

Referências Bibliográficas

BRATVOLD, R. B.; CAMPBELL, J. M.; e BEGG, S. H.. **Would you know a good decision if you saw one?** SPE Annual Technical Conference. San Antonio, Texas: Society of Petroleum Engineers. 29 September – 2 October 2002. p.1-11.

CAPEN, E. C. **A consistent probabilistic definition of reserves.** SPE Reservoir Engineering, p.23-28, February 1996.

CAPEN, E. C. **Probabilistic reserves! Here at last?** SPE Reservoir Evaluation & Engineering, p.387-394, October 2001.

CLEMEN, R. T.; WINKLER, R. L. **Combining Probability Distributions From Experts in Risk Analysis.** Risk Analysis, v. 19, n. 2, p. 187-203, nov. 1999.

DANESHKHAH, A. R. **Psychological Aspects Influencing Elicitation of Subjective Probability.** The University Of Sheffield. August, 2004. Disponível em: <www.shef.ac.uk> Acesso em: 15/08/2005.

Fuentes, C. N. A. **Avaliação Probabilística de Prospectos de Petróleo antes da Perfuração do Poço Pioneiro.** Rio de Janeiro, Dissertação de Mestrado – PUC, DEI, 2004.

HYNE, J.P. **Nontechnical Guide to Petroleum Geology, Exploration, Drilling and Production.** 2. ed. Tulsa: Penn Well Corporation, 2001. 598p.

JENKINSON, D. **The Elicitation of Probabilities – A Review of Statistical Literature.** 72 p. April, 2005. Disponível em:<www.shef.ac.uk> Acesso em: 15/08/2005.

KEEFER, D. L.; BODILY, S. E. **Three-point approximations for continuous random variables.** Management Science, v.29, n.5, p.595-609., May 1983.

KEENEY. R. L.; VON WINTERFELDT. **Eliciting Probabilities from Experts in Complex Technical Problems.** IEE Transactions on Engineering Management. Vol. 38, n. 3. August, 1991. p 191-201.

LOVERIDGE, D. **Experts and foresight: Review and experience.** International Journal Foresight and Innovation Policy, v.1, n.1/2, p.33-69. 2004.

MORRIS, P. A. **Combining Expert Judgments: A Bayesian Approach.** Management Science, 23, p. 679–693. 1977.

MORRIS, P. A. **Decision analysis expert use.** Management Science, 20, p. 1233–1241. 1974.

PLEGUEZUELO, R. H.; RODRIGUES E. P. **Estimación de uma Distribución Beta como Modelo para su Utilización em el Método PERT.** Acta da V Reunión Anual de ASEPELT-ESPAÑA, 1991. p. 1191-1199.

ROSE, P. R. **Risk Analysis and Management of Petroleum Exploration Ventures**. AAPG Methods en Exploration Series, n. 12. 2004. 164 p.

SCHNEIDERMAN, N. e OTIS, R.M. **A Process for Evaluating Exploration Prospects**. AAPG Bulletin, v. 81, n.7 (Julho 1997). P. 1087 -1109.

SCHUENEMEYER, J. H. **A Framework for Expert Judgment to Assess Oil and Gas Resources**. Natural Resources Research, v.11, n.2, 2002/06, p.97-107. 2002.

SIMPSON, G. S.,; LAMB. F. E.; FINCH, J. H. & DINNIE, N. C. **The Application of Probabilistic and Qualitative Methods to Asset Management**. 2000. Base de Dados da SPE. SPE 26245. Disponível em: <www.spe.org>. Acesso em: 01/09/2005.

SPETZLER, C. S.; STAËL VON HOLSTEIN, C-A. S. **Probability Enconding in Decision Analysis**. Management Science, v. 22, n. 3, p. 340-357, nov. 1975.

VERGARA, S. C. **Projetos e Relatórios de Pesquisa em Administração**. 4. ed. São Paulo: Atlas, 1999.

WINKLER, R. L. **Combining Probability Distributions from Dependent Information Sources**. Management Science, 27, p. 479–488. 1981.

WRIGHT, J. T. C.; GIOVINAZZO, R. A. **Delphi – Uma Ferramenta de Apoio ao Planejamento Prospectivo**. Cadernos de Pesquisa em Administração, São Paulo, v.1, n. 12. 2º trim./2000.

Outras Bibliografias

ARIELY D.; AU W.T.; BENDER R.H.BUDESCU D.V.; DIETZ C.B.; GU H., WALLSTEN T.S.; ZAUBERMAN G. **The Effects of Averaging Subjective Probability Estimates Between and Within Judges**. Journal of Experimental Psychology Applied: 2000, Vol. 6, No. 2, p. 130-147.

AYYUB B.M. **Does A Practical Guide on Conducting Expert-Opinion Elicitation of Probabilities and Consequences for Corps Facilities**. IWR Report 01-R-01, January, 2001. Disponível em: <<http://www.iwr.usace.army.mil/iwr/pdf/PEEfinal.PDF> >

BRENNER L.A. **A random support model of the calibration of subjective probabilities**. Organizational Behavior and Human Decision Processes, 90, p. 87-110, 2003.

CAPEN, E.C. **A Consistent Probabilistic Definition of Reserves**. SPE Reservoir Engineering, February, 1996. p. 23-28.

CHUNGCHAROEN E. & FULLER J. D. **Including Geological Uncertainty and Economic Analysis in a Rapid Simulation of Hydrocarbon Exploration.** Natural Resources Research, Vol. 8, No. 3, 1999.

CLEMEN, R., **Does Decision Analysis Work? A Research Agenda**, Furqua School of Business, April, 1999. Disponível em: <<http://faculty.fuqua.duke.edu/~clemen/bio/pubs.html>>

DANESHKHAH A.R. **Uncertainty in Probabilistic Risk Assessment: A Review.** The University Of Sheffield, August, 2004. Disponível em: <<http://www.shef.ac.uk/beep/publications.html>> Acesso em: 15/08/2005.

HALL, S. G. & MITCHELL, J. **“Optimal” combination of density forecasts.** mimeo, NIESR (2004).

HORA S.C. **Probability Judgments for Continuous Quantities: Linear Combinations and Calibration.** Management Science; May 2004; 50, 5; ABI/INFORM Global pg. 597.

LAU H.S.; LAU A.H.; KOTTAS J. F. **A comparison of procedures for estimating the parent probability distribution from a given set of fractiles.** European Journal of Operational Research 120, p. 657-670, 2000.

LAU H.S.; LAU A.H.; KOTTAS J. F. **Using Tocher's curve to convert subjective quantile-estimates into a probability distribution function.** IIE Transactions (1999) 31, p. 245-254.

OUCHI, F. **A literature review on the use of expert opinion in probabilistic risk analysis.** World Bank policy Research Working Paper 3201, (2004).

SCHMOKER J. W. & KLETT T. R U.S. **Geological Survey Assessment Model for Undiscovered Conventional Oil, Gas, and NGL Resources - The Seventh Approximation.** U.S. Geological Survey Bulletin 2165. May, 1999. Disponível em <<http://greenwood.cr.usgs.gov/pub/bulletins/b2165/b2165.html>>.

WALLIS K.F. **Combining Density and Interval Forecasts: A Modest Proposal.** Oxford Bulletin of Economics and Statistics 67, 983–994, 2005.

WALLSTEN, T. S.; BUDESCU D.V.; EREV I.; DIEDERICH A. **Evaluating and Combining Subjective Probability Estimates.** Journal of Behavioral Decision Making, Vol. 10, 243-268, 1997.

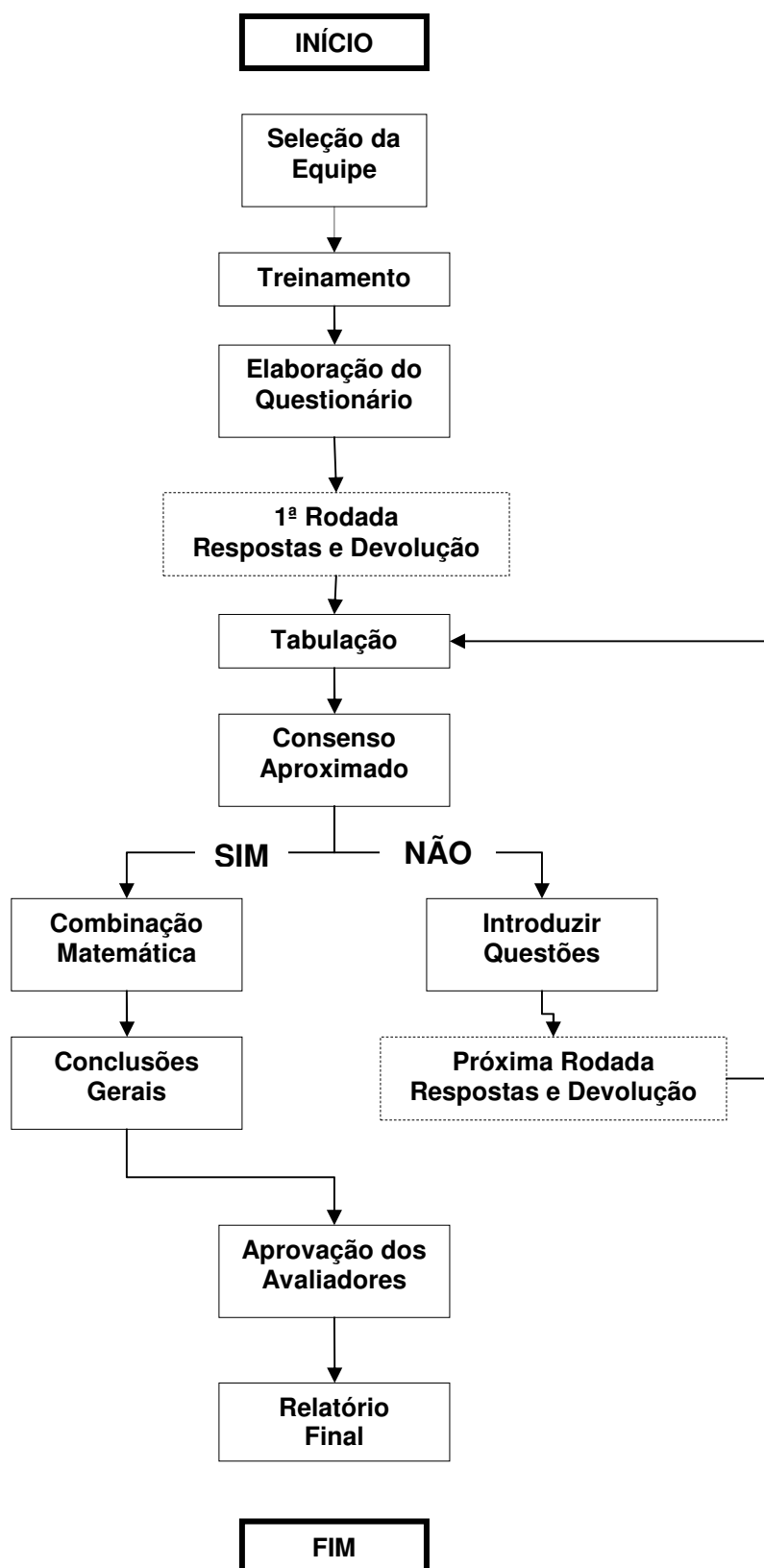
ANEXO I – Formulário de Avaliação de Parâmetros Geológicos

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 ^a	50	63	100	150	250	425	500
Area of closure ^b	0.5	1	1.5	2	5	10	20
Porosity ^c	15	18	22	25	28	33	40
Water saturation ^c	33.3	27.8	22.7	20.0	17.9	15.2	12.5
Trap fill ^c	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 ^d (1000 ft)	1	2.5	4	5	6	8	10
Oil accumulation characteristics							
Oil recovery factor (%)	40						
Type of reservoir-drive (check any that apply)							
Water:	☒	Depletion:	☒	Gas expansion:			
FVF (Formation volume factor, rb/stb) := 1.14 (this example)							
FVF = $0.8913 + 5.01 E-02 \times \text{Depth (1000 ft)}$ 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)							
$\text{Log}_{10}(\text{GOR}) = 2.092 + 0.066906 \times \text{Depth (1000 ft)}$							
NGLR (Natural gas liquids to associated gas ratio, bbls/million cu.ft., at stp)							
$\text{NGLR} = 1e + 06 / (5.36 E + 05 \exp(-0.254 \times \text{Depth (1000 ft)}))$							
Oil quality parameters							
API gravity	30						
Sulfur content of oil							
Associated gas quality parameters							
Hydrogen sulfide (%)	5						
CO ₂ contamination (%)	5						
Other inert gases							
Name:		Percent:					
Name:		Percent:					
Allocation							
Resources in 1002%	70						
Resources in non-1002%	30						

^aThickness in feet.
^bThousands of acres.
^cPercent.
^dSea level to surface adjustment (1000 ft): 0.1.

Fonte: Schuenemeyer, 2002.

ANEXO II – Avaliação de Recursos Não Descobertos com Método Delphi



Adaptado de Wright e Giovinazzo, 2000.