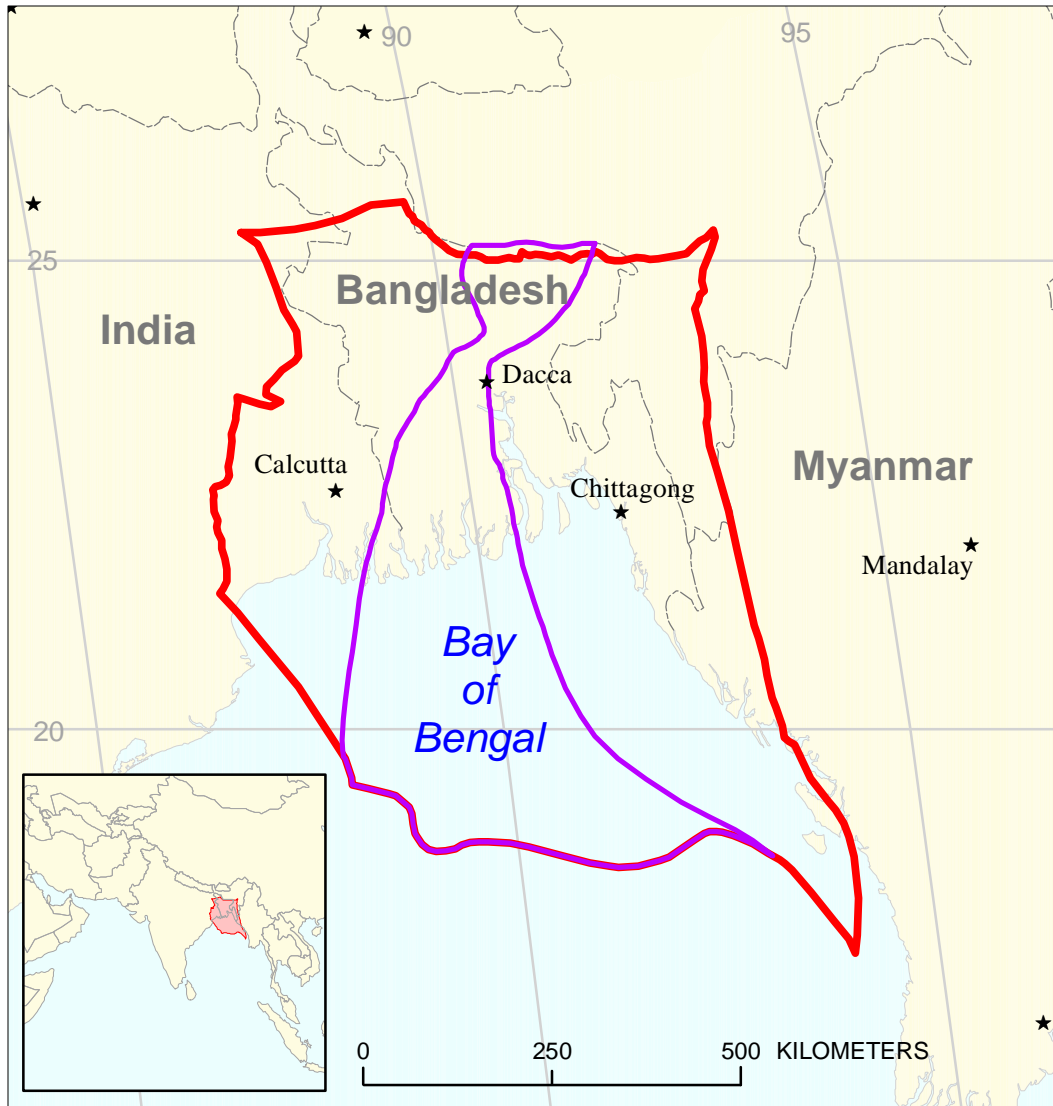




# Central Basin Assessment Unit 80470301



-  Central Basin Assessment Unit 80470301
-  Ganges-Brahmaputra Delta Geologic Province 8047

**USGS PROVINCE:** Ganges-Brahmaputra Delta (8047) Bangladesh, India, Myanmar

**GEOLOGIST:** R.C. Milici

**TOTAL PETROLEUM SYSTEM:** Jenam/Bhuban-Bokabil (804703)

**ASSESSMENT UNIT:** Central Basin (80470301)

**DESCRIPTION:** Assessment unit is in the axial part of the thick Tertiary deltaic deposits of the Bengal basin. The delta is located east of the Indian craton of Precambrian crystalline rocks, south of the Himalaya Mountains, and west of the Arakan Yoma. The eastern part of the delta is thrown into a series of plunging folds where it is being subducted obliquely beneath the Arakan Yoma. Overall, the delta is as thick as 20,000 m in the Patuakhall depression, a depocenter located on the southeastern side of the delta. The strata that comprise these assessment units are in the Oligocene Barail Group and the Miocene Surma Group and range from about 3000 to 5000 m thick in the northern part of the basin and are at least 7000 m thick in the southern part of the delta. In general, the basin fill consists of sandstones, siltstones, and shales that commonly contain plant-derived organic matter. The stratigraphy of the adjacent Eastern Fold Belt assessment unit is well known from exploration drilling. The Central Basin assessment unit, however, is undrilled and its stratigraphy is extrapolated from the eastern assessment unit.

**SOURCE ROCKS:** Source rocks may include coal beds and probably include the shales of the Oligocene Jenam Formation and silty shales in the lower part of the Bhuban Formation. The Bhuban Formation contains about 0.2 to 0.7 percent TOC and the Jenam Formation contains 0.6 to 2.4 percent TOC in the Eastern Fold Belt assessment unit.

**MATURATION:** Thermal maturation is sufficient to generate natural gas and natural gas liquids.

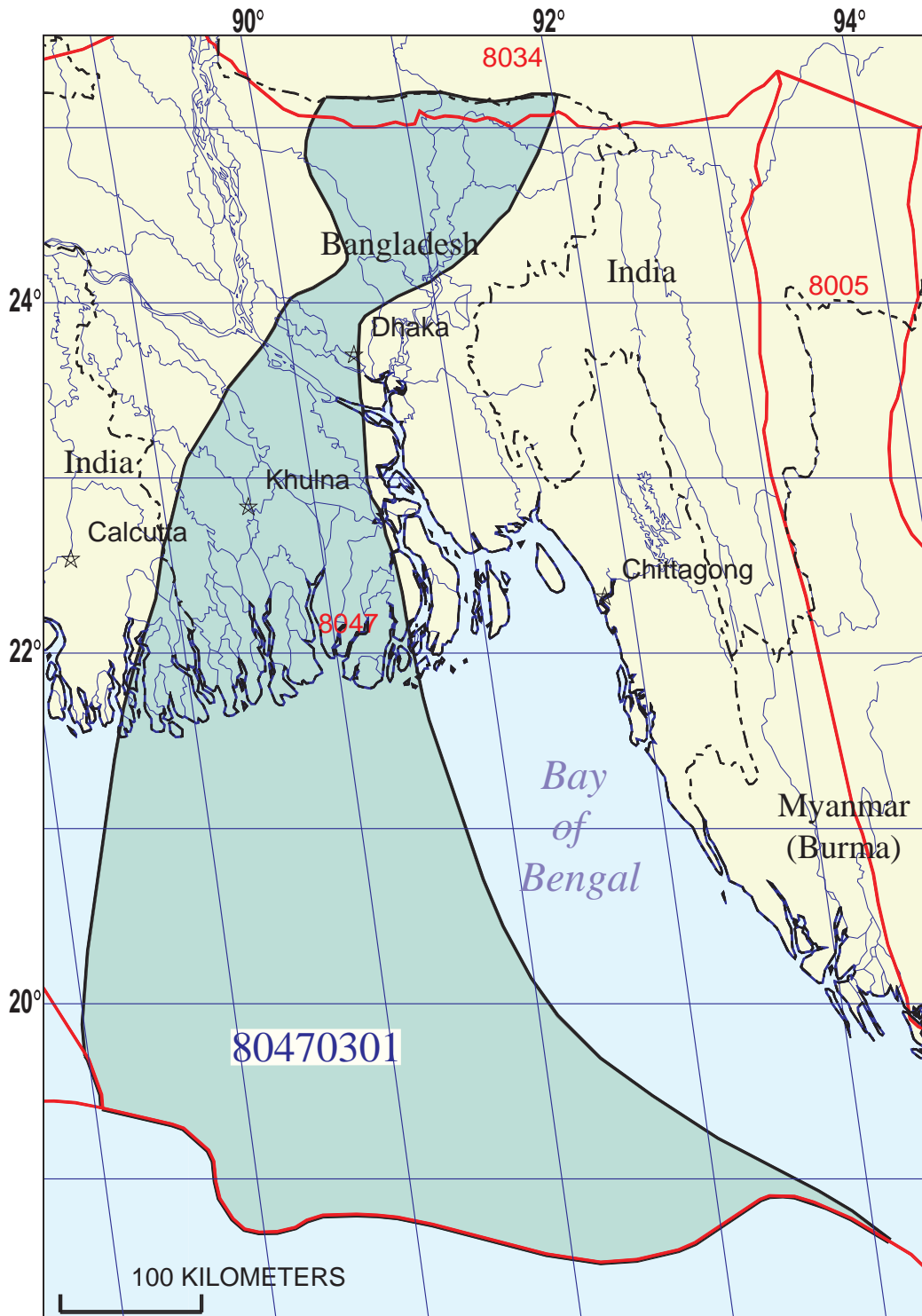
**MIGRATION:** Migration is generally vertical along fractures and through porous media, and lateral up the dip of the Eocene paleoslope to the west.

**RESERVOIR ROCKS:** Reservoir rocks are in the sandstones of the Bokabil Formation, in turbidite sandstones in the thick deposits of megasequence 1, and in the channel-fill deposits of megasequence 2. Porosity ranges generally from 10 to 20 percent.

**TRAPS AND SEALS:** Stratigraphic traps along megasequence boundaries and in channel-fill deposits comprise the major traps. Roll-over anticlines associated with down-to-the-basin faults may occur in the deeper parts of the assessment units, but thus far have not been identified. Seals consist of the upper shale beds of the Bokabil Formation and finer-grained units associated with turbidite deposits. Anticlines and faulted anticlines comprise the major traps of the Eastern Fold Belt Assessment that have been identified.

**REFERENCES:**

Indian Journal of Geology, 1997, v. 69, no. 1 and 2.



## Central Basin Assessment Unit - 80470301

### EXPLANATION

- Hydrography
- Shoreline
- 8047 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 80470301 Assessment unit code and boundary

Projection: Robinson. Central meridian: 0



**AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS**

(uncertainty of fixed but unknown values)

<u>Oil Fields:</u>	minimum	median	maximum
Gas/oil ratio (cfg/bo).....	<u>1100</u>	<u>2200</u>	<u>3300</u>
NGL/gas ratio (bnl/mmcf).....	<u>30</u>	<u>60</u>	<u>90</u>
<u>Gas fields:</u>	minimum	median	maximum
Liquids/gas ratio (bnl/mmcf).....	<u>2</u>	<u>4</u>	<u>8</u>
Oil/gas ratio (bo/mmcf).....	<u>          </u>	<u>          </u>	<u>          </u>

---

**SELECTED ANCILLARY DATA FOR UNDISCOVERED FIELDS**

(variations in the properties of undiscovered fields)

<u>Oil Fields:</u>	minimum	median	maximum
API gravity (degrees).....	<u>          </u>	<u>          </u>	<u>          </u>
Sulfur content of oil (%).....	<u>          </u>	<u>          </u>	<u>          </u>
Drilling Depth (m) .....	<u>500</u>	<u>1500</u>	<u>5000</u>
Depth (m) of water (if applicable).....	<u>0</u>	<u>400</u>	<u>2000</u>
<u>Gas Fields:</u>	minimum	median	maximum
Inert gas content (%).....	<u>          </u>	<u>          </u>	<u>          </u>
CO <sub>2</sub> content (%).....	<u>          </u>	<u>          </u>	<u>          </u>
Hydrogen-sulfide content (%).....	<u>          </u>	<u>          </u>	<u>          </u>
Drilling Depth (m).....	<u>500</u>	<u>1900</u>	<u>8000</u>
Depth (m) of water (if applicable).....	<u>0</u>	<u>400</u>	<u>2000</u>

**ALLOCATION OF UNDISCOVERED RESOURCES IN THE ASSESSMENT UNIT  
 TO COUNTRIES OR OTHER LAND PARCELS** (uncertainty of fixed but unknown values)

1. Bangladesh represents 80 areal % of the total assessment unit

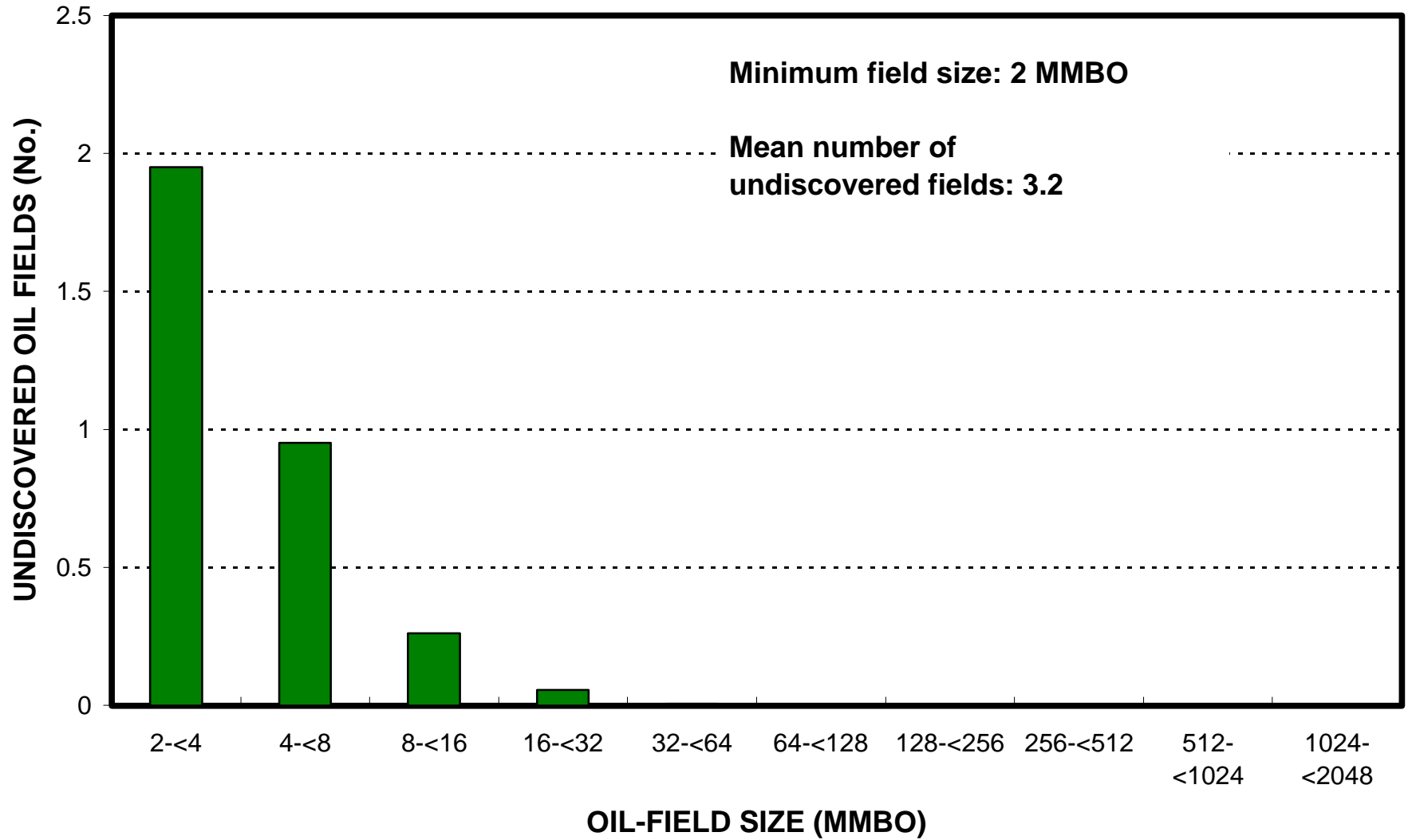
<u>Oil in Oil Fields:</u>	minimum	median	maximum
Richness factor (unitless multiplier):.....	_____	_____	_____
Volume % in parcel (areal % x richness factor):...	_____	<u>80</u>	_____
Portion of volume % that is offshore (0-100%):.....	_____	<u>60</u>	_____
<u>Gas in Gas Fields:</u>	minimum	median	maximum
Richness factor (unitless multiplier):.....	_____	_____	_____
Volume % in parcel (areal % x richness factor):...	_____	<u>80</u>	_____
Portion of volume % that is offshore (0-100%):.....	_____	<u>60</u>	_____

2. India represents 20 areal % of the total assessment unit

<u>Oil in Oil Fields:</u>	minimum	median	maximum
Richness factor (unitless multiplier):.....	_____	_____	_____
Volume % in parcel (areal % x richness factor):...	_____	<u>20</u>	_____
Portion of volume % that is offshore (0-100%):.....	_____	<u>90</u>	_____
<u>Gas in Gas Fields:</u>	minimum	median	maximum
Richness factor (unitless multiplier):.....	_____	_____	_____
Volume % in parcel (areal % x richness factor):...	_____	<u>20</u>	_____
Portion of volume % that is offshore (0-100%):.....	_____	<u>90</u>	_____

# Central Basin, AU 80470301

## Undiscovered Field-Size Distribution



# Central Basin, AU 80470301

## Undiscovered Field-Size Distribution

