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Kizomba, A Deepwater Giant Field, Block 15 Angola

In the last decade, Exxon Exploration Company embarked upon a series of global integrated regional geological studies culminating in the discovery of giant oil and gas fields. Aggressive acreage capture strategies were initiated based on these studies with early participation in opening tender rounds in the prolific basins identified from a position of having no acreage in the Congo Basin. ExxonMobil has become the largest net deepwater acreage holder in Angola with interest in 11 blocks totaling 13 million gross acres.

Block 15 was among the first trenches of deepwater acreage offered by the Government to a consortium led by ExxonMobil's subsidiary, Esso Exploration Angola (block 15) Ltd. and with BP Amoco, Agip and Statoil as Co-Venturers. The Joint Venture acquired 2,500 Km² of high quality 3-D seismic and high graded play areas to focus early drilling. Wildcat drilling during 1997-1999 has resulted in 6 discoveries, (86% economic success rate), all in 1000 - 1400 m of water. Recoverables reserves are estimated to be in excess of 2.0 billion oil equivalent barrels with significant undiscovered potential remaining to be evaluated on the block.

Four of these discoveries (Hungo, Chocalho, Kissanje and Dikanza) make up the giant Kizomba Field Complex with recoverable reserves approaching 2.0 billion oil equivalent barrels. Each field of the discovery wells penetrated multiple high quality, deepwater reservoirs with oil water contacts controlled by a combination of structural spill, fault leak and top seal failure where columns exceed 1000 m. Trap configuration is controlled by early Aptian salt movement, subsequent late stage extensional faulting, and lateral channel facies seals. Reservoirs are Middle to Lower Miocene in age and dominantly turbidities with associated debris flows deposited in an upper/mid slope setting. Reservoir properties are excellent.

Kizomba will represent ExxonMobil's first Angolan oil production operation with first oil expected by 2004. The development will take place in approximately 1200 m of water and will involve about one-half of the Kizomba reserves in its first phase of development (approximately 1 billion oil equivalent barrels). The primary drive mechanism of these relatively shallow (2100-2700 m) reservoirs will be waterflood with injection of associated gas early in project life. Production will be via a floating surface wellhead platform producing to a floating production storage and offloading vessel (FPSO). The FPSO is expected to store 2.2 mbbls, process 250 kstbpd, include water and gas facilities, and offload to tankers via a nearby CALM buoy. Success in the discovery of this giant field has been through the application of leading edge geoscience technologies systematically integrated into regional exploration experiences and strategies. The future will involve continued emphasis on innovative development technologies to maximize production in this challenging deep offshore environment.