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## ANEXO I – Formulário de Avaliação de Parâmetros Geológicos

ANWR 1002 Assessment Form-1997							
Play name:	Topset					This run: 3/31/1998	
Assessor's name:	Houseknecht-Schenk					Program Rev: 3/31/1998	
Play area:	735.8 × 1000 acres, within 3-mile boundary					Data Rev: 3/23/1998	
Oil hydrocarbon volume parameters							
Attributes	Fractiles prob of and greater than						
	Min or LTP	95	75	50	25	5	Max
Net reservoir thickness <sup>a</sup>	50	63	100	150	250	425	500
Area of closure <sup>b</sup>	0.5	1	1.5	2	5	10	20
Porosity <sup>c</sup>	15	18	22	25	28	33	40
Water saturation <sup>c</sup>	33.3	27.8	22.7	20.0	17.9	15.2	12.5
Trap fill <sup>c</sup>	30	40	55	70	83	95	100
Approx. mm bbl	5.3	23.1	98.9	296.2	1683.0	7973.1	24684.5
Correlation between porosity and water saturation = -1							
Trap depth at sea level <sup>d</sup> (1000 ft)	1	2.5	4	5	6	8	10
Oil accumulation characteristics							
Oil recovery factor (%)	<input type="text" value="40"/>						
Type of reservoir-drive (check any that apply)							
Water:	<input checked="" type="checkbox"/>	Depletion:	<input checked="" type="checkbox"/>	Gas expansion:	<input type="checkbox"/>		
FVF (Formation volume factor, rb/stb) := 1.14 (this example)							
FVF = 0.8913 + 5.01E-02 × Depth (1000 ft) 2170 < Depth < 12150 ft							
FVF = 1, Depth ≤ 2170 ft FVF = 1.5, Depth ≥ 12150							
GOR (Associated gas-to-oil ratio, cu.ft/bbl, at stp)							
Log <sub>10</sub> (GOR) = 2.092 + 0.066906 × Depth (1000 ft)							
NGLR (Natural gas liquids to associated gas ratio, bbls/million cu.ft., at stp)							
NGLR = 1e + 06/(5.36E + 05 exp(-0.254 × Depth (1000 ft)))							
Oil quality parameters							
API gravity	<input type="text" value="30"/>						
Sulfur content of oil	<input type="text"/>						
Associated gas quality parameters							
Hydrogen sulfide (%)	<input type="text" value="*"/>						
CO <sub>2</sub> contamination (%)	<input type="text" value="5"/>						
Other inert gases							
Name:	<input type="text"/>	Percent:	<input type="text"/>				
Name:	<input type="text"/>	Percent:	<input type="text"/>				
Allocation							
Resources in 1002%	<input type="text" value="70"/>						
Resources in non-1002%	<input type="text" value="30"/>						
<sup>a</sup> Thickness in feet.							
<sup>b</sup> Thousands of acres.							
<sup>c</sup> Percent.							
<sup>d</sup> Sea level to surface adjustment (1000 ft): 0.1.							

Fonte: Schuenemeyer, 2002.

## ANEXO II – Avaliação de Recursos Não Descobertos com Método Delphi

