



May 1, 2000

Mr. Dick VanAppelen
Exploitation Engineer
Canadian Natural Resources Limited
2000, 425 - 1st St. SW
Calgary, AB T2P 3L8

CNRL Project B (04)
E (06)
H (08)
J (10)
K (11)
N (13)
O (14)

Dear Mr. VanAppelen:

**RE: APPLICATIONS FOR CONCURRENT PRODUCTION WITH
GOOD ENGINEERING PRACTICE AMENDMENTS
BUICK CREEK LOWER HALFWAY "B", "E", "H", "J", "K", "N" and "O" POOLS**

Attached are amendments to the Concurrent Production Approvals with Good Engineering Practice (GEP) for the subject pools, as requested in your application dated March 7, 2000.

The approvals are amended under section 97 of the Petroleum and Natural Gas Act. The approvals are intended to allow operational flexibility in order to maximize oil recovery. Also, the approvals will allow the drilling of additional multi-lateral wells to access undrained portions of these pools to improve primary recovery.

It should be noted that the approval conditions may be modified if another operator completes oil wells outside the project area in the subject pools. Please note that Talisman Energy Inc., operator of the Lower Halfway "A" pool, would also be entitled to receive a similar approval.

Sincerely,

Craig Gibson, P. Eng.
Manager
Reservoir Engineering and Geology

Attachments

**Approval Letters to Industry
GEP, SWD, CONCURRENT PROD,
PRESSURE MAINTENANCE,
WATERFLOOD, ETC.**

Copy 10

- Wellfile (originals)
- 59240
- Daily
- Resource Revenue
- S. Chicorelli
- R. Stefik
- G. Farr
- P. Attariwala
- C. Gibson
- D. Krezanoski

ENGINEERING AND GEOLOGY BRANCH

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Location: 6th Flr 1810 Blanshard St. Victoria BC

Headquarters: #200, 10003 110th Ave, Fort St. John BC V1J 6M7 Tel: (250) 261-5729 Fax: (250) 261-5744

APPROVAL 90-07-002 (AMENDMENT #1)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

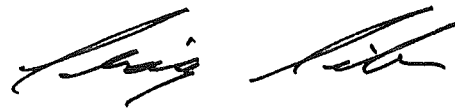
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "B" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act R.S.B.C. 1996, c.361 hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of February 7, 1990 is amended, subject to the conditions herein contained and, in particular:

1. The area of the scheme shall consist of units 56 - 58, 66 - 68, 77 and 78 of Block I/ 94-A-11.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than $4.0 \text{ m}^3/\text{d}$ must be shut-in if the GOR exceeds $1,800 \text{ m}^3/\text{m}^3$.
4. Gas production from the project will be limited to $85.0 \cdot 10^3 \text{ m}^3/\text{d}$.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not completed nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 15th day of May, 2000.

APPROVAL 95-07-003 (AMENDMENT #2)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "E" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act, hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of March 3, 1995 modified on April 3, 1996 is hereby amended, subject to the conditions herein contained and, in particular:

1. The area of the scheme shall consist of legal subdivisions 1 to 8, fractional 9, fractional 10, fractional 11 and fractional 12 of section 34-88-20 W6M, legal subdivisions 1 to 8, fractional 9, fractional 10, fractional 11 and fractional 12 of section 35-88-20 W6M, and fractional units 16 to 18 of Block I/94-A-11.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate less than $4.0 \text{ m}^3/\text{d}$ must be shut-in if the GOR exceeds $1800 \text{ m}^3/\text{m}^3$.
4. Gas production from the project will be limited to $143.0 \cdot 10^3 \text{ m}^3/\text{d}$.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not completed nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 17th day of May, 2000.

APPROVAL 95-07-004 (AMENDMENT #1) ✓

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

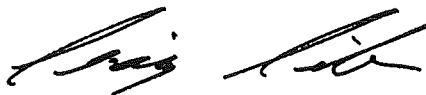
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "H" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act, hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of December 15, 1995 is amended, subject to the conditions herein contained and, in particular:

1. The area of the scheme shall consist of units 44 and 55 of Block A/94-A-14.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than 4.0 m³/d must be shut-in if the GOR exceeds 1,800 m³/m³.
4. Gas production from the project will be limited to 35.0 10³ m³/d.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not completed nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this ^{5th} day of May, 2000.

APPROVAL 96-07-003 (AMENDMENT #3)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

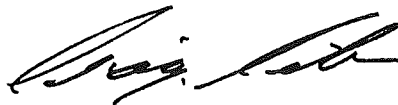
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "J" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act R.S.B.C. 1996, c.361 hereby approves an amendment to the Concurrent Production project of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of April 3, 1996 modified on May 8, 1997 and on October 28, 1999 is amended, subject to the conditions herein contained and, in particular:

1. The area of the scheme shall consist of fractional units 16 – 18, units 26 - 29, 38 and 39 of Block I/94-A-11.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than 4.0 m³/d must be shut-in if the GOR exceeds 1800 m³/m³.
4. Gas production from the project will be limited to 161.8 10³ m³/d.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not completed nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 1st day of May, 2000.

APPROVAL 96-06-003 (Amendment #2)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

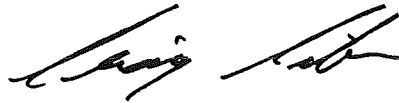
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "K" oil pool without spacing and target restrictions, and without a project allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act, hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of December 7, 1996 modified on April 6, 1998 is amended, subject to the conditions herein contained and in particular:

1. The area of the scheme shall consist of units 38, 48, 56 - 58 of Block I/94-A-11.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than $4.0 \text{ m}^3/\text{d}$ must be shutⁱⁿ if the GOR exceeds $1800 \text{ m}^3/\text{m}^3$.
4. Gas production from the project will be limited to $80.4 \cdot 10^3 \text{ m}^3/\text{d}$.
5. All gas production will be conserved.
6. In accordance with section 76(8) of the Drilling and Production Regulation, oil production from well a-58-I/94-A-11 (WA 9766) is limited to an adjusted individual well daily oil allowable of 54.7 m^3 .
7. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not nearer than 100 m to the sides of the approved area.
8. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this ^{1st} day of May, 2000.

APPROVAL 98-07-004 (AMENDMENT #1)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

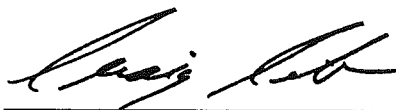
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "N" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Division Head, pursuant to section 97 of the Petroleum and Natural Gas Act, hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of March 26, 1998 is amended, subject to the conditions herein contained and in particular:

1. The area of the scheme shall consist of units 36, 46, 55 and 56 of Block A/94-A-14.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than $4.0 \text{ m}^3/\text{d}$ must be shut-in if the GOR exceeds $1800 \text{ m}^3/\text{m}^3$.
4. Gas production from the project will be limited to $33.2 \cdot 10^3 \text{ m}^3/\text{d}$.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 15th day of May, 2000.

APPROVAL 98-07-005 (AMENDMENT #1)

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

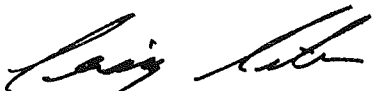
IN THE MATTER of a Concurrent Production scheme with Good Engineering Practice of Canadian Natural Resources Limited (CNRL) for producing the Buick Creek Lower Halfway "O" oil pool without spacing and target restrictions, and without a project oil allowable.

NOW, THEREFORE, the Commission, pursuant to section 97 of the Petroleum and Natural Gas Act R.S.B.C. 1996, c.361 hereby approves an amendment to the Concurrent Production scheme of CNRL for concurrent production of oil and gas without an oil allowable, as such scheme is described in:

an Application from CNRL to the Commission dated March 7, 2000.

The scheme approval of March 26, 1998 is amended, subject to the conditions herein contained and, in particular:

1. The area of the scheme shall consist of units 43 - 45, 54 and 55 of Block N94-A-14.
2. The project daily oil allowable is waived.
3. Any well producing at an oil rate of less than $4.0 \text{ m}^3/\text{d}$ must be shut-in if the GOR exceeds $1,800 \text{ m}^3/\text{m}^3$.
4. Gas production from the project will be limited to $106.3 \cdot 10^3 \text{ m}^3/\text{d}$.
5. All gas production will be conserved.
6. The requirements of section 9 of the *Drilling and Production Regulation* are hereby waived, provided that oil wells within the scheme area are not completed nearer than 100 m to the sides of the approved area.
7. This approval may be modified or rescinded at a later date if deemed appropriate.



Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 1st day of May, 2000.