

Arden Ratzlaff

PETROLEUM GEOLOGIST

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107 N. Market 850 Bittling Bldg. Wichita, KS 67202

COMPANY: **L. D. DRILLING, INC.**
 LEASE: **REGIER 2-7**
 FIELD: **Buhler North**
 LOCATION: **1650' FSL & 1420' FWL**
 SECTION: **7 TOWNSHIP 22S RANGE 4W**
 COUNTY: **RENO STATE KANSAS**
 CONTRACTOR: **L. D. DRILLING** REG. NO. _____
 COMMENCED DRILLING: **9-1-2017**
 COMPLETED DRILLING: **9-9-2017**
 RTD: **4040 FEET** LTD: **4043 FEET**
 MUD UP AT **2400 FEET** MUD TYPE: **Chemical**

DRILLING TIME
AND
SAMPLE LOG

ELEVATIONS
KB: **1511**
IF: _____
GL: **1506**
Measurements Are All
From **K.B.**
CASING
13 3/8" @ 136' w. 200 k.
ELECTRICAL SURVEYS
DUAL INDUCTION

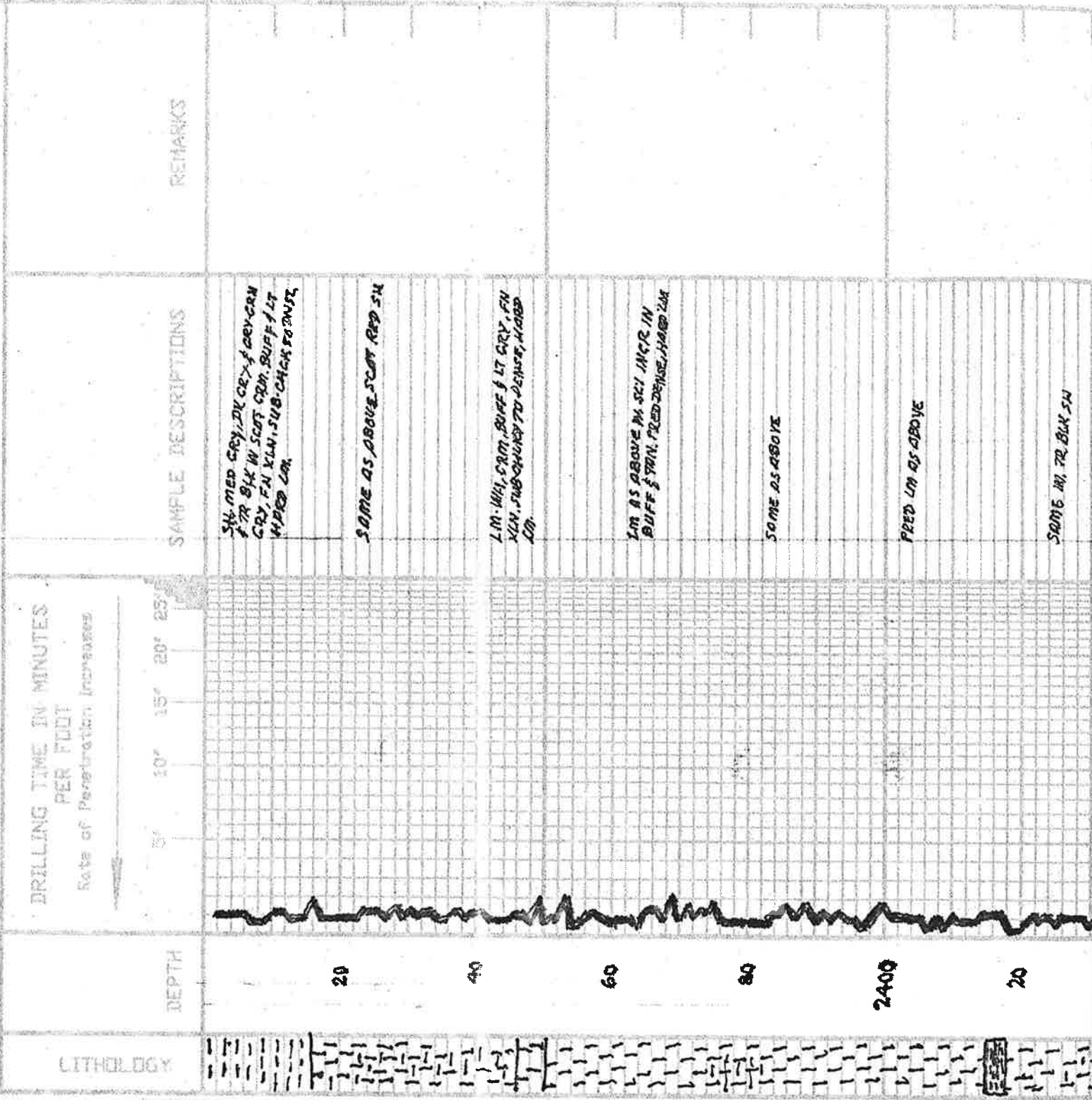
REMARKS: *DETERMINING THE SAMPLES, ELECTRIC LOG, DRILL STEM TEST AND ALL OTHER NEGATIVE INFORMATION. IT WAS THE DRILLER'S UNANIMOUS DECISION THAT THE WELL BE PLUGGED & ABANDONED AT A DEEP HOLE. ARDEN RATZLAFF.*

NOTE: *KIM SUDEMAKER & ARDEN RATZLAFF WERE THE GEOLOGISTS ON THE WELL.*

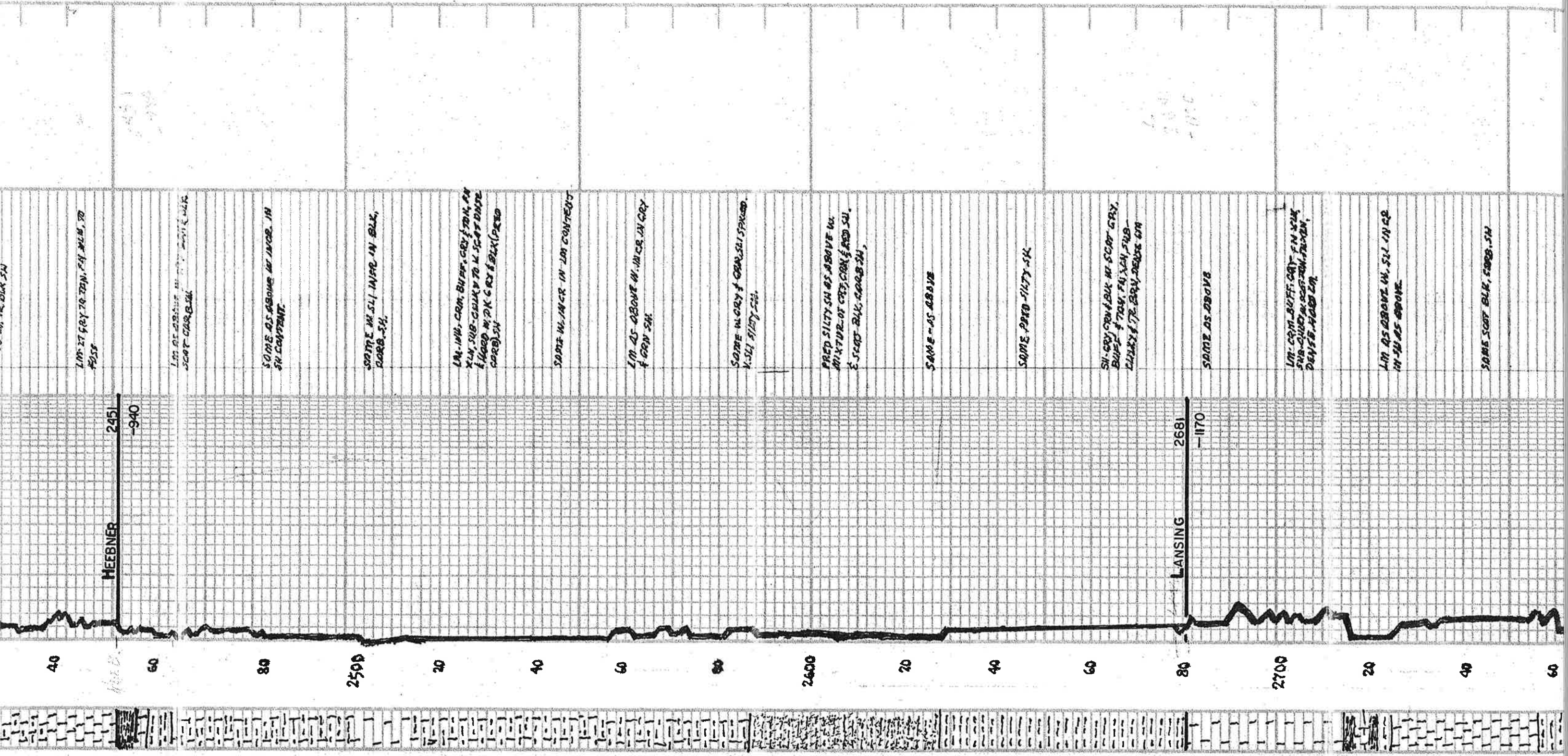
FORMATION TOPS	SAMPLE	ELECTRIC LOG
HEEBNER	2451(-940)	2451(-940)
LANSING	2681(-1170)	2677(-1166)
BASE LANSING	3088(-1577)	3087(-1576)
MISSISSIPPIAN	3380(-1869)	3385(-1874)
KINDERHOOK	3586(-2075)	3601(-2090)
VIOLA	3870(-2359)	3877(-2366)
SIMPSON SAND	3892(-2381)	3883(-2372)
ARBUCKLE	3982(-2471)	3992(-2481)
TOTAL DEPTH	4040(-2529)	4043(-2532)

LEGEND

- Anhydrite
- Salt
- Sandstone
- Shale
- Carb sh. Limestone
- Dolomite
- Chert
- Bouldering



9-702168



1.5' TO 2.0' GRAY TO TANN. FINE MUD, SD
FUSE

1.0' TO 1.5' ABOVE W. IN CR. IN
SCOT CORB. SH.

SOME AS ABOVE W. IN CR. IN
SH CONTENT.

SOME W. SILTY IN CR. IN BLK,
CORB. SH.

1.0' IN W. CR. BUFF. GRAY TO BK. FV
XLS, SUB-CALKY TO W. SCOT DUNE
CORB. SH.

SOME W. IN CR. IN LOI CONTENT

1.0' AS ABOVE W. IN CR. IN GRAY
F GRN SH.

SOME W. GRAY F GRN SILTY SH.

FINE SILTY SH AS ABOVE W.
MIXTURE OF CR. CORB. & RED SU.
E. SCOT BLK. CORB. SH.

SAME AS ABOVE

SAME PREC. SILTY SH

SH. GR. CR. & BLK. W. SCOT GRAY.
BUFF. F. TANN. FINE MUD, SD
DUNE F. GR. DUNE GR.

SAME AS ABOVE

1.0' CR. BUFF. GRAY F. IN W. CR.
SUB-CALKY TO W. SCOT DUNE
CORB. SH.

1.0' AS ABOVE W. SILTY IN CR.
IN SU AS ABOVE.

SOME SCOT BLK. CORB. SH.

HEEBNER

LANSING

2451

-940

2681

-1170

40

60

80

2500

20

40

60

80

2600

20

40

60

80

2700

20

40

60

SH - GRAY, FINE, BUFF AS ABOVE,
W. SCOT. GRAY, BUFF & TAN, FN
KLN, DENSE & HARD LN

SAME AS ABOVE

LN AS ABOVE W. FINE W. SH
AS ABOVE

SAME AS ABOVE

LN AS ABOVE, PRSD DARKER,
MORE DENSE & HARD W. CONS SH
AS ABOVE

LN - GRAY, BUFF & TAN, FN X24,
SUB-CHALKY TO SMOKE & HARD - SCOT
SH AS ABOVE

LN - GRAY, BUFF, GRAY & TAN, FN X24,
SUB-CHALKY TO DENSE & HARD

SAME W. PRSD, TAN LN

LN AS ABOVE INCR. IN GRAY &
BLK, POOR CORE SH

SH - GRAY, COH. & BLK (CORR. IN
PRSD) - ALSO LN AS ABOVE

SH & LN AS ABOVE.

SH - BLK & DK GRAY PLUS GRAY TO
GRAY & TAN, FN X24, SUB-CHALKY
TO DENSE, HARD LN

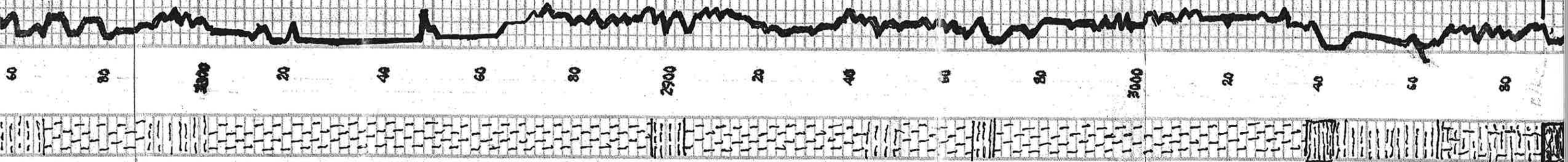
LN & SH AS ABOVE

LN AS ABOVE W. SCOT. SH AS
ABOVE

LN - GRAY, BUFF, GRAY & TAN, FN
X24, SUB-CHALKY TO DENSE & HARD

SAME W. GRAY & BLK (CORR. IN)

SAME AS ABOVE, PRSD LN



BANSING 3088
-1577

-1577

LM - PRED DENSE f. HAD IN SCOT
OR CRY f. BLK (PRED) SUB

SH - MED DK GR, BLK f. TR. CAN. W.
Y. SCOT. LM AS ABOVE

SH - MED

SH - MED TO DK CRY, GR, f. V. SCOT
BLK. W. CRY, BUFF. TR. IN SCOT
SUB - CHALKY TR. DENSE f. HAD IN LM

LM - AS ABOVE. PRED SUB - CHALKY
W. SCOT. SH - AS ABOVE

LM - CR. BUFF. CRY f. TR. IN SCOT. SUB -
CHALKY TO DENSE f. HAD IN LM

LM - AS ABOVE IN DK CRY f. BLK.

LM - CR. BUFF. CRY f. TR. IN SCOT. SUB -
CHALKY TO DENSE f. HAD IN LM

LM - AS ABOVE IN FLOT. RED. CRY.
CRY f. BLK. SH

SAME W. SCOT f. BLK. CRY IN PRED.
W. BUFF. TR. f. TR. IN SCOT.
PRED DENSE. HAD IN LM

LM f. V. SCOT IN ABOVE W. TR. W. f.
CRY. SUB - CHALKY f. TR. CRY. LM

LM - CR. BUFF. CRY f. TR. IN SCOT. SUB -
CHALKY TO DENSE f. HAD IN LM

LM - AS ABOVE IN SCOT. CRY. TR. f. TR.
RED f. SCOT. BLK. CRY. SH

SH - CRY. GR. f. BLK. CRY. IN PRED.
W. CR. CRY f. TR. W. F. BLK. SUB -
CHALKY TO DENSE (CR. IN) HAD IN LM

SH f. LM AS ABOVE

LM - AS ABOVE W. CONS. SH. AS ABOVE

SH f. LM AS ABOVE

SH - MED TO DK CRY. GR. f. BLK. W.
SCOT. LM AS ABOVE

SAME W. CONS. MED. SH.

SH - MED TO DK CRY. GR. f. CAN. W.
SCOT. CRY f. BUFF. f. TR. IN PRED
DENSE. HAD IN LM

SAME W. CONS. BUFF. SH. B.
CHALKY LM - SPLE. PRED. SH

SAME - PRED. SH - TR. PYRITIC

SH f. LM - SH. CRY. GR. f. BLK. W. SH
BUFF. CRY f. TR. W. CONS. SUB - CHALKY
TO DENSE. HAD IN LM

SAME AS ABOVE

LM - CR. BUFF. CRY f. TR. IN SCOT. SUB -
CHALKY TO DENSE f. HAD IN LM

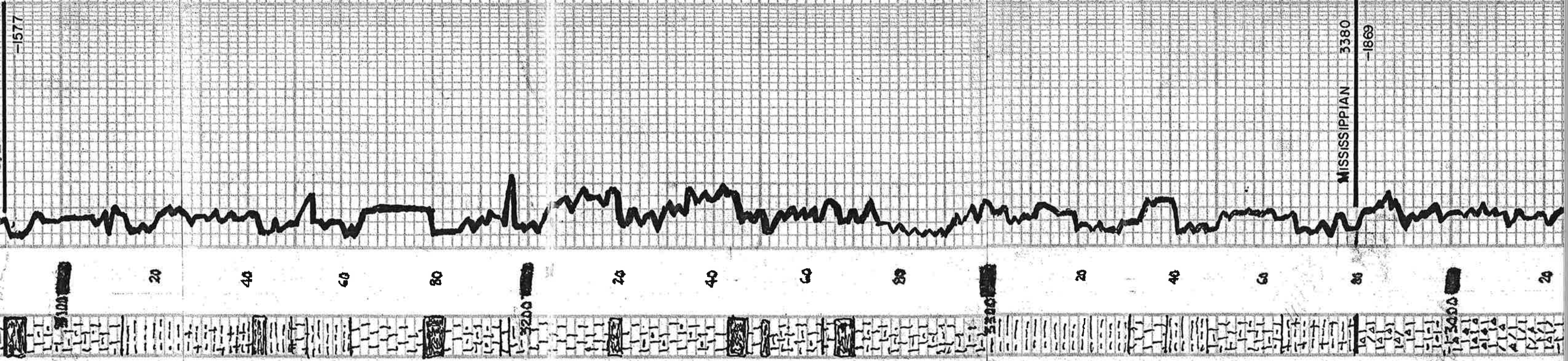
SAME W. CR. GR. f. BLK. CRY. IN PRED.
W. BUFF. TR. f. TR. IN SCOT. SUB -
CHALKY TO DENSE f. HAD IN LM

SAME AS ABOVE IN H. BLK. TR.

SAME AS ABOVE W. V. SCOT. D. GR.

MISSISSIPPIAN 3380

-1869



100

20

40

60

80

3200

20

40

60

80

3200

20

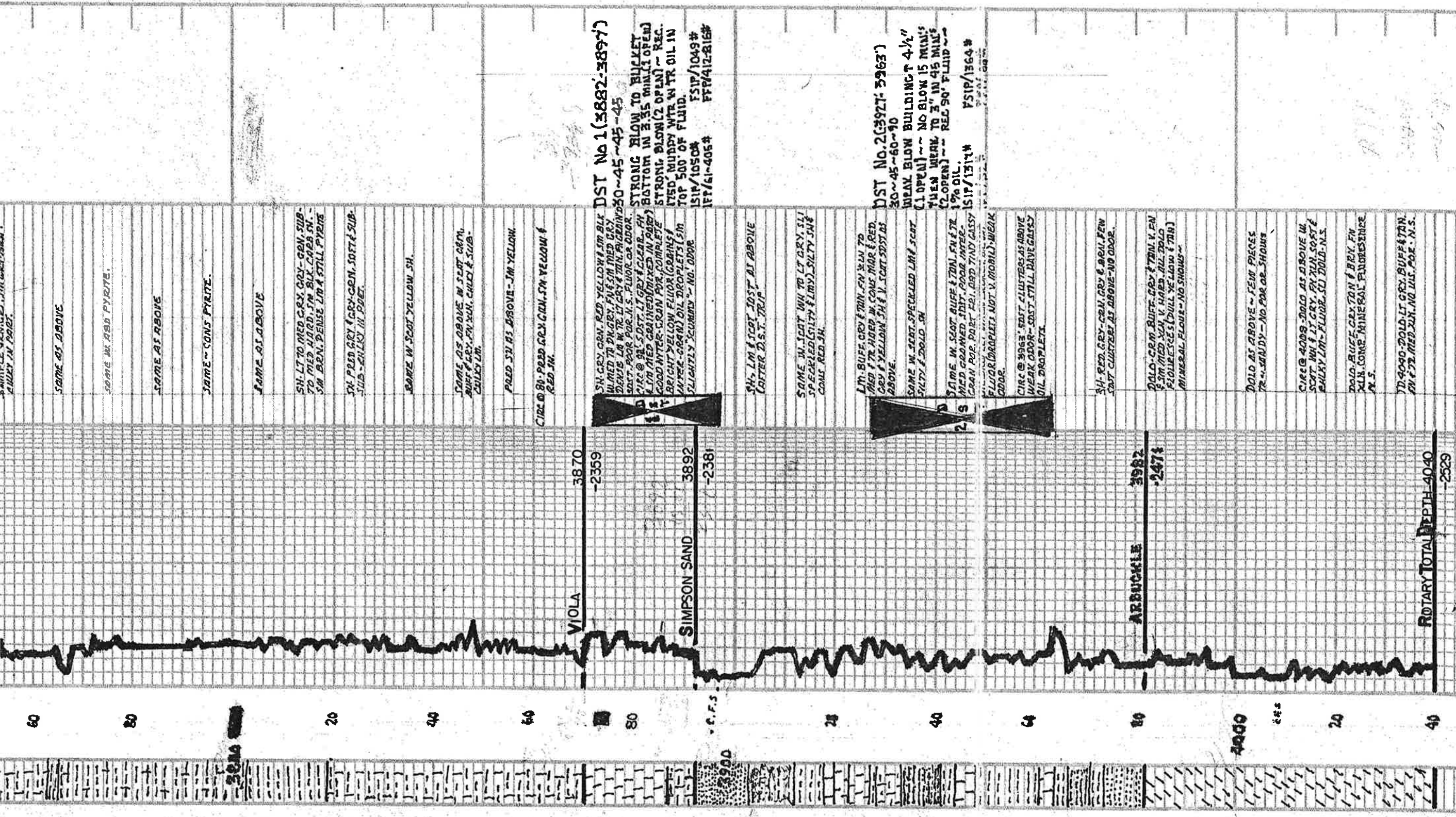
40

60

80

3200

20



SOME AS ABOVE

SOME M. ASD PYRITE.

SOME AS ABOVE

SOME ~ CONS PYRITE.

SAME AS ABOVE

SH. LT TO MED GRAY GRAY GRN. SUB-TO MED HORD. SM BLK. CARB. SH. - SM BRN. DENSE LIM & STILL PYRITE

SH. FINE GRAY GRAY GRN. SOFT & SUB-TEND. - CRISPY IN PART.

SAME IN SCOT YELLOW SH.

SOME AS ABOVE IN SCOT GRN. BUFF GRAY. FN. XIN. CHALK & SUB-COARSE LIM.

PROD. SU. AS ABOVE - SM YELLOW.

CIRC @ 80. PROD GRAY GRN. SM YELLOW & RED SH.

VIOLA 3870 - 3892

-2359

SIMPSON SAND 3892 - 4040

-2381

ARBUCKLE 3982 - 4040

ROTARY TOTAL DEPTH 4040 -2529

DST No 1 (3882-3897)
 30~45~60~70
 STRONG BLOW TO BUCKET BOTTOM IN 3.35 MIN (1 OPEN)
 STRONG BLOW (2 OPEN) ~ REC. TEST. MUDDY WTR. WTR OIL IN TOP 500' OF FLUID.
 FSIP/1049#
 1514/10504
 1514/61-405#
 FF412-816#

DST No 2 (3927-3963)
 30~45~60~70
 WEAK BLOW BUILDING T 4 1/2" (1 OPEN) ~ NO BLOW 15 MIN. THEN HEAVY TO 3" IN 45 MIN. (2 OPEN) ~ REC 90' FLUID ~ 1% OIL.
 FSIP/1364#
 1514/13114

SH. GRAY GRN. RED YELLOW & SM BLK. W/ MED TO DN GRAY. FINE SM MED GRAY. DENSE LIM IN LT GRAY & TAN. FINE GRAY. SOFT. POOR POR. N.S. FLUOR. OR ODOOR.
 CIRC @ 80. SOFT. LT GRAY & CLEAR. FN. & LM. MED GRAY (MIXED IN PART). GOOD WATER. GRAY. FINE. COMPLETE. BRIGHT YELLOW FLOOR (GIBBING). WATER. GRAY OIL. DRIPPLETS. SM. SLIGHTLY "SCUMBY". NO. ODOOR.

SH. LM & SCOT. SOFT. AS ABOVE (AFTER D.S.T. TRIP)
 SAME IN SCOT. WTR. TO LT GRAY. SILTY. SPECKLED (SILTY & LIMY). SILTY. SN& CONS. RED SH.

LT. BUFF. GRAY & TAN. FN. XIN. TO MED. FTR. HORD. IN CONS. MUD & RED. GRAY & YELLOW. SH. & V. SCOT. SD. ST. AS ABOVE.
 SAME IN SCOT. SPECKLED. LM. SCOT. SILTY & DOLD. SN
 SAME IN SCOT. BUFF. & TAN. FN. & TR. MED. GRAY. SOFT. POOR. WATER. GRAY. POR. PART. 22. DOLD. TIND. GASSY. FLUOR. DRIPPLETS. NOT V. HORD. WEAK ODOOR.

CIRC @ 9963. SOFT. CLUSTERS AS ABOVE. WEAK ODOOR. SOFT. STILL HAVE GASSY OIL. DRIPPLETS.
 SH. RED GRAY GRN. GRAY & BUFF. FINE. SCOT. CLUSTERS AS ABOVE. NO ODOOR.

DOLD. GRN. BUFF. GRAY & TAN. V. FN. & SM. MED. XIN. V. HORD. ALL DOLD. FLUOR. S. (DULL YELLOW & TAN). MINERAL FLOOR. NO SHOWS.

DOLD AS ABOVE. FEW PIECES. TR. SANDY. NO POR. OR. SHOWS
 CIRC @ 4009. DOLD AS ABOVE. IN SCOT. WTR. & LT GRAY. FN. XIN. SOFT & BUDDY. LIM. FLUOR. SO. DOLD. N.S.
 DOLD. BUFF. GRAY & TAN. FN. XIN. CONS. MINERAL. FLUOR. S. N.S.

TR. 4090. DOLD. LT GRAY. BUFF. & TAN. FN. & TR. MED. XIN. NO. ULS. POR. N.S.