Multicomponent seismic data add a new dimension for seismic interpretation. In recent years, the seismic industry has made significant progress in the acquisition and processing of multicomponent data. The widespread use of multicomponent data, however, is partly hindered by the lack of interpretation tools and workflows after 3C/4C data processing.

In this presentation, we describe an interpretation workflow for 3D four-component ocean bottom cable (3D/4C OBC) data, and discuss the related inversion problems. Key issues include: problems in matching PP and PS events in the time domain; preconditioning of PP/PS data for joint inversion; inversion methodologies for S wave and density contrasts; and the derivation of special attributes from joint inversion, which may help us understand more about our hydrocarbon reservoirs. Part of the inversion results of EOG project at Pamberi, Trinidad is used as an example to illustrate the interpretation workflow. The results and related fullwave attributes are compared to well logs.