

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Carr #2-34
Location: 1062' FNL & 1147' FWL, Sec. 34-T21S-R16W, Pawnee Co., KS.
Licence Number: 15-145-21689-0000 Region: Larned Field
Spud Date: 10/9/2012 Drilling Completed: 10/17/2012
Surface Coordinates: 1062' FNL & 1147' FWL, Sec. 34-T21S-R16W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 1991' K.B. Elevation (ft): 2002'
Logged Interval (ft): 3150 To: 4538' Total Depth (ft): 4538'
Formation: Granite Wash at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 2984'; Chemical Gel 2984' to 4538'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

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GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
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Wichita, KS. 67205-8856

Cores

None Taken

DSTs

DST #1(Lansing 'A' + 'B' zones) 3508' - 3544' Test Times 15"-45"-45"-90" IFP Weak Blow built to Fair 3.5" Blow, FFP Fair 7" Blow, no Blowback on SI's; REC: 200' Gas in Pipe, 50' OCM(10%O, 90%M), 30' GO & WCM(10%G, 15%O, 20%W, 55%M) CI 33,000, Mud CI 6000; IFP 15-27#, ISIP 1077#, FFP 31-46#, FSIP 1028#, IHP 1714#, FHP 1714#, BHT 107 Deg. F.

DST #2(Arbuckle) 3772' - 3855' Test Times 10"-30"-10"-30" IFP Strong Blow BOB/1 Min., FFP Strong Blow BOB/2 Min., 7" Blowback on FSI; REC: 370' Gas in Pipe, 490' GWOCM(10%G, 25%O, 25%W, 40%M), 770' GOCMW(5%G, 20%O, 55%W, 20%M), 420' GMW(5%G, 90%W, 5%M), CI 37,000, Mud CI 6500; IFP 476-692#, ISIP 1190#, FFP 724-881#, FSIP 1192#, IHP 1903#, FHP 1733#, BHT 117 Deg. F.

Comments


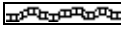
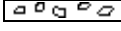
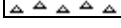
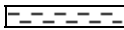







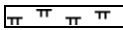

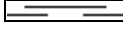
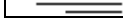
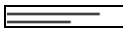


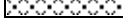
10/9/12 MIRU Sterling Rig #2, Spud at 8:30 PM.; 10/10/12 Drilling at 774'; 10/11/12 TD. 1011' - Drilling Cement Plug; 10/12/12 Drilling at 2347'; 10/13/12 Drilling at 3080'; 10/14/12 TD. 3544' - DST #1; 10/15/12 Drilling at 3810'; 10/16/12 Drilling at 4025'; 10/17/12 RTD. 4538' - Short Trip for Logs

Set new 8 5/8" 23# Surface Casing at 1006' w/ 400 sx.(Basic Energy Services). Cement did Circulate. PD. 5:30 PM. 10/10/12.

















































Surveys: 0.5 Deg. at 1011'(Surface Casing); 0.75 Deg. at 3544'(DST #1); 1 Deg. at 3855'(DST #2); Deg. at 4538' RTD.

Pipe Strap at 3544'(DST #1): Strap 0.84 Long to the Board, no correction made to the Board.
























ROCK TYPES

 Anhy  Bent  Brec  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  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
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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
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Curve Track 1

ROP (min/ft) ———

Gamma (API) - - - - -

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

conn

A.V.= 120.05

WOB 37-38K
PP 900#
SPM 60
RPM 70
conn

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

conn
MudCo. Mud
Check at 3208'
Vis 48 Wt. 8.7
WL 10.0 CI 12800
PH 10.5 LCM Trc.

conn

WOB 38K
PP 810#
SPM 56
RPM 72
conn

A.V.= 120.00

Depth
Porosity Type

Lithology

Oil Shows

Geological Descriptions

TG, C1-C5
TG (Units) ———
C1 (units) - - - - -
C2 (units)
C3 (units)
C4 (units)
C5 (units)

HERMAN L. LOEB, LLC.

CARR #2-4

GEOLOGICAL REPORT

KB. 2002'

10' Wet and Dry Samples

LM; tan to lt brn, foss ip, scat fair interpart por, minor soft chalky mtx, spotty lt yel min fluor, no stn or odor, ns.

LM; off wh, lt gy, buff, fxln, scat poor vis interxln por, interbdd hd gy micrite, occ dull yel min fluor, no stn or odor, ns.

LM; med brn, blocky, hd, micritic

LM; off wh, buff, f to med xln, fair to occ gd interxln por, minor soft chalky mtx, dull to lt yel min fluor, no stn or odor, ns.

SH; blk, platy, smooth

SH; med gy, gy grn, platy, silty ip.

LM; lt to med brn, gy brn, most dense, blocky, scat gy to amber occ foss cht, no vis por, no fluor, ns.

LM; tan to buff, med to cse xln, fair to gd interxln por, lt yel fluor, no stn or odor, ns.

LM; med brn, gritty to fxln, most well cem, scat foss mat, lt yel min fluor, no stn, ns.

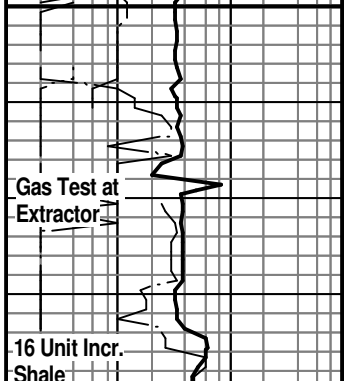
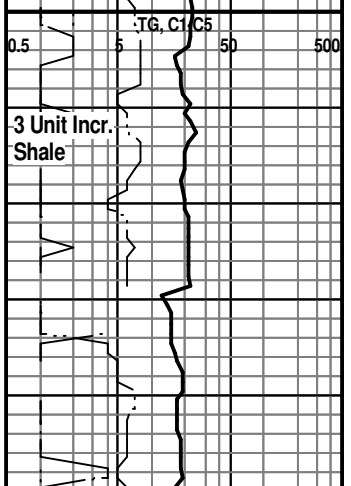
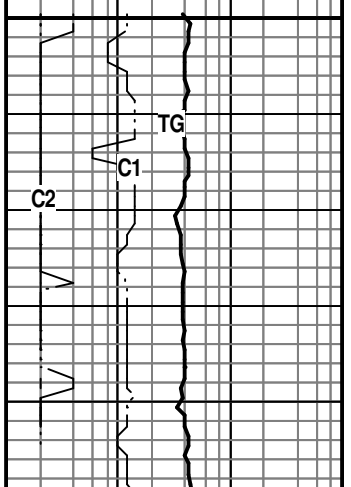
SH; med gy, grn, foss ip, platy

LM; med gy brn to dk brn, hd, micritic, tite

QUEEN HILL SHALE 3284(-1282)

SH; blk, carb ip, platy, trc gas, trc pyr

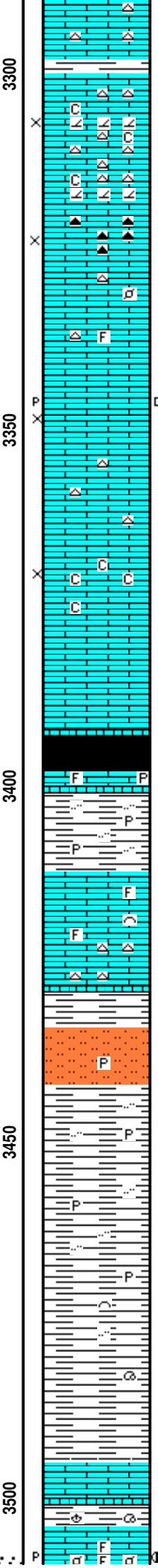
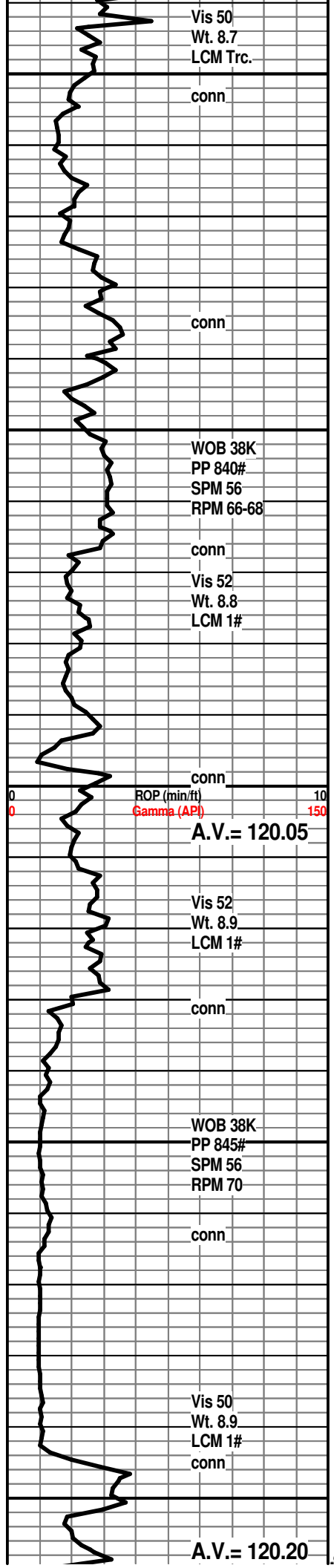
TG, C1-C5
0.5 5 50 500



3 Unit Incr. Shale

Gas Test at Extractor

16 Unit Incr. Shale



LM; lt to med xn, med to micritic, scat gy to tan cht, no vis por, spotty lt yel min fluor, no stn or odor, ns.

LM; off wh, tan, buff, med to occ cse xln, some interbdd dolomitic lmst, cherty w/off wh, tan to lt gy cht, scat lt yel min fluor, minor soft chalky mtx, no stn or odor, ns.

LM; tan to lt brn, f to med xln, some gran text, fair interxln por, interbdd dk gy/smoky/blk cht, dull yel to no fluor, ns.

LM; tan to cream, buff, fxln, scat fair interxln w/occ p-p por, few pcs w/blk tar/gilsonite, dead oil, no live shows, no odor, weak/no cut

LM; off wh, wh, cream, fxln, much chalk and chalky mtx, soft ip, fair interpart por ip, no fluor, no stn or odor, ns.

HEEBNER SHALE 3393(-1391)
SH; blk, carb ip, platy, trc gas
LM; med brn, gy brn, dense, foss ip, pyr.

SH; grn, gy grn, silty, firm, occ pyr.

TORONTO 3412(-1410)
LM; off wh, wh, buff, fxln, scat well cem foss mat, hd, rare off wh cht, much med yel min fluor, interbdd hd gy micrite, no stn or odor, no gas kick, ns.

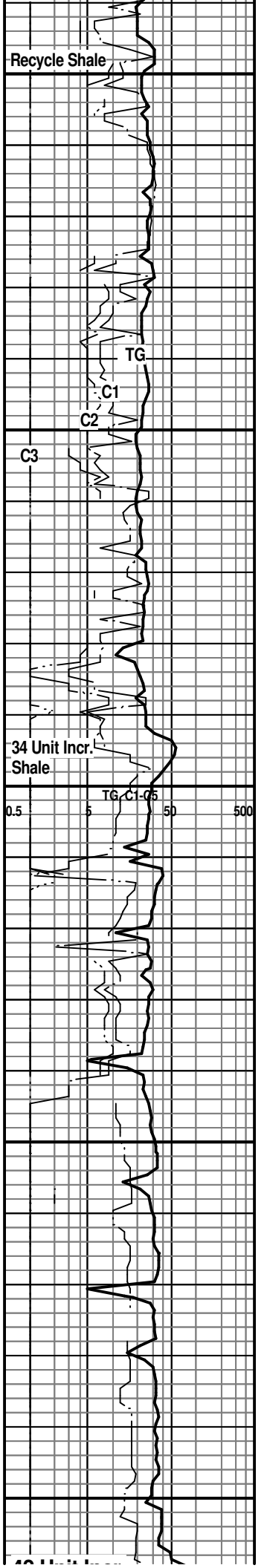
DOUGLAS SHALE 3429(-1427)
SH; lt to med gy, silty, platy
SLTST; lt gy, rarely med gy, firm, platy

SH; lt to med gy, silty ip, occ pyr, firm

SH; med gy, firm, fiss to flakey, rarely foss

BROWN LMST. 3495(-1493)
LM; med brn, dense, micritic, blocky

LANSING 'A' 3504(-1502)
LM; lt/med gy, tan, foss - finely pelletal, fair p-p and occ



DST #1
Lansing "A"
 + "B" zones
 conn 3508' - 3544'

Vis 54
 Wt. 8.9
 LCM 1#

CFS. at 3544'
 MudCo. Mud
 Check at 3544'
 Vis 51 Wt. 9.2
 WL 8.4 CI 6000
 conn PH 10.5 LCM 1#

WOB 38K
 PP 920#
 SPM 56
 RPM 70

conn

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

Vis 50
 Wt. 9.2
 LCM 1#

A.V. = 120.20

conn

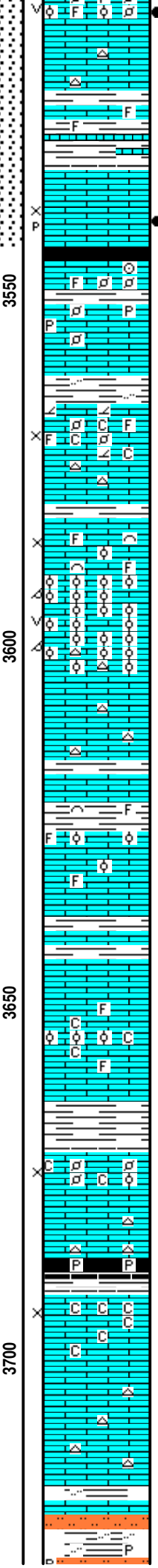
conn
 Vis 50
 Wt. 9.2
 LCM 1#

WOB 38K
 PP 975#
 SPM 56
 RPM 70

conn

Vis 53
 Wt. 9.2
 LCM 1#

conn



vug por, med/brite yel fluor, 1rc. FO, gd odor, spotted to even lt brn stn, few gas bubbles, some bleeding oil, gd cut

LM; off wh, buff, most dense, scat off wh cht

SH; med gy, grn, interbdd hd foss lmst strngs.

LANSING 'B' 3533(-1531)

LM; tan to cream, f to med xln, fair interxln w/p-p por, med/brite yel fluor, fair odor, Trc. FO, trc gas, most w/even med brn stn, fair to gd cut

DST #1: Lansing 'A'+ 'B' 3508' - 3544'

LM; med brn, gy brn, foss - pelletal ip, most well cem, scat pyr, no vis por, ns.

LM; tan to lt brn, foss, scat foss frags w/occ pelletal lmst, minor soft chalky mtx, dull to lt yel min fluor, no stn or odor, ns.

SH; med gy, grn, silty ip, firm

LM; off wh, tan, cream, foss, fair interpart por, partly sucrosic text - dolo ip, scat soft chalky mtx ip, interbdd gy to off wh cht, dull yel min fluor, no stn or odor, ns.

LANSING 'G' 3582(-1580)

LM; tan to off wh, buff, foss - partly oolitic, most well cem, poor interpart por, no stn, ns.

LM; off wh, tan - buff, oolitic, most med to occ lrg moldic por, scat vug por also, occ chalk and chalky mtx, no fluor, no stn or odor, scat off wh to gy oolitic cht, ns.

LM; tan to buff, off wh, most dense, blocky, scat off wh cht, tite

LM; med brn, hd, foss ip, tite

KANSAS CITY 'H' 3626(-1624)

LM; tan to cream, foss ip, rarely oolitic, most well cem, dull yel min fluor only, no stn or odor, ns.

SH; med gy grn, platy

LM; off wh, buff, f to med xln, scat soft chalky mtx, poor interpart por, interbdd foss lmst w/wscat small oolites, chalky, dull yel fluor, ns.

SH; med gy, grn, trc dk gy, platy

KANSAS CITY 'J' 3671(-1669)

LM; tan to off wh, wh, f to med xln, scat foss w/small pellets, most well cem, minor soft chalky mtx, poor/no vis por, no stn or odor, ns.

LM; tan to cream, buff, hd, micritic, cherty, tite

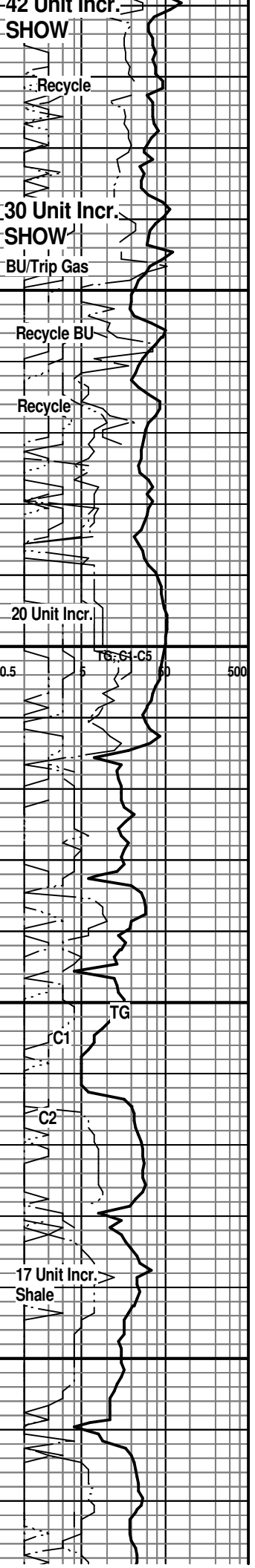
SH; blk, platy, pyr ip.

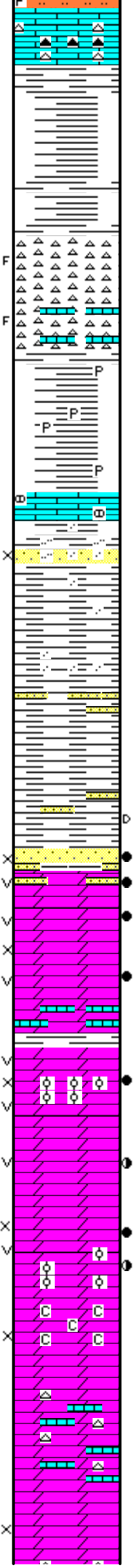
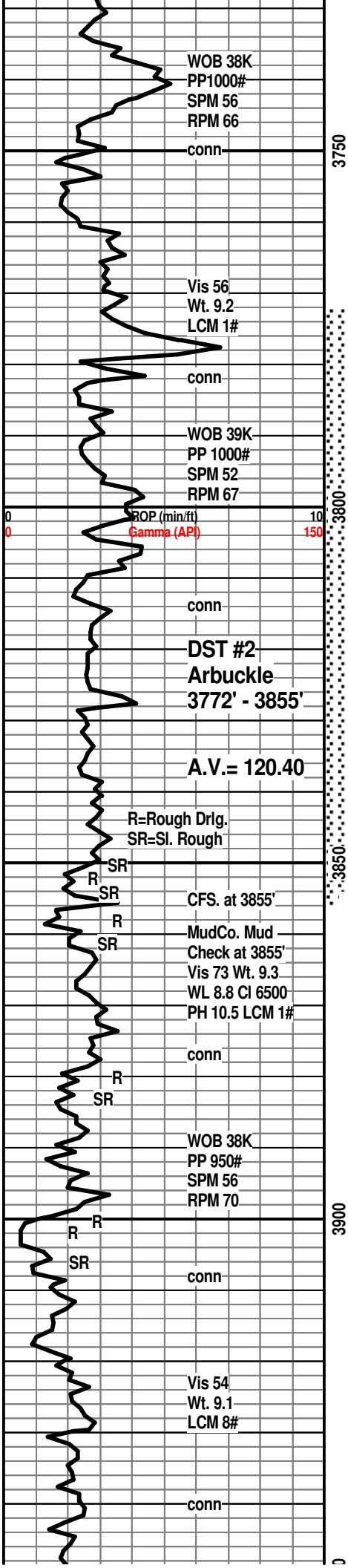
LM; wh, off wh, fxln, v. chalky at top, poor interxln por, no fluor, ns.

LM; tan to buff, rare lt brn, blocky, hd, no vis por, scat off wh to gy cht, tite

BASE KANSAS CITY 3718(-1716)

SH and SLTST; lt gy, some varic sh, soft, silty, occ pyr





MARMATON 3730(-1728)
LM; lt brn, tan, most dense, cherty ip w/brn to org cht, hd, no vis por, no fluor, ns.

SH; varic, grn, yel, rust red, fiss to flakey

SH; varic, grn, gy, red, yel, fiss

CONGLOMERATE 3761(-1759)
CHT; varic, org, brn, gy, most hd-sharp, fresh, trc frags, interbdd nodular weathered lmst - pink to red, no stn or odor, no gas kick

SH; varic, grn, maroon, mauve, gy, fiss, scat pyr

LM; red brn, off wh, nodular, weathered appear.

SIMPSON SHALE 3802(-1800)
SH; med grn, gy grn, some dk gy/blk, carb ip, silty to sandy, interbdd f to med gr clr qtz ss clusters, fair to gd intergran por, no stn or odor, ns.

SH; med grn, gy grn, silty to sandy, interbdd dk gy/blk carb sandy shales

SH; sea grn to turquoise, platy, waxy ip, sandy, interbdd med to cse gr qtz occ ss, blk tar/gilsonite, some live stn - SFO, gd odor

ARBUCKLE 3851(-1849)
DOL; tan, buff, sucrosic to med rhombic, sandy ip, lmy/dense ip, strong odor, vug por, GSFO, few gas bubbles, even lt brn stn, brite yel fluor

DST #2: Arbuckle 3772' - 3855'
DOL; tan to buff, med rhombic, scat well dev. vug and interxln por, brite yel fluor, SFO, strong odor, gd to exc. cut, interbdd hd lmy dolo

SH; brite grn, turquoise, platy

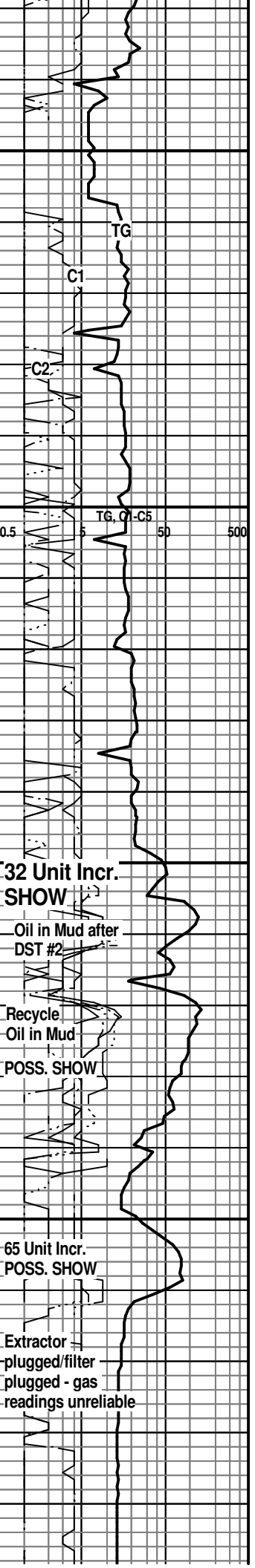
DOL; off wh, tan, buff, med to occ cse rhombic, gd interxln w/vug por, most w/even med brn stn, med to brite yel fluor, SFO, strong odor, interbdd altered oolitic lmy/dolo

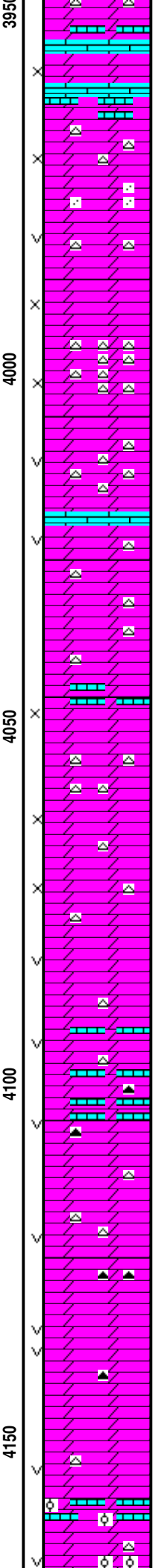
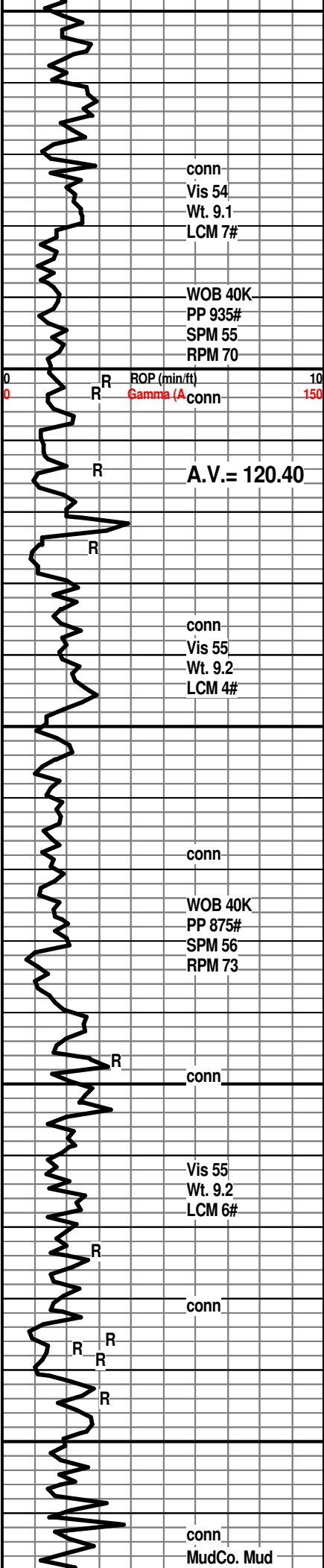
DOL; tan to buff, med rhombic, some lmy, scat med brn stn, vug por, some tite

DOL; lt brn, sucrosic, v. gd interxln w/occ vug por, most w/even oil stn to occ saturation, brite yel fluor, strong odor, gd cut, SFO, interbdd wh oolitic dolo.

DOL; off wh, buff, sucrosic, soft ip, gd interxln por, interbdd soft chalk and chalky dolo, decr. in staining/faint odor

DOL; tan to buff, off wh, finely rhombic, lmy, scat wh to off wh cht, no stn, faint odor, fair interxln w/occ vug por, med yel min fluor, ns.





DOL; off wh, tan to lt brn, sucrosic to finely rhombic, scat off wh oolitic cht, interbdd med brn hd lmy dolo and dolo. lmst, med yel min fluor, no stn or odor, ns.

DOL; tan to lt brn, sucrosic to fine rhombic, rare med gr qtz in dolo, rare off wh oolitic cht, med yel min fluor, fair interxln w/rare vug por, no stn or odor, ns.

DOL; tan to lt brn, sucrosic to fine rhombic, abnt wh fresh cht, med yel min fluor, fair interxln por, no stn or odor, ns.

DOL; lt to med brn, sucrosic to f rhombic, cherty, scat transl. qtz xtals, vug por, med yel min fluor, ns.

LM; med brn, dense, micritic, cherty

DOL; lt brn, off wh, med rhombic w/well dev. vug por, cherty ip w/occ wh fresh cht, med yel min fluor, ns.

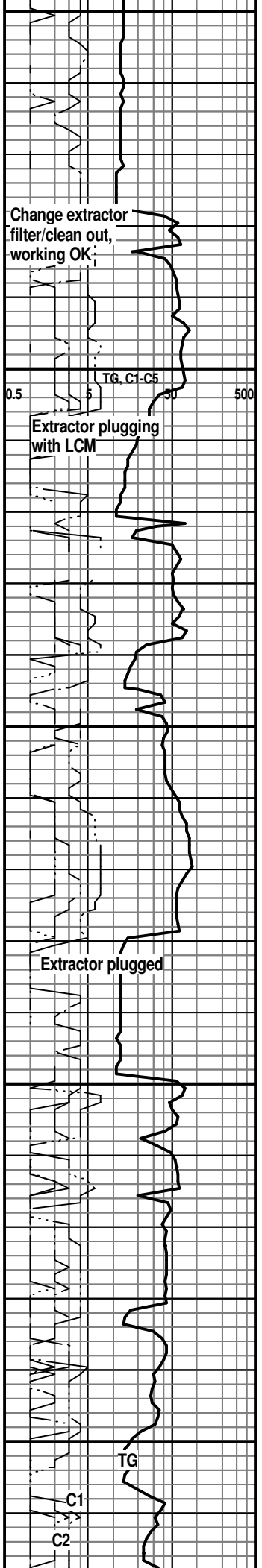
DOL; tan to lt brn, sucrosic to fine rhombic, scat hd lmy dolo/dolo lmst, cherty ip, occ soft chalky mtx, fair to gd interxln por, med yel fuor, faint sulfur odor, ns.

DOL; tan to buff, occ lt gy, most med rhombic w/gd interxln and vug por, scat off wh cht, interbdd csely rhombic dolo w/well dev. vug por, med yel fluor, ns.

DOL; tan to buff, f to med rhombic, interbdd hd lmy dolo/dolo lmst, occ cherty w/occ amber to org, scat transl. qtz xtals, sli. sulfur odor, med yel min fluor, ns.

DOL; lt to med brn, med rhombic, some rnd rhombs, not qtz gr, v. gd vug por w/lrg pore throats, med yel fluor, scat lrg opaque calc xtals, ns.

DOL; lt brn, tan, med rhombic, lmy ip, scat oolitic lmy dolo, some tite, interbdd well dev. vug por, rare off wh cht, ns.



Check at 4172'
Vis 52 Wt. 8.8
WL 8.8 CI 3800
PH 9.5 LCM 8#

conn

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

WOB 40K
PP 875#
SPM 53
RPM 65-75

conn

Vis 51
Wt. 8.9
LCM 8#

conn

WOB 40K
PP 925#
SPM 53
RPM 66

conn

A.V. = 120.40

Vis 54
Wt. 8.9
LCM 11#

conn

conn
WOB 38K
PP 800#
SPM 56
RPM 68

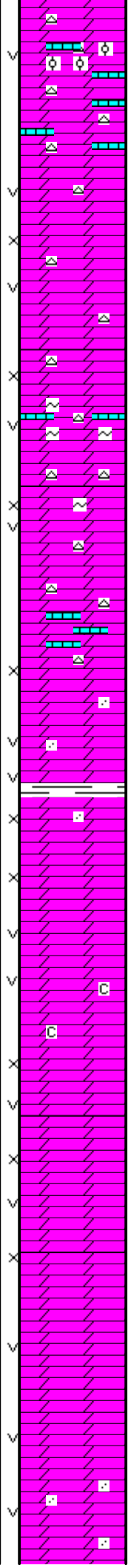
conn

4200

4250

4300

4350



DOL; off wh, tan, lt brn, most med to occ cse rhombic, scat lrg vug por, occ wh oolitic cht, lmy - tite ip, v. dull yel min fluor, no stn or odor, ns.

DOL; lt to med brn, off wh, med rhombic w/gd interxln and vug por, lrg pore throats, scat lt to med yel min fluor, rare wh to off wh oolitic cht, no stn or odor, ns.

DOL; tan to lt brn, rare med brn, sucrosic to med rhombic, scat gd interxln w/vug por, med yel min fluor, occ cherty, rare transl. qtz xtals, no stn or odor, interbdd off wh to lt gy partly lmy glau dolo, ns.

DOL; off wh, lt gy, rare tan, fine to med rhombic, gd interxln and occ vug por, scat off wh/wh cht, med yel min fluor, interbdd hd dolomitic lmst, no stn or odor, ns.

DOL; wh, off wh, med rhombic, minor soft chalky mtx, v. gd interxln and vug por, med yel fluor, rare clr med gr qtz in mtx. ns.

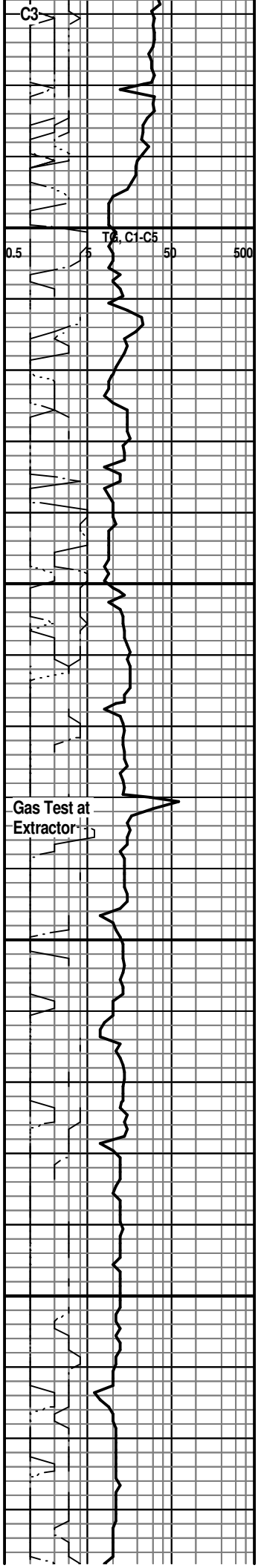
SH; brite grn, platy

DOL; wh, off wh, lt gy, med to cse rhombic, v. gd interxln and vug por, med yel fluor, sl. sulfur odor, no stn, ns.

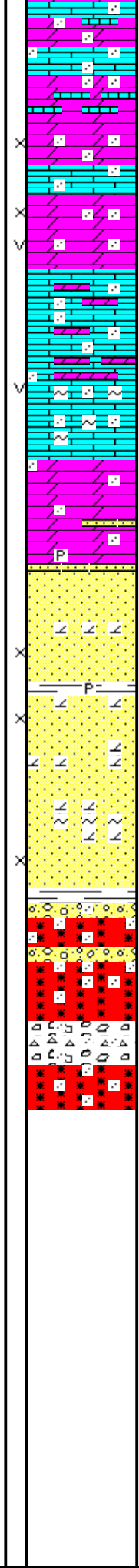
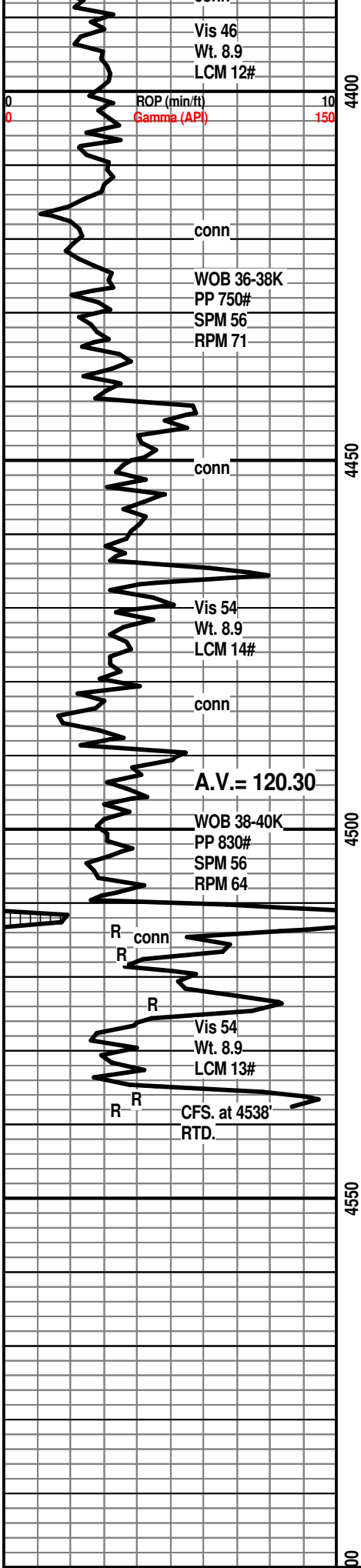
DOL; off wh, wh, lt gy, med to csely rhombic, v. gd to exc. interxln and vug por, minor chalky mtx, med yel min fluor, no stn or odor, ns.

DOL; wh, off wh, csely rhombic, exc. porosity, lrg pore throats, barren, med yel min fluor, ns.

DOL; wh, off wh, med to csely rhombic, exc. vug por, med yel min fluor, no stn or odor, interbdd vf to f gr qtz in dolomite mtx, ns.



Gas Test at Extractor



DOL; wh, med rhombic, very lmy w/interbdd dolo. lmst, sandy w/scat med to cse clr rnd qtz gr in dolo and lmst mtz, scat off wh to wh cht, dull yel min fluor, no stn, ns.

DOL and LM; wh, off wh, sandy, incr. amt of med gr qtz gr. embdd in carb. mtz, no clean sand, most well cem, scat fair interpart and vug por, ns.

LM; off wh, tan, dolomitic w/interbdd dolo, sandy, incr. amt of med gr rnd qtz in lmst mtz, most dense, poor to no vis por, dull yel min fluor, ns.

LM; off wh, buff, sandy, some sucrosic dolo interbdd, v. hd, blocky, scat grn glau, rare small vug por, med yel min fluor, ns.

DOL; off wh, buff, sucrosic, v. hd, bands of qtzite/hd transl qtz, dense

REAGAN SAND 4464(-2462)
 SS; clr, wh, med to rarely cse gr, rnd to subrnd, clusters, dense - partly qtzitic, some fri gr, fair intergran por, no fluor, no stn or odor, partly dolomitic, scat dk gy occ pyr shales

SS; clr, qtz, fine to med gr, abnt loose gr, poorly sorted, some w/gd intergran por, rnd to subrnd gr, clean, no fluor, no stn or odor, no sample shows, interbdd hd qtzitic ss

SS; clr, wh, f gr w/occ med gr, dolomitic, occ loose gr - most clusters, occ grn tint(glau), fair intergran por, no fluor, no stn or odor, ns.

GRANITE WASH 4510(-2508)
 GRAN & CONGL; pink feldspar, cse qtz gr, scat grn weath. nodules, occ lrg qtz xtals, dense, some qtzite

WEATH. GRAN; pink feldspar, qtz, sandy ip. w/interbdd clr cse gr qtz, ns.

CONGL/GRAN; cse qtz gr, lrg opaque to transl. qtz xtals, weath gran w/embdd qtz gr, hd, no vis por, no fluor, no stn or odor, ns.

BIT TORQUED UP BADLY AT 4538'

RTD. 4538' at 5:15 AM. 10/17/12

LTD.

Halliburton DIL, NEU/DEN, Microlog

