

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

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GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.

LEASE # 1-1 IVAN

FIELD WILDCAT

LOCATION 834' ENL & 581' FEL

SEC 1 TWSP 23s RGE 14w

COUNTY STAFFORD STATE KANSAS

CONTRACTOR PETROMARK DRILLING RIG 2

SPUD 5-13-14 COMP 5-23-14

RTD 3942 LTD 3940

MUD UP 2998 TYPE MUD CHEMICAL

ELEVATIONS

KB 1930

DF _____

GL 1925

Measurements Are All From 1930 KB

CASING

SURFACE 8 5/8" @ 322'

PRODUCTION 4 1/2" @

ELECTRICAL SURVEYS
DUAL IND., DENS-N.

SAMPLES SAVED FROM 3200 TO 3940

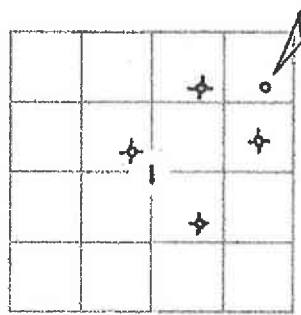
DRILLING TIME KEPT FROM 3100 TO 3942

SAMPLES EXAMINED FROM 3200 TO 3942

GEOLOGICAL SUPERVISION FROM 3400 TO 3942

GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	807 + 1123	807 + 1123
B/ ANH.	828 + 1102	829 + 1101
HEEBNER	3323 - 1393	3326 - 1396
BROWN LIME	3453 - 1523	3455 - 1525
LANSING	3473 - 1543	3475 - 1545
B/KC	3683 - 1753	3691 - 1761
VIOLA	3770 - 1840	3765 - 1835
SIMPSON	3810 - 1880	3812 - 1882
ARBUCKLE	3861 - 1931	3862 - 1932



API: 15-185-23864

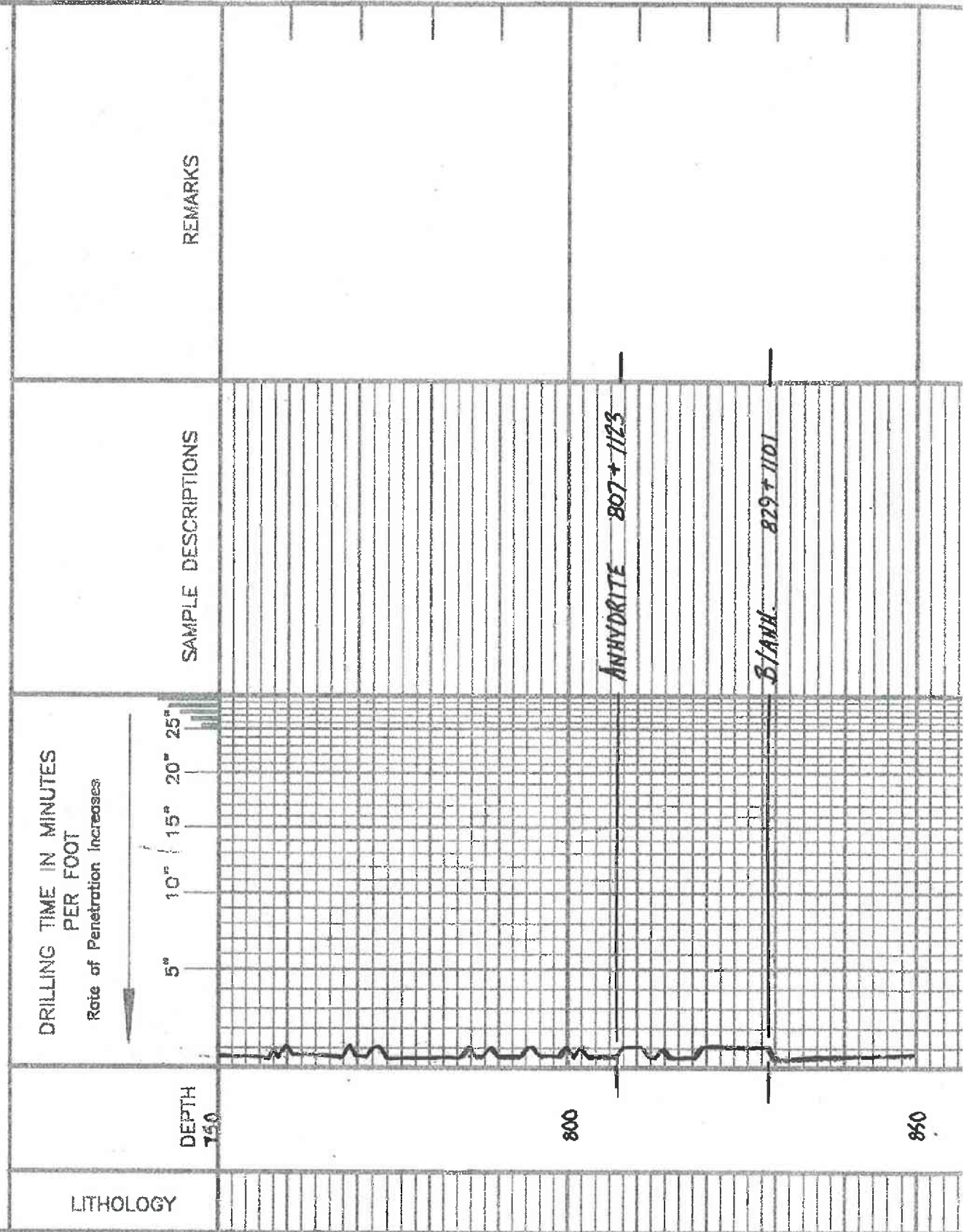
REMARKS

5-12-14 Moved In
5-13 SPUD
5-14 @ 762'
5-15 @ 2210'
5-16 @ 2982'
5-17 @ 2988'
5-18 @ 3238'
5-19 @ 3550'
5-20 @ 3610'
5-21 @ 3742'
5-22 @ 3885'
5-23 @ 3940'

LEGEND

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

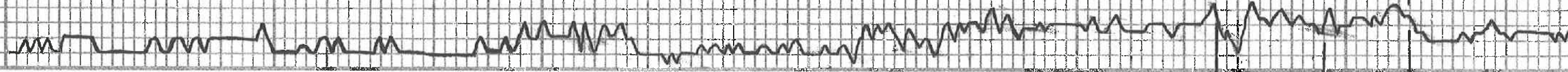
SHOE01-11



3100

3200

3300



Samples are tagged

Sh. 219.

43. 119. Sh. Pos. Si. Chly.

Sh. DE-2-12

43. 70. 10. 10. 10. Sh. Chly.

43. 70. 10. 10. 10. Sh.

43. 70. 10. 10. 10. Sh.

43. 10. 10. 10. 10.

A. 119.

43. 70. 10. 10. 10. Sh. Chly.

43. 70. 10. 10. 10. Sh. Pos.

HEEBNER 3326-1396

Sh. 219. 43. 70. 10. 10. 10.

Sh. 219.

43. 10. 10. 10. 10. Sh. Chly.

43. 70. 10. 10. 10. Sh. Pos. 7. 10. 10. 10. 10. 10. 10. 10. 10. 10.

Sh. 219. 43. 70. 10. 10. 10.

Sh. 219. 43. 70. 10. 10. 10.

3400

3500

3600

3700

Sh. gy. clay - silty

Sh. gy. clay

BROWN LIME 3455-1525

45. Bl. VSR. Foss.

Sh. clay

LANSING 3475-1545

45. Bl. VSR. Foss.

45. T. gy. VSR. Foss.

45. Bl. VSR. Foss. Sh. clay

45. T. gy. Sh. clay

45. T. gy. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. gy. Sh. Foss. silty

Sh. clay

45. Bl. Sh. Foss.

45. gy. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. Bl. Sh. Foss. silty

45. Bl. clay. silty. Sh. clay.

45. Bl. clay

45. gy. T. clay

Sh. gy.

45. T. gy. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. T. clay

45. Bl. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. T. gy. VSR. Foss. silty

45. T. gy. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. Bl. clay. VSR. Foss.

Sh. clay

45. T. gy. Sh. clay. Foss. Sh. clay. Dull. Frag. F. D. 26.

45. Bl. clay. Sh. clay

45. T. gy. Sh. clay. Foss.

B/KC 3691-1761

45. T. gy. silty

Sh. clay

45. gy. VSR. Foss.

Sh. clay. Bl.

45. Bl. clay. Sh. clay. Foss.

Sh. clay. Bl.

DST (1)

DST (2)

DST (3)

VSR. Foss.

DST (1) 3494-3550

1st OPEN: 14" Blow
2nd OPEN: No "

30. 30. 30. 30. 30

Rec. 10 WM
(22' LW. 20' AM)

FP: 10' 15" 20' 25'

SIP: 891.737'

PH: 10
RW: 3
CWC: 3/100
Temp: 101°F

DST (2) 3589-3610

1st OPEN: 3 1/4" Blow
2nd OPEN: Surface Blow died 17 min.
30. 30. 30. 30. 30

Rec. 20 WM

FP: 12.19
29.26'

SIP: 857.344'

PH: 10
RW: 35 @ 20°F
CWC: 180,000
Temp: 108°F

DST (3) 3606-3660

1st OPEN: 500lb bucket 21 min.
2nd OPEN: " " 20.5 "
30. 45. 45. 60

Rec. 372' G.I.P.

31' HOCM (10' CM)

31' HOCM (20' CM)

42' HOCM (18' G)

116' VSOBGMV (37' G)

TF: 240'

FP: 14.71

75.100'

SIP: 1136.119'

PH: 9
RW: 17 @ 82°F
CWC: 320,000 ?
Temp: 105°F

Tool Sample: 12' 10". 63' LW. 25' M.V.

NIS: 991

WT: 90

WE: 12.6

CWC: 10,000

NIS: 95

WT: 90

WE: 12.6

CWC: 15,000

ls. Fr. Sl. Bass 1551 Chb.

Sh. Bl. Nucle

ls. Fr. SIA

Sh. Fr. G.

YIOLA 3765-1835

A. orange

A. wh. lily Frak. Col.

A. Yellow

A. wh. Fr. Frak. Col. w/ DE. Bl. Sp. M. S. S. S. S. P. No. 100

A. wh. R. Top. Gd. Fr. Frak. Col. Bl. S. S. S. S. P. No. 100

A. wh. wh. Frak. Col. w/ R. S. S. S. P. No. 100

SIMPSON 3812-1882

Sh. Blue Fr.

Sh. Blue Fr. S. S. S. P. No. 100

S. S. S. P. No. 100

Sh. Blue Fr.

Sh. Fr. Frak. Col. w/ R. S. S. S. P. No. 100

ARBUCKLE 3862-1932

Dol. Fr. Frak. Col.

Dol. Fr. Frak. Col. w/ R. S. S. S. P. No. 100

Dol. wh. lily Frak. Col.

Dol. Fr. Frak. Col. w/ R. S. S. S. P. No. 100

Dol. Fr. Frak. Col.

Dol. Fr. Frak. Col.

Dol. Fr. Frak. Col.

Dol. Fr. Frak. Col.

RTD 3992-2012

VIS: 49
WT: 90
MC: 160
CHE: 15,800

DST (4)

VIS: 49
WT: 90
MC: 168
CHE: 15,900

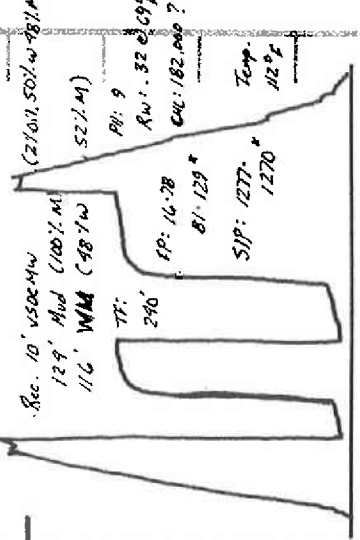
3800

3900

DST (4) 3800-3868

1st OPEN: Blow 60:11 to 7"
2nd OPEN: " " 9"

30.95.95.60



Rec. 10' V500MM
129' Mud (100% M)
170' W/M (98' W/M)
TT: 240'
FP: 16.78
81-129*
SIP: 1277*
1270*
709
1270*
1270*
88' None
58' "