

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: KD #1
Location: SE-NW-NE of Section 35-23s-12w - Stafford County, KS
License Number: KCC Licence#: 5614 Region: Mid-Continent
Spud Date: 01/15/2014 Drilling Completed: 01/22/2014
Surface Coordinates: 1083' FNL & 1734' FEL
of Section 35-23s-12w
Bottom Hole Coordinates: Same as Surface Coordinates
Ground Elevation (ft): 1849' K.B. Elevation (ft): 1862'
Logged Interval (ft): 2800' To: 3992' Total Depth (ft): 3992'
Formation: LKC (Productive) & 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
Address: P.O. Box #521
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GEOLOGIST

Name: Jeffrey A. Burk & Eli Felts, Consulting Petroleum Geologist
Company: PETERRA Energy Services
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Drilling Report

01/09/14 Langfeld Dirt built location & Kelly's Water Well drilled a 70' water well.
01/15/14 MIRU & spudded @ 8:00 p.m.
01/16/14 Drilled to 317' KB (Survey 1/2 degree). Ran (7) jts. of new 8 5/8" casing and cemented
@ w/ 300 sxs. of 60/40 pozmix (3% cc, 2% gel). Cement was down 30'. Ran (1") and
cemented w/ additional 50 sxs. Cement to surface.
01/17/14 Drilling ahead @ 1485' @ 7:30 a.m.
01/18/14 Bit trip @ 3106' (Survey 1 degree). Strap 1.66' long to board.
01/19/14 Ran DST #1 3408'-3487' (see report), covering Lansing "B", "D", & "F" zones. Started
running DST #2 3487'-3501'.
01/20/14 Finishing DST #2 3487'-3501' (see report), covering Lansing "G" zones. Started running
DST#3 3533'-3620' covering "H", "I", "J", & "K" zones.
01/21/14 Finished running DST#3 3533'-3620' (see report) covering "H", "I", "J", & "K" zones.
Drilled to 3885' and started DST #4 (3817'-3885') covering the Arbuckle.
01/22/14 Finished running DST #4 (3817'-3885') (see report) covering the Arbuckle. Drilled ahead
to 3991' (RTD). Nabors Logging ran: CNL/CDL, DIL, MICRO, & SONIC logs. Started
LDDP.
01/23/14 Finished LDDP & began running 5 1/2" casing @ 6:30 a.m. Casing set @ 3990' KB &
cemented w/ 150 sxs. of AA-2 cement (10% salt 5#/sx gil, 1/2# cell flake, 1/4% FR, 1/4%

DST Reports

DST #1 3408'-3487' (Lansing "B"- "F")

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

1st open: BOB in 90 sec. w/ no GTS

1st shut in: no blow back

2nd open: BOB in 30 seconds w/GTS in 45 minutes (TSTM)

2nd shut in: weak surface blow back

REC: 3092' GIP

329' GWMCO (35% G, 30% O, 25% M, 10% W)

IHP: 1747#

IFP: 36#-87#

ISIP: 954#

FFP: 67#-129#

FSIP: 832#

FHP: 1689#

BHT: 102 degrees

Note: Not enough water for a chloride check

DST #2 3487'-3501' (Lansing "G")

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

1st open: fair blow - built to 8"

1st shut in: no blow back

2nd open: weak blow - built to 3"

2nd shut in: now blow back

REC: 62' GIP

62' SOMCW (5% O, 50% W, 45% M)

120' Water

IHP: 1737#

IFP: 19#-52#

ISIP: 1028#

FFP: 57#-104#

FSIP: 991#

FHP: 1659#

BHT: 104 degrees

Clorides: 80,000 ppm (RW .17 @ 40 degrees)

DST #3 3533'-3620' (Lansing "H", "I", "J", "K")

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

1st open: strong blow w/ BOB in 3 min. w/ no GTS

1st shut in: weak surface blow back

2nd open: strong blow w/ BOB in 30 seconds w/ no GTS

2nd shut in: 3 1/2' blow, declined to 1 1/2" blow back

REC: 2827' GIP

72' GOCM (2% G, 5% O, 93% M)

300' GMCO (40% G, 40% O,

20% M)

IHP: 1782#

IFP: 38#-133#

ISIP: 1160#

FFP: 123#-209#

FSIP: 1139#

FHP: 1742#

BHT: 103 degrees

DST #4 3817'-3885' (Arbuckle)

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

1st open: weak 1/2" blow w/ no GTS

1st shut in: no blow back

2nd open: weak 1" blow

2nd shut in: no blow back

REC: 266' MCW (60% W, 40% M)

120' W

IHP: 1980#

IFP: 24#-108#

ISIP: 1219#

FFP: 112#-193#

FSIP: 1174#

FHP: 1897#

BHT: 108 degrees

Comments

Due to the positive results and hydrocarbons recovered on DST #1 and DST #3, it was decided by all parties involved to set 5 1/2" casing in order to further evaluate the zones covered by those tests.

Respectfully submitted,

PETERRA Energy Services
 Jeffrey A. Burk, Petroleum Geologist
 Eli Felts, Petroleum Geologist

ROCK TYPES

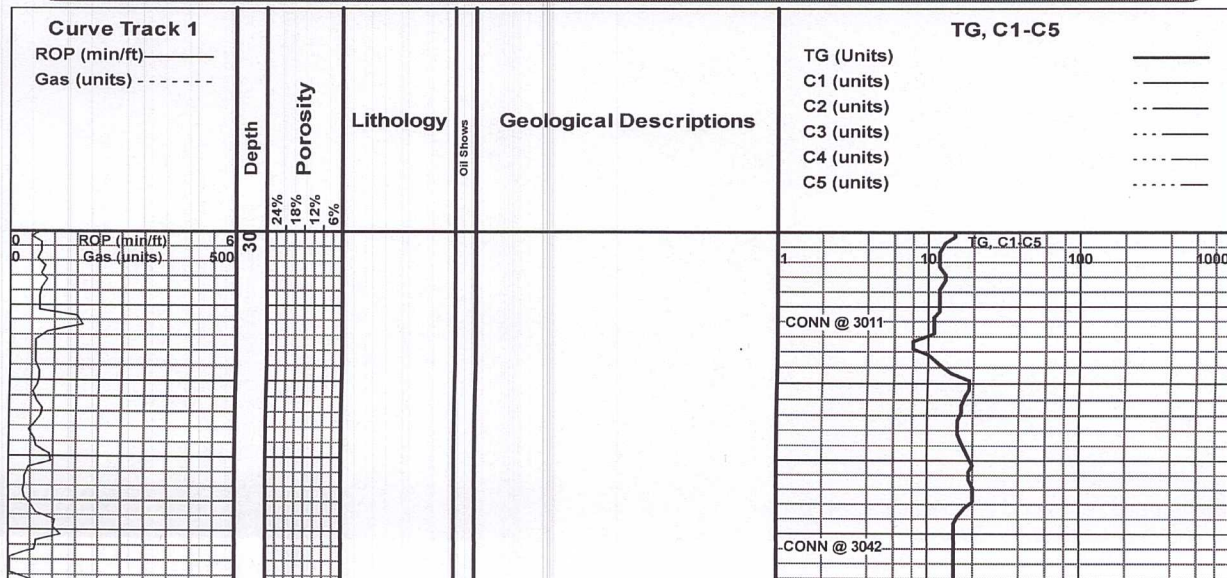
Anhy	Coal	Lmst	Shcol
Bent	Congl	Meta	Shgy
Brec	Dol	Mrlst	Sltst
Cht	Gyp	Salt	Ss
Clyst	Igne	Shale	Till

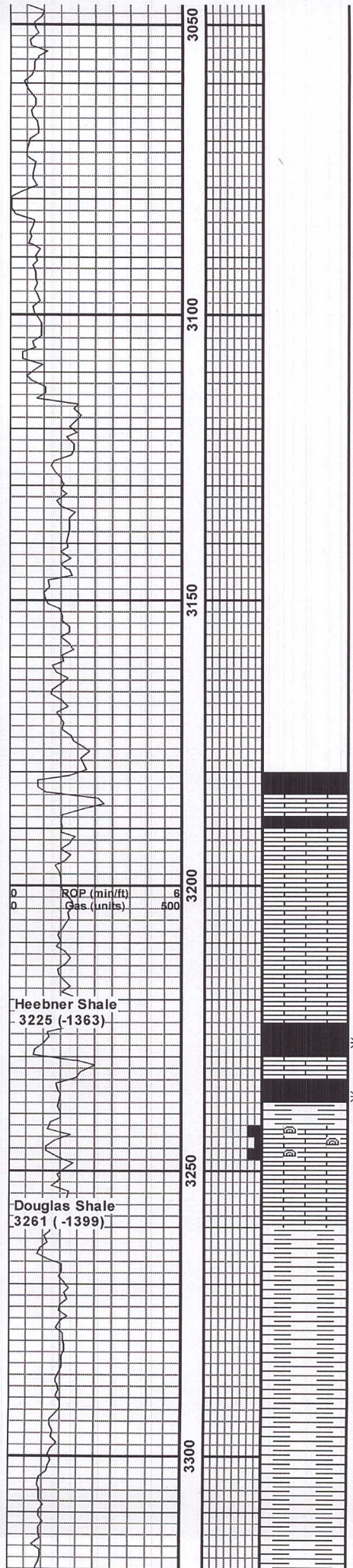
ACCESSORIES

MINERAL	Minxl	Crin	Gyp
Anhy	Nodule	Echin	Ls
Arggrn	Phos	Fish	Mrst
Arg	Pyr	Foram	Sltstrg
Bent	Salt	Fossil	Ssstrg
Bit	Sandy	Gastro	
Brecfrag	Silt	Oolite	TEXTURE
Calc	Sil	Ostra	Boundst
Carb	Sulphur	Pelec	Chalky
Chtdk	Tuff	Pellet	Cryxln
Chtlt		Pisolite	Earthy
Dol	FOSSIL	Plant	Finexln
Feldspar	Algae	Strom	Grainst
Ferrpel	Amph		Lithogr
Ferr	Belm	STRINGER	Microxln
Glau	Bioclst	Anhy	Mudst
Gyp	Brach	Arg	Packst
Hvymin	Bryozoa	Bent	Wackest
Kaol	Coral	Coal	
Marl		Dol	

OTHER SYMBOLS

POROSITY	SORTING	OIL SHOW	Dst
Earthy	Well	Even	Dst
Fenest	Moderate	Spotted	
Fracture	Poor	Ques	EVENT
Inter		Dead	pipesymbol
Moldic	ROUNDING	Gas show	Rft
Organic	Rounded	New symbol	Sidewall
Pinpoint	Subrnd		
Vuggy	Subang	INTERVAL	
	Angular	Core	





SH - dark grey to black, few carb

LS- mst crm to buff, most f xln, sl foss, few w/ pp por to inner foss por, few chlky NSFO

LS- crm to buff aa, mst f xln, poor dev pp por, chlky in most, NSFO

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

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

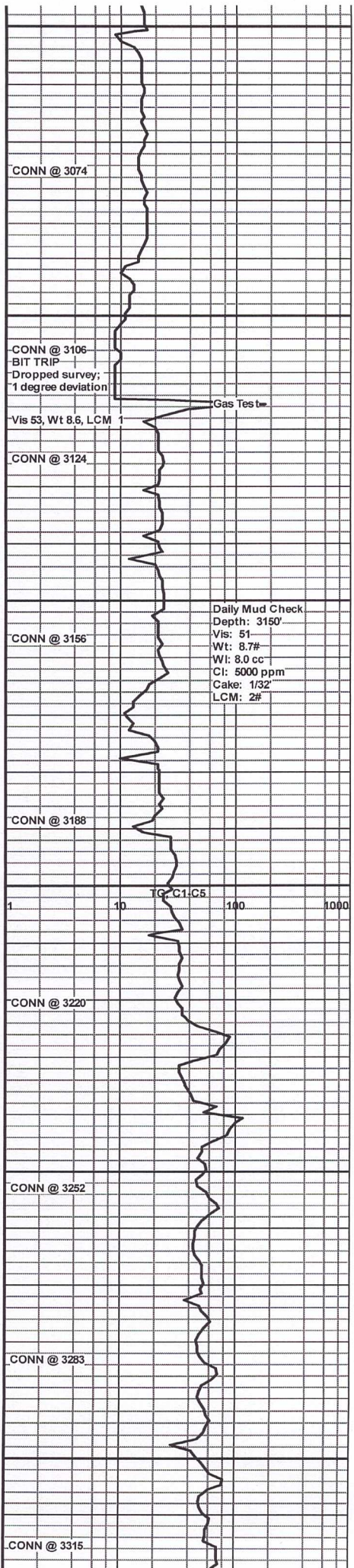
LS crm to buff, mst f xln, sl foss in few, few sl chlky, poor dev por, NSFO

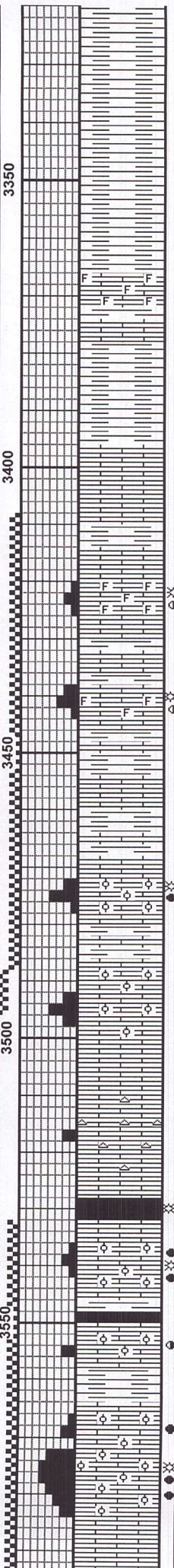
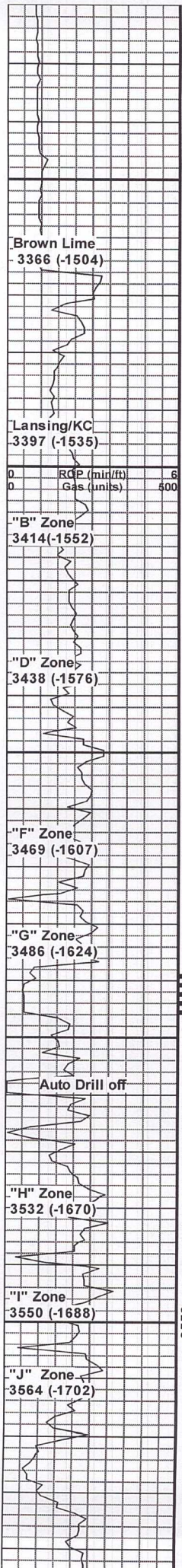
SH- mstly gry and shades of gry, few red & grn, few silty

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

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

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





SH- gry, gry.grn, silty, mica in part few sl mushy

SH- mst gry, so ft and mushy as above, tr scatt pyrite

LS- mst brn, v dns, f xln, few foss, poor to no vis por.

SH- mst gry, fewgr nish and slsdy, tr red

LS- wh to crm/buff, mst f xln, few spty foss, few sl chky, NS

SH- mst drk gry, fewsl limey

LS- crm to tan, mst f xln, tr foss, to frac porosity, w/few spty sh oi & gas in very few, sl odor, spty dull flor, spty edged lt brn stain

LS- crm to gryish, f xln, tr foss, few w/ fair inner foss por, sh drk fr oil in few, faint odor, poor dull flor, spty 30% drk stain

LS- mst gry to tan, dns f xln, tr foss, poor dev inner foss por, NSFO

LS- tan, f-med xln, few ool/oom por, tr inner xln por, fair sh fr oil and gas, fair odor, dull spty flor, 25% spty lt brn stain

LS- crm to buff, highly dev ool/ool por, fair sh lt fr oil, tr gas bubbles, fair odor, spty 25% stain.

LS- crm to tan, f xln, v few ool, poor dev inner ool/foss por, NSFO

LS- tan, f xln, v dens, poor to no vis por, tr chert, NSFO

SH- mst blk to carb, dns organic sh, bleeds gas

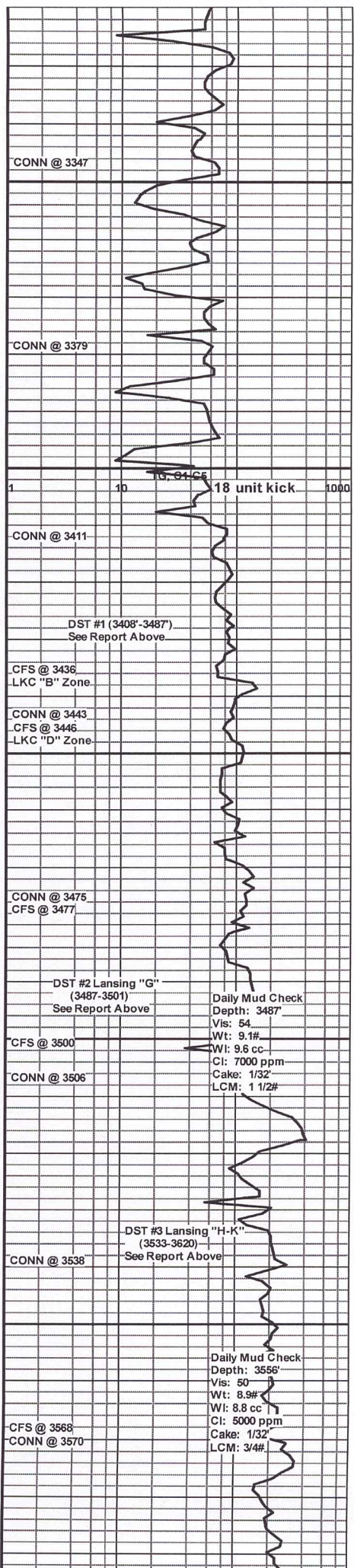
LS, crm, fn-med xln, few ool/ool, few pp/ vuggy porosity, f sh fr oil & gas, fair odor, spty fluor.

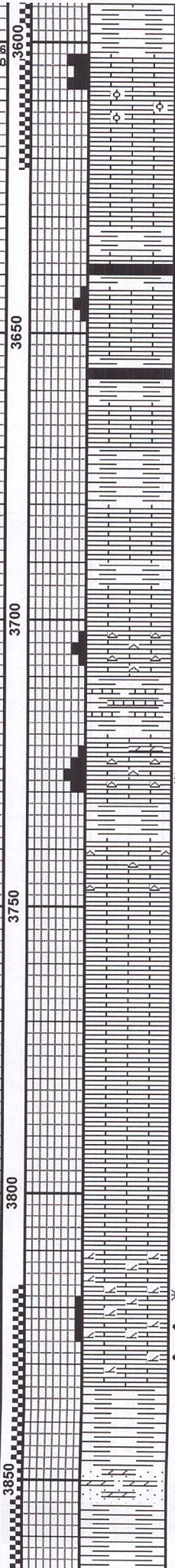
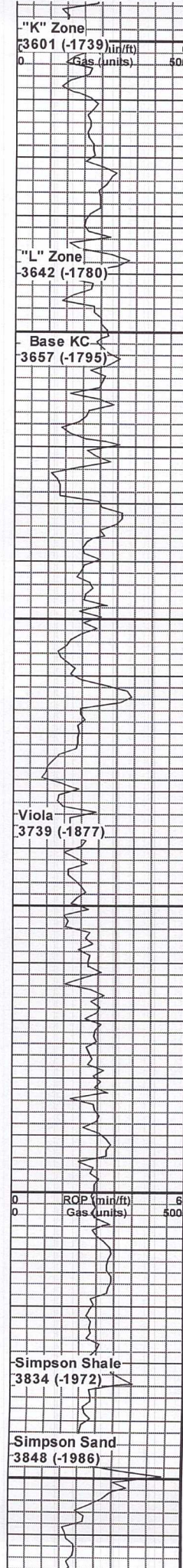
LS- crm to buff, abdt sm ool, few w. inner ool por, v wksh of lt fr oil in 2 pieces

LS- crm to tan, mst f xln, few w/ spty ool/foss por, f sh lt fr oil and gas bubbles, fair odor/flor, spty 25% brn stain

LS- crm to tan, aa, mst med xln, highly ool/ool, fair show of lt fr oil w/ few gas bubbles, fair odor, spty yellow flor, 30% spty brn stain.

LS- tan, dns, tr sparse ool, mst w/ poor to no vis por, NS





SH- mst gry few sl limey, few sfoss, w/ tr pell

LS, crm, dns, f xln w/ scat ool/oom porosity in few, sl sh f oil, sl odor, dull fluor

LS- mst gry to tan, v dns, f xln, mst w/ poor dev inner xln por, NSFO

SH, grey/grn/ few blk carb, small traces pyrite

LS, crm to gry, f- xln w/ scat inner fossiliferous / oolitic porosity, fair show of dark free oil, fair odor, spotty fluor.

SH- drk gry to blk, sub to carb, mst brittle, fissile

LS- mst gry to drk gry, fn to micro xln, poor to no vis por

SH- mst gry, grn, reddish sh, most soft, few red mushy

LS- gry to maroon, mst micro xln, few var colored sh, tr chert, NSFO

SH- var colors, mst maroon, waxy

CH- mst tan to wh, many limey, mst dns, fresh chert, few w/ tr gas show, no odor, poor flor

SH- mst gry, fewgr nish, mst limey, few maroon

CH- mst bone white, few sl trip, abdt LS inner-bedded, few w/ sl sh of gas, poor dev por. no sh fr oil, no odor

SH- mst gry, fewwaxy & dns, silty w/ tr pyrite

LS- most wh to buff, f xln, w/ inner-bedded bone wh chert, poor to no vis por, NSFO

LS- mst wh to buff, f xln, dns, few scatt cherts, NSFO

LS- mst wh to crm, dns, v f xln, tr bone white cherts, NSFO

LS- mst wh to tan, few sl dol, poor dev pp por in few, NSFO

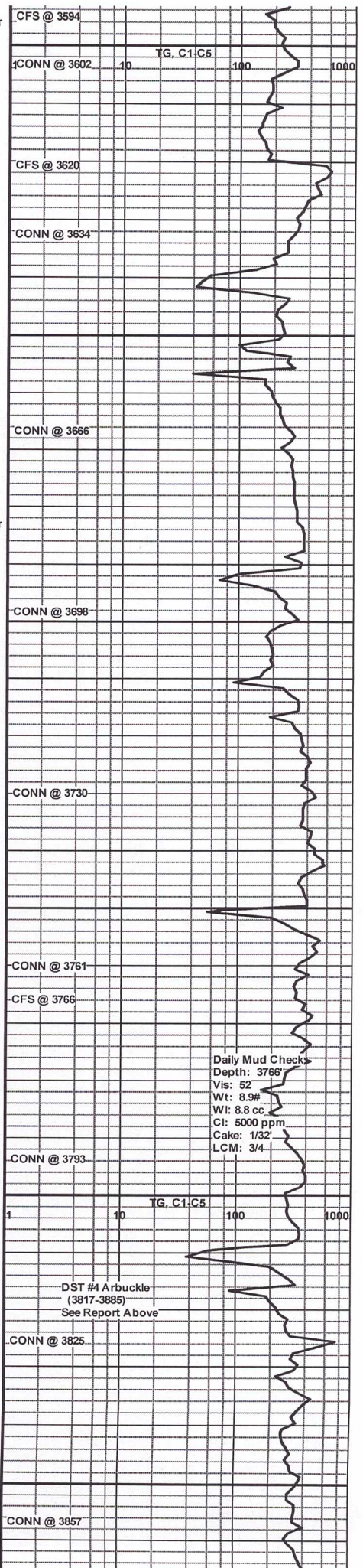
DOL- brn micro xln, v dns, v fn xln, some limey, sl sdy app, sl sh gas & bleeding fr oil.

DOL- drk brn aa, v f xln, grainular app, sl sh bleeding fr oil, v faint odor, dull flor

SH, mst grey to greenish, few blue grn, some slsandy

SS- mst tan to clear, f-med grain, fair sorted, poor fria, mst dol, NSFO

SH, grn-grey, some vry mushy, traces pyrite.



- Arbuckle
3879 (-2017)

Rotary Total Depth
3991 (-2129)

3900

3950

00

SH, dark grey to grnish, lots of pyrite,

DOL- mst crm to tan, some fn to m xln, tr
foss to pp por, f sh of fr oil, fair to gd
odor, spty 30% lt brn stain

DOL- mst tan, f xln, dns, poor dev pp por
in few, tr pyrite, faint odor, poor flor,
NSFO

DOL- Tan to crm, mst m xln, fair dev por,
faint odor, poor flor, NSFO

DOL- mst tan to pink, mst f xln, poor dev
por, no sh fr oil, poor odor, dull flor

DOL- mst tan w/ few pinkish, f xln, dns,
poor dev pp por in few, tr pyrite, faint
odor, no flor, NSFO

DOL- mst f-med xln, fair dev pp to vuggy
por, v faint odor, no flor, NSFO

.CFS @ 3883
.CFS @ 3885
CONN @ 3889

.CONN @ 3921

.CONN @ 3953

.CFS @ 3963

.CONN @ 3984

Dropped survey; 3/4
degree deviation

Vis 54
Wt 9.1
LCM 2

Daily Mud Check
Depth: 3963'
Vis: 52
Wt: 9.1#
Wl: 8.8 cc
Cl: 4000 ppm
Cake: 1/32
LCM: 2#