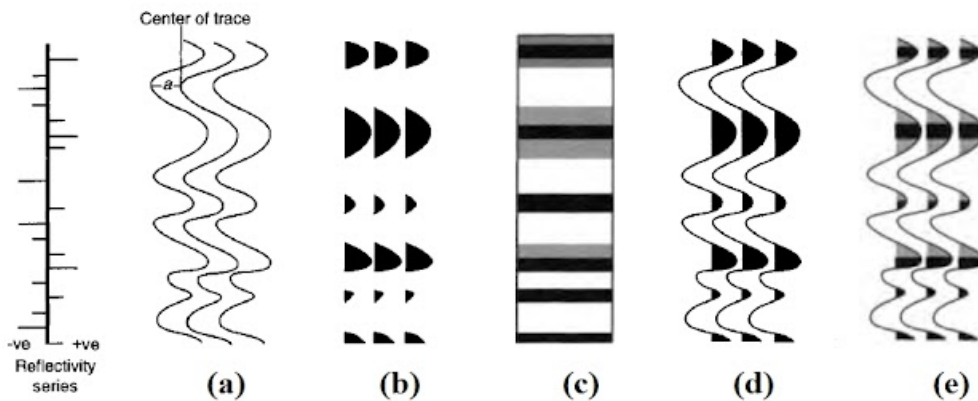


Quiz-3: Reservoir Geophysics and Deepwater Imaging (GPD 510)

Total points 14/20

The respondent's email (shiwani.19mc0074@agp.iitism.ac.in) was recorded on submission of this form.

✓ Write the names of the seismic section display style for a, b, c, d and e. * 5/5



a)Wiggle trace, b)Variable area, c) Variable density, d) Variable area wiggle e). Variable density wiggle trace

Correct answers

- a. Wiggle
- b. Variable area
- c. Variable density
- d. Variable area/wiggle
- e. Variable density/wiggle



✗ What type of advantages are observed for residual moveout during AVO 1/2 analysis? *

Done offseto correct time migrated gather at large offset

✗

Correct answers

The signal to noise ratio of the near and far stacks is high compared with that of a gather.

Scanning through the appropriate sub-stack volume (especially the far traces for class III) is a quick way to look for anomalous amplitude.

✓ The passive margin megasequence is coming under, *

1/1

Post-rift

✓

Pre-rift

✓ How passive seismic works for the location of events and clustering? * 1/1

Fault mapping,Map fracture system, Cap rock integrity

✗

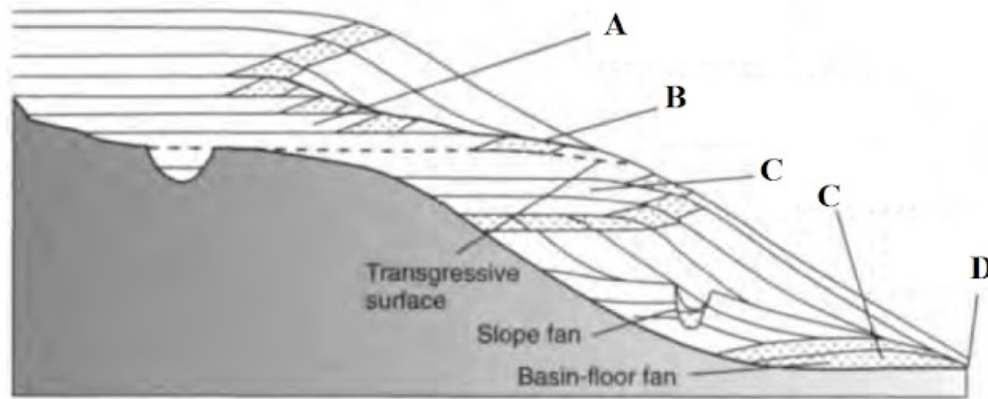
Correct answers

1. Map fracture System
2. Cap rock integrity
3. Fault mapping for reservoir compartmentalization



✓ Based on architecture of the deposition model and provided hints identify (A), (B), (C) and (D) only names. *

4/4



A) Transgressive system tract, B) Maximum flooding surface, C) Lowstand system tract, D) Sequence boundary

✗

Correct answers

- (A) Transgressive Systems tract
- (B) Maximum Flooding Surface
- (C) Lowstand system tract
- (D) Sequence boundary

✗ Write the proper justification for approximation of the expression, *

1/2

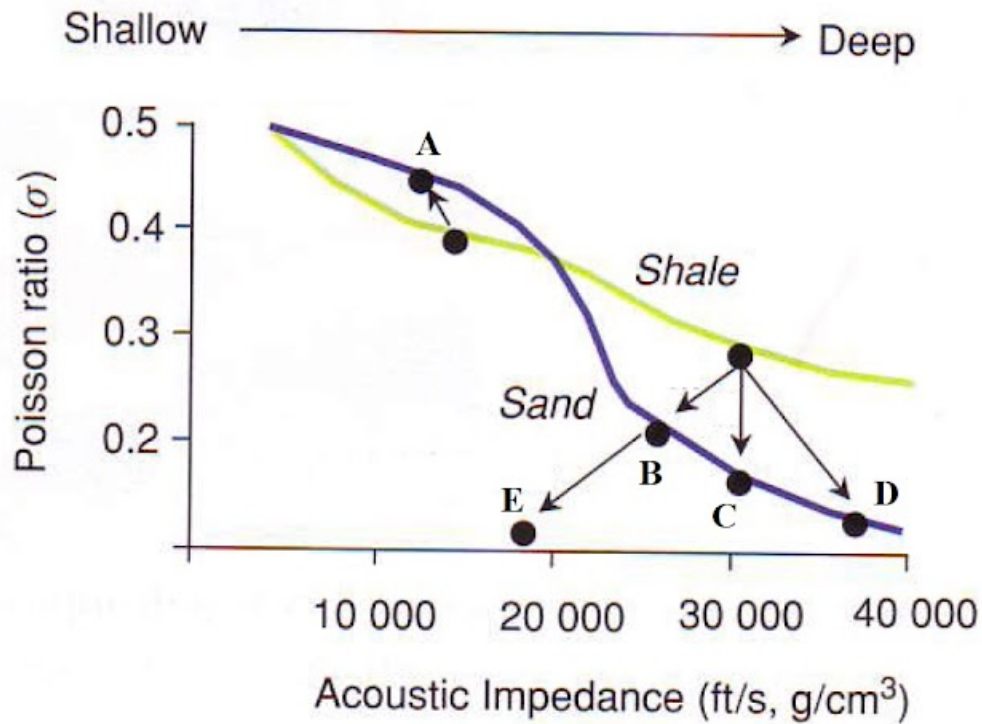
$R(\Theta) = R_0 + G \sin^2(\Theta)$ where R_0 is the normal incidence reflectivity and G is the gradient.

Linearization of Zoeppritz Equation, ignoring terms for far angle i.e. before critical angle, incorporating small changes in elastic parameters

✗



✗ Based on the character of the cross plot between Poisson ratio and Acoustic Impedance and the direction of points, interpret the class of AVO of the points (A), (B), (C) and (D). Identify point (E) based on the nature of AVO class. Green line represents shale whereas blue lines show sand. The low impedance part of the reservoir showing shallower section whereas high impedance is showing deeper section. *



A). Class1, B)Class 2P, C)&D)- class3 E)Low impedance sand that with low poisson ratio so may contain gas

✗

Correct answers

- A. Class -IV
- B. Class - III
- C. Class - II
- D. Class - I
- E. Gas effect

This form was created inside of Indian Institute of Technology (Indian School of Mines), Dhanbad.

