



MANITOBA

THE OIL AND NATURAL GAS CONSERVATION BOARD
309 LEGISLATIVE BUILDING
WINNIPEG, MANITOBA
R3C 0V8

November 12, 1984

Roxy Petroleum Ltd.
2300, 700 - 9th Avenue S.W.
Calgary, Alberta
T2P 3V4

Attention: Mr. V. G. Johnson,
Vice President, Production

Dear Sirs:

Re: Roxy Andex Whitewater 12-2-3-21 (WPM)

Your letter of October 29, 1984 is acknowledged.

Your proposal to eliminate the accumulated overproduction on the subject well by March 31, 1985 is satisfactory to the Board.

We request that you keep the Board advised on any developments in your studies regarding pressure maintenance of the Whitewater WL B Pool and submit the results of any reservoir tests on a timely basis.

Yours sincerely,

THE OIL AND NATURAL GAS
CONSERVATION BOARD

ORIGINAL SIGNED BY

IAN HAUGH

Ian Haugh
Deputy Chairman

c.c. Marc Eliesen
J. F. Redgwell
Petroleum Branch



roxy PETROLEUM LTD.

2300, 700 - 9TH AVENUE SOUTH WEST CALGARY, ALBERTA, CANADA T2P 3V4 PHONE 1-403-294-4000

October 29, 1984

Manitoba Oil and Natural Gas
Conservation Board
309 Legislative Building
WINNIPEG, Manitoba R3C 0V8



Attn: Ian Haugh
Deputy Chairman
Oil and Natural Gas
Conservation Board

Dear Sir:

Re: Roxy-Andex Whitewater 12-2-3-21 (WPM)

Roxy Petroleum Ltd. has reviewed the subject well pursuant to your letter of October 23, 1984 and your request for a timetable to eliminate the well overproduction and for an update on the pool development potential.

It is proposed to eliminate the accumulated overproduction on this well by limiting oil production until the accumulated overproduction is eliminated by March 31, 1985. In addition to this, a pressure build-up survey will be conducted on the 12-2 well from mid-November to mid-December 1984 and this data will be submitted to the Conservation Board. The well will remain shut-in during the one month duration of this test (a report will be sent to the Conservation Board once the accumulated overproduction is eliminated).

With respect to Roxy studies and plans regarding pressure maintenance operations, Roxy forwards the following data and expected waterflood study schedule:

1. Attached herein is one copy of the Special Core Analysis Study done by Geotechnical Resources Ltd. in June 1984. The study determined several reservoir characteristics such as relative permeabilities, capillary pressure curves and formation fines mobilization necessary to evaluate the technical feasibility of waterflooding the reservoir.

Ian Haugh's office
pc: H. C. Moster/06Nov84
with attachments

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2. Reservoir Studies - A black oil three phase reservoir simulation is proposed on the Whitewater Lodgepole WL B Pool and is expected to be completed near the end of November, 1984.

The object of the enhanced oil recovery study would be to determine the optimal depletion of the Lodgepole B Pool. Several patterns of pressure maintenance (i.e. line drive, pattern flood, irregular) would be evaluated to determine an economic and technically feasible depletion strategy. A detailed report is expected to be submitted to the Manitoba Department of Energy and Mines not later than the first quarter of 1985.

3. Attachment No. 1 - Pressure Data Discussion and Raw Pressure Data.

Please note the Attachment No. 1 illustrates that apparently very minor reservoir pressure depletion was observed during the pressure build-up survey conducted in March 1984. The reservoir pressures will be confirmed by the build-up on the 12-2-3-21 WPM well.

If any questions should arise, please feel free to contact Mr. Elmer Pelensky at our Calgary office (403) 294-4061.

Yours truly,

ROXY PETROLEUM LTD.



for
V. G. Johnson
Vice President Production

EJP/kw/6

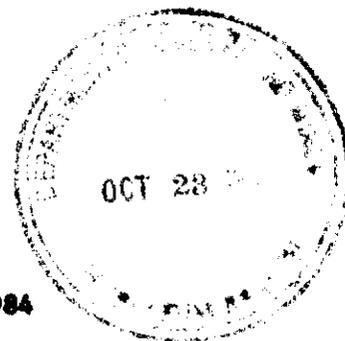
Attachments

ATTACHMENT NO. 1

PRESSURE DATA DISCUSSION

Pressure build-up tests performed during March, 1984 on the wells 6-2-3-21 WPM and 14-2-3-21 WPM show that extrapolated reservoir pressure, P^* is still 6500 kPa and 8000 kPa respectively. The Whitewater Lodgepole WL B Pool saturation pressure is approximately 1193 kPa as determined by AGAT Technologies in the Reservoir Fluid Study (Pressure - Volume - Temperature Study) conducted on the well 10-2-3-21 WPM in October 1983. Since the reservoir is still well above saturation pressure, continued production prior to implementing any enhanced oil recovery scheme would not result in any appreciable damage to the reservoir. Pressures would continue to be monitored to ensure that the reservoir pressure does not fall below saturation pressure.

COPY



October 23, 1984

Roxy Petroleum Ltd.
2300 - 7th Avenue S.W.
Calgary, Alberta
T2P 3V4

Attention: Mr. V. Johnson
Vice President, Production

Dear Sir:

Re: Roxy-Andax Whitewater 12-2-3-21 (WPM)

A review of production data for the subject well indicates that the well has produced in excess of its maximum permissible rate (MPR) for the past several months. The overproduction status for the well is detailed on the attached sheet.

Subsection 51(6) of The Petroleum Drilling and Production Regulations, 1984 requires that a well with accumulated overproduction in excess of its monthly MPR is to remain shut in until the overproduction has been reduced to zero.

Insofar as much of the overproduction accumulated prior to the effective date of the above Regulation, the Board is prepared to authorize continued production from the well, provided that the accumulated overproduction is eliminated by March 31, 1985. You are requested to submit before November 2nd your specific plans to eliminate the overproduction.

With respect to the Whitewater Lodgepole WL B Pool, the Board requests that you provide a status report on your studies and plans regarding pressure maintenance operations.

Yours sincerely

THE OIL AND NATURAL GAS
CONSERVATION BOARD

ORIGINAL SIGNED BY
IAN HAUGH

Ian Haugh
Deputy Chairman

Attachment

pc: Marc Eliesen
J. F. Redgwell
Petroleum Branch

LRD/IH/bb

12-2-3-21

<u>Month</u>	<u>Days Produced</u>	<u>Production (m³)</u>	<u>MPR (m³)</u>	<u>Cumulative Overproduction m³</u>
Dec. 83	1	4.6	39.8	-
Jan. 84	29	187.3	416.6 ^{373.6} (1)	-
Feb. 84	28	146.2	230.5	-
Mar. 84	31	319.3	246.4	72.9
Apr. 84	30	258.2	238.5	92.6
May 84	31	390.6	246.4	236.8
June 84	30	439.5	238.5	437.8
July 84	31	445.3	246.4	636.7
Aug. 84	31	372.0	240.0	768.7

Basis For MPR Calculation

July 1984 and prior MPR = 50 BPD

Test Allowable = 1250 BBL

Daily Maximum = 60 BPD

August 1984 and subsequent months MPR = 240 m³/mon.

(1) $\left[\frac{4}{5} \times 1250 + 60 \frac{29}{50(31-4)} \right] 0.1589873 \text{ bbl/m}^3 = \frac{373.6}{416.6} \text{ m}^3$