

Monday, January 10, 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 General Dinner Meeting

Dr. Menno G. Dinkelman
ION-GX Technology

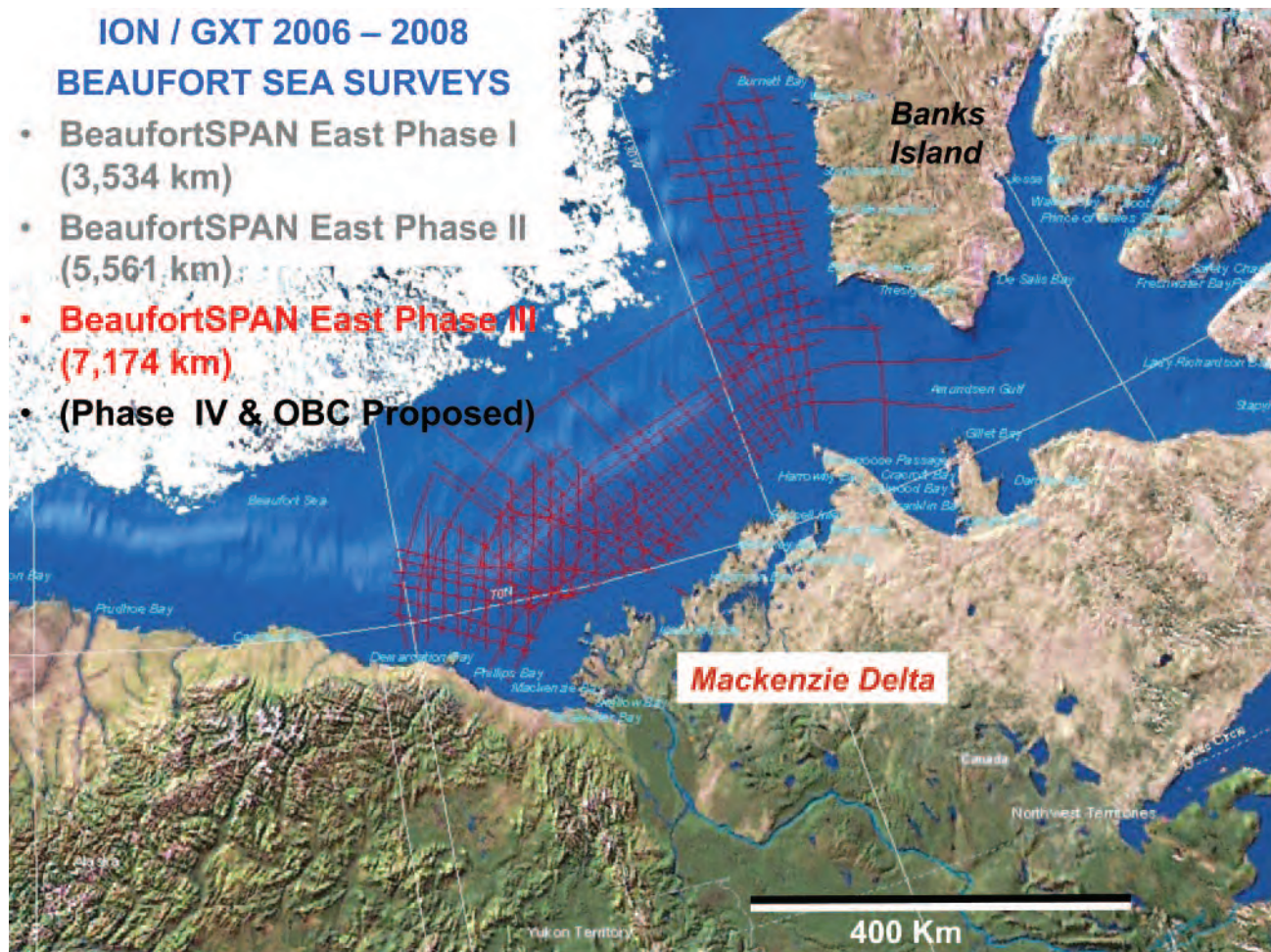
HGS General Dinner Meeting

Interpretation of a New Regional Seismic Survey, Offshore Mackenzie Delta and Beaufort Sea Margin, Arctic Canada: Illuminating a Pivotal Piece of the Arctic Puzzle

The new regional 2D BeaufortSPAN seismic survey acquired in four phases from 2006 to 2010 in the Beaufort Sea provides a broad, deeper view of basins and crustal structure of the Meso-Cenozoic Canadian Arctic passive margin. The 40-km deep PSDM seismic profiles cover 22,160 km from inner shelf to

over 2000 m water depth and include areas previously unsurveyed due to sea-ice limits. The survey area extends from the U.S. border and offshore Mackenzie Delta north to latitude 74° N off Banks Island. The clastic sedimentary prism attains a thick-

HGS General Dinner continued on page 23



BeaufortSPAN survey phases shown on a geographic base map with minimum sea ice extent in summer 2008. Acquired lines extend from near 70° to 74°N latitude and over 500 Km EW. Our survey is enabled by technology and ice. Phase IV and OBC data are currently in processing.

ness up to 17 km and has a well-documented petroleum system that has yielded 48 oil and gas discoveries in Cretaceous-Oligocene sandstones of the delta region. A basin-scale geological interpretation of the seismic data is tied to exploratory wells in the Beaufort-Mackenzie basin and reveals significant variations in the crustal architecture of the continental margin.

Three segments of the passive margin are recognized and defined by orientation and structural styles, displaying variations from typical passive margin geometry along Banks Island, to wrench structures along the Tuktoyaktuk Peninsula, to a compressional foldbelt west of Mackenzie Bay. Outboard seismic profiles image the continent-ocean boundary (COB), oceanic crust, and the inferred extinct spreading center of the Canada basin. The COB is interpreted using gravity data supported by deep seismic reflectors. Together, the geophysical data support the rotational model of the opening of the Canada basin in early Cretaceous time. The regional deep imaging of the distinct tectonic architecture,

structural sequence, and tectonostratigraphy of each segment are major results of this project, and advance the understanding of the geological framework of known and potential petroleum basins of the Arctic margin of Canada. ■

Bilgraphical Sketch

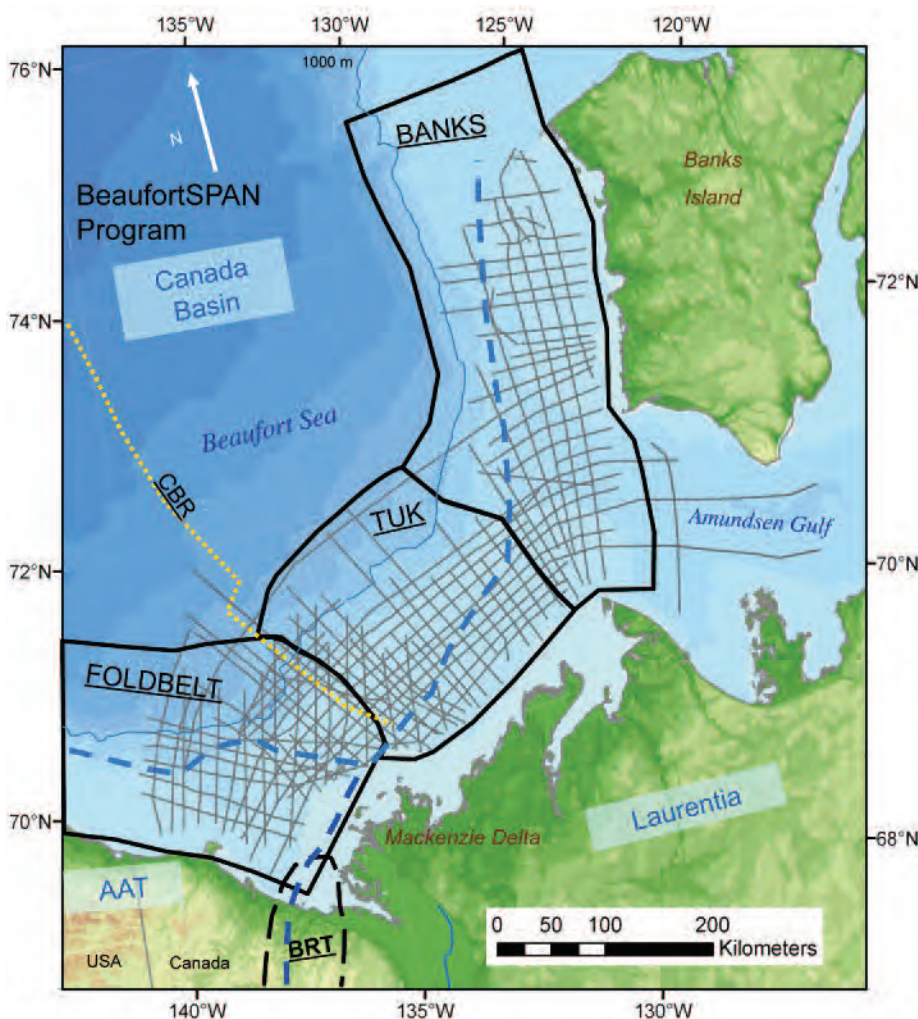
DR. MENNO G. DINKELMAN joined ION-GX Technology in 2005, initially as a consultant and then in 2006 as Chief Geologist BasinSPAN Programs, with primary focus on the interpretation of the Arctic, North Atlantic, and SE Asia programs.



Prior to joining ION-GXT, Mr. Dinkelman was active for more than 14 years as principal geologist at the international energy consultancy firm Gaffney, Cline & Associates, where he provided technical, commercial, and strategic advice to energy

companies' exploration and development projects spanning from grass roots exploration to reserves audits and certifications in sedimentary basins worldwide. Throughout the 1980s he worked as a senior research scientist/geologist at the exploration research centers of Conoco and ARCO, and then as the exploration advisor for the Ministry of Oil and Mineral Resources in the Yemen Arabic Republic (North Yemen). From 1973 to 1980 he was on the faculty of the Department of Geology at Florida State University. Ever since his early days as a geologist he has also intermittently worked as an independent consulting geologist in Europe and the United States and has been on assignment in many countries.

Mr. Dinkelman holds degrees in the Natural Sciences and Geology from the Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland, and a Ph.D. in Geological Oceanography from Oregon State University, Corvallis, Oregon. He is a member of HGS, GCAGS, the Society of Sedimentary Geology and the Society of Exploration Geophysicists. He is fluent in Dutch, English, and German and has working knowledge of French, Spanish, and Italian.



Three segments of the passive margin, Banks, Tuk and Foldbelt, have been distinguished in our studies. ION BeaufortSPAN Phase 1, 2 and 3 lines are shown.