



File: 58550-02/1425

October 29, 1996

3300-4800-59240-

CNRL Unit #2 (04)

Mr. J.W. Harvey
Joint Venture Manager
Canadian Natural Resources Limited
2000, 425 - 1st Street S.W.
Calgary, Alberta
T2P 3L8

Dear Mr. Harvey:

RE: CURRANT HALFWAY GAS UNIT NO. 2

The Order in Council authorizing the Minister of Employment and Investment to enter into the Currant Halfway Unit Agreement No. 2 was approved September 19, 1996. The Honourable Dan Miller has now endorsed the agreement, two copies of which are enclosed for your records.

Thank you for your cooperation in processing this document.

Yours sincerely,

Gerald German
Director
Petroleum Titles Branch

Enclosure

Ministry of
Employment
and Investment

Energy and
Minerals
Division

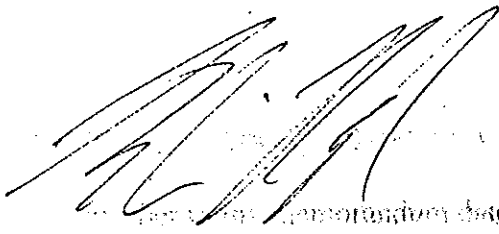
Mailing Address:
Petroleum Titles Branch
PO Box 9326
Stn Prov Govt
Victoria BC V8W 9N3

Location:
6th Floor, 1810 Blanshard Street
Victoria, BC
Telephone: (604) 952-0332
Facsimile: (604) 952-0331



There are no negative impacts on Crown revenues resulting from the proposed changes.

Please sign three copies each of the Currant Unit No. 1 Amending Agreement and the Currant Unit No. 2 Agreement, and have them returned to my office. Thank you.



Blair Redlin
Acting Deputy Minister

Attachment/Enclosures



Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources

Parliament Buildings
Victoria
British Columbia
V8V 1X4
Phone: (604) 952-0302 FAX: (604) 952-0291

6th Floor, 1810 Blanshard Street, Victoria, British Columbia V8V 1X4

August 10, 1995

950643
330-4800-59240-14

Approval Letters to Industry

Mr. Jeff Bergeson, P.Eng.
Exploitation Engineer
Canadian Natural Resources Limited
2000, 425-1st Street S.W.
Calgary, Alberta
T2P 3L8

bcc: D.L. Johnson
Resource Revenue
Data Management
P.S. Attariwala
R. Stefik
G. Farr
D. Richardson
S. Chicorelli
Wellfile
Daily
59070-04

Dear Mr. Bergeson:

**RE: APPLICATION TO COMMENCE GAS CAP BLOWDOWN
CURRANT HALFWAY "A" POOL**

This acknowledges receipt of your application dated June 15, 1995, and subsequent letter dated August 2, 1995, requesting approval to produce gas cap wells in the subject pool.

We concur that the Currant Halfway "A" oil pool and more specifically Currant Unit #1, operated by Canadian Natural Resources Limited, is now effectively depleted. Accordingly, blowdown of the gas cap is considered timely in this pool. Also, we note that the Working Interest Owners (CNRL and Morrison Petroleum Ltd.) are in agreement of forming the Currant Unit #2 in the gas cap of the pool.

Your proposal of producing only the d-27-C/94-A-16 at this time, while the proposed Currant Unit #2 is formalized, is hereby approved as per section 90 of the B.C. Drilling and production Regulation. Accordingly, a reserve based gas allowable of $12.9 \times 10^3 \text{ m}^3/\text{d}$ is hereby approved for the well effective August 1, 1995.

Yours sincerely,

B van Oort, P.Eng.
Acting Director
Engineering and Operations Branch

PSA/bd



June 1, 1992

M. K. Mullane
Land Administrator
Canadian Natural Resources Limited
1710, 300 - 5th Avenue S.W.
Calgary, Alberta
T2P 3C4

Dear Ms. Mullane:

RE: CURRANT UNIT NO. 1 ENLARGEMENT

4-C/94-A-16 added

I have enclosed two counterparts, with Exhibits "A" and "B" attached, that were signed by the Minister of Energy, Mines and Petroleum Resources on May 28, 1992. The enlargement of Currant Unit No. 1 should be effective 8:00 A.M., June 1, 1992, in accordance with clause 904 of the unit agreement.

Yours sincerely,

Gerald German
Commissioner
Petroleum Titles Branch
(604) 356-2786

Attachment

cc: Bruce Garrison
Peter Attariwala

otherwise dispose of the personal property and facilities used in connection with unit operations.

1504 Notice to Royalty Owners

The Working Interest Owners shall give notice in accordance with their Leases to their respective Royalty Owners of the termination of this Agreement within Thirty (30) days thereafter.

IN WITNESS WHEREOF the Parties have executed this Agreement each on the date shown opposite its execution hereof.

May 28, 1992

Date

Anne Edwards

Minister of Energy, Mines
and Petroleum Resources

Chris Ludwig

Witness

Petro-Canada Resources
P.O. Box 2844
Calgary, Alberta T2P 3E3
Telephone (403) 296-8000
Telex 03-821524

Ressources Petro-Canada
C.P. 2844
Calgary (Alberta) T2P 3E3
Téléphone (403) 296-8000
Télex 03-821524

cc. D. Johnson, Clotelok
cc P S A Harivalls
cc B. Garrison.



July 5, 1988

Mr. B. Van Oort
Chief Reservoir Engineer
Engineering and Operations Branch
Petroleum Resources Division
Ministry of Energy, Mines & Petroleum Resources
Parliament Building
Victoria, British Columbia
V8V 1X4

Dear Sir:

RE: COMPLETION OF CURRANT GAS CONSERVATION FACILITIES

Petro-Canada Resources hereby notifies the Branch that the Currant Gas Conservation Facilities to be installed by Petro-Canada were completed by 1988-05-24. These facilities have not been operated to date because significant gas production has not been possible. The lack of production ability is due to difficulties being experienced by d-16-C. This problem will be rectified shortly. Also, prior to the full utilization of the gas conservation facilities, Unocal must perform some lease work at their d-28-C/94-A-16 well. This is expected to be accomplished in July.

This notification is in accordance with the Branch request, and it is expected that the concurrent production approval will be in effect upon its receipt.

If you have any questions, please contact Martin Wichert at (403) 296-5731.

Yours truly,
PETRO-CANADA INC.

K. E. Sendall, P. Eng.
Engineering Supervisor
Reservoir Engineering North

458MW/July1/sl





Ref. No. 88718

May 31, 1988

Ms. K. E. Sendall
Petro Canada Resources
P.O. Box 2844
Calgary, Alberta
T2P 3E3

Dear Ms. Sendall

Re: Gas Allowable for Currant d-6-C/94-A-16
Currant Halfway "A" Concurrent Production

With respect to your request of 1988 05 09 for a gas allowable limit for the subject well, we hereby approve a gas production limit of $0.3 \times 10^3 \text{m}^3/\text{d}$.

An application by Unocal Canada Limited for the gas well d-28-C/94-A-16 was reviewed. A copy of our response is attached for your records.

Accordingly, condition No. 2 of the concurrent production approval of November 5, 1987 should now read as follows:

Gas production from each oil well will be limited as follows:

<u>Well</u>	<u>Gas Production ($10^3 \text{m}^3/\text{d}$)</u>
d-5-C	0.85
d-6-C	0.30
d-16-C	20.60
d-17-C	0.74
d-28-C	12.50

Please note that the effective date of the concurrent production approval will be the date the Branch is advised of completion of gas conservation facilities.

Letter dated July 5/88.

Yours truly,

B. van Oort
Acting Director, Engineering and Operations

PSA:ket

Attachment
- Approvals



Ref. No. 871029

November 5, 1987

*Gas Unit
being
formed*

Mr. R. T. Lien
Petro-Canada Resources
P.O. Box 2844
Calgary, Alberta
T2P 3E3

Petro-Canada Project (03)

Dear Mr. Lien:

Re: Application for Concurrent Production
Currant Halfway "A" Pool

This acknowledges receipt of your application dated 1987 10 08 requesting concurrent production approval for the subject pool under Section 113 of the Petroleum and Natural Gas Act.

Installation of gas gathering facilities is overdue in this mature waterflooded pool. The well d-16-C/94-A-16 was ordered to be restricted to a producing gas-oil ratio of 177 m³/m³ in April 1987 as unnecessary flaring of associated gas could not be accepted any longer. It is recognized that a gas unit is being formed to allow gas cap blowdown at a future date. As written confirmations were submitted by all interested parties, we wish to advise that your application for associated gas conservation is hereby approved subject to the following conditions:

1. The area of the concurrent production is as follows: units 5-7, 14-19, 24-29, 34-39 and 44-49 Block C/94-A-16. (Please note that unit 4-C/94-A-16 was not included in the approval area as it is Crown land.)
2. Gas production from each oil well will be limited as follows:

<u>Well</u>	<u>Gas Production (10³m³/d)</u>
d-5-C	0.85
d-16-C	20.60
d-17-C	0.74
d-28-C	9.70 12.5
d-6-c	0.30

} see attached letter
May 31, 1988.

Original



Mr. R. T. Lien
Page 2

3. All produced gas from these wells will be conserved.
4. The effective date of this approval will be the date the Branch is advised of completion of gas conservation facilities.
5. Production reports (BC S-1 and BC S-2) will continue to be filed separately for the Currant Unit No. 1 and the well Union HBOG et al Currant d-28-C/94-A-16.
6. This approval may be modified at a later date if deemed appropriate through a change of circumstances.

*As per entry
1988 05 24.
Letter attached?*

Yours truly,



E. Macgregor
Assistant Deputy Minister
Energy Resources Division

PSA/lgu

bcc: Resource Revenue
D. L. Johnson
P. K. Huus



Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources

Parliamentary bcc: P.K. Huus
Victoria M. Hamersley
British Columbia
V8V 1X4

April 23, 1987

Reference 87374

Petro Canada Resources
P.O.Box 2844
Calgary, Alberta
T2P 3E3

Attention: K.E. Sendall, P.Eng

Dear Madam:

Re: Currant Halfway Unit No.1

This is in response to your letter of 1987 02 24 regarding gas flaring from the Currant Halfway Unit No. 1.

Unitization and gas cap blowdown does not appear to be near, and flaring of gas cap continues at an excessively high level. The Branch has therefore concluded that certain measures should be taken to reduce the loss of reservoir energy. Therefore, as an interim measure, production from the well PEX et al Currant d-16-C/94-A-16 will be restricted to a producing gas-oil ratio of $177 \text{ m}^3/\text{m}^3$ effective May 1, 1987. This order is made under Division 13(e) of the Petroleum and Natural Gas Act.

Yours truly,

K.J. Hindmarch
Director
Engineering & Operations

PSA/rr

cc: D.L. Johnson

1654802
35004130

Ref. No. 5510

1978 07 24

Pacific Petroleum Ltd.
P.O. Box 6666
Calgary, Alberta
T2P 6T6

Attention: Mr. J. Pawelek, P. Eng.
Chief Reservoir Engineer.

Dear Sir:

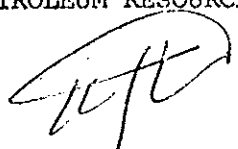
Re: Application for Good Engineering Practice - Currant Unit No. 1

We acknowledge receipt of your application dated July 3, 1978.

As you are aware we have received a written objection to your application from Union Oil Company which has interests in the gas cap and in the oil leg outside the Unit area. In the circumstances we consider that the Currant pool could be now considered as a candidate for concurrent production of the oil column and gas cap. However, we would prefer that a joint application be made by working interest owners in the pool before the Branch takes any course of action.

Yours truly

PETROLEUM RESOURCES BRANCH


A.G.T. Weaver
Chief Engineer
(604) 387-5993

BTB/AGTW:bm

c.c. Union Oil Company of Canada Limited
Attention: Mr. H.E. Hughes, P. Eng.
Manager of Engineering.



Approvals catalogue

PETROLEUM RESOURCES BRANCH
DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

June 23, 1975

Pacific Petroleum Ltd.,
P.O. Box 6666,
Calgary, Alberta
T2P 6T6

Attn: Mr. J.G. Goemans P. Eng.
Chief Engineer

Dear Sirs:

Re: 1975 Annual Pressure Survey
→ Curreant Unit No. 1
N. Req. Fort St. John Unit No. 1 *
Pacific-Atlantic Peejay Project
Peejay Unit No. 1
Peejay Unit No. 3
Weasel Unit No. 2
N. Rev. Peejay North Project ✓
N. App Osprey Project **
Weasel d-82-J/94-A-15
N. App Wolf Halfway Pool. **

We have reviewed your letter of March 11, 1975 presenting the proposed 1975 schedule and requesting biennial pressure surveys in all the above except Fort St. John Unit No. 1 and the Peejay North Project.

With regard to the latter, we hereby approve your application except for the Osprey Project and the Wolf Halfway Pool as considerable pressure history is now available. If a need for additional pressure information occurs in the future, this approval may be suspended or rescinded in whole or in part.

With regard to your 1975 schedule, we believe that additional pressure data should be obtained in the following:-

Peejay Unit No. 1	b-28-E/94-A-16 b-57-E/94-A-16
Weasel Unit No. 2	d-3-B/94-H-2 d-15-B/94-H-2
Wolf Halfway Pool	b-3-G/94-A-15

June 13, 1972.

Pacific Petroleum Ltd.,
P.O. Box 6666,
Calgary 1, Alberta.

Attention: Mr. J.G. Goemans.

Dear Sir:

Re: Additional Injector, Curreant Unit #1

Your application to inject water into the Halfway Pool, Curreant Field, through the well located in d-7-C/94-A-16 is approved. This approval will become operative on the effective date of Unit enlargement; I believe our Titles Branch have been in contact with you concerning this.

Before conversion of the well is carried out, details of the proposed workover should be submitted to our Development Engineering Section on the usual triplicate copies of the form 'Application to Alter a Well'.

Yours truly,

A. J. Dingley,
Senior Reservoir Engineer.

AJD/pd
c.c. - D.L. Johnson
~~XXXX~~ W.L. Ingram
b.c.c. - Approvals Catalogue. ✓



WHEN REPLYING PLEASE REFER TO

FILE NO. U-2-23-P1

DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

April 14, 1970

Pacific Petroleums Limited
Box 6666
Calgary, Alberta

Attention: Mr. A.D. Rogan

Dear Sir:

Re: Additional Injector b-26-C/94-A-16
Currant Unit No. 1

We were pleased to receive yesterday your request, dated April 3, 1970, for approval to convert the subject well to water injection service.

This is to advise that the request is granted. The Branch Development Engineering Section is being informed by copy of this letter. However, before the conversion is carried out details of the work-over should be entered on the usual triplicate copies of form 6 'Application to Alter a Well', which should be forwarded to the Development Engineering Section in Victoria, B.C.

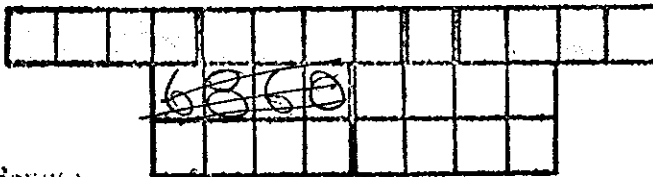
Yours truly,

A. J. Dingley
Senior Reservoir Engineer

AJD:lhk

cc DLJ
WLI

bcc Approvals Catalogue



Ref. No. 11695

10/15/82

1982 11 15

Wainoco Oil and Gas Limited
14th Flr., 311 - 6th Avenue, S.W.
CALGARY, ALBERTA
T2P 0R6

Attention: Mr. D. G. Campbell, P. Eng.
Chief Reservoir Engineer

currant west

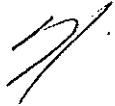
Dear Sir:

Re: Exemption From Annual Reservoir Pressure Surveys
Wainoco et al Currant d-42-D/94-A-16, Halfway 'A' Pool

This acknowledges receipt of your letter of 1982 11 01 on the above. We have reviewed the pressure/production history of the pool and hereby approve biennial pressure surveys for the Halfway 'A' pool in well d-42-D/94-A-16. The first pressure to be taken under this approval should be scheduled for 1984.

Yours truly,

PETROLEUM RESOURCES DIVISION


P.S. Attariwala
Reservoir Engineer
(604) 387-5993

JB:wml

cc. D. L. Johnson
Fort St. John

Copy for Review

U-2-23-P1

September 27, 1967

Mr. A. D. Rogan,
Manager of Production,
Pacific Petroleum Ltd.,
P. O. Box 6666,
Calgary, Alberta.

Dear Sir:

Re: Application for Approval of a Pressure
Maintenance Scheme - Currant Unit No. 1

Notice of the application dated July 24 for approval of a pressure maintenance scheme involving water injection in the Halfway Pool in that part of the Currant field comprising Currant Unit No. 1, and for a joint M.P.R. of 781 barrels of oil per day was published in the British Columbia Gazette on August 3 and 10. As no written objections were received the application, as amended by your letter of August 25 decreasing the M.P.R. to 627 barrels of oil per day, is approved effective September 1, 1967 under Section 117 of the Petroleum and Natural Gas Act, 1965 subject to the following conditions:

1. The volume of water to be injected, the rate of injection and the wells into which water will be injected shall be as approved by the Chief of Branch.
2. The joint M.P.R. of 627 barrels of oil per day shall become effective on the first day of the month in which the injection of water begins.
3. The joint M.P.R. prior to the commencement of water injection and effective September 1, 1967 shall be equal to the sum of the primary M.P.R.s of the wells in the Unit.
4. Adequate records shall be kept concerning the operation of the scheme and these shall include records of the volumes of all fluids produced and injected.
5. The Chief of Branch may review from time to time the operation of the scheme and may issue general or special orders concerning it including amendment of the original approval if he deems it necessary.

Yours very truly,

Original signed by K. B. B.

MINISTER