

GEOLOGIC REPORT

DAVID J. GOLDAK

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

Well Name: Ellsaesser "B" #1
Location: Section 31 - T29S - R31W
License Number: API: 15-081-21991
Spud Date: 08 / 14 / 2012
Surface Coordinates: 2310' FNL and 330' FWL
SW - SW - NW

Region: Haskell Co., KS
Drilling Completed: 08 / 24 / 2012

Bottom Hole
Coordinates:
Ground Elevation (ft): 2880' K.B. Elevation (ft): 2891'
Logged Interval (ft): 4150' To: 5690' Total Depth (ft): 5690'
Formation: Mississippian - St Louis
Type of Drilling Fluid: Chemical - Mud-Co

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

OPERATOR

Company: White Exploration, Inc.
Address: 2400 N. Woodlawn, Suite 115
Wichita, Kansas 67220-3966

GEOLOGIST

Name: David J. Goldak
Company: D. J. GOLDAK, INC.
Address: 155 N. Market, Suite 710
Wichita, Kansas 67202

General Info

CONTRACTOR: Murfin Drilling, Rig #22

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	HTC-GTC1	16-16-16	1945	1945	29.75
2	7-7/8	HTC-506F-PDC	16-16-16	4500	2555	40.00
3	7-7/8	HTC-GX22S	16-16-16	5690	1190	71.75

SURVEYS: 1129'-0.75, 1945'-0.75, 4500'-0.50, 5268'-1.50,
5585'-1.75, 5690'-2.00

GENERAL DRILLING & PUMP INFORMATION:

Pumping 62 S/M, 9.11 B/M, with 1000 psi at the Standpipe.
Drilling w/ Conv bit: 34,000-38,000 lbs on bit at 70 RPM.
Running 9 stands collars - 350'

Daily Status

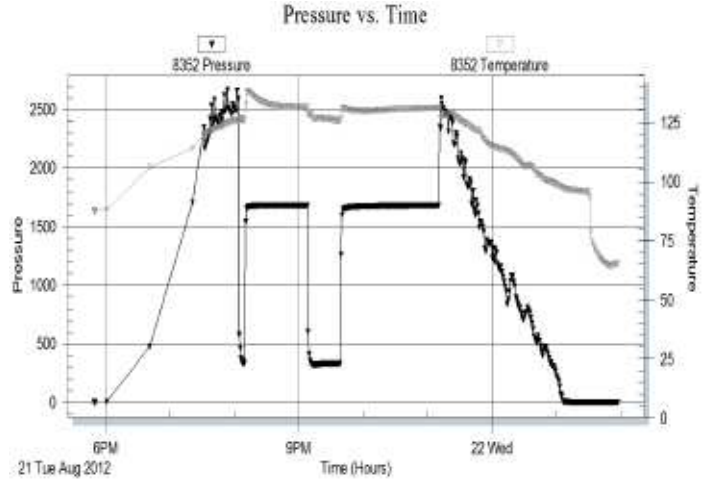
08/14/12 - Spud at 5:00 pm
 08/15/12 - 1,110' Drilling
 08/16/12 - 1,945' Running casing; Set 8-5/8" Csg at 1,944'
 08/17/12 - 2,530' Drilling; Displace @ 3,611'
 08/18/12 - 3,970' Drilling; Bit trip @ 4,500'; Bit stuck @ 3,715'
 08/19/12 - 4,500' Reaming
 08/20/12 - 4,885' Drilling
 08/21/12 - 5,219' Drilling; DST #1 @ 5,268'
 08/22/12 - 5,300' Drilling
 08/23/12 - 5,585' TIH with DST #2
 08/24/12 - 5,690' TOH for logging

DST #1: 5,202' - 5,268' (Morrow Limestone)
5" - 60" - 30" - 90"

IF: BOB immediately - GTS in 2 minutes
 guage with 3/4" orifice: 5 min. = 1396 MCF
ISI: No blow back
FF: Guage gas with 3/4" orifice:
 10 min. = 1756 MCF, 20 & 30 min. = 1974 MCF
FSI: No blow back

RECOVERY: 1' Total Fluid, consisting of:
 1' Mud (100% Mud)

SIP: 1682-1679; **FP:** 371-332, 332-330; **HP:** 2661-2594;
BHT: 131

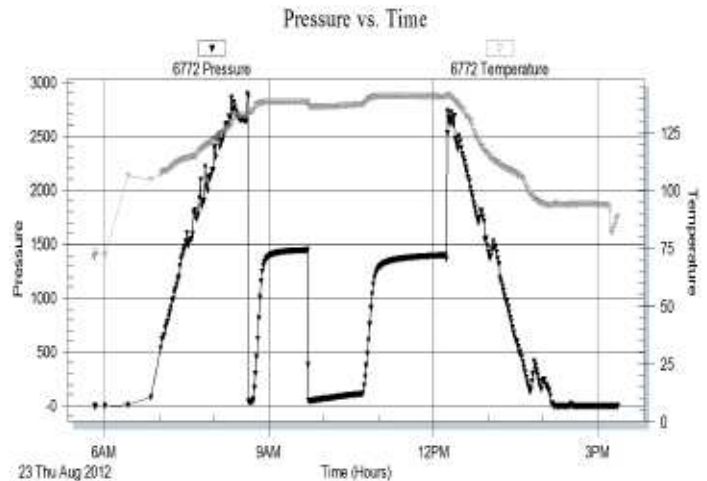


DST #2: 5,550' - 5,585' (St Louis)
5" - 60" - 60" - 90"

IF: Good blow, BOB in 2 minutes
ISI: No blow back
FF: BOB in 20 sec., GTS in 34 min., TSTM
FSI: Weak blow back, building to 2 inches

RECOVERY: 310' Total Fluid, consisting of:
 1' CO (100% O)
 184' GOCM (23% G, 10% O, 67% M)
 125' GOWCM (40% G, 10% O, 20% W, 30% M)
Sampler: 0.5 CFG, 1500 ml O & 200 ml M @ 700 psi

SIP: 1446-1399; **FP:** 45-44, 49-114; **HP:** 2866-2729;
BHT: 141



ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol

	Gyp
	Igne
	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Slstt
	Ss
	Till
	Carb sh
	Dol
	Dtd
	Gry sh

	Sandylms
	Shale
	Slstn
	Shlyslts
	Sltysh
	Lms

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
- Chlorite
- Dol
- Sand
- Sltly

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

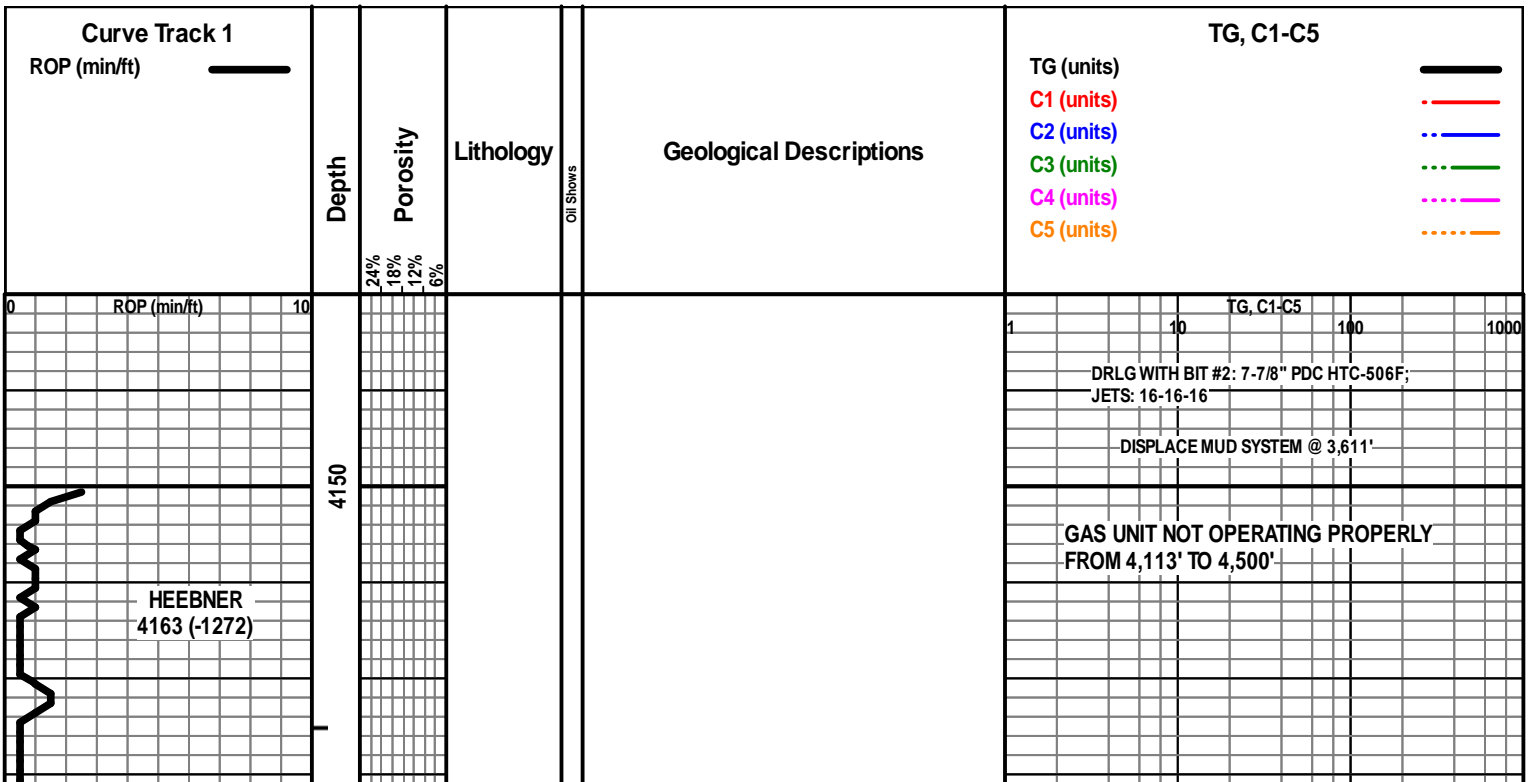
INTERVALS

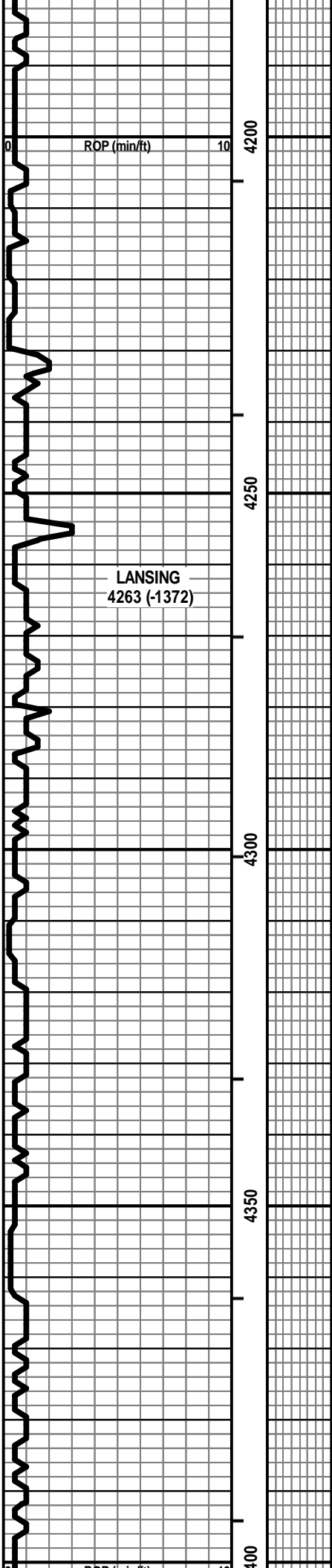
- Core
- Dst

- Dst_1_t
- Dst_1_b
- Dst

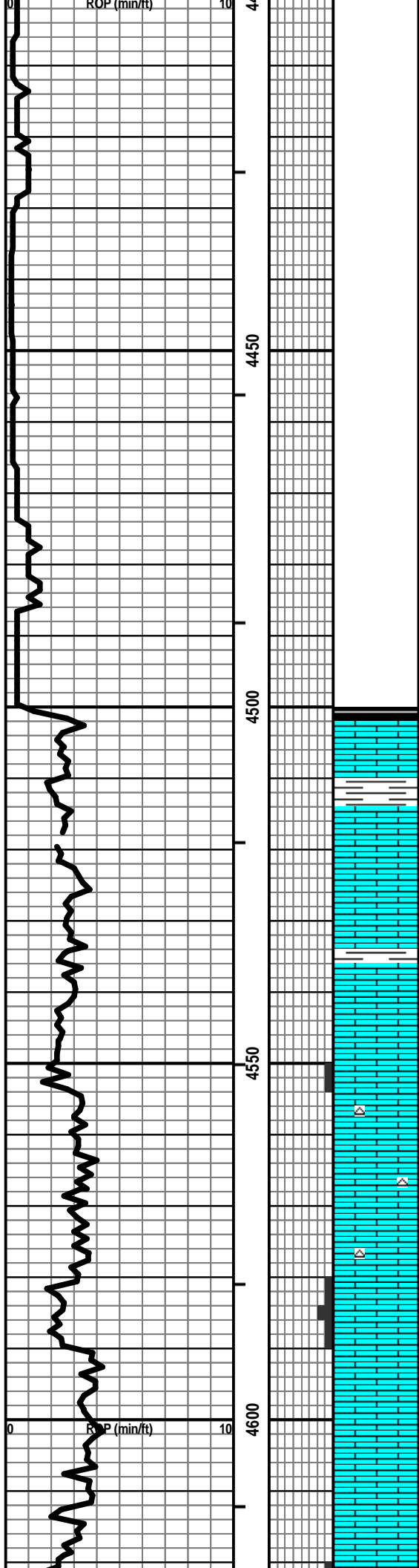
EVENTS

- Rft
- Sidewall
- Conn





1	10	TG, C1-C5	100	1000
Vis: 68, Wt: 9.1, YP: 25, GelS: 17/53, pH: 10.0, WL: 8.4, Chl: 1,300, Sol: 5.7, LCM: 2#				

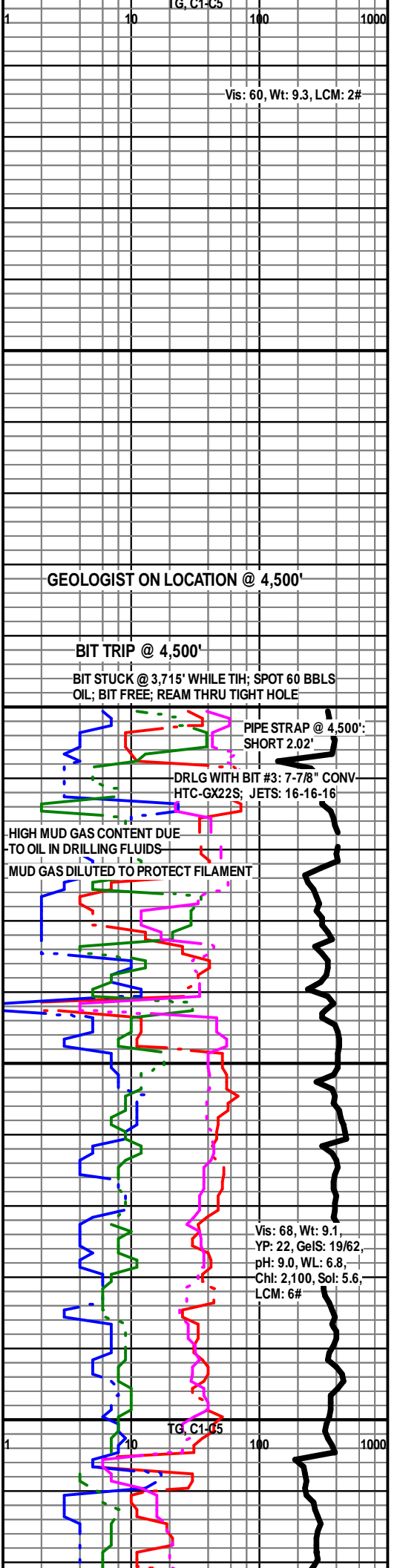


LS - CRM / GY / TAN, VF / F XLN, FOSS IN PT, SL OOL, CHKY IN PT, PRED DNS, NS W/ SH - GY / SCAT BLK, CARB IN PT

LS - LT GY / CRM, VF / F XLN, FOSS + OOL IN PT, CHKY IN PT, TR P PPT POR, PRED DNS, NS

LS - CRM / TAN / SCAT BRN, VF / F XLN, OOL IN PT, SL FOSS, PRED DNS, NS W/ CHT - WHT / GY / TAN, OOL

LS - CRM / GY / TAN, VF / F XLN, OOL IN PT, SCAT P OOM POR, SCAT CHKY / DNS, NS



Vis: 60, Wt: 9.3, LCM: 2#

GEOLOGIST ON LOCATION @ 4,500'

BIT TRIP @ 4,500'

BIT STUCK @ 3,715' WHILE TIH; SPOT 60 BBLs OIL; BIT FREE; REAM THRU TIGHT HOLE

PIPE STRAP @ 4,500': SHORT 2.02'

DRLG WITH BIT #3: 7-7/8" CONV-HTC-GX22S; JETS: 16-16-16

HIGH MUD GAS CONTENT DUE TO OIL IN DRILLING FLUIDS

MUD GAS DILUTED TO PROTECT FILAMENT

Vis: 68, Wt: 9.1, YP: 22, GelS: 19/62, pH: 9.0, WL: 6.8, Chl: 2,100, Sol: 5.6, LCM: 6#

TG, C1-C5

LS - CRM / TAN, VF / F XLN, FOSS + OOL IN PT, P / F
MOLDIC + VUG POR IN PT, P INTXLN POR, CHKY IN PT /
DNS, NS

LS - CRM / TAN / BRN, VF / CRYPTO XLN, SL FOSS,
PRED DNS, NS

SH - BLK / GY, CARB IN PT W/LS - CRM / TAN, VF / F
XLN, OOL IN PT, SCAT CHKY, PRED DNS, NS

LS - CRM / TAN, VF / CRYPTO XLN, SL FOSS, CHKY IN
PT, PRED DNS, NS

LS - CRM / LT GY / TAN, VF / M XLN, TR FOSS, PRED
DNS, NS W/SH - BLK / GY / GRN, CARB IN PT

LS - CRM / LT GY, F XLN, OOL, F / G OOM + INTXLN
POR, TR CHKY, NS

LS - CRM / GY / TAN, MOT IN PT, VF / F XLN, SL FOSS,
CHKY IN PT, PRED DNS, NS

SH - GY / BLK / SCAT GRN

LS - CRM / TAN / GY, VF / F XLN, FOSS IN PT, PRED
CHKY / DNS, NS

LS - CRM / TAN, VF / F XLN, SL FOSS, ARGIL IN PT,
PRED DNS, NS W/SH - GY / BLK, CALC IN PT

LS - CRM / WHT / TAN, F XLN, SCAT M REXLN CALC,
SCAT P INTXLN + PPT POR, PRED DNS, NS

LS - ASABOVE, SCAT P / TR F INTXLN + PPT POR,
PRED DNS, NS

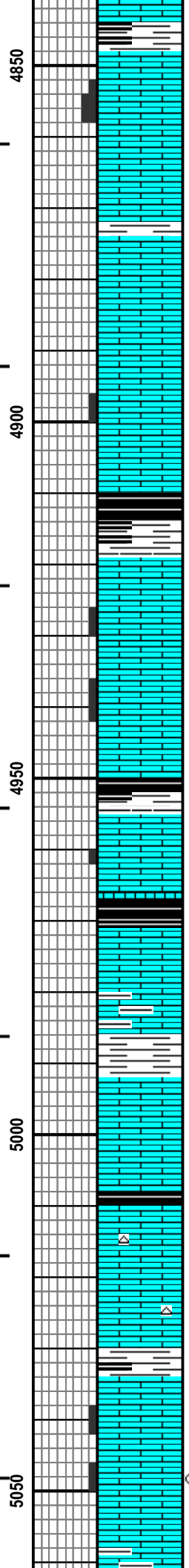
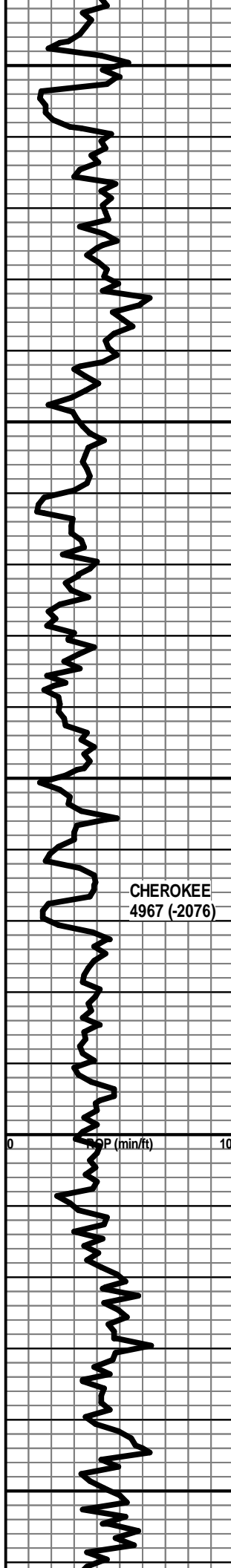
STARK SH
4668 (-1777)

MARMATON
4812 (-1921)

Vis: 60, Wt: 9.1,
LCM: 6#

0 R_{sp} (min/ft) 10

1 10 TG, C1-C5 100 1000



LS - CRM / TAN, F XLN, OOL IN PT, P / F OOM POR IN PT, CHKY / DNS, NS

LS - CRM / TAN / SCAT BRN, VF / F XLN, SL FOSS + OOL, SUBCHKY IN PT, PRED DNS, NS

LS - ASABOVE, SCAT P INTXLN POR, PRED DNS / CHKY, NS

LS - GY / CRM / SCAT TAN, VF / F XLN, SCAT M REXLN CALC, FOSS + OOL IN PT, SCAT P / TR F INTXLN + MOLDIC POR, CHKY / DNS, NS

LS - ASABOVE, NS

LS - CRM / TAN / BRN, VF / F XLN, OOL IN PT, SL FOSS, SCAT P INTXLN / INTPART POR, PRED DNS, NS W / SH - BLK, CARB

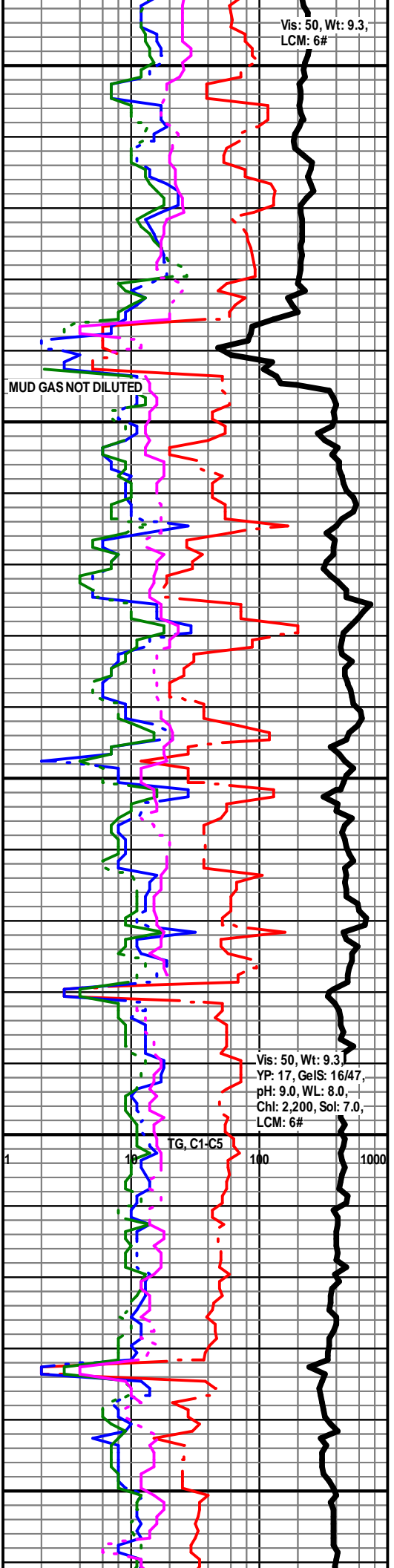
LS - CRM / TAN, VF XLN, SL FOSS, PRED DNS, NS W / ABNT SH - GY / GRN / BLK

LS - GY / CRM, VF / F XLN, SL FOSS, TR OOL, SUBCHKY IN PT, PRED DNS, NS W / SCAT SH - BLK, CARB

LS - CRM / TAN, VF / F XLN, SCAT M REXLN CALC, FOSS IN PT, PRED DNS, NS W / SCAT CHT - WHT / LT GY

LS - CRM / TAN / SCAT BRN F XLN, FOSS + OOL IN PT, SCAT P INTXLN POR, SCAT CHKY, PRED DNS, TR GB, NSFO, NO ODOR

CHEROKEE
4967 (-2076)



ATOKA
5067 (-2176)

CFS @ 5093'

5100

5150

5200

5250

MORROW SH
5220 (-2329)

CFS @ 5220'

MORROW LS
5238 (-2347)

CFS @ 5,247'

CFS @ 5268'

LS - CRM / GY / TAN, MOT IN PT, VF / F XLN, TR FOSS,
TR P INTXLN POR, NS

LS - CRM / TAN, F XLN, FOSS IN PT, P / F INTXLN POR,
FEW PCS SL / F SGB, NSO, NO ODOR

LS - CRM / TAN / GY, VF / F XLN, FOSS, SCAT P INTXLN
POR, CHKY IN PT / DNS, NS W / CHT - WHT / GY, FOSS

LS - CRM / TAN, F XLN, FOSS, P / SCAT F INTXLN +
MOLDIC POR, TR FO, V FT ODOR, SCAT SPTY STN
(FAIR SAMPL QUAL - V FINE)

LS - CRM / TAN / SCAT LT GY, VF / F XLN, SCAT CRYPTO
XLN, FOSS IN PT, TR P INTXLN POR, PRED DNS, NS

LS - CRM / GY, MOT IN PT, VF / F XLN, FOSS IN PT, SCAT
CHKY, PRED DNS, NS

SH - GY / BLK

LS - CRM / TAN, F / M XLN, FOSS IN PT, P / SCAT F
INTXLN + VUG POR, SL / F SGB, NSO, NO ODOR, TR
SPTY STN ?

LS - ASABOVE, TR P POR, NS W / SH - GY / BLK / GRN
W / SCAT LS - BRN / GY, F XLN, PRED DNS, NS

LS - TAN / CRM / GY, MOT IN PT, PRED M / C XLN, FOSS
IN PT, SCAT AREN, GLAUC + CHL IN PT, P / F INTXLN
POR, SCAT PPT POR, SCAT CHKY, SL / G SGB, NSFO,
NO ODOR, TR SPTY STN

LS - TAN / CRM / GY, F / M / C XLN, FOSS IN PT, P / F
INTXLN POR, TR PPT POR, SCAT CHKY, SL / G SGB,
NSFO, NO ODOR, SPTY STN IN PT

SH - PRED GY / SCAT GRN + BLK W / LS - TAN / GY, VF /
F XLN, SCAT CRYPTO XLN, FOSS IN PT, CHKY IN PT,
PRED DNS, NS

DILUTE MUD GAS

Vis: 45, Wt: 9.1, LCM: 4#
RUNNING PREMIX

DST #1: 5,202' - 5,268' (Morrow Ls)
5" - 60" - 30" - 90"

IF: BOB immed. - GTS in 2 minutes - guage
gas with 3/4" orifice: 5 min. = 1396 MCF

ISI: No blow back

FF: Guage gas with 3/4" orifice:
10 min. = 1756 MCF, 20 & 30 min. = 1974 MCF

FSI: No blow back

RECOVERY: 1' Total Fluid:
1' Mud (100% Mud)

SIP: 1682-1679

HP: 2661-2594

FP: 371-332, 332-330

BHT: 131

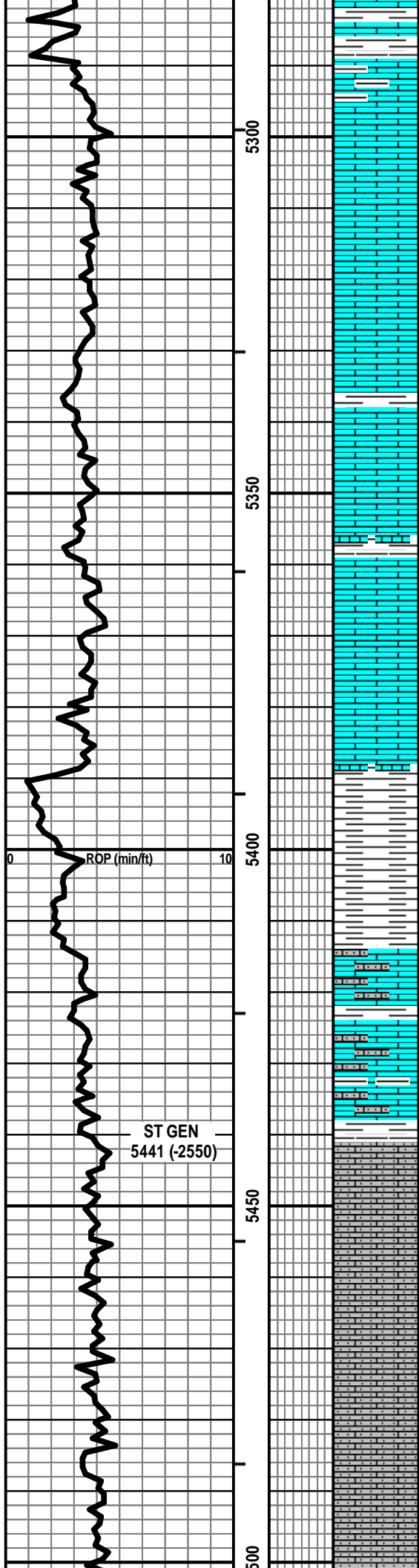
TC, C1-C5

MUD GAS NOT DILUTED

Vis: 51, Wt: 9.2,
YP: 19, GelS: 17/50,
pH: 10.5, WL: 7.2,
Ch: 1,200, Sol: 6.4,
LCM: 5#

DILUTE MUD GAS

0 RO (min/ft) 10



PRED DNS, NS

LS - LT / MED GY, VF / CRYPTO XLN, PRED DNS / ARGIL IN PT, NS W/LS - CRM / TAN / GY, MOT IN PT, F / C XLN, FOSS IN PT, SCAT CHKY, SCAT GLAUC + CHL, PRED DNS, NSFO, NO ODOR, SCAT SPTY STN W/ MOD AMT SH - PRED GY / CALC IN PT

LS - LT / MED GY, VF / CRYPTO XLN, PRED DNS / ARGIL IN PT, NS W/ SH - GY, CALC IN PT

LS - LT / MED GY, VF / CRYPTO XLN, PRED DNS / ARGIL IN PT, NS W/ SCAT SH - GY, CALC IN PT

LS - LT / MED GY / SCAT TAN, VF / CRYPTO XLN, PRED DNS / ARGIL IN PT, NS W/ SCAT SH - GY / GRN, CALC IN PT

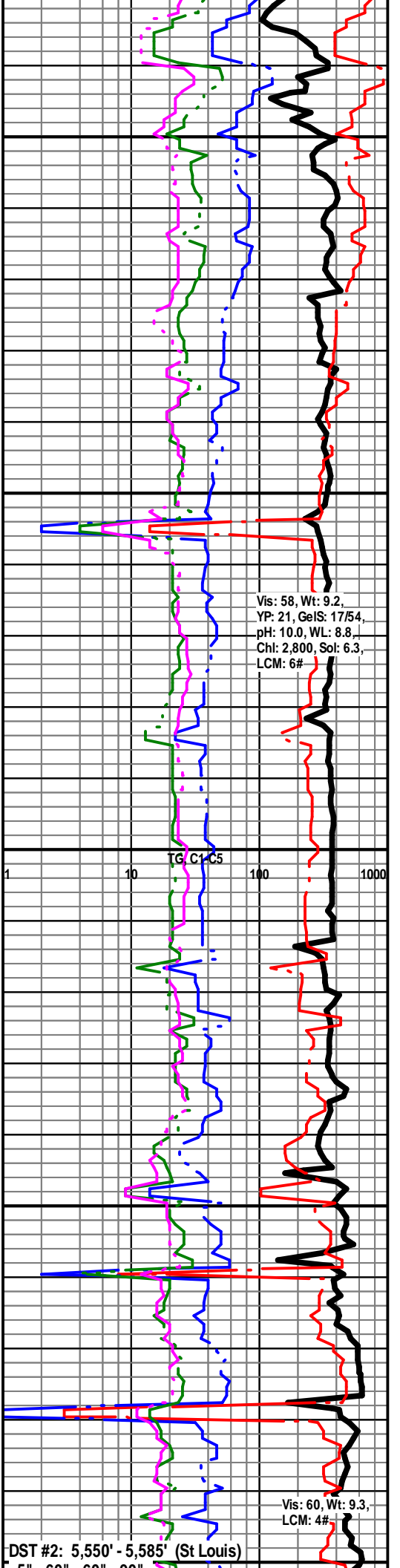
SH - GY / BLK / GRN, TR SLTY / AREN

LS - GY / GRN, VF XLN, AREN, VF QTZ GR, PRED DNS, NS W/LS - LT / MED GY / SCAT TAN, VF / CRYPTO XLN, PRED DNS / ARGIL IN PT, NS W/ SCAT SH - GY

LS - WHT / CRM, VF XLN, AREN, VF QTZ GR, FNLY OOL IN PT, SCAT CHKY, PRED DNS, NS

LS - WHT / CRM, VF XLN, AREN, VF QTZ GR, FNLY OOL IN PT, SCAT CHKY, PRED DNS, NS

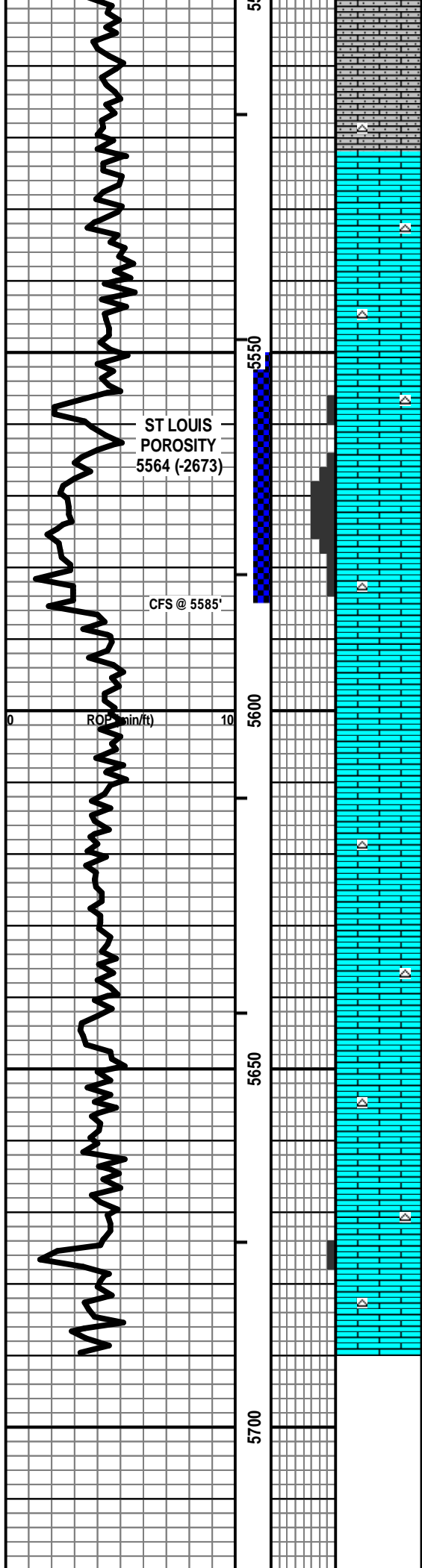
LS - WHT / CRM / SCAT TAN, VF XLN, AREN, VF QTZ GR, FNLY OOL IN PT, SCAT CHKY, PRED DNS, NS



Vis: 58, Wt: 9.2,
 YP: 21, GelS: 17/54,
 pH: 10.0, WL: 8.8,
 Chl: 2,800, Sol: 6.3,
 LCM: 6#

ST GEN
 5441 (-2550)

DST #2: 5,550' - 5,585' (St Louis)



LS - ASABOVE W/ SCAT LS - CRM / TAN, VF / F XLN, OOL IN PT, PRED DNS, NS W/ SCAT CHT - GY / ORG

LS - CRM / TAN, VF / F XLN, OOL IN PT, PRED DNS, NS W/ SCAT CHT - ORG / GY W/ AREN LS - ASABOVE, NS

LS - CRM / SCAT TAN, VF / F XLN, OOL, PRED P INTOOL POR, CHKY IN PT, ABNT FREE OOL IN TRAY, NS, NO ODOR

LS - CRM / SCAT TAN, VF / F XLN, OOL, P / G INTOOL POR, CHKY IN PT, SL / F SGB + FO, F ODOR, SCAT SPTY / TR SAT STN, MOD AMT FREE OOL IN TRAY

LS - CRM / TAN, VF / F XLN, OOL IN PT, SCAT CHKY, PRED DNS, NS

LS - CRM / TAN / SCAT BRN, F XLN, TR OOL, PRED DNS, NS W/ SCAT CHT - GY / WHT

LS - CRM / TAN / SCAT BRN, F XLN, SCAT M REXLN CALC, OOL IN PT, PRED DNS, NS W/ SCAT CHT - GY / WHT

LS - CRM / TAN, VF / F XLN, OOL IN PT, TR P INTOOL POR, CHKY IN PT, PRED DNS, NS W/ CHT - GY / WHT

TOTAL DEPTH 5690 (-2799)

