

OIL & GAS COMMISSION

4900-4575-59240-09 OGC - 05271

Approval Letters to Industry GEP, SWD, CONCURRENT PROD,

October 7, 2005

Mr. Nam Pui Exploitation Engineer Canadian Natural Resources Limited Suite 2500, 855 – 2 Street SW Calgary, AB T2P 4J8

Dear Mr. Pui:

RE:	APPLICATION TO AMEND	WATERFLOOD APPROVAL
	<u>INGA - INGA UNIT #1</u>	

PRESSURE MAINTENANCE,
WATERFLOOD, ETC.
Copy 9
Wellfile (originals)
59240
Daily
Resource Revenue
S. Chicorelli
R. Stefik
G. Farr
R. Slocomb

D. Krezanoski

The Commission has reviewed your application, dated September 15, 2005 requesting approval to convert the well **CNRL Inga 14-18-88-23 (WA #3224)** to water injection service.

Attached is Approval # 68-09-003 (Amendment #5) for the application, granted under Section 117 of the Petroleum and Natural Gas Act.

We concur with your conclusions that the conversion of this suspended well to water injection service will provide pressure support to the producing wells. This should result in incremental oil recovery from Inga Unit #1. Accordingly, approval is hereby granted to convert the well 14-18-88-23 W6M to water injection service.

You state in your application that the well 14-18 was worked over and converted to water injection service in September 2004. The Commission records show that an "Application to Alter a Well" was not submitted and approved prior to the workover being performed. Therefore, before the conversion is performed, the form "Completion/Workover Report" must be submitted to the Commission's Operations Engineering Branch, 200, 10003-110 Avenue, Fort St. John, BC V1J 6M7.

Sincerely.

Richard Slocomb Acting Director

Resource Conservation Branch

Phone: (250) 952-0302 Fax: (250) 952-0291

APPROVAL 68-09-003 (AMENDMENT #5)

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 Inga - Inga Unit #1.

The approval granted pursuant to Section 117 of the Petroleum and Natural Gas Act, 1965 is hereby amended as follows:

The pressure maintenance scheme of CNRL for waterflood recovery of oil from the Inga - Inga Unit #1 as originally approved dated December 11, 1968 is hereby amended, subject to the terms herein contained:

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

Twp 87-Rge 23 W6M: N/2 Sec 32 and Sec 33

Twp 88-Rge 23 W6M: Sec 4-8, S /2 & NW/4 Sec 9, S/2 Sec 16, Sec 17-19, S/2 Sec 20 and S/2

Sec 30

Twp 88-Rge 24 W6M: N/2 Sec 1, Sec 12, 13, N/2 Sec 23, Sec 24 - 26, Frac Sec 35 and Frac Sec 36

94-A-12 Block J: Frac units 5-8, units 15-18 and 27.

- 2. The project daily oil allowable is 1151.5 m³.
- 3. Water may be injected into the Inga Unit #1 through the wells located at 16-32 and 16-33-87-23 W6M, 6-6, 16-6, 13-7, 6-8, 6-9, 6-16, 6-18, 14-18, 6-20 and 6-30-88-23 W6M, 6-13, 16-24 and 1-36-88-24 W6M and d-27-J/94-A-12.
- 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.

Richard Slocomb

Acting Director

Resource Conservation Branch

DATED AT the City of Victoria, in the Province of British Columbia, this /O day of October, 2005.