Development of Akçakoca Gas Field in Western Black Sea, Offshore Turkey

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Exploration and development activities in the Turkish sector of Black Sea have been ongoing with a growing trend since Ayazli Gas Field was discovered in late 2004. Three tripods, a trunk offshore pipeline were installed off the western Turkish coast up to 78 meters water depth, 18.5 km of onshore pipeline and Cayagzi Natural Gas Processing Facility in the shoreline was constructed to receive, process, compress and send the produced gas to the national gas grid in Phase-I development. Akcakoca Gas Field was discovered in late 2006 after Akcakoca-3 exploration well was successfully drilled and tested by a semi-submersible rig. Field is located about 14 km off the coast of Akcakoca/Duzce in the Western Black Sea where the water depth is about 94 meters. Akcakoca Field Development, also called Phase-II, encompasses design, fabrication and installation of a 4-Legged Drilling/ Wellhead Platform with a two level Topside over the two pre-drilled wells, installation of a 12 inch 7 km long offshore pipeline, tie-in to the existing subsea pipeline system, tie-back of the existing wells and drilling & completion of two or three additional wells via a platform rig installed on main deck of the platform. An advanced FEED study for Akcakoca Platform and offshore pipeline was performed which was followed by an international tendering process for an EPCI type service agreement. Platform was constructed by the Contractor GSP in Agigea Yard/Constanta in Romania, transported to Turkey and installed by a shear-leg heavy lift barge owned them. Offshore pipeline was installed using S-Lay method by a pipelay vessel again owned by GSP. In this paper, Akcakoca field development phases are introduced, particulars and different aspects of design and construction activities are presented. Akcakoca Platform is currently the deepest shallow water installation in the Turkish territorial waters and is expected to reach its total peak production rate from the platform wells after all the wells are drilled and completed in the third quarter of 2011.

Keywords: Western Black Sea, Field Development, Akcakoca, Pipeline, Offshore Platform