

# **DEPTH MEASUREMENTS IN THE LOWER UBLUTUOCH RIVER, JULY 30-31, 1999**

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## **Introduction**

In 1999, ARCO Alaska Inc. proposed to explore for oil within the eastern portion of the National Petroleum Reserve–Alaska (NPR-A). Exploration would lead to crossing rivers and lakes with ice roads.

During review of exploration, and potentially development, permits, information was required to ensure that the ice roads did not adversely affect fish wintering areas. A survey to evaluate potential wintering areas, and their proximity to potential ice road crossings was conducted on July 30-31, 1999.

## **Methods**

Water depth data were collected on July 30-31, 1999 to identify deep areas of the lower Ublutuoch River that may provide overwintering areas for fish. The survey was conducted in a 12 ft inflatable boat beginning at 70°15.08'N 151°17.09'W. Depths were taken with an Eagle SupraPro ID depth sounder and were located with a hand-held GPS receiver. At the time of the survey, the GPS signal was being degraded with an intentional random error by the U.S. Department of Defense. The error was estimated to be about 300 ft, thus accurate locations within a narrow river channel were not possible. To aid in resolving actual locations, positions were marked on USGS topographical maps as well as recorded by GPS.

GPS points and information recorded on USGS maps were transferred to ArcView GIS software to map the depth data on a geo-referenced aerial photograph of the lower Ublutuoch River.

## **Results**

Results of the survey are presented in the attached figure. Maximum depths tended to increase when moving downstream. In the upper portion of the surveyed reach, maximum depths were 8-13 ft, while near the downstream end, depths in excess of 23 ft were encountered. Overwintering is typically in water 8 ft deep or greater, thus the survey indicates there is substantial potential for successful overwintering in the lower Ublutuoch River.



Figure 1. Depths (in feet) observed in the lower Ublutuoch River on July 30-31, 1999 during surveys conducted to identify potential ice road crossings (MJM Research data files).