

GEOLOGICAL REPORT

CLINTON OIL COMPANY
and
RAINS & WILLIAMSON OIL CO. INC.
MAUCK #1--V
NW NW NE SECTION 22-13S-18W
ELLIS COUNTY, KANSAS

Report by:

RAYMOND M. GOODIN

Geologist

CLINTON OIL COMPANY
and
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MAUCK #1-V
NW NW NE SECTION 22-13S-18W
ELLIS COUNTY, KANSAS

D A T A S H E E T

Elevation:	2106 Gr.; 2108 D.F.; 2111 K.B.
Operator:	Clinton Oil Company
Contractor:	Rains & Williamson Oil Co. Inc.
Spud Date:	8-20-69
Surface Pipe:	598 feet 8 5/8"; 235 sacks Posmix, 100 sacks Common
Completion Date of Rotary:	8-31-69
Rotary Total Depth:	3681
Log Total Depth:	3677
Production Casing:	None

DRILL STEM TESTS

<u>Formation</u>	<u>Number</u>
Topeka	2
Lansing Kansas City	2
Arbuckle	3

CORES

None

SURVEYS

Dresser Atlas

Gamma Ray Neutron Laterolog,
Acoustilog

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G E O L O G Y

The following information is the interpretation of samples, time log and electric log on the captioned well. The measurements are from the elevation of 2111 K.B. There are no corrections in measurements. The difference in depths of log and driller's measurements is apparently due to cuttings in the bottom of the hole.

<u>Formation</u>	<u>Sample Tops</u>	<u>Electric Log Tops</u>
Anhydrite (Driller's)	1376 to 1418 (+735 to +693)	1373 to 1410 (+738 to +701)
Tarkio	2913 -802	2912 -801
Howard	3030 -919	3030 -919
Topeka	3086 -975	3088 -977
Queen Hill	3266 -1155	3264 -1153
Heebner	3345 -1234	3343 -1232
Toronto	3376 -1265	3367 -1256
Lansing Kansas City	3397 -1286	3398 -1287
Base of Kansas City	3629 -1518	3628 -1517
Arbuckle	3646 -1535	3646 -1535
Total Depth	3681 -1570	3677 -1566

Electric log measurements will be used for the following information:

	<u>% Porosity</u>	<u>% Water</u>
<u>Topeka 3088</u>		
<u>Zone 3132 to 3136</u>	12	70
Oolitic and chalky lime, poor porosity, no show oil, some very slightly dolomitic lime, no show.		
<u>Zone 3279 to 3282</u>	7	62
<u>Zone 3285 to 3288</u>	9.5	56
Gray fine crystalline and slightly fossiliferous lime, trace of fracture pin-point and fossili- ferous porosity, edge stain, trace of saturation, small show of free oil, slight odor.		

#1 Drill Stem Test 3276 to 3295

Open 30 minutes, shut in 30 minutes
Open 60 minutes, shut in 30 minutes
Weak blow, increasing to strong
Recovered 260 feet gas in pipe
125 feet heavily mud cut oil

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#1 Drill Stem Test (continued)

I.B.H.P. 148# F.B.H.P. 137#
I.F.P. 25 to 31# F.F.P. 42 to 46#
I.Hyd.P. 1888# F.Hyd.P. 1878# Temp. 108

	<u>% Porosity</u>	<u>% Water</u>
<u>Zone 3299 to 3301</u>		
Gray fine crystalline, slightly dolomitic lime, poor to fair crystalline and vugular porosity.	6	70
<u>Zone 3308 to 3310</u>	12	50
<u>Zone 3315 to 3318</u>	8.5	68
Fine crystalline oolitic and fossiliferous, poor to fair crystalline and vugular porosity and fossiliferous porosity, small show of good porosity, fair stain to saturation, much chalk, light odor, trace of free oil.		

#2 Drill Stem Test 3297 to 3321

Open 30 minutes, shut in 30 minutes
Open 60 minutes, shut in 30 minutes
Weak blow throughout test
Recovered 50 feet very slightly oil cut mud
10 feet gas in pipe
I.B.H.P. 126# F.B.H.P. 126#
I.F.P. 27 to 31# F.F.P. 31 to 31#
I.Hyd.P. 1825# F.Hyd.P. 1815#
Temp. 108

<u>Toronto 3367</u>		
<u>Zone 3367 to 3370</u>	8.5	65
<u>Zone 3370 to 3372</u>	8	66
White fine crystalline lime, trace of poor crystalline porosity, trace of spotted stain.		

Lansing Kansas City 3398

<u>"A" Zone 3398 to 3410</u>	No calculation
Buff fine crystalline lime, trace of poor crystalline porosity, trace of stain, no free oil, no odor, much chalk.	

"B" Zone 3419

<u>Zone 3423 to 3425</u>	8.5	32
Trace of buff, fine crystalline lime and oolitic and oolitic, poor to fair broken porosity, fair spotted stain, spotted saturation, fair odor, fair show free oil.		

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#3 Drill Stem Test 3384 to 3442

Open 30 minutes, shut in 30 minutes
Open 60 minutes, shut in 30 minutes
Weak blow, increasing to fair
Recovered 40 feet very slightly oil cut mud
and water; 180 feet slightly muddy salt water;
20 feet gas in pipe
I.B.H.P. 841# F.B.H.P. 664#
I.F.P. 52 to 84# F.F.P. 116 to 158#
I.Hyd.P. 1878# F.Hyd.P. 1867# Temp. 110

"C" Zone 3437

Buff fine crystalline, dense lime, no show.

% Porosity

No calculation

% Water

"D" Zone 3447

Fine crystalline lime, poor edge crystalline
and vugular porosity, spotted stain, fair
odor, small show free oil.

No calculation

"F" Zone 3465 to 3471

Fine crystalline lime, fair to good crys-
talline vugular edge porosity, good stain
in porosity, fair show free oil, good odor.

Does not calculate

Zone 3471 to 3478

Fine crystalline, oolitic and chalky, poor
to fair crystalline vugular oolitic porosity,
fair spotted stain, trace of saturation,
fair odor, fair show free oil.

Does not calculate

#4 Drill Stem Test 3458 to 3480

Open 30 minutes, shut in 30 minutes
Open 90 minutes, shut in 30 minutes
Weak blow throughout test
Recovered 60 feet gas in pipe,
30 feet very slightly oil cut mud
I.B.H.P. 52# F.B.H.P. 46#
I.F.P. 31 - 31# F.F.P. 31 - 31#
I.Hyd.P. 1888# F.Hyd.P. 1878# Temp. 108

"G" Zone 3483

White fine crystalline lime.

Does not calculate

"H" Zone 3528

Chalky, slightly oolitic, trace of stain,
no free oil, no odor.

Does not calculate

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	<u>% Porosity</u>	<u>% Water</u>
<u>"I" Zone 3549</u> White to buff, fine crystalline lime, chalky.	Does not calculate	
<u>"J" Zone 3560</u> White fine crystalline lime.	Does not calculate	
<u>"K" Zone 3588</u> Gray oolitic lime, poor oolitic porosity, spotted stain to trace of saturation.	Does not calculate	
<u>"L" Zone 3615</u> White to buff, fine crystalline lime.	Does not calculate	
<u>Base Kansas City 3628</u>		
<u>Arbuckle 3646 -1535</u> <u>3646 to 3650</u> Fine crystalline dolomite, spotted good saturation, poor porosity, small show free oil, white opaque chert, oolitic chert.	Does not calculate	
<u>3651 to 3653</u>	15.5	30
<u>3653 to 3655</u>	17	30
<u>3658 to 3660</u> Fine crystalline to medium crystalline, dolomite, poor crystalline porosity, good stain, saturation, good show free oil, odor.	21.5	35
<u>3660 to 3662</u> <u>3660 to 3671</u> Fine crystalline, dense dolomite, fine to medium crystalline, slightly granular to sandy dolomite, poor crystalline porosity, good stain saturation, good show free oil, odor.	16.5	45

#5 Drill Stem Test 3659 to 3671

Open 30 minutes, shut in 30 minutes
Open 60 minutes, shut in 30 minutes
Weak blow throughout test
Recovered 185 feet heavily oil cut mud
I.B.H.P. 882 F.B.H.P. 747#
I.F.P. 31 to 52# F.F.P. 63 to 105#
I.Hyd.P. 1962# F.Hyd.P. 1951# Temp. 108

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3671 to 3674

Fine crystalline sucrose dolomite, block saturation, poor crystalline porosity, good show free oil, good odor.

3674 to 3681

Medium crystalline dolomite, poor porosity, trace of stain, white opaque chert, much fine crystalline dense dolomite.

#6 Drill Stem Test 3671 to 3681

Open 30 minutes, shut in 30 minutes
Open 60 minutes, shut in 30 minutes
Weak blow, increasing to strong.
Recovered 60 feet muddy salt water with slight show of oil; 480 feet muddy salt water
I.B.H.P. 1060# F.B.H.P. 1018#
I.F.P. 21 - 114# F.F.P. 126 - 296#
I.Hyd.P. 2067# F.Hyd.P. 2056# Temp. 112

#7 Drill Stem Test 3624 to 3662 (Straddle Test)

Open 30 minutes, shut in 30 minutes
Open 90 minutes, shut in 30 minutes
Weak blow, increasing to fair
Recovered 120 feet very slightly oil cut mud
I.B.H.P. 851# F.B.H.P. 716#
I.F.P. 14 - 21# F.F.P. 42 - 63#
I.Hyd.P. 2014# F.Hyd.P. 2004# Temp. 108

RECOMMENDATION:

On the basis of the above information, it was recommended that the #1-V Mauck be plugged and abandoned.

Respectfully submitted,

Raymond M. Goodin
RAYMOND M. GOODIN

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DEPTH	TIME					COMMENTS
2800 - 2820	1-1-1-1-2	2-3-2-4-5	5-4-4-4-4	4-3-3-3-3		
2840	3-3-3-2-2	1-3-4-3-3	2-3-2-2-2	2-2-3-2-2		
2860	2-3-2-3-4	4-2-4-5-3	3-3-3-2-2	2-2-2-3-2		
2880	2-2-2-1-1	1-1-2-1-1	1-1-1-1-1	2-1-1-1-1		
2900	1-1-1-1-1	1-1-1-2-1	2-2-1-2-2	2-3-2-2-2		
2900 - 2920	3-2-3-2-3	2-2-2-1-1	2-2-2-3-3	5-3-4-4-5		
2940	5-2-3-2-4	4-3-6-4-3	2-3-4-3-4	4-5-5-4-3		
2960	3-2-2-2-2	1-1-2-3-2	2-2-2-2-2	2-2-3-2-2		
2980	2-3-3-6-5	3-3-3-3-4	4-4-4-5-5	3-3-4-3-3		
3000	4-3-4-3-4	4-5-5-5-5	3-3-2-4-5	5-5-5-5-3		
3000 - 3020	4-4-4-3-5	6-6-6-5-6	3-3-5-5-3	4-4-5-5-4	Trip @ 3010	
3040	2-2-2-2-2	2-3-2-2-2	3-5-5-5-4	4-4-2-2-2	Vis. 41 Wt.10.1 @ 3032	
3060	2-3-3-3-3	3-3-3-3-3	4-3-3-2-3	4-3-3-2-3	Vis. 41 Wt.10.2 @ 3071	
3080	3-3-2-3-2	2-2-2-3-3	3-3-3-2-3	3-3-3-3-4		
3100	3-4-4-4-4	2-4-5-5-6	4-6-5-4-5	5-4-3-4-3		
3100 - 3120	5-5-5-5-5	5-5-4-5-5	6-5-5-5-5	6-6-6-6-5	Vis. 43 Wt.10.2 @ 3114	
3140	6-5-6-5-6	5-6-6-6-6	4-2-3-3-2	1-3-2-3-5	CFS 3135 Vis. 47 Wt.10.1 @ 3138	
3160	7-5-7-6-8	5-6-6-7-5	4-4-5-5-4	4-5-4-4-4		
3180	6-5-7-6-6	6-5-5-7-3	4-4-6-6-5	6-7-4-3-7		
3200	7-7-7-7-8	10-8-9-8-8	7-9-8-7-6	9-6-6-5-5		
3200 - 3220	5-6-5-6-6	8-7-5-3-9	8-8-6-5-4	6-4-6-6-5	Trip @ 3212 Vis. 41 Wt.10.1 @ 3214	
3240	6-5-6-5-6	9-4-6-7-5	6-7-6-7-7	5-6-6-6-8	Mixing Mud 3225 Vis. 42 Wt.10.1	
3260	8-9-10-8-9	10-7-8-10-10	7-6-7-7-6	5-5-8-7-9	@ 3230 Vis. 43 Wt.10.1 @ 3250	
3280	7-7-9-9-11	10-5-6-4-3	10-10-8-7-7	10-8-7-10-7	Vis. 43 Wt.10.1 @ 3271	
3300	8-7-7-6-6	8-7-5-10-6	7-7-7-7-9	10-9-6-5-6	CFS 3295	
3300 - 3320	7-7-10-7-7	8-8-7-8-7	6-5-6-6-7	7-5-5-7-8	CFS 3310 Vis. 41 Wt.10.1 WL 8.8	
3340	7-7-10-7-7	5-8-7-7-8	6-8-7-8-6	6-7-8-7-8	@ 3313 Vis. 54 Wt.10.3 @ 3334	
3360	7-7-7-7-8	5-5-3-4-6	8-8-6-6-5	6-8-6-7-7	Vis. 41 Wt.10.1 WL 11.9 @ 3353	
3380	7-7-6-6-5	7-7-6-8-5	6-6-5-5-5	6-7-7-7-9	Vis. 42 Wt.10.1 WL 11.8 @ 3383	
3400	9-8-9-9-7	7-8-7-7-6	8-8-10-7-8	6-7-8-7-6	CFS 3385	
3400 - 3420	7-8-7-7-5	5-7-8-5-6	8-7-7-7-7	6-5-7-6-6	Vis. 43 Wt. 10.1 @ 3403 CFS 3410	
3440	6-7-6-6-7	6-6-6-7-7	7-6-6-6-8	7-6-6-6-5	Vis. 42 Wt.10.1 WL 13.2 @ 3441	
3460	7-7-5-6-6	8-8-7-8-6	5-6-7-7-6	6-6-7-6-6	CFS 3442 CFS 3450 Vis. 41 Wt.10.2	
3480	8-6-8-6-6	6-8-6-6-7	7-5-6-7-6	6-5-7-7-6	@ 3450 Vis. 45 Wt.10.1 WL 10 @ 3464	
3500	7-9-7-8-6	5-7-8-8-8	7-6-7-7-6	5-7-7-6-7	CFS 3465 CFS 3470 Vis. 43 Wt.10.1	
					WL 10 @ 3471 Vis. 42 Wt.10.1 WL 10.4	
					@ 3479 CFS 3480	

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DEPTH	TIME					COMMENTS
3500 - 3520	8-7-8-6-7	5-8-8-7-7	7-8-7-7-8	7-7-7-5-8	Vis. 47 Wt.10.1 WL 10.2 @ 3505	
3540	8-8-6-6-6	6-5-5-2-6	8-8-7-7-9	7-7-6-7-9	Vis. 47 Wt. 10.2 WL 10.4 @ 3534	
3560	8-9-8-7-6	10-8-7-7-6	6-6-6-7-5	5-6-6-7-8	CFS 3540 Vis. 47 Wt.10.2 WL 10.4	
3580	7-10-9-6-8	7-7-6-5-6	5-6-7-7-8	7-7-8-6-7	@ 3552 CFS 3565 Vis.45 Wt.10.2	
3600	9-7-8-8-7	7-6-7-7-7	7-8-6-6-5	7-7-7-7-7	WL ___ @ 3566 CFS 3580	
3600 - 3620	7-8-7-8-8	6-6-8-7-8	8-8-8-7-6	8-7-8-7-7	Vis. 43 Wt.10.2 WL 10.4 @ 3605	
3640	8-7-8-7-8	8-9-8-8-6	6-5-5-6-6	8-6-6-6-7	CFS 3640 Vis. 46 Wt.10.3 @ 3641	
3660	6-9-9-6-8	8-5-5-4-3	4-6-4-3-2	3-3-4-5-2	CFS 3646 R 3656-7 R 3659	
3680	2-3-3-3-1	1-2-2-2-4	4-3-2-4-5	5-4-4-5-4	CFS 3660 R 3667 SR 3669	
3681	6 - TD				CFS 3671 R 3681 - CFS	
					Vis. 43 Wt.10.1 WL 10.2 @ 3681-TD	