

GEOLOGIC REPORT

DAVID J. GOLDAK

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

Well Name: Rodenberg #1-19
Location: Section 19 - T16S - R31W
License Number: API: 15-171-20992
Spud Date: 11 / 18 / 2013
Surface Coordinates: 423' FNL and 1916' FEL
Approx. N/2 - NW - NE
Region: Scott Co., KS
Drilling Completed: 11 / 29 / 2013
Bottom Hole Coordinates:
Ground Elevation (ft): 2950' K.B. Elevation (ft): 2957'
Logged Interval (ft): 3700' To: 4702' Total Depth (ft): 4702'
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	312	312	4.00
2	7-7/8	JZ-PL516-PDC	15-15-15	3811	3499	40.00
3	7-7/8	JZ-QX33	15-15-15	4702	891	49.75

SURVEYS: 312'-0.50, 874'-0.50, 1436'-0.50, 2124'-0.75,
2624'-0.75, 3811'-0.75, 4702'-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"): 490.13'
Pumping 60 S/M; 7.7 B/M; 650-750 psi at the standpipe.

Daily Status

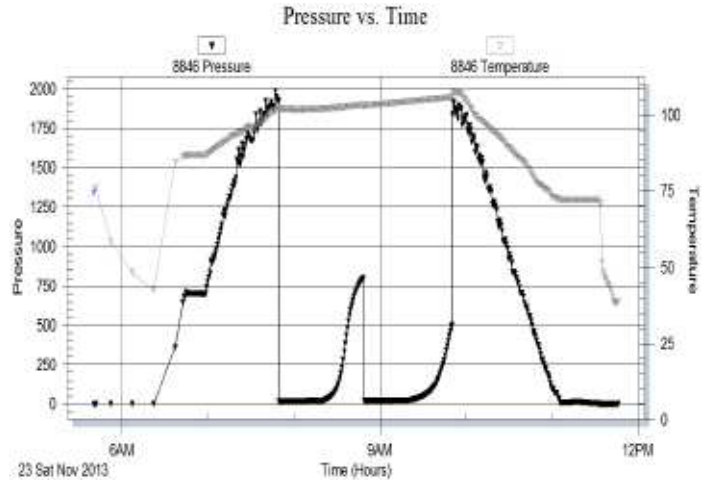
11/18/13 - Spud at 8:30 PM; Set 8-5/8" csg at 310'
 11/19/13 - 312' WOC
 11/20/13 - 1,220' Drilling
 11/21/13 - 2,945' Drilling; Displace mud system at 3,470'
 11/22/13 - 3,811' CFS; Bit trip @ 3,811'
 11/23/13 - 4,014' TIH with DST #1
 11/24/13 - 4,068' TOH with DST #2
 11/25/13 - 4,218' On bottom with DST #3
 11/26/13 - 4,440' Drilling; DST #4 @ 4,468'
 11/27/13 - 4,581' CFS; DST #5 @ 4,581'
 11/28/13 - 4,614' TOH with DST #6
 11/29/13 - 4,702' Preparing to plug

DST #1: 3,992' - 4,014' (LKC "B")
 30" - 30" - 30" - 30"

IF: Weak blow, building to 1-1/8 inches
ISI: No blow back
FF: Weak blow, building to 3/4 inch
FSI: No blow back

RECOVERY: 15' Total Fluid, consisting of:
 15' MCO (60% O, 40% M)
Sampler: 12 ml Oil & 8 ml Mud

SIP: 801-498; **FP:** 16-20, 21-22; **HP:** 1924-1917; **BHT:** 107

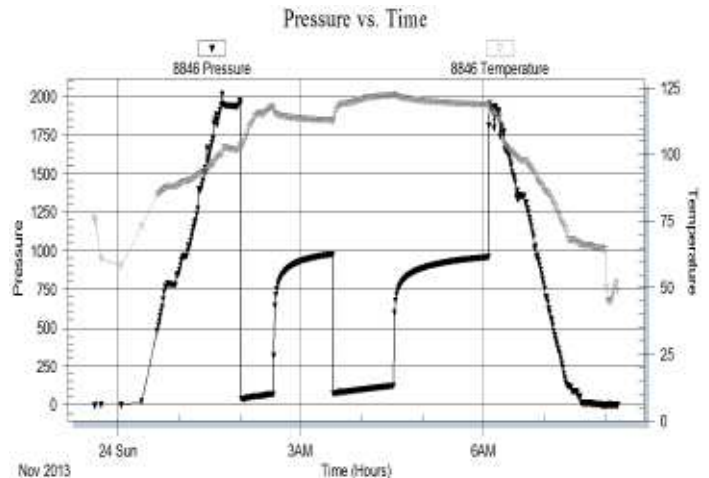


DST #2: 4,020' - 4,068' (LKC "C-D")
 30" - 60" - 60" - 90"

IF: Weak blow, building to 7-1/2 inches
ISI: Weak surface blow back
FF: Weak blow, building to 9 inches
FSI: Weak surface blow back

RECOVERY: 190' Total Fluid, consisting of:
 4' CO (100% O); Gravity: 31
 124' OCM (20% O, 80% M)
 62' OCMW (5% O, 55% W, 40% M)
Chlorides recovery: 14,000 ppm
Sampler: 100 ml Oil

SIP: 980-961; **FP:** 39-70, 73-124; **HP:** 1963-1959; **BHT:** 119

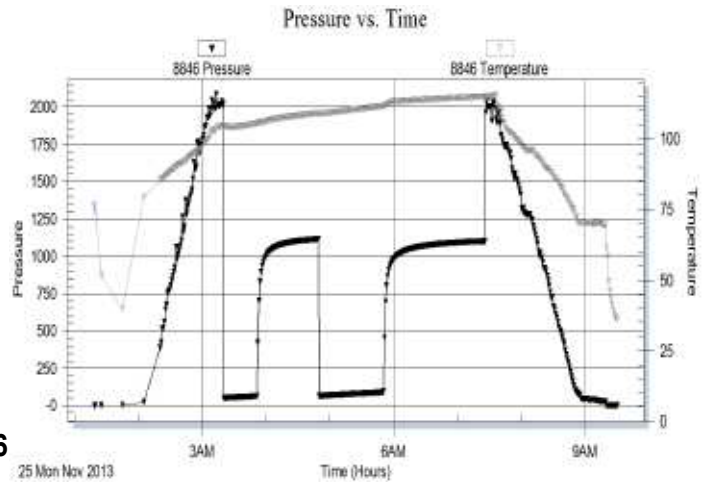


DST #3: 4,132' - 4,206' (LKC "G-I")
(Straddle test) 30" - 60" - 60" - 90"

IF: Weak blow, building to 3 inches
ISI: No blow back
FF: Weak blow, building to 5 inches
FSI: No blow back

RECOVERY: 90' Total Fluid, consisting of:
90' OSM (100% M)
Sampler: 3000 ml OSM

SIP: 1114-1100; FP: 49-63, 65-88; HP: 2021-2044; BHT: 116

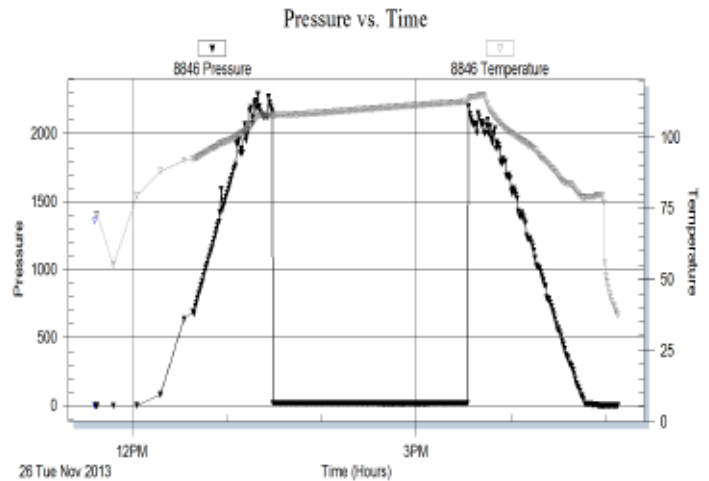


DST #4: 4,437' - 4,468' (Pawnee)
30" - 30" - 30" - 30"

IF: Surface blow, building to 1/4 inch
ISI: No blow back
FF: No blow
FSI: No blow back

RECOVERY: 5' Total Fluid, consisting of:
5' OSM (100% M)
Sampler: No recovery

SIP: 17-16; FP: 15-15, 15-14; HP: 2170-2199; BHT: 112

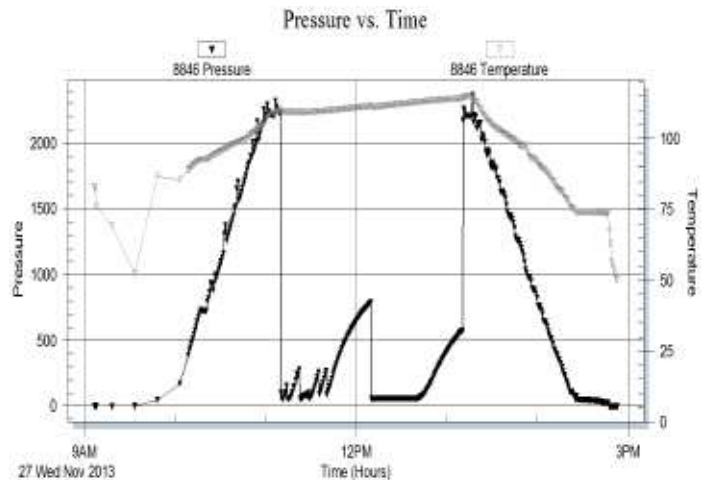


DST #5: 4,480' - 4,581' (Ft Scott - Johnson Zone)
30" - 30" - 30" - 30"

IF: Weak blow, building to 1 inch
ISI: No blow back
FF: Weak surface blow throughout
FSI: No blow back

RECOVERY: 62' Total Fluid, consisting of:
62' Mud (100% M)
Sampler: 3000 ml Mud

SIP: 790-578; FP: 52-86, 54-55; HP: 2229-2265; BHT: 114

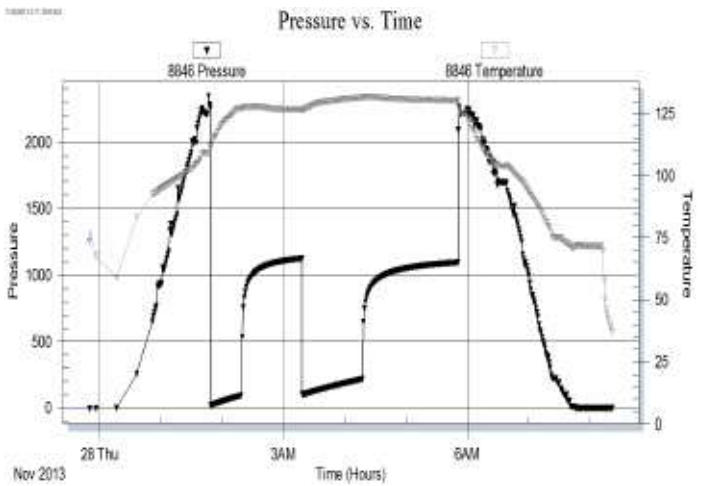


DST #6: 4,582' - 4,614' (Basal Penn Sand)
 30" - 60" - 60" - 90"

IF: Fair blow, building to 6 inches
 ISI: No blow back
 FF: Fair blow, building to 4 inches
 FSI: No blow back

RECOVERY: 434' Total Fluid, consisting of:
 124' WCM (30% W, 70% M) w/ scum of oil
 124' MCW (80% W, 20% M)
 186' Water (100% W); Chlorides: 25,000 ppm
 Sampler: 3000 ml Water

SIP: 1126-1096; FP: 19-95, 100-220; HP: 2255-2259; BHT: 130



ROCK TYPES

- | | | | |
|-------|-------|---------|----------|
| Anhy | Gyp | Shgy | Sandylms |
| Bent | Igne | Siltst | Shale |
| Brec | Lmst | Ss | Siltstn |
| Cht | Meta | Till | Shlysits |
| Clyst | Mrlst | Carb sh | Sltysch |
| Coal | Salt | Dol | Lms |
| Congl | Shale | Dtd | |
| Dol | Shcol | Gry sh | |

ACCESSORIES

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

OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- F Fenest
- X Fracture
- I Inter
- M Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- F Subrnd
- a Subang
- A Angular

OIL SHOWS

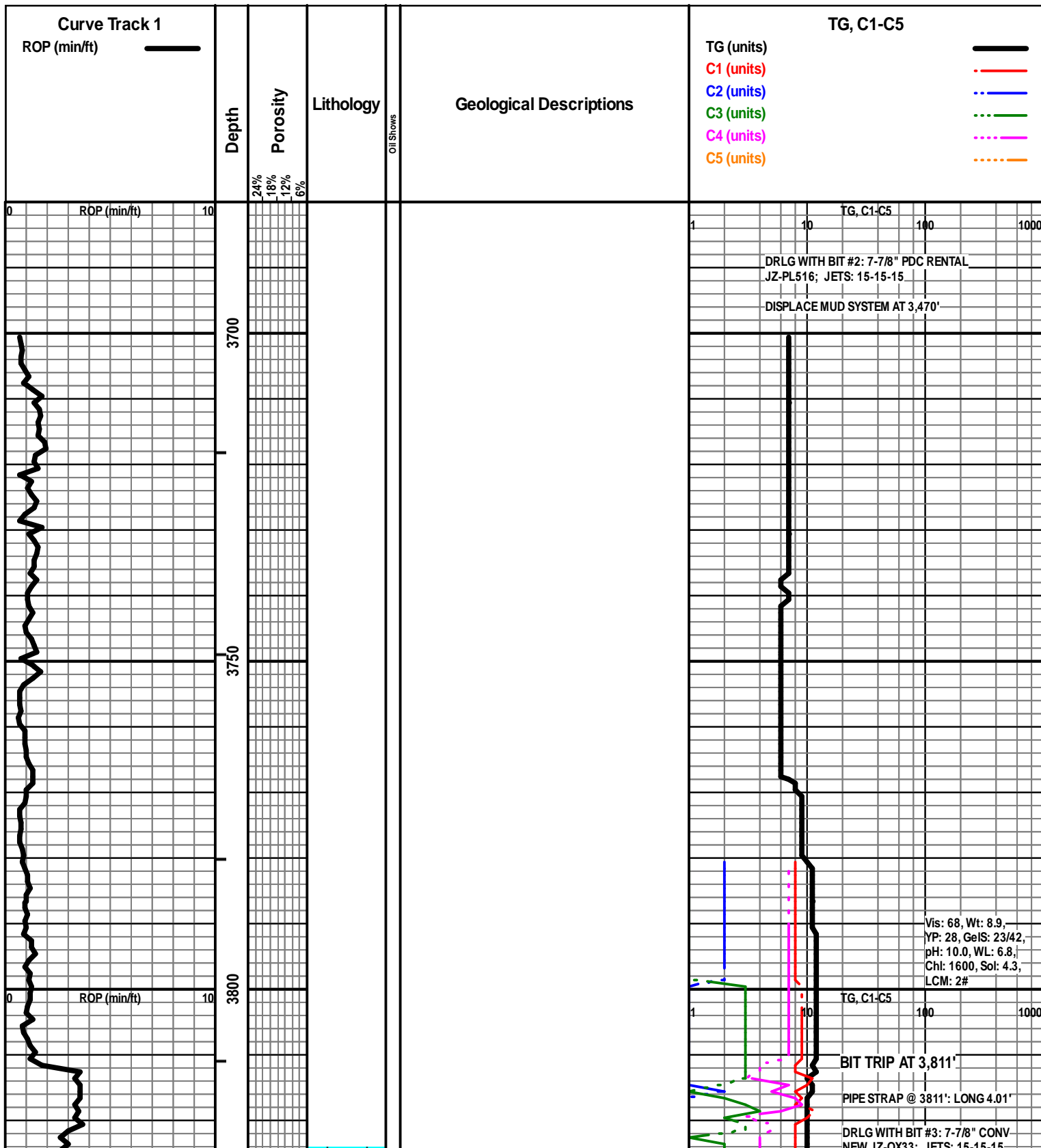
- Even
- ◉ Spotted
- ◌ Ques
- ◻ Dead
- ⊠ Gas show

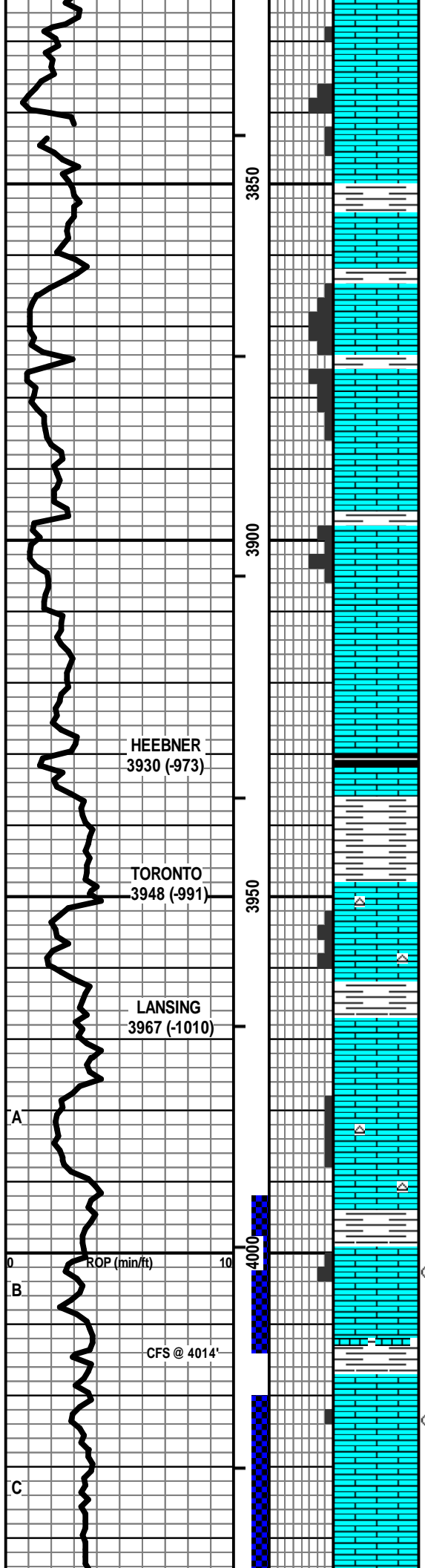
INTERVALS

- Core
- ◻ Dst

- ▣ Dst_1_t
- ▢ Dst_1_b
- ▣ Dst

- #### EVENTS
- ▽ Rft
 - ▾ Sidewall
 - ▬ Conn





LS - CRM / TAN / GY, VF / F XLN, SL FOSS, SCAT P VUG + PPT POR, SCAT DEAD OIL STN, NSFO, NO ODOR W/ SH - GY / GRN / BLK

LS - CRM / WHT / TAN, VF / F XLN, SL FOSS, SCAT F / G VUG + FOSSMOLD POR, SUBCHKY IN PT, NS

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

LS - CRM / TAN, PRED F XLN, FOSS IN PT, F / SCAT G INTXLN + VUG POR, RARE FOSS POR, SCAT CHKY, NS

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

LS - CRM / TAN, F XLN, FOSS IN PT, P/G INTXLN + PPT POR, CHKY IN PT / DNS, TR DEAD OIL STN, NSFO, NO ODOR

LS - CRM / TAN / GY, VF / F XLN, FOSS IN PT, PRED CHKY / DNS, SCAT DEAD OIL STN, NSFO, NO ODOR

HEEBNER
3930 (-973)

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

SH - GY / GRN

TORONTO
3948 (-991)

LS - TAN / GY / WHT, MOT IN PT, PRED F XLN P / TR F INTXLN POR, SCAT CHKY, NS W/ SCAT CHT - WHT / LT GY

LANSING
3967 (-1010)

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

LS - AS ABOVE, P PPT + VUG POR, TR DEAD OIL STN, NSFO, NO ODOR W/ SCAT CHT - LT GY / WHT

A

ROP (min/ft)

B

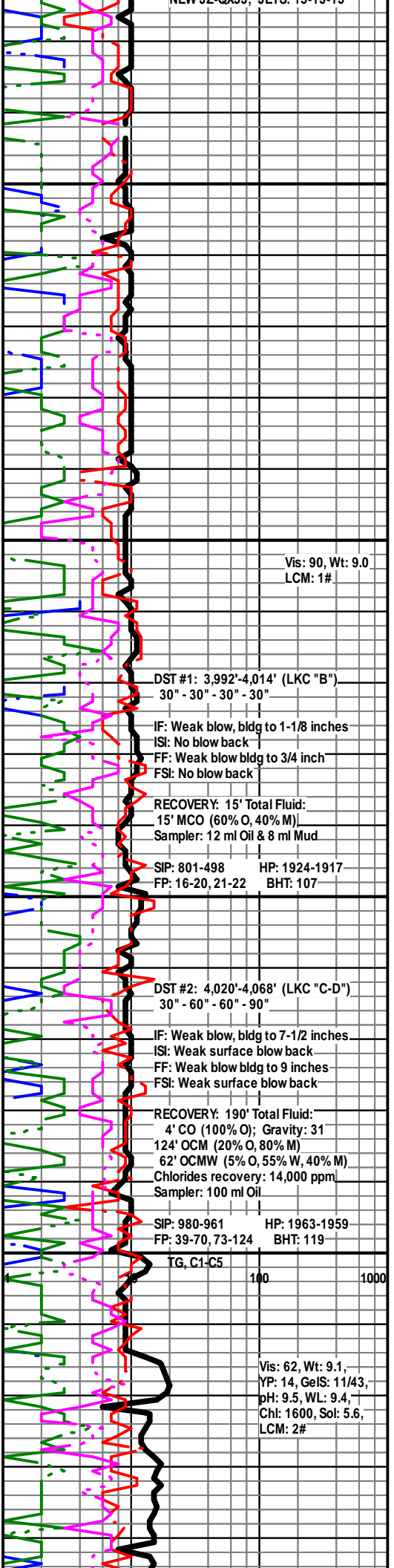
CFS @ 4014'

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

LS - LT GY / CRM / WHT, F / SCAT M XLN, TR FOSS, SCAT P INTXLN + PPT POR, TR VUG POR, SUBCHKY IN PT, PRED DNS, SSFO + GB, F ODOR, SCAT SPTYSTN, G FLUOR + CUT

C

LS - LT GY / CRM / WHT, PRED VF / F XLN, SCAT M XLN, TR FOSS, SUBCHKY IN PT, PRED DNS, NS, NO ODOR



Vis: 90, Wt: 9.0
LCM: 1#

DST #1: 3,992'-4,014' (LKC "B")
30" - 30" - 30" - 30"

IF: Weak blow, bldg to 1-1/8 inches
IS: No blow back
FF: Weak blow bldg to 3/4 inch
FS: No blow back

RECOVERY: 15' Total Fluid:
15' MCO (60% O, 40% M)
Sampler: 12 ml Oil & 8 ml Mud

SIP: 801-498 HP: 1924-1917
FP: 16-20, 21-22 BHT: 107

DST #2: 4,020'-4,068' (LKC "C-D")
30" - 60" - 60" - 90"

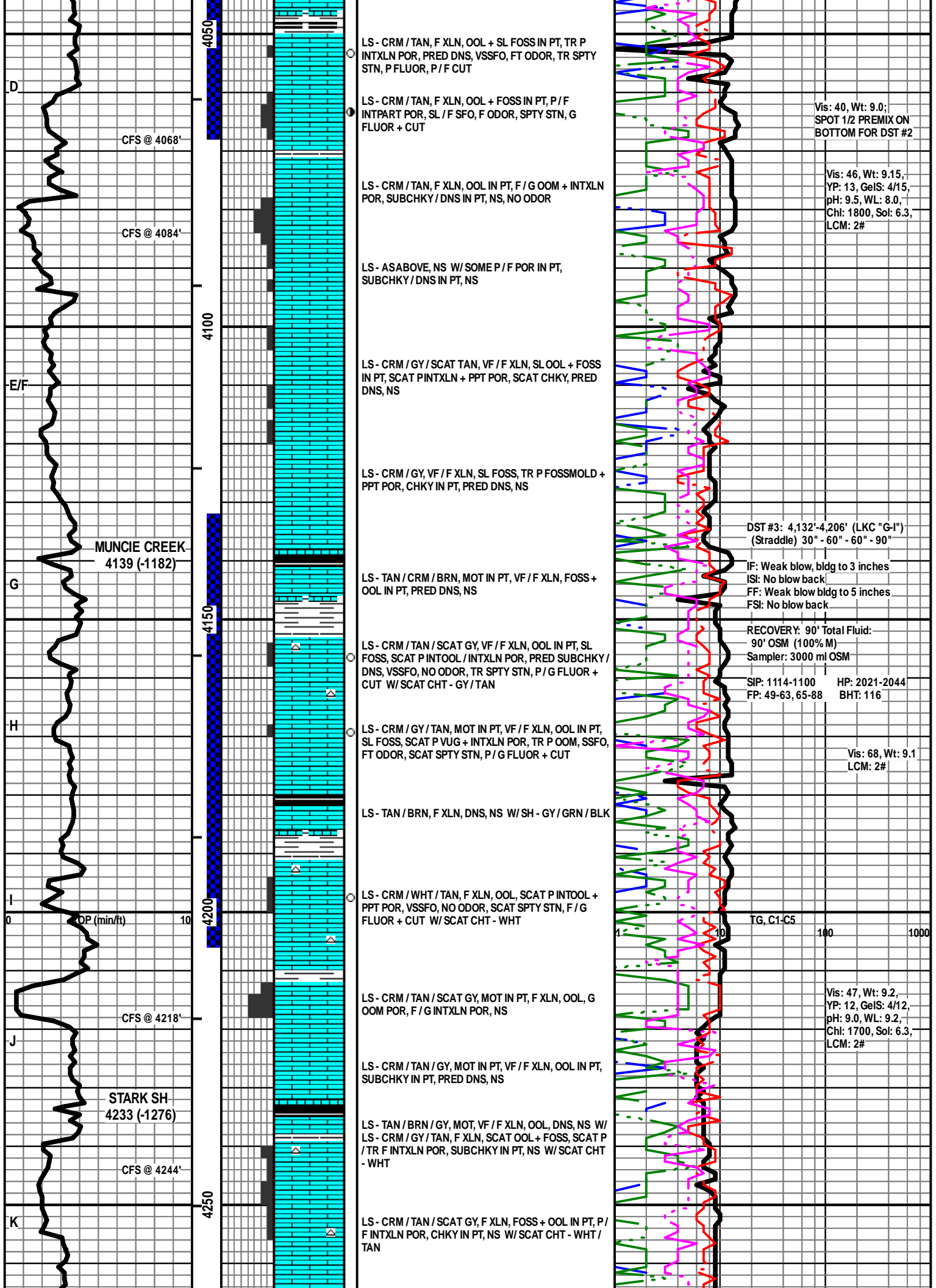
IF: Weak blow, bldg to 7-1/2 inches
IS: Weak surface blow back
FF: Weak blow bldg to 9 inches
FS: Weak surface blow back

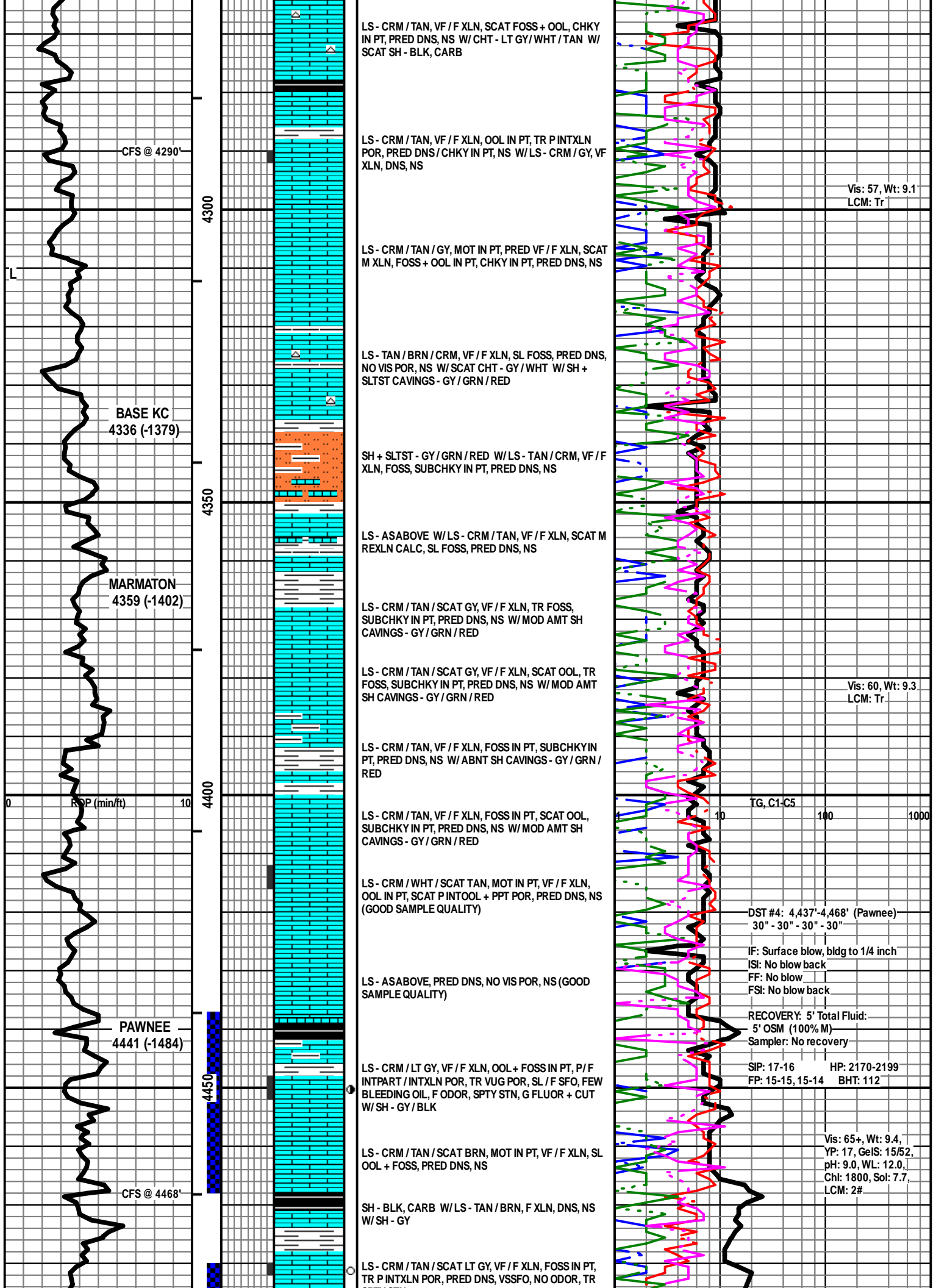
RECOVERY: 190' Total Fluid:
4' CO (100% O); Gravity: 31
124' OCM (20% O, 80% M)
62' OCMW (5% O, 55% W, 40% M)
Chlorides recovery: 14,000 ppm
Sampler: 100 ml Oil

SIP: 980-961 HP: 1963-1959
FP: 39-70, 73-124 BHT: 119

TG, C1-C5

Vis: 62, Wt: 9.1,
YP: 14, GeIS: 11/43,
pH: 9.5, WL: 9.4,
Chl: 1600, Sol: 5.6,
LCM: 2#





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

CFS @ 4290'

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

Vis: 57, Wt: 9.1
LCM: Tr

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

BASE KC
4336 (-1379)

LS - TAN / BRN / CRM, VF / F XLN, SL FOSS, PRED DNS, NO VIS POR, NS W/ SCAT CHT - GY / WHT W/ SH + SLTST CAVINGS - GY / GRN / RED

SH + SLTST - GY / GRN / RED W/ LS - TAN / CRM, VF / F XLN, FOSS, SUBCHKY IN PT, PRED DNS, NS

LS - ASABOVE W/ LS - CRM / TAN, VF / F XLN, SCAT M REXLN CALC, SL FOSS, PRED DNS, NS

MARMATON
4359 (-1402)

LS - CRM / TAN / SCAT GY, VF / F XLN, TR FOSS, SUBCHKY IN PT, PRED DNS, NS W/ MOD AMT SH CAVINGS - GY / GRN / RED

LS - CRM / TAN / SCAT GY, VF / F XLN, SCAT OOL, TR FOSS, SUBCHKY IN PT, PRED DNS, NS W/ MOD AMT SH CAVINGS - GY / GRN / RED

Vis: 60, Wt: 9.3
LCM: Tr

LS - CRM / TAN, VF / F XLN, FOSS IN PT, SUBCHKY IN PT, PRED DNS, NS W/ ABNT SH CAVINGS - GY / GRN / RED

LS - CRM / TAN, VF / F XLN, FOSS IN PT, SCAT OOL, SUBCHKY IN PT, PRED DNS, NS W/ MOD AMT SH CAVINGS - GY / GRN / RED

TG, C1-C5

LS - CRM / WHT / SCAT TAN, MOT IN PT, VF / F XLN, OOL IN PT, SCAT P INTOOL + PPT POR, PRED DNS, NS (GOOD SAMPLE QUALITY)

DST #4: 4,437'-4,468' (Pawnee)
30" - 30" - 30" - 30"

IF: Surface blow, bldg to 1/4 inch
IS: No blow back
FF: No blow
FSI: No blow back

PAWNEE
4441 (-1484)

LS - ASABOVE, PRED DNS, NO VIS POR, NS (GOOD SAMPLE QUALITY)

RECOVERY: 5' Total Fluid:
5' OSM (100% M)
Sampler: No recovery

LS - CRM / LT GY, VF / F XLN, OOL + FOSS IN PT, P/F INTPART / INTXLN POR, TR VUG POR, SL / F SFO, FEW BLEEDING OIL, F ODOR, SPTY STN, G FLUOR + CUT W/ SH - GY / BLK

SIP: 17-16 HP: 2170-2199
FP: 15-15, 15-14 BHT: 112

CFS @ 4468'

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

Vis: 65+, Wt: 9.4,
YP: 17, GeIS: 15/52,
pH: 9.0, WL: 12.0,
Chl: 1800, Sol: 7.7,
LCM: 2#

SH - BLK, CARB W/ LS - TAN / BRN, F XLN, DNS, NS W/ SH - GY

LS - CRM / TAN / SCAT LT GY, VF / F XLN, FOSS IN PT, TR P INTXLN POR, PRED DNS, VSSFO, NO ODOR, TR

CHEROKEE
4488 (1531)

4500

SPTY STN

LS - CRM / TAN / SCAT BRN, VF / F XLN, OOL IN PT, SL FOSS, SUBCHKY IN PT, PRED DNS, NS (POOR SAMPLE QUALITY; ABNT SH)

LS - ASABOVE, SUBCHKY IN PT, PRED DNS, NS (POOR SAMPLE QUALITY; ABNT SH)

LS - CRM / TAN / LT GY, VF / F XLN, FOSS IN PT, SCAT OOL, PRED DNS, NO VIS POR, NS

LS - CRM / TAN / BRN, MOT IN PT, VF / F XLN, FOSS IN PT, PRED DNS, NS W/ GY / BLK

JOHNSON ZN
4548 (-1591)

4550

LS - CRM / TAN / SCAT GY, MOT IN PT, VF / F XLN, SCAT M REXLN CALC, SL FOSS, OOL IN PT, SCAT P / TR F INTXLN + SM VUG POR, PRED DNS / CHKY IN PT, SSFO, FT ODOR, SCAT SPTY STN, P / G FLUOR + CUT

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

CFS @ 4581'
MORROW SH
4582 (-1625)

SS - LT GY, PRED VF / F QTZ GR, SCAT M GR, PRED W SRTD, SA / R, SIL / V SL CALC CEM, P / F INTGR POR, SL / MOD FRI IN PT, SL / G SFO, SSGB, FT ODOR, SAT / SPTY STN, F / G FLUOR, G CUT

MISS ST GEN

4602 (-1645)

4600

SS - V SIM TO ABOVE, SL / G SFO, SSGB, FT ODOR, SAT / SPTY STN, F / G FLUOR, G CUT, MOD AMT BARR CLSTRS W/ SCAT SS - LT GY, VF / M QTZ GR, FW SRTD, SR / R, SSFO / BARR W/ LS - WHT / CRM, VF XLN, V AREN, VF QTZ GR, OOL IN PT, CHKY / DNS, NS

CFS @ 4614'

(V POOR SAMPLE QUALITY) PRED SH - GY / GRN / RED W/ TR LS - ASABOVE

(V POOR SAMPLE QUALITY) PRED SH - GY / GRN / RED W/ SCAT LS - AS ABOVE W/ TR LS - CRM / TAN, VF / F XLN, TR OOL, PRED DNS, NS

(POOR SAMPLE QUALITY) ABNT SH - GY / GRN / RED W/ SCAT LS - CRM / TAN, VF / F XLN, SCAT OOL, PRED DNS, NS

(GOOD SAMPLE QUALITY) LS - CRM / TAN, VF / F XLN, OOL IN PT, PRED CHKY / DNS, NO VIS POR, NS

4650

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

LS - CRM / TAN, CRYPTO / F XLN, OOL IN PT, SCAT CHKY, PRED DNS, NS W/ TR CHT - GY / CRM

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

4700

TOTAL DEPTH 4702 (1745)

DST #5: 4,480'-4,581' (Ft Scott thru 30" - 30" - 30" - 30" Johnson Zn)

IF: Weak blow, bldg to 1 inch
ISI: No blow back
FF: Weak surface blow thru-out
FSI: No blow back

RECOVERY: 62' Total Fluid:
62' Mud (100% M)
Sampler: 3000 ml Mud

SIP: 790-578 HP: 2229-2265
FP: 52-86, 54-55 BHT: 114

Vis: 56, Wt: 9.4,
YP: 12, GeIS: 10/40,
pH: 8.5, WL: 11.4,
Chl: 1600, Sol: 7.7,
LCM: 1.5#

TG, C1-C5

Vis: 46, Wt: 9.3,
YP: 13, GeIS: 6/23,
pH: 9.0, WL: 10.0,
Chl: 1800, Sol: 7.0,
LCM: 1#

DST #6: 4,582'-4,614' (Basal Sand) 30" - 60" - 60" - 90"

IF: Fair blow, bldg to 6 inches
ISI: No blow back
FF: Fair blow, bldg to 4 inches
FSI: No blow back

RECOVERY: 434' Total Fluid:
124' WCM (30% W, 70% M)
w/ scum of oil
124' MCW (80% W, 20% M)
186' W (100% W)

Chlorides recovery: 25,000 ppm
Sampler: 3000 ml Water

SIP: 1126-1096 HP: 2255-2259
FP: 19-95, 100-220 BHT: 130

Vis: 64, Wt: 9.2
LCM: 1#

