

August 23, 1999

3600-4580-59240-07 990443

Mr. Ron Bryant Petro-Canada Oil and Gas P.O. Box 2844 Calgary AB T2P 3E3

Dear Mr. Bryant:

RE: CONCURRENT PRODUCTION APPROVAL, PETRO-CANADA UNIT #1 FORT ST. JOHN NORTH PINE "A" POOL

The Commission has received a letter dated August 18, 1999, from Calahoo Petroleum Ltd. (Calahoo), stating concerns regarding the re-activation of the Fort St. John North Pine A Unit #1. Specifically, that the completion of well 13-14-83-18 in the gascap will allow the Unit to deplete reservoir energy and have a negative impact on pool oil recovery.

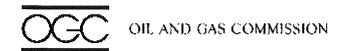
A Concurrent Production scheme was approved for Unit #1, covering a portion of the subject pool, on June 1, 1977, with a daily oil allowable of 53.1 m³ and a gas production limit of 56.3 e³m³. The approval of a concurrent scheme allows the simultaneous production of both gas and oil from an oil pool and eliminates the gas-oil ratio adjustment factor for the oil allowable, however the primary objective remains to maximize oil recovery. At this time there is no production from any of the oil wells within Unit #1.

Present production information indicates that there are three producing, high GOR, oil wells in the North Pine "A" pool, operated by Calahoo. As these wells are draining a portion of the gascap, as well as solution gas reserves, other wells in the pool remain entitled to gascap withdrawal. The total gas production limit for the Unit remains at 56.3 e³m³ per day. However, since the well 13-14 is not expected to contribute to pool oil recovery, an individual well daily gas allowable (DGA) is being issued to control gascap blowdown. Therefore, attached is a DGA of 19.8 e³m³ for the well PEX WP FT ST JOHN 13-14-83-18 (WA# 194).

A well producing under a DGA is subject to a "daily production limit", defined as a volume equal to 125% of the daily allowable. Please note that total gas production must not exceed the DGA multiplied by the number of days from the date of initial production to October 31, the end of the annual production period. Sections 87 through 89 of the Drilling and Production Regulation further define gas production restrictions.

	Sincerely,	GEF PRE	proval Letters to Industry P, SWD, CONCURRENT PROD ESSURE MAINTENANCE, TERFLOOD, ETC.					
/	Bou van Oort, P. Eng. Director Engineering and Operations Branch	L	Wellfile (originals) 59240 Daily Resource Revenue R. Stefik G. Farr					
	Attachment	Ema						
	cc: Dennis Taylor, Calahoo Petroleum Ltd.		S. Chicorelli C. G. bson					
	ENGINEERING AND GEOLOGY BRANCH P. S. Attarinal							

PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3 Tel: (250) 952-0302 Fax: (250) 952-0291 Location: 6th Flr 1810 Blanshard St. Victoria BC



Mailing Address: Engineering and Geology Branch PO BOX 9329 STN PROV GOV'T VICTORIA BC V8W 9N3 Location: 1810 Blanshard St - 6th Fl Victoria BC V8T 4J1 Phone: (250) 952-0302

FAX: (250) 952-0291

59070-03/WA

APPLICATION FOR DAILY GAS ALLOWABLE (DGA)

Individual Well

Form must be submitted under the authority of the Petroleum and Natural Gas Act R.S.B.C. 1996, c. 361, Drilling and Production Regulation, s.88, to the Oil and Gas Commission, at the address noted above. Information collected on this form will be used for public record in accordance with s.57 of the Drilling and Production Regulation.

	☐ Initial Application			Revision I			
Well Name		PEX WP	FT ST J	JOHN 13-14-83-18		Well Authorization No. 0194	
Field	Fort St. John		Pool		North Pine "A"		
Factors		Units	Value	Owner's es Obtained from		ions ues Used in This Calculation	COMMISSION USE ONLY Branch Calculations
Depth to top gas pay		mKb					
Depth to bottom gas pay		mKb					
Assigned area	А	hectares					260.6
Average net pay thickness	h	metres					1.9
Average net porosity	φ	fraction				***************************************	0.146
Average water saturation (Nominal 0.25)	S _w	fraction					0.20
Initial pool pressure at MPP	Pi	kPaa					13,231
Formation temperature	Т	К					325
Initial supercompressibility factor	Z _i						0.835
Recovery factor	R	fraction					.90
Unadjusted Daily Gas Allowa	$\frac{\text{(Pi R)}}{\text{TZi}} \left(\frac{1}{3.65} \right)$	50			19.8		
Name		Position					
Signature		Company					
Date Phone No.			•	FAX No.			
		APP	ROVAL (fo	or commission use	only)		
Off-target penalty factor	1.00		Da (minimum Ut	ily gas allowab DGA is 60.0 10³m³ in	le 19 accordance	9.8 with Section 1 of the I	10 ³ m ³ Prilling and Production Regulation)
Date Effective	August 23, 19	99					
Field	Fort St. John Pool North Pine "A"						
Approval Date	August 23, 19	99		17	,	11//	
OGC_038_DGA Rev. 99/05				R.G. Stefik		Authorized	d Commission Employee