

AMPE26 INTEGRATED OIL AND GAS FIELD EVALUATION

UNIT-1 GEOLOGICAL STUDIES

- 1.1 Structural contour maps and various geological models.
- 1.2 Estimation of reserves.
- 1.3 Hydrodynamic Study, Techno-economic Evaluation for normal and marginal fields. Innovative ways to asset development.

UNIT-2 PETROLEUM PROJECT EVALUATION

- 2.1 Mineral project evaluation case studies.
- 2.2 The design and evaluation of well drilling systems
- 2.3 Economic appraisal methods for oil field developmental project evaluation including risk analysis, probability and statistics in decision-making and evaluations.

UNIT-3 AN INTEGRATED RESERVOIR DESCRIPTION IN PETROLEUM ENGINEERING

- 3.1 Usage of geophysical, geological, petro physical and engineering data-emphasis on reservoir and well data analysis and interpretation,
- 3.2 Reservoir modeling (simulation), reservoir management (production optimization of oil and gas fields) and economic analysis (property evaluation)

UNIT-4 AN INTEGRATED RESERVOIR DEVELOPMENT IN PETROLEUM ENGINEERING

- 4.1 Reservoir and well evaluation production optimization-nodal analysis,
- 4.2 Stimulation, artificial lift facilities-surveillance.

UNIT-5 EVALUATION OF WELL COMPLETIONS

- 5.1 Placement of casing, liners and well tubing.
- 5.2 Evaluation, performance of horizontal wells.
- 5.3 Evaluation of acidization treatments.

References Books:

1. Katz D.L.et al., Natural Gas Engineering (Production & storage), McGraw-Hill, Singapore.
2. Standard Handbook of Petroleum and Natural Gas Engineering. 2nd Edition. William C Lyons, Gary C Plisga. Gulf Professional Publishing.
3. Mc.Cray. A.W and Cole.F.W. 'Oil Well Drilling Technology' University of Oklahoma Press, Norman 1959.