

WELL INFORMATION

Company: L.D. DRILLING, INC.
 Address: 7 SW 26TH AVE
 GREAT BEND, KS 67530

Well Name: 2-35 LOCKWOOD

Location: 2150 FSL, 1950 FWL
 SEC. 35- T11S - R31W
 GOVE COUNTY, KANSAS

API: 15-063-22213-00-00
 Field: CLEVELAND CREEK S.W.

KB Elevation: 2956 Rotary Depth: 4670
 Ground Elevation: 2949 Log Depth: 4674

Spud Date: 8/19/2014 Drilling Completed: 9/1/2014

Completion: OIL WELL
 Surface Casing: 8 5/8" SET @ 325' Production Casing: 4.5" SET @ 4667'

Formation at TD: MISSISSIPPIAN
 Drilling Fluid Type: CHEMICAL

Rig Contractor: SKYTOP DRILLING
 Logger: NABORS Logs Run: DI, CND, MICRO

Wellsite Geologist: LARRY P. FRIEND

FORMATION DEPTHS

COMPARED TO:
 L.D. DRILLING, INC.
 1-35 LOCKWOOD
 SW, 35-T11S-T31W (1/10/2013)

FORMATION DEPTHS	SAMPLE	LOG	
ANHYDRITE	2462 (+494)	2463 (+493)	+7
BASE ANHY.	2488 (+468)	2488 (+468)	+7
STOTLER	3609 (-653)	3610 (-654)	+3
HEEBNER SHALE	3958 (-1002)	3959 (-1003)	+7
TORONTO	3981 (-1025)	3985 (-1029)	+9
LANSING	3996 (-1040)	3997 (-1041)	+14
MUNCIE CREEK	4132 (-1176)	4133 (-1177)	+7
STARK SHALE	4216 (-1260)	4215 (-1259)	+7
HUSHPUCKNEY SH.	4248 (-1292)	4249 (-1293)	+7
BS KANSAS CITY	4275 (-1319)	4275 (-1319)	+6
MARMATON	4298 (-1342)	4301 (-1345)	+7
"PAWNEE"	4400 (-1444)	4399 (-1443)	+8
"MYRICK STATION"	4439 (-1483)	4441 (-1485)	+9
"FT. SCOTT"	4463 (-1507)	4465 (-1509)	+8
"CHEROKEE"	4491 (-1535)	4492 (-1536)	+8
"JOHNSON ZONE"	4535 (-1579)	4535 (-1579)	+7
MISSISSIPPIAN	4548 (-1592)	4554 (-1598)	+6
SPERGEN	4604 (-1648)	4605 (-1649)	+16

NOTES

DUE TO FAVORABLE DRILL STEM TEST RESULTS, IT WAS DECIDED TO RUN CASING AND PRODUCE THIS WELL.

AFTER BRIEF EVALUATION OF THE LOG, THE ZONES OF INTEREST I SEE FOR FUTHER EVALUATION AND / OR PERFORATION ARE: (THERE MAY BE MORE)

DRILL INFORMATION ARE: (THERE MAY BE MORE.)

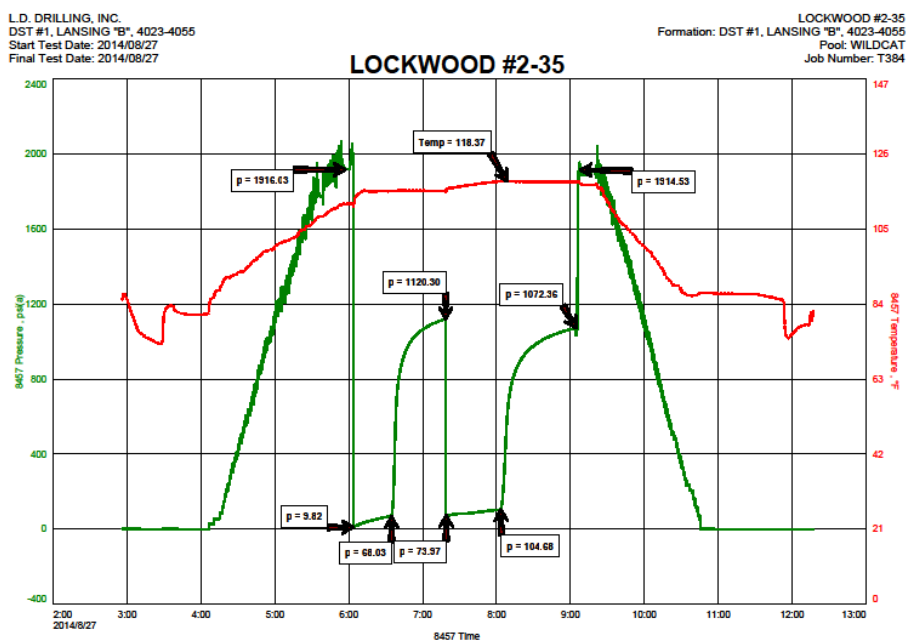
LANSING "B": 4032-4034 & 4036-4038, (DST #1)
 LANSING "E": 4068-4070, (DST #2)
 LANSING "F": 4080-4082?, LOOKS WET?, (DST #2)
 KANSAS CITY "H": 4149-4153, (DST #3)
 MYRICK STATION: 4446-4448?, POOR POROSITY, (DST #5)
 MISSISSIPPIAN: 4585-4588?, ONLY SLI. SAMPLE SHOW, MAY BE TOO THIN, TIGHT & WET.

RESPECTFULLY SUBMITTED,
 LARRY P. FRIEND

DRILLSTEM TESTS

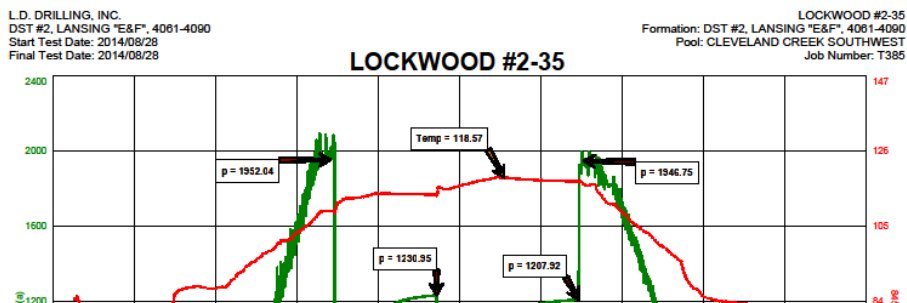
No	Interval	Formation
1	4023 - 4055	LANSING "B" ZONE
2	4061 - 4090	LANSING "E" AND "F"
3	4130 - 4210	KANSAS CITY "H", "I", "J"
4	4212 - 4273	KANSAS CITY "K" AND "L"
5	4417 - 4545	MYRICK, FT. SCOTT AND JOHNSON ZN.

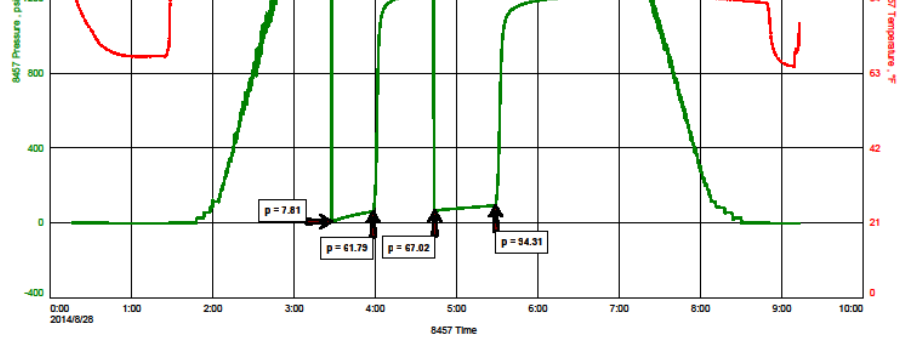
DST #1 CHART



Fast

DST #2 CHART





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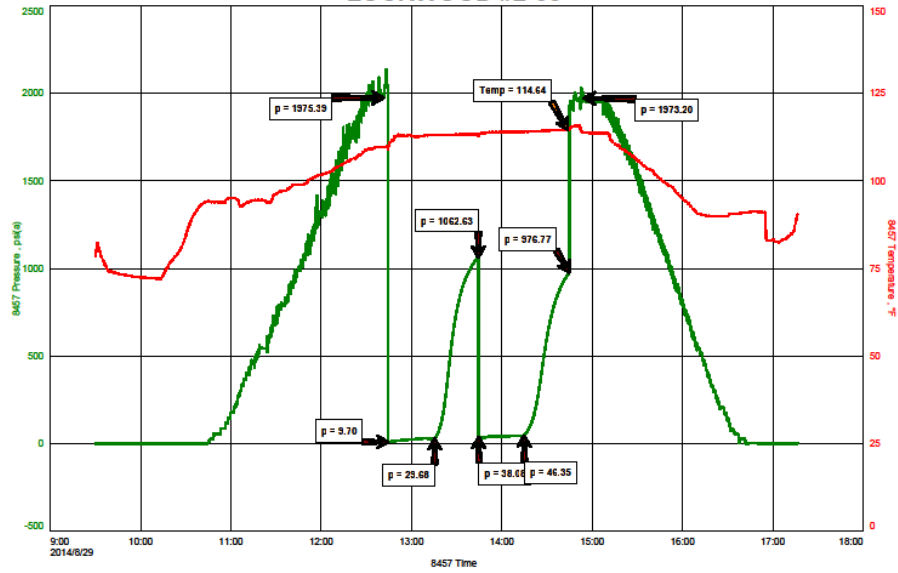
Fast

DST #3 CHART

L.D. DRILLING, INC.
DST #3, LANSING "H,I,J", 4130-4210
Start Test Date: 2014/08/29
Final Test Date: 2014/08/29

LOCKWOOD #2-35
Formation: DST #3, LANSING "H,I,J", 4130-4210
Pool: CLEVELAND CREEK SOUTHWEST
Job Number: T388

LOCKWOOD #2-35



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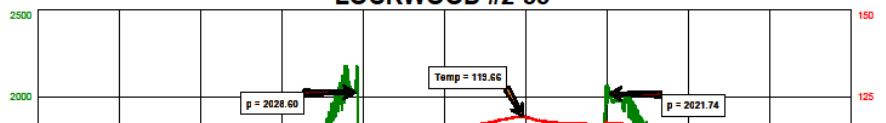
Fast

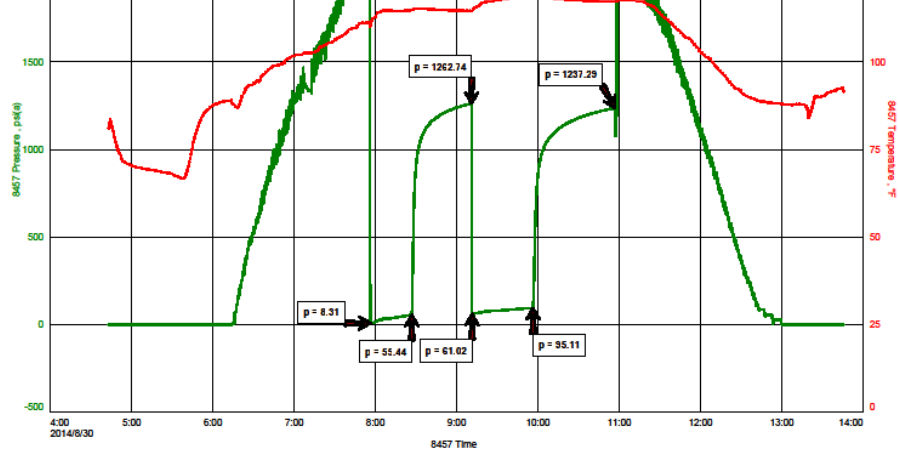
DST #4 CHART

L.D. DRILLING, INC.
DST #4, LANSING "K&L", 4212-4273
Start Test Date: 2014/08/30
Final Test Date: 2014/08/30

LOCKWOOD #2-35
Formation: DST #4, LANSING "K&L", 4212-4273
Pool: CLEVELAND CREEK SOUTHWEST
Job Number: T387

LOCKWOOD #2-35





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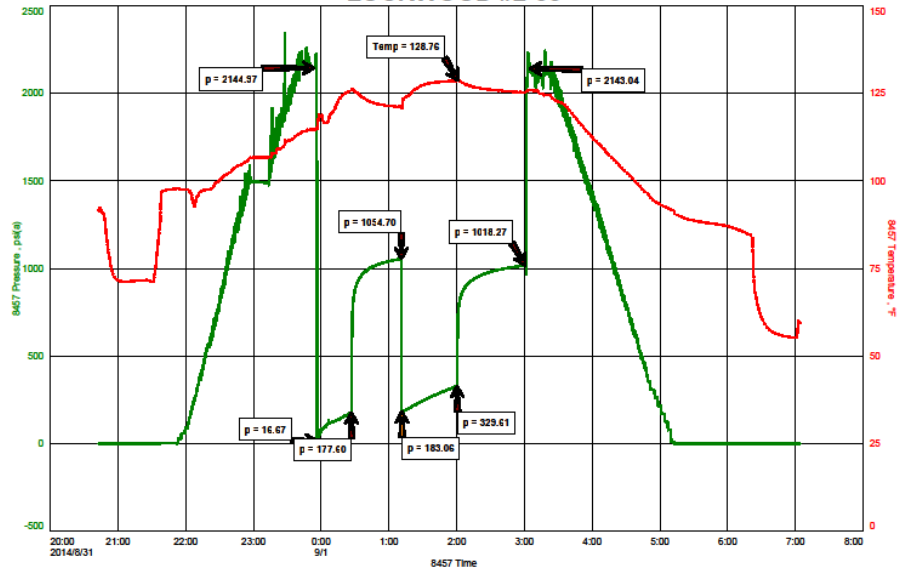
Fast

DST #5 CHART

L.D. DRILLING, INC.
DST 5, MYR./FT. SC./JOH., 4417-4545
Start Test Date: 2014/08/31
Final Test Date: 2014/09/01

LOCKWOOD #2-35
Formation: DST 5, MYR./FT. SC./JOH., 4417-4545
Pool: CLEVELAND CREEK SOUTHWEST
Job Number: T388








LOCKWOOD #2-35



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Fast

ROCK TYPES

- | | | | |
|--|---|---|---|
|  Dolsec |  Lmst fw7> |  Shbck |  Stst |
|  Lmst fw<7 |  Shgy |  Shcol | |

ACCESSORIES

ACCESSORIES

MINERAL

- ▲ Chert, dark
- △ Dolomitic
- ✕ Mineral Crystals
- Sandy
- ^ Siliceous
- Silty
- △ Chert White

FOSSIL

- ◊ Oolites

OTHER SYMBOLS

OIL SHOWS

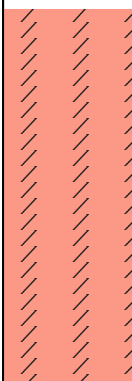
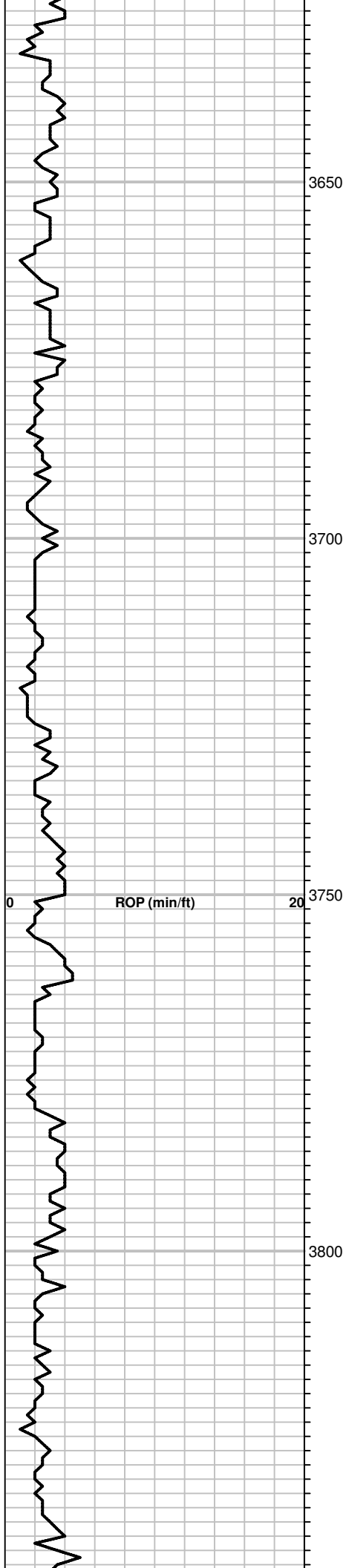
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- Questionable Stn
- D Dead Oil Stn
- Fluorescence

INTERVALS

- Core
- DST

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #01 ROP (min/ft)	Depth Intervals Cored Interval DST Interval	Interpreted Lithology	Porosity Oil Shows	Geological Descriptions	Comment
<p>1:240 Imperial</p> <p>- STOTLER - 3609 (-653)</p>					<p>7AM DEPTHS: 8/19/14: MIRU & SPUD 8/20: 330' WAITING ON CEMENT 8/21: 1020 8/22: 1939 8/23: 2816, TRIP TO ADD COLLARS, HAD TO REAM LAST 14 STNDS 8/24: 2940, LOST CIRC. 8/25: 3425 8/26: 3885 8/27: 4055, DST #1 8/28: 4090, DST #2, WORK ON MUD PUMP. 8/29: 4210 8/30: 4273, DST #4 8/31: 4430 9/01: 4545, RTD 4670 @ 8:21PM</p> <p>DEV. SURVEYS: 1.75 DEGREES @ 330' 1.50 DEGREES @ 2816' 1.25 DEGREES @ 4055' DEGREES @ 4670"</p> <p>LOST CIRCULATION @ 2966'</p> <p>MUDDERED UP AT 3330'.</p> <p>DRILLING MUD @ 3436: WT: 8.5 VIS: 54 FILTRATE: 8 CHLOR: 1000 LCM: 2#</p>



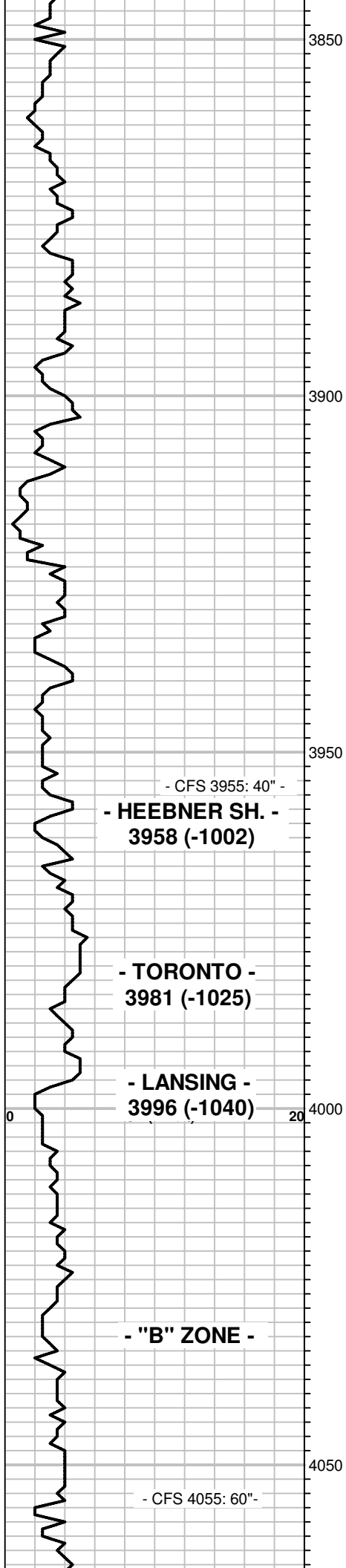
10: DOL, BRN, FXLN, SUC, W/ PR - FR. XLN. POR; NS, NF.

20: LS, CRM-TAM, FXLN, SLI. FOSS, PR - GD. XLN. POR, TR. CHLKY; NS

30: INC. DOL. AS ABV, BRN, FXLN, SUC, W/ PR - GD. XLN & VUG. POR; NS, NF.

40 & 50: DOL. AS ABOVE; NS

60: LS, CRM - GRY, FXLN, TR. SLI. CALCITIC, MUCH SLI. CHLKY, PR - GD. XLN. POR; NS, NF



70: GRY, LMY. SILTSTONE.

80: SILTSTN AS ABV; SHALE RED, GRY, BLK;
TR. DK. GRY, DETRITAL LS, DSE; TR. LS, TAN,
VFXLN, CHTY, DSE; NS

90 & 100: LS, TAN, VF-FXLN, FOSS, PR - TR.
FR. XLN. POR & TR. LS, V. OOLITIC, PR. POR;
NS

10 & 20: TR. LS, TAN, VFXLN, DSE TO V.SLI.
CHLKY, PR. SPTY. PPT. & XLN. POR, VSSFO &
PR. SPTY BRN. SAT. STN, NO ODOR.

30: LS, TAN, V. OOLITIC (V. FN. OOLITIES),
PR. - GD. OOLICASTIC POR, FEW DK SPKS;
AND SOME TAN DOL, FXLN, PR. XLN. POR;
TR. TAN CHT; NS, NF.

40: LS, BRN, V. OOLITIC (MD- CSE OOLITES),
PR. VIS. POR; SOME BRN SHP. CHT; NS, NF.

50: LS, TAN, OOL./ FOSS/ CALCITIC, SLI.
CHLKY, PR. TR. PPT - VUG. POR, TR. W/ PR.
TR. HVY. DK. FO, PR. V. SPTY. DK. STN ONLY
IN VUGS.

CIRC: LS, TAN- GRY, FXLN, SOME SLI. FOSS,
PR - FR. XLN. POR; NS, NF.

70: SHALE, BLK, CARBONACEOUS.

80: LS, BRN, VF-FXLN, SLI. FOSS, DSE; NS

90: SHALE, GRY, GRN, RED, SOME LMY.

100: MOSTLY LS, TAN, VFXLN, SLI. FOSS,
DSE; NS

10: TR. LS, BRN, V. OOLITIC/ FOSS., PR - FR.
OOLIC. & XLN. POR; NS, NF.

20: SHALE, GRY, GRN; TR. OOL./ FOSS. LS AS
ABV; AND LS, TAN VFXLN, DSE; NS, NF.

30: LS, TAN, VFXLN, TR. W/ CALCITIC FILL,
TR. OOLITIC, PR. VIS. POR; NS, NF.

40: TR. (ONLY 1-2 PCS/TRAY) LS, BRN, SLI - V.
OOLITIC W/ TR. PR. INTER-OOL. PPT TO
OOLIC POR, SSFO, 1 PC W/ FSFO, PR. SPTY
TO TOT. BRN. SAT. STN, FR. FLUSH CUT, SLI
ODOR

50: FEW PCS. LS, AS ABOVE, TAN, V. OOL. (FN
OOLITES), PR - TR. FR. INTER-OOL - OOLIC
POR, SSFO, PR SPTY - FR. TOT. LT. BRN.
SAT. STN, GD. FLUSH CUT, SLI. ODOR.

CIRC: LS, TAN, VF-FXLN, PR. VIS. POR; SOME
CHT. WHITE, SHP; TR. LS AS ABV. W/ SHOW
OIL, NO ODOR.

70: LS, TAN, FXLN, SLI. CALC, PR. XLN. POR;
AND LS, CRM, SOFT, SLI. CHLKY; V. COL. SH.

DRILLING MUD @ 3976:

WT: 9.2
VIS: 47
FILTRATE: 8.8
CHLOR: 1500
LCM: 2#

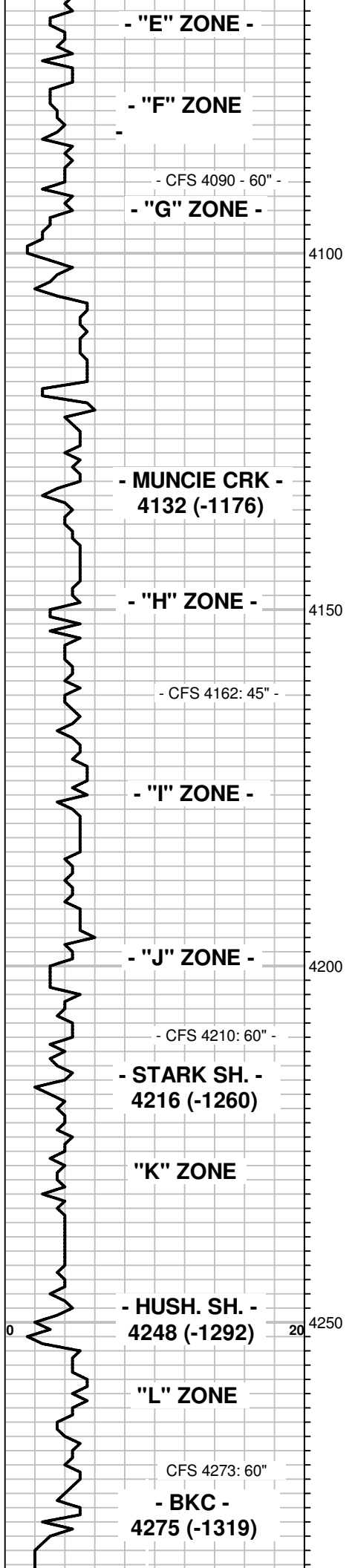
MUD @ 4055:

WT: 9.4
VIS: 50
FILTRATE: 8.8
CHLOR: 500
LCM: 2#

DST #1: 4023-4055
LANSING "B" ZONE
TIMES: 30-45-45-60
IF: BLOW OFF BTM IN 30"
ISI: NO BLOWBACK
FF: BLOW OFF BTM IN 36"
FSI: NO BLOWBACK
REC: 190' GIP & 235' TOTAL
FLUID:
85' VSW&MC OIL (98%O,
1%W, 1%M), GRAV. 36
95' O&WCM (18%O, 18%W
64% M.)
55' SMCW W/ TR. OIL (92%
W, 8%M, TR. OIL)
WTR. CHLOR: 81,000 PPM
SYSTEM: 1,000 PPM
RW: .13 @ 73 F.
IFP: 10-68#, FFP: 74-105#
SIP: 1120-1072#
HP: 1916-1915#
MAX TEMP: 118 F.
SEE CHART ABOVE

PIPE STRAP @ 4055:
2.5 FT. LONG TO BOARD.

DST 2: 4061-4090
LANSING "E" & "F" ZONES



- "E" ZONE -

- "F" ZONE -

- CFS 4090 - 60" -

- "G" ZONE -

4100

- MUNCIE CRK -
4132 (-1176)

- "H" ZONE -

4150

- CFS 4162: 45" -

- "I" ZONE -

- "J" ZONE -

4200

- CFS 4210: 60" -

- STARK SH. -
4216 (-1260)

"K" ZONE

- HUSH. SH. -
4248 (-1292)

4250

"L" ZONE

CFS 4273: 60"

- BKC -
4275 (-1319)

80&90: SEV. PCS. LS, TAN, FXLN, W/ MOSTLY PR. TO TR. GD. PPT.-VUG- SOLUTION. POR, MUCH CALCITE FILL, SSFO&G, FR. SPY-TOT.
MED BRN SAT STN, DULL FLUOR, GD. FLUSH CUT, FR. ODOR; SOME OOL. LS, PR. POR; NS
CIRC: SEV. PCS. LS, FXLN, W/ PR. TO R. TR. FR. PPT- FOSS. CAST- VUG. POR, PR. TO TR. FR SPY-TOT. BRN SAT STN, VSSFO, S-F ODR

10: DOL, TAN, FXLN, SUCROSIC, W/ PR - TR. FR. XLN. POR; NS, NF.
20: LS, TAN, FXLN, W/ PR- FR. XLN. POR, SOME CRM. SLI. CHLKY; LS. GRY, VFXLN, SLI. FOSS, DSE; NS,
30 & 40: LS, GRY- LT. BRN, VFXLN, SLI. FOSS, DSE, TO SOME WEATHERED CHLKY; NS, NF.

50: SHALE, BLK; LS, BRN, VFXLN, DSE TO MUCH WEATH, SLI. CHLKY W/ FR-GD. POR, FEW PCS W/ PR. SPY TO FR. TOTAL FLUOR
NFO, NO STN, SLI ODOR.
62: FEW PCS LS, BRN, VFXLN, DSE, V. OOL./ FOSS (CSE FOSS.), PR. TR. INTER-OOL. PPT. POR, SSFO, PR- FR. SPY- TOT. MD BRN SAT STN, SPY FLOUR, SLI. ODOR
30" CIRC: LS, GRY-TAN, VFXLN, DSE TO WEATHERED CRM, SLI. CHLKY; NS
80: SHALE, BLK; LS, BRN, VFXLN, DSE TO SOME CRM, CHLKY, ONLY CP. PCS W/ V. PR PPT. POR, VSSFO, PR. SPY. STN & FLUOR, SLI. ODOR
90: SEV. PCS. LS, TAN, FXLN W/ PR - FR PPT. - VUG. & XLN POR, RBSSO&G, FR-GD LT. BRN SAT STN, SPY BRT TO TOT. DULL FLR, FR ODOR.
100: LS, DSE, MANY PCS W/ PR. SPY XLN POR & SPY STN, NFO, NO ODOR.

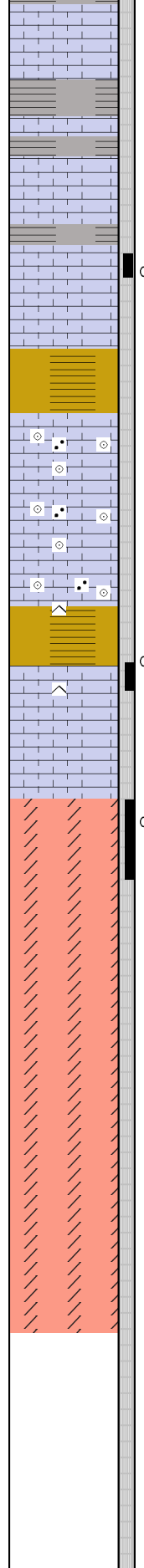
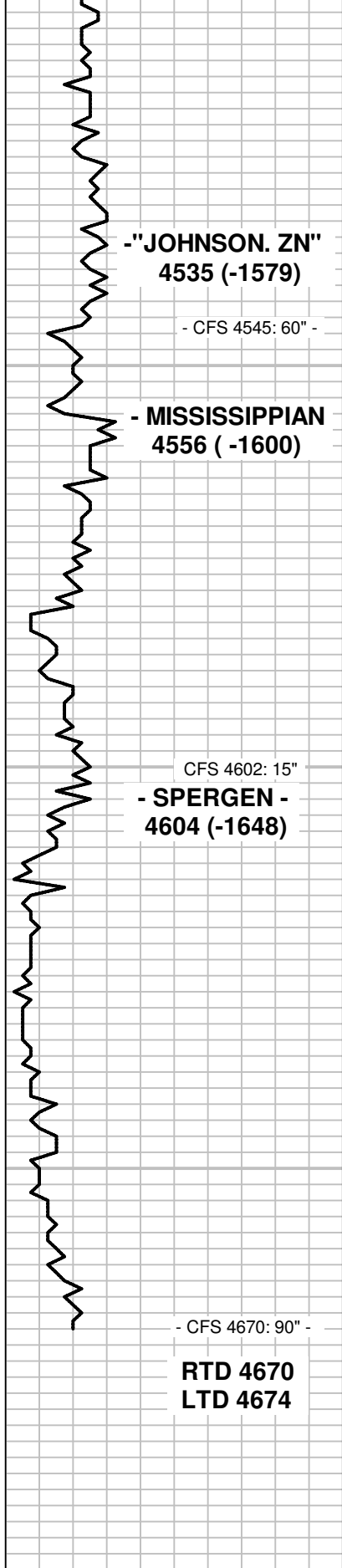
10: DOL, BRN, FXLN, PR- FR. XLN POR & TR. PPT. POR, SSFO, MOSTLY PR. SPY SAT. STN. & V. SPY. BRT. FLUOR, NO ODOR.
CIRC 10: LS, GRY-BRN, VFXLN, DSE TO SOME WEATH. SLI. CHLKY; SOME CHT. GRY-BLUE-BRN; NS.
30: LS, TAN, VFXLN, DSE TO SOME CRM SLI. CHLKY, TR. STN; SHALE, BLK, GRY & BRN.
40: TR. LS, V. OOL./ FOSS, W/ PR- TR. FR. PPT- VUG. POR, SSFO, PR. SPY TO TR. FR. TOT. MD. BRN SAT. STN & FLUOR., SLI. ODOR.
50: LS, BRN, V. OOL/ FOSS, W/ TR. PR- FR. XLN POR & TR. PR. VUG. POR, TR. FO, PR. SPY. LT. BRN SAT STN & FLUOR, FR. ODOR
60: LS, CRM - BRN, FXLN, OOL/ FOSS, FR. XLN POR, TR. STN, SLI. ODOR; SHALE BLACK.
70: LS, DK. BRN, VFXLN, SLI. FOSS, DSE TO SOME WEATHERED; NS, NF
CIRC 73: LS, TAN, VFXLN, DSE, SLI. WEATH, TR. PR. XLN. POR & TR. PR. SPY STN & FLUOR. NO ODOR.
100: SOFT, CRM-GRY CHALK & CRM - LT. GRN LIMY SILTSTONE; NS

TIMES: 30-45-60
IF: BLOW BLT TO 11.5"
ISI: NO BLOWBACK
FF: BLOW OFF BTM 33".
FSI: NO BLOWBACK
REC: 215' GIP & 210'
TOTAL FLUID:
80' SMCO (2%M) GRAV 36
20' SW&MCO (84%O, 6%W
10%M)
55' SO&HWCM (11%O, 38%
W, 51%M)
55' SMCW W/ TR. OIL
(TR. O, 91%W, 9%M)
WTR CHLOR: 87,000 PPM
SYSTEM: 1,000 PPM
RW: .12 @ 70 F.
IFP: 8-62#, FFP: 67-94#
SIP: 1231-1208#
HP: 1952-1208#
MAX. TEMP: 119 F.
SEE CHART ABOVE.
MUD @ 4090:
WT: 9.4
VIS: 59
FILTRATE: 8.8
CHLOR: 1,000 PPM
LCM: 2#

DST #3: 4130-4210
KC "H", "I", "J" ZONES
TIMES: 30-30-30-30
IF: BLOW BLT TO 1.5"
FF: BLOW BLT TO .75"
REC: 85' SO&WCM
(13%O, 11%W, 76%M)
IFP: 10-30#, FFP: 38-46#
SIP: 1063-977#
HP: 1975-1973#
MAX TEMP: 115 F.
SEE CHART ABOVE

MUD @ 4210:
WT: 9.3
VIS: 68
FILTRATE: 8.8
CHLOR: 500
LCM: 2#

DST #4: 4212-4273
KC "K" & "L" ZONES
TIMES: 30-45-45-60
IF: BLOW BLT TO 4.5"
FF: BLOW BLT TO 4"
NO BLOWBACK ON SI.
REC: 195' TOTAL FLUID:
20' MCW (61%W, 39%M)
65' WCM (29%W, 71%M)
55' SMCW (92%W, 8%M)
55' HWCM (45%W, 55%M)
WTR CHLOR: 68,000 PPM
SYSTEM: 1,000 PPM
RW: .13 @ 79 F.
IFP: 8-55#, FFP: 61-95#
SIP: 1263-1237#
HP: 2029-2022#
MAX. TEMP: 120 F.
SEE CHART ABOVE



WEATH, SLI. CHLKY; NS

30: LS, BRN, VFXLN, FOSS, DSE; TR. SHALE, GRY & BLK; NS

40: TR, SHALE, GRY & GRN; LS, TAN - BRN, VFXLN, SLI. FOSS, DSE; NS

45 & CIRC: LS, BRN, VFXLN, DSE, TR. W/ PR. VUG. POR, VSSFO, PR. SPTY STN, NO FLUOR GD. FLUSH CUT, SLI. ODOR

60: TR. LS, CRM, V. OOL, SLI. GLAUC, PR. XLN. POR; NS

70: LS, TAN & MUSTARD, V. OOL, SLI. ARENACEOUS, PR. XLN. POR; AND SHALE, VARY COLORED, FEW PCS QTZ; NS, NF

80: LS, AS ABV, OOL./ ARENACEOUS, PR. XLN. POR; TR. QTZ. GRNS; NS

90: OOL./ ARENACEOUS LS AS ABV, SOME SLI. CHLKY; NS, NF

100: LS, OOL./ AREN., CHTY, HD, 2 PCS W/ PR SPTY. STN, NFO, GD. FLUSH CUT; SHALE, V. COLORED.

02: 15": LS, BRN, VFXLN, DSE, CHTY, R. TR. PR. SPTY. PPT-VUG. POR, PR. SPTY STN & FLUOR, NFO, GD. FLUSH CUT, NO ODOR

4618: CIRC: DOL, BRN, FXLN, W/ PR -GD, FOSS. CAST-PPT- VUG. POR, SSFO, EST. 10% W/ LT. BRN SAT. STN, TR. SPTY FLUOR, WK- FR. RING CUT, FT. ODOR (V. SUBTLE BRN STN ON BRN DOL).

50: DOL, BRN, FXLN, SUCROSIC, HD W/ GRY MOTTling, PR. VIS. POR; AND DOL AS ABV W/ PR- GD FOSS CAST- VUG POR; NS, NF

60: DOL, BRN, FXLN, SUCROSIC, HD W/ PR. XLN POR. TO GD FOSS. CAST & VUG. POR; NS, NF

70: DOL, BRN FXLN W/ MUCH GRY MOTTling, PR. - TR. FR. VIS. XLN. POR; NS.

4670: CIRC: DOL, BRN W/ GRY MOTTling, SLI. FOSS, PR. VIS. POR; NS:

(1%O, 47%W, 52%M)

245' MCW W/ SP. OIL (88%W, 12%M)

240' SMCW (88%W, 12%M)

55' WCM (31%W, 69%M)

WTR CHLOR: 85,000 PPM

SYSTEM: 1,000 PPM

RW: .13@ 66 F.

IFP: 17-178#, FFP: 183-330#

SIP: 1055-1018#

HP: 2145-2143#

MAX. TEMP: 129 F.

SEE CHART ABOVE

MUD @ 4545:

WT: 9.5

VIS: 70

FILTRATE: 8.8

CHLOR: 500 PPM

LCM: 1#