

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

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GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **L. D. DRILLING, INC.**

LEASE: *** I-13 SAMPSON TRUST**

FIELD: **WILDCAT**

LOCATION: **1450' FNL & 1410' FEL**

SEC: **13** TWP: **18s** RGE: **23w**

COUNTY: **Ness** STATE: **KANSAS**

CONTRACTOR: **L. D. DRILLING, INC.**

SPUD: **9-3-19** COMP: **9-12-19**

RTO: **4450** LTD: **4451**

MUD UR: **3405** TYPE MUD: **CHEMICAL**

ELEVATIONS

KB: **2300**

DF: _____

GL: **2295**

Measurements Are From **2300 KB**

CASING SURFACE: **8 1/8" @ 329'**

PRODUCTION: _____

ELECTRICAL SURVEY: **DUAL IND. DENS-N., MICRO**

SAMPLES SAVED FROM **3500** TO **4450**

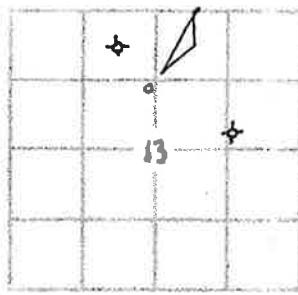
DRILLING TIME KEPT FROM **3300** TO **4450**

SAMPLES EXAMINED FROM **3500** TO **4450**

GEOLOGICAL SUPERVISION FROM **3700** TO **4450**

GEOLOGIST ON WELL: **KIM B. SHOEMAKER**

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	1522+778	1526+774
B/ANK.	1560+740	1564+736
HEEBNER	3679-1379	3677-1377
LANSING	3722-1422	3720-1420
B/KC.	4046-1746	4045-1745
PAWNEE	4120-1820	4117-1817
FORT SCOTT	4216-1916	4212-1912
CHEROKEE	4238-1938	4235-1935
MISS. OSAGE	4316-2016	4314-2014



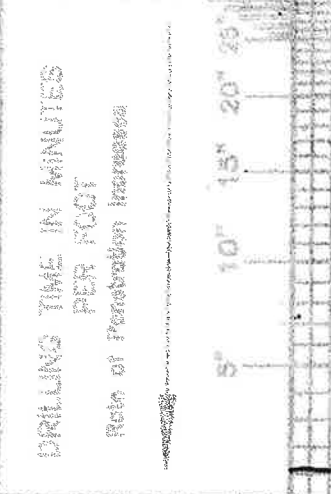
REMARKS

9-3-19 SPUD
9-4 @ 334'
9-5 @ 1660'
9-6 @ 2485'
9-7 @ 2995'
9-8 @ 3431'
9-9 @ 3925'
9-10 @ 4250'
9-11 @ 4319'
9-12 @ 4450'

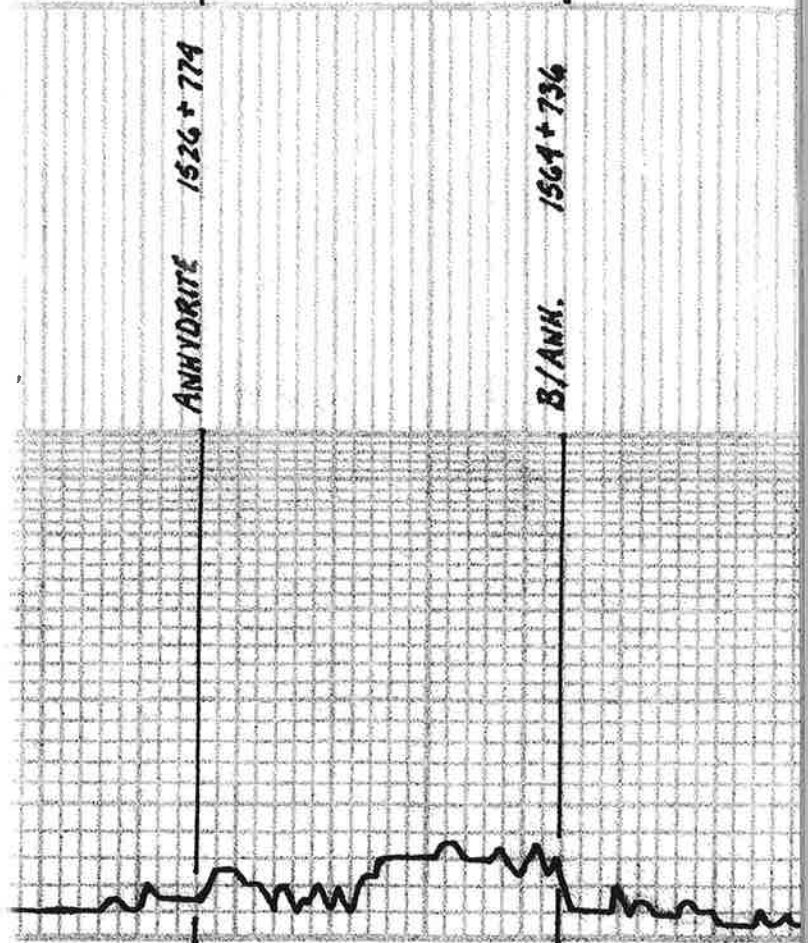
API: 15-135-26077

LEGEND

- Anhydrite
- Salt
- Sandstone
- Shale
- Dark sh.
- Urnstone
- Ool. Lime
- Chert
- Dolomite



LITHOLOGY



REMARKS

1600

3300

3400

3500

VIS: 60 WT: 213
ML: 72 CW: 4600

Samples are Lagged

LS. 11g. VSKA

SA 02g.

LS. 11. 15g. For St. Chilly

LS. 7. 6g. For St. Chilly

LS. 7. St. Sec. For St. Dubowitz



11. W. 9th St. Park St. Dulawishi

Sh. G.G.

12. W. 9th St. A

13. W. 1st. For. Glorin

14. W. 1st. For.

15. To. W. 1st. For. Glorin

16. W. 1st. For.

17. W. 1st. For. Glorin. St. d. l. y.

HEEBNER
Sh. B. L. C. G.

3677-1377

Sh. L. G.

18. W. 1st. For. St. A

19. To. W. 1st. For. St. A

Sh. L. G.

LANSING 3720-1420

20. W. 1st. For. St. A

Sh. L. G.

21. G. W. V. St. For.

Sh. L. G.

22. W. 1st. For. St. d. l. y.

Sh. L. G.

23. W. 1st. For. St. A

24. W. 1st. For. St. A

Sh. L. G.

25. W. 1st. For. St. A

Sh. L. G.

26. W. 1st. For. St. A

27. W. 1st. For. St. A

Sh. L. G.

Sh. L. G.

28. W. 1st. For. St. A

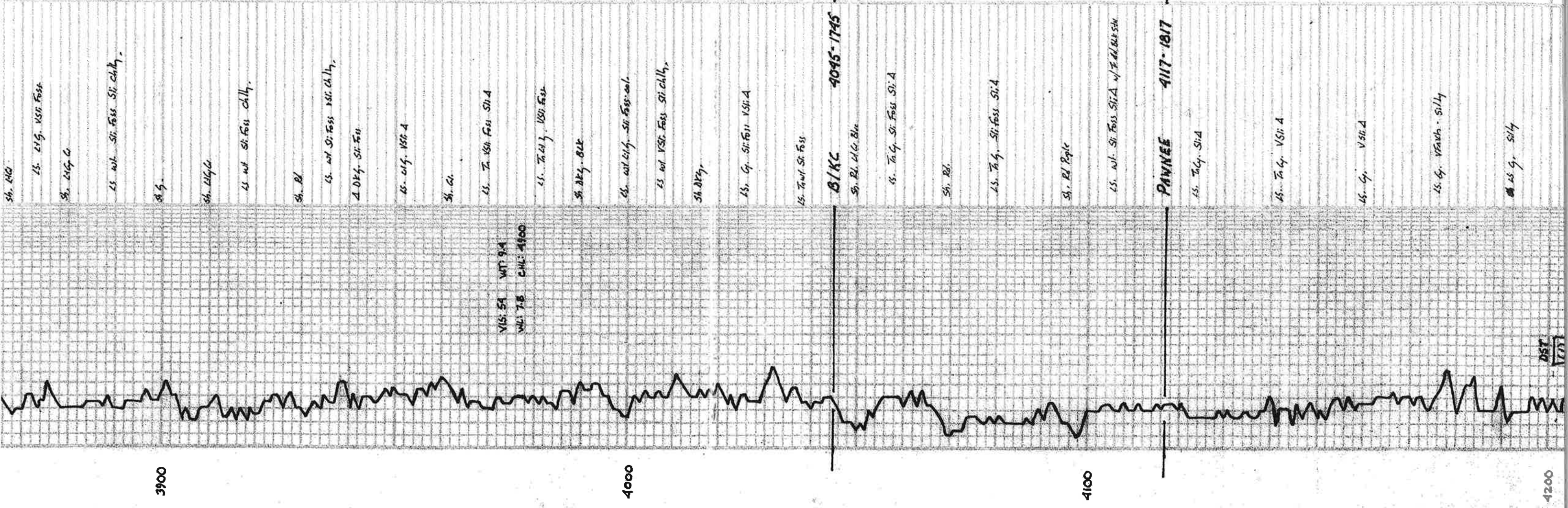
Sh. L. G.

29. W. 1st. For. St. A

3600

3700

3800



Sh. Sil.

LS. Ltg. VSD Foss.

Sh. Ltg. C.

LS. wt. Sil. Foss. Sil. chly.

Sh. Sil.

Sh. Ltg. C.

LS. wt. Sil. Foss. chly.

Sh. Sil.

LS. wt. Sil. Foss. VSD. chly.

Δ DEP. Sil. Foss.

LS. Ltg. VSD. A

Sh. Sil.

LS. T. VSD. Foss. Sil. A

LS. T. Ltg. VSD. Foss.

Sh. DEP. BLK

LS. wt. Ltg. Sil. Foss. sil.

LS. wt. VSD. Foss. Sil. chly.

Sh. DEP.

LS. G. Sil. Foss. VSD. A

LS. T. wt. Sil. Foss.

B/KC 4045-1745

Sh. BL. Ltg. BLK

LS. T. G. Sil. Foss. Sil. A

Sh. Sil.

LS. T. G. Sil. Foss. Sil. A

Sh. BL. Purple

LS. wt. Sil. Foss. Sil. A w/ F. BL. BLK. SW

PAYNEE 4117-1817

LS. T. G. Sil. A

LS. T. G. VSD. A

LS. G. VSD. A

LS. G. V. Fath. Silly

LS. G. Silly

3900

4000

4100

4200

DST

DST (1) 4201-4250
1 stop: Surface show died 28 min.

DST (1) 4201-4250

1st open: Surface Blow did 28 min.
2nd open: No Blow

30-30-30-30

Rec. 5' Mud

FP: 11-13 13-15*

SIP: 35-23*

51. Blue Clay.
FORT SCOT 4212-4212

LS. Fr. VSI. Foss. Sil. A

LS. wt. Sil. Foss. Clay.

LS. with sil. foss. VSI. Clay. P. Frag. Fr. Frag. (4210, 50)
VSI. Sil. Foss. Sil. A

CHEROKEE 4235-4235

Sh. Clay.

Sh. Lt. Blue-Gy.

LS. Clay. Sil. A

LS. G. Fr. VSI. Foss. VSI. Clastic

Sh. Clay.

LS. Lt. Fossiliferous Sil. A

Sh. Yellow-Gy.

LS. wt. VSI. Foss. T. Bladed Sil.

Sh. Lt. Blue-Gy.

Sh. Lt. Blue-Yellow

Sh. Blue-Gy.

MISSISSIPPI 'U' 4305-2005

LS. Clay. wt. VSI. Foss. Sil. A

MISS. OSAGE 4314-2014

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

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LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

LS. wt. Fr. Clay. Sil. A

DST (1)

VIS: 59 WT: 9.2

WT: 7.6 CUB: 5100

DST (2)

VIS: 50 WT: 9.2

WT: 7.2 CUB: 5100

DST (3)

RTD 4450-2150

4200

4300

4400

Temp 116°F



DST (2) 4258-4319

1st open: 1/2" Blow

2nd open: Blow did 4 1/2 min.

30-30-30-30

Rec. 10' Mud

FP: 12-14 14-16*

SIP: 765-653*

Temp 119°F



DST (3) 4317-4327

1st open: Built to Soliton Bucket 22 1/2 min. 28: Min

2nd open: " " " 30 1/2 " 28: " 28: " 28: "

30-45-45-60

Rec. 80' G.I.P.

295' 56MWD

60' 9500MWD

TT: 355'

FP: 23-82 84-158*

SIP: 1332-1327*

Temp 127°F

