

8-9-28W

DEC 26 1984

Ind

RICHARD J. HALL
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Released

Vincent J. Duncan
Mosier #8-1
C-SW-SE
Section 8 T9S-R28W
Sheridan County, Kansas

JAN 06 1985
KANSAS GEOLOGICAL SURVEY
WICHITA BRANCH

December 19, 1984

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GENERAL INFORMATION

Elevation G.L. 2819' K.B. 2824'
 (All measurements are from K.B.)
 Contractor Murfin Drilling Company, Rig No. 7
 Surface Casing 6 joints of 8 5/8 @ 262' with 195 SX
 Total Depth R.T.D. 4240' -1416 L.T.D. 4236' -1412'
 Drilling Time 3500' to 4240' R.T.D. -
 Samples Saved 3570' to 4240' R.T.D.
 Samples Examined 3570' to 4240' R.T.D.
 DST Company - Number of Tests Formation Testing Services - 5 tests
 Mud Company - Mud Type Davis Mud - Chemical
 Electric Log Company Great Guns - RA Guard Log (3300' - 4236' L.T.D.)
 Samples Sent to KGS
 Well Status Dry and Abandoned
 Date Spudded Tuesday, December 4, 1984 - Spud 1:45 p.m.
 Set surface casing
 Wednesday, December 5, 1984 - 7:00 a.m. - 1325', Drilling ahead, bit trip @ 2263'
 Thursday, December 6, 1984 - 7:00 a.m. - 2635', Drilling ahead
 Friday, December 7, 1984 - 7:00 a.m. - 3367', Drilling ahead
 Saturday, December 8, 1984 - 7:00 a.m. - 3959' - CFS; ran DST #1
 Sunday, December 9, 1984 - 7:00 a.m. - 3990', Running DST #2, ran DST #3
 Date Completed Monday, December 10, 1984 - 7:00 a.m. - 4129', Drilling ahead, ran Electric Logs
 Tuesday, December 11, 1984 - 7:00 a.m. - 4240' R.T.D. - WOO; ran DST #4 and DST #5. Plug hole as dry and abandoned

REFERENCE WELL

- A. Imperial Oil Company
 Mosier #1 (D & A)
 C-NW-SW
 Section 8 T9S-R28W
 Sheridan County, Kansas
 K.B. 2793'
- B. Imperial Oil Company
 Pratt #1 (D & A)
 C-SW-SW
 Section 9 T9S-R28W
 Sheridan County, Kansas
 K.B. 2772'

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FORMATION TOPS

Formation	Sample Tops	E. Log Tops*	Datum (Log)	Reference Well		Test Well Difference To Reference Well	
				A	B	A	B
Anhydrite	2448	2444	+380	+386	+380	-6	Even
Base/Anhydrite	2482	2477	+347	+351	+344	-4	+3
Howard	3619	3616	-792	-	-	-	-
Topeka	3709	3702	-878	-866	-883	-12	+5
Heebner	3921	3916	-1092	-1083	-1092	-9	Even
Toronto	3943	3938	-1114	-1105	-1118	-9	+4
Lansing	3956	3952	-1128	-1119	-1129	-9	+1
Base/Kansas City	4194	4188	-1364	-1357	-	-7	-

*NOTE: L.T.D. is four (4) feet high to R.T.D.

DRILL STEM TESTS

DST #1

Toronto - Lansing "A" Zone

Open Hole Test

3938' - 3959' (Rotary Depth)

15-30-45-90

Initial Open: 1 1/2 inches
 5 minutes - 4 inches
 10 minutes - 7 inches
 15 minutes - 8 inches

Final Open: 5 minutes - 3 inches
 10 minutes - 5 inches
 15 minutes - 8 inches
 20 minutes - 9 inches
 25 minutes - 10 inches
 30 minutes - 11 inches
 35 minutes - 12 inches
 40 minutes - 13 inches
 45 minutes - 14 inches

Recovery: 640 Total feet
 40' Heavy oil cut mud (60% oil, 40% mud)
 600' Sulfur water (31,600 p.p.m. Chlorides)

IHP 1946 P.S.I.
 IFP 49-98 P.S.I.
 ISIP 1056 P.S.I.
 FFP 118-255 P.S.I.
 FSIP 1056 P.S.I.
 FHP 1920 P.S.I.

Temperature 128°F

DST #2

Lansing "A-B" Zones

Open Hole Test

3959' - 3990' (Rotary Depth)

15-30-45-90

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Initial Open: 1/2 inches
 5 minutes - 4 inches
 10 minutes - 8 inches
 15 minutes - 13 inches

Final Open: 5 minutes - 6 inches
 10 minutes - 7 inches
 15 minutes - 9 inches
 20 minutes - 12 inches
 25 minutes - 12 inches
 30 minutes - 14 inches
 35 minutes - 14 inches
 40 minutes - 14 inches
 45 minutes - 14 inches

Recovery: 801 Total feet
 35' Clean oil and heavy oil cut mud
 766' Sulfur water (41,900 p.p.m. Chlorides)

IHP 1946 P.S.I.
 IFP 39-147 P.S.I.
 ISIP 1021 P.S.I.
 FFP 182-364 P.S.I.
 FSIP 1021 P.S.I.
 FHP 1932 P.S.I.

Temperature 129°F

DST #3

Lansing "D" Zone
 Open Hole Test
 3992' - 4006' (Rotary Depth)
 15-30 15-30

Initial Open: Very weak surface blow, dying in 13 minutes.

Final Open: No return blow.

Recovery: 5 Total feet
 5' Drilling mud

IHP 1951 P.S.I.
 IFP 16-16 P.S.I.
 ISIP 1206 P.S.I.
 FFP 18-18 P.S.I.
 FSIP 1126 P.S.I.
 FHP 1934 P.S.I.

Temperature 112°F

DST #4

Lansing "E-F" Zones
 Straddle Test
 4026' - 4044' (Electric Log Depth)
 15-30-45-90

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Initial Open: 1 inch
 5 minutes - 4 inches
 10 minutes - 6 inches
 15 minutes - 9 inches

Final Open: 5 minutes - 2 1/2 inches
 10 minutes - 5 inches
 15 minutes - 8 inches
 20 minutes - 10 inches
 25 minutes - 12 inches
 30 minutes - 14 inches
 35 minutes - 15 inches
 40 minutes - 15 inches
 45 minutes - 15 inches

Recovery: 612 Total feet
 612' Salt water (41,400 p.p.m. Chlorides)

IHP 2036 P.S.I.
 IFP 29-88 P.S.I.
 ISIP 1196 P.S.I.
 FFP 108-265 P.S.I.
 FSIP 1186 P.S.I.
 FHP 2031 P.S.I.

Temperature 132°F

DST #5

Toronto
 Straddle Test
 3921' - 3944' (Electric Log Depth)
 15-30-45-90

Initial Open: Surface blow
 5 minutes - 1/2 inches
 10 minutes - 1 inch
 15 minutes - 1 1/2 inches

Final Open: Surface blow
 5 minutes - 1/4 inch
 10 minutes - 1/2 inch
 15 minutes - 3/4 inches
 20 minutes - 3/4 inches
 25 minutes - 3/4 inches
 30 minutes - 3/4 inches
 35 minutes - 3/4 inches
 40 minutes - 3/4 inches
 45 minutes - 7/4 inches

Recovery: 59 Total feet
 59' Slightly oil and water cut drilling mud (20% oil, 10% water 88% mud)

IHP 1986 P.S.I.
 IFP 13-16 P.S.I.
 ISIP 1116 P.S.I.
 FFP 16-23 P.S.I.
 FSIP 1116 P.S.I.
 FHP 1986 P.S.I.

Temperature 122°F

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DIRECTIONAL SURVEYS

262' - 1/2°
2263' - 1°
3959' - 1°
4240' - 1 1/4°

ZONES OF INTEREST

Log Depth

Description, Comments

3938' - 3-44' - Toronto

Limestone, off-white-light gray, fine crystalline, chalky, mostly even brown stain, good show free oil, fair odor, fair fluorescence, good-excellent streaming cut; some very fine crystalline, tight, spotty stain and visual to good pin point porosity. Great Guns Electric Logs calculate an average porosity of 9.75% and an average water saturation of 38%. DST #5 straddle test, tested this zone and recovered 59 feet of slightly oil and water cut drilling mud.

3952' - 3958' - Lansing "A" Zone

Limestone, buff, rare gray, very fine-fine crystalline, scattered brown stain, excellent show free oil, excellent odor, good fluorescence, excellent streaming cut, some dense, some chalky, fair-good pin point porosity. Great Guns Electric Logs calculate an average porosity of 10.5% and an average water saturation of 46.6%. DST #1 covered the Toronto and the top two (2) feet of the Lansing "A" zone and recovered 40 feet of heavy oil cut mud and 600 feet of sulfur water. DST #2 covered the lower part of this zone (3954' to 3986') and recovered 35 feet of clean oil and heavy oil cut mud and 766 feet of sulfur water.

3991' - 3998' - Lansing "D" Zone

Limestone, gray, fine crystalline, nodular, mostly even brown stain, good show free oil, excellent odor, fair fluorescence, excellent streaming cut, good pin point porosity. Limestone, off-white-buff, some gray, tan, mostly fine crystalline, scattered stain, good show free oil, excellent odor, good fluorescence, excellent cut, fair pin point porosity. DST #3 covered this interval and recovered 5 feet drilling mud. Great Guns Electric Logs show the zone to be shaley and/or tight.

4019' - 4022' - Lansing "E" Zone

Limestone, light-medium gray, very fine crystalline, dense, scattered black stain, NSFO; gray, fine crystalline, fair show free oil, no fluorescence, fair-good cut, fair pin point porosity. Great Guns Electric Logs calculate a 7.5% porosity and 53% water saturation.

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Log Depth

Description, Comments

4028' - 4034' - Lansing "F" Zone

Limestone, light gray, very fine crystalline, mostly scattered brown-black stain, good show free oil, rare fluorescence, excellent cut, poor pin point porosity. Great Guns Electric Logs calculate an average porosity of 8% and an average water saturation of 38.6%. DST #4 straddle test, tested this zone and recovered 612 feet of salt water.

4052' - 4058' - Lansing "G" Zone

Limestone, tan-light brown, very fine-fine crystalline, rare spotty black stain, fair show free oil, slight fluorescence, good streaming cut, no visual porosity. Great Guns Electric Logs calculate a 4.5% porosity and a 55% water saturation, zone is tight.

4111' - 4116' - Lansing "I" Zone

Limestone, buff-tan, very fine-fine crystalline, mostly even black stain, fair show free oil, fair fluorescence, good cut, no odor, no-fair pin point porosity, zone appears tight.

4135' - 4138' - Lansing "J" Zone

Limestone, off-white-buff, fine crystalline, some oolitic and chalky, scattered brown stain, fair show free oil, good fluorescence, good cut, slight odor, fair pin point porosity. Zone appears very tight.

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SUMMARY

Structurally, the Mosier #8-1 test well ran low throughout the well to Reference Well "A", one-half mile to the Northwest (Imperial Oil Co., Mosier #1, NW-SW-8-T9S-R28W, D & A) and high or even to Reference Well "B", one-half mile to the East (Imperial Oil Co., Pratt #1, SW-SW-9-T9S-R28W, D & A). The Lansing Formation in the test well ran nine (9) feet low and one foot high to Reference Wells A & B respectively. Although Reference Well "A" is higher structurally, its drill stem test recoveries indicate the Lansing/Kansas City to be tight, while, the test well recovered some oil on drill stem tests #1 and #2.

Numerous sample shows encountered throughout the test well, with most occurring in the Lansing/Kansas City Group. Although Electric Logs showed numerous zones that calculated low water saturation, specifically the Toronto Limestone, Lansing "A", and Lansing "F" zones, all were drill stem tested and failed to recover commercial quantities of hydrocarbons. (DST's #1-3 were open hole tests while DST's #4-5 were straddle tests run after Electric Logs).

Therefore, based on the poor drill stem test recoveries, it was recommended that the Mosier #8-1 test well be plugged and abandoned as a dry hole.

Respectively Submitted,



Richard J. Hall

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