

# SIPES Luncheon Meeting

## Going Deep: McMoRan's High Impact Deep Exploration Play

James R. Moffett

For the last six years, McMoRan Exploration Company has been the leader in the Gulf of Mexico's deep shelf exploration play, drilling numerous discoveries targeting deep Miocene structures at depths of 15,000'-25,000'. McMoRan's continued success with its deep shelf program includes the Flatrock discovery on OCS 310 in South Marsh Island Blocks 212 and 217. During 2008 McMoRan expanded its exploration program to include the "Ultra Deep" play at depths of 25,000' – 35,000', targeting giant structures below the listric detachments of the Miocene shelf. The unprecedented deepening of the South Timbalier Block 168 "Blackbeard" prospect was a significant accomplishment for McMoRan's drilling and geotechnical teams, an achievement that has profound implications for the future of this game-changing exploration play.

Flatrock Field was discovered in 2007 beneath the Tiger Shoal Field. It is a prime example of the "deeper pool" concept which is a fundamental aspect of the McMoRan exploration strategy. The shallower Tiger Shoal Field, discovered in 1958, is in normal pressured reservoirs with 110 wells that have produced 3.3 TCFE. Flatrock Field has six wells producing from the geopressured Rob L and Operc (14,800' MD to 17,200' MD) reservoirs. Production from the Flatrock Field averaged a gross rate of approximately 280 MMcf/d in the third quarter of 2009. Production from the field is expected to increase in early 2010 following planned recompletions and remedial activities. These high production rates are evidence of excellent porosity and permeability at these depths. The recent announcement of positive drilling results at the Blueberry Hill Sidetrack prospect on SL 340 at depths of over 20,000' highlights the continuing potential of the deep shelf play.

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McMoRan Exploration's ultra deep drilling program has identified multiple deep, large structural traps below the regional listric fault/salt weld with reservoir targets of Miocene, Paleogene, and possible Cretaceous age. McMoRan has drilled two ultra deep wells in the play. In 2008, McMoRan re-entered and deepened the Blackbeard well in South Timbalier Block 168 from 30,067' MD to total depth of 32,997' MD. This exploration well discovered four hydrocarbon-bearing intervals within the Miocene section. In 2009, McMoRan evaluated the Davy Jones prospect, re-entering the South Marsh Island Block 230 #1 well and deepening it from original total depth of 19,958' MD to total depth of more than 28,000' MD as of December 2009, and as of this date, the well continues to be drilled to a planned total depth of 29,000'.

The large ultra-deep structures were interpreted on regional 2D seismic data, on pre-stack time-migrated (PSTM) 3D seismic data, and on proprietary reprocessed pre-stack depth-migrated (PSDM) 3D seismic data. Available deep well data were utilized to calibrate the geologic model for the section above the salt weld. The ultra deep prospects are similar to deep, large sub-salt structural traps in the deep water Gulf of Mexico with reservoirs of Middle Miocene to Lower Paleocene age at depths below 20,000 feet subsea. The Middle Miocene to Lower Paleocene sandstone reservoirs in both deep water and below the deep shelf were deposited in deep water depositional environments. Preservation of porosity and permeability with depth of burial is a major risk factor for deep sandstone reservoirs in the shallow water areas of the Gulf of Mexico shelf.

McMoRan has generated an impressive inventory of high-potential prospects and will continue to pursue its deep shelf and ultra deep exploration opportunities on the Gulf of Mexico shelf in 2010.

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## Biographical Sketch



James R. Moffett is Co-Chairman of the Board of McMoRan Exploration Co. (NYSE: MMR). MMR is engaged in the exploration, development, and production of oil and natural gas reserves offshore in the Gulf of Mexico and onshore in the Gulf Coast area. McMoRan has a diversified portfolio of oil and gas properties with significant production and cash flow generating capacity and a large exploration acreage position to pursue opportunities on the continental shelf of the Gulf of Mexico.

Mr. Moffett is Chairman of the Board of Directors of Freeport-McMoRan Copper & Gold Inc. (NYSE: FCX). FCX is one of the world's leading international mining companies. FCX is engaged in minerals exploration, mining, smelting, refining, and related operations around the globe. Under Mr. Moffett's leadership, in 1988 FCX discovered the Grasberg ore complex in Papua, Indonesia, which contains the world's largest reserves of copper and gold. In 2007, FCX acquired the Phelps Dodge Corporation in a \$26 billion transaction that created the world's largest publicly traded copper company. With 25,000 employees, FCX operates large, long-lived, geographically diverse assets with significant proven and probable reserves of copper, gold, and molybdenum.

Born in 1938 in Houma, Louisiana, and raised in Houston, Texas, Mr. Moffett has a B.S. degree in geology from The University of Texas (1961) and an M.S. degree in geology from Tulane University (1963).