

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: T & L #2
Location: SE-NE-NW-NE of Section 6-23s-12w - Stafford County, KS
License Number: KCC Licence#: 5614 Region: Hudson-SW
Spud Date: 8/23/2014 Drilling Completed: 8/29/14
Surface Coordinates: SE NE NW NE (335' FNL & 1450' FEL)
of Section 06-23s-12w
Bottom Hole Same as Surface Coordinates
Coordinates:
Ground Elevation (ft): 1847' K.B. Elevation (ft): 1856'
Logged Interval (ft): 2800' To: 3816' Total Depth (ft): 3815'
Formation: Arbuckle Dolomite @ Total Depth
Type of Drilling Fluid: Andy's Mud Company (Chemical Drispac)

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Hutchinson Oil Company
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GEOLOGIST

Name: Eli J. Felts & Jeffrey Burk, Consulting Petroleum Geologists
Company: PETERRA Energy Services
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Phone: (316) 269-2015

Drilling Report

8/19/14

Langfeld was on location digging haul-off reserve pit. Kelly's Water Well Service drilled a 57' deep water well with a 54' static water level.

8/22/14

Sterling Drilling Rig #4 moving in. Planning to rig up and spud Saturday (8/23/14)

8/23/14

Spudded @ 8:00 A.M. Drilled 338' (KB) of 12 1/4 inch surface hole (Survey showed 1 degree). Tallied and ran 8 jts. of new 8 5/8" (24#) surface casing (Strap welded the bottom 3 jts. and tack remainder). Basic Energy Service cemented w/ 350 sxs. of 60/40 poz mix, (3% cc, 2% gel). Plug was down @ 4:30 P.M. Cement did circulate. W.O.C. (10 hours).

8/24/14

Drill out under surface @ 2:30 A.M. Drilled to 445' and noticed that the surface casing had movement. Checked cement on the back of surface casing and the cement had dropped down 20'. Pulled the bit and drill pipe. Basic on location and ran 1" to 25'. Cemented w/ 100 sxs. of Common cement (3% cc) @ 25'. W.O.C. (4 hours). Will drill out under surface again at 3:00 P.M.

8/25/14

Drilling @ 1783' @ 7:00 A.M. Drillers pick on the top of the Anhydrite was: 666 (+1190) (+1 to T&L # 1).

8/26/14

Displaced mud system @ 2916' @ 1:30 A.M. Drilling @ 3111' @ 7:00A.M. CFS on the "B" & "D" zones. Noted a slight show free oil, gas bubbles, and the zones were very shaley. CFS on the "G" zone. Noted a weak show of dark oil with some gas bubbles. CFS on the "H", "I", "J", & "K" zones. All had fair shows of oil & gas w/ a faint odor. Elected not to test the LKC zones due to being 8' low to the offset, T&L #1.

8/27/14

Drill to 3732' (Simpson Sand). Had a good drilling break. CFS showed abundant loose sand grains, well sorted, w/ a slight show of dark fee oil, and a faint odor. DST #1 (3687'-3732') covering the Simpson Sand. Ran test intervals as follows: 30"-45"-30"-45". The strap on the pipe was 1.85' short to board and the straight hole survey was off 3/4 degree. Finished DST #1 and went back to drilling. CFS @ 3755', 3758', 3763', & 3766'. Noted that the Arbuckle Dolomite had fair xln porosity and a fair show of free oil & odor.

8/28/14

Ran DST #2 (3754'-3766' covering the Arbuckle with time intervals of: 30"-45"-30"-60". Test recovered: 315' GIP, 90' clean gassy oil, 60' water cut oil (12% oil 88% water), and 441' oil spotted muddy water (1% oil 99% water: ISIP 1291# FSIP 1303#. Preparing to drill ahead to 3815' and run E-Logs.

8/29/14

Finished running electric logs. After reviewing the logs and comparing them to the offset, T & L #1, it was decided to plug the well. Well was plugged in accordance with KCC (Dodge City) instructions.

DST Reports

DST #1 3687'-3732' (Simpson Sand)

OP 30"-45"-30"-45"

1st open: Weak surface blow died off in 16 minutes.

1st shut in: no blow back

2nd open: Dead, flushed tool, no help

2nd shut in: No blow back

REC: 5' drilling mud

IHP: 1879#

IFP: 39#-88#

ISIP: 517#

FFP: 47#-68#

FSIP: 310#

FHP: 1798#

DST #2 3754'-3766' (Arbuckle)

OP 30"-45"-30"-60"

1st open: fair blow - BOB 8"

1st shut in: sl surface blow back

2nd open: fair blow - BOB 12"

2nd shut in: 5' blow back

REC: 315' GIP

90' clean gassy oil

60' water cut oil (12% oil, 88% wtr)

441' oil spt mdy wtr (1% oil 94% wtr, 5% mud)

IHP: 1866#

IFP: 33#-194#

ISIP: 1290#

FFP: 195#-287#

FSIP: 1303#

FHP: 1822#

BHT: 120 degrees

Clorides: 19,000 ppm (RW .20 @ 100 degrees)

Comments

Several shows were noted in the Lansing/KC while drilling this well. Due to the amount of data previously obtained from the T & L #1 and, due to the low structural position to the offset well (T&L #1), those zones were not tested. Additionally, due to the negative results recovered from DST #1 and DST #2, it was decided by all parties involved to plug this well as non-commercial. The Kansas City shows, previously noted, will be further evaluated in the, structurally higher, T & L #1 well.

Respectfully submitted,

PETERRA Energy Services

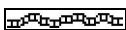
Eli J. Felts, Petroleum Geologist

Jeffrey A. Burk, Petroleum Geologist

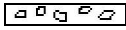
ROCK TYPES



Anhy



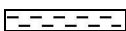
Bent



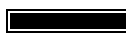
Brec



Cht



Clyst



Coal



Congl



Dol



Gyp



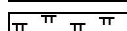
Igne



Lmst



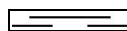
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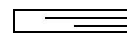
Mrlst



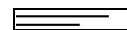
Salt



Shale



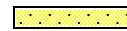
Shcol



Shgy



Slstst



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
- 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
- Gas show
- New symbol

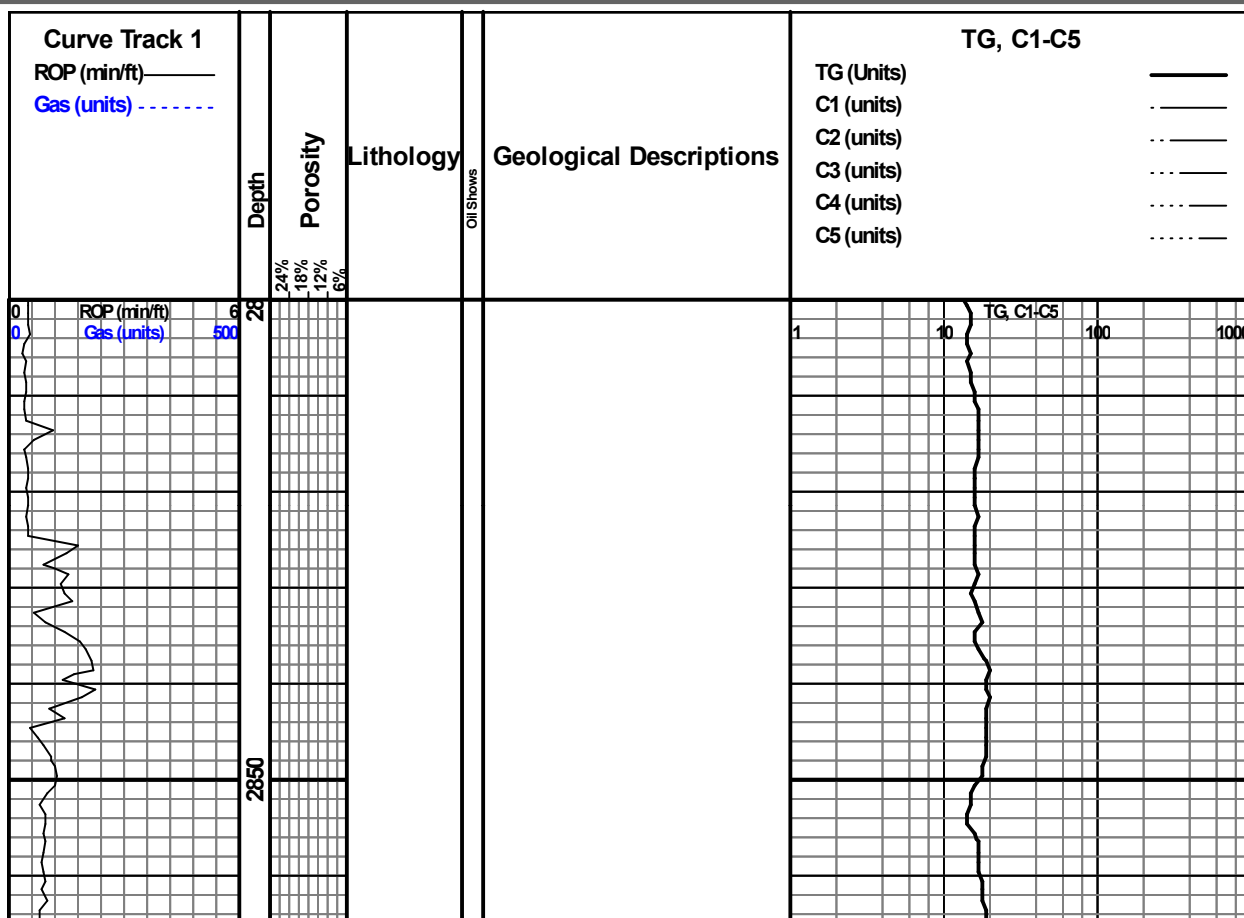
INTERVAL

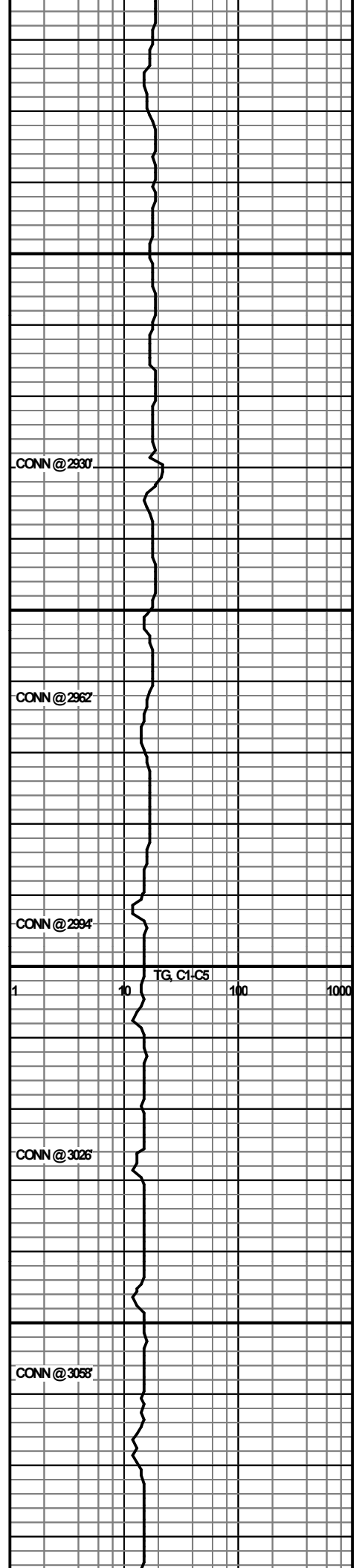
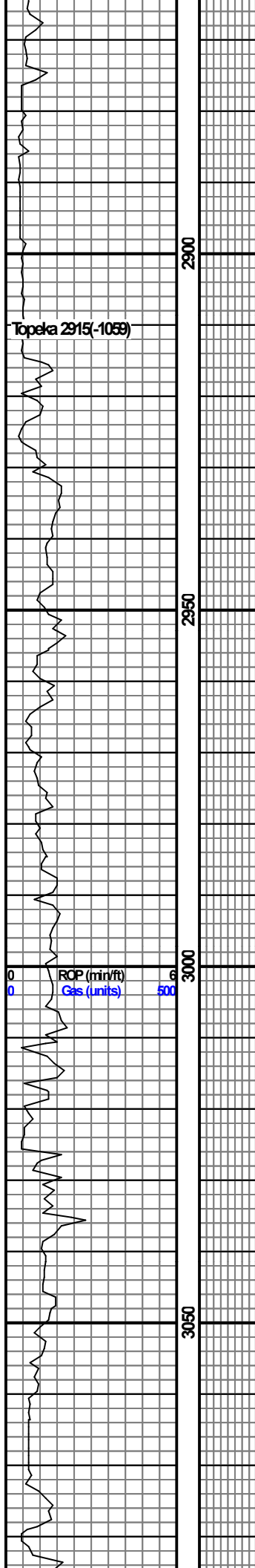
- Core

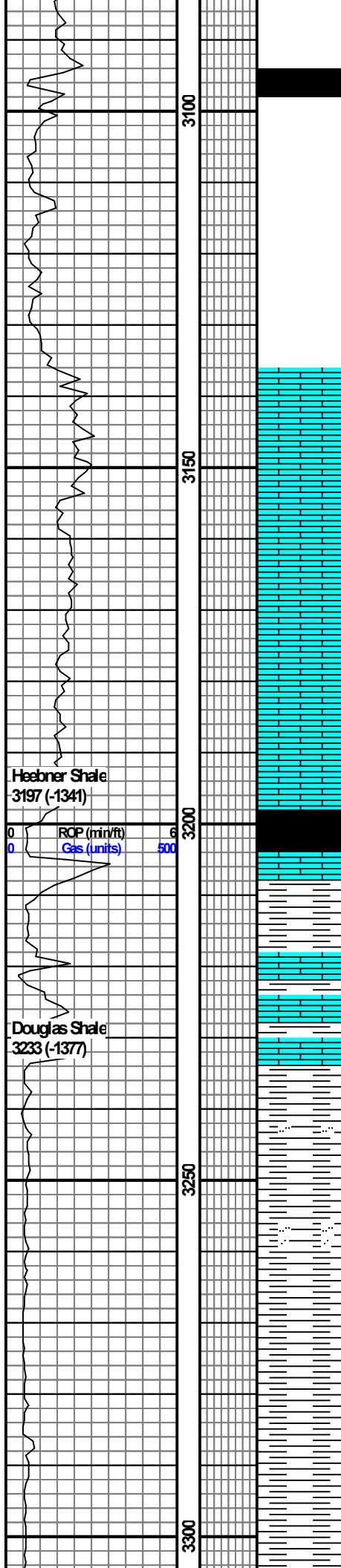
- Dst
- Dst

EVENT

- pipesymbol
- Rft
- Sidewall







LS- cm-brwn, mostly chalky some w
gils staining, few vry dns w foss/ micro
xln & chrty

LS-cm-tan, soft, fr-med xln, gils stain in
fractures, few foss, few pieces micro-xln

Heebner Shale
3197 (-1341)

SH- mst blk to carb, few very organic,
bleeding gas

ROP (min/ft)
Gas (units)

SH- drk gry to blk, mst sub-carbon, few
bleeding gas aa

Douglas Shale
3233 (-1377)

LS cm to buff, mst f xln, sl foss in few,
few sl chily poor dev por, NSFO

SH- mstly gry and shades of gry few red
& gm, few silty

SH- mst shades of gry few silty, sl sdy tr
pyrite, NS

SH- mst gry gmish, tr red, tr pyrite and
sl mica

SH- mst gmish to gry soft & mushy in
some, tr pyrite

CONN @ 3089'

CONN @ 3121'

Daily Mud Check
Depth: 3150'
Vis: 51
Wt: 8.7#
Vl: 8.0 cc
Cl: 5000 ppm
Cake: 1/32'
LCM: 2#

CONN @ 3153'

CONN @ 3185'

TG, C1, C5
1 10 100 1000

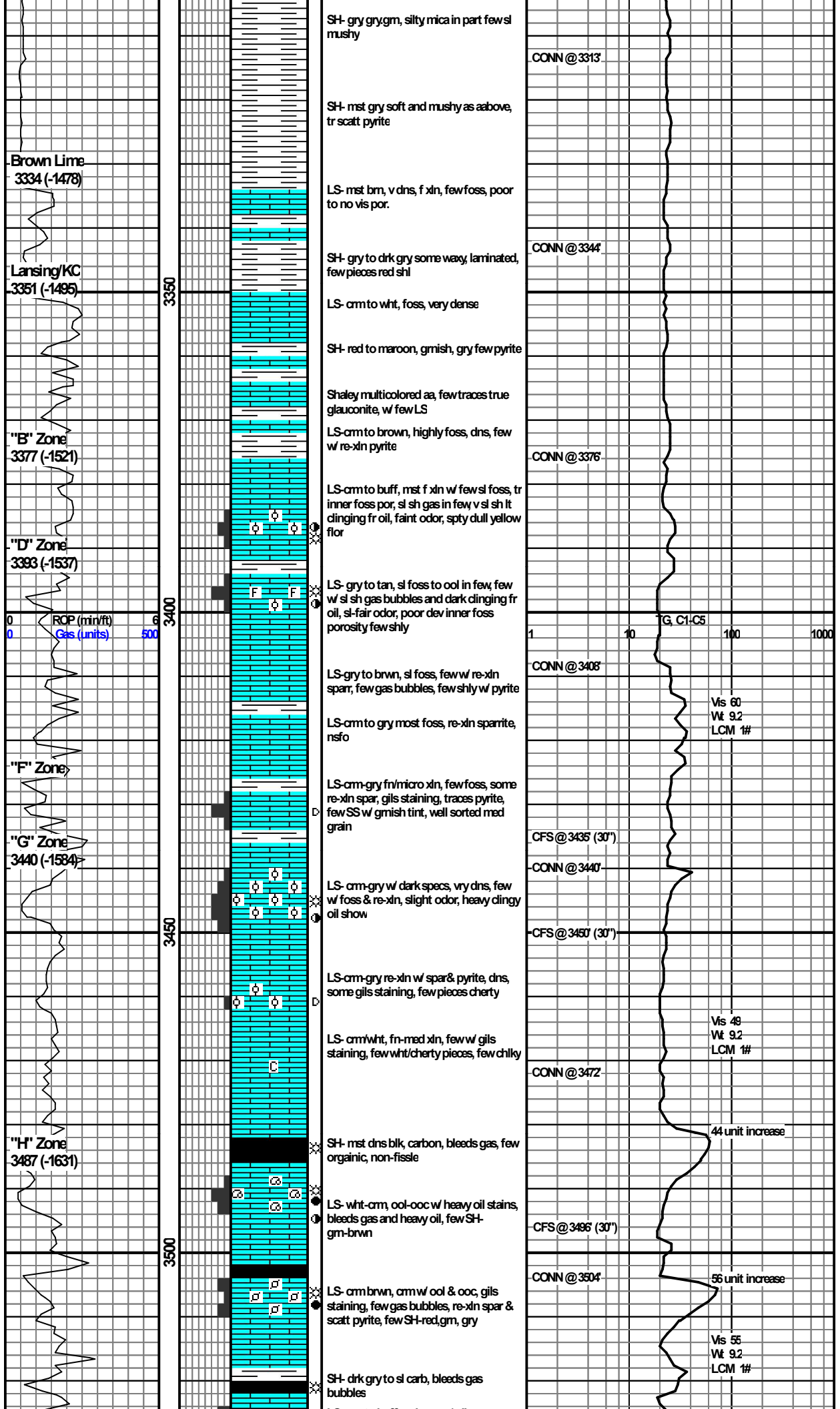
CONN @ 3217'

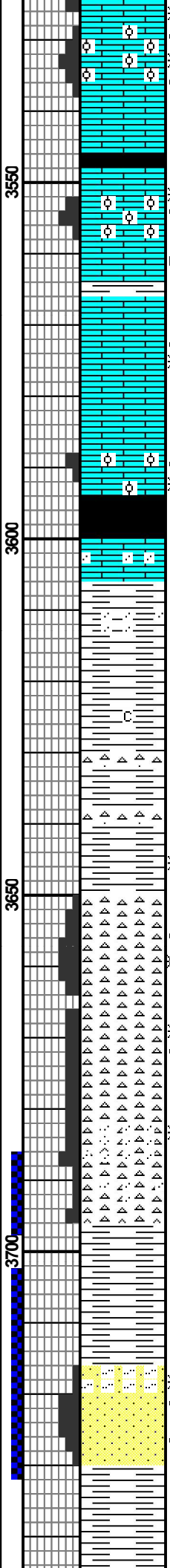
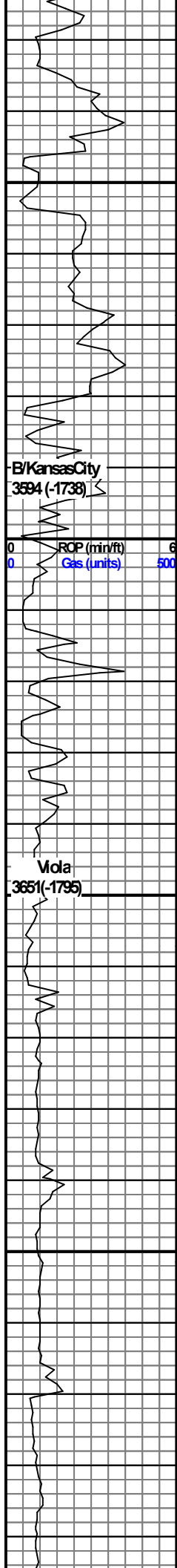
Daily Mud Check
Depth: 3487'
Vis: 54
Wt: 9.1#
Vl: 9.6 cc
Cl: 7000 ppm
Cake: 1/32'
LCM: 1 1/2#

CONN @ 3249'

Vis 44
Wt 9.0
LCM 1#

CONN @ 3281'





LS-orm to buff, ool-ool w gils, gas bubbles & heavy oil, few w pp porosity & lighter oil show

LS-whit-orm, ool w re-xln spar, few w pp porosity bubbles gas and oil, few SH-dark, organic

SH- mst drk, few sl carb, dns fissle in few

LS-whit-orm, ool-ool w re-xln, gils stain w gas show, few dark oil droplets, few cherty w pyrite

LS-whit-orm-brwn, ool w some gils staining, few gry sh's

LS- aa, some vuggy w re-xln sparrite, bleeds gas, heavy dark oil when broken

LS- whit-tan, ool, good porosity and perm, bleeding thick, clingy oil & gas, SH-dark gry

SH- gry brwn, black, few silty/sandy

SH- multicolored, red to gm to gry mostly mushy few silty/sandy

SH- aa, mostly mushy w added maroon colored SH, few scatt chky

SH- aa, few pieces chert w partial re-xln

SH- mushy multicolored, few pieces chert, multicolored, dns

SH- aa, few chert are trippolitic, no odor, spty flor, ss gas

CH- wh, trippolitic, well developed porosity bleeds gas and oil, fair odor, spty flor

CH-, few tripp w faint oil & gas, spty flor, mostly dns w re-xln spar in fractures, few pyrite

CH-, mst wht & trip, few pieces brwn-bleed gas, faint odor; vry spty flor, no show oil

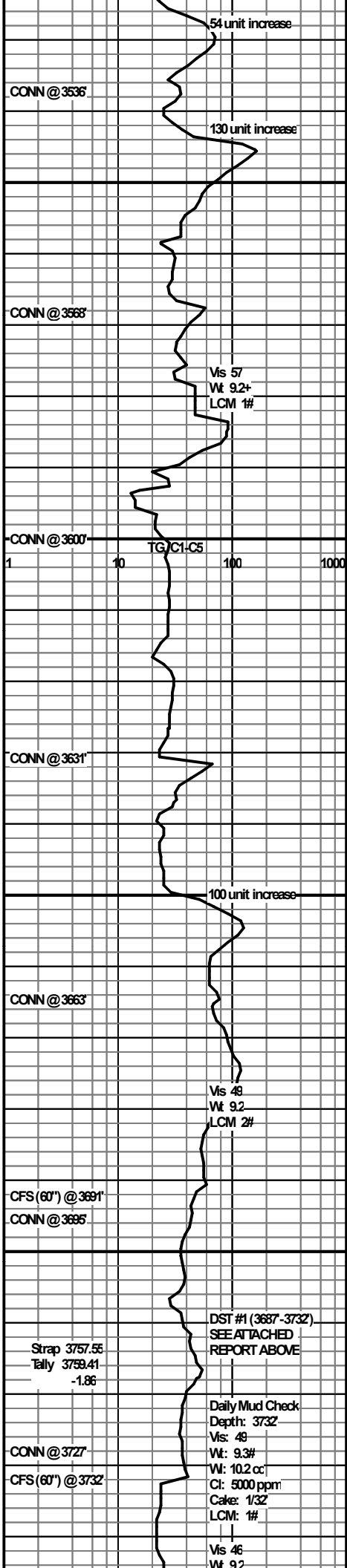
SS-well sorted med grain w gm tint

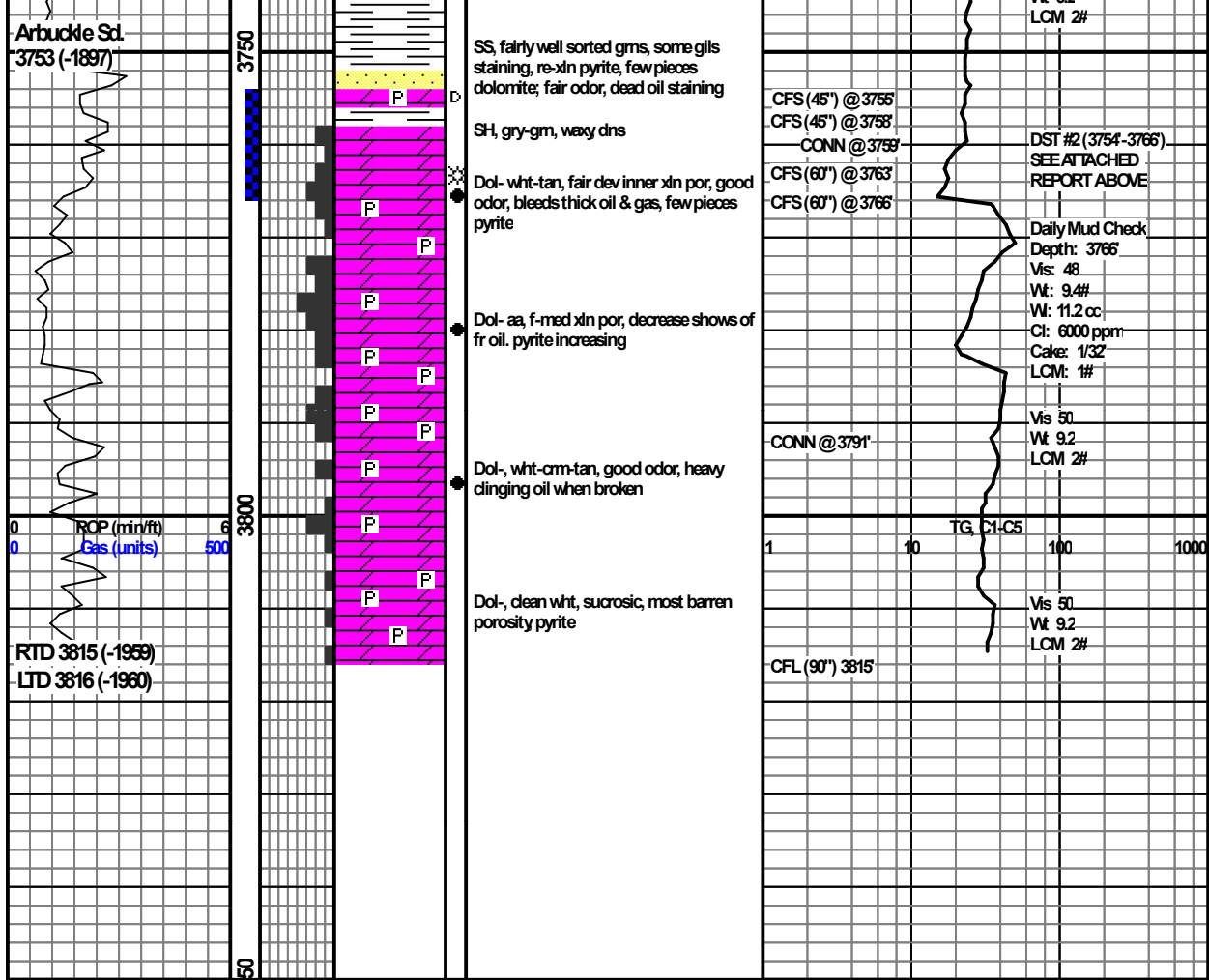
SH- mst gry to gmish, few sl silty some blue/gm waxy sh's

SS- mst gmish to tan, few dol, few w fair sh drk fr oil, tr gas, faint odor, spty dull flor

SS- clear to tan, sl show drk fr oil, aa, spty dull flor, abdt loose fair well sorted/rounded sand grains, faint odor

SH-gm-drk gm, few gry gm SH is waxy & fryly dns, few pieces quartz w iron staining





Arbuttle Sd.
3753 (-1897)

3750
3800
3850
50

ROP (min/ft)
Gas (units)

RTD 3815 (-1959)
LTD 3816 (-1960)

SS, fairly well sorted grms, some gils staining, re-xln pyrite, few pieces dolomite, fair odor, dead oil staining

SH, gry-gm, waxy dns

Dol- wht-tan, fair dev inner xln por, good odor, bleeds thick oil & gas, few pieces pyrite

Dol- aa, f-med xln por, decrease shows of fr oil. pyrite increasing

Dol-, wht-crm-tan, good odor, heavy clinging oil when broken

Dol-, clean wht, sucrosic, most barren porosity pyrite

CFS (45") @ 3755
CFS (45") @ 3758
CONN @ 3759
CFS (60") @ 3763
CFS (60") @ 3766

LCM 2#

DST #2 (3754-3766)
SEE ATTACHED REPORT ABOVE

Daily Mud Check
Depth: 3766
Vis: 48
Wt: 9.4#
W: 11.2 cc
Cl: 6000 ppm
Cake: 1/32
LCM: 1#

CONN @ 3791'

Vis 50
Wt 9.2
LCM 2#

1 10 TG C1-C5 100 1000

CFL (90") 3815

Vis 50
Wt 9.2
LCM 2#