - gr-tan, fn xtln, fos, dense
 Sh - gr-blk
 LS - tan-gr, fn xtln, no vis por
 Sh - gr-blk
 Sh - gr-blk

Howard LS
 2939 (-1234)

LS - tan-lt gr, fn xtln, slt chalky to
 vslt pinpoint por, no show
 LS - tan-dk gr, dense
 LS - tan-gr, no vis por, abundant
 shale cavings
 LS - gr-tan, mostly shale cavings
 Sh - gr

50

2900

50

3000

Sh - gr

Topeka LS
3051 (-1346)

50

Vis 60
Wt. 8.7

LS - brn-tan-lt gr, fn xtlh, dense

3100

LS - tan-wht, fos in part, fair-gd
pinpoint por, no show

50

LS - lt gr-tan, fn xtlh, dense

3200

LS - tan-wht, fn xtlh, f-gd int xtlh
por

50

LS - tan-wht, fn xtlh, fos, gd vug
por, no show

Work on rig
Pull 10 stands
Displace Mud

3300

50

Vis 75
Wt. 8.6
LCM 2#

3400

Vis 48
Wt. 9.0

50

10 50 100 500

LS - tan-wht, fn xtln, chalky

LS - gr-tan-wht, fn xtln, dense,
scat poor por

LS - lt gr-tan, fn xtln, chalky to
dense, scat vug to fos cast por

LS - tan-lt gr, fn and med xtln,
scat gd vug por

LS - lt gr-tan, fn xtln, dense to slt
chalky, scat vug and fos cast por

LS - gr-brn, dense, scat chalk,
scat poor vug por

Sh - gr-blk carb

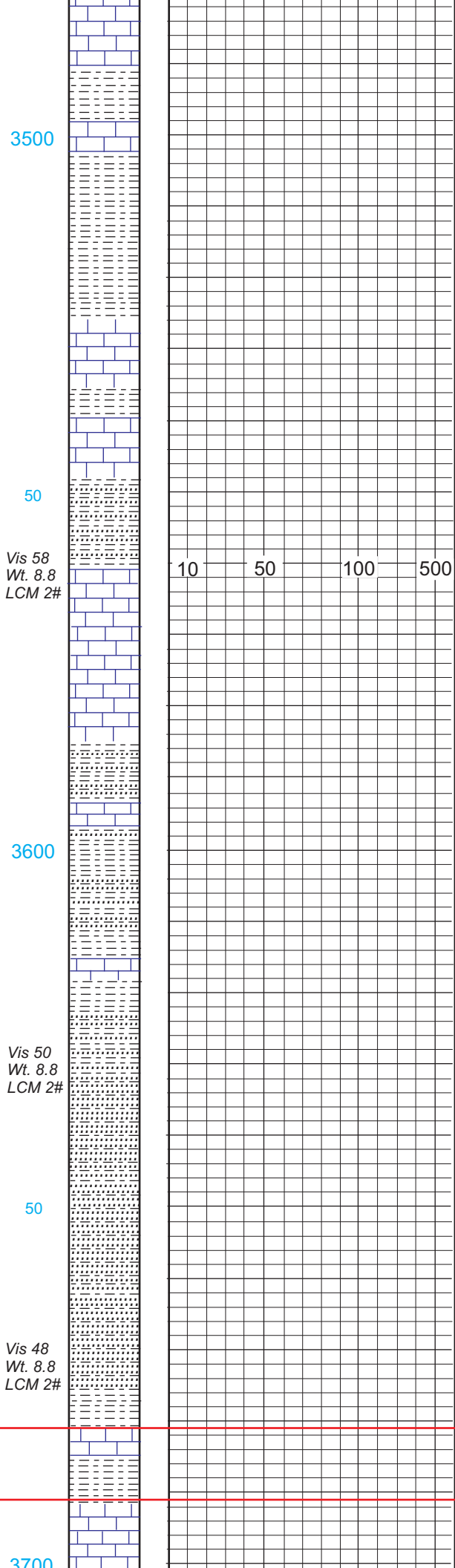
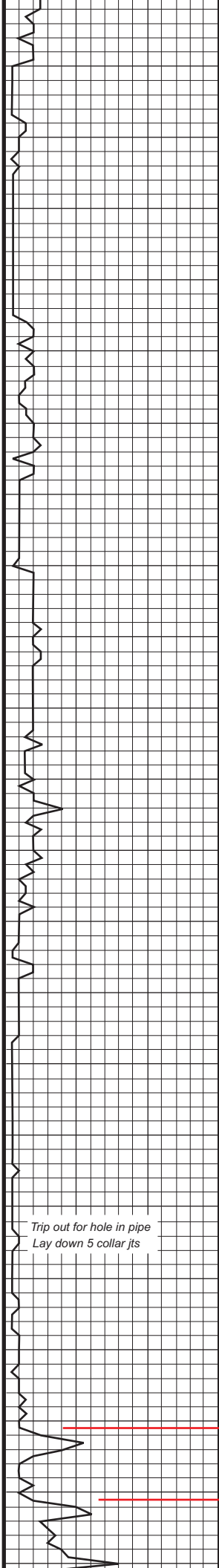
LS - tan-brn, fn xtln, dense

Sh - blk carb

LS - tan-brn, fn xtln, dense

Sh - lt gr-dk gr

Heebner Sh.
3460 (-1755)



LS - brn-gr-wht, fn xtn, dense

Sh - gr-blk

LS - lt gr-brn, fn xtn, dense

Sh - lt-dk gr-blk

LS - lt gr-tan, fn xtn, dense

Sh - gr-blk

LS - tan-gr, fn xtn, slt fos, dense

Sh - lt gr, silty w/ lt gr silty sand, micaceous

LS - gr-tan, fn xtn and fos, slt pyritic, dense

Sh - lt-dk gr, silty in part

LS - brn-gr, dense

Sh - lt-dk gr, w/ SS - gr-wht, fn grained, micaceous, silty

Sh - lt-dk gr, silty in part

SS - lt gr, fn grained, well sort, slt mica, semi-friable, no show

SS - lt gr-wht, fn-vfn grained, slt mica, semi-friable to tightly cem, no show

Sh - lt-dk gr

LS - brn-gr, fn xtn, dense

Sh - gr-blk

LS - gr-tan-crm, fn xtn, scat fair vug por, no show

Brown Lime
3681 (-1976)

Lansing
3691 (-1986)

3500

50

Vis 58
Wt. 8.8
LCM 2#

3600

Vis 50
Wt. 8.8
LCM 2#

50

Vis 48
Wt. 8.8
LCM 2#

3700

Trip out for hole in pipe
Lay down 5 collar jts

Vis 48
Wt. 8.9
LCM 2#

50

3800

Vis 48
Wt. 9.0
LCM 2#

50

Vis 47
Wt. 9.0
LCM 2#

3900

10 50 100 500

LS - lt gr-tan, fn xtln to slt chalky, scat p-fair vug por

LS - gr-tan-wht, fn xtln, dense to slt chalky

LS - lt-dk gr to wht and brown, fn xtln, dense to slt chalky

LS - lt-dk gr, brown, fn xtln, dense to chalky

LS - dk-lt gr, and wht, dense to chalky

LS - gr-tan, fn xtln, dense, scat chalk

LS - gr-tan, fn xtln, dense

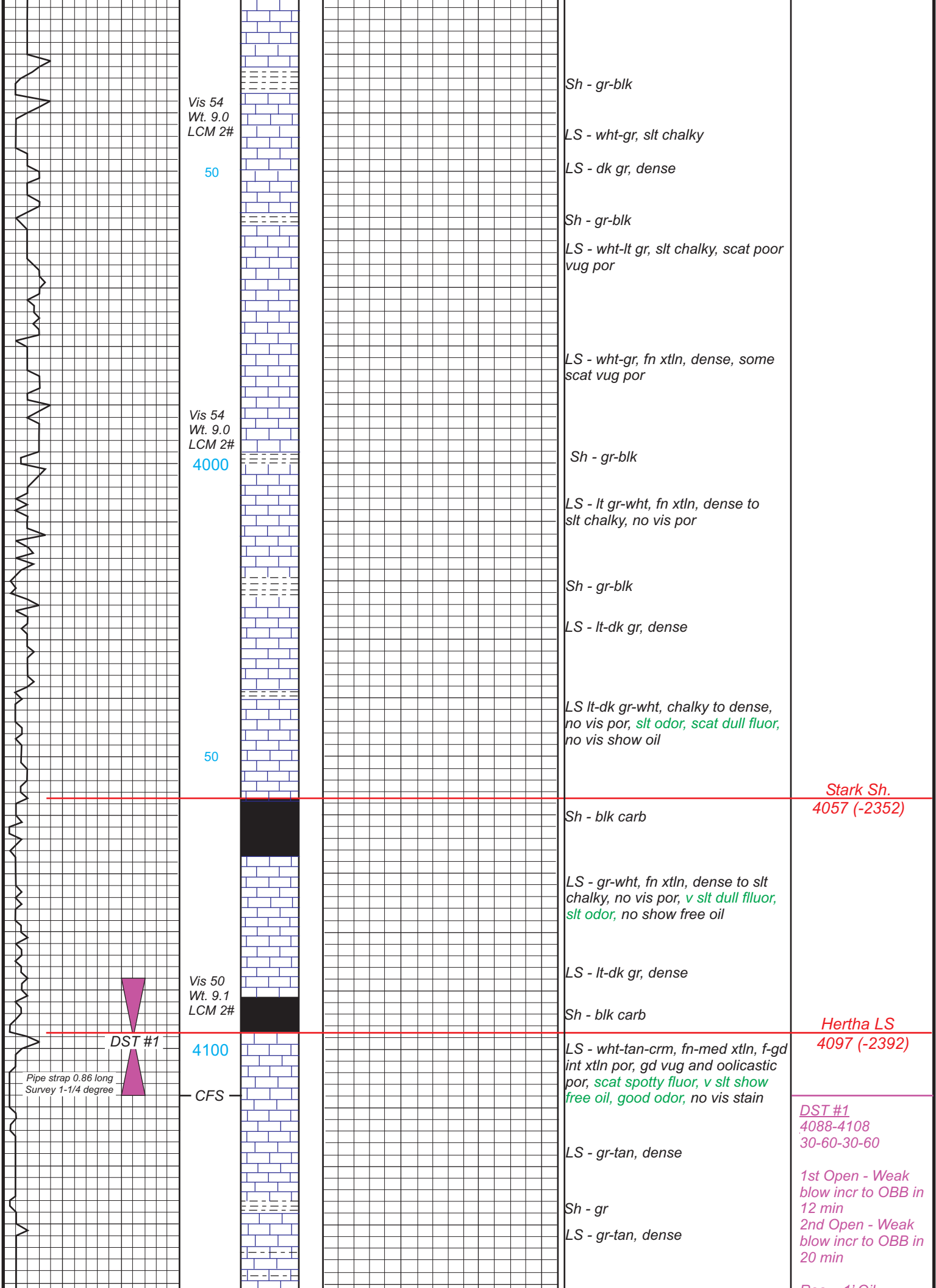
LS - dk-lt gr-tan, fn xtln, dense

LS - dk gr-brn, fn xtln, dense

LS - dk-lt gr and tan, fn xtln dense to slt chalky

Sh - gr-blk

LS - tan-gr, fn xtln, dense



Vis 54
Wt. 9.0
LCM 2#

50

Sh - gr-blk

LS - wht-gr, slt chalky

LS - dk gr, dense

Sh - gr-blk

LS - wht-lt gr, slt chalky, scat poor
vug por

LS - wht-gr, fn xtl, dense, some
scat vug por

Vis 54
Wt. 9.0
LCM 2#

4000

Sh - gr-blk

LS - lt gr-wht, fn xtl, dense to
slt chalky, no vis por

Sh - gr-blk

LS - lt-dk gr, dense

LS lt-dk gr-wht, chalky to dense,
no vis por, *slt odor, scat dull fluor,*
no vis show oil

50

Stark Sh.
4057 (-2352)

Sh - blk carb

LS - gr-wht, fn xtl, dense to slt
chalky, no vis por, *v slt dull fluor,*
slt odor, no show free oil

LS - lt-dk gr, dense

Vis 50
Wt. 9.1
LCM 2#

4100

Sh - blk carb

Hertha LS
4097 (-2392)

LS - wht-tan-crm, fn-med xtl, f-gd
int xtl por, gd vug and oolitic
por, *scat spotty fluor, v slt show*
free oil, good odor, no vis stain

DST #1

Pipe strap 0.86 long
Survey 1-1/4 degree

CFS

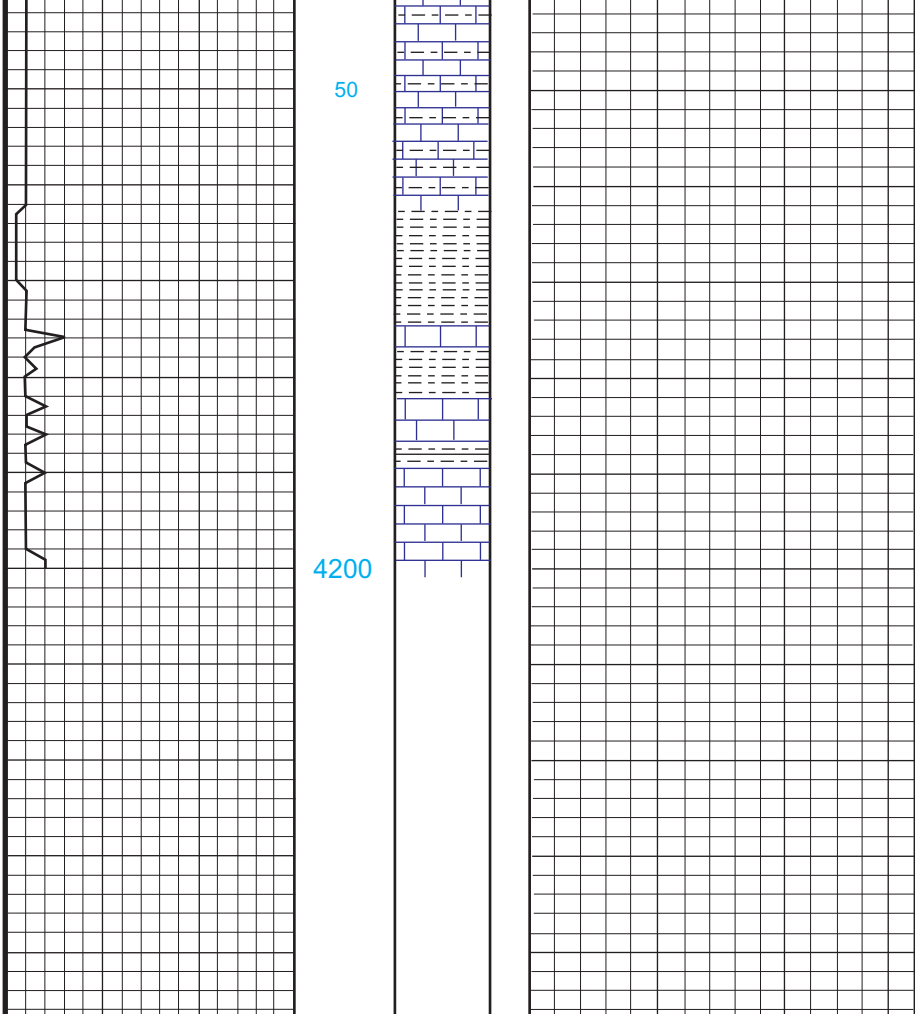
LS - gr-tan, dense

DST #1
4088-4108
30-60-30-60

Sh - gr

LS - gr-tan, dense

*1st Open - Weak
blow incr to OBB in
12 min
2nd Open - Weak
blow incr to OBB in
20 min*



LS - lt-dk gr-tan, dense, with sh
gr-blk

Sh - gr-blk

LS - gr-tan, fn xtln, dense

Sh - blk-gr

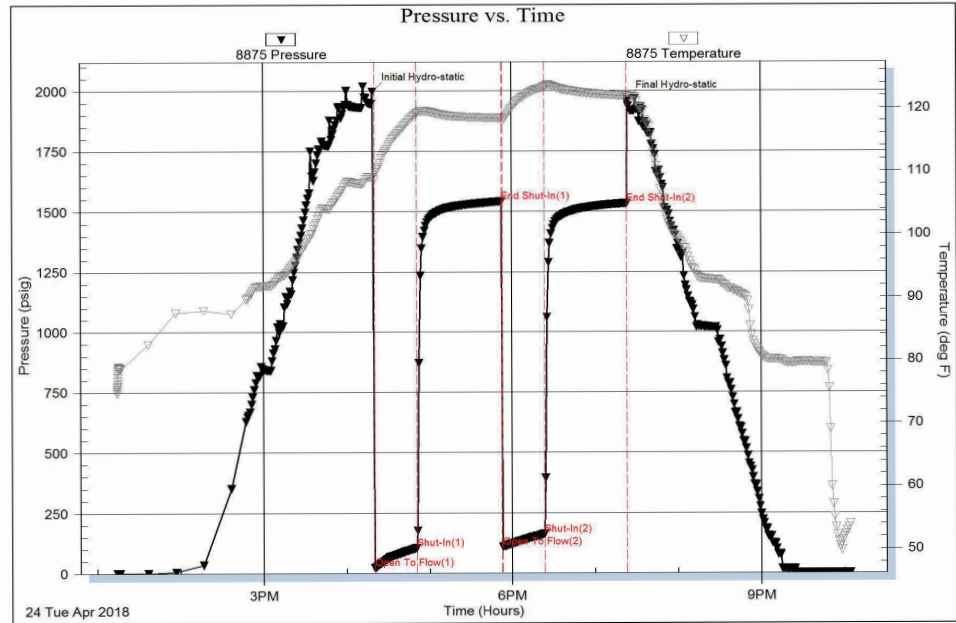
Sh - blk-gr

LS - gr-tan-wht, fn xtln, dense

Rec. - 1' Oil
63' SOCMW
252' Wtr

IFP: 23-106#
FFP: 110-163#
SIP: 1542-1534#
HP: 1998-1964#
BHT: 122 deg

Serial #: 8875 Inside R&B Oil & Gas Goetz A-1 DST Test Number: 1



DST #1
4088-4108
30-60-30-60

1st Open - Weak
blow incr to OBB in
12 min

2nd Open - Weak
blow incr to OBB in
20 min

Rec. - 1' Oil
63' SOCMW
252' Wtr

IFP: 23-106#
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