



*approval*

Ref. No. 8439

1984 01 13

bcc: P. K. Huus ✓  
W. L. Ingram

Canterra Energy Ltd.  
P.O. Box 1051  
Calgary, Alberta  
T2P 2K7

Attention: Mr. John Wansleeben, P. Eng.

Dear Sir:

WA 2613  
Re: Application for Good Engineering Practice Area  
Tenn Osprey d-13-J/94-A-15, Osprey - Halfway  
CDCOG

*Canterra  
(CDCOG) GEP Project (3)  
(Cont. Prod.)*

This will acknowledge receipt of your application dated 1983 12 19,  
requesting approval of a Good Engineering Practice area and allowable  
for the well Tenn Osprey d-13-J/94-A-15.

This is to advise that your application is approved as the well d-13-J  
is located in a pool which is being produced under a concurrent  
production scheme. The conditions of this approval are as follows:

1. The GEP area consists of units 12, 13, 22 and 23-J/94-A-15.
2. The gas allowable for the area, based on volumetric gas reserves in the area of approval, is  $17.5 \times 10^3 \text{ m}^3/\text{d}$ .
3. This approval could be modified at a later date if deemed appropriate through a change in circumstances.

Yours truly,

PETROLEUM RESOURCES DIVISION

*A. G. T. Weaver*

A. G. T. Weaver  
Director, Engineering and Operations  
(604) 38-5993

PSA:him

cc: D. L. Johnson





*Husky*

MINISTRY OF MINES AND PETROLEUM RESOURCES  
PETROLEUM RESOURCES BRANCH

APPLICATION FOR DAILY GAS ALLOWABLE  
INDIVIDUAL WELL

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

Initial Application/Revision ~~XXXXXX~~

Well name Tenn Osprey 2613 Location d-13-J/94-A-15  
Field Osprey Pool Halfway  
Depth to top of gas column 1142 1141.2 m obtained from log interpretations  
KB  
Depth to bottom of gas column 1146 1145.2 m obtained from log interpretations  
KB

Factors	Nominal Values	Owner's Calculations		Branch Calculations
		Values Obtained from—	Values Used in This Calculation	
Average net pay thickness (b)		Table 1	4.0	2.5
Average net porosity (ø)	Fraction	Table 1	0.21	.189
Average interstitial water (C)	0.25	Table 1	0.27	.185
Initial pool pressure at MPP P <sub>i</sub> (kPa)		ref. 1 p.509	9542	9598
Initial supercompressibility factor (Z <sub>i</sub> )		ref. 1 p.509	0.865	0.828
Assumed abandonment pressure P <sub>a</sub> (kPa)		estimate	300	1135
Abandonment supercompressibility factor (Z <sub>a</sub> )		calculated	0.995	0.977
Assigned area ( <i>mapped</i> ) (A)		ref. 1 p.509	259	183
Formation temperature (T°K)		ref. 1 p.509	329	327

Recoverable raw gas (10<sup>6</sup>m<sup>3</sup>) = 28.43819 × 10<sup>-3</sup> Ah ø (1-C)  $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$  147.30 × 10<sup>6</sup> m<sup>3</sup> 63.9

Unadjusted daily gas allowable (10<sup>3</sup>m<sup>3</sup>/d) = 7.79128 × 10<sup>-3</sup> Ah ø (1-C)  $\left(\frac{P_i}{Z_i} - \frac{P_a}{Z_a}\right) \frac{1}{T}$  40.35 × 10<sup>3</sup> m<sup>3</sup>/d 17.5

Dated at Calgary, Alberta this 16<sup>th</sup> day of December 1983  
Signed by J. Woudseeban Company Canterra Energy Ltd.  
Position Manager Reservoir Engineering

(For Branch use only)

APPROVAL

Off-target penalty factor 1.0 Water penalty factor \_\_\_\_\_  
Daily gas allowable 17.5 10<sup>3</sup>m<sup>3</sup>, before water penalty factor.  
Date effective \_\_\_\_\_ Pool Halfway 'A'  
Field Osprey

Dated January 13, 1984

*[Signature]*  
Officer of the Branch