


# Quiz-2: Seismic Data Processing and Interpretation Practical (GPC 519) of Monsoon Semester 2020-21

Total points 12/30 

All answer should be concise and precise

Answer all Question

No Negative Marks

The respondent's email address ([deepak.19mc0025@agp.iitism.ac.in](mailto:deepak.19mc0025@agp.iitism.ac.in)) was recorded on submission of this form.

✘ The following values are provided for different lithologies. Find out gas sand from provided lithologies based on the estimation of single Lamé's parameter. \* .../4

Lithology	V <sub>p</sub> (m/s)	V <sub>s</sub> (m/s)
A	6260	3240
B	7050	4160
C	6060	4150
D	3453	2302

B

✘

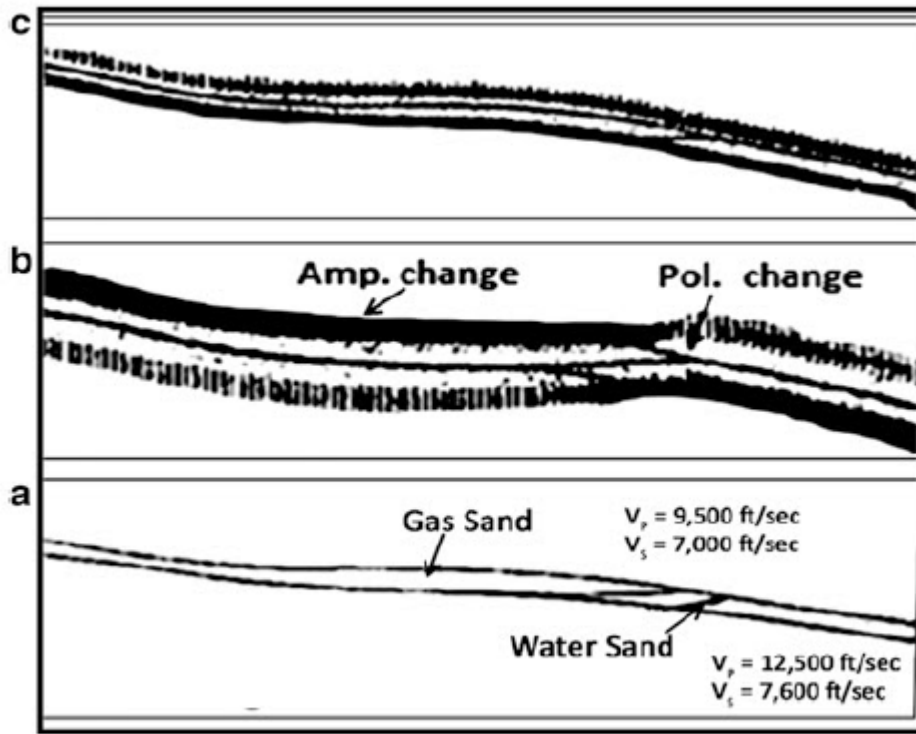
Correct answer

D: V<sub>p</sub>/V<sub>s</sub> & Poisson Ratio: 1.50 & 0.10



✘ Identify Geological model, P-seismic and S-seismic based on “a”, “b” and “c”. \*

.../3



Bright spot - gas sand

✘

Correct answers

a- Geological Model

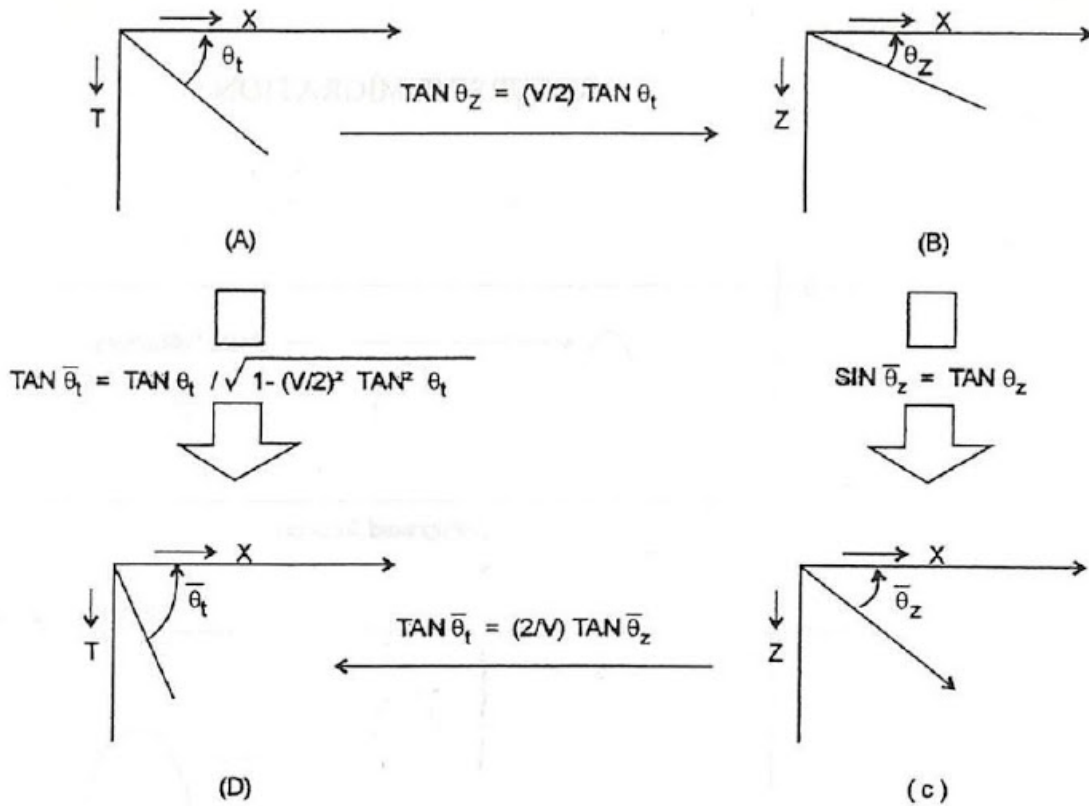
b- P-Seismic

c- S-Seismic



✗ Identify Flow process of Migration based on "A", "B", "C" and "D".  
 Notations are carrying standard meaning of Migration \*

.../4



C TO D MIGRATION,

✗

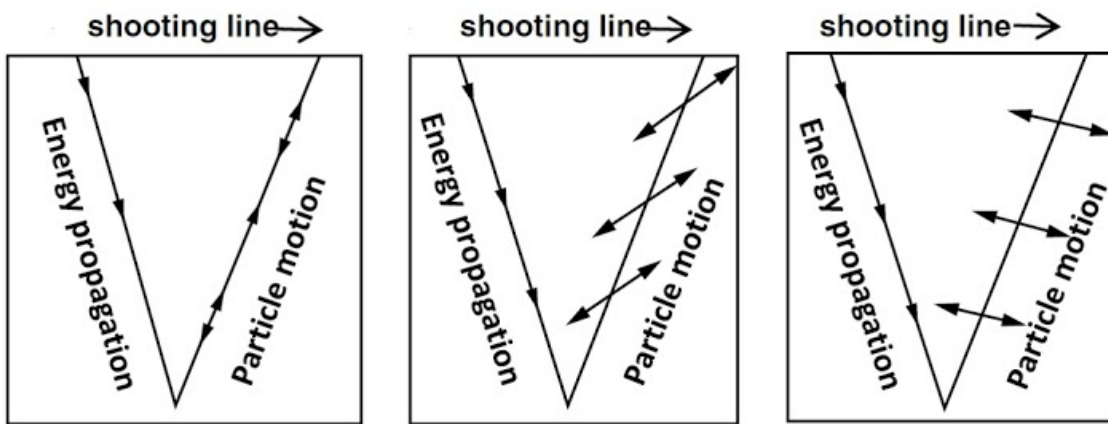
Correct answer

A) Input Record Section, B) Conversion to Depth Domain, C) Migration in Depth Domain, D) Re-conversion to Time Domain



✓ Identify the waves based on particle motion. \*

3/3



1 - p wave ,3 - s - Horizontal(SH ), 2-s vertical(SV)

✗

Correct answer

P, SH and SV

✗ Low-Impedance Gas Sand is, \*

0/2

- Class 1 AVO
- Class 2 AVO
- Class 3 AVO
- Class 4 AVO

✗

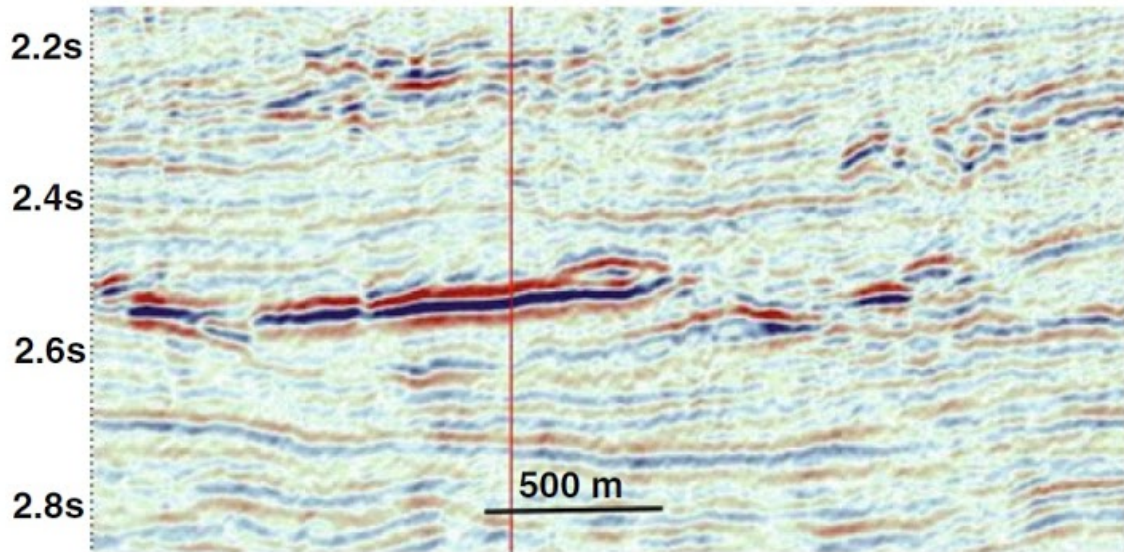
Correct answer

- Class 3 AVO



✓ Name/identify the Special Character from the Seismic Image. \*

2/2



ps section , may be resevier , bright spot

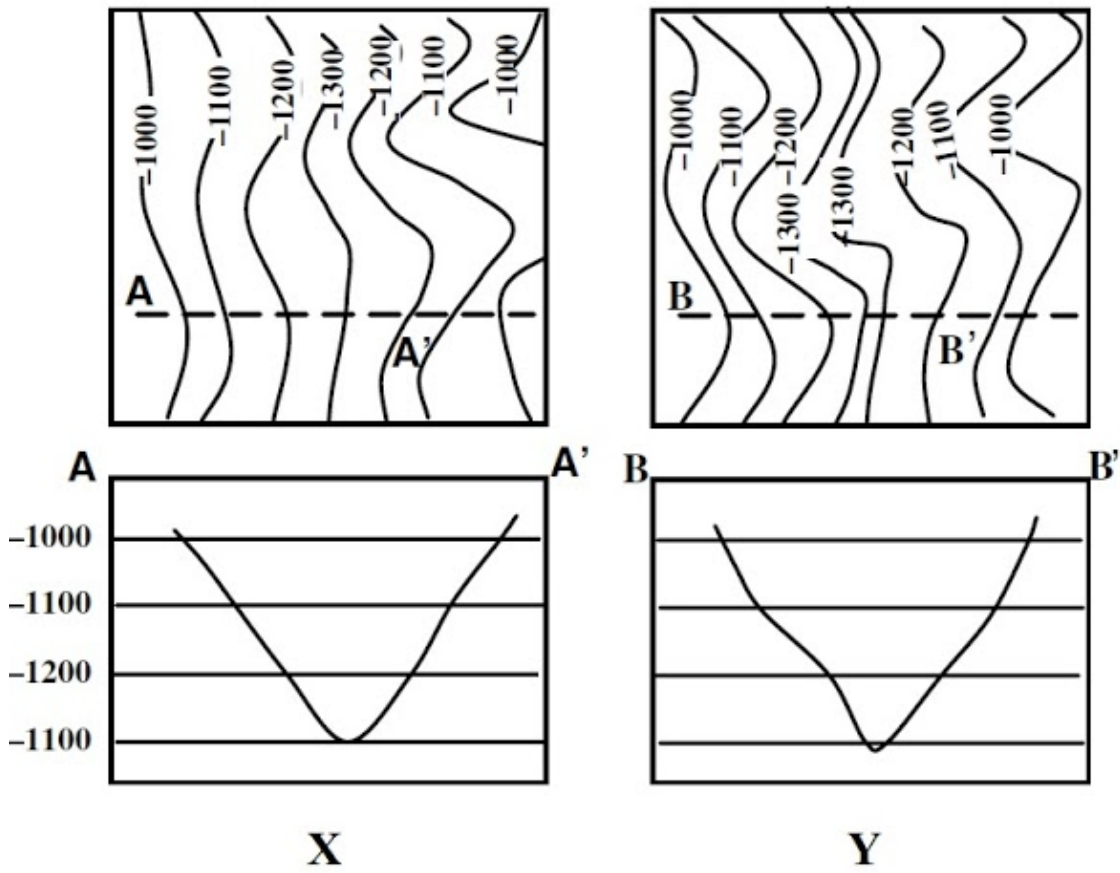
✗

Correct answer

Bright Spot



✓ Which one is correct for cross-sectional representation between X and Y of two contours? \* 2/2

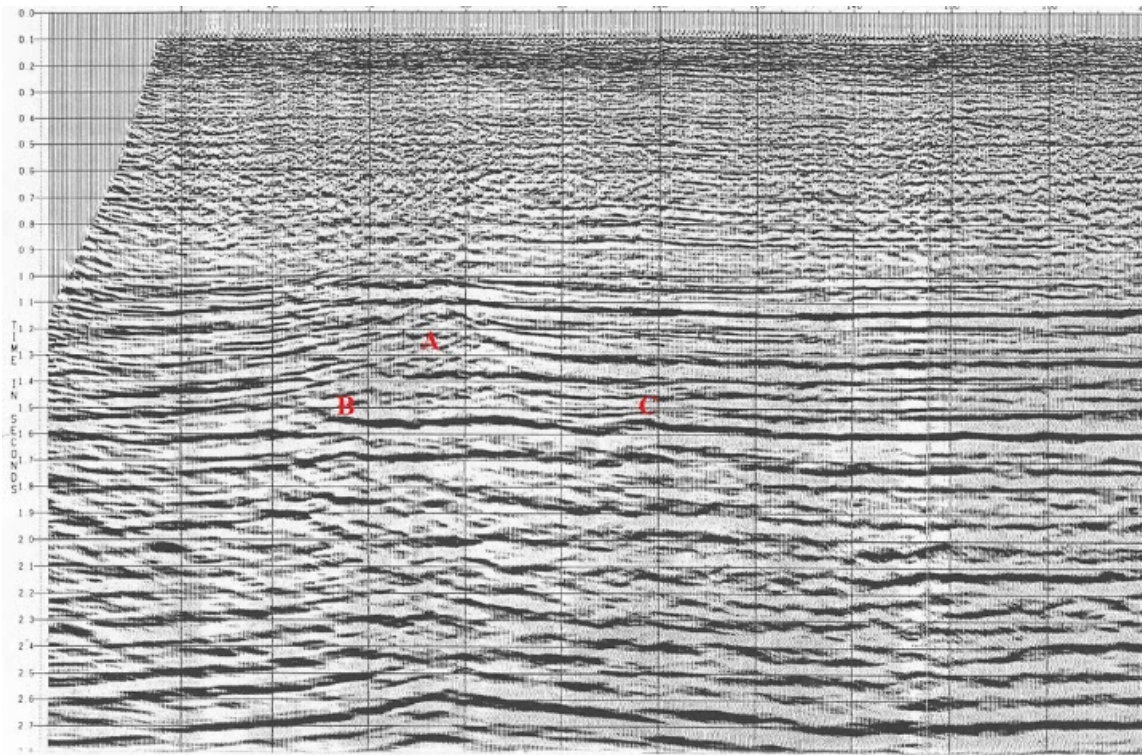


Y .....



✗ Identify the structural signature from the given seismic section. \*

1/3



anticline, MAY BE SALT DOME

✗

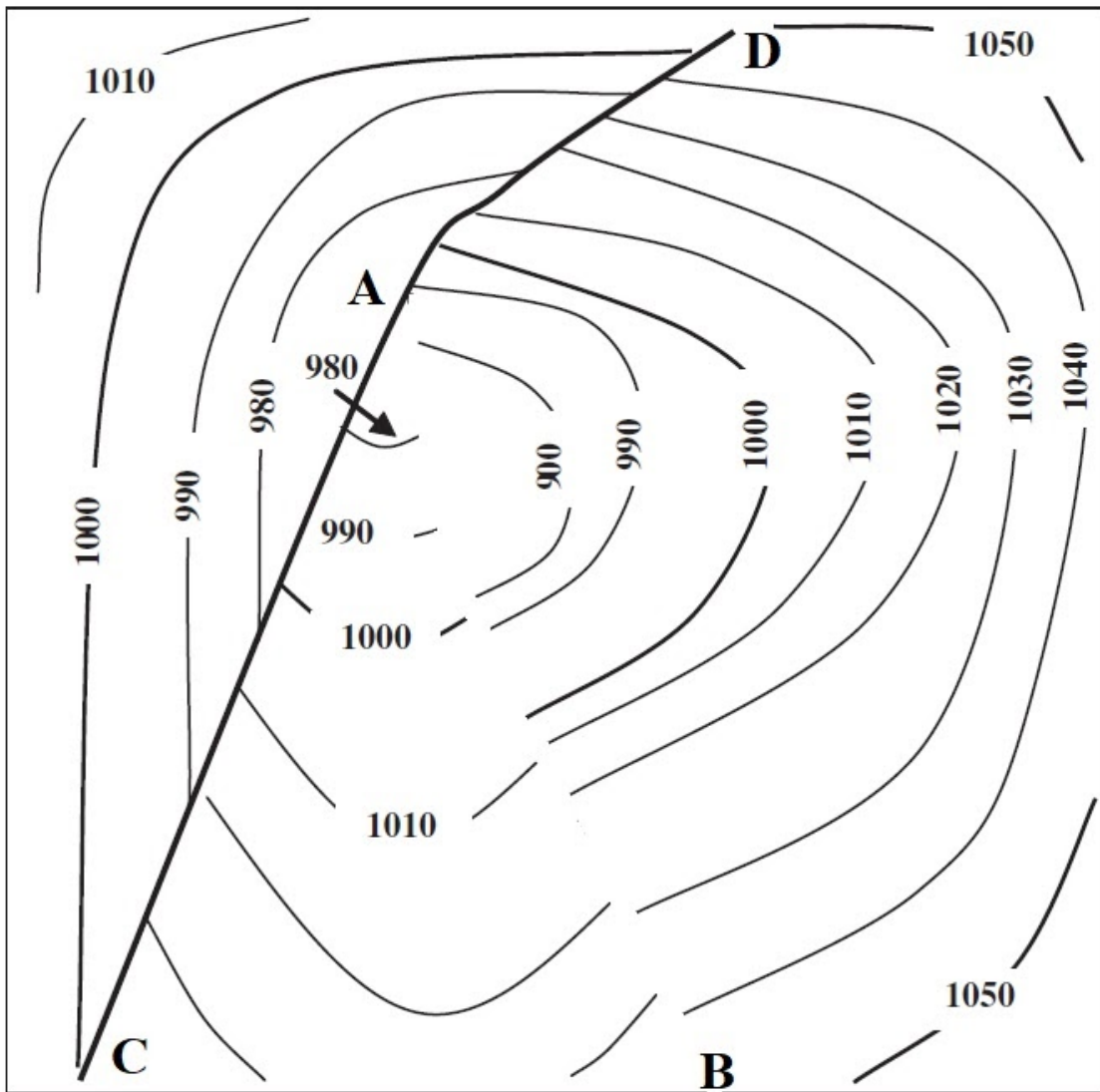
Correct answer

A: Anticline, B: Fault 1 and C: Fault 2



✘ How this contour map can be corrected and why? \*

0/2



fault because fault change in sudden contour

✘

Correct answer

Placing Fault in between A to B since contour lines are shifted



✗ V1: 6500 ft/sec; H1: 650 ft; V2: 8000 ft/sec; H2 : 1000 ft;  $\Delta t_1 = 100$  ms 3/4  
(OWT) and  $\Delta t_2 = 125$  ms (OWT); Find out RMS velocity? In which domain  
of Migration this velocity will be applicable? Do you expect any kind of  
distortion in image after using this velocity for migration? \*

Vrms = 7371.11ft/sec, time domain, ✗

Correct answer

7371 & Time; No

✓ AVO is mostly applicable to siliciclastic sand hydrocarbon reservoirs 1/1  
though more commonly to ones saturated with gas where the effect of  
amplitude anomaly is more pronounced. \*

True ✓

False

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