

MMS Resource Evaluation Process



Harold E. Syms
Geologist,
Resource Evaluation Division

Presentation Outline

- 👉 MMS Resource Evaluation Program
- 👉 Resource Evaluation Process
- 👉 Pre Lease Assessment
 - ✍ National Assessment
 - ✍ Fair Market Value
- 👉 Post Lease Assessments
 - ✍ Reserve Estimates
 - ✍ Geo hazards
 - ✍ Unitization / Conservation

Resource Evaluation Office Function

- 👉 Regulation of geological and geophysical (G&G) data acquisition
- 👉 G&G data acquisition and analysis
- 👉 Resource Assessment
- 👉 Tract Evaluation / Fair Market Value
- 👉 Reserves Estimation

Federal OCS Planning Areas



Resource Evaluation Process

- ☞ Data and Information Available to MMS for Resource Evaluation
- ☞ Overview of Methodology
- ☞ Uses for Resource Estimates

Resource Evaluation

- ☞ Are Oil and/or Gas Accumulations Present
- ☞ If They are Present, How Large are They
- ☞ How Much is Economically Recoverable

Exploration and Production Data and Information

- ➡ MMS does not physically acquire E&P data and information
- ➡ MMS regulations are designed to assure that MMS has access to all relevant data and information (and analyses thereof) acquired by permittees or operators
- ➡ This is accomplished by
 - ✎ application and issuance of permits
 - ✎ notification requirements
 - ✎ various approvals during drilling and production operations

Overview of Methodology

- ☞ Assessment of hydrocarbon resources is a statistical analysis of geologic and geophysical data
 - ✎ Geological/geophysical analysis of area of interest
 - ✎ Play definition and analysis
 - ✎ Resource Assessment
- ☞ Results are estimates of undiscovered technically recoverable resources of the identified geologic plays

Overview of Methodology contd.

- ☞ These results are subject to a separate economic and engineering analysis to estimate the undiscovered economically recoverable resources for the assessment area.

Uses for Resource Estimates

Form Basis for Most MMS-OMM Activities

Pre-Lease

-  Selection of Favorable Areas

-  Estimation of Revenue

-  Basis for Environmental Analysis

-  Oil Supply Planning

Post-Lease

-  Assure fair value in Public/Private transactions

-  Estimation of Revenue

-  Oil Supply Planning

Fair Market Value Determination

- 👉 Federal law requires that MMS insure that the government receives fair market value.
- 👉 MMS uses a computer model to determine risked present net value.

Government Revenues for Offshore Activities

- ➡ Bonus bids - pays for right to explore & develop a tract
- ➡ Rental - fixed annual payment until production starts
- ➡ Royalty - paid on volumes produced ($1/8$ or $1/6$)
- ➡ Taxes - paid on profit

MMS Lease Sale

- ➡ Rentals, royalties, lease terms, and stipulations are set
- ➡ Bonus bids are offered by companies
- ➡ MMS evaluates the bids to determine if the \$ offered are acceptable

MONTCAR Model

- ➡ MONTCAR - MMS's customized development simulation model
- ➡ MONTCAR model designed specifically to evaluate individual prospects & tracts
- ➡ Develops values for tracts
- ➡ Provides basis for accepting or rejecting bids (\$) received at lease sales
- ➡ Uses net present value (NPV) concepts & discounted cash flow analysis

Post Sale Evaluations

- 👉 Reserve Estimation
- 👉 Geo Hazards
- 👉 Unitization / Conservation

Reserves Estimation

❖ Why do reserve assessments?

❖ Private Sector

- ❖ As collateral for loans
- ❖ Performance measures
- ❖ Corporate strategic planning
- ❖ Financial reporting

❖ Public Sector

- ❖ Planning - Energy Supply Forecasting
- ❖ Public Policy Decisions
- ❖ Independent Assessment/Verification
- ❖ Assure fair value in public/private transactions