

15-179-20097-00-00

RECEIVED
STATE CORPORATION COMMISSION
MAY 27 1968
CONSERVATION DIVISION
Wichita, Kansas

GEOLOGICAL REPORT

MOSIER "A" #1
C NW SW Section 8-9S-28W
Sheridan County, Kansas

GEOLOGICAL REPORT

15-179-20097-00-00

Company: Imperial Oil Company

Farm: Mosier "A" No. 1

Contractor: Imperial Oil Company, Rig #2

Pool: Wildcat

Sheridan County, Kansas

C NW SW Sec. 8-9S-28W

Elevation: 2793 K.B.

Rotary Total Depth: 4158'

Rotary Completed: 5-15-68

Geological Data:

Samples were examined from 3400' to Rotary Total Depth. One foot drilling time was kept from 3100' to Rotary Total Depth. (Electric log information: No log run.)

Formation Tops

Sample Tops

| | |
|--------------------|--------------|
| Anhydrite | 2407 (≠ 386) |
| Base Anhydrite | 2442 (≠ 351) |
| Elmont | 3570 (- 777) |
| Howard | 3609 (- 816) |
| Topeka | 3659 (- 866) |
| Heebner | 3876 (-1083) |
| Toronto | 3898 (-1105) |
| Lansing | 3912 (-1119) |
| Base Kansas City | 4150 (-1357) |
| Rotary Total Depth | 4150 (-1367) |

Porosity and Shows of Oil

Elmont
3569-74

Tan to gray finely crystalline, slightly fossiliferous limestone. Poor vugular porosity with trace of free oil and no odor.

DST #1

3548-78'. Open 1 hour. Strong blow. Recovered 200 feet muddy water with no show of oil. ICIP 1128#/30", IFP 47#, FFP 105#, FCIP 1128#/30".

Howard
3610-16

Buff to buff and gray mottled fossiliferous limestone. Fair fossilcast and pin-point porosity with a trace of light, scattered, spotty stain in a few pieces. No free oil or odor.

DST #2

3599-3623'. Open 1 hour. Very weak blow for 25 minutes. Recovered 30 feet mud with no show of oil. ICIP 1002#/30", IFP 23#, FFP 23#, FCIP 884#/30".

Toronto

3898-3906

Cream, finely crystalline, slightly fossiliferous limestone. Fair to poor vugular porosity with dark scattered stain with slight show of free oil and no odor.

DST #3

3876-3907'. Open 1 hour. Weak blow for 10 minutes. Recovered 30 feet mud with no show of oil. ICIP 58#/30", IFP 23#, FFP 23#, FCIP 58#/30".

Lansing

3912-26

(Top) Buff to gray oolitic and slightly oolitic limestone. Light, scattered, spotty stain with fair show of free oil and good odor. Poor to fair porosity. Mostly barren at base.

DST #4

3906-27'. Open 1 hour. Weak blow for 20". Recovered 20 ft. mud with no show of oil. ICIP 1243#, IFP 35#, FFP 58#, FCIP 1232#/30".

3946-50

(35' Zone) Cream, finely crystalline to mealy and slightly chalky, cherty limestone. Fair pinpoint porosity with no show of oil.

3955-59

(50' Zone) White to cream, finely crystalline, light, scattered, spotty stain with show of free oil and no odor. Poor to fair porosity.

DST #5

3927-60'. Open 1 hour. Weak blow for 30". Recovered 45 ft. mud with no show of oil. ICIP 1209#/30", IFP 47#, FFP 59#, FCIP 1151#/30".

3984-88

(70' Zone) Buff, coarse crystalline limestone with gilsonitic stain. No free oil or odor. Fair scattered vugular porosity.

3992-4000

Gray oolitic limestone. Very good porosity. No show or odor. Appeared water bearing.

4045-51

(140' Zone) Gray, fine to dense crystalline limestone. Good scattered stain with slight show of free oil and faint odor. Fair scattered vugular porosity.

DST #6

4026-53' Open 1 hour. Very weak blow for 10 minutes. Recovered 25 ft. mud with no show of oil. ICIP 117#/30", IFP 23#, FFP 35#, FCIP 58#/30".

4074-79

(160' Zone) Gray, medium to coarse crystalline limestone. Light, scattered stain with a trace of free oil and good odor.

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DST #7 4053-86'. Open 45". Very weak blow for 1". Recovered 10 ft. mud with a trace of oil. ICIP 199#/15", IFP 23#, FFP 23#, FCIP 70#/15".

Rotary Total Depth 4160'

Completed 5-15-68.

D & A

All shows of oil were tested with negative results; therefore, it was recommended this test well be plugged and abandoned, 5-15-68.

IMPERIAL OIL COMPANY

Charley V. Shank

Charley V. Shank
Geologist on Well

CVS:jl

DRILLING TIME LOG
 #1 MOSIER "A"
 C NW SW Sec. 8-9S-28W
 Sheridan County, Kansas

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| Depth | Minutes | Remarks |
|---------------------|--|---------------------|
| 1' Intervals | | |
| 3100-10 | 2-3-3-2-2/1-2-2-1-1 | |
| 20 | 2-2-1-1-2/1-2-1-2-2 | |
| 30 | 1-1-1-1-2/1-2-1-2-2 | |
| 40 | 1-1-1-2-2/1-1-1-1-1 | |
| 50 | 1-1-1-2-1/1-2-1-2-1 | |
| 60 | 1-1-1-1-1/1-1- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ | |
| 70 | $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ / $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-1 | |
| 80 | 1-1-2-1-1/ $\frac{1}{2}$ - $\frac{1}{2}$ -1- $\frac{1}{2}$ - $\frac{1}{2}$ | |
| 90 | $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-1/1-2-2-2-2 | |
| 3200 | 3-5-5-3-1/3-2-2-2-2 | |
| 3200-3210 | 3-2-3-2-3/3-2-3-2-3 | |
| 20 | 5-5-4-4-3/3-3-4-4-3 | |
| 30 | 2-1-2-2-2/0-2-2-1-2 | 1' Kelly Correction |
| 40 | 2-2-2-2-1/1-2-2-2-2 | |
| 50 | 2-2-2-2-2/2-2-3-2-2 | |
| 60 | 2-2-3-4-3/3-2-4-3-5 | |
| 70 | 4-3-5-5-7/5-6-7-7-6 | |
| 80 | 4-3-4-3-2/3-4-1-3-3 | |
| 90 | 5-4-4-5-4/5-4-3-3-4 | |
| 3300 | 4-4-5-4-4/5-4-4-4-6 | |
| 3300-3310 | 4-3-4-5-5/5-5-5-6-6 | |
| 20 | 7-6-3-5-5/6-8-5-6-7 | |
| 30 | 7-9-9-9-11/2-2-2-3-3 | Trip at 3326' |
| 40 | 2-2-4-3-3/3-2-3-2-2 | |
| 50 | 2-2-2-2-2/2-2-2-2-2 | |
| 60 | 2-2-2-2-1/2-1-2-1-1 | |
| 70 | 1-1-1-2-2/3-3-3-3-2 | |
| 80 | 2-2-2-2-3/3-2-3-2-2 | |
| 90 | 3-2-2-3-5/6-6-7-8-7 | |
| 3400 | 6-7-8-6-4/5-4-5-7-8 | |
| 3400-3410 | 5-5-5-7-6/7-7-6-6-7 | |
| 20 | 4-4-3-3-4/4-3-3-2-3 | |
| 30 | 4-5-4-2-4/3-3-3-3-2 | |
| 40 | 2-2-3-3-2/4-4-6-5-3 | |

DRILLING TIME LOG: #1 Mosier "A"

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| Depth | Minutes | Remarks |
|--------------|---------------------|-------------------------------|
| 1' Intervals | | |
| 3440-3450 | 2-3-3-3-3/4-6-5-4-4 | |
| 60 | 4-4-5-6-5/4-5-5-5-4 | |
| 70 | 5-5-5-6-6/6-6-7-6-6 | |
| 80 | 6-6-4-3-3/3-2-4-5-4 | |
| 90 | 4-3-3-4-4/5-6-5-4-4 | Slightly rough at 3485' |
| 3500 | 5-4-4-4-5/4-5-4-5-5 | |
| 3500-3510 | 6-4-5-4-4/3-3-4-4-3 | |
| 20 | 3-3-3-3-3/3-3-3-7-5 | |
| 30 | 6-4-3-3-4/4-4-5-3-5 | |
| 40 | 7-7-4-6-4/5-4-4-5-4 | |
| 50 | 5-5-5-5-5/6-5-6-3-3 | |
| 60 | 4-7-7-8-6/6-5-4-7-6 | |
| 70 | 4-5-5-5-5/7-4-7-7-5 | |
| 80 | 6-5-5-6-3/2-4-4-3-2 | DST #1: 3548-78; Circ. 1 hr. |
| 90 | 2-1-2-2-2/2-2-2-3-3 | |
| 3600 | 3-3-3-3-2/3-3-5-6-5 | |
| 3600-3610 | 3-4-0-3-3/2-4-3-4-3 | 1' kelly corrc. @ 3603' |
| 20 | 4-2-1-3-4/4-3-4-4-4 | |
| 30 | 4-3-4-5-5/4-3-4-3-3 | |
| 40 | 3-4-4-4-3/4-6-6-6-6 | |
| 50 | 6-6-5-5-3/3-3-6-5-7 | |
| 60 | 3-5-3-5-4/4-4-4-4-5 | |
| 70 | 5-5-4-3-3/3-4-4-5-4 | |
| 80 | 6-4-4-4-5/3-5-5-5-4 | |
| 90 | 4-4-3-3-5/4-7-6-4-5 | |
| 3700 | 4-4-5-3-2/2-2-4-3-2 | |
| 3700-3710 | 2-2-3-3-3/4-6-5-4-4 | |
| 20 | 5-5-5-5-5/4-5-4-4-4 | |
| 30 | 3-3-4-4-4/4-2-2-2-3 | |
| 40 | 4-4-5-3-3/4-3-3-4-2 | |
| 50 | 3-3-3-3-3/3-3-3-4-4 | Circ @ 3746; Rough @ 3747-48' |
| 60 | 4-4-4-4-4/4-3-5-5-5 | |
| 70 | 7-6-3-5-5/3-2-2-3-2 | |
| 80 | 3-2-2-2-2/2-2-2-1-2 | |
| 90 | 1-2-1-2-2/2-1-2-3-4 | |
| 3800 | 3-3-4-4-4/5-2-3-2-3 | |
| 3800-3810 | 2-2-2-2-2/3-4-4-3-3 | |
| 20 | 4-4-5-4-5/3-3-4-3-3 | |
| 30 | 3-4-3-5-5/4-5-4-5-4 | |
| 40 | 4-5-5-6-5/5-3-3-3-3 | |

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| Depth | Minutes | Remarks |
|---------------------|----------------------------|---------------------------------|
| <u>1' Intervals</u> | | |
| 3840-3850 | 4-3-4-6-6/5-6-5-5-4 | |
| 60 | 2-3-1-1-2/3-2-2-1-1 | |
| 70 | 3-3-3-2-4/4-5-2-4-3 | |
| 80 | 3-4-3-4-5/6-3-2-3-5 | |
| 90 | 7-6-5-5-6/7-8-3-5-7 | |
| 3900 | 6-7-6-7-7/8-8-6-7-6 | |
| 3900-3910 | 6-7-8-8-7/8-7-3-5-4 | DST #3: 3876-3907' |
| 20 | 5-4-3-3-3/3-3-4-5-5 | |
| 30 | 5-7-6-5-6/6-6-4-6-4 | DST #4: 3906-3927' |
| 40 | 5-7-4-5-4/6-5-4-5-5 | |
| 50 | 5-5-4-3-3/6-7-9-5-5 | |
| 60 | 4-1-2-1-5/6-6-3-5-6 | DST #5: 3927-3960'; Circ. |
| 70 | 8-11-12-10-8/10-10-10-11-9 | |
| 80 | 7-8-8-5-5/7-8-9-9-8 | |
| 90 | 9-10-10-8-7/5-6-5-10-6 | |
| 4000 | 10-10-5-2-2/6-4-4-4-4 | |
| 4000-4010 | 7-5-5-4-8/8-9-6-7-5 | Circ. @ 4001' |
| 20 | 6-6-5-3-6/5-6-7-7-7 | Slightly rough @ 4013-14 & 4020 |
| 30 | 10-9-9-8-7/7-11-11-0-11 | |
| 40 | 7-3-11-9-8/9-11-8-6-7 | Rough @ 4037-38 |
| 50 | 6-5-6-4-3/9-12-11-7-10 | Slightly rough @ 4045' |
| 60 | 10-9-10-4-7/7-8-7-5-8 | DST #6: 4026-53; circ. @ 4053 |
| 70 | 7-6-6-6-7/7-5-7-6-6 | |
| 80 | 6-6-7-4-5/6-6-6-5-5 | |
| 90 | 5-6-7-4-5/5-3-5-6-8 | DST #7: 4053-86; circ. |
| 4100 | 7-8-8-7-8/8-6-7-6-7 | |
| 4100-4110 | 6-5-5-6-7/7-5-9-7-6 | Circ. @ 4108 |
| 20 | 7-6-6-5-5/6-7-5-6-5 | |
| 30 | 6-6-6-6-7/6-6-8-6-5 | |
| 40 | 4-3-6-0-4/5-6-7-7-6 | 1' kelly corr. @ 4134 |
| 50 | 7-6-7-7-5/8-4-6-8-4 | |
| 60 | 7-6-7-8-4/3-3-3-3-2 | Circ. @ 4160' |

Rotary Total Depth 4160'