

# Summary of Metocean parameters for portions of the Chukchi and Beaufort Seas

Presented by Dr. Andrew Metzger



**Abstract:** The intent of this study was to produce a supplement to ISO 19906 Standard: *Petroleum and Natural Gas Industries - Arctic Offshore Structures* (i.e., the Normative). The supplement provided meteorological and oceanographic (metocean) information, for US waters in both the Chukchi and Beaufort seas, in a format consistent with the philosophy of the Normative. Implementation of ISO 19906 in US waters will require such meteorological and oceanographic design criteria. Appendices B.7 (Beaufort Sea) and B.8 (Chukchi Sea) of ISO 19906, by design, provide only cursory information that is intended for reference. This study explored the existing data base of publicly available metocean data

for the region; collated what was found; and then presented bulk statistics for the data. The end product is intended to provide more granular reference material that will assist federal regulatory agencies in planning and permit review.

**Biography:** Dr. Andrew Metzger is an Associate Professor in the Civil Engineering Department at the University of Alaska Anchorage (UAA). He has been the principal investigator for a number of research efforts themed on engineering design criteria for infrastructure and structures sited in the Arctic. Dr. Metzger was recently funded by the Bureau of Safety and Environmental Enforcement (BSEE) to provide reference design values for environmental demands (metocean and sea-ice parameters) on offshore structures in the Chukchi and Beaufort lease areas. He has also been involved in a number of policy development activities focused on arctic shipping and shore side support infrastructure for same. Andrew has also provided testimony at a US Senate hearing, at the invitation of Senator Mark Begich, on the engineering challenges of Arctic Infrastructure and northern development (July 27, 2011). Dr. Metzger was also a member of the North Slope Spills Analysis Expert Panel; sponsored by the Alaska Department of Environmental Conservation. His primary area of study is the uncertainty of demands placed on civil infrastructure with an emphasis on the Arctic.

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