

# KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-884-9705 • WICHITA, KS

## GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **L.D. DRILLING, INC.**  
 LEASE **#1-18 DAWN NELL**  
 FIELD **DRACH**  
 LOCATION **330' ENL & 2970' FEL**  
 SEC. **18** TWP. **22s** R. **12w**  
 COUNTY **STAFFORD** STATE **KANSAS**  
 OPERATOR **L.D. DRILLING, INC.**  
 SPUD **8-17-17** COOP **8-25-17**  
 RID. **3785** TO **3784**  
 BROW INP **2787** TYPE LOG **CHEMICAL**

ELEVATIONS  
 TO **1885**  
 OF  
 TO **1880**  
 Measurements Are All  
 From **1885 KB**  
 CASING  
 8 5/8" @ 336'  
 5 1/2" @  
 ELECTRICAL SURVEYS  
 DUAL IND., DENS-N., MICRO

SAMPLES SAVED FROM **3000 TO 3785**  
 DRILLING TIME KEPT FROM **2800 TO 3785**  
 SAMPLES EXAMINED FROM **3000 TO 3785**  
 GEOLOGICAL SUPERVISION FROM **3200 TO 3785**

GEOLOGIST ON WELL **KIM B. SHOEMAKER**

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	694+1191	689+1196
TOPEKA	2886-1001	2887-1002
HEEBNER	3178-1293	3180-1295
BROWN LIME	3313-1428	3314-1429
LANSING	3328-1443	3330-1445
B/KC	3546-1661	3547-1662
VIOLA	3580-1695	3582-1697
SIMPSON	3621-1736	3621-1736
ARBUCKLE	3681-1796	3682-1797

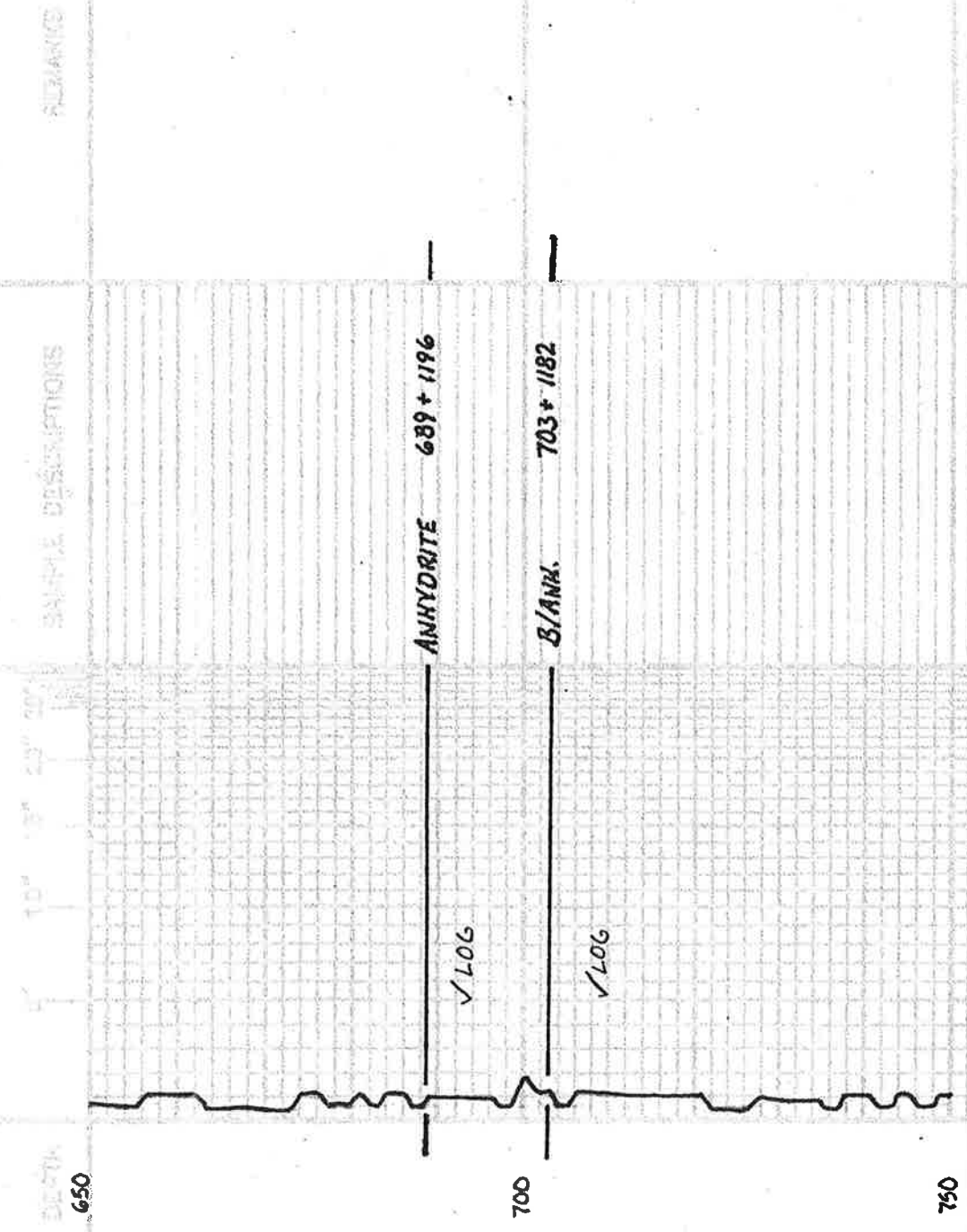


REMARKS  
 API: 15-185-23992  
 8-17-17 5900  
 8-28-17 @ 379'  
 8-19-17 @ 1670'  
 8-20-17 @ 2670'  
 8-21-17 @ 3319'  
 8-22-17 @ 3470'  
 8-23-17 @ 3620'  
 8-24-17 @ 3684'  
 8-25-17 @ 3785'

### LEGEND

- Anhydrite
- Salt
- Sandstone
- Sandstone with Lenticles
- Sandstone with Lenticles and Shale
- Limestone
- Limestone with Shale
- Shale
- Evaporite

DRILLING TIME IN MINUTES  
 PER FOOT  
 Scale of Penetration, Inverse



ENTHALPY

VIS: 66  
WT: 8.7  
WL: 7.2  
CIL: 1000

2800

2900

3000

TOPEKA 2887 - 1002

Samples are lagged

A 119.

15. wt 119. VSI. Foss.

15. wt 119. Sl. Foss. w/ DEq. Foss.

15. wt. Foss. VSI. A

Sh. 119.

15. wt. Sl. Foss. A 119.

Sh. DEq. Bkt

3100

LS. wt. Foss. vsil. chly.

LS. wt. Foss. chly.

LS. Lt. G. vsil. Foss. sil. d.

LS. Lt. Shool.ool. sil. Chly.

LS. wt. vsil. Foss. chly.

LS. wt. Lt. G. vsil. chly.

LS. wt. Lt. G. w/ no. Moll.

HEBNER 3180-1295

Sh. Blk Carb.

LS. Lt. G. sil. Foss.

Sh. Lt. Blue G.

LS. wt. sil. Foss. sil. d.

sh. Rd.

Sh. Lt. G. Silly. sdy.

Sh. Lt. Blue G. Silly

Sh. Lt. G. Silly.

Sh. Lt. G. Silly

TORONTO

DOUGLAS

3200

3300

BROWN LIME 3314-1429

LS. Lt. Br. vsil. Foss.

VIS: 62 WT: 9.0

WIL: 8.0 CAL: 5000

Sh. Lt. G. G. Silly

LANSING 3330-1445

LS. wt. Lt. vsil. Foss.

LS. wt. Lt. G. sil. Foss. sil. d. 1/4" of

Lt. Br. sil. sh. to 1/4" to 1/2" dull flour F. color.

Sh. Lt. G.

LS. wt. Lt. G. sil. Foss. F. color. 1/4" to 1/2" dull flour F. color.

LS. G. Foss.

Sh. Lt. G. G.

LS. G. sil. Foss.

LS. Lt. G. G. sil. Foss. sil. d. 1/4" of

LS. Lt. Br. G. Foss.

Sh. G.

LS. G. Br. sil. Foss.

Sh. G.

LS. wt. sil. Foss. P. vis. d.

Sh. Br. sil. d. sil. 1/4" to 1/2" dull flour F. color.

LS. wt. Lt. G. Shool. sil. chly.

3400



DST (1) 3343-3410

1st OPEN: Blow built to 3/4"

2nd OPEN: No Blow

30 - 30 - 30 - 30

Rec. 20' Mud

FP: 26-31 22-32"

SP: 137-65"

Temp. Sample: 100% Mud

Temp. 105°C

LS. wt. 1/4. Stool. Si. Chalk.

LS. Tr. VSI. 1683. VSI. A

LS. wt. 1/4. VSI. A  
Δ wt

Sh. Gy.

LS. Tr. wt. Stool. P. VSI. 1683. VSI. A  
No Flour. No odor.

Sh. Gy.

LS. wt. Foss. cool. Si. Chalk. P. VSI. 1683. VSI. A  
No Flour. No odor.

LS. wt. Chalk.

LS. wt. cool. Foss. cool. Si. Chalk. P. VSI. 1683. VSI. A  
No Flour. No odor.

LS. wt. VSI. 1683. Chalk.

Sh. Gr. Gy.

LS. wt. 1/4. cool. Si. Chalk. P. VSI. 1683. VSI. A  
No Flour. No odor.

LS. Gy. Dna

LS. Tr. Si. A

**B/KC 3547-1662**

Sh. Gy.

LS. DE. R. Si. Foss. P. VSI. 1683. VSI. A  
No Flour. No odor.

Sh. Rd. Gy.

LS. DE. R. Foss. cool. Si. Chalk. P. VSI. 1683. VSI. A  
No Flour. No odor.

LS. wt. R. wt. R. Sh.

**VIOLA 3582-1697**

Δ. Wt. Yellow Fresh Cut

Δ. Wt. Fresh Cut w/ Wreath Edged  
w/ Lt. Bl. Sh. FSC

Δ. Lt. Bl. Trip. Col. Pin Pt. of Lt. Bl. Sat. Sh.  
GSSG. FSC. F. Flour. F. Odor.

**SIMPSON 3621-1736**

Sh. Tany.

Sh. Lt. Blue, Tg, Lt. Yellow Col.

Sh. Ch. M. G. Col. Rd. Sub. Bl. w/ Sh. Foss.  
F. P. Trip. of R. Sat. Sh. FSC. F. Flour. F. Odor.

Sh. Tg.

Sh. Tg. Lt. Yellow-Gar.

**ARBUCKLE 3682-1797**

Sh. Lt. Blue.

Rd. Tr. Bl. Fresh Sp. Col. Xhd  
R. Sat. Sh. FSC. FSC. F. Flour. F. Odor.

Rd. wt. M. Col. Xhd. F. Col. Xhd. Lt. Bl. Sat. Sh.  
FSC. FSC. F. Flour. F. Odor.

Sh. Lt. Blue-Tg.

Rd. Bl. M. Xhd. Col. Xhd.  
R. DE. R. Sat. Sh. FSC. FSC. F. Flour. F. Odor.

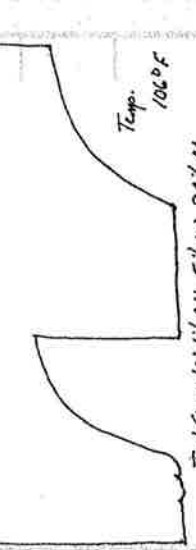
Rd. Lt. Gy. Fresh. One. of. Dna. of  
R. DE. R. Sat. Sh. FSC. FSC. F. Flour. F. Odor.

**DST (2) 3450-3530**

1<sup>st</sup> OPEN: Blow built to 5 1/2"  
2<sup>nd</sup> OPEN: " " " 5 1/2"  
30. 45-45-60

Rec. 82' G.I.P.  
72' 500MM (27.6.57.0.937.0.1)

FP: 31-59 53-77 \*  
SIP: 808-733 \*



Tool Sample: 1' Oil. 57. W. 94% M

Temp. 106.0 F

VIS: 52 WT: 9.2  
WL: 10.2 CAL: 7000

3500

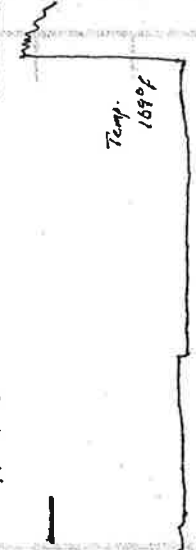
**DST (3)**

**DST (3) 3545-3620**

1<sup>st</sup> OPEN: Blow built to 5 1/2 inches  
2<sup>nd</sup> OPEN: " " " 5"  
30. 45-45-60

Rec. 102' G.I.P.  
22' Mud

FP: 32-31 35-33 \*  
SIP: 116-751 \*



Tool Sample: 100% Mud

Temp. 109.9 F

3600

**DST (4)**

**DST (4) 3617-3660**

1<sup>st</sup> OPEN: Blow built to 1/2"  
2<sup>nd</sup> OPEN: No Blow  
30. 30-30-30

Rec. 6' Mud

FP: 28-52 31-42 \*  
SIP: 72-56 \*



Tool Sample: 100% Mud

Temp. 105.0 F

VIS: 55 WT: 9.4  
WL: 9.6 CAL: 8000

3600

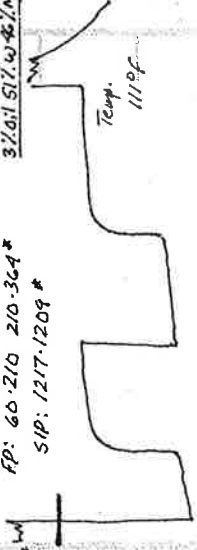
**DST (5)**

**DST (5) 3614-3684**

1<sup>st</sup> OPEN: Bottom bucket 5 min.  
2<sup>nd</sup> OPEN: " " 9 min.  
30. 45-45-60

Rec. 62' G.I.P.  
124' 16500MM (401.6.57.01.57.0.501.0.1)  
558' 56000MM (107.6.137.01.57.0.721.0.1)  
62' 5000MM (57.01.457.0.507.0.1)

FP: 60-210 210-364 \*  
SIP: 1217-1209 \*



Tool Sample: 37.01 57.0. 46.2% M

Temp. 111.9 F

VIS: 49 WT: 9.4  
WL: 15 CAL: 10,000

3700

56. 4 Blue-17.

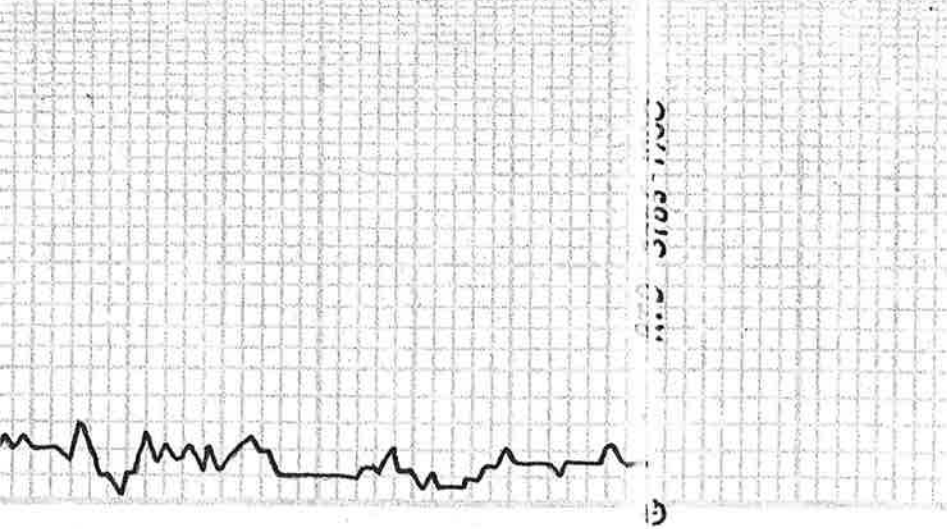
Dol. Bl. Mchx Gd xh p  
Bl. DE Bl. Sal. SN. FSG FSED F. Flour Gd color

Dol. Bl. G. Fresh Dc. gd. xh p  
Bl. DE Bl. Sal. SN. GUSTO, BROADEN OI. SSG  
F. Flour Gd color

Dol. Bl. G. Mchx F. Gd xh p  
Bl. DE Bl. Sal. SN. Sphl SH. SSG SSES Dull Flour  
Gd color

Dol. wt. v. Fresh sue.

Dol. wt. 41g. Fresh w/ 40% DE Bl. SN.



3800

