CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

April 16, 1964

RESERVOIR FLUID DIVISION

Canadian Pacific Oil and Gas Limited
P. O. Box 400
Calgary, Alberta, Canada

Attention: Mr. T. H. France

Subject: Reservoir Fluid Study
CPOG Taber S 12-21 Well
Taber South Field
Alberta, Canada
Our File Number: RFL 2722

Gentlemen:

Samples of separator liquid and vapor were collected from the subject well by a representative of Core Laboraotries-Canada, Ltd. and submitted to our Dallas laboratory for use in a reservoir fluid study. Presented on the following pages are the results of this study.

After correction for the factors shown on page one of the report, the producing gas-liquid ratio was found to be 76.9 cubic feet of separator gas at 14.696 psia and 60° F. per barrel of stock tank liquid at 60° F.

Upon recombination of the separator products to the producing gas-liquid ratio, the resulting mixture was examined in a windowed cell at the reservoir temperature of 97° F. The saturation pressure of the mixture was found to be 718 psig at 97° F. Presented on page three are the results of the pressure-volume relations of the reservoir fluid

Thank you for this opportunity of serving you. If we may assist you further in any manner, please do not hesitate to contact us.

Very truly yours,

Core Laboratories, Inc.
Reservoir Fluid Division

P. L. Moses
N.J.

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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File RFL 2722

Company Canadian Pacific Oil and Gas Limited — Date Sampled February 6, 1964

Well Taber S 12-21 — County

Field Taber South — State Alberta, Canada

FORMATION CHARACTERISTICS

Formation Name	Taber Sandstone
Date First Well Completed	, 19
Original Reservoir Pressure	PSIG @ Ft.
Original Produced Gas-Liquid Ratio	SCF/Bbl
Production Rate	Bbls/Day
Separator Pressure and Temperature	PSIG ° F.
Liquid Gravity at 60° F.	° API
Datum	Ft. Subsea

WELL CHARACTERISTICS

Elevation	Ft.
Total Depth	Ft.
Producing Interval	3244 (mid-point) Ft.
Tubing Size and Depth	In. to Ft.
Open Flow Potential	MMSCF/Day
Last Reservoir Pressure	PSIG @ Ft.
Date	, 19
Reservoir Temperature	97 ° F. @ Ft.
Status of Well	
Pressure Gauge	

SAMPLING CONDITIONS

Flowing Tubing Pressure		PSIG
Flowing Bottom Hole Pressure	492	PSIG
Primary Separator Pressure	10	PSIG
Primary Separator Temperature	79	° F.
Secondary Separator Pressure		PSIG
Secondary Separator Temperature		° F.
Field Stock Tank Liquid Gravity		° API @ 60° F.
Primary Separator Gas Production Rate		MSCF/Day
Pressure Base	14.696 PSIA	
Temperature Base	60 ° F.	
Compressibility Factor (F_{pv})	1.000	
Gas Gravity (Laboratory)	0.947	
Gas Gravity Factor (F_g)	1.0276	
Stock Tank Liquid Production Rate @ 60° F.		132 Bbls/Day
Primary Separator Gas/Stock Tank Liquid Ratio		76.9 SCF/Bbl
or		Bbls/MMSCF
Core Laboratories, Inc., Engineer		DR

REMARKS:

CL-518

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Well Taber S 12-21

VOLUMETRIC DATA OF Reservoir Fluid SAMPLE

1. Saturation pressure (bubble-point pressure) 718 PSIG @ 97 °F.

2. Thermal expansion of saturated oil @ 2000 PSI $= \frac{V \text{ @ } 97 \text{ °F}}{V \text{ @ } 74 \text{ °F}} =$ 1.00906

3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

   From 2000 PSI to 1600 PSI = 4.52×10^{-6}

   From 1600 PSI to 1100 PSI = 4.61×10^{-6}

   From 1100 PSI to 718 PSI = 4.71×10^{-6}

4. Specific volume at saturation pressure: ft^3/lb 0.01753 @ 97 °F.

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Pressure - Volume Relations of Reservoir Fluid at 97° F.

Pressure PSIG	Relative Volume V/Vs
2000	0.9941
1800	0.9950
1600	0.9959
1400	0.9968
1200	0.9977
1100	0.9982
1000	0.9986
900	0.9991
800	0.9996
718	1.0000
708	1.0027
700	1.0047
692	1.0069
684	1.0090
642	1.0201
583	1.0411
501	1.0838
416	1.1483
353	1.2343
288	1.3631
230	1.5358
178	1.7734
141	2.0758
110	2.5181
86	3.0056
63	3.8279
44	5.1276

Core Laboratories, Inc.
Reservoir Fluid Division

P. L. Moses HS

P. L. Moses
Operations Supervisor

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Petroleum Reservoir Engineering
DALLAS, TEXAS

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Pressure-Volume Relations of Reservoir Fluid

Company Canadian Pacific Oil and Gas Limited
Well Taber S 12-21
Field Taber South
Formation Taber Sandstone
County
State Alberta, Canada