

# GEOLOGIC REPORT

## DAVID J. GOLDAK

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

Well Name: Russell #1-18  
Location: Section 18 - T16S - R31W  
License Number: API: 15-171-20991  
Spud Date: 11 / 30 / 2013  
Surface Coordinates: 1544' FNL and 335' FEL  
Approx. NE - SE - NE  
Region: Scott Co., KS  
Drilling Completed: 12 / 10 / 2013  
Bottom Hole Coordinates:  
Ground Elevation (ft): 2929' K.B. Elevation (ft): 2936'  
Logged Interval (ft): 3650' To: 4700' Total Depth (ft): 4700'  
Formation: Mississippian - St Louis  
Type of Drilling Fluid: Chemical - Mud-Co

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

### OPERATOR

Company: Stelbar Oil Corporation  
Address: 1625 N. Waterfront Pkwy., Suite 200  
Wichita, Kansas 67206-6602

### GEOLOGIST

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

### General Info

CONTRACTOR: Pickrell Drilling, Rig #10

#### BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	JZ-L116	15-15-15	339	339	2.75
2	7-7/8	JZ-PL516-PDC	15-15-15	3746	3407	43.75
3	7-7/8	JZ-ENP0123	15-15-15	4621	875	37.75
4	7-7/8	JZ-QX33	15-15-15	4700	79	6.75

SURVEYS: 339'-0.75, 839'-0.75, 1308'-0.50, 1870'-0.75,  
2371'-0.75, 2871'-0.75, 3746'-0.50, 4700'-0.75

#### GENERAL DRILLING & PUMP INFORMATION:

Drilling with 36,000-38,000 lbs on bit and 70-75 RPM.  
Running 8 stands of collars (6.25"x2.25"): 488.43'  
Pumping 60 S/M; 7.7 B/M; 650-750 psi at the standpipe.

## Daily Status

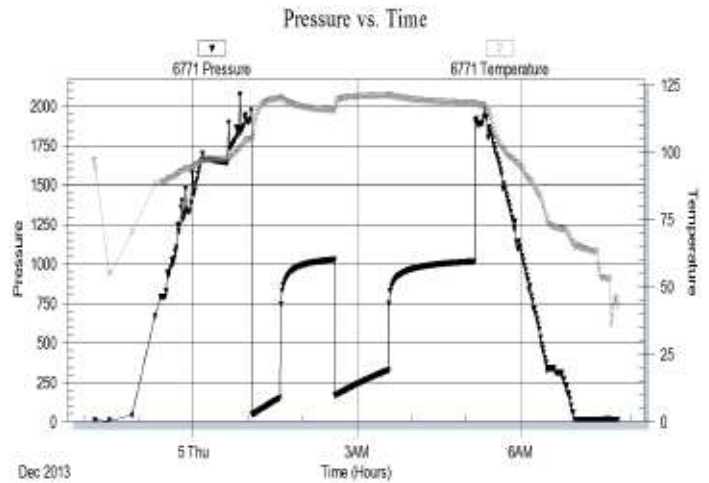
11/30/13 - Spud at 2:30 PM; Set 8-5/8" csg at 337'  
12/01/13 - 339' Drilling plug  
12/02/13 - 1,995' Drilling  
12/03/13 - 3,253' Drilling; Displace at 3,550'; Bit trip at 3,746'  
12/04/13 - 3,746' TIH with conv bit  
12/05/13 - 4,996' TOH with DST #1  
12/06/13 - 4,018' CTCH after DST #2; DST #3 @ 4,046'  
12/07/13 - 4,065' Drilling; DST #4 @ 4,192'  
12/08/13 - 4,224' CFS  
12/09/13 - 4,585' Drilling  
12/10/13 - 4,621' TIH after DST #5; RTD 4,700' @ 3:45 PM

**DST #1: 3,970' - 3,996' (LKC "B")**  
30" - 60" - 60" - 90"

**IF:** Good blow, building to BOB in 18 minutes  
**ISI:** No blow back  
**FF:** Good blow, building to BOB in 23 minutes  
**FSI:** No blow back

**RECOVERY:** 660' Total Fluid, consisting of:  
120' OSMW (Tr O, 70% W, 30% M)  
120' SMCW (90% W, 10% M)  
420' Water (100% W); Chlorides: 31,500 ppm  
Show of free oil in tool  
Sampler: 100 ml Oil & 1900 ml Water @ 260 psi

**SIP:** 1029-1016; **FP:** 47-152, 168-328; **HP:** 1969-1906; **BHT:** 121

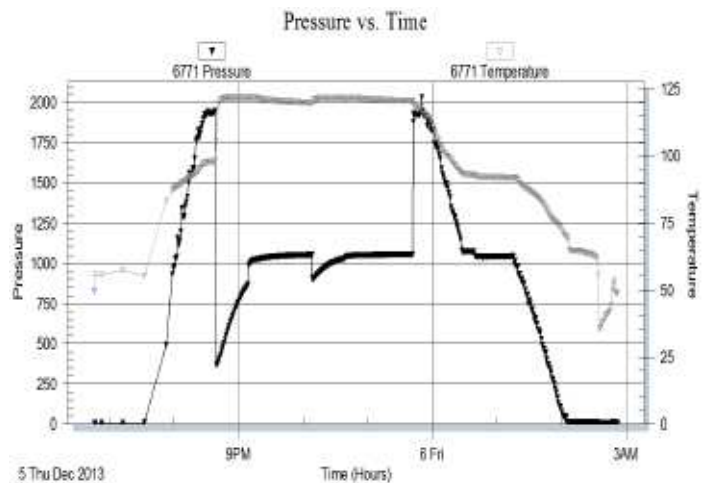


**DST #2: 3,996' - 4,018' (LKC "C")**  
30" - 60" - 30" - 60"

**IF:** Strong blow, building to BOB in 1 minute  
**ISI:** No blow back  
**FF:** Strong blow, building to BOB in 2 minutes  
**FSI:** No blow back

**RECOVERY:** 2,110' Total Fluid, consisting of:  
120' SMCW (85% W, 15% M)  
120' W (100% W); Chlorides: 25,500 ppm  
1750' W (drop bar & break circ sub)  
120' W (below circ sub)  
Sampler: 2000 ml Water

**SIP:** 1053-1056; **FP:** 369-869, 904-1030; **HP:** 1948-1928; **BHT:** 121

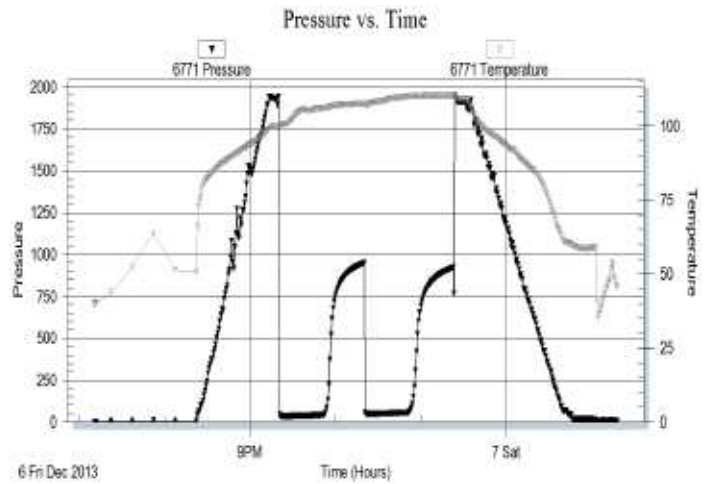


**DST #3: 4,028' - 4,046' (LKC "D")**  
30" - 30" - 30" - 30"

**IF: Weak blow, building to 1.25 inches**  
**ISI: No blow back**  
**FF: Weak blow, building to 1 inch**  
**FSI: No blow back**

**RECOVERY: 60' Total Fluid, consisting of:**  
15' FO (100% O); Gravity: 32  
45' OCWM (10% O, 30% W, 60% M)  
**Chlorides recovery: 28,000 ppm**  
**Sampler: 700 ml Oil, 400 ml Mud & 900 ml Wtr**

**SIP: 949-920; FP: 39-42, 52-54; HP: 1941-1927; BHT: 110**

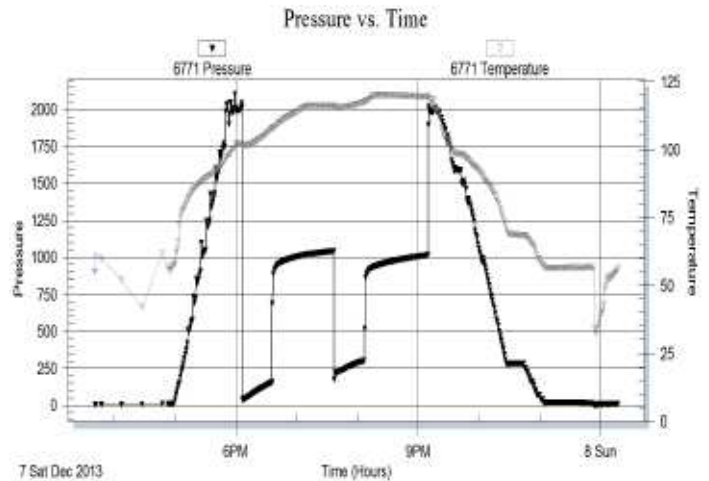


**DST #4: 4,122' - 4,192' (LKC "G-I")**  
30" - 60" - 30" - 60"

**IF: Good blow, building to BOB in 22 minutes**  
**ISI: No blow back**  
**FF: Good blow, building to BOB in 30 minutes**  
**FSI: No blow back**

**RECOVERY: 500' Total Fluid, consisting of:**  
80' OSWCM (30% W, 70% M)  
120' MCW (80% W, 20% M)  
300' Water (100% W); Chlorides: 39,800 ppm  
Show of free oil in tool  
**Sampler: 2000 ml Water @ 130 psi**

**SIP: 1043-1015; FP: 37-152, 177-302; HP: 2041-2014; BHT: 120**

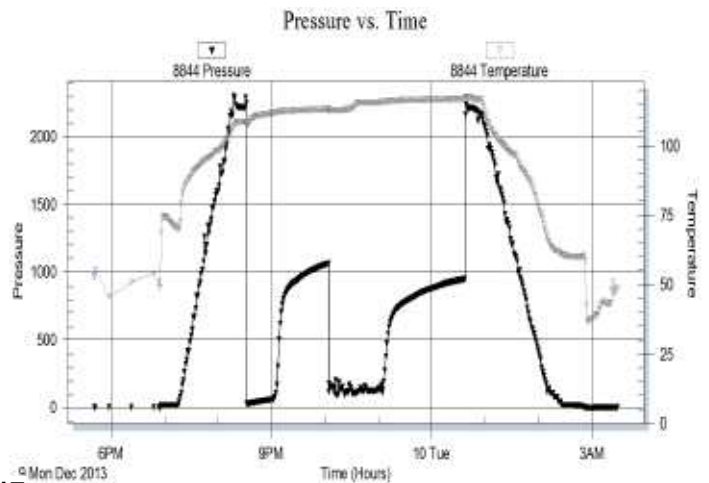


**DST #5: 4,518' - 4,568' (Johnson Zone)**  
(Straddle test) 30" - 60" - 60" - 90"

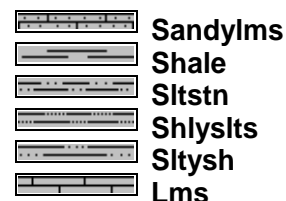
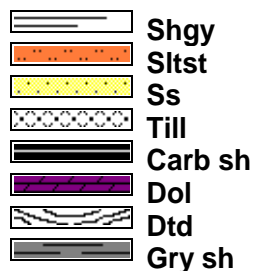
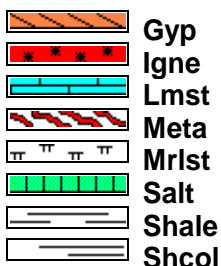
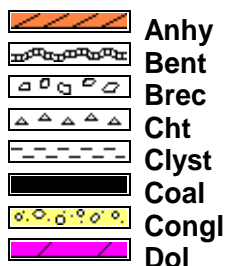
**IF: Good blow, building to BOB in 30 minutes**  
**ISI: Weak blow back, building to 1.5 inches**  
**FF: Good blow, building to BOB in 30 minutes**  
**FSI: Surface blow back, died in 32 minutes**

**RECOVERY: 250' GIP & 230' Total Fluid:**  
120' GMCO (20% G, 45% O, 35% M)  
110' GOCM (15% G, 40% O, 45% M)  
**Sampler: 0.4 CGF, 1000 ml Oil & 600 ml Mud**  
(Straddle packer failed)

**SIP: 1063-949; FP: 24-61, 115-113; HP: 2250-2163; BHT: 117**



## ROCK TYPES

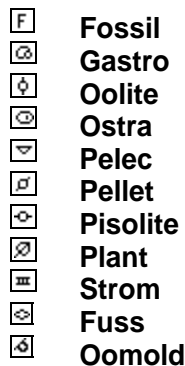
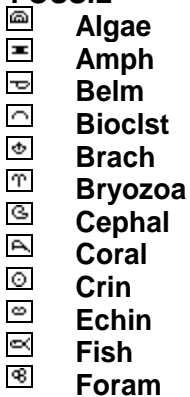


## ACCESSORIES

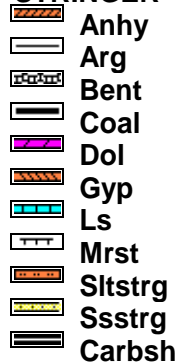
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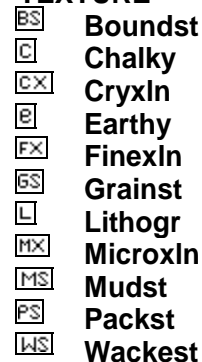
### FOSSIL



### STRINGER

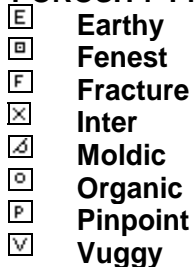


### TEXTURE



## OTHER SYMBOLS

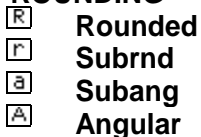
### POROSITY TYPE



### SORTING



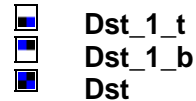
### ROUNDING



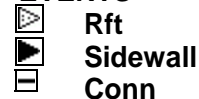
### OIL SHOWS

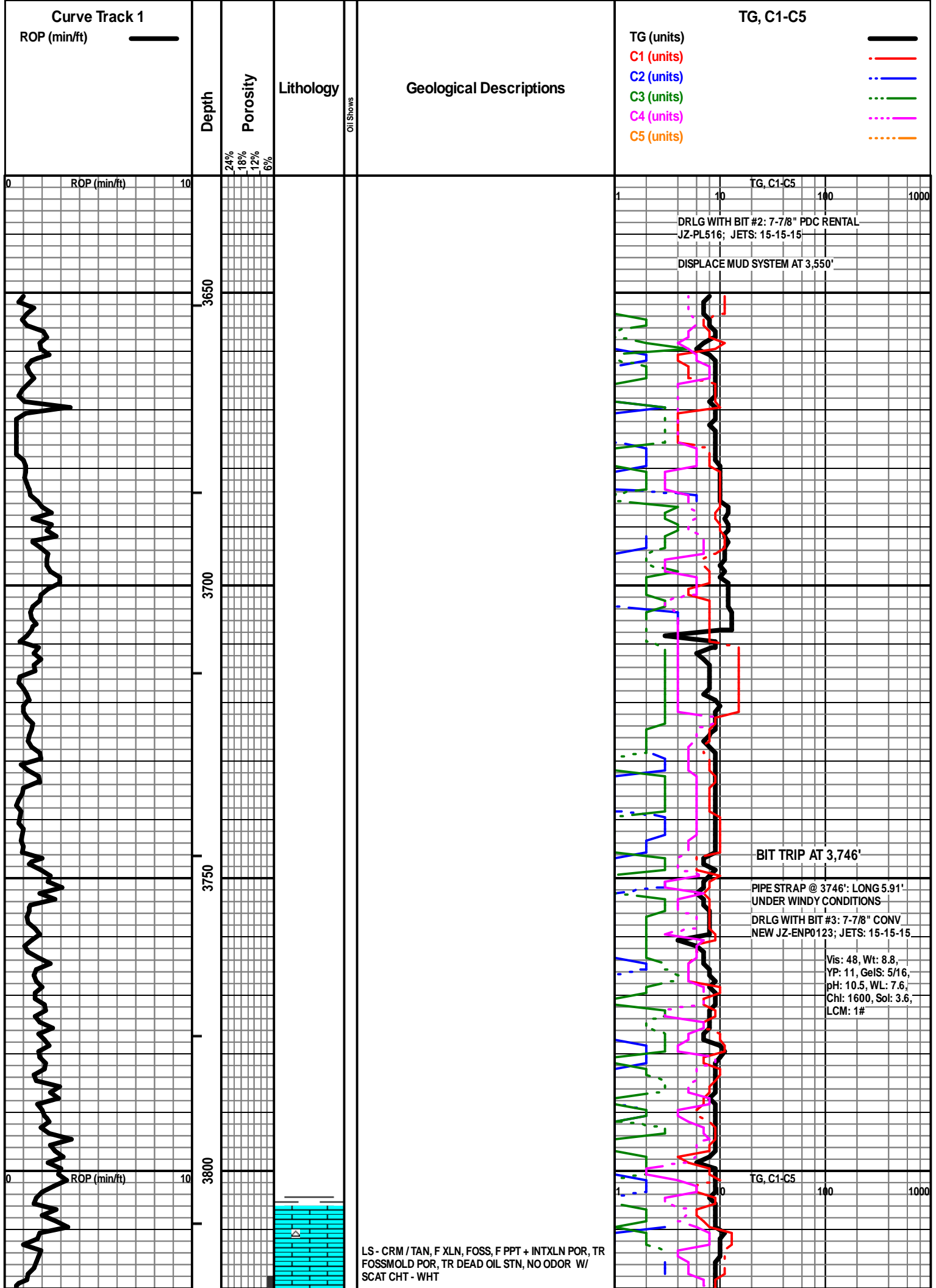


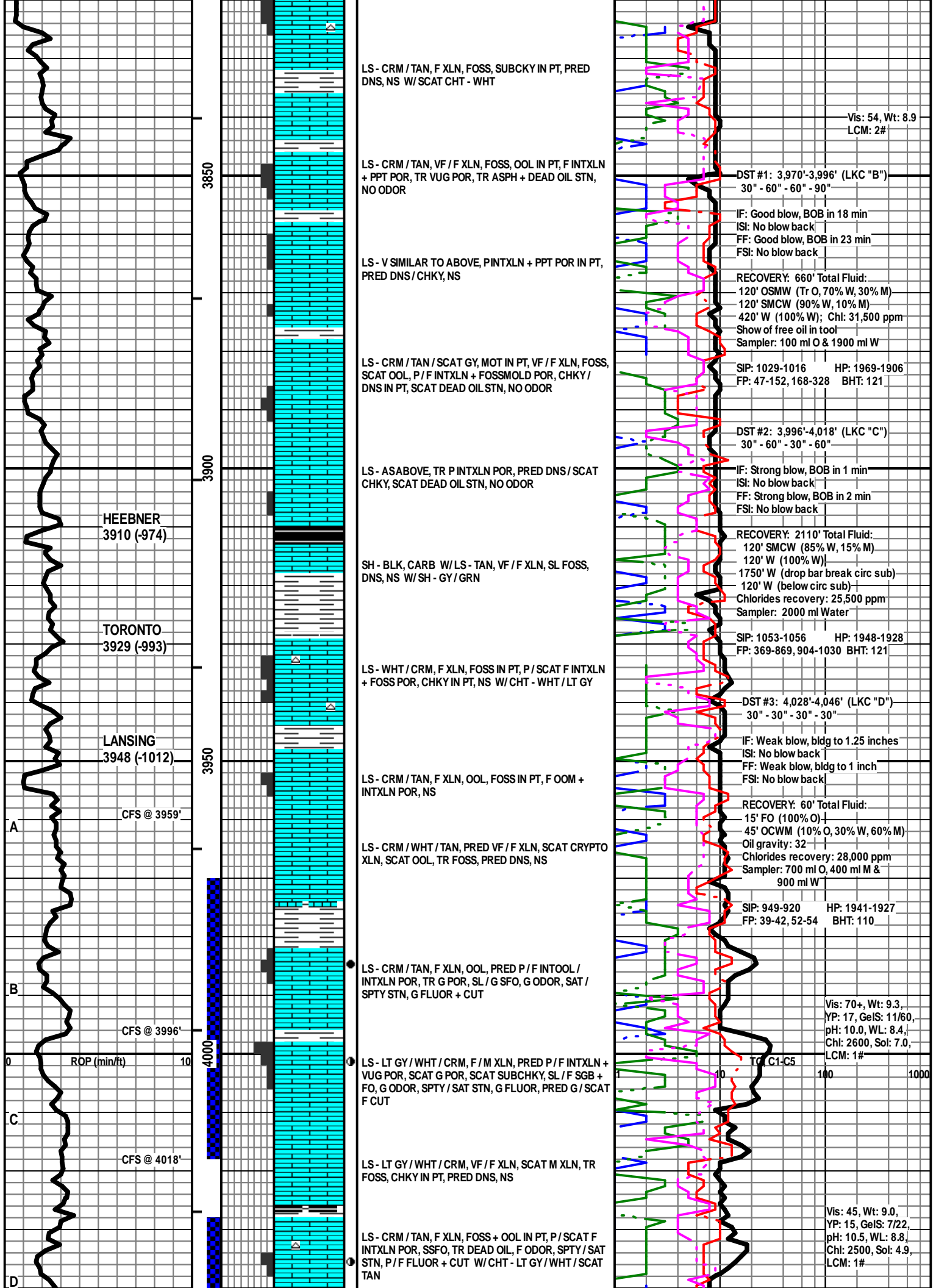
### INTERVALS



### EVENTS







LS - CRM / TAN, F XLN, FOSS, SUBCKY IN PT, PRED DNS, NS W/ SCAT CHT - WHT

Vis: 54, Wt: 8.9  
LCM: 2#

3850

LS - CRM / TAN, VF / F XLN, FOSS, OOL IN PT, F INTXLN + PPT POR, TR VUG POR, TR ASPH + DEAD OIL STN, NO ODOR

DST #1: 3,970'-3,996' (LKC "B")  
30" - 60" - 60" - 90"

IF: Good blow, BOB in 18 min  
ISI: No blow back  
FF: Good blow, BOB in 23 min  
FSI: No blow back

RECOVERY: 660' Total Fluid:  
120' OSMW (Tr O, 70% W, 30% M)  
120' SMCW (90% W, 10% M)  
420' W (100% W); Chl: 31,500 ppm  
Show of free oil in tool  
Sampler: 100 ml O & 1900 ml W

LS - V SIMILAR TO ABOVE, PINTXLN + PPT POR IN PT, PRED DNS/CHKY, NS

SIP: 1029-1016 HP: 1969-1906  
FP: 47-152, 168-328 BHT: 121

LS - CRM / TAN / SCAT GY, MOT IN PT, VF / F XLN, FOSS, SCAT OOL, P/F INTXLN + FOSSMOLD POR, CHKY / DNS IN PT, SCAT DEAD OIL STN, NO ODOR

DST #2: 3,996'-4,018' (LKC "C")  
30" - 60" - 30" - 60"

IF: Strong blow, BOB in 1 min  
ISI: No blow back  
FF: Strong blow, BOB in 2 min  
FSI: No blow back

RECOVERY: 2110' Total Fluid:  
120' SMCW (85% W, 15% M)  
120' W (100% W)  
1750' W (drop bar break circ sub)  
120' W (below circ sub)  
Chlorides recovery: 25,500 ppm  
Sampler: 2000 ml Water

HEEBNER  
3910 (-974)

LS - ASABOVE, TR P INTXLN POR, PRED DNS / SCAT CHKY, SCAT DEAD OIL STN, NO ODOR

SIP: 1053-1056 HP: 1948-1928  
FP: 369-869, 904-1030 BHT: 121

TORONTO  
3929 (-993)

SH - BLK, CARB W/LS - TAN, VF / F XLN, SL FOSS, DNS, NS W/SH - GY / GRN

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

DST #3: 4,028'-4,046' (LKC "D")  
30" - 30" - 30" - 30"

IF: Weak blow, bldg to 1.25 inches  
ISI: No blow back  
FF: Weak blow, bldg to 1 inch  
FSI: No blow back

RECOVERY: 60' Total Fluid:  
15' FO (100% O)  
45' OCWM (10% O, 30% W, 60% M)  
Oil gravity: 32  
Chlorides recovery: 28,000 ppm  
Sampler: 700 ml O, 400 ml M & 900 ml W

LANSING  
3948 (-1012)

LS - CRM / TAN, F XLN, OOL, FOSS IN PT, F OOM + INTXLN POR, NS

SIP: 949-920 HP: 1941-1927  
FP: 39-42, 52-54 BHT: 110

CFS @ 3959'

LS - CRM / WHT / TAN, PRED VF / F XLN, SCAT CRYPTO XLN, SCAT OOL, TR FOSS, PRED DNS, NS

Vis: 70+, Wt: 9.3,  
YP: 17, GeIS: 11/60,  
pH: 10.0, WL: 8.4,  
Chl: 2600, Sol: 7.0,  
LCM: 1#

A

LS - CRM / TAN, F XLN, OOL, PRED P / F INTOOL / INTXLN POR, TR G POR, SL / G SFO, G ODOR, SAT / SPTY STN, G FLUOR + CUT

CFS @ 3996'

B

LS - LT GY / WHT / CRM, F / M XLN, PRED P / F INTXLN + VUG POR, SCAT G POR, SCAT SUBCHKY, SL / F SGB + FO, G ODOR, SPTY / SAT STN, G FLUOR, PRED G / SCAT F CUT

C

CFS @ 4018'

LS - LT GY / WHT / CRM, VF / F XLN, SCAT M XLN, TR FOSS, CHKY IN PT, PRED DNS, NS

C

LS - CRM / TAN, F XLN, FOSS + OOL IN PT, P / SCAT F INTXLN POR, SSFO, TR DEAD OIL, F ODOR, SPTY / SAT STN, P / F FLUOR + CUT W/ CHT - LT GY / WHT / SCAT TAN

Vis: 45, Wt: 9.0,  
YP: 15, GeIS: 7/22,  
pH: 10.5, WL: 8.8,  
Chl: 2500, Sol: 4.9,  
LCM: 1#

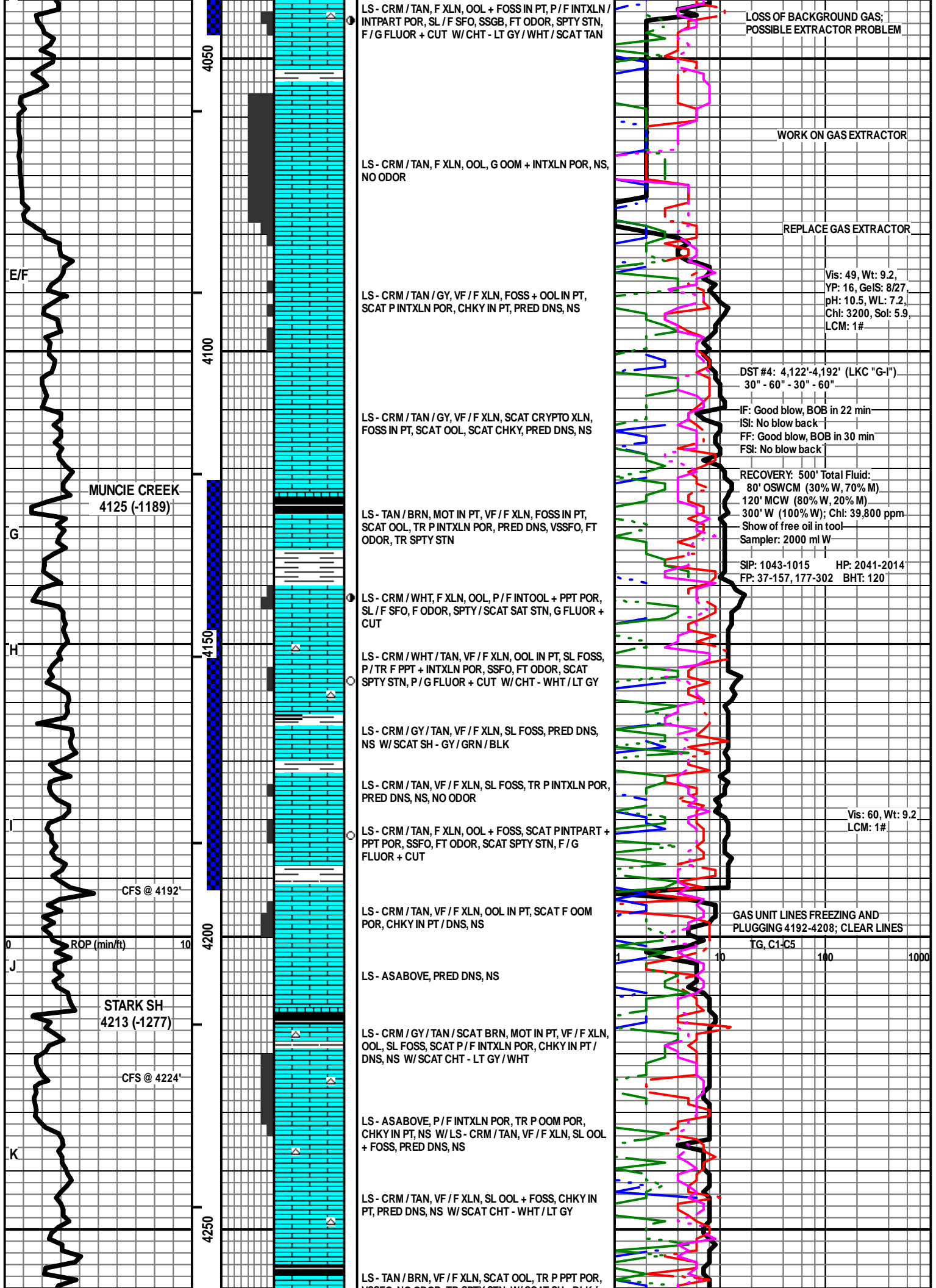
D

ROP (min/ft)

4000

TG C1-C5

100 1000



LS - CRM / TAN, F XLN, OOL + FOSS IN PT, P / F INTXLN / INTPART POR, SL / F SFO, SSGB, FT ODOR, SPTY STN, F / G FLUOR + CUT W / CHT - LT GY / WHT / SCAT TAN

LOSS OF BACKGROUND GAS; POSSIBLE EXTRACTOR PROBLEM

LS - CRM / TAN, F XLN, OOL, G OOM + INTXLN POR, NS, NO ODOR

WORK ON GAS EXTRACTOR

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

REPLACE GAS EXTRACTOR

Vis: 49, Wt: 9.2,  
YP: 16, GeIS: 8/27,  
pH: 10.5, WL: 7.2,  
Chl: 3200, Sol: 5.9,  
LCM: 1#

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

DST #4: 4,122'-4,192' (LKC "G-I")  
30" - 60" - 30" - 60"

IF: Good blow, BOB in 22 min  
IS: No blow back  
FF: Good blow, BOB in 30 min  
FSI: No blow back

MUNCIE CREEK  
4125 (-1189)

LS - TAN / BRN, MOT IN PT, VF / F XLN, FOSS IN PT, SCAT OOL, TR P INTXLN POR, PRED DNS, VSSFO, FT ODOR, TR SPTY STN

RECOVERY: 500' Total Fluid:  
80' OSWCM (30% W, 70% M)  
120' MCW (80% W, 20% M)  
300' W (100% W); Chl: 39,800 ppm  
Show of free oil in tool  
Sampler: 2000 ml W

SIP: 1043-1015 HP: 2041-2014  
FP: 37-157, 177-302 BHT: 120

LS - CRM / WHT, F XLN, OOL, P / F INTOOL + PPT POR, SL / F SFO, F ODOR, SPTY / SCAT SAT STN, G FLUOR + CUT

LS - CRM / WHT / TAN, VF / F XLN, OOL IN PT, SL FOSS, P / TR F PPT + INTXLN POR, SSFO, FT ODOR, SCAT SPTY STN, P / G FLUOR + CUT W / CHT - WHT / LT GY

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

LS - CRM / TAN, VF / F XLN, SL FOSS, TR P INTXLN POR, PRED DNS, NS, NO ODOR

Vis: 60, Wt: 9.2  
LCM: 1#

LS - CRM / TAN, F XLN, OOL + FOSS, SCAT PINTPART + PPT POR, SSFO, FT ODOR, SCAT SPTY STN, F / G FLUOR + CUT

CFS @ 4192'

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

GAS UNIT LINES FREEZING AND PLUGGING 4192-4208; CLEAR LINES

LS - ASABOVE, PRED DNS, NS

TG, C1-C5 100 1000

STARK SH  
4213 (-1277)

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

LS - ASABOVE, P / F INTXLN POR, TR P OOM POR, CHKY IN PT, NS W / LS - CRM / TAN, VF / F XLN, SL OOL + FOSS, PRED DNS, NS

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

LS - TAN / BRN, VF / F XLN, SCAT OOL, TR P PPT POR,

E/F

G

H

I

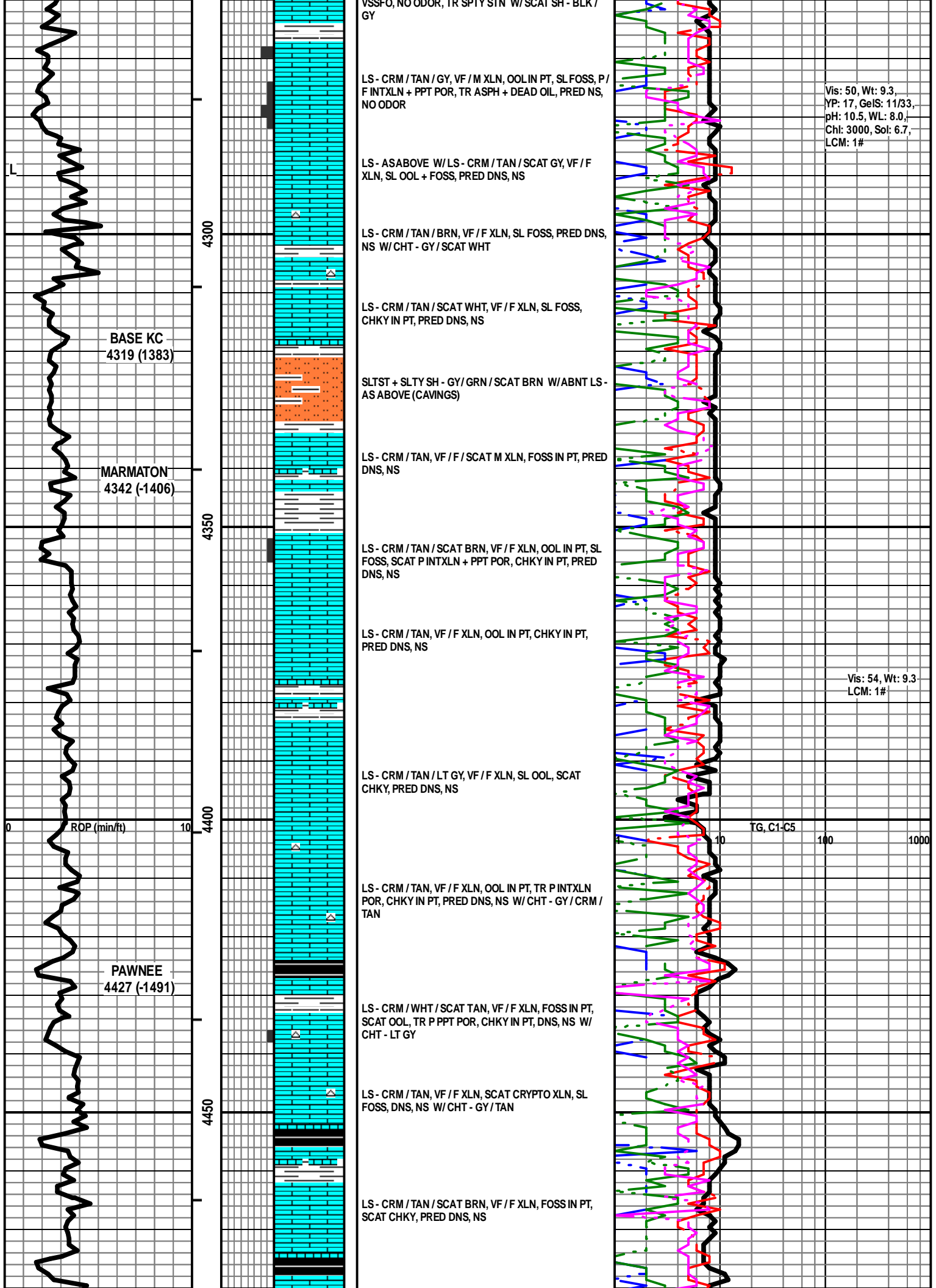
J

K

ROP (min/ft) 10

CFS @ 4224'

4050  
4100  
4150  
4200  
4250



VSSF-O, NO ODOR, TR SP1Y SIN W/SCAT SH - BLK / GY

LS - CRM / TAN / GY, VF / M XLN, OOL IN PT, SL FOSS, P / F INTXLN + PPT POR, TR ASPH + DEAD OIL, PRED NS, NO ODOR

Vis: 50, Wt: 9.3,  
YP: 17, GeIS: 11/33,  
pH: 10.5, WL: 8.0,  
Chl: 3000, Sol: 6.7,  
LCM: 1#

LS - AS ABOVE W/LS - CRM / TAN / SCAT GY, VF / F XLN, SL OOL + FOSS, PRED DNS, NS

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

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

BASE KC  
4319 (1383)

SLTST + SLTY SH - GY/GRN / SCAT BRN W/ABNT LS-AS ABOVE (CAVINGS)

LS - CRM / TAN, VF / F / SCAT M XLN, FOSS IN PT, PRED DNS, NS

MARMATON  
4342 (-1406)

LS - CRM / TAN / SCAT BRN, VF / F XLN, OOL IN PT, SL FOSS, SCAT P INTXLN + PPT POR, CHKY IN PT, PRED DNS, NS

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

Vis: 54, Wt: 9.3  
LCM: 1#

LS - CRM / TAN / LT GY, VF / F XLN, SL OOL, SCAT CHKY, PRED DNS, NS

ROP (min/ft)

4400

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

TG, C1-C5

PAWNEE  
4427 (-1491)

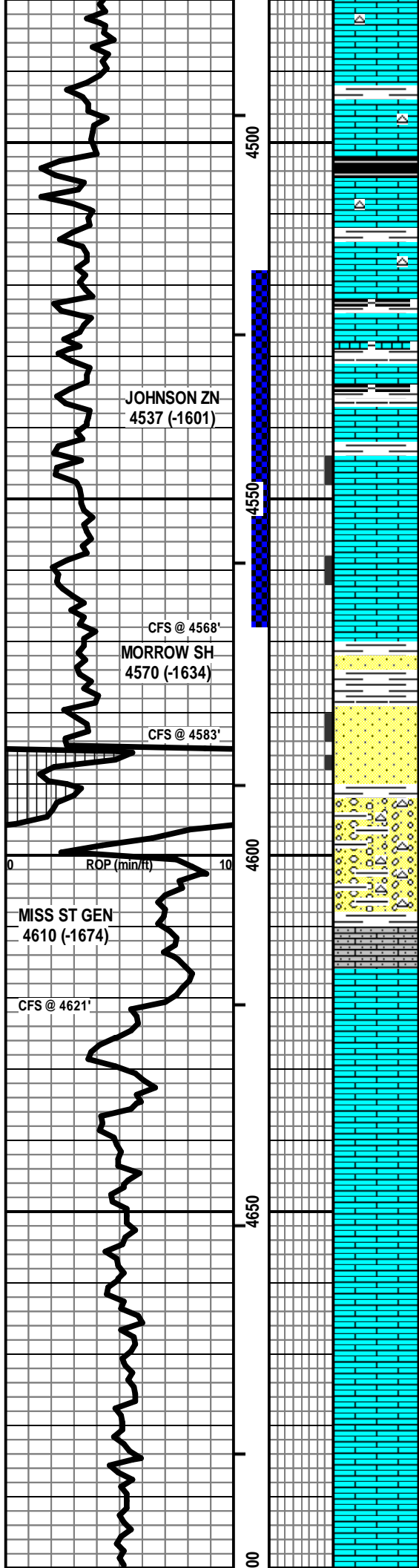
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LS - CRM / TAN, VF / F XLN, SCAT CRYPTO XLN, SL FOSS, DNS, NS W/CHT - GY / TAN

4450

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





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

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

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

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

LS - CRM / TAN, VF / F XLN, OOL + FOSS IN PT, SCAT P / F VUG + INTXLN POR, SL / F SFO, FT ODOR, SAT / SPTY STN, F / G FLUOR + CUT

LS - CRM / TAN, VF / F XLN, SL FOSS, SCAT P / F INTXLN + PPT POR, TR VUG POR, SL / F SFO, F ODOR, SPTY / SAT STN, F / G FLUOR + CUT

SH - GY W/ SCAT SS - LT GY, VF / F GR, SA / R, W SR TD, SIL CEM, PRED P / NO VIS POR, SCAT SL / MOD FRI, NS W/ SCAT AREN LS TO LMY SS - CRM / GY, NO VIS POR, NS

MOD AMT SS - AS ABOVE, P / SCAT F INTGR POR, MOD FRI IN PT, NS

CONGL: SH - GY / GRN, SLTY IN PT W/ CHT - ORG / YEL / WHT / TAN, SL WEATH IN PT W/ SS - AS ABOVE, LT GY / GRN W/ LS - TAN / GY, VF / F XLN, DNS; NS, NO ODOR

CONGL - AS ABOVE W/ LS - WHT / CRM, VF XLN, V AREN, VF QTZ GR, SCAT OOL, CHKY / DNS, NS

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

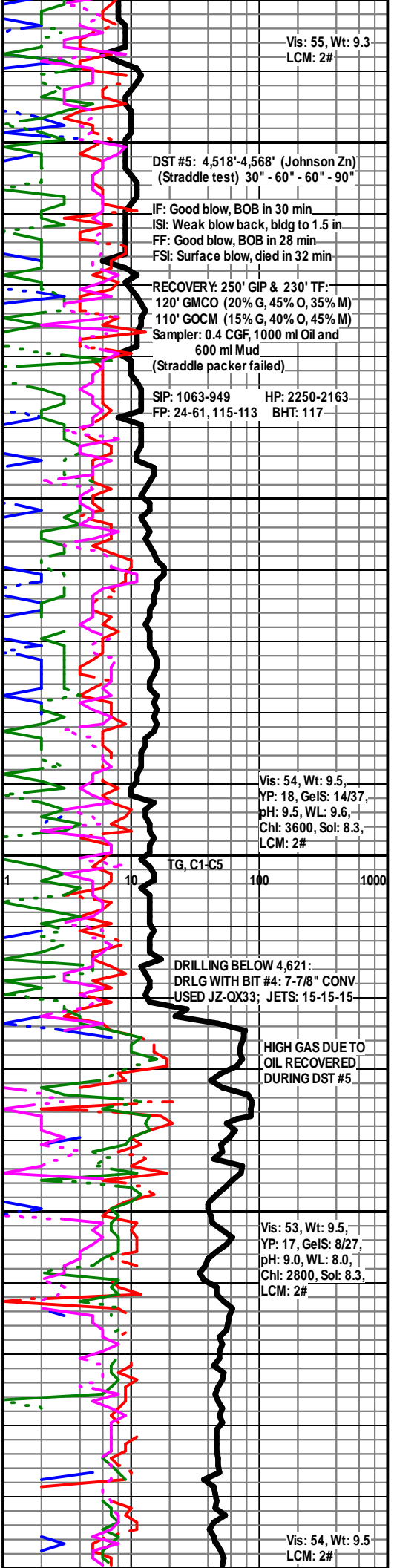
LS - CRM / TAN / SCAT WHT, VF / F XLN, SL / MOD AREN IN PT, OOL IN PT, CHKY / DNS, NS

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

LS - CRM / TAN / SCAT WHT, VF / F XLN, SCAT CRYPTO XLN, SL AREN IN PT, OOL IN PT, CHKY / DNS, NS W/ SCAT CHT - TAN

LS - CRM / TAN, VF / F XLN, SL AREN IN PT, OOL IN PT, CHKY / DNS, NS W/ SCAT CHT - TAN

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



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TOTAL DEPTH 4700 (-1764)

