

GEOLOGIC REPORT

DAVID J. GOLDAK

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

Well Name: J. Nuss #1-36
Location: Section 36 - T17S - R32W
License Number: API: 15-171-21187
Spud Date: 11 / 14 / 2016
Surface Coordinates: 1243' FNL and 1323' FWL
SW - SW - NE - NW
Region: Scott Co., KS
Drilling Completed: 11 / 22 / 16
Bottom Hole Coordinates:
Ground Elevation (ft): 2962' K.B. Elevation (ft): 2973'
Logged Interval (ft): 3700' To: 4640' Total Depth (ft): 4640'
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: 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: 12427 W Ridgepoint Cir
Wichita, Kansas 67235

General Info

CONTRACTOR: Murfin Drilling, Rig #21

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	HTC-VM1	3-15s	314	314	2.25
2	7-7/8	HTC-DP506	18-16-16	4640	4326	74.25

SURVEYS: 314'-0.25, 1698'-0.25, 2715'-0.25, 3727'-0.75,
3994'-0.125, 4640'-0.125

GENERAL DRILLING & PUMP INFORMATION:

Drilling with 19 collars (6.25" x 2.25"): 578.12'
Drilling with 10,000-14,000 lbs on bit and 90-95 RPM.
Pumping 60 S/M; 8.8 B/M; 850-950 psi at standpipe.

Daily Status

11/14/15 - Spud at 4:15 PM; Set 8-5/8" csg at 314'
 11/15/15 - 437' Drilling; DP at 5:15 AM
 11/16/15 - 2,408' Drilling; Lost circ @ 3,266'; Displace @ 3,270'
 11/17/15 - 3,515' Drilling
 11/18/16 - 3,970' DST #1 in progress; DST #2 @ 3,994'
 11/19/16 - 4,010' Drilling
 11/20/16 - 4,340' TOH with DST #3; DST #4 @ 4,424'
 11/21/16 - 4,438' Drilling; RTD 4,640' @ 2:45 PM; Log well
 11/22/16 - 4,640' Conclude logging @ 2:00 AM

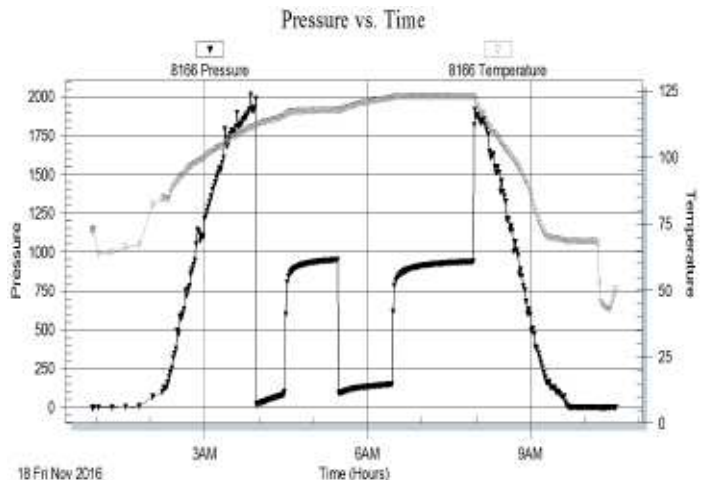
	Log Tops	Sample Tops
Anhydrite	2291 (+682)	2293 (+680)
Base / Anhydrite	2308 (+665)	2312 (+661)
Lecompton	3774 (-801)	3776 (-803)
Oread	3822 (-849)	3822 (-849)
Heebner	3885 (-912)	3886 (-913)
Lansing	3920 (-947)	3921 (-948)
Muncie Creek	4106 (-1133)	4106 (-1133)
Stark Sh	4203 (-1230)	4203 (-1230)
Hushpuckney Sh	4240 (-1267)	4241 (-1268)
Base of KC	4296 (-1323)	4294 (-1321)
Marmaton	4314 (-1341)	4314 (-1341)
Pawnee	4405 (-1432)	4406 (-1433)
Cherokee Sh	4450 (-1477)	4450 (-1477)
Lower Cher Sh	4478 (-1505)	4478 (-1505)
Johnson Zone	4513 (-1540)	4512 (-1539)
Morrow Sh	4548 (-1575)	4549 (-1576)
Mississippian	4565 (-1592)	4567 (-1594)
Total Depth	4640 (-1667)	4640 (-1667)

DST #1: 3,946' - 3,970' (LKC "B")
 30" - 60" - 60" - 90"

IF: Fair blow building to 7 inches
ISI: No blow back
FF: Fair blow building to BOB in 56 minutes
FSI: Blow back building to 1 inch

RECOVERY: 124' GIP & 350' Total Fluid, consisting of:
 164' GO (10% G, 90% O); Oil Gravity: 27 API
 186' GMCO (10% G, 60% O, 30% M)
Sampler: 1,000 ml Gas & 1,000 ml Oil @ 300 psi

SIP: 948-937; FP: 16-83, 91-150; HP: 1984-1911; BHT: 122

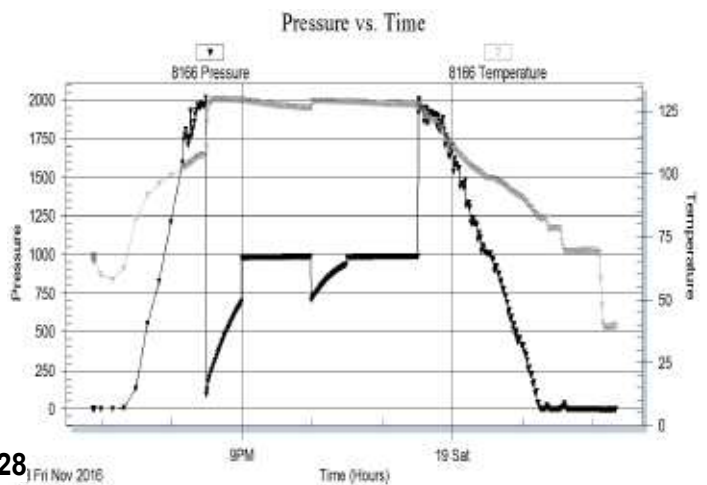


DST #2: 3,982' - 3,994' (LKC "C")
30" - 60" - 30" - 60"

IF: Strong blow building to BOB in 2 minutes
ISI: No blow back
FF: Strong blow building to BOB in 3 minutes
FSI: No blow back

RECOVERY: 1,632' Total Fluid, consisting of:
330' OSMW (50% W, 50% M)
1,302' W (100% W); Chlorides: 38,000 ppm
Sampler: 2,000 ml Water @ 500 psi

SIP: 985-986; FP: 94-692, 707-934; HP: 2012-2002; BHT: 128

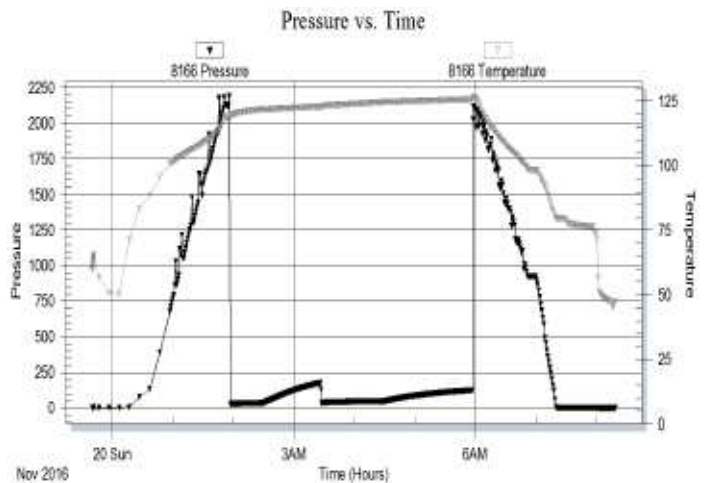


DST #3: 4,286' - 4,340' (Marmaton)
30" - 60" - 60" - 90"

IF: Weak blow building to 7 inches
ISI: No blow back
FF: Weak blow building to 9 inches
FSI: No blow back

RECOVERY: 310' GIP & 62' Total Fluid, consisting of:
62' SGOCM (10% G, 10% O, 80% M)
Sampler: 2 cu ft Gas @ 50 psi

SIP: 176-124; FP: 23-34, 32-46; HP: 2189-2116; BHT: 125

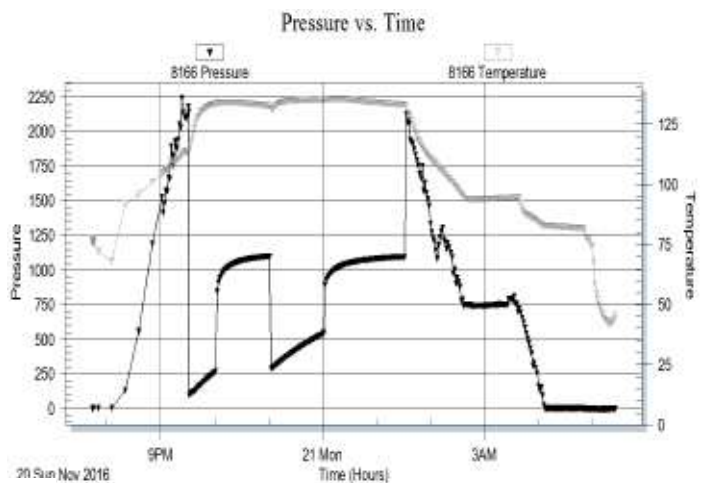


DST #4: 4,340' - 4,424' (Marmaton)
30" - 60" - 60" - 90"

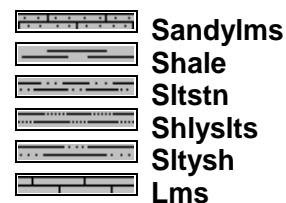
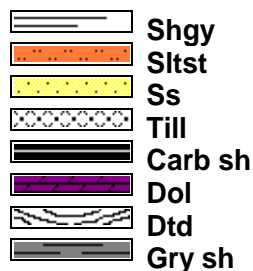
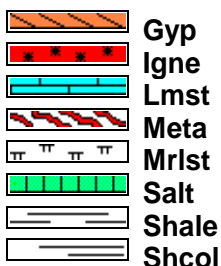
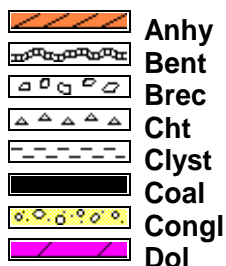
IF: Strong blow building to BOB in 1.5 minutes
ISI: Blow back building to BOB in 8 minutes
FF: Strong blow building to BOB in 2 minutes
Gas to Surface in 45 minutes, TSTM
FSI: Blow back building to BOB in 12 minutes

RECOVERY: 1,512' Total Fluid, consisting of:
1,388' GO (30% G, 70% O); Oil Gravity: 29 API
124' GOCM (40% G, 20% O, 40% M)
Sampler: 8 cu ft Gas & 400 ml Oil

SIP: 1101-1097; FP: 90-268, 289-547; HP: 2184-2128; BHT: 133



ROCK TYPES

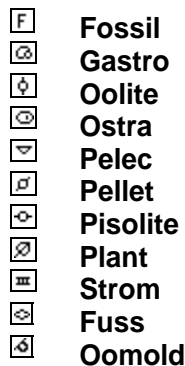
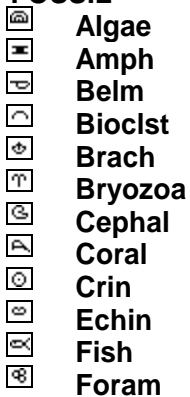


ACCESSORIES

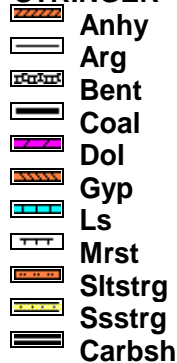
MINERAL



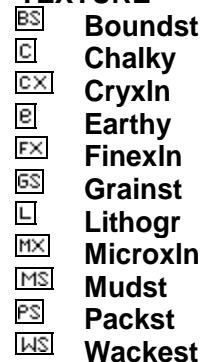
FOSSIL



STRINGER

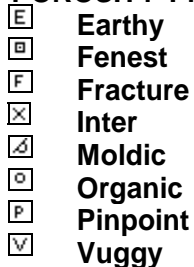


TEXTURE



OTHER SYMBOLS

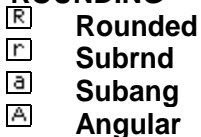
POROSITY TYPE



SORTING



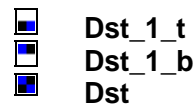
ROUNDING



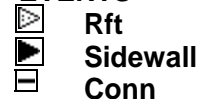
OIL SHOWS

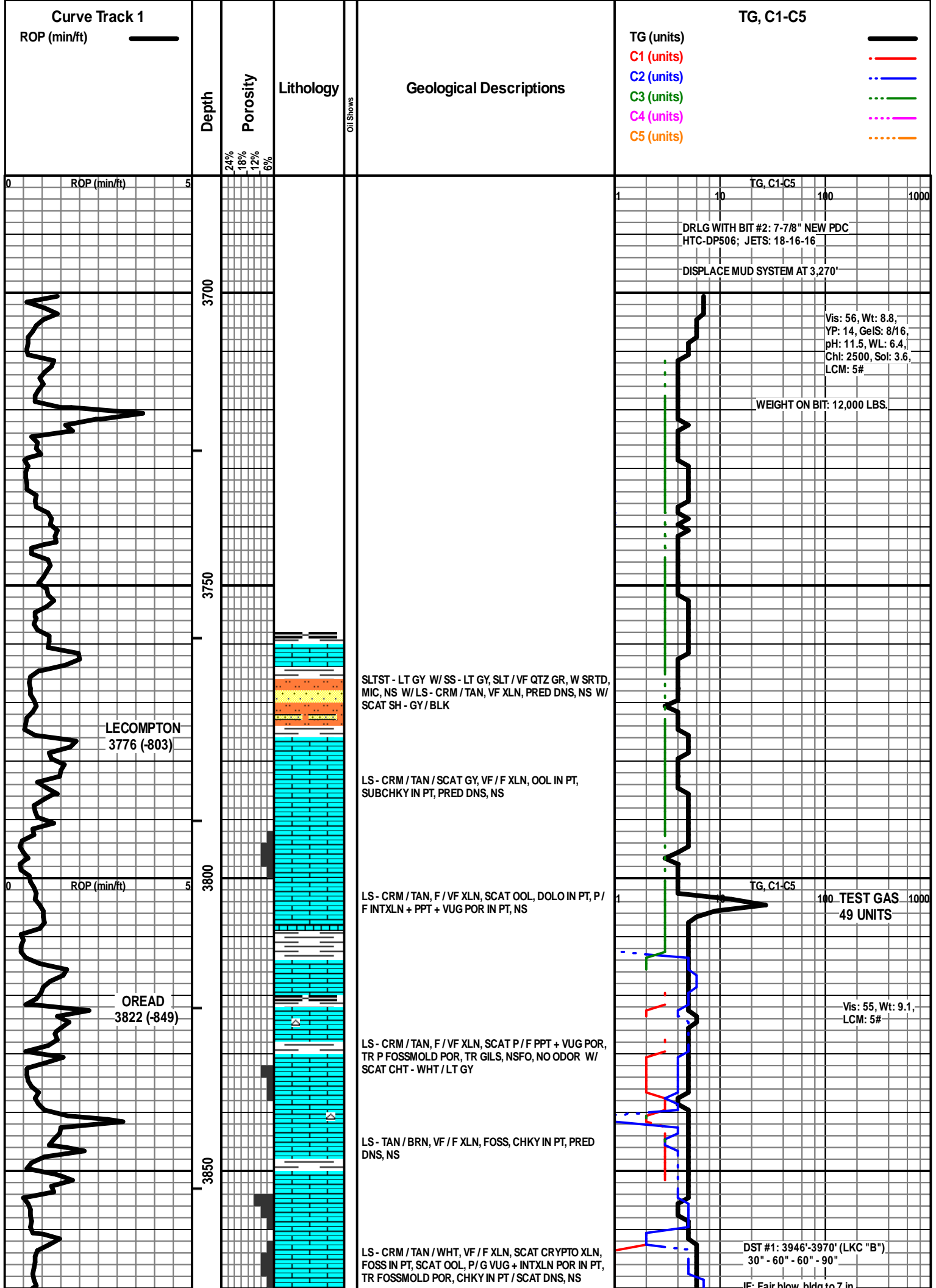


INTERVALS



EVENTS





HEEBNER
3886 (-913)

3900

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

LS - AS ABOVE, NS

----- LANSING 3921 (-948)

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

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

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

LS - CRM, F / VF XLN, OOL, P / F INTOOL / INTXLN + VUG POR, CHKY IN PT, SL / F SFO, VSSGB, POSS SCAT ASPH, F ODOR, PRED SPY / SCAT SAT STN, G FLUOR + CUT

LS - CRM / TAN, SIM TO ABOVE, FOSS IN PT, SCAT INTXLN + VUG POR, SOME WITH SSFO (CAVINGS?), SOME NS, NO ODOR

3991' CFS: LS - CRM / TAN / SCAT GY, F / VF XLN, SCAT F / M REXLN CALC, SCAT P / F INTXLN + VUG POR, SL / F SFO, TR GB, FT ODOR, SPY / TR SAT STN, G FLUOR + CUT, SOME CHKY / DNS

3994' CFS: LS, AA, P / G VUG + INTXLN POR, SL / F SFO + GB, F ODOR, SPY / SCAT SAT STN, G FLUOR + CUT, SCAT BARR VUG POR

LS - PRED CRM / TAN, AS ABOVE, SL FOSS, P / G VUG + INTXLN POR TO DNS / CHKY IN PT, SSFO, PRED BARR POR, F ODOR

LS - AS ABOVE, PRED DNS, VSSFO W/ SCAT LS - TAN / BRN, VF / F XLN, PRED DNS, NS, V FT ODOR

LS - CRM / TAN, F / VF XLN, FOSS + OOL IN PT, SUCR IN PT, SCAT PINTXLN + PPT POR, TR VUG POR, SUBCHKY IN PT, NS W/ CHT - WHT / LT GY W/ SCAT LS - AS ABOVE (CAVINGS), VSSFO, V FT ODOR, SCAT SPY BLK DEAD STN

LS - CRM / TAN / GY, F / VF XLN, OOL IN PT, SL FOSS, F / G OOM + VUG POR, NS

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

ISI: No blow back
FF: Fair blow, BOB in 56 min.
FSI: Blow back bldg to 1 in.

RECOVERY: 124' GIP & 350' TF:
164' GO (10% G, 90% O)
186' GMCO (10% G, 60% O, 30% M)
Sampler: 1000 ml G & 1000 ml O
Oil Gravity: 27 API

SIP: 948-937 HP: 1984-1911
FP: 16-83, 91-150 BHT: 122

DST #2: 3982'-3994' (LKC "C")
30" - 60" - 30" - 60"

IF: Strong blow, BOB in 2 min.
ISI: No blow back
FF: Strong blow, BOB in 3 min.
FSI: No blow back

RECOVERY: 1632' Total Fluid:
330' OSMW (50% W, 50% M)
1302' W (100% W)
Sampler: 2000 ml W @ 500 psi
Chlorides recovery: 38,000 ppm

SIP: 985-986 HP: 2012-2002
FP: 94-692, 707-934 BHT: 128

INCREASE WEIGHT
ON BIT TO 14,000 LBS.

Vis: 57, Wt: 9.2,
YP: 15, GeIS: 10/20,
pH: 11.5, WL: 7.2,
Chl: 4000, Sol: 5.8,
LCM: 3#

HIGH GAS DUE TO OIL
IN DRILLING FLUIDS

GAS QUESTIONABLE DUE TO
OIL IN DRILLING FLUIDS

TG, C1-C5 100 1000

A

B

C

D / E

F

CFS @ 3970'

CFS @ 3991'
CFS @ 3994'

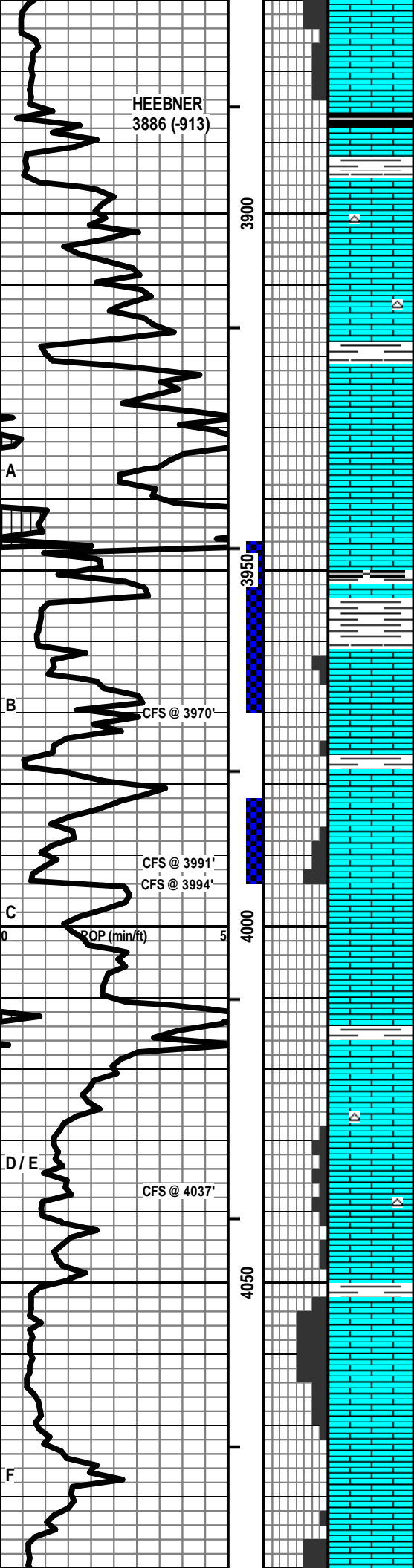
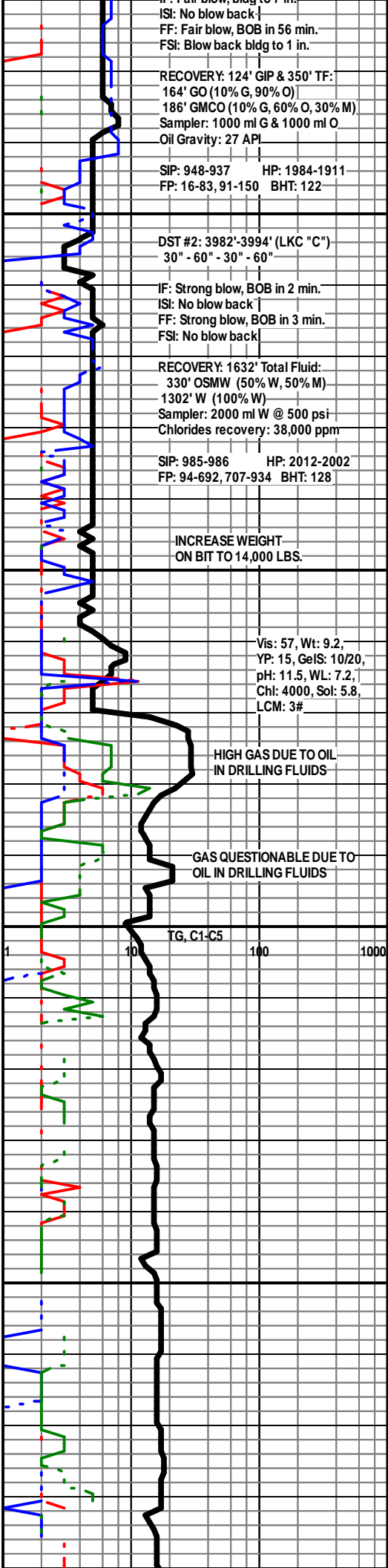
CFS @ 4037'

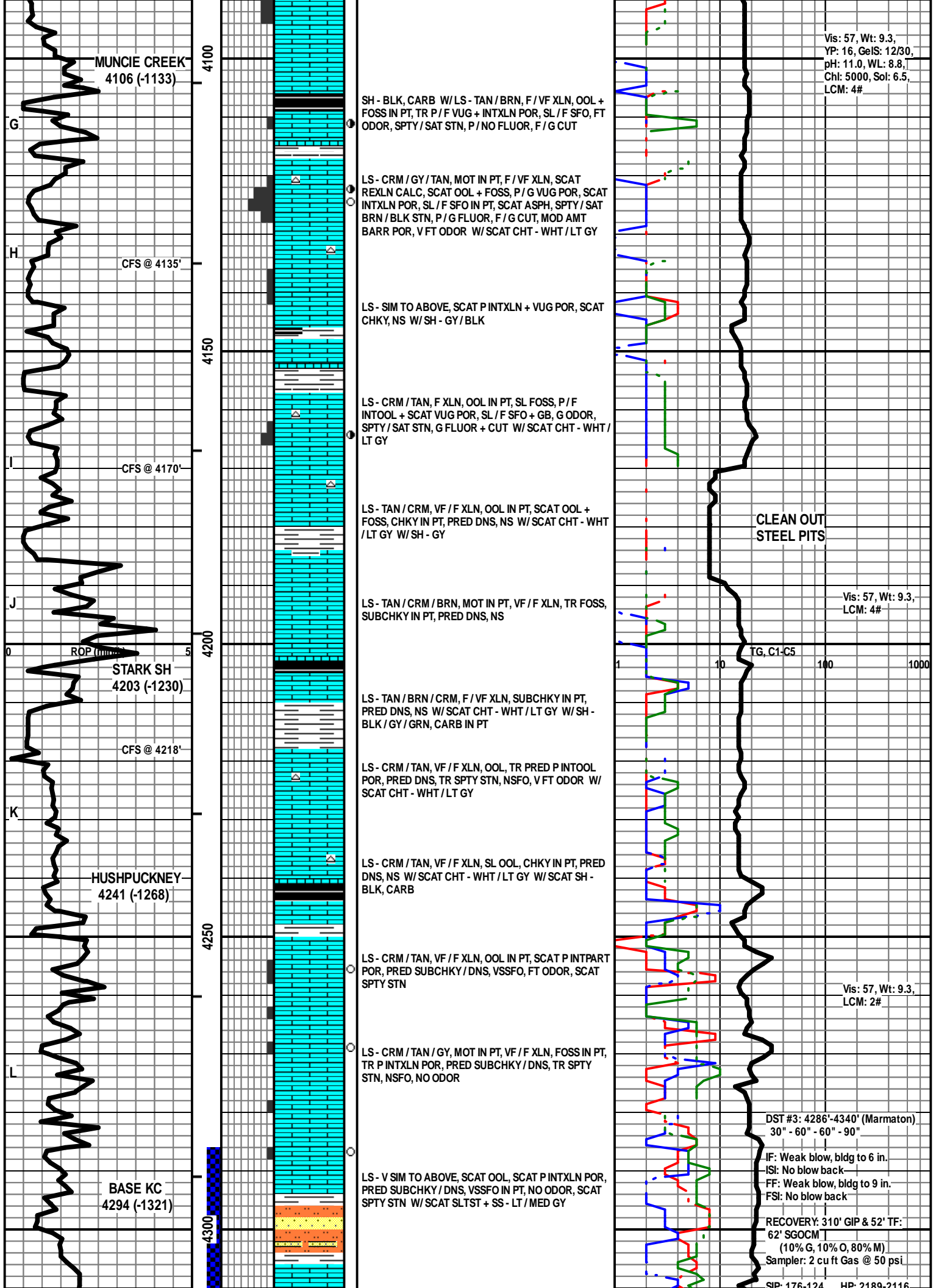
3950

4000

4050

ROP (min/ft)





MUNCIE CREEK
4106 (-1133)

Vis: 57, Wt: 9.3,
YP: 16, GeIS: 12/30,
pH: 11.0, WL: 8.8,
Chl: 5000, Sol: 6.5,
LCM: 4#

SH - BLK, CARB W/LS - TAN / BRN, F / VF XLN, OOL + FOSS IN PT, TR P / F VUG + INTXLN POR, SL / F SFO, FT ODOR, SPTY / SAT STN, P / NO FLUOR, F / G CUT

CFS @ 4135'

LS - CRM / GY / TAN, MOT IN PT, F / VF XLN, SCAT REXLN CALC, SCAT OOL + FOSS, P / G VUG POR, SCAT INTXLN POR, SL / F SFO IN PT, SCAT ASPH, SPTY / SAT BRN / BLK STN, P / G FLUOR, F / G CUT, MOD AMT BARR POR, V FT ODOR W/ SCAT CHT - WHT / LT GY

LS - SIM TO ABOVE, SCAT P INTXLN + VUG POR, SCAT CHKY, NS W/ SH - GY / BLK

CFS @ 4170'

LS - CRM / TAN, F XLN, OOL IN PT, SL FOSS, P / F INTOOL + SCAT VUG POR, SL / F SFO + GB, G ODOR, SPTY / SAT STN, G FLUOR + CUT W/ SCAT CHT - WHT / LT GY

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

CLEAN OUT
STEEL PITS

Vis: 57, Wt: 9.3,
LCM: 4#

ROP (ft/min)
STARK SH
4203 (-1230)

LS - TAN / CRM / BRN, MOT IN PT, VF / F XLN, TR FOSS, SUBCHKY IN PT, PRED DNS, NS

CFS @ 4218'

LS - TAN / BRN / CRM, F / VF XLN, SUBCHKY IN PT, PRED DNS, NS W/ SCAT CHT - WHT / LT GY W/ SH - BLK / GY / GRN, CARB IN PT

LS - CRM / TAN, VF / F XLN, OOL, TR PRED P INTOOL POR, PRED DNS, TR SPTY STN, NSFO, V FT ODOR W/ SCAT CHT - WHT / LT GY

HUSHPUCKNEY
4241 (-1268)

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

CFS @ 4250'

LS - CRM / TAN, VF / F XLN, OOL IN PT, SCAT P INTPART POR, PRED SUBCHKY / DNS, VSSFO, FT ODOR, SCAT SPTY STN

Vis: 57, Wt: 9.3,
LCM: 2#

LS - CRM / TAN / GY, MOT IN PT, VF / F XLN, FOSS IN PT, TR P INTXLN POR, PRED SUBCHKY / DNS, TR SPTY STN, NSFO, NO ODOR

DST #3: 4286'-4340' (Marmaton)
30" - 60" - 60" - 90"

BASE KC
4294 (-1321)

LS - V SIM TO ABOVE, SCAT OOL, SCAT P INTXLN POR, PRED SUBCHKY / DNS, VSSFO IN PT, NO ODOR, SCAT SPTY STN W/ SCAT SLTST + SS - LT / MED GY

IF: Weak blow, bldg to 6 in.
ISI: No blow back
FF: Weak blow, bldg to 9 in.
FSI: No blow back

RECOVERY: 310' GIP & 52' TF:
62' SGOCM
(10% G, 10% O, 80% M)
Sampler: 2 cu ft Gas @ 50 psi

SIP: 176-124 HP: 2189-2116

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

LS - TAN / CRM, F / M XLN, SCAT REXLN CALC, FOSS + OOL, F INTXLN / INTPART + VUG POR, SL / F SFO + GB, SCAT ASPH + BLK FLKS, V FT ODOR, SPTY / SAT STN, G FLUOR + CUT W/AREN LS - CRM / WHT, VF / F XLN, VF QTZ GR, NO VIS POR, NS W/SS - LT / MED GY, VF / SCAT F QTZ GR, CALC, P / NO VIS POR, NS (CAVINGS?)

MOD AMT LS - CRM / TAN / SCAT BRN, PRED F XLN, SCAT F / C REXLN CALC, FOSS + OOL IN PT, SOME P / F VUG POR, SL / F SFO + GB, G ODOR, SPTY / SAT STN, G FLUOR + CUT (POSS. CAVINGS?) W/ SOME LS - CRM / TAN, VF / F XLN, SUBCHKY IN PT, PRED DNS, NS

LS - CRM / TAN, VF / F XLN, SL OOL IN PT, SUBCHKY IN PT, TR P INTXLN POR, PRED DNS, TR SPTY STN, NSFO W/SH - LT / MED GY W/ SOME CAVINGS FROM ABOVE

LS - LS - CRM / TAN, F XLN, FOSS, OOL IN PT, SCAT P / F FOSSMOLD + INTXLN POR, TR P INTOOL POR, SL / F SFO, SSGB, SCAT ASPH + FLKY DEAD OIL, FT ODOR, SPTY / SAT STN, F / G FLUOR + CUT, SCAT BARR POR

LS - TAN / SCAT CRM, VF / F XLN, SCAT FOSS + OOL, TR P INTOOL / INTXLN POR, PRED DNS, TR SPTYSTN, NSFO, NO ODOR

SH - BLK CARB / GY W/LS - CRM / TAN, VF / F XLN, OOL IN PT, SL FOSS, TR P INTXLN POR, SUBCHKY IN PT, PRED DNS, TR SPTY STN, NSFO, NO ODOR W/CHT - WHT / LT GY

LS - V SIM TO ABOVE, PRED DNS, NS

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

LS - CRM / TAN, F / VF XLN, OOL IN PT, SL FOSS, SCAT P INTOOL POR, PRED DNS, VSSFO, NO ODOR, SCAT SPTY STN W/SH - BLK, CARB

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

LS - CRM / TAN / GY, MOT IN PT, VF / F XLN, OOL IN PT, SL FOSS, TR P INTXLN + VUG POR, PRED DNS, VSSFO, NO ODOR, TR SPTY STN

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

LS - TAN / CRM / SCAT BRN, MOT IN PT, VF / F XLN, SL OOL + FOSS, TR P INTOOL / INTXLN POR, SUBCHKY IN PT / PRED DNS, TR SPTY STN, NSFO, NO ODOR

MARMATON
4314 (-1341)

CFS @ 4340'

4350

CFS @ 4378'

4400

PAWNEE
4406 (-1433)

CFS @ 4424'

4450

CHEROKEE
4450 (-1477)

4500

JOHNSON ZN
4512 (-1539)

FP: 23-34, 32-46 BHT: 125

Vis: 56, Wt: 9.3,
YP: 14, GeIS: 10/19,
pH: 11.0, WL: 8.0,
Chl: 5500, Sol: 6.4,
LCM: 3#

DST #4: 4340'-4424' (Marmaton)
30" - 60" - 60" - 90"

IF: Blow bldg to BOB in 1.5 min.
ISl: Blow back to BOB in 8 min.
FF: Blow bldg to BOB in 2 min.
GTS in 45 min., TSTM
FSI: Blow back to BOB in 12 min.

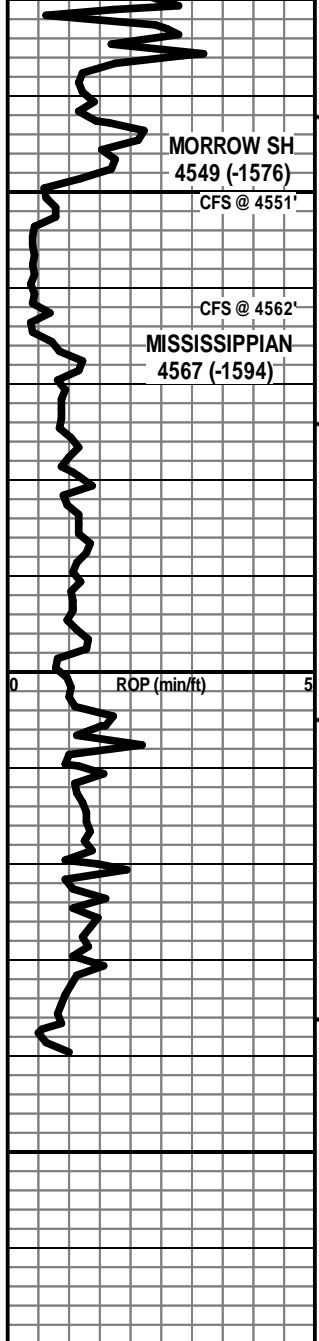
RECOVERY: 1,512' Total Fluid:
1,388' GO (30% G, 70% O)
124' GOCM (40% G, 20% O, 40% M)
Sampler: 8 cu ft Gas & 400 ml Oil
Oil Gravity: 29 API

SIP: 1101-1097 HP: 2184-2128
FP: 90-268, 289-547 BHT: 133

CLEAN OUT
STEEL PITS

1 10 100 1000
TG, C1-C

Vis: 58, Wt: 9.2,
LCM: 3#

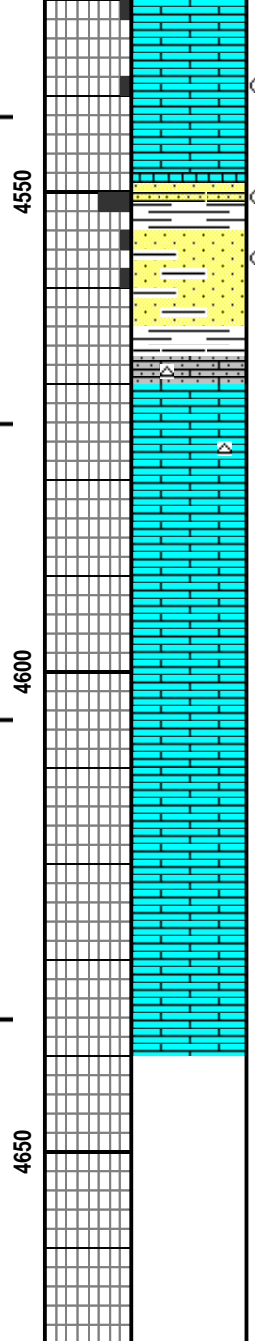


MORROW SH
4549 (-1576)

CFS @ 4551'

CFS @ 4562'

MISSISSIPPIAN
4567 (-1594)



LS - CRM / TAN / GY, MOT IN PT, F / VF XLN, OOL IN PT, SL FOSS, TR P INTXLN + VUG POR, PRED DNS / CHKY, VSSFO, NO ODOR, TR SPTY STN W/SS - TAN / CRM / SCAT LT GY, VF / F GR, W SRTD, R / SA, SIL CEM, SCAT WHT CLAY, P / F INTGR POR, FRI IN PT, SL / F SFO + GB, V FT ODOR, SPTY / SUBSAT STN, F / G FLUOR, G CUT

4562' CFS: SH - LT GRN / GY W/SS - LT / MED GY / SCAT GRN, PRED VF / F GR, SCAT M / C GR, P / W SRTD, SA / R, SIL CEM, ARGIL / SLTY IN PT, TR P / F INTGR POR, TR FO + FLKY DEAD OIL, NO ODOR, SCAT BLK SPTY STN, P FLUOR, P / G CUT

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

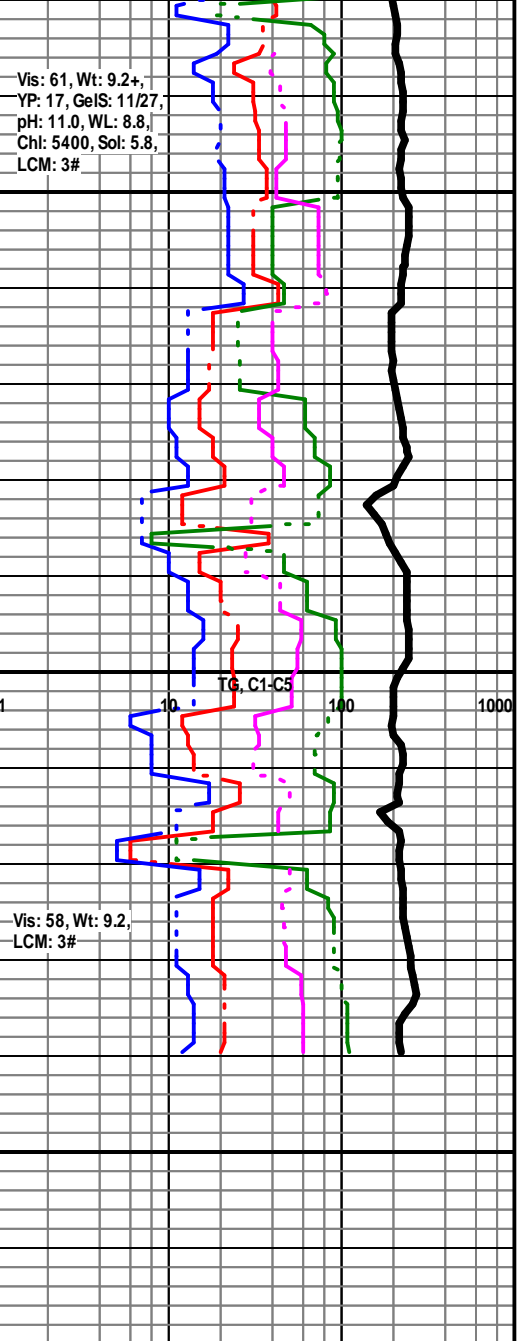
LS - CRM / TAN, VF / F XLN, OOL IN PT, CHKY IN PT, PRED DNS, NS

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

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

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

TOTAL DEPTH 4640 (-1667)



Vis: 61, Wt: 9.2+,
YP: 17, GeIS: 11/27,
pH: 11.0, WL: 8.8,
Ch: 5400, Sol: 5.8,
LCM: 3#

Vis: 58, Wt: 9.2,
LCM: 3#