Jauf Formation is of Lower to Middle Devonian age. It underlies Jubah and overlies Tawil formation with conformable contacts. After deposition of Tawil, the shallow marine sands of the Jauf formation were deposited over a broad shelf. It consists of thick Sandstone with thin Shale intercalations. Jauf reservoir is relatively cleanest and most porous of all pre-Unayzah reservoirs. It is a continuous zone with sand thickness varying from 250 to 400 ft. Jauf top is encountered at a depth of 11000 ft in the structural crest and reach depths of over 15000 ft in flanks of Awali field area and penetrated in few Awali wells. Individual porous layers are 5-15 ft thick and alternate with tight well-cemented sandstones or shales. The zone proved to be gas bearing in a test conducted in two of the crestal wells of Awali field. Gas shows were also reported in few drilled wells, but production testing was not carried out in these wells.

3D Seismic interpretation has been carried out by using 3D Re-processed PSDM volume. The relevant well data of the area has been duly incorporated in the study. Integration of 3D seismic data and Geological information resulted in preparation of detailed subsurface structural and attribute maps at selected levels. Seismic attributes such as Frequency and Amplitude maps show some anomaly on Jauf level, these are indirectly indicating the Jauf reservoir development and also validated with the available Well’s test results. Few potential stratigraphic and fault closure traps have also been identified in the flank of the Awali field.

The study resulted in identifying potential areas of better reservoir development besides supporting the ongoing exploration efforts in surrounding offshore areas for similar gas prospects.
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