

February 13, 2003

6800-4800-59240-09 OGC - 03043

Wayne Kennedy, P.Eng. Exploitation Engineer Canadian Natural Resources Limited 2500, 855 – 2nd Street SW Calgary, AB T2P 4J8

CNRL UNIT #2 (03) CNRL UNIT #3 (04)

Dear Mr. Kennedy:

RE: APPLICATION FOR PRESSURE MAINTENANCE AMENDMENTS PEEJAY HALFWAY UNITS #2 & #3

This refers to your application dated January 20, 2003 wherein you requested approval to modify the waterflood pressure maintenance schemes in the Peejay Halfway Units #2 and #3 by converting shut-in oil wells to water injector service.

Attached is Approval # 66-09-001 (Amendment #6) for the Unit #2 and Approval 67-09-001 (Amendment #7) for the Unit #3. These amendments incorporate revised water injection locations within each Unit for improved waterflood sweep.

We note that you plan to resume water injection into several suspended injection service wells within Units #1, #2, #3 and the Peejay Halfway Project area, and re-start other suspended production wells within Unit #1, Unit #2 and Unit #3. This along with the new water injectors should improve oil recovery for the Peejay field.

Please note that an "Application to Alter a Well" must be submitted to the Fort St. John office of the Commission, as well as the form BC-11 submitted to the Ministry of Provincial Revenue. The Form BC-S18 "Monthly Injection/Disposal Statement" must be maintained.

Should you have any questions, please contact Peter Attariwala at (250) 952-0311 or Ron Stefik at (250) 952-0310.

Sincerely,	Approval Letters to Industry GEP, SWD, CONCURRENT PROD, PRESSURE MAINTENANCE, WATERFLOOD, ETC. Copy 9
Craig Gibson, P. Eng.	Wellfile (originals) 59240
Manager Reservoir Engineering and Geology	Daily Resource Revenue S. Chicorelli
Attachments	R. Stefik G. Farr
ENGINEERING AND GEOLOGY BRAJ PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3 Tel: (250) 98	P. Attariwala D. Krezanoski

Location: 6th Fir 1810 Blanshard St. Victor

APPROVAL 67-09-001 (AMENDMENT #7)

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

IN THE MATTER of a pressure maintenance scheme of Canadian Natural Resources Limited (CNRL) for waterflood recovery of oil by water injection into the Peejay Halfway Unit #3. (04)

The approval granted pursuant to Section 100 of the <u>Petroleum and Natural Gas Act</u>, R.S.B.C. 1996, c.361 is hereby amended as follows:

The pressure maintenance scheme of CNRL for waterflood recovery of oil from the Peejay Halfway Unit #3 as described in the application dated February 9, 1967 and modified on June 20, 1990 (Amendment #6) is hereby amended, subject to the terms herein contained:

- The Unit #3 area of the pressure maintenance scheme consists of: 94-A-15:
 Block H: units 34, 44, 45, 51-58, 62-68, 73-78, 84-88 and 95-99.
- 2. The project daily oil allowable, being the sum of the individual well allowables, is 1090.9 m³.
- 3. Water may be injected into the Peejay Unit #3 through the wells located at d-44-H, d-51-H, b-52-H, d-52-H, d-56-H, d-58-H, b-64-H, d-64-H, d-73-H, b-76-H, d-84-H, b-86-H, d-87-H, d-88-H, b-95-H, d-95-H and d-98-H/94-A-15.
- 4. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
- 5. All associated gas will be conserved.
- 6. An oil well may be drilled anywhere within the project area provided that it is not nearer than 100 m to the sides of the project area.
- 7. The operations of the pressure maintenance scheme will be subject to periodic review and modification to the approval may be ordered, if deemed appropriate.

Craig Gibson

Manager

Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this /3 day of February, 2003.

APPROVAL 66-09-001 (AMENDMENT #6)

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

IN THE MATTER of a pressure maintenance scheme of Canadian Natural Resources Limited (CNRL) for waterflood recovery of oil by water injection into the Peejay Halfway Unit #2.

The approval granted pursuant to Section 100 of the <u>Petroleum and Natural Gas Act</u>, R.S.B.C. 1996, c.361 is hereby amended as follows:

The pressure maintenance scheme of CNRL for waterflood recovery of oil from the Peejay Halfway Unit #2 as described in the application dated September 26, 1966 and modified on March 13, 2000 (Amendment #5) is hereby amended, subject to the terms herein contained:

1. The Unit #2 area of the pressure maintenance scheme consists of:

94-A-16:

Block C: units 59, 60, 68-70, 78-80, 88-90, 98-100

Block D: units 62, 63, 71-73, 81-83, 91-93

Block E: units 1-3, 11-13, 22-26, 33-35, 43, 45, 46

Block F: units 9 and 10.

- 2. The project daily oil allowable, being the sum of the individual well allowables, is 1307.7 m³.
- 3. Water may be injected into the Peejay Unit #2 through the wells located at d-59-C, b-68-C, d-70-C, d-99-C, d-100-C, d-71-D, d-72-D, d-82-D, d-83-D, d-12-E, d-13-E, d-25-E and d-35-E/94-A-16.
- 4. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
- 5. All associated gas will be conserved.
- 6. An oil well may be drilled anywhere within the project area provided that it is not nearer than 100 m to the sides of the project area.
- 7. The operations of the pressure maintenance scheme will be subject to periodic review and modification to the approval may be ordered, if deemed appropriate.

Craig Gibson

Manager

Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 19 day of February, 2003.