



## Decision Analysis for Petroleum Exploration: 3.0 Edition

By John R Schuyler, Paul D Newendorp

 Download

 Read Online

**Decision Analysis for Petroleum Exploration: 3.0 Edition** By John R Schuyler, Paul D Newendorp

This is a major rework of Paul Newendorp's 1975 best-seller, which became the standard reference in the field. This book is now structured as a handbook of over 330 important concepts in risk and economic decision analysis. As the title suggests, well over half the examples apply to petroleum exploration investment decisions. Perhaps 80% of the topics are generally applicable to capital investment, project management, and operations decisions.

Topics in the book represent a composite of evaluation practices and problem-solving approaches now commonly used in oil & gas and other capital-intensive industries. Several important and practical techniques were first published in the first edition.

Decision analysis methods apply to any type of decision. The emphasis here is on quantitative methods useful in capital investment decisions and decisions to acquire additional information. This will be of special interest to anyone involved in the evaluation of property acquisitions, geophysical surveys, prospect drilling, and field development decisions. This book is intended for petroleum geologists, engineers, geophysicists, evaluation and planning analysts, and managers. This is not a first book in decision analysis. We presume the reader has a general familiarity with management, economics, decision analysis, and knowledge of the oil & gas industry.

As a handbook we are focusing on what is most important and practical. Major topic areas include the decision analysis process, key concepts in probability and statistics (including Bayes' rule and easy equivalents), decision policy (including risk policy expressed as a utility function), popular economic metrics and concepts, project and enterprise modeling, decision tree analysis, Monte Carlo simulation, and various special topics. Value of information problems receive special attention. Over 270 figures help illustrate the concepts.

The expected value (EV) concept is central throughout. Most often we assume a decision policy that maximizes EV. Most of the discussion presumes a business context and measuring outcome as net present value (NPV). We also describe approaches for multi-criteria decision making including HSE.

Expected monetary value ( $EMV = EV \text{ NPV}$ ) is the principal decision criterion used in most examples. The EV calculation incorporates judgments about risks and uncertainties expressed as probabilities and probability distributions. EV is the cornerstone of formal, quantitative analysis for decisions under uncertainty. The key calculation methods are decision trees and Monte Carlo simulation. Small decision trees can be solved with a hand calculator, while larger trees and Monte Carlo simulation usually require a computer. Software supporting these methods is now widely available as Microsoft® Excel® spreadsheet add-ins and for other platforms.

The material is organized into seven sections: Decision Analysis Process, Probability and Statistics, Decision Policy, Economic Matters, Modeling, Decision Tree Analysis, and Monte Carlo Simulation. Throughout, real-world exploration examples are presented to illustrate the risk and decision analysis methods.

This revised 3.0 edition features a larger page format, an updated and expanded bibliography, and an extensive glossary. We also offer additional material online, including extended discussions, software resources, and example Excel spreadsheets.

 [Download Decision Analysis for Petroleum Exploration: 3.0 E ...pdf](#)

 [Read Online Decision Analysis for Petroleum Exploration: 3.0 ...pdf](#)

# Decision Analysis for Petroleum Exploration: 3.0 Edition

*By John R Schuyler, Paul D Newendorp*

**Decision Analysis for Petroleum Exploration: 3.0 Edition** By John R Schuyler, Paul D Newendorp

This is a major rework of Paul Newendorp's 1975 best-seller, which became the standard reference in the field. This book is now structured as a handbook of over 330 important concepts in risk and economic decision analysis. As the title suggests, well over half the examples apply to petroleum exploration investment decisions. Perhaps 80% of the topics are generally applicable to capital investment, project management, and operations decisions.

Topics in the book represent a composite of evaluation practices and problem-solving approaches now commonly used in oil & gas and other capital-intensive industries. Several important and practical techniques were first published in the first edition.

Decision analysis methods apply to any type of decision. The emphasis here is on quantitative methods useful in capital investment decisions and decisions to acquire additional information. This will be of special interest to anyone involved in the evaluation of property acquisitions, geophysical surveys, prospect drilling, and field development decisions. This book is intended for petroleum geologists, engineers, geophysicists, evaluation and planning analysts, and managers. This is not a first book in decision analysis. We presume the reader has a general familiarity with management, economics, decision analysis, and knowledge of the oil & gas industry.

As a handbook we are focusing on what is most important and practical. Major topic areas include the decision analysis process, key concepts in probability and statistics (including Bayes' rule and easy equivalents), decision policy (including risk policy expressed as a utility function), popular economic metrics and concepts, project and enterprise modeling, decision tree analysis, Monte Carlo simulation, and various special topics. Value of information problems receive special attention. Over 270 figures help illustrate the concepts.

The expected value (EV) concept is central throughout. Most often we assume a decision policy that maximizes EV. Most of the discussion presumes a business context and measuring outcome as net present value (NPV). We also describe approaches for multi-criteria decision making including HSE.

Expected monetary value ( $EMV = EV - NPV$ ) is the principal decision criterion used in most examples. The EV calculation incorporates judgments about risks and uncertainties expressed as probabilities and probability distributions. EV is the cornerstone of formal, quantitative analysis for decisions under uncertainty. The key calculation methods are decision trees and Monte Carlo simulation. Small decision trees can be solved with a hand calculator, while larger trees and Monte Carlo simulation usually require a computer. Software supporting these methods is now widely available as Microsoft® Excel® spreadsheet add-ins and for other platforms.

The material is organized into seven sections: Decision Analysis Process, Probability and Statistics, Decision Policy, Economic Matters, Modeling, Decision Tree Analysis, and Monte Carlo Simulation. Throughout, real-world exploration examples are presented to illustrate the risk and decision analysis methods.

This revised 3.0 edition features a larger page format, an updated and expanded bibliography, and an

extensive glossary. We also offer additional material online, including extended discussions, software resources, and example Excel spreadsheets.

### **Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp Bibliography**

- Sales Rank: #1439666 in Books
- Published on: 2013-08-12
- Original language: English
- Number of items: 1
- Dimensions: 11.00" h x 1.33" w x 8.50" l, 2.95 pounds
- Binding: Paperback
- 588 pages

 [Download Decision Analysis for Petroleum Exploration: 3.0 E ...pdf](#)

 [Read Online Decision Analysis for Petroleum Exploration: 3.0 ...pdf](#)

## Download and Read Free Online Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp

---

### Editorial Review

#### About the Author

Dr. Paul Newendorp began his career in 1959 as a petroleum engineer. He later earned MS and PhD in Petroleum Engineering from U. of Oklahoma. In 1968, he developed a two-week short course on petroleum exploration economics and risk analysis. The course was based, in part, on his doctoral research on decision theory and earlier industry work experience. During his 21 years of teaching, Paul was active in developing and promoting use of decision theory methods applied to exploration investments. He pioneered many ideas, particularly with Monte Carlo simulation, that are now standard practice. Paul served in various SPE leadership roles and received numerous awards.

John Schuyler has over 39 years of business experience in training, consulting, analysis, and management. His industry experience has been mostly in the petroleum industry, and also includes finance, mining, manufacturing, pharmaceuticals, and government.

John's short courses deal with portfolio management, capital investments, project design, and under decisions under uncertainty. He has presented over 300 industry courses for over 24 years, mostly in association with PetroSkills, LLC.

His previous work experience includes VP and petroleum evaluation engineer for Security Pacific Bank; Manager-Business Systems for Cities Service Co.'s Petrochemicals Division; Senior Management Consultant with a national accounting firm; Planning and Evaluation Analyst for Cities Service Oil Company; and VP - Administration, CFO, and co-founder of a small commercial products company.

He holds an M.B.A. from U. of Colorado and B.S. and M.S. degrees in Mineral-Engineering Physics from Colorado School of Mines. He has earned the following: CAM, CCP, CMA, CMC, CPIM, DRMP, PMP, and PE (Colorado). He is a member of AACE, IMA, IMC, INFORMS, PMI, RMAG, SPE and SPEE.

John written over 40 conference papers, articles and handbook chapters published in the professional literature. In addition to revising this book, he has written Risk and Decision Analysis in Projects, Second Edition (2001, Project Management Institute).

### Users Review

#### From reader reviews:

#### James Brier:

With other case, little men and women like to read book Decision Analysis for Petroleum Exploration: 3.0 Edition. You can choose the best book if you like reading a book. So long as we know about how is important the book Decision Analysis for Petroleum Exploration: 3.0 Edition. You can add information and of course you can around the world by the book. Absolutely right, due to the fact from book you can realize everything! From your country right up until foreign or abroad you will be known. About simple issue until wonderful thing it is possible to know that. In this era, we can open a book or perhaps searching by internet

product. It is called e-book. You need to use it when you feel fed up to go to the library. Let's learn.

**Carlos Pollard:**

Reading a publication can be one of a lot of task that everyone in the world loves. Do you like reading book and so. There are a lot of reasons why people like it. First reading a guide will give you a lot of new details. When you read a guide you will get new information because book is one of various ways to share the information or perhaps their idea. Second, reading through a book will make you more imaginative. When you studying a book especially fiction book the author will bring someone to imagine the story how the characters do it anything. Third, it is possible to share your knowledge to some others. When you read this Decision Analysis for Petroleum Exploration: 3.0 Edition, you may tells your family, friends in addition to soon about yours book. Your knowledge can inspire the others, make them reading a guide.

**Bertram Staten:**

This Decision Analysis for Petroleum Exploration: 3.0 Edition is completely new way for you who has interest to look for some information as it relief your hunger details. Getting deeper you upon it getting knowledge more you know or perhaps you who still having bit of digest in reading this Decision Analysis for Petroleum Exploration: 3.0 Edition can be the light food in your case because the information inside that book is easy to get simply by anyone. These books acquire itself in the form that is certainly reachable by anyone, sure I mean in the e-book application form. People who think that in reserve form make them feel drowsy even dizzy this publication is the answer. So there is not any in reading a reserve especially this one. You can find what you are looking for. It should be here for a person. So , don't miss this! Just read this e-book type for your better life as well as knowledge.

**Adam Mathews:**

As a scholar exactly feel bored for you to reading. If their teacher requested them to go to the library or make summary for some reserve, they are complained. Just minor students that has reading's soul or real their leisure activity. They just do what the educator want, like asked to go to the library. They go to presently there but nothing reading very seriously. Any students feel that reading is not important, boring in addition to can't see colorful pics on there. Yeah, it is being complicated. Book is very important for you personally. As we know that on this period of time, many ways to get whatever we really wish for. Likewise word says, many ways to reach Chinese's country. Therefore , this Decision Analysis for Petroleum Exploration: 3.0 Edition can make you really feel more interested to read.

**Download and Read Online Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp #N963W0AUM1R**

## **Read Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp for online ebook**

Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp Free PDF download, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp books to read online.

### **Online Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp ebook PDF download**

**Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp Doc**

**Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp Mobipocket**

**Decision Analysis for Petroleum Exploration: 3.0 Edition By John R Schuyler, Paul D Newendorp EPub**