

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 * WICHITA, KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.
 LEASE # 1-7 CASEY
 FIELD WILDCAT
 LOCATION 1783' FSL & 330' FWL
 SEC 7 TWP 2s RGE 37w
 COUNTY CHEYENNE STATE KANSAS
 CONTRACTOR L. D. DRILLING, INC.
 SPUD 5-4-15 COMP 5-22-15
 RTD 4951 LTD 4949
 MUD LAP 3639 TYPE MUD CHEMICAL

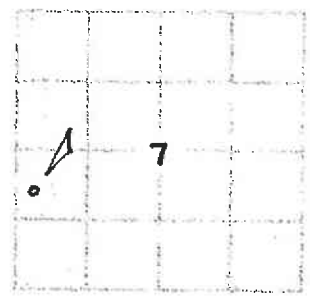
ELEVATIONS
 KB: 3251
 DP
 GL 3246 *
 Measurements Are All From 3251 KB

CASINGS
 SURFACE 8 5/8" @ 309'
 PRODUCTION 5 1/2" @

ELECTRICAL SURVEYS
 DUAL IND, DENS-N., MICRO

SAMPLES SAVED FROM 3900 TO 4951
 DRILLING TIME NOT FROM 3700 TO 4951
 SAMPLES EXAMINED FROM 3900 TO 4951
 GEOLOGICAL SUPERVISION FROM 3900 TO 4951
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	3188 + 63	3180 + 71
B/ANK.	3216 + 35	3218 + 33
TOPEKA	3990 - 739	3997 - 746
HEEDNER	4165 - 914	4170 - 919
LANSING	4207 - 966	4213 - 962
B/KC	4492 - 1241	4486 - 1235
PAWNEE	4614 - 1363	4624 - 1373
FORT SCOTT	4650 - 1399	4650 - 1399
CHEROKEE	4667 - 1416	4672 - 1421
MISSISSIPPI	NR	4944 - 1693



REMARKS
 5-4-15 SPUD
 5-5 @ 391'
 Down Weather (Rain)
 5-13 @ 391'
 5-14 @ 1850'
 5-15 @ 3000'
 5-16 @ 3700'
 5-17 @ 4170'
 5-18 @ 4300'
 5-19 @ 4440'
 5-20 @ 4725'
 5-21 @ 4951'

API 15-023-21427

* : CAT DRIVER LOWERED SURFACE ELEVATION BY 2' 3248 (L.C. 2) = 3246

LEGEND

- Anhydrite
- Salt
- Sandstone
- Shale
- Carbonate
- Limestone
- Oil shale
- Gypsum
- Dolomite

DRILLING TIME IN MINUTES PER FOOT
 Part of Production Intermittent

DEPTH
 3100

REMARKS

SAMPLE DESCRIPTIONS

LITHOLOGY

ANHYDRITE 3180+71

3200

3150

3100

3000

1900

B/ANK. 3218 + 33

Vis. 41
WT. 87
V.L. 7.2
CAL. 5000

Samples are logged

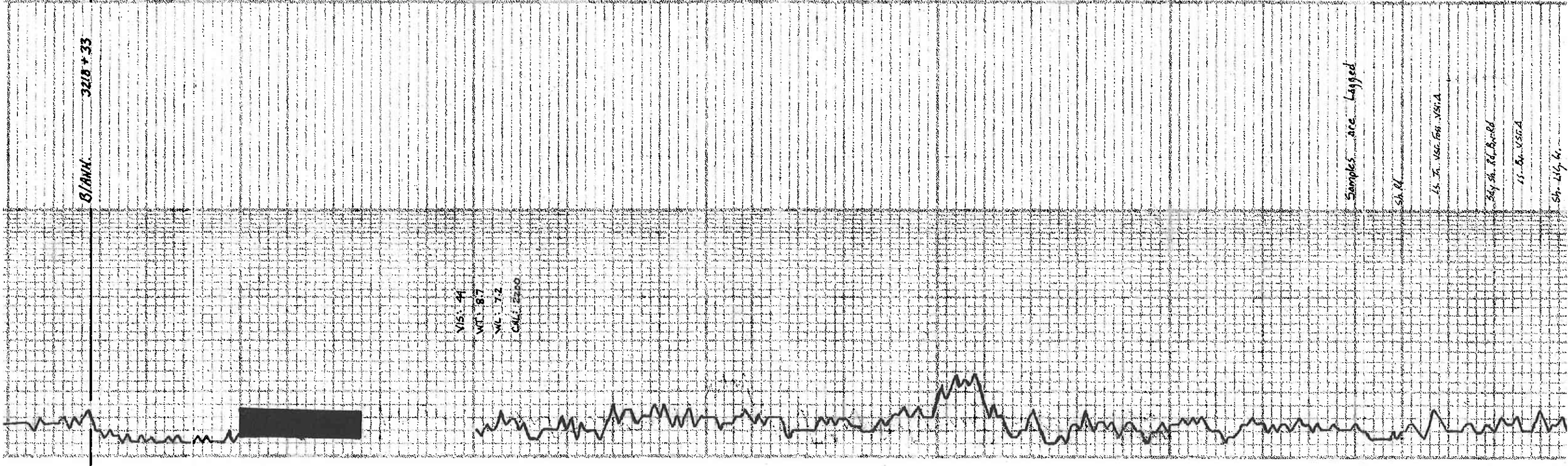
Sh. 11

15. J. sec. 108. 1511A

Sh. 11. Red. 1011

15. 60. 1511A

Sh. 11. 61.



ls. wt. 16 gr. V.Si. Calc. Pk. 4
Blk. Si. 13.7% - 14.5% N. My. Blk. N. Floor
No. 100
(3965)

Sh. G.

ls. 14 gr. V.Si. Foss.

ls. 14 gr. V.Si. Foss.

Sh. R. 14 gr. G.

TOPEKA 3927-716

ls. wt. 14 gr. V.Si. Foss. Priv. 10
BLE. det. Sil. 5.26%

ls. 14 gr. V.Si. Foss. Sil. 3

Sh. R.

ls. wt. Foss. det. V.Si. Calc.

Sh. R.

ls. G. Det.

Sh. R. 14 gr. Sil. 14.5% Blk.

Sh. R.

ls. wt. Foss. det. Sil. Calc.

ls. wt. 14 gr. V.Si. Calc.

Sh. R. 14 Purple

Sh. R. 14 gr.

Sh. R. 14 gr. G.

ls. wt. 14 gr. Foss. Sil. Foss. V.Si. Calc. Pk. 4
Blk. Si. 13.7% - 14.5% N. My. Blk. N. Floor
No. 100
(3965)

ls. 14 gr. V.Si. 2

HEEBNER 4170-919

Sh. R. 14 gr. Blk.

ls. 14 gr. V.Si. Foss.

Sh. R. 14 gr. Blk.

Sh. R. 14 gr. Blk.

Sh. R.

DST. (1) 4169-9300

1st. Open: Bottom Bucket 7 MIN.

2nd. Open: " 4 8 "

30-45-45-60

Re. 600' GP.
120' CGO

290' M600 (257' M, 257' G, 50' O.A.)

TR: 660'

LANSING 4213-962

ls. wt. 14 gr. V.Si. Foss. Priv. 10
BLE. det. Sil. 5.26%

ls. 14 gr. V.Si. Foss. Sil. 3

Sh. R.

ls. wt. Foss. det. V.Si. Calc.

Sh. R. 14 Purple

Sh. R. 14 Purple - Silly - Silly

Sh. R.

4000

4100

4200

O READ

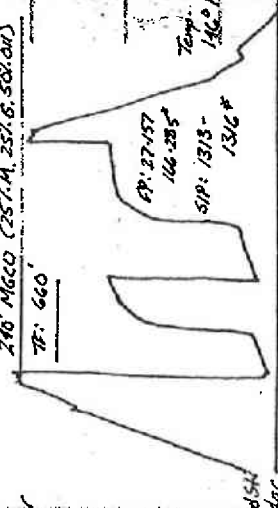
DST (1)

415.57

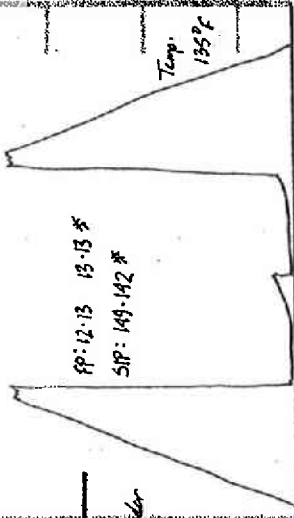
415.91

416.72

417.286



Rec. 10' Mud w/ oil spots



Sh. Bl. G.
Sh. Bl. G.
PAWNEE 4624-1373
Ls. Gy. wh. Foss. w/ R. U. G. Dk. Red. Sh.
580' 7' 6" 1/2
Red. Foss. Member
(4640)

LS. Tn. G. Dm.
LABETE 465-192
Sh. Bl. G. (4668)

FORT SCOT 4650-1391
Ls. Tn. G. - V. sh. Foss. Dns.
Ls. - 11 G. - Sh. Foss. Sh. A

CHEROKEE 4672-1421
Sh. G. G.
Ls. - 11 G. - Dm.
Ls. - Tn. G. - Sh. Foss. - Sh. Chilly

MISSISSIPPI 4944-1693
Sh. G. G.
Ls. - 11 G. - Sh. Foss. - Sh. Chilly
Sh. Bl. G.
Ls. - 11 G. - Sh. Foss. - Sh. A

Sh. G. G.
Ls. - 11 G. - Sh. Foss. - Sh. Chilly
Sh. Bl. G.
Ls. - 11 G. - Sh. Foss. - Sh. A

Sh. G. G.
Ls. - 11 G. - Sh. Foss. - Sh. Chilly
Sh. Bl. G.
Ls. - 11 G. - Sh. Foss. - Sh. A

Sh. G. G.
Ls. - 11 G. - Sh. Foss. - Sh. Chilly
Sh. Bl. G.
Ls. - 11 G. - Sh. Foss. - Sh. A

Sh. G. G.
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Sh. G. G.
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Ls. - 11 G. - Sh. Foss. - Sh. A

4700

4800

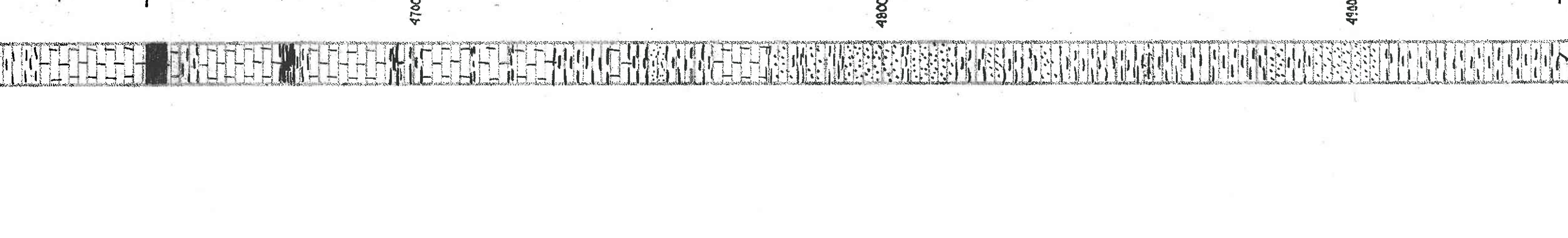
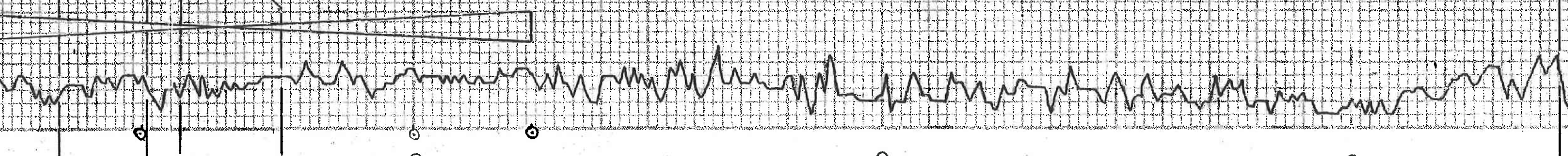
4900

WT 193

WT 180

WT 4000

✓ PAWNEE LOG
LABETE LOG
FORT SCOT LOG
✓ CHEROKEE LOG



MISSISSIPPI 4944-1693

Sh. DE G.

Sh. DE G.

MISSISSIPPI 4949-1693

DE. DE G. - East. 500.

RTO 4951-1700

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