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**DETAILED MESAURED SECTION OF THE TINGMERKPUK
SANDSTONE (NEOCOMIAN), NORTHWESTERN DELONG MOUNTAINS,
WESTERN ARCTIC SLOPE, ALASKA**

by

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**DETAILED MEASURED SECTION OF THE TINGMERKPUK SANDSTONE (NEOCOMIAN),
NORTHWEST DELONG MOUNTAINS, WESTERN ARCTIC SLOPE, ALASKA**

This study is one of a series in a project to expand the data base for evaluation of potential hydrocarbon exploration objectives of the future in the western part of the Colville basin, including the western part of the National Petroleum Reserve, Alaska (NPR). The project includes geologic mapping and detailed studies on the stratigraphy, paleontology, organic geochemistry, and tectonic evolution of the foothills of the western DeLong Mountains. Field operations and analytical studies were partially funded by grants from Anadarko Petroleum Corporation, ARCO Alaska, Inc, Arctic Slope Regional Corporation, BP Exploration Inc., North Slope Borough, Phillips Petroleum Company, the U.S. Geological Survey, and Alfred James III.

This report contains detailed data for a 130-m measured section of the Lower Cretaceous Tingmerkpuk sandstone (informal name) on the steep north flank of Tingmerkpuk Mountain (NW 1/4 Sec. 21, T 10 S, R 45 W, 68.57°N, 162.46°W)--its type locality. The exposure includes the entire unit and is the only known complete, relatively well-exposed, and structurally uncomplicated section of the Tingmerkpuk. The base of the section at Tingmerkpuk Mountain includes the contact with the top of the stratigraphically underlying Kingak Shale (Neocomian); the top of the section is overlain by Kingak Shale at the base of an overlying thrust sheet. Although the upper 15 m of the exposure consists of rubble that was not measured or described, this locality is thought to contain a complete section of the Tingmerkpuk. Dips are consistently ~30° S throughout the exposed section, and there is no indication of any structural break within the section.

Additional DGGS reports in this series include:

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Dow, Wallace G., DGSI, Inc., 1998, Organic geochemistry of Cretaceous, Jurassic, and Triassic shales from the northwestern DeLong Mountains, western Brooks Range, Alaska, 1994-1997: Alaska Division of Geological and Geophysical Surveys Public-data file report 98-35, 181 p.
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Wartes, M.A., and R.R. Reifenstuh, 1998, Preliminary petrography and provenance of six Lower Cretaceous sandstones, northwestern Brooks Range, Alaska, in Clough, J.G., (editor), Short Notes on Alaska Geology, 1997, Alaska Division of Geological and Geophysical Surveys Professional Report PR 118, p. 113-122.

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Elder, William P., 1999, Report on coquinoid limestone beds of the western Arctic Slope, Alaska: Alaska Division of Geological and Geophysical Surveys Preliminary Interpretative Report, 10 p., in press.

Elder, William P., and Mickey, Michael B., 1999, Tingmerkpuk River stratigraphic section, western Brooks Range, Alaska: Alaska Division of Geological and Geophysical Surveys Preliminary Interpretative Report, 4 p., 1 sheet, in press.

Kirkham, R.K., and Mull, 1999, Measured section of the HRZ unit, Pebble Shale unit, and Kingak Shale near VABM Redwul, Kukpowruk River, northwestern DeLong Mountains, western Brooks Range, Alaska: Alaska Division of Geological and Geophysical Surveys Preliminary Interpretative Report, 4 p., 1 sheet, in press.

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REPORTS IN PREPARATION

Munley, Walt, Paul, Layer, and C.G., Mull, 1999, 40Ar-39Ar dates of detrital muscovite in Mount Kelly Graywacke, northwestern DeLong Mountains, Brooks Range, Alaska: Alaska Division of Geological and Geophysical Surveys Preliminary Interpretative Report, in press.

Murphy, John, 1999, Apatite fission-track data, 1994 and 1996 samples, Tingmerkpuk project: Alaska Division of Geological and Geophysical Surveys Raw Data File, in press.

MAPS IN PREPARATION

Geologic map of the Surprise Creek structural trend, DeLong Mountains D1 and D2 quadrangles, western Brooks Range, Alaska, scale 1:63,360.

Geologic map of the Tingmerpkuk Sandstone trend, DeLong Mountains C1 and C2 quadrangles, western Brooks Range, Alaska, scale 1:63,360.

ABSTRACTS

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September 23, 1999