**Technical Notes**

*By Steve Kaiman*

**RCA (ALASCOM)** will build a $360 million communications system for the trans-Alaska oil pipeline. Alyeska Pipeline Service Company, a consortium of ten oil companies which is responsible for the design, construction, and operation of the 789-mile pipeline, recently approved after several years of delay due to the protests of environmental groups, has agreed to purchase an RCA Alascom system for use of the communications system. A $72 million interim system is now being built for the construction phase and an expanded permanent $232 million system will be ready in 1977, when the pipeline is expected to begin carrying hot crude oil from Prudhoe Bay on Alaska's most experienced North Slope to the ice-free port of Valdez on the southern coast.

Both systems will combine uncoordinated and satellite facilities for better efficiency and reliability. The interim system will consist of 11 earth stations at Prudhoe Bay and Valdez as well as expanded microwave and VHF systems along the pipeline route. The earth stations, expected to be operational by late 1972, will beam signals through the RCA Alascom transoceanic system in the Canadian and international communications satellite already in orbit. The permanent system will permit operation of the pipeline from a central control center in Valdez. This operation system is composed of two independent components. The pulsating-carrying communications system will beam signals in between.

There there will be 20 microwave repeaters, built on towers able to withstand 150-knot winds and ice three inches thick. The Buckstone System is backed up by use of all electronic communications satellites that RCA plans to orbit in 1978. Both systems will be fully automatic and operate around the clock.

The interim and permanent systems will be part of Alaska's overall communications satellite system and will provide additional capacity for non-pipeline related services. The systems are designed to be the most reliable over our own to assure the integrity of the pipeline.