Monday, April 18, 2011

Westchase Hilton • 9999 Westheimer
Social Hour 5:30–6:30 p.m.
Dinner 6:30–7:30 p.m.

Cost: $28 Preregistered members; $35 non-members & walk-ups

To guarantee a seat, you must pre-register on the HGS website and pre-pay with a credit card.
Pre-registration without payment will not be accepted.
You may still walk up and pay at the door, if extra seats are available.

HGS International Dinner Meeting

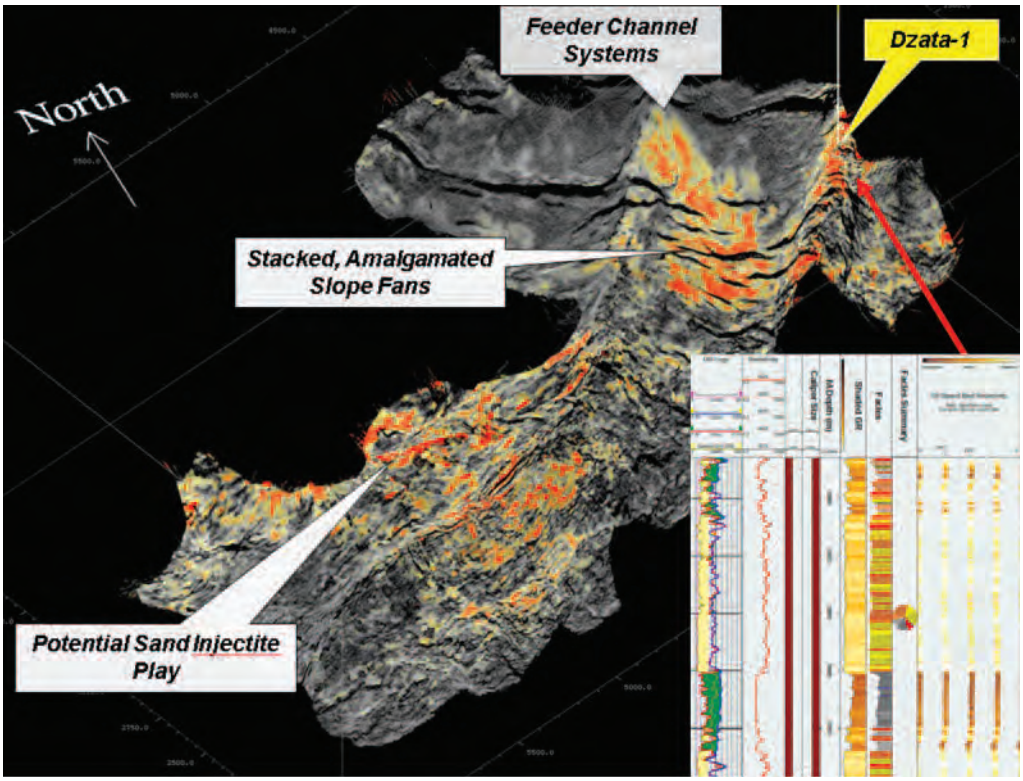
Christopher H. Bradley
Vanco Exploration Company
Houston, Texas

The Tano Basin of Western Ghana – a Complex, Intriguing and Prolific Deepwater Play

The offshore Tano-Ivorian basin straddling the Ghana-Côte d'Ivoire border along the West African transform margin has become one of the most active deepwater exploration plays in the world, resulting in multiple significant discoveries. Vanco is playing a significant part in this exciting play.

The offshore Tano-Ivorian basin…has become one of the most active deepwater exploration plays…resulting in multiple significant discoveries

Vanco's recent Dzata-1 well targeted a structural trap formed by compression of a unique succession of outboard foredeep basin sediments adjacent to the Ghana Marginal Ridge. It is an internally-faulted, elongate, three-way dip closure at multiple levels within the Cenomanian and Albian section with the seal provided by the overlying Late Cretaceous and Tertiary claystones. The well was located based on a strong Class IIP AVO anomaly and encountered a gross hydrocarbon column of 94 meters with 25 meters of net stacked oil and gas pay in Albian sandstones opening a new prospective trend in the previously undrilled Romanche sub-basin in the eastern part of the Tano basin. The primary reservoir sandstone between the depths of 3,663 and 3,690 meters contains gas and light oil. Volatile black oil was recovered from a zone between 3,701 and 3,709 meters. Geochemical analysis of these hydrocarbons and penetrated source rocks suggest a two-phase petroleum system consisting of early oil and gas charge from a lacustrine source facies and a subsequent oil charge from a marine source facies. Increased gas influx from continued burial of the source facies appears to have depressed the original oil water contact further down structure and increased reservoir pressure until the seal for gas was breached charging the gas chimney evident on the structure.



3D perspective showing far stack seismic amplitudes on a Middle Albian surface. The warm colors are areas of sandy slope fan turbidites fed by amalgamated slope channels updip spilling downdip into a basin floor setting which are then remobilized and injected into overlying younger sediments.

The Dzata-1 provided positive seismic anomaly calibration which has allowed regional

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application of AVO and seismic inversion technology exploring the large 3,200 sq km 3D survey within Vanco's Cape Three Points Deep Water license. These technologies combined with seismic facies analysis and 3D visualization has revealed multiple opportunities in both the Lower and Upper Cretaceous deepwater plays that will be the focus of an upcoming drilling campaign in addition to appraising the Dzata discovery. Opportunities include structural/stratigraphic plays on the flanks of Dzata and nearby structures, stratigraphic plays in amalgamated channelized slope fans similar to Jubilee Field and an interesting unconventional sand injectite play.

Biographical Sketch

Christopher Bradley, an exploration geologist, joined Vanco in 2007 and has over 33 years of U.S. domestic and international exploration and production experience including overseas postings. He has spent the last 22 years working deepwater plays and new ventures worldwide both as a geoscientist and project manager for Conoco Inc., Kerr McGee, and Anadarko Petroleum Corporation.

Mr. Bradley has been involved with several large discoveries in deepwater plays in both West Africa and Brazil. He is trained in both the latest geologic and geophysical exploration concepts and technology with emphasis on sequence stratigraphy, seismic interpretation, basin modeling, deepwater sedimentology and deepwater drilling operations.

Since 2007, Mr. Bradley has been responsible for geological evaluation and resource estimation for all of Vanco's worldwide activities including the geological evaluation of the recent Dzata-1 discovery in Ghana and the Orca-1X bis well in Côte d'Ivoire.

Mr. Bradley holds a B.Sc. in Geology from the University of Connecticut and a M.Sc. in Geology from the University of Louisiana at Lafayette (formerly the University of Southwestern Louisiana).