

Short Course on
Petroleum Reserve Estimation, Production, and
Production Sharing Contract (PSC)
PMRE, BUET,
29-30 April, 2008

**USGS World Petroleum Resource Assessment
2000**

USGS World Petroleum Resource Assessment 2000

- **The USGS World Petroleum Assessment 2000 provides estimates of the quantities of conventional oil, gas and natural gas liquids outside USA that have the potential to be added to reserves in the next 30 years.**
- **The USGS undertook this world petroleum assessment in the order to provide impartial, scientifically based, societally relevant petroleum-resource information essential to the economic and strategic security of the United States.**
- **The assessment is based on extensive geologic studies as opposed to statistical analysis. A team of more than 40 geoscientists and additional staff conducted the study over a five year period (1995-2000).**

7th Approximation – Basic Input Data Form

- Identification Information:

**Date, Assessment geologist's name, Region, Province
Total Petroleum System, Assessment Unit, Note of
the Assessor.**

- Characteristics of Assessment Unit

- **What is the minimum field size ?**
- Number of discovered field size exceeding minimum size
- Established Frontier Hypothetical.....
- Median size (grown) of discovered oil fields: (3 values)
- Median size (grown) of discovered gas fields: (3 values)

7th Approximation – Basic Input Data Form

- **Assessment Unit Probabilities:**

Attribute	Probability of Occurrences 0 – 1.0
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- **1. Charge:** Adequate petroleum charge for an undiscovered field > Minimum size
- **2. Rocks:** Adequate reservoirs, traps, and seals for an undiscovered field > Minimum size
- **3. Timing:** Favorable geologic timing for an undiscovered field > Minimum size

- Assessment-unit Geologic probability (product of 1, 2 and 3)

- **4. Access:** Adequate location for necessary petroleum related activities.

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Undiscovered Fields

- **Number of undiscovered fields:** How many undiscovered fields exist the are \geq minimum size
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- Oil fields Min no. _____ Median No. _____ Max no. _____
- Gas Fields Min no. _____ Median No. _____ Max no. _____
- **Size of the Undiscovered Fields: What are the anticipated sizes of the above fields**
- Oil in oil fields (mmbo) min. median max.
- Gas in gas fields (bcfg) min, median max.

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Average co-product ratio for undiscovered fields

Oil fields	min	median	max
• Gas/Oil Ratio	----	-----	---
• NGL/gas ratio	----	-----	---
Gas Fields			
• Liquid/gas ratio	----	-----	---
• Or			
• NGL/gas ratio	----	-----	---
• Oil/gas ratio	----	-----	---

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Selected Ancillary data for undiscovered fields

<u>Oil fields</u>	min	median	max
• API gravity of oil	----	-----	----
• Sulfur content	----	-----	----
• Drilling depth	----	-----	----
• Water depth (if applicable)	----	-----	----
<u>Gas fields</u>			
• Inert-gas content	----	-----	----
• CO2 content	----	-----	----
• Hydrogen-sulfide content	----	-----	----
• Drilling depth	----	-----	----
• Water depth (if applicable)	----	-----	----

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Allocation of undiscovered resources to land entities

- 1. _____ represents _____ areal % of the assessment unit
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Oil in oil fields	min	median	max
• Volume % in entity	----	-----	----
• Portion of volume % that is offshore	----	-----	----

Gas in gas fields	min	median	max
• Volume % in entity	----	-----	----
• Portion of volume % that is offshore	----	-----	----

7th Approximation – Basic Input Data Form

