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GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY: **RAYMOND OIL COMPANY, INC.**

WELL: * 2 **FRUSNER**

LOG: **593' FNL & 1233' FEL**

SEC: **9** HSE: **216** HGT: **23W**

COUNTY: **Hobbsman** STATE: **Kansas**

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

SPUD: **7-22-19** OVER: **8-1-19**

LOG: **4645** CHEMICAL: **4646**

LOG: **3500** CHEMICAL

SAMPLES SAVED FROM: **3400 TO 4645**

DRILLING TIME KEPT FROM: **3400 TO 4645**

SAMPLES EXAMINED FROM: **3400 TO 4645**

GEOLOGICAL SUPERVISION FROM: **3700 TO 4645**

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

ELEVATIONS

KB: **2293**

CA: **2288**

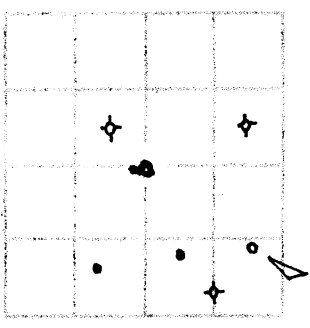
MEASUREMENTS ARE ALL FROM: **2293 KB**

CASING: **8 5/8" @ 260'**
PRODUCTION: **5 1/2" @**
BEFORE 9 FEET

DUAL END, DEN-S-N, W/2 @ SONIC

FORMATION TOPS LOG SAMPLES

| | | |
|-------------|-------------|-------------|
| AMMIDITE | 1494 + 799 | 1493 + 800 |
| HEBNER | 3801 - 1508 | 3801 - 1508 |
| LANSING | 3854 - 1561 | 3854 - 1561 |
| GLK | 4192 - 1899 | 4191 - 1898 |
| MARMATON | 4232 - 1939 | 4231 - 1938 |
| PAWNE | 4313 - 2220 | 4309 - 2016 |
| FORT SCOT | 4380 - 2587 | 4378 - 2085 |
| CHEVOKEE | 4446 - 2113 | 4403 - 2110 |
| MISSISSIPPI | 4480 - 2187 | 4484 - 2191 |

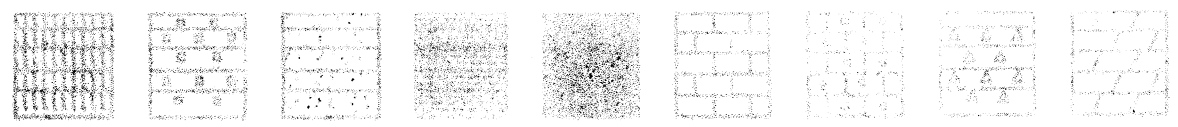


REMARKS

7-22-19 SPUD
7-23 @ 263'
7-24 @ 1570'
7-25 @ 2460'
7-26 @ 2935'
7-27 @ 3407'
7-28 @ 3960'
7-29 @ 4314'
7-30 @ 4478'
7-31 @ 4478'
8-1 @ 4645'

API: 15-083-21970

LEGEND



LITHOLOGY

DRILLING TIME IN MINUTES
PER FOOT
Rate of Penetration increases



DEPTH
1450

5" 10" 15" 20" 25"

SAMPLE DESCRIPTIONS

REMARKS

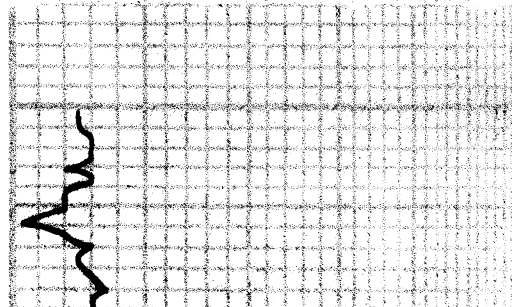
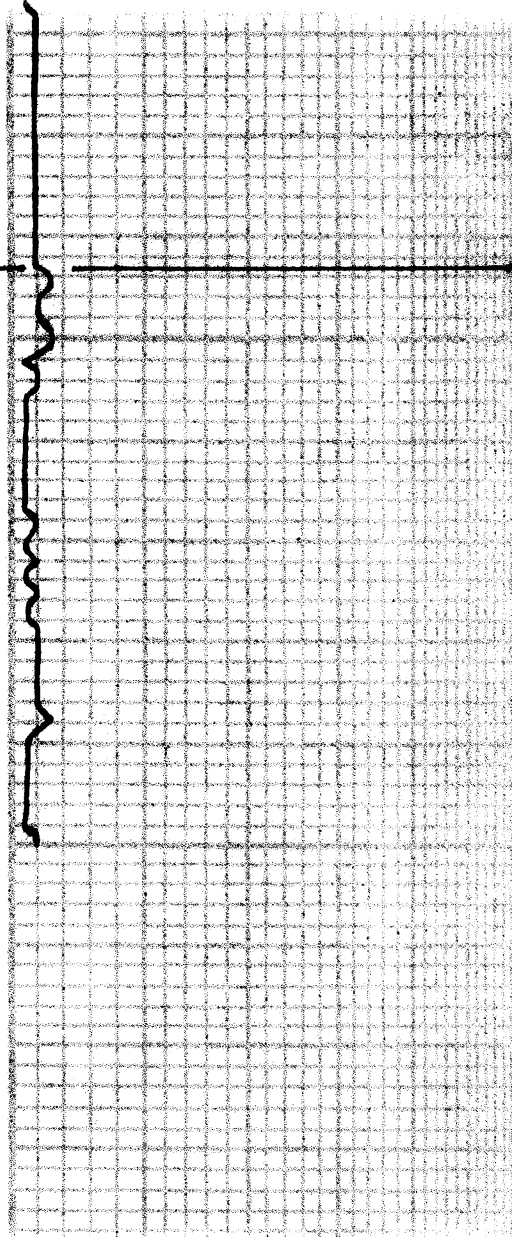
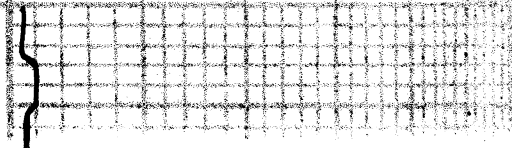
1500

ANHYDRITE 1493 + 800

1550

3400

Samples are tagged
15. Lt Gy. Sh. Foss.



Sh. Lt Gy. Silty. Sdy

Ls. M. Sil Foss. vsli A

Ls. Ta Gy. Sil Foss.

Ls. wt Ta Foss. Calcitic

Sh. Lt Gy.

Ls. wt. Foss. Calcitic

Ls. wt Lt Gy. Foss. vsli chly.

Ls. wt Lt Gy. ool. Sil Foss. Calcitic

Sh. Pl.

Ls. Ta Lt Gy. Sil Foss.

3500

3600

3700

ls wt. Spool.ool. chly.

LS. To wt. Sl. Foss. Foss. Sl. A

Sb. H. G. G. G.

LS. G. V. Sl. Foss.

Sh. D. G. B. L. L.

Sh. L. G. G.

A. G. G.

LS. wt. G. G. Foss.

LS. wt. Foss. Sl. chly.

LS. To Foss.ool.

LS. To Foss. Sl. Calcitic

LS. wt. Sl. Foss. Sl. A

LS. To wt. Sl. Foss. Foss. Sl. chly.

3800

HEBNER 3801-1608
Sb. Bk. Carb.

Sh. Lt. Blue G.

LS. To wt. Sl. Foss. Sl. chly.

LS. Ltg. vsli Foss.

Sh. Blue G.

LANSING 3854-1561

LS. To wt. Sl. Foss. Sl. A

Sh. Blue G.

A wt.

LS. wt. Sl. Foss. Sl. A

Sh. G. Silty

LS. To wt. Foss. Sl. A

A wt.

LS. wt. Sl. Foss. Sl. Chly.

Sh. Blk.

Sh. Ltg.

LS. Ltg. vsli Foss. Sl. A

LS. To wt. Foss. Calcitic

Sh. Rd

LS. wt. Ltg. Foss. wt. vsli Chly.

LS. wt. Sl. Foss. Sl. A

A. I. 12.

LS. Ltg. Sl. Foss. Sl. Chly.

MUNCIE CREEK 4024-1731

Sh. Blk. BK G.

LS. Ltg. vsli Foss.

Sh. Ltg. bk.

3900

4000

VIS: 37 WT: 0.8
WL: 2.8 CW: 4600

Auto Driller

LS. wt. Ltg. sh. Foss vsli.A

LS. To G. vsli.A

sh. G

sh. Lt. To G.

LS. To sh. Foss sh.A

sh. Ltg.

Δ wt

LS. To wt. vsli.Foss vsli.A

sh. Ltg.

LS. To G. sh. Foss cool.

LS. Bl. sh. Foss

STARK 4121-1828
sh. BLE Carb.

sh. Ltg. G

LS. wt. G. sh. cool. Foss sh. Calcitic

LS. To wt. sh. Foss vsli.A

HUSNPUCKNEY 4156-1863
sh. BLE Carb.

LS. Ltg. Foss sh. Calcitic

LS. wt. chly.

LS. wt. sh. Foss Calcitic

B/KC 4191-1898

sh. Ltg. G
A Bl.

LS. To Bl. sh.A

sh. Lt. Bluey Silty

LS. G. sh.A vsli.Foss

sh. Lt. Bluey Silty

MARMATON 4231-1938

LS. To Ltg. vsli.Foss sh.A

sh. Rd
11.1 G-11

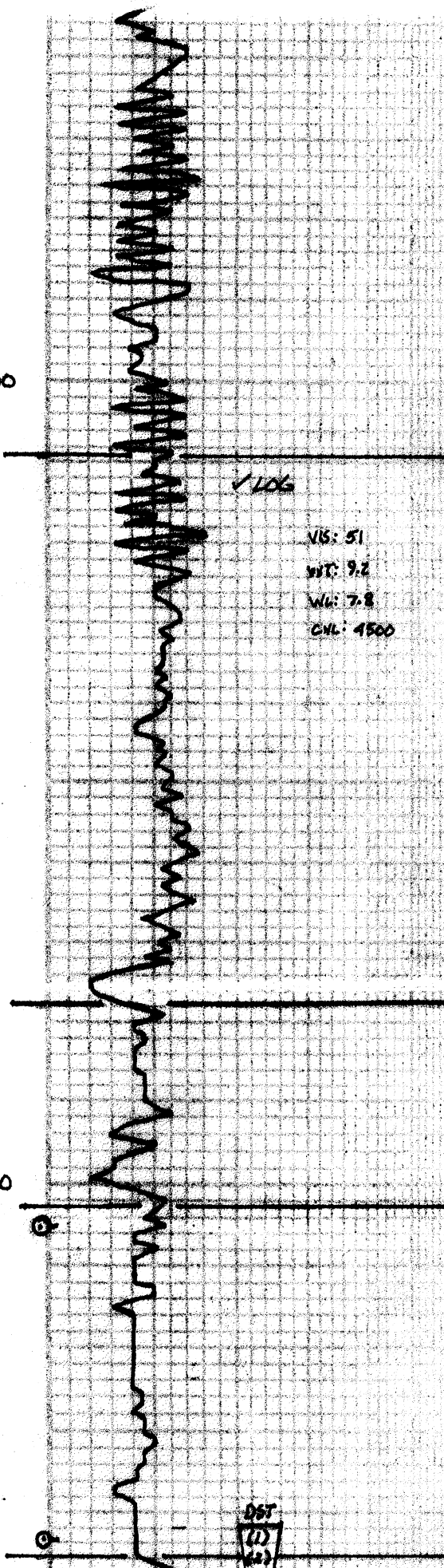
4100

4200

Auto Driller Down.



4300



Sh. Rd. G.
 LS. Ltg. VSh. Foss.
 LS. Ta Ltg. Slid.
 LS. Ta Ltg. Slid. VSh. Foss.
 Sh. Ltg. G.
 LS. wt. Sh. Foss. Slid.
PAWNEE 4309 - 2016
 Sh. Dec.
 LS. G. VSh. A

VIS: 51
 WT: 9.2
 WU: 7.8
 CUL: 4500

Auto Driller Repaired.

LS. Ltg. G. VSh. A VSh. Foss.
 LS. G. Ltg. Silky
 LS. G. Dec. Silky
 Sh. Blk Carb.

4400

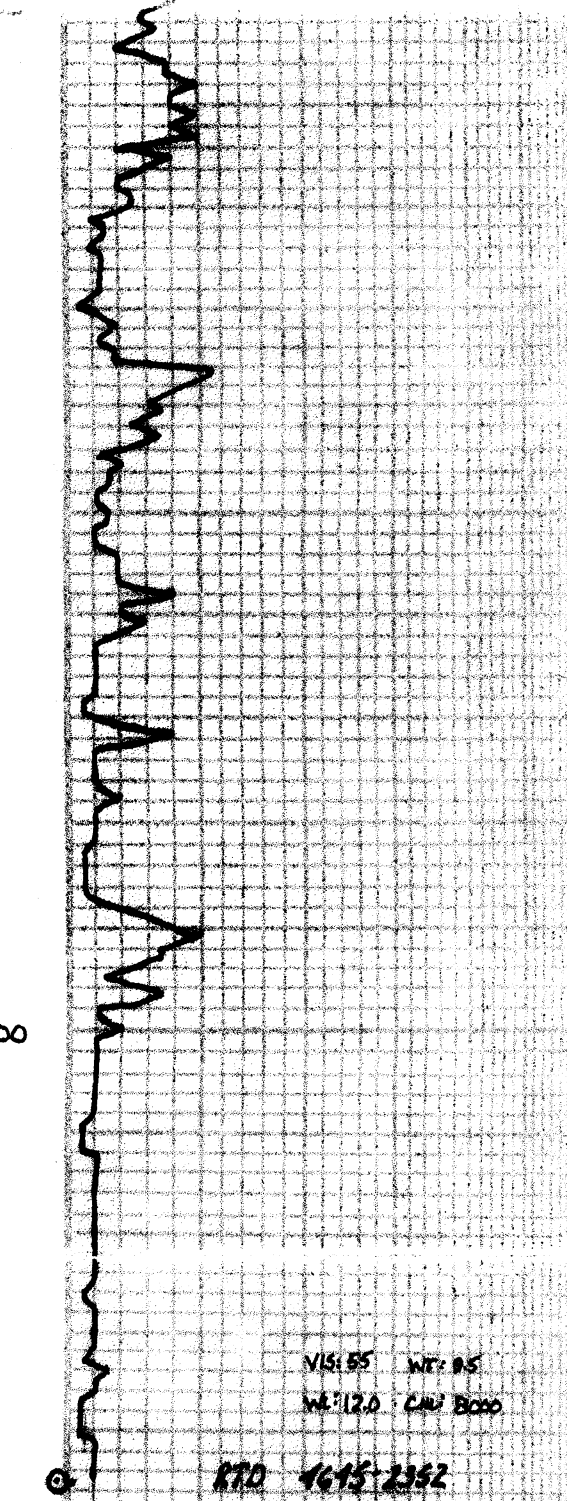
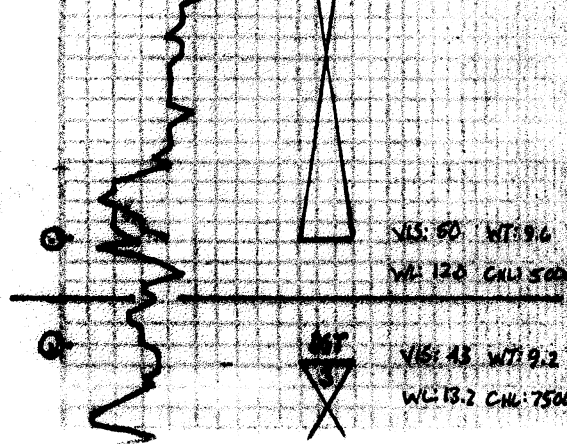
FORT SLOC 4378 - 2085
 LS. Ta G. Sh. Foss. Slid. VSh. Colectic
 LS. Ltg. Slid. VSh. Foss.
 LS. wt. Sh. Foss. VSh. Chly
 A G. wt.
CHAROKE 4403 - 2110
 Sh. Blk Carb.
 LS. B. G. VSh. Foss. Slid.
 A B. Sh. Foss.
 LS. G. Sh. Foss. VSh. A
 Sh. Dec.
 LS. B. Sh. Foss. Slid.
 Sh. Ltg.
 LS. Ta G. VSh. A
B/PENN 4446 - 2153
 Sh. Lt. Blue Ta VSh. Sdy

Pipe Strip.
 Bd 4498.7
 Strip 4497.74
 1.97 short

DST (1) 4442 - 4178
 Hit Bridge @ 3100'

DST (2) 4442 - 4178
 15' OPEN: Bottom bucket 5 min. 88: Bucket 22 min.
 88: Valve





2ND OPEN: 30-60-45-90

Sh. Yellow Gr. Blue.

Tool Sample
36' Cut
35' Oil
5' Wt
30' Mud

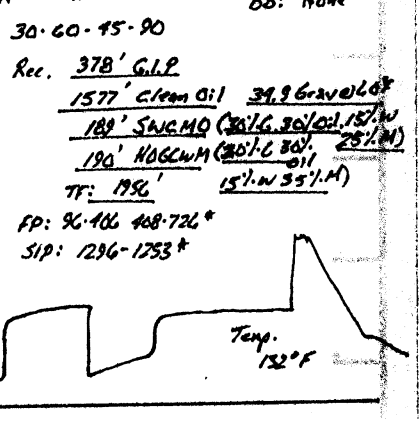
REC. 378' G.I.P.
1577' Clean Oil 39.9 Gravel 48'
180' SHWCW (30% G. 30% Oil 15% W)
190' HOGCWM (30% G. 30% Oil 25% W)
TR: 1956' 15' W 35' M)

Vis: 80 WT: 9.6
WL: 12.8 CW: 5000

Vis: 43 WT: 9.2
WL: 13.2 CW: 7500

Dol. T. Lig. St. Foss. V. Foss. S. P.

MISSISSIPPI 1984-2191



1ST OPEN: Slow built to 6" 88' None
" " " 8" 88: "

2ND OPEN: 30-60-45-75

Tool Sample Rec. 190' SHW (15' M 85' W)
CWL: 28,000

LS. T. St. Foss. Col. Foss.

Δ wt. V. St. Foss. St. A

FP: 25-56 58-103*

SIP: 1287-1242*

Temp 133°F

Δ wt. Lig.

Dol. T. Lig. F. Foss.

Δ wt.

Dol. Lig. V. Foss. S. C.

Δ wt. St. Foss.

LS. T. St. Foss. St. A

Dol. T. Lig. V. Foss. S. C. w/ T. Clave.

Δ wt. Lig. V. St. Foss.

Δ wt. Lig.

Δ wt. Lig. V. St. Foss.

Vis: 55 WT: 8.5
WL: 12.0 CW: 8000

270 1615-2352

