

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

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GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.
 LEASE * 1-27 HICKERT FARMS
 FIELD WILDCAT
 LOCATION 1199' ENL & 2452' FEL
 SEC 27 TWP 6S RGE 25W
 COUNTY GRAHAM STATE KANSAS
 CONTRACTOR L. D. DRILLING, INC.
 SPUD 2-26-19 COMP 3-7-19
 LTD 3996 LTD 3978
 MUD UP 3440 TYPE MUD CHEMICAL

ELEVATIONS
 NO 2562
 OF
 CL 2557
 Measurements Are All
 From 2562 KB
 CASING
 SIZE 8 5/8" @ 399'
 PRODUCTION 5 1/2" @
 ELECTRICAL SURVEYS
 DUAL IND., DENS-N, MICRO,
 SONIC

SAMPLES SAVED FROM 3480 TO 3996
 DRILLING TIME KEPT FROM 3300 TO 3996
 SAMPLES EXAMINED FROM 3480 TO 3996
 GEOLOGICAL SUPERVISION FROM 3000 TO 3996
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2167 + 395	2167 + 395
B/ANH.	2260 + 362	2199 + 363
HEEBNER	3658 + 1096	3658 + 1096
LANSING	3697 - 1135	3695 - 1133
B/KC	3882 - 1320	3883 - 1321



REMARKS

2-26-19 SPUD
 2-27 @ 350'
 2-28 @ 350'
 3-1 @ 1300'
 3-2 @ 2585'
 3-3 @ 3310'
 3-4 @ 3735'
 3-5 @ 3855'
 3-6 @ 3928'
 3-7 @ 3996'

API: 15-065-24147

RTD 3996 LTD 3978

The difference appears to be fill,
 all tops appear to match Drilling Depth.

LEGEND

- Anhydrite
- Salt
- Sandstone
- Shale
- Carb sh
- Limestone
- Coal
- Dolomite

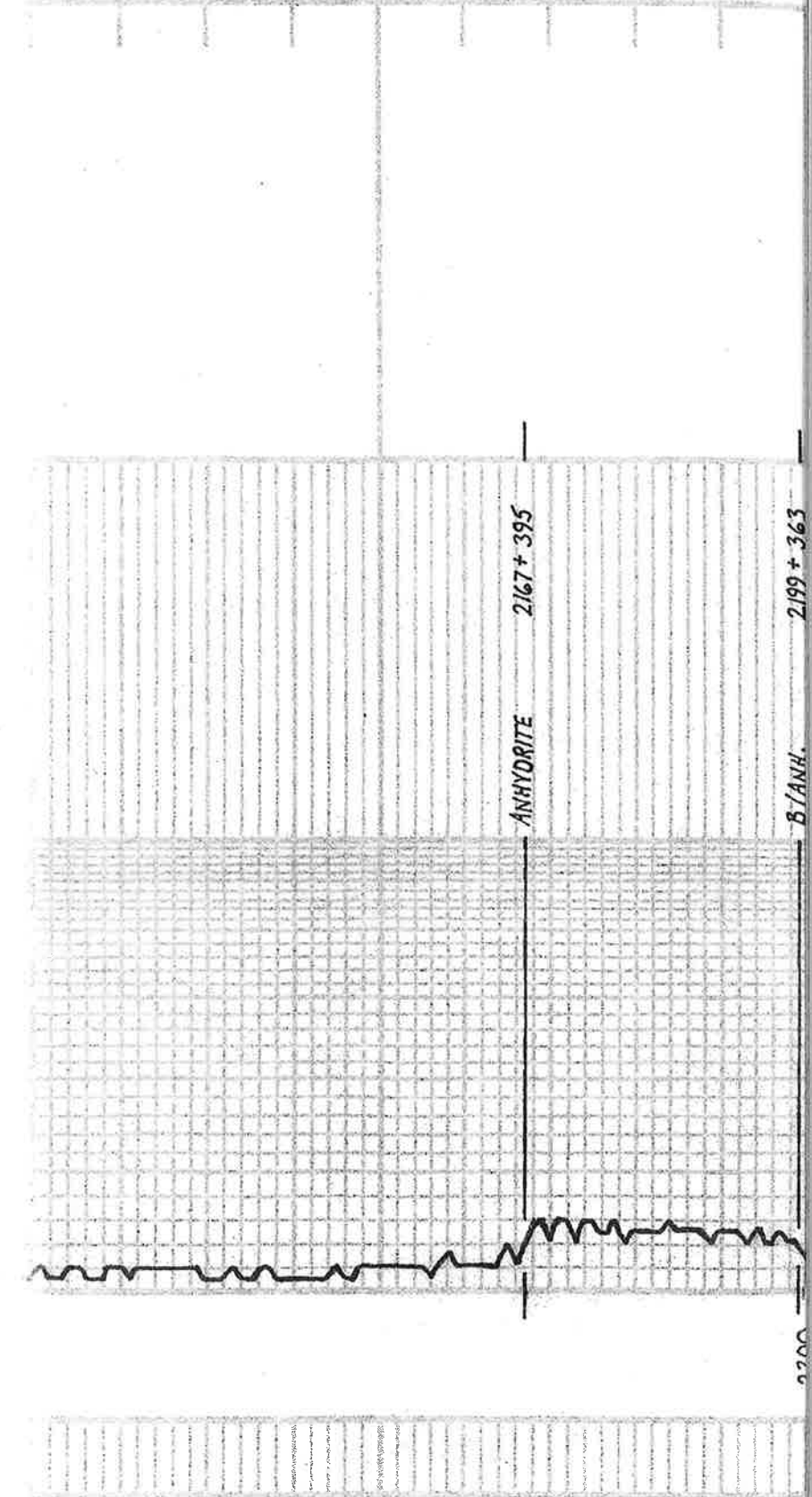
DRILLING TIME IN MINUTES PER FOOT
 (Index of Penetration increases)

DEPTH 2100

LITHOLOGY

SAMPLE DESCRIPTIONS

REMARKS



Sh. Blue-G

Ls. G. Foss.

Sh. Rd.

Ls. w/ Sh. Foss w/ Org. A

Sh. Rd.

Ls. w/ V. Foss. Sil. A

Ls. w/ Foss. Colonic

Ls. w/ Foss. Colonic

HEESNER

Sh. Blue-G

3658-1096

Sh. Light V. Foss. Silly

Ls. w/ Sh. Foss. Sil. A

Sh. Rd.

LANSING 3695-1133

Ls. w/ col. F. V. F. DEAR BLUE HAY SH

V. Foss. Noodor

Ls. w/ L. G. Sil. Foss. Sil. A

Sh. Rd.

Ls. Rd. V. Foss. Sil. A

DEAR BLUE HAY SH V. Foss. F. V. F. Noodor

Sh. Rd.

Ls. w/ Sh. Foss. Ch. G.

Sh. Rd.

Ls. w/ V. Foss. A

Ls. w/ L. G. Sil. Foss. P. V. F. Noodor

DEAR BLUE HAY SH V. Foss. Noodor

Ls. w/ L. G. Sil. Foss. F. V. F. Noodor

DEAR BLUE HAY SH V. Foss. Noodor

Ls. w/ Sh. Foss. F. V. F. Noodor

DEAR BLUE HAY SH V. Foss. Noodor

Ls. w/ Sil. A

Ls. G. V. Foss. A

Sh. Rd.

Sh. Rd.

Ls. G.

Ls. w/ L. G. Sil. Foss. Sil. A

Sh. Rd.

Ls. w/ Sh. Foss. Foss. Sil. A. P. V. F. Noodor

Ls. Rd. Sil. Foss. Foss. Sil. A. P. V. F. Noodor

Sh. Rd.

Ls. w/ V. Foss. Sil. Ch. G.

Ls. w/ V. Foss. V. Foss. Colonic

B/KC

3883-1321

Sh. Rd.

Ls. w/ Sil. Foss. Sil. Ch. G. V. Foss. Sil. Rd.

Sh. Blue-G

Ls. G. V. Foss. A

3600

3700

3800

3900

DST (17)

DST (22)

DST (37)

Wt: 58 Wt: 8.1
Wt: 72 Cal: 1100

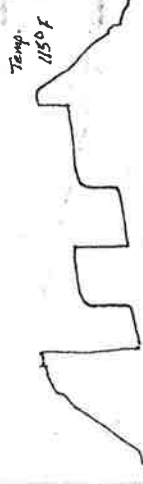
Wt: 57 Wt: 10
Wt: 7.2 Cal: 1100

DST (1) 3687-3735
15' Open: Bottom bucket 11 min.
24' Open: " " 13 "
30-45-45-60

Rec. 83' MW (70' w/ 30' M)
378' VSMW (97' w/ 31' M)
63' MW (70' w/ 30' M)

Bl: 7
Wt: 528'

RM: 10018°F
RM: 0810115°F
CIC: 59200
FP: 16:15 119-249
SIP: 1152-1127 *



DST (2) 3743-3770

15' Open: Bottom bucket 27 min.

24' Open: " " 28 "

30-45-45-60

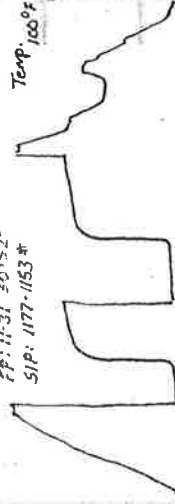
Rec. 189' G.I.P.

20' CO 338 G.I.P. 60°F
20' MCO (95' 01' 51' G. 20' M)
63' MCO (65' 01' 51' G. 30' M)

Bl: 103'

FP: 11:31 30-52 *

SIP: 1177-1153 *



DST (3) 3795-3880

15' Open: Tool Steel 20', blow built to 6 1/4"

24' Open: Blow built to 5"

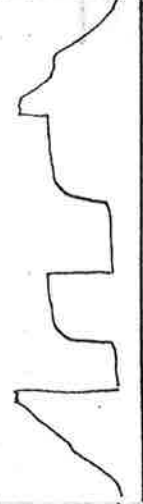
30-45-45-60

Rec. 118' VSOCH (3' 01' 97' Mwd)

FP: 25-43 44-67 *

SIP: 1232-1203 *

Temp. 104°F



sol. Sky sh. H blue-g. Y. G. S. L. by. S. R. D.

Sh. blue-g.

LS. G. VSDA

Sh. PL. Purple.

LS. T. w/ Sh. Foss w/ PL Shok Strks.

Sh. PL.

LS. H. G. Foss. SL. A

Sh. PL. B. Sky-g.

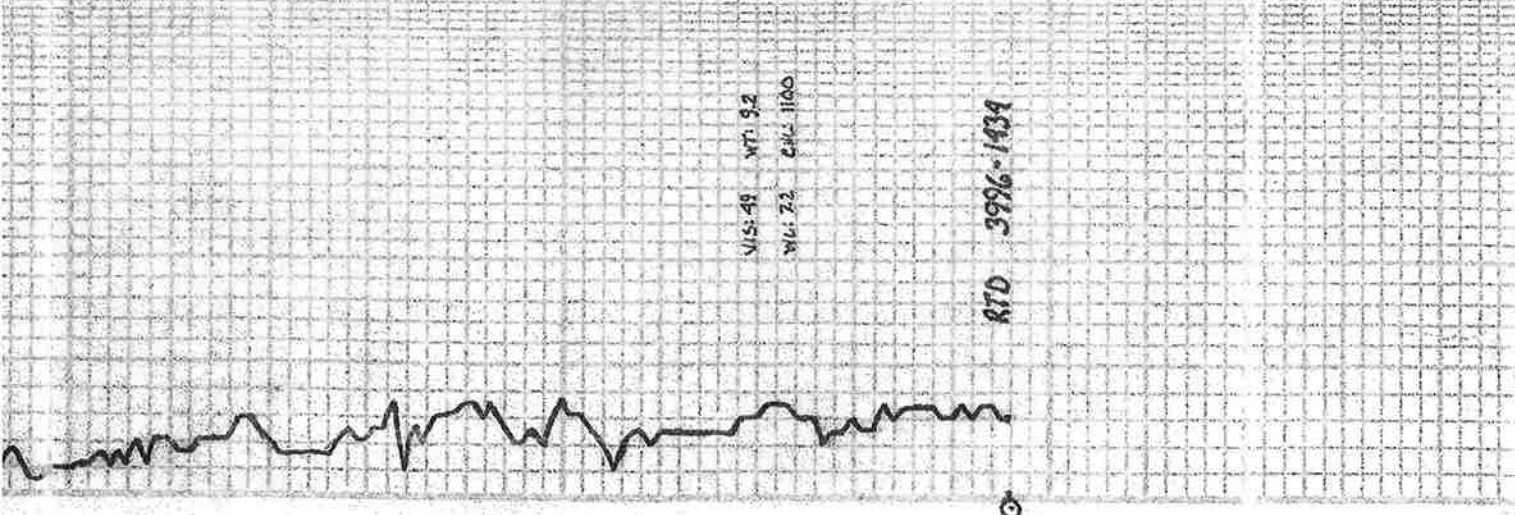
LS. G. VSD. Foss.

Sh. PL.

LS. w. L. G. w/ PL A. Foss.

Sh. PL. Yellow G.

3900



RTD 3996-1434

VLS: 49 VTI: 92
WLS: 72 WLS: 1100

4000