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Additional sources of photos, data and text include: ARCO Plano and Los Angeles photo libraries; the ARCO Spark, Atlantic's Producer and Pipeliner, ARCO 1866-1991 Celebrating 125 Years, ARCO—50 Years of Technology, 100 years of Progress: The story of the Atlantic Refining Company, various Atlantic and ARCO annual reports, recruiting brochures and other publications, ARCO's internal files and technical reports, organization chart archives, and material in the public domain.

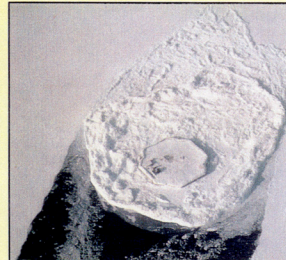
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The 400-foot-long USCG Icebreaker, Polar Sea.



Man-made Tarsiut Island in Beaufort Sea ice.

WINTER CRUISES AND THE LAST GREAT ICE DAYS

In the late 1970s and early 1980s, ARCO, on the hunt for the next Prudhoe Bay, invested significant capital in exploration leases in the Arctic region. There was, however, an obstacle: Even if we discovered the next Prudhoe Bay, how would we develop the field? Thus the ARCO Plano facility became the hot spot for the study of ice.

The Arctic Engineering group was enlisted to apply their expertise to collecting statistics about ice conditions in the Arctic Ocean. If ARCO planned to develop an offshore field in the Arctic, it would need a drilling platform that was the proverbial immovable object. The team was sent to determine how much force the ice could exert on an offshore structure.

One of the more exotic work opportunities associated with their research was the annual Arctic Ocean "winter cruise adventure" aboard one of the U.S. Coast Guard's two 400-foot-long icebreakers—the Polar Sea and the Polar Star. Teams of scientists and engineers from major oil companies spent most of the winter aboard one of these two ships, literally ramming the ice to see how it broke. Then they climbed down 20-foot ladders to drill holes through the ice to determine its thickness and collect study samples.

The Arctic Engineering group measured ice strength in Plano by first crushing samples in a refrigerated plywood box. Later, an ice mechanics laboratory was built, which consisted of a 24'x36'x12' freezer room that contained all test equipment and staff in an ice-friendly environment. This world-class ice lab, however, was defrosted when oil prices dropped and offshore Arctic development was no longer economical.

Since the Arctic in winter is a fairly unforgiving place, ARCO personnel were sent to an Arctic survival school. When the personnel learned the school was formed for Navy Seals and Green Berets, one trio of ARCO personnel, noted that, although they were getting paid to attend, they weren't being paid enough.



Their "final pass/fail exam" included a four-day stay in a snow bank in the mountains. Inside the snow bank or "cave," the temperature reached +32° F, providing warm relief from the -24° F temperature outside.

On one survival training day, an ARCO group headed down the side of a mountain and into a valley to look for a suitable snow bank in which to spend the next few days. The slope was steep and created some rough climbing. Small fir trees made convenient handholds as the group made its way down the side of the mountain. Joe Schmidt brought up the rear. Suddenly, there was a loud cracking sound. The others turned to see Joe sunk up to his waist in snow. A second cracking noise rang out, and Joe disappeared in a puff of snow.

Those small fir trees were really just the tips of full-grown fir trees buried in snow! The branches couldn't support the snow and Joe, so he dropped 12 feet through the branches and snow. To get out, Joe had to climb the tree wearing a backpack and snowshoes.

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