



Province of
British Columbia

ASSISTANT DEPUTY MINISTER

Ministry of
Energy, Mines and
Petroleum Resources

Parliament Buildings
Victoria
British Columbia
V8V 1X4

June 19, 1989

Mr. N.R. Shular
Manager, Engineering
Unocal Canada Limited
150 - 6th Avenue S.W.
Box 1180
Calgary, Alberta
T2P 2K9

** will become
part of Valma field
Gething gas pool
87
89-09-06*

Dear Mr. Shular:

NETTLE CONCURRENT PRODUCTION
GETHING "A" POOL

This acknowledges receipt of your letter of May 23, 1989, in which you request rescinding of the Nettle Gething Concurrent Production scheme, and redefinition of the pool to a gas pool.

In view of the advanced stage of depletion of this pool and the concomitant high GOR, it is agreed that the pool should be reclassified to a gas pool with oil recovery as a secondary product to gas production. Therefore, the concurrent production approval is hereby rescinded and the wells d-67-A and d-68-A/94-H-7 are assigned a minimum daily gas allowable of 60.0 10³m³ each, effective June 1, 1989.

Approved Daily Gas Allowable forms are enclosed for your records.

Yours sincerely,

John Allan
Assistant Deputy Minister
Energy Resources Division

Enclosures

cc: Mr. D.L. Johnson
Manager, Field Office
Fort St. John

Mr. B. Garrison
Manager,
Petroleum Revenues Branch

bcc: R. Stefik ✓
L. Macgregor



Well Authorization No. 1879

U.W.I. _____

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

APPLICATION FOR DAILY GAS ALLOWABLE
INDIVIDUAL WELL

Form to be submitted in duplicate to the Energy Resources Division, Ministry of Energy, Mines and Petroleum Resources, Victoria, B.C.

Initial Application/Revision No. _____

Well name Union KCL Pex Nettle Location d-68-A/94-H-7

Field Nettle Pool Gething "A"

Depth to top of gas column _____ mKB obtained from _____

Depth to bottom of gas column _____ mKB obtained from _____

Factors	Units	Owner's Calculations		Division Calculations
		Values Obtained from —	Values Used in This Calculation	
Average net pay thickness (h)	metres			3.4
Average net porosity (∅)	Fraction			.140
Average interstitial water (Nominal 0.25) (C)	Fraction			.424
Initial pool pressure at MPP P _i (P _i)	kPa			6688
Initial supercompressibility factor (Z _i)				0.876
Assumed abandonment pressure P _a (P _a)	kPa			760
Abandonment supercompressibility factor (Z _a)				0.988
Assigned area (A)	Ha			279.7
Formation temperature (T)	K			327

Recoverable raw gas (10⁶m³) = 28.43819 × 10⁻³ Ah ∅ (1-C) $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$ 45.79

Unadjusted daily gas allowable (10³m³/d) = 7.79128 × 10⁻³ Ah ∅ (1-C) $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$ 12.5

Dated at _____ this _____ day of _____ 19 _____

Signed by _____ Company _____

Position _____

APPROVAL * minimum allowable

Off-target penalty factor 1.0 Water penalty factor _____

Daily gas allowable 60.0* 10³m³, before water penalty factor.

Date effective May 23, 1989 Pool Gething A

Field Nettle

Dated June 6, 19 89

[Signature]
Officer of the Division



Well Authorization No. 1321
 U.W.I.

Province of British Columbia
 Ministry of Energy, Mines and Petroleum Resources

APPLICATION FOR DAILY GAS ALLOWABLE
INDIVIDUAL WELL

Form to be submitted in duplicate to the Energy Resources Division, Ministry of Energy, Mines and Petroleum Resources, Victoria, B.C.

Initial Application/Revision No. ~~XXXXXXXXXX~~

Well name Union KCL PEX Nettle Location d-67-A/ 94-H-7

Field Nettle Pool Gething A

Depth to top of gas column mKB obtained from

Depth to bottom of gas column mKB obtained from

Factors	Units	Owner's Calculations		Division Calculations
		Values Obtained from --	Values Used in This Calculation	
Average net pay thickness (h)	metres			3.9
Average net porosity (Ø)	Fraction			.146
Average interstitial water (Nominal 0.25) (C)	Fraction			.391
Initial pool pressure at MPP P _i (P _i)	kPa			6688
Initial supercompressibility factor (Z _i)				0.876
Assumed abandonment pressure P _a (P _a)	kPa			760
Abandonment supercompressibility factor (Z _a)				0.988
Assigned area (A)	Ha			279.7
Formation temperature (T)	K			327

Recoverable raw gas (10⁶m³) = 28.43819 × 10⁻³ Ah Ø (1-C) $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$ 57.91

Unadjusted daily gas allowable (10³m³/d) = 7.79128 × 10⁻³ Ah Ø (1-C) $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$ 15.9

Dated at this day of 19

Signed by Company

Position

*minimum allowable
 APPROVAL

Off-target penalty factor 1.0 Water penalty factor

Daily gas allowable 60.0* 10³m³, before water penalty factor.

Date effective May 23, 1989 Pool Gething A

Field Nettle

Dated June 6, 1989

[Signature]
 Officer of the Division