

OPERATOR

Company: IA OPERATING, INC.
Address: 9915 W 21ST ST
STE B
WICHITA, KS 67205
Contact Geologist: JULIE BURROWS
Contact Phone Nbr: (620) 721-0036
Well Name: ARCHER #21-2
Location: NW NW SE NE Sec. 21 - 8S - 26W
API: 15-179-21407
Pool:
State: KANSAS
Field: STUDLEY WEST
Country: USA

Scale 1:240 Imperial

Well Name: ARCHER #21-2
Surface Location: NW NW SE NE Sec. 21 - 8S - 26W
Bottom Location:
API: 15-179-21407
License Number: 33335
Spud Date: 7/18/2015
Region: SHERIDAN COUNTY KANSAS
Drilling Completed: 7/24/2015
Surface Coordinates: 1518' FNL & 1076' FEL
Bottom Hole Coordinates:
Ground Elevation: 2413.00ft
K.B. Elevation: 2421.00ft
Logged Interval: 3250.00ft
Total Depth: 3880.00ft
Formation: LANSING - KANSAS CITY
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

Time: 12:45 PM
Time: 3:49 AM
To: 3880.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -100.2218082
Latitude: 39.3452584
N/S Co-ord: 1518' FNL
E/W Co-ord: 1076' FEL

LOGGED BY

Company: BIG CREEK CONSULTING, INC.
Address: 1909 MAPLE
ELLIS, KS 67637

Phone Nbr: (785) 259-3737
Logged By: GEOLOGIST

Name: JEFF LAWLER

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 4
Rig Type: MUD ROTARY
Spud Date: 7/18/2015
TD Date: 7/24/2015
Rig Release: 7/25/2015

Time: 12:45 PM
Time: 3:49 AM
Time: 4:00 PM

ELEVATIONS

K.B. Elevation: 2421.00ft
K.B. to Ground: 8.00ft

Ground Elevation: 2413.00ft

NOTES

DUE TO LACK OF DEPLETED RESERVOIR PRESSURE ON DST #4 DECISION WAS MADE TO PLUG AND ABANDON THE ARCHER #21-2.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

					●				☒				☒				☒																
					IA OPERATING				C-G DRILLING & N APPLEMAN				HESS OIL CO.				D&D DRLG. CO.																
					ARCHER 21-1				McCLELLAND #1				LINDENMAN #1				MISER #1																
					NW NE NE SE 21-8-26				NE NE SW 21-8-26				CE/2 NW 21-8-26				NE NE 21-8-26																
ARCHER 21-2																																	
KB		2421		GL		2413		KB		2491		KB		2423		KB		2432		KB		2415											
LOG TOPS				SAMPLE TOPS				LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.			
FORMATION		DEPTH		DATUM		DEPTH		DATUM		DEPTH		DATUM		CORR.		CORR.		DEPTH		DATUM		CORR.		CORR.		DEPTH		DATUM		CORR.		CORR.	
ANHYDRITE TOP		2054		367		2054		367		2114		377		-		10		-		10		2048		375		-		8		-		8	
BASE		2088		333		2088		333		2148		343		-		10		-		10													
TOPEKA		3353		-932		3358		-937		3420		-929		-		3		-		8						3363		-931		-		6	
HEEBNER		3559		-1138		3562		-1141		3623		-1132		-		6		-		9		3566		-1143		+		5		+		2	
TORONTO		3581		-1160		3582		-1161		3645		-1154		-		6		-		7		3594		-1162		+		2		+		1	
LKC		3596		-1175		3597		-1176		3660		-1169		-		6		-		7		3603		-1180		+		5		+		4	
BKC		3807		-1386		3813		-1392		3879		-1388		+		2		-		4		3823		-1400		+		14		+		8	
TOTAL DEPTH		3880		-1459		3880		-1459		3925		-1434		-		25		-		25		3837		-1414		-		45		-		45	

Recovery			Gas Rates		
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
62.00	Oil Specked MCW 45%w 55%w	0.59			
248.00	MCW %5m 95%w	3.48			

Trilobite Testing, Inc

Ref. No: 62393

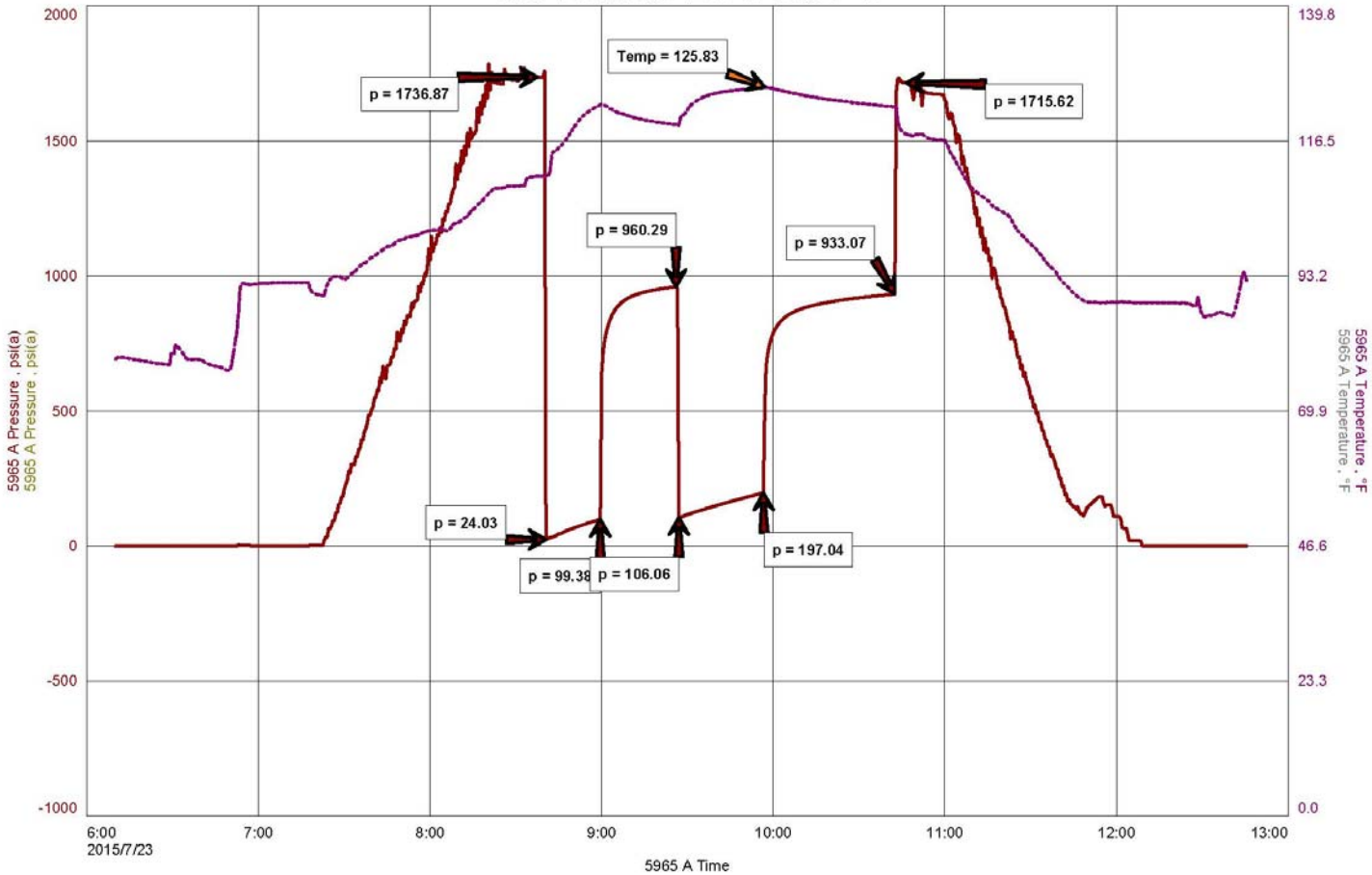
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DST #2 LKC E-F 3653' - 3682'

IA Operating
DST 1 LKC E0F 3653-3682
Start Test Date: 2015/07/23
Final Test Date: 2015/07/23

KS Archer 21-2
Formation: LKC E-F
Job Number: W198

KS Archer 21-2 DST 1



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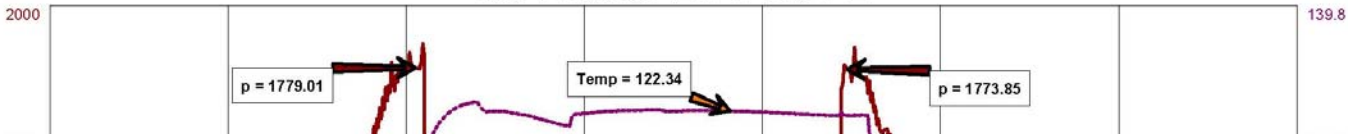


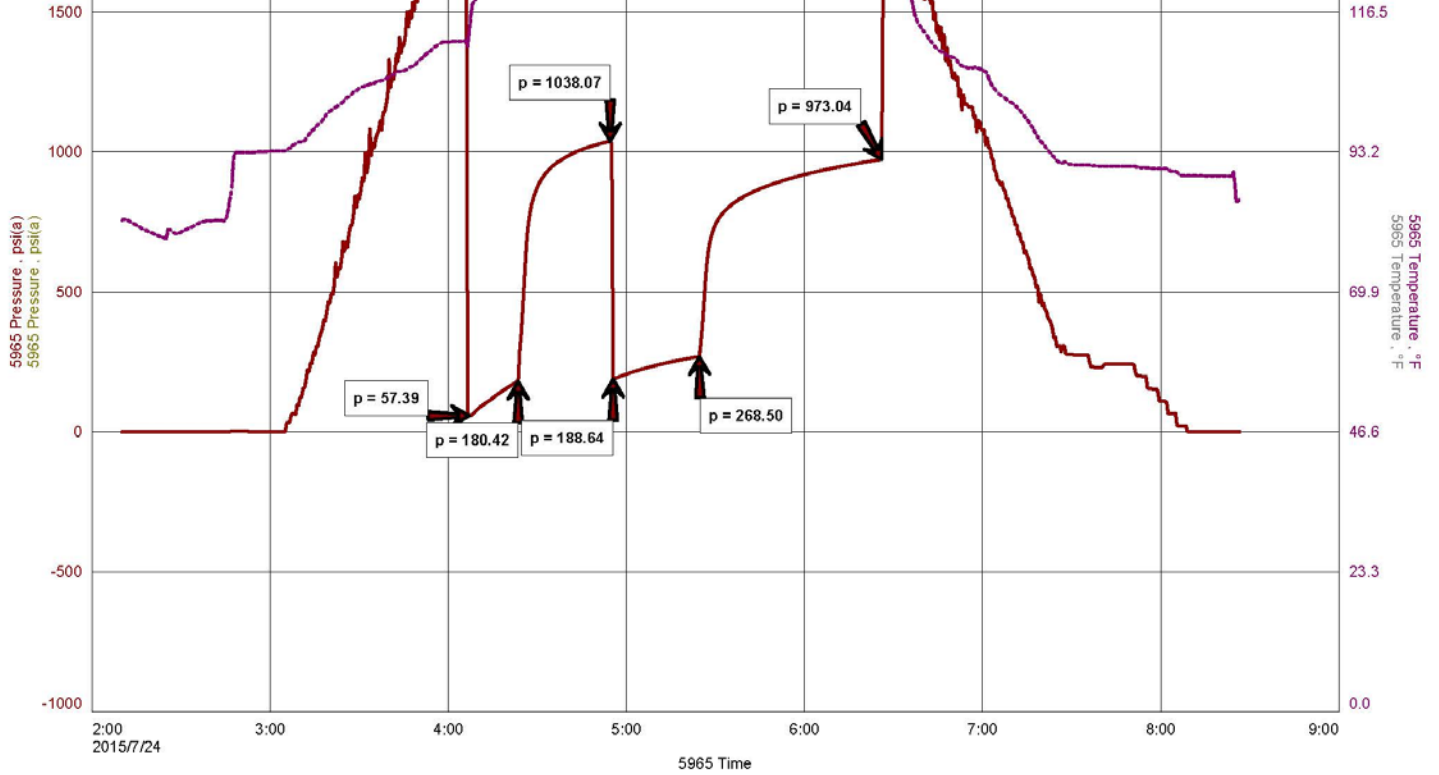
DST #3 LKC H-K 3707' - 3800'

IA Operating
DST 2 LKC H-K 3707-3800
Start Test Date: 2015/07/24
Final Test Date: 2015/07/24

KS Archer 21-2
Formation: LKC H-K
Job Number: W199

KS Archer 21-2 DST 2





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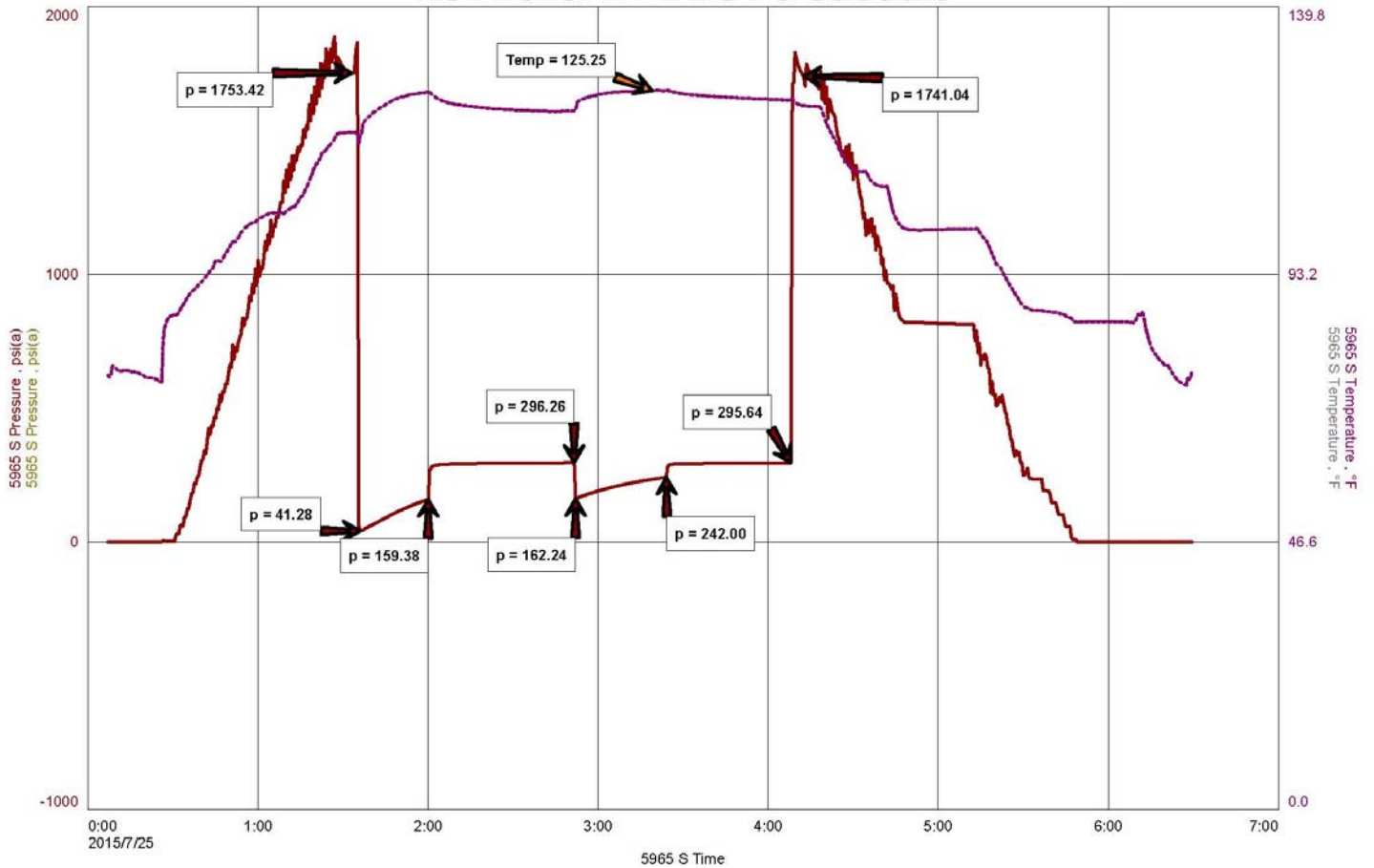
Fast

DST #4 LKC H (STRADDLE) 3707' - 3733'

IA Operating
DST 3 Straddle LKC H 3707-3733
Start Test Date: 2015/07/25
Final Test Date: 2015/07/25

KS Archer 21-2
Formation: LKC H
Job Number: W200

KS Archer 21-2 DST 3 Straddle



ROCK TYPES



ACCESSORIES

FOSSIL

◇ Oolite

STRINGER

~~~~ Chert

~~~~ Dolomite

OTHER SYMBOLS

MISC

DR Daily Report

📷 Digital Photo

📄 Document

📁 Folder

🔗 Link

📊 Vertical Log File

📊 Horizontal Log File

🔍 Core Log File

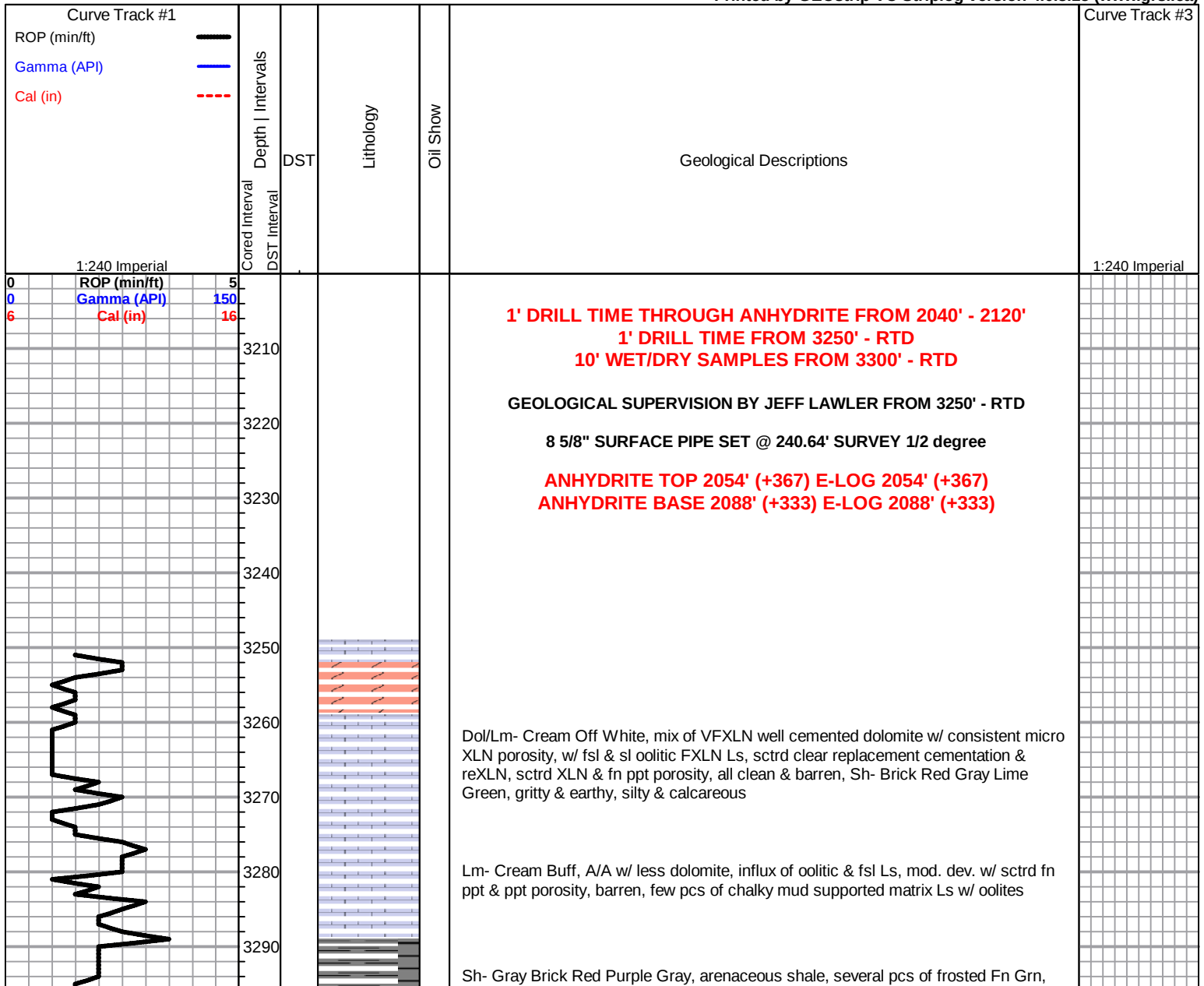
📊 Drill Cuttings Rpt

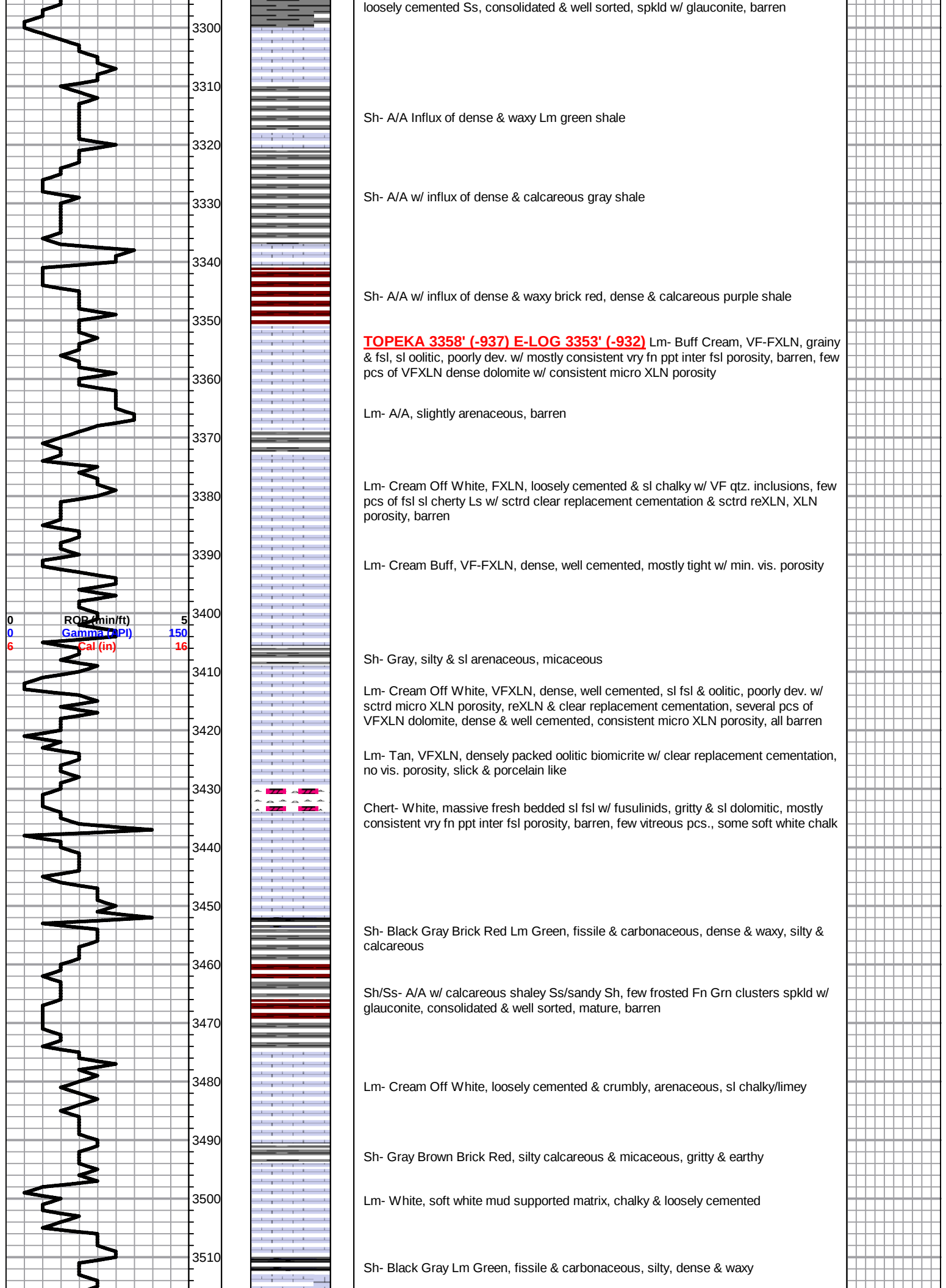
DST

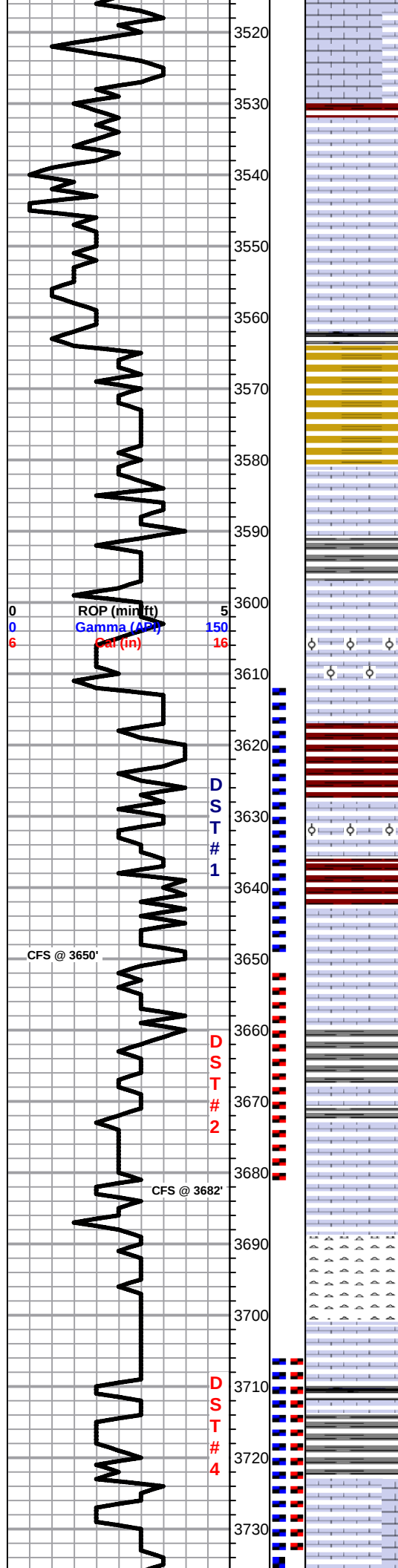
■ DST Int

■ DST alt

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)







Lm- Cream Off White, VF-FXLN, fsl, poorly dev. w/ sctrd XLN porosity, some sctrd reXLN, barren

Lm- Tan Buff, VFXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity

Lm- Cream Tan, VFXLN, dense, well cemented & tight

Lm- Lt Gray, massive, well cemented, fn grn qtz inclusions, no vis. porosity, some clear replacement cementation

HEEBNER 3562' (-1141) E-LOG 3559' (-1138) Sh- Black, fissile & carbonaceous

Sh- Gray Brown, silty & calcareous, dense & waxy

TORONTO 3582' (-1161) E-LOG 3581' (-1160) Lm- Cream Off White, VFXLN, dense, well cemented, mostly tight w/ sctrd micro XLN porosity, barren, grainy

Sh- Gray, silty & calcareous

LKC 3597' (-1176) E-LOG 3596' (-1175) Lm- Cream Off White, FXLN, fsl & oolitic, mod. dev. w/ sctrd XLN porosity, some sctrd reXLN, barren, some soft white chalk

Lm- Cream Off White, FXLN, fsl, poorly dev. w/ dense reXLN, XLN porosity, barren

Sh- Gray Brick Red, silty & arenaceous, gritty & earthy, some frosted consolidated fn grn Ss, mod. cementation, barren

Lm- Cream Off White, FXLN, fsl & oolitic, mod. well dev. w/ mostly consistent fn ppt inter oolite & XLN porosity, few sub-oolite clusters, SCTRDRK STN, OILY SHEEN, TR-FR FO UPON CRUSH, TR GSY BUBBLES UPON CRUSH, FR ODR

Sh- Maroon, gummy wash

Lm- Off White, VF-FXLN, dense, mostly tight & poorly dev. w/ sctrd XLN porosity, some soft white chalk, barre & clean

Lm- Cream Off, VFXLN, dense, well cemented, mostly tight w/ min. vis., barren

Lm- Cream Buff, FXLN, dense, well cemented, sl fsl, poorly dev. w/ sctrd XLN porosity, some sl chalky in part, barren

Lm- Cream Tan, FXLN, fsl & oolitic, mod. well dev. w/ sctrd to consistent fn ppt inter oolite porosity, LT SCTRDRK STN, NSFO, WK ODR, some sctrd reXLN w/in porosity

Lm- White Off White, VF-FXLN, dense, mostly well cemented & poorly dev. w/ sctrd micro XLN & XLN porosity, vry clean & barren

Lm/Chert- Cream Off White White, A/A w/ fresh bedded sl fsl vitreous chert w/ vis porosity, some chalky mud supported matrix Ls & soft white chalk, all vry clean

Sh- Black Gray, fissile & carbonaceous, silty & calcareous

Lm- Cream Off White, VF-FXLN, fsl & oolitic, mod. dev. w/ sctrd ppt inter oolite & XLN porosity, LT STN, NSFO, DEAD OIL??, NO ODR, some sctrd reXLN w/in porosity

Lm- Cream Off White, VFXLN, dense, well cemented, mostly tight w/ min. vis.

SHORT TRIP
STRAP -0.15'
SURVEY 1/2 dgr.

DST #1 LKC C-D
3613' - 3650
30-45-30-45

310' TOTAL FLUID
62' OSPMW
(55%W, 45%M)
248' MCW
(95%W, 5%M)

IFP: 30-9+5#
FFP: 103-159#
SIP: 1044-1011#
BHT: 121 dgr.
CHLOR: 90,000

C.jpg

DST #2 LKC E-F
3653' - 3682'
15-30-30-45
400' MCW
(25%M, 75%W)

IFP: 99-24#
FFP: 106-197#
SIP: 960-933#
BHT: 126 dgr.
CHLOR: 88,000

E_F.jpg

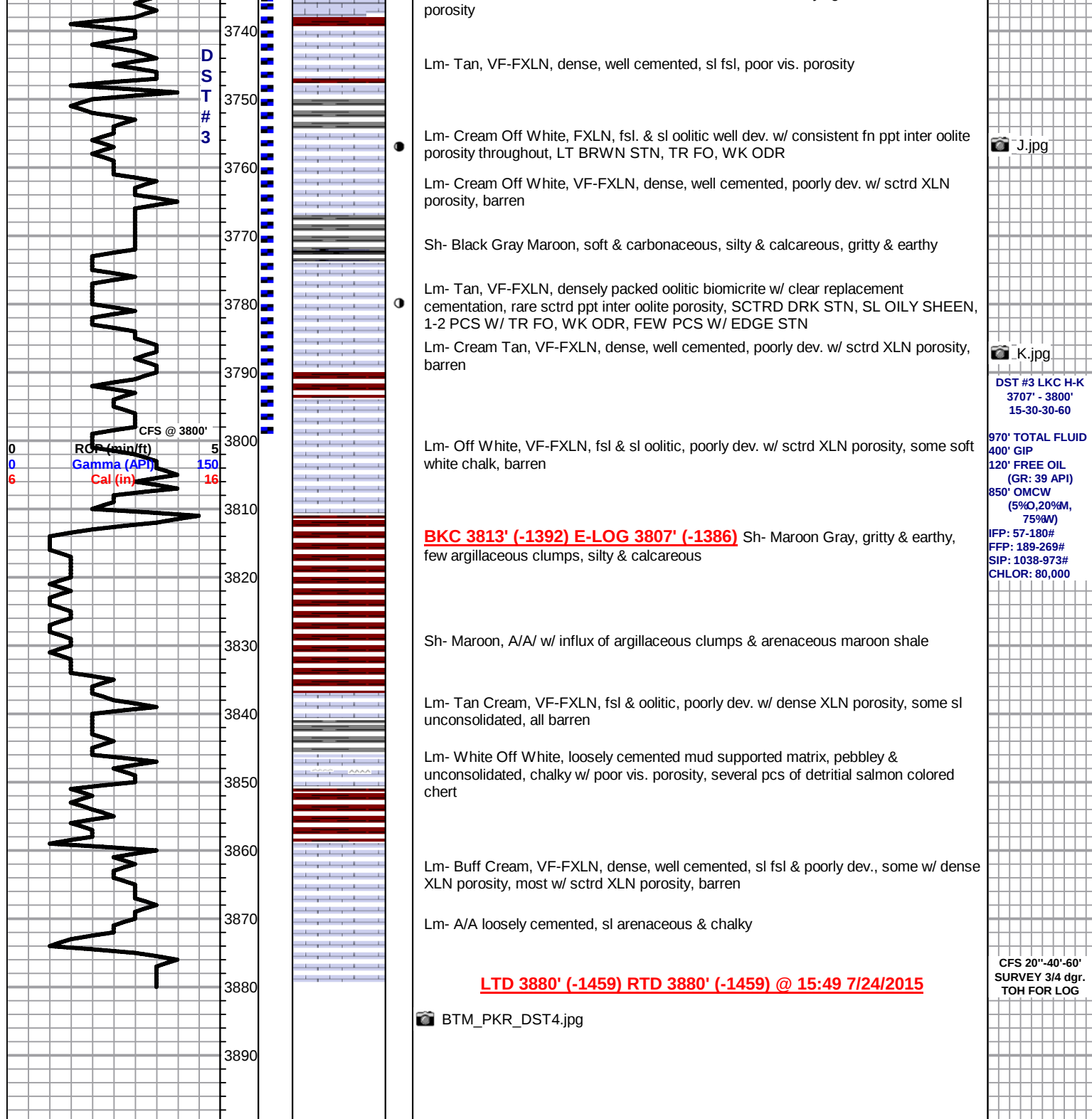
DST #4 LKC H
(STRADDLE)
3707' - 3733'
30-45-30-45

660' TOTAL
FLUID
350' GIP

90' OIL (Gr: 38.8)
570' GOMCW
(5%G, 5%O,
20%M, 70%W)

IFP: 41-159#
FFP: 162-242#
SIP: 296-295#
CHLOR: 85,000

VALID
STRADDLE
BOTTOM
PACKER CHART
BELOW



A001 1280x1024 2015/07/22 05:18:03 Unit: mm Magnification: 96.9 x 1



C ZONE X 25

A002 1280x1024 2015/07/23 04:40:19 Unit: mm Magnification: 96.9 x 1



E/F ZONE X20

H.jpg

A003 1280x1024 2015/07/23 20:13:54 Unit: mm Magnification: 116.2 x 1



0.2 mm

H ZONE X 30

J.jpg

A004 1280x1024 2015/07/23 22:47:52 Unit: mm Magnification: 116.2 x 1



0.2 mm

J ZONE X 30



IA Operating
DST 3 Straddle LKC H 3707-3733
Start Test Date: 2015/07/25
Final Test Date: 2015/07/25

KS Archer 21-2
Formation: LKC H
Job Number: W200

KS Archer 21-2 DST 3 Straddle Lower

