ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 8672

1452 SHESS EXECUTIVE ORDER # 50

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
EMMONAK	545	On coast near mouth of Yukon River	SES #2 to Bethel	KOV-64 school KXL-89 KZI-7	UUI 10 phones	SES 687-8001 3 trunks	100%	KYUK-TV via trans.	KYUK-AM				950 KW oil +
ENGLISH BAY	120	Tip of Kenai Peninsula		KXH-62 KYT-4	GS	IMTS 235-8292							
FUNTER BAY		S.E. Alaska Admiralty Island		KWI-92 KWK-8									
EYAK		Prince William Sound near Cordova											
FAIRBANKS (Boro total=	30,462 60,227)		SES #4 to Tanana		FMUS 24,898 phones	MW 323 trunks		Com.TV-2 Pub. TV-1	Com.AM-3 Pub. FM-1	State Library ETA Legis. info.	*	Frontier Cable TV	
FALSE PASS	50	Alaska Peninsula	SES #1 to Anchorage			SES 548-8001	100%						710 KW private oil +
FT. GREELY	1,825					MW		AFSN	AFSN				

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FT. RICHARDSON	8,960				ATU	MW		AFSN All Anchorage stations	AFSN				
FT.WAINWRIGHT	9,097				GTU	MW 62 trunks		AFSN	AFSN				
FORT YUKON	637	Yukon Flats No. of Fairbanks	SES #4 to Tanana ATS 1		ITC 229 phones	MES 10 trunks		Mini TV		ETA			1035 KW oil +
FORTUNA LEDGE (Marshall)	210	Lower Yukon	SES #2 to Bethel	KIV-95 school		SES 639-8001		KYUK-TV via trans.	KYUK-AM				
FRESHWATER BAY	50	Northern S.E. Alaska											
GAKONA	88	East of Mat-Su. Borough			GT	MW		KTVF KFAR via trans					
GALENA	957	Interior Yukon River	SES #4 to Tanana ATS 1		ITC 199 phones	MES 10 trunks		AFSN	AFSN	ETA			760 KW private oil +

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CAMBELL	447	St. Lawrence Island	SES #3 to Nome			SES 746-8001	100%	Mini TV	All Nome stations				581 KW oil +
GIRDWOOD	150	Anchorage area			GAB 306 phones	MW 20 trunks		KAKM KENI via trans.	All Anchorage AM sta-tions				
GLENNALLEN	360	East of Mat-Su. Borough			CV 1063 phones	MW 39 trunks		KFAR KTVF via trans.	KCAM-AM				
GOLOVIN	118	Seward Peninsula on Norton Sound	SES #3 to Nome			SES 775-8001	100%		KICY-AM KNOM-AM				70 KW school oil +
GOODNEWS BAY	248	S.W. end of Kuskokwim Bay				VHF to Cape Newenham		KYUK via trans.	KYUK-AM				150 KW oil +
GRAYLING	181	Lower Kuskokwim	SES #2 to Bethel	KTD-27 KPI-3		SES 461-8001	84.76%	Mini TV					120 KW oil +
GUSTAVUS	70	Northern S.E. Alaska		KWC-61 KWC-7 KWB-62	STC 131 phones	MW 8 trunks							Private oil/gas

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HAINES	1,366	North end of S.E. Alaska Panhandle			GT 784 phones	MW 22 trunks			KINY-AM	ETA		Lynn Canal Cable	3500 KW oil +
HALIBUT COVE	45	S.W. end of Kenai Peninsula				IMTS 235-8000							
HAPPY HARBOR				WKD-79 WHO-8 WRN-24									
HEALY	50	No. of Mat-Su. Borough			MTA 288 phones	MW 16 trunks		KUAC-TV via trans.					
HOLY CROSS	302	Lower Yukon	SES #2 to Bethel	KWO-47 WNI-7		SES 481-8001	92.27%	Mini TV	KYUK-AM				150 KW oil +
HOMER	2,227	Kenai Peninsula			GST 1648 phones	MW 67 trunks		3 com. 1 pub. via trans.	KBBI-AM				
HOONAH	1,093	North end Chichagof Island S.E. Alaska			STC 316 phones	MW 12 trunks				ETA		Capital Cable Vision	1700 KW oil +

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HOOPER BAY	610	Lower Yukon on coast	Ses #2 to Bethel	KWE-58 WCI-8	UUI 25 phones	SES 329-8001 3 trunks	100%	KYUK-TV via trans.	KYUK-AM				575 KW oil +
HOPE	70	North end Kenai Peninsula			ATU 62 phones	MW 2 trunks							
HOUSTON	440	Mat-Su. Borough			MTA	MW							
HUGHES	98	Interior-on Koyukuk River	SES #4 to Tanana ATS 1	WDT-72 KHH-4		SES 889-8001							70 KW school oil -
HUSLIA	212	Interior-on River Koyukuk	SES #4 to Tanana ATS 1	KWX-68 KZN-8		SES 829-8001	86.39%						285 KW oil +
HYDABURG	381	S.W. Prince of Wales Is. S.E.Alaska			NU 86 phones	Tropo to Craig 7 trunks				ETA			oil +
HYDER	79	Ketchikan Borough			GT	MW							British Columbia +

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IGUIGIG	40	West end Lake Illiamna	SES #2 to Kanakanak			SES 533-8001	0.00%						40 KW school oil -
ILLIAMNA	60	North shore Lake Illiamna			IT 59 phones	MES 8 trunks			KDLG				Private oil +
IVANOF BAY	46	Alaska Peninsula N.E. of Shumagin Islands	SES #2 to Kanakanak	KVD-35 KLE-8 KWI.-35		SES 669-8001	94.62%						Private oil -
JUNEAU	23,115	S.E. Alaska			JDTC 14529 phones plus centrex	MW 115 Jnu trunks 20 trunks Douglas 58 trunks Sterling*		KINY-TV KTOO-TV	KINY-AM KJNO-AM KTOO-FM	ETA Library Legis. info. etc.	*	B.C. Cable Co.	
KACHEMAK	271	South end Kenai Peninsula			GS	MW			KBBI				

* 63 trunks State Office

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KAKE	710	N.W. Kupreanof Island S.E. Alaska		KWE-50 KWL-3 KWD-53	STC 150 phones	MW 10 trunks		Mini TV		ETA			1600 KW oil +
KATOVIK	192	Beaufort Sea Shore				VHF to Barter Island		Mini TV	KBRW				250 KW oil +
KALSKAG		Lower Kuskokwim		KLR-60 KRZ-4		675-4352							
KALTAG	257	Interior Yukon River	SES #4 to Tanana	KWB-27 KWX-6		SES 534-8001	100%						775 KW oil +
KARLUK	75	Kodiak Island	SES #1 to Kodiak			SES 458-8001	30.11%						oil -
KASAAN	46	S.E. Prince of Wales Island S.E. Alaska		KXC-91 KZN-9 KXM-42		SES 542-8001	100%						
KASIGLUK	310	N.W. of Kuskokwim Bay				VHF to Bethel 543-2032			KDGL				250 KW 125 KW school oil +

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KASILOF	71	Kenai Peninsula			GST	MW		KTVA KAKM via trans.					
KENAI	4,421	Kenai Peninsula			GST 3009 phones	MW 79 trunks		KTVA KAKM KENI KIMO via trans.		ETA Legis. info.	*		
KENNY COVE	143	Near Cordova				MW			KLAM				
KETCHIKAN	8,542	S.E. Alaska			KPU 6445 phones	MW 74 trunks			KTKN-AM KRBD-FM	ETA Legis. info.	*	Ketchikan Alaska Television	
KIANA	344	N.W. Arctic	SES #3 Kotzebue		OTZ 51 phones	SES 3 trunks	100%	Mini TV	KOTZ				650 KW oil +
KING COVE	733	Alaska Peninsula			IT 109 phones	SES 4 trunks		Mini TV		ETA			1950 KW private oil +
KING SALMON		Bristol Bay Borough			B B Telco 157 phones	MES 12 trunks		AFSN					oil +

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KIPNUK	325	Lower Kuskokwim on coast	Ses #2 to Bethel			SES 598-8001	72.65%	Mini TV					120 KW school oil +
KIVALINA	264	N.W. Arctic Coast	SES #3 to Kotzebue		OTZ 34 phones	SES 3 trunks	100%	Mini TV	KOTZ				356 KW oil +
KLAWOCK	404	Prince of Wales Is. outer coast S.E. Alaska			STC 103 phones	MW 8 trunks							1650 KW oil +
KLUKWAN	150	Haines Borough			GT	Land line from Haines MW							685 KW oil +
KOBUK	61	N.W. Arctic	SES #3 to Kotzebue			SES 948-8001	69.25%						100 KW school oil -
KODIAK	5,754	S.E. of Alaska Peninsula			GS Telco 4814 phones	MES* 62 trunks		Mini TV	KVOK-AM KTMX-FM	ETA Legis. info.	*	KOTV, Inc. Cable	Oil +

* Kodiak Coast Guard 19 trunks.

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KOKHANOK	90	S.E. shore Lake Illiamna				VHF to Illiamna 571-1200			KDLG				Private oil
KOLIGANEK	150	West of Lake Illiamna	SES #2 to Kanakanak			SES 586-8001	95.83%	AFSN via trans.	KDLG				75 KW school oil +
KONGIGANAK	260	No.shore Kuskokwim Bay	SES #2 to Bethel	KBQ-48 KMH-8		SES 696-8001	83.97%	KYUK-TV via trans.					Private oil
KOTLIK	305	So. shore Norton Sound	SES #2 to Bethel			SES 839-8001	72.13%	KYUK TV via trans.	KYUK				135 KW school oil -
KOTZEBUE	2,526	Central shore Kotzebue Sound			OTZ 574 phones	MES 27 trunks		Mini TV	KOTZ	ETA Legis. info.	*	Kotzebue TV Cable	3420 KW oil +
KOYUK	178	N.Central shore Norton Sound	SES #3 to Nome			SES 965-8001	100%						150 KW oil +

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KOYUKUK	124	Interior on Koyu-kuk River	SES #4 to Tanana ATS 1			SES 929-8001	100%		All Nome stations				215 KW school oil +
KUPREANOF	42	S.E.Alaska near Petersburg											
KWETHLUK	44	Lower Kuskokwim				VHF to Bethel 543-2031		KYUK-TV via trans.	KYUK				125 KW 160 KW school oil +
KWIGILLINGOK	150	N.shore Kuskokwim Bay	SES #2 to Bethel	WCX-61 WEI-7		SES 769-8001	64.38%	KYUK TV via trans.	KYUK				70 KW school oil +
LARSEN BAY	133	Kodiak Island	SES #1 to Kodiak			SES 857-8001	84.54%	MI-1 TV					Private oil +
LEVELOCK	98	N. of Bristol Bay Borough				VHF to King Salmon		AFSN via trans.	KDLG				500 KW school oil
LIME VILLAGE	65	N.W. of of Kenai Peninsula Borough				VHF							Private oil

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LOWER KALSKAG	218	Lower Kuskokwim				VHF to Aniak			KYUK				425 KW oil +
MANLEY HOT SPRINGS	60	W. of North Star-borough	672-3221		MU 20 phones	SES 2 trunks			All Fair-banks stations				111 KW oil +
MANOKOTAK	250	Bristol Bay area				VHF to Dillin-ham		AFSN via trans.	KDLG				550 KW oil +
MARSHALL Fortuna Ledge	210	Lower Yukon	SES #2 to Bethel	KWI-93 KWJ-7		SES 639-8001	68.07%	KYUK via trans.	KYUK				100 KW oil +
MCGRATH	382	Interior	524-3368 PHS Phone ATS 1		GTC 136 phones	MES 11 trunks		Mini TV		ETA			780 KW oil +
MEKORYUK	174	Nunivak Island	SES #2 to Bethel	WKE-24 WCZ-2		SES 627-8001	37.50%	Mini TV					200 KW oil +
MENTASTA LAKE	68	East of Mat-Su. Borough				Land line from Tok MW			KLAM				45 KW oil

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MESHIK	66	N. shore Alaska Peninsula				SES 976-8001	100%						
METLAKATLA	1,119	So. of Ketchikan			GT 381 phones	MW 10 trunks		Canadian TV via trans.					600 KW oil/hydro +
MINTO	190	Interior West of Fairbanks	524-3741 VHF			SES 798-8001	96.49%		All Fair-banks stations				240 KW oil +
MOOSE PASS	200	Kenai Peninsula			GT 99 phones	MW 6 trunks							
MOUNTAIN VILLAGE	543	Lower Yukon	SES #2 to Bethel	WKE-51 WGU-9		SES 365-8001	100%	KYUK-TV via trans.	KYUK				700 KW oil +
MT. EDGECUMBE	835	Near Sitka			STC 711 phones	MW 12 trunks		KIFW-TV	KIFW				Hydro/oil +
MYERS CHUCK	40	Near Ketchikan		KWA-90 KZO-8 KXM-48		MW							Private oil
NAKNEK (Boro total)	1,685	Bristol Bay Borough			B & B Telco 114 phones	MES 5 trunks		AFSN via	JDLG				

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NAPAKIAK	313	Lower Kuskokwim				IMTS to Bethel		KYUK-TV	KYUK				
NAPASKIAK	240	Lower Kuskokwim				IMTS to Bethel		KYUK-TV	KYUK				
NELSON LAGOON	40	Alaska Peninsula	SES #1 to Anchorage			SES 989-8001	100%		KDLG				120 KW oil/wind +
NENANA	503	West of Fairbanks			GST 347 phones	MW 14 trunks		KUAC KTVF KFAR via trans.	All Fair-banks stations	ETA			
NEW STUYAHOK	297	No. of Bristol Bay Borough	SES #2 to Kanakanak			SES 693-8001		AFSN via trans.	KDLG				120 KW oil +
NEWHALEN	105	No.shore Lake Illiamna				IMTS to Illiamna			KDLG				Private oil/wind
NEWTOK	154	Lower Kuskokwim near coast	SES #2 to Bethel	WKD-49 KAC-2		SES 369-8001	68.50%	KYUK-TV via trans.	KYUK				90 KW school oil +

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NIGHTMUTE	135	Lower Kuskokwim near coast	SES #2 to Bethel	KIX-65 WDJ-4		SES 587-8001	57.82%	KYUK-TV via trans.	KYUK				125 KW school oil -
NIKOLAEVSK	100	S. coast Alaska Peninsula				IMTS to Diamond Ridge			KBBI				
NIKOLAI	152	Interior		KXR-86 WQE-3		IMTS to Tatalina 524-3941							50 KW oil
NIKOLSKI	35	Aleutians	SES #1 to Anchorage			SES 786-8001	100%						120 KW oil +
NINILCHIK	500	Kenai Peninsula			GST 138 phones	MW 6 trunks							
NOATAK	293	N.W. Arctic	SES #3 to Kotzebue		OTZ	SES	100%	Mini TV	KOTZ				150 KW oil +
NOME	2,892	Seward Peninsula So. shore Norton Sound			GT 1557 phones	MES 39 trunks			KICY-AM KICY-FM KNOM-AM	FTA Legis. info.	*	Nome Cable	3420 KW oil +

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NONDALTON	226	N.E. of Lake Illiamna		KNC-99 school		VHF to Illiamna							
NOORVIK	526	N.W. Arctic	SES #3 to Kotzebue		OTZ 72 phones	SES 3 trunks	100%	Mini TV	KOTZ				650 KW oil +
NORTH KENAI	3,489	Kenai Peninsula			GST 1104 phones	MW 33 trunks		Ancho-rage stations via trans.					
NORTH POLE	823	N. Star Borough	488-2785		GST 3039 phones	MW 43 trunks			KJNP + Fair-banks				
NORTHWAY	361	E. of Mat-Su. Borough near Canadian border	778-9924		ST 68 phones	MW 4 trunks							480 KW oil +
NUIQSUT	182	Shore of Beaufort Sea	SES #4 to Barrow			SES 493-8001	100%	Mini TV	KBRW				100 KW oil +

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NULATO	332	Interior on Yukon River	SES #4 to Tanana ATS 1	KWC-27 KWE-4		SES 898-8001		Mini TV					550 KW private oil +
NUNAPITCHUK	608	Lower Kuskokwim				IMTS to Bethel 543-2064			KYUK				600 KW 170 KW school oil +
OLD HARBOR	345	Kodiak Island	SES #1 to Kodiak			SES 286-8001	100%						150 KW oil -
OSCARVILLE	42	Lower Kuskokwim				IMTS to ethel 543-2066		KYUK-TV	KYUK				50 KW school oil -
OUZINKIE	177	Kodiak Island				VHF to Bethel 486-6300							140 KW oil +
PALMER	2,056	Mat-Su. Borough			MTA 3105 phones	MW 86 trunks		KENI-TV via trans.		ETA			
PAULOFF HARBOR	39	Aleutians											

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PAXSON	391	East of Mat-Su. Borough			CV	MW		KFAR-TV via trans.	KCAM				
PEDRO BAY	50	S.E. shore Cook Inlet	SES #1 to Anchorage			SES 793-8001	100%						Oil -
PELICAN	211	Lisianski Inlet Chichagof Island S.E.Alaska			ST 65 phones	MW 8 trunks				ETA			1200 KW oil/hydro +
PERRYVILLE	130	S. shore Alaska Peninsula	SES #2 to Kanakanak	KWY-68 KBF-7		SES 877-8001	100%	Mini TV					230 KW oil +
PETERSBURG	3,197	S.E. Alaska			GT 1660 phones	MW 34 trunks		Mini TV	KFSK-FM	ETA		WPTV	5100 KW oil/hydro +
PILOT POINT	70	N. shore Alaska Peninsula	SES #2 to Kanakanak			SES 797-8001	100%	Mini TV	KDLG-AM				Private oil
PILOT STATION	301	Lower Yukon River	SES #2 to Bethel			SES 429-8001	100%	KYUK-TV via trans.	KYUK				560 KW oil +

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PITKAS POINT	90	Lower Yukon area	SES #2 to Bethel	KBQ-47 KMH-5		VHF to St. Mary's	100%	KYUK-TV via trans	KYUK				
PLATINUM	58	S.W. shore Kuskokwim Bay				VHF to Cape Newman		Mini TV	KYUK				50 KW oil
POINT BAKER	50	N. tip Prince Wales Island S.E. Alaska		KPD-46 WDJ-8 KPC-44		SES 559-8001	100%		KFSK-FM				
POINT HOPE	464	W. shore N. Slope Borough	SES #3 to Kotzebue			SES 362-8001	94.22%	Mini TV	KOTZ				200 KW oil +
POINT LAY	130	N.W.shore N. Slope Borough	SES #4 to Barrow			SES 824-8001		Mini TV	KBRW				80 KW oil +
PORT ALEXANDER	101	So. tip Baranof Is. S.E. Alaska		KWB-78 KWE-2 KWP-94		VHF to Pt. Baker	100%		KFSK-FM				
PORT ALSWORTH	75	S.E. shore Lake Clark				SES 781-8001	73.25%						

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PORT CHILKOOT	220	Near Haines S.E. Alaska				Land line from Haines MW							
PORT GRAHAM	125	Tip of Kenai Peninsula	SES #1 to Anchorage	KLR-99 WMD-7		MTS to Diamond Ridge	95.09%		KBBI				200 KW oil +
PORT HEIDEN (Meshik)	91	N. shore Alaska Peninsula	SES #2 to Bethel	KVD-39 KLE-9		SES (Meshik) 978-8001			KDLG				
PORT LIONS	232	Kodiak Island			IT 83 phones	MW to Kodiak 4 trunks						POTV Cable	785 KW oil +
PORT MOLLER	37	Alaska Peninsula											
PORTAGE CREEK	75	N.E. of Bristol Bay Borough				VHF to Dilling-ham		AFSN	KDLG				500 KW school oil -

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QUINHAGAK	488	E. shore Kuskokwim Bay				VHF to Cape Newen-ham		KYUK-TV via trans.	KYUK				310 KW 135 KW school oil +
RAMPART	53	Interior West of Fairbanks	SES #4 to Tanana			SES 358-8001	100%		KJNP				22 KW school oil -
RED DEVIL	81	Lower Kuskokwim (Interior)	SES #2 to Bethel			SES 447-8001	100%		KYUK				oil -
ROWAN BAY	50	W. coast Kuiu Is. S.E. Alaska											
RUBY	220	Interior	SES #1 to Tanana ATS 1	KXA-95 KZD-4 KWB-292 KFM-79		SES 689-8001							100 KW oil +
RUSSIAN MISSION	167	Lower Kuskokwim	SES #2 to Bethel	KXF-69 KYL-2		SES 759-8001	73.62%		KYUK				55 KW oil +

Prepared by: House Research Agency

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
SAINT GEORGE	165	Pribilof Islands	SES #1 to Anchorage			SES 859-8001	90.34%	Mini TV					125 KW 300 KW oil +
SAINT MARY''	436	Lower Yukon	SES #2 to Bethel	KXA-27 KZO-2	United 40 phones	SES 8 trunks	100%	KYUK-TV via trans.	KYUK	ETA			1300 KW oil +
SAINT MICHAEL	282	S.E.shore Norton Sound	SES #3 to Nome			SES 996-8001	64.15%		KYUK				400 KW 200 KW school oil +
SAINT PAUL	567	Pribilof Islands	SES #1 to Anchorage			SES 546-8001	100%	Mini TV					oil +
SAND POINT	773	Alaska Peninsula			IT 222 phones	MES 10 trunks		Mini TV		ETA			2400 KW private oil +
SAVOONGA	409	St. Lawrence Island				SES 399-8001	100%	Mini TV					450 KW 200 KW school oil +

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COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
SAXMAN	272	Near Ketchikan S E. Alaska			KPU	Land line from Ketchi-kan MW			KRBD-FM KTKN-AM				
SCAMMON BAY	232	W. shore Bering Sea				VHF to Cape Roman-zoff							120 KW 60 KW school oil +
SELAWIK	505	E. of Kotzebue	SES #3 to Kotzebue		OTZ 74 phones	SES 3 trunks	100%	Mini TV	KOTZ				650 KW oil +
SELDOVIA	528	Kenai Peninsula			GST 184 phones	MW 9 trunks			KBBI				
SEWARD	1,778	Kenai Peninsula			GT 1495 phones	MW 40 trunks		KIMO KAKM KENI via trans.	KRXA-AM	ETA			oil +
SHAGELUK	223	Lower Yukon Interior	SES #2 to Bethel			SES 431-8001	81.52%	Mini TV KYUK-TV via trans.	KYUK				150 KW 35 KW school oil +

Prepared by: House Research Agency

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
SHAKTOOLIK	160	E. shore Norton Sound	SES #3 to Nome			SES 975-8001	70.77%		Nome stations				100 KW 40 KW school oil +
SHELDON POINT	143	Mouth of Yukon River				VHF to Cape Roman-zoff							
SHISHMAREF	373	N.W. shore Seward Peninsula	SES #3 to Nome		MTC 88 phones	SES 3 trunks			KOTZ				700 KW oil +
SHUGNAK	198	N.W. Arctic	SES #3 to Kotzebue		OTZ 45 phones	SES 3 trunks	100%	Mini TV	KOTZ				475 KW oil +
SITKA (Boro)	8,787	S. E. Alaska			STC 4138 phones	MW 58 trunks		KIFW-TV	KIFW-AM	ETA Legis. info.	*	KSA Cable	Oil/hydro +
SKAGWAY	877	N. end Lynn Canal S.E.			NU 445 phones	MW 14 trunks		Mini TV		ETA		Skagway Network TV	1530 KW oil +
SKWENTNA	30	Lower Cook Inlet											

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COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
SLEETMUTE	100	Lower Kuskokwim (Interior)	SES #2 to Bethel			SES 449-8001	0.00%						School oil -
SOLDOTNA	2,365	Kenai Peninsula			GST 2870 phones	MW 76 trunks		KAKM-TV via trans.	KSRM-AM	Legis. info.			
SOUTH NAKNEK	142	Bristol Bay Borough				VHF to King Salmon		AFSN via trans.					
STEBBINS	309	S. shore Norton Sound	SES #3 to Nome			VHF to St. Michael	42.78%						150 KW 45 KW school oil
STERLING	460	E.of Kenai Lower Cook Inlet			GST	MW		KENI KTVA KIMO via trans.					
STEVENS VILLAGE	75	Yukon Flats No. of Fairbanks	SES #4 to Tanana ATS 1			SES 478-8001	0.00%						10 KW school oil -
STONY RIVER	100	Lower Kuskokwim (Interior)	SES #2 to Bethel			SES 439-8001	77.11%	KYUK-TV via trans.	KYUK				Private oil -

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COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
SUTTON	76	Mat-Su. Borough			MTA	MW		KENI KTVA KAKM via trans.					
TAKOTNA	48	W. of McGrath Interior	524-3731 VHF			IMTS to Tatalina AFB			KDLG				9 KW school oil
TALKEETNA	182	Mat-Su. Borough			MTA 219 phones	MW 12 trunks		KTVA-TV via trans					
TANACROSS	128	S.E. of N.Star Borough	883-2737		NU	Land line from Tok MW		KTVF-TV via trans.					
TAKU LODGE		S.E. of Juneau Taku River		KWB-80 KWL-9									
TANANA	49[illegible]	Interior W. of Fairbanks	366-7200 PHS + ATS 1		YTC 105 phones	MES 6 trunks							1000 KW oil +

Prepared by: House Research Agency

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
TATITLEK	111	Prince William Sound	SES #1 to Anchorage	KXC-93 KZO-3 WAU-791		SES 257-8001	100%	Mini TV					School oil -
TELIDA	35	Interior W. of Mat-Su. Borough				SES 843-8001	100%						School oil -
TELLER	258	Seward Peninsula			GTC 30 phones	MW 5 trunks							80 KW 66 KW school oil +
TENAKEE SPRINGS	141	Northern S.E. Alaska Chichagof Island				SES 736-8001	100%	Mini TV					250 KW private oil +
TETLIN	130	E. of Mat-Su. Borough near border				VHF to Tok							90 KW school oil
THORNE BAY	450	S.E. Alaska Prince of Wales Is.			GTC 109 phones	MW 6 trunks		Mini TV					

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
TOGIAK	474	N. shore Bristol Bay	SES #2 to Kanakanak			SES 974-8001	58.17		KDLG				481 KW oil +
TOK	735	N.E. of Mat-Su. Borough			NU 386 phones	MW 16 trunks		KTVF KUAC via trans		ETA			2280 KW oil +
TOKSOOK BAY	336	Mainland opposite Nunivak Island	SES #2 to Bethel			SES 526-8001	100%	KYUK-TV via trans.	KYUK				481 KW oil +
TRAPPERS COVE	25	Aleutians											
TULUKSAK	258	Lower Kuskokwim				IMTS to Bethel		KYUK-TV via trans.	KYUK				100 KW school oil
TUNTUTULIAK	225	Kuskokwim Bay				IMTS to Bethel		KYUK-TV	KYUK				60 KW school oil
TUNUNAK	299	Mainland opposite Nunivak Island	SES #2 to Bethel			SES 599-8001	100%	KYUK-TV via trans.	KYUK				
TWIN HILLS	82	N.shore Bristol Bay	SES #2 to Kanakanak			VHF to Togiak	36.19%		KDLG				

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March 17, 1980

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
TYONEK	323	N.E. shore Cook Inlet			MTA 57 phones	MW 8 trunks			All Ancho-stations				
UNALAKLEET	632	Norton Sound			GT 126 phones	MW 8 trunks			Nome stations				875 KW 165 KW school oil +
UNALASKA	768	Aleutians			IT 349 phones	MES 15 trunks		Mini TV	KIAL-AM (AFSN trans.)	ETA			600 KW oil +
UPPER KALSKAG	166	Lower Kuskokwim				VHF to Aniak			KYUK-AM				
VALDEZ	4,066	Prince William Sound			CV 1999 phones	MES 69 trunks		KENI KIMO via trans.	KEEI-AM (KBYR trans.)	ETA	*	KCCS TV	
VENETIE	151	Yukon Flats	SES #4 to Tanana ATS 1			SES 849-8001	77.53%						95 KW school oil -
WAINWRIGHT	429	Shoreline Arctic Sea				VHF to Wain-wright DEW Line		Mini TV	KBRW-AM				350 KW oil +

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COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
WALES	109	West shore Seward Peninsula	SES #3 to Nome		MTC 31 phones	MW 3 trunks							185 KW oil +
WASILLA	2,184	Mat-Su. Borough			MTA 2109 phones	MW 92 trunks			Ancho-rage stations	Legis. info.	*		
WHALE PASS	190	Prince of Wales Is. S.E. Alaska											
WARD COVE	105	Near Ketchi-kan S.E. Alaska			KPU 637 phones	Land line from KPU MW 14 trunks			KRBD-FM KTKN-AM				
WHITE MOUNTAIN	115	S.E. Seward Peninsula	SES #3 to Nome			SES 625-8001	100%		Nome stations				
WHITTIER	292	N.W. shore Prince William Sound			WTC 75 phones	Land line from Portage Creek MW 4 trunks		Mini TV		ETA			

Prepared by: House Research Agency

COMMUNITY	POPU-LATION	GEO-GRAPHIC LOCATION	EMERGENCY MEDICAL	HF RADIO	LOCAL TELCO.	LONG LINE	% AVAIL. JAN 1980	TV SERVICE	RADIO BROAD-CAST	DATA SERVICE	TELE-CONF.	CABLE TV	POWER GENERATION INFORMATION
WILLOW	38	Mat-Su. Borough			MTA 239 phones	MW 10 trunks			Ancho-rage stations				
WOODY ISLAND	41	Near Kodiak Island			VHF to Kodiak								
WRANGELL	3,325	S.E. Alaska			GT 1278 phones	MW 24 trunks		Mini TV	KSTK-FM	ETA		WPTV,Inc.	7725 KW oil +
YAKUTAT	442	N.E.shore Gulf of Alaska			ST 261 phones	MES 14 trunks		Mini TV		ETA			2030 KW oil +

Prepared by: House Research Agency

Bush Phone Station Frequencies

SOUTHEASTERN (KETCHIKAN AREA)
2182, 2512, 3411, 4645, 4696, 2256T/2604R - Ketchikan Alascom

SOUTHEASTERN (JUNEARU AREA)
2182, 2512, 2566, 4645, 4668, 2694T/2784R - Juneau Alascom

BRISTOL BAY AREA
2264, 2509, 3201, 3340, 5195, 2466T/3164.5R - King Salmon Alascom

WESTERN ALASKA PENINSULA (ALEUTIAN AREA)
2182, 2509, 3201, 3340, 5195, 2691T/3241R - Cold Bay Alascom
or: 5134.5T/4370R - Unalaska

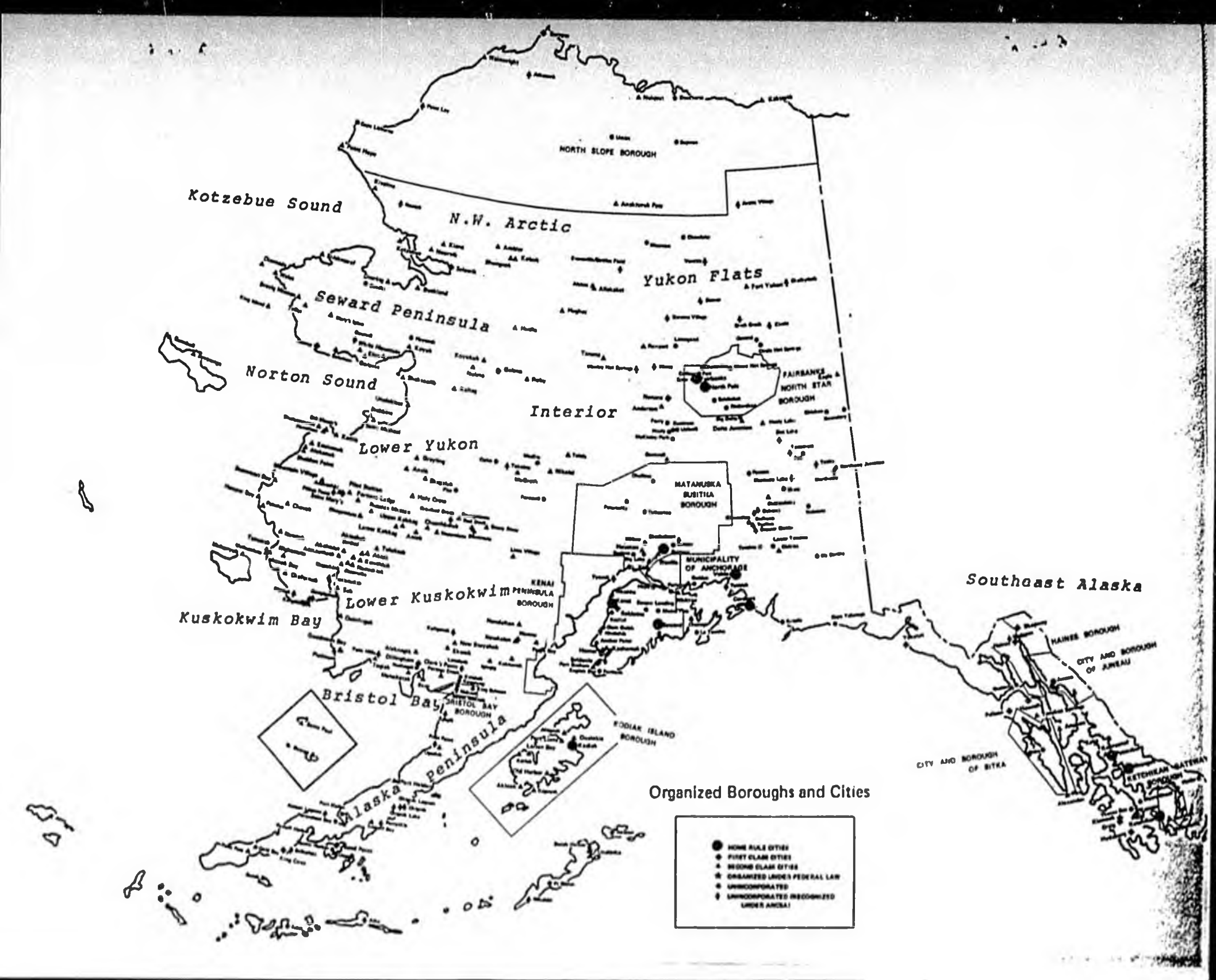
LOWER KUSKOKWIM (LOWER YUKON AREA)
2264, 3201, 3340, 3411, 5195, 2629T/2604R - Bethel Alascom

INTERIOR ALASKA
2264, 3201, 3293, 3411, 5195, 3354T/3165.7R - Fairbanks Alascom

SEWARD PENINSULA
2264, 3201, 3293, 3411, 5195, 2471T/2784R - Nome Alascom

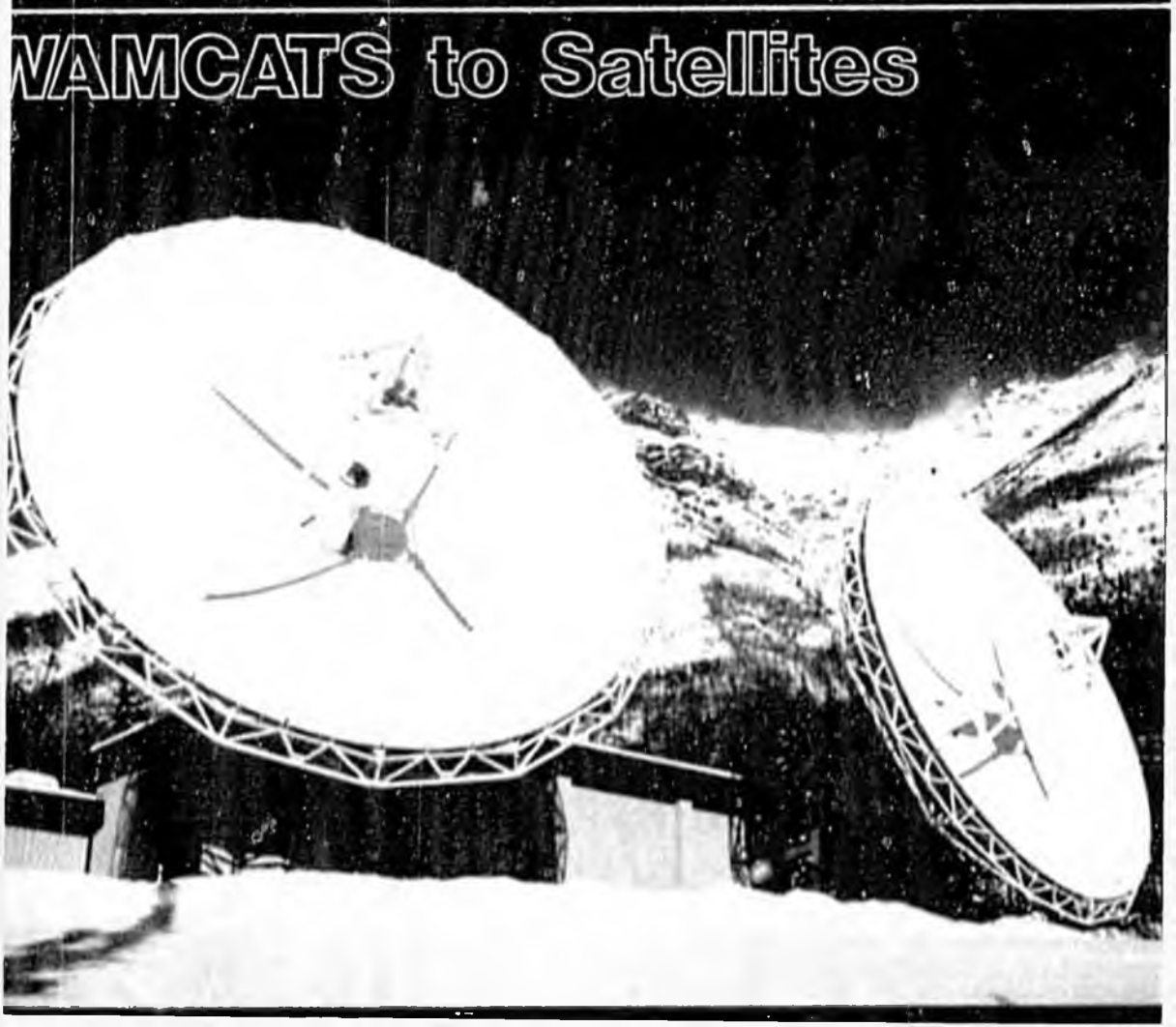
NORTHWESTERN ALASKA
2264, 3201, 3293, 3411, 5195, 2463T/2601R - Kotzebue Alascom

2182 - Marine Calling and Distress, for coastal stations
3293 - Public Health Service medical traffic, Interior, Seward Peninsula and Northwest Alaska
3340 - Public Health Service medical traffic, Southcentral and Western Alaska


NORTH SLOPE BOROUGH
Kotzebue Sound
N.W. Arctic
Yukon Flats
Seward Peninsula
Norton Sound
Interior
FAIRBANKS NORTH STAR BOROUGH
Lower Yukon
MATANUSKA SUSITNA BOROUGH
MUNICIPALITY OF ANCHORAGE
KENAI PENINSULA BOROUGH
Lower Kuskokwim
Southeast Alaska
Kuskokwim Bay
HAINES BOROUGH
CITY AND BOROUGH OF JUNEAU
Bristol Bay
BRISTOL BAY BOROUGH
KODIAK ISLAND BOROUGH
Alaska Peninsula
CITY AND BOROUGH OF SITKA
KETCHIKAN GATEWAY BOROUGH
Organized Boroughs and Cities
HOME RULE CITIES
FIRST CLASS CITIES
SECOND CLASS CITIES
ORGANIZED UNDER FEDERAL LAW
UNINCORPORATED
UNINCORPORATED RECOGNIZED UNDER ANCSA I

Telecommunications on the Last Frontier

NAMCATS to Satellites

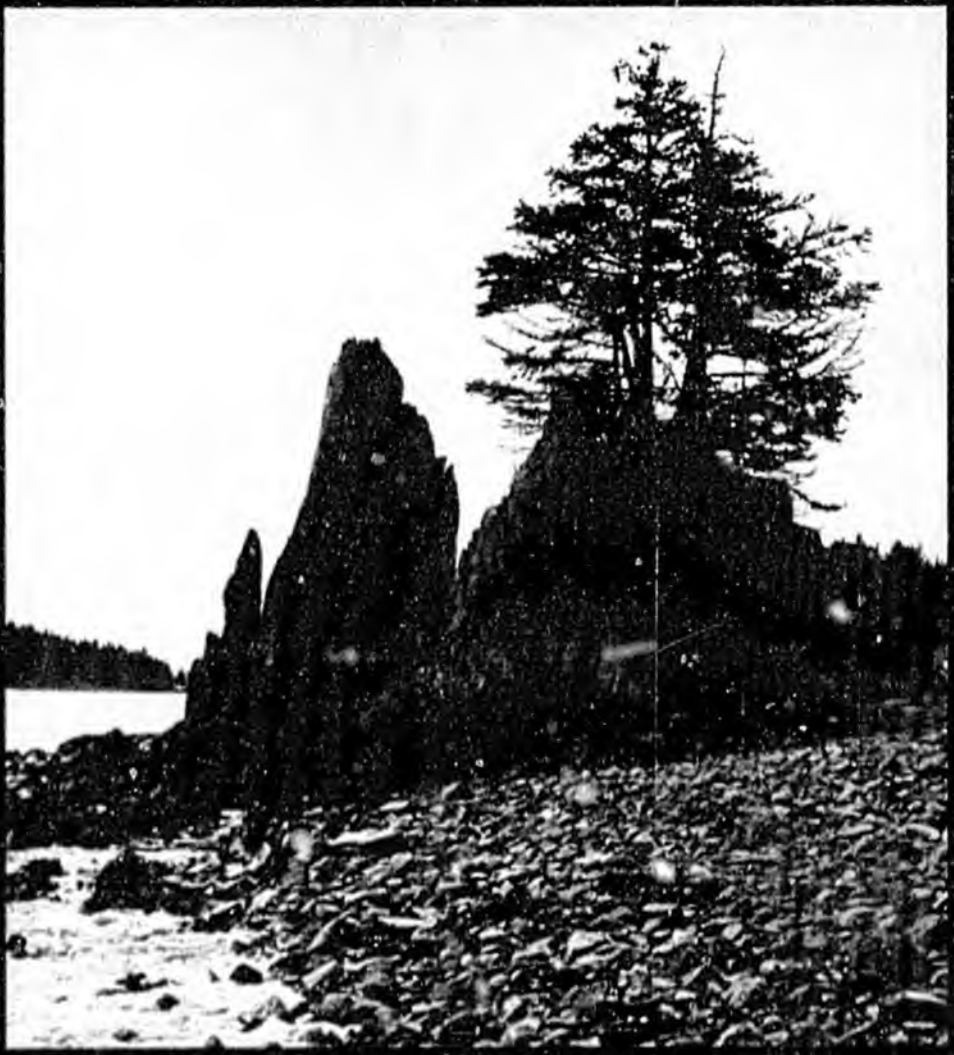


photographs

front cover
caribou hide and small earth station, Ambler
page one
beach on Kodiak Island
page seven
Army radio operator Ft Gibbon (1909) U S Army
page twenty-three
salmon drying on fish racks, Hooper Bay
back cover
Alascom's Eagle River "gateway" earth station

Contents

Introduction to Alaska



1

Alaska. the 49th State, has a population of just over 410,000 with nearly half living in the Anchorage area.

The state's capital, Juneau, with a population of 15,000 is the largest city in area: 3,018 square miles.

Alaska is the largest state in the union with 586,412 square miles — 1/5 the size of the United States — with 6,640 miles of coastline and 33,904 miles of tidal shoreline. From east to west the state is 2,400 miles long and the Alaska/Canada border stretches for 1,538 miles.

The size of the state requires four different time zones: Pacific, Yukon, Alaska and Bering.

North America's tallest mountain, Mt. McKinley, is located several hundred miles north of Anchorage and reaches to a height of 20,320 feet. The largest lake in the state is Iliamna, covering 1,000 square miles and the Yukon River is the longest river, flowing 1,400 miles in Alaska and over 1,800 miles in total.

The largest glacier is the Malaspina at 2,937 square miles. Alaska is bordered by the North Pacific Ocean, the Bering Sea, the Chukchi Sea and the Arctic Ocean.

The northernmost point of the United States is Point Barrow, Alaska on the edge of the Arctic Ocean. It is here, during the month of June, that the sun does not set, because of refraction of sunlight it appears to not set for four days. During the winter the sun does not rise for 67 days.

More than 200 islands, roughly 5,500 square miles, form the narrow arc separating the North Pacific Ocean and the Bering Sea. Nearly the entire chain is in the Aleutian Islands National Wildlife Refuge. Unimak, closest to the mainland, is 1,100 miles from Attu, the most distant. The 2,000 Aleuts still living on the islands are clustered mainly in the villages of Atka, Atka Island; Nikolski, Umnak Island and False Pass, Unimak Island. Fishing and crabbing provide the main economic base.

Because of its position on the globe, Alaska is subject to the whims of mother nature. The highest temperature recorded was 100 degrees at Fort Yukon. The lowest temperature was a minus 80 degrees at Prospect Creek Camp. The most snowfall in a season was recorded at Thompson Pass near Valdez with 974.5 inches. In the winter of 1935-36, Barrow received the least snowfall in a season: 3 inches.

Cost of food, clothing, housing and gasoline are 15% to 40% higher than in the Lower 48 states. In most of the bush areas, gas has been selling well over a dollar-a-gallon for many years.

Land is perhaps Alaska's most complex, controversial issue. When the United States acquired Alaska from Russia in 1867, almost 100% of the land became federally owned. Under the Alaska Statehood Act of 1959, the state was allowed to select 104.4 million acres of land from this federal domain. In the 1960's Alaska Natives began asking for their share of the state based on their historic use of the land. In 1966, the Federal Government imposed a land freeze until the land claims could be settled. In December 1971, Congress passed the Alaska Native Claims Settlement Act. This historic legislation awarded Natives title to a little over 40-million

1

Alaska has four different climatic zones and winter temperatures from one region to another can easily vary by 80°. In areas above the Arctic Circle, the sun will not rise for sixty-seven days.

2

The juncture of Alaska's southern coastline with the North Pacific Ocean forms the Gulf of Alaska. High seas, heavy winds and some of the highest tides in the world challenge the skill of those who cross its waters.

3

Located on a hill near the village of Russian Mission, the Russian Orthodox Church stands as a reminder of the heritage of the tiny Eskimo community.

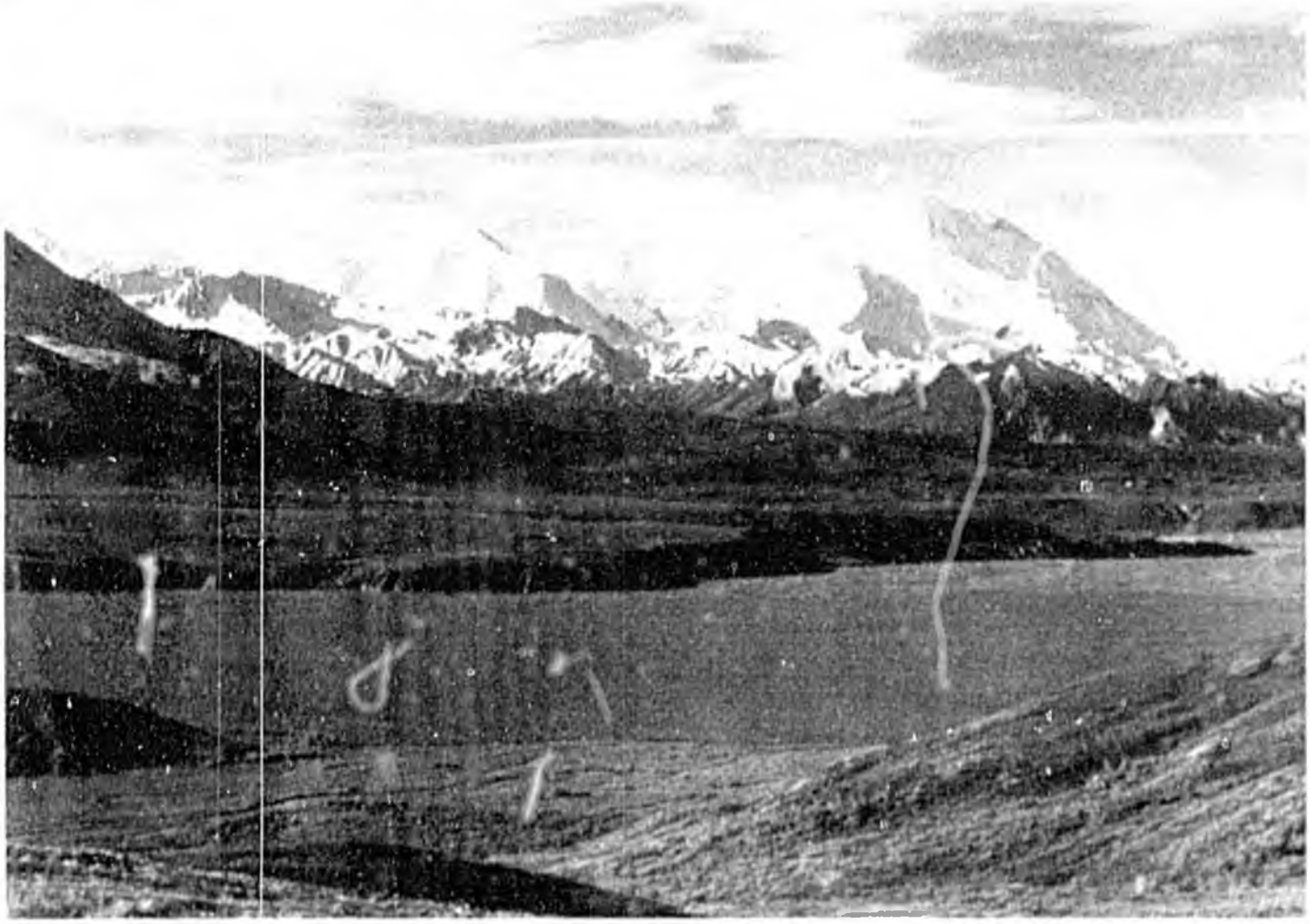
4

Mt. McKinley, over 20,000 feet high, is North America's highest peak. The first men to climb one of the two summits were members of the "Sourdough" party of Alaskans who reached the North Peak (which they believed to be the higher) on April 3, 1910. Another group, led by Archdeacon Hudson Stuck, reached the South (true) summit on June 7, 1913.

2

3

4



acres of land and more than $900-million. Thirteen regional Native business corporations were established under the act. Section 17 (d) (2) of the act also mandated that up to 80 million acres of land could be withdrawn from selection and included as units of the National Park and Wildlife Refuge, National Forest and Wild and Scenic Rivers Systems. Recently Congress voted to put over 100 million acres of land within these designations.

Of the total population of Alaska Natives, roughly 40,000 are Eskimos, 25,000 are Indians and 7,000 are Aleuts. Many live in widely separated villages along the coastline and great rivers of the state. The village, rather than the tribe, is the unit and the Alaska tribe is the language group. Besides English, Alaska's languages include Haida, Tlingit, Tsimshian, Aleut, several dialects of Eskimo and several dialects of Athabaskan.

Natives are migrating to the cities with about 5,000 living in Fairbanks and 10,000 in Anchorage.

Permanently frozen subsoil, continuous in polar regions, underlies the entire Arctic region to depths reported to reach 2,000 feet. Permafrost limits construction in the Arctic because building on it causes thawing and therefore heaving of the melted ground. Permafrost also prevents significant flow of ground water into streams and rivers in much of the interior and all of the Arctic, resulting in a nearly complete freezing of rivers in winter. It's also responsible for thousands of lakes dotting the Arctic tundra because ground water is held on the surface.

Alaskans are served by 33 radio stations, 10 commercial and public television stations and 34 newspapers. There is cable television serving several areas and many villages receive programming via satellite. Several towns have mini-tv stations, rebroadcasting the programming of the four Anchorage stations.

5

Fishing is one of Alaska's major industries, worth millions of dollars every season. The state has recently started to promote its abundant and untapped bottomfish resources. With the imposition of the 200-mile limit, the state is able to protect one of its most precious renewable resources.

6

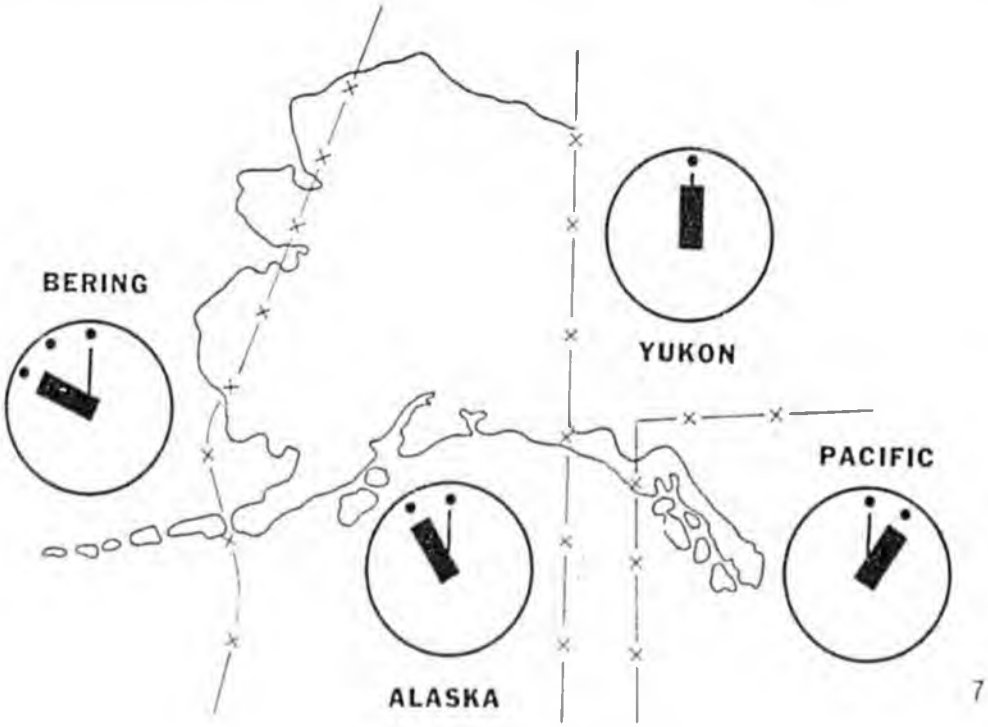
Timber is also one of the state's most abundant renewable resources. But with the imposition of the Antiquities Act, much of the prime timber country has been placed off limits to harvesting.

7

Because of its huge expanse — 586,000 square miles, over 2,000 miles from east to west — Alaska crosses four time zones: Pacific, Yukon, Alaska and Bering.

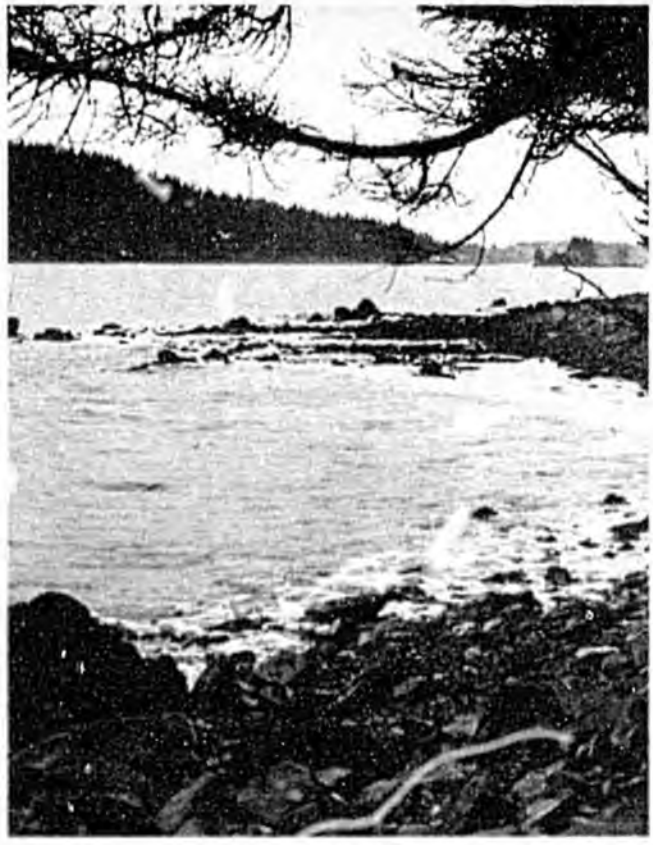
8

Shortly after Congress approved the Alaska Native Claims Settlement Act, thirteen regional corporations were formed to help distribute the land and wealth to the Natives. Originally 12 corporations were formed in the state, with the thirteenth formed outside Alaska to represent those Natives no longer living in the state.



7

8



9

Alaska's coastline is some of the most rugged and beautiful in the world. It stretches for over 6,000 miles, longer than the coastline of the contiguous United States.

10

Alaska is one-fifth the size of the entire United States and when placed over a map of the contiguous states, actually stretches from Florida to California and from Canada to Texas.

9

10

History of Telecommunications in Alaska

1

2

Preface

Prior to the introduction of satellite technology in Alaska, public communications in the state was — to say the least — still in the dark ages of development. One to eight hour delays in placing long distance calls were common all across the state. In the bush, the situation was much worse. Villages not located near the scattered outposts of the U.S. Air Force's White Alice Communications System existed in a communications vacuum for a great deal of time. A village could be totally isolated from the rest of the world for days and even weeks at a time during winter storms or spring floods.

1
The ACS toll center in Anchorage utilized manual plug-in operator switchboards.

2
An Alaska Communications System receiver station at Adak, Alaska.

3
It's February 1947 and an ACS crew helps to dig out a train from a snow drift on the White Pass and Yukon Route Railroad in Canada that serves the northern tip of Southeast Alaska. The crew was repairing wire lines along the right of way.

4
The U.S. Army Transport Burnside was one of the many ships that participated in laying submarine cable for the old Washington/Alaska Military Cable System in the early 1900's. U.S. Army Photograph.

5
WAMCAT line inspectors stopped at an Army telegraph station at Wortman's cabin north of Valdez. U.S. Army Photograph.

1. Alaska Communications System

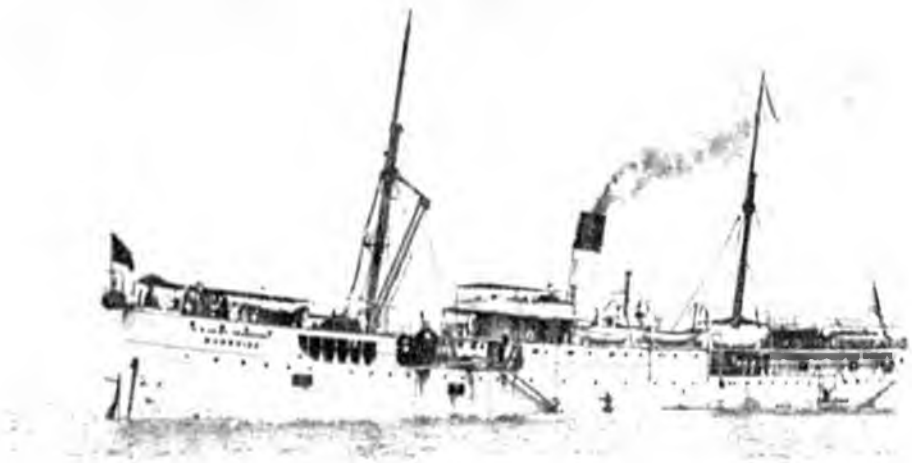
For 71 years, the Federal Government operated in Alaska what amounted to a commercial long lines communication system — a system begun at the turn of the century. Until that time, a single telegraph line from White Horse to Skagway was the *only* link Alaska had with the outside world. In 1900, Congress approved enough money to establish the Washington/Alaska Military Cable and Telegraph System — better known as WAMCATS — and renamed the Alaska Communications System (ACS) in 1935.

During World War II, the ACS was greatly expanded. It continued to operate the telecommunications routes between cities and towns in Alaska and between Alaska and the United States while providing communications installation and maintenance support for the military. ACS also operated toll telephone switchboards which linked the local telephone facilities of the various cities and provided telephone interconnections with the outside.

Up until 1952, long distance telephone calls to the outside had to be made from phone booths located at ACS public counters in Alaska's major cities.

The ACS system would eventually be replaced by a commercial long lines carrier — Alascom, Inc.

3



4

5

At the height of modern technology in the 1950's this WACS site at Neklasson Lake near Palmer, Alaska was considered to be the finest in communications equipment for its day. But its days were numbered as scientists and engineers found ways to put large amounts of sophisticated technology into smaller and smaller parts while improving the quality and quantity of service.

2. White Alice Communications System

As the cold war with the Soviet Union developed, the military played an extended role in Alaska because of its strategic location at the top of the world bordering the Soviet Union. Both the Distant Early Warning (DEW) line and the WACS system were conceived in the early 1950's to respectively provide radar warning of approaching aircraft and military communications between scattered military aircraft control and warning sites and tactical airfields.

The WACS system, built in the 1950's, stretched from the Aleutians to the shores of the Arctic Ocean. WACS carried limited commercial traffic, but on a preemptible basis. In 1962, the Air Force took over the operation of the ACS from the Army. In the meantime, the amount of commercial traffic was increasing. In fact, by 1971, nearly 95 percent of the traffic on the ACS system was commercial, accounting for 4 million calls. Both ACS and WACS were fast becoming taxed to capacity and their inability to meet both the needs of civilian and military traffic would soon become apparent. In this respect, a [illegible] to be mounted

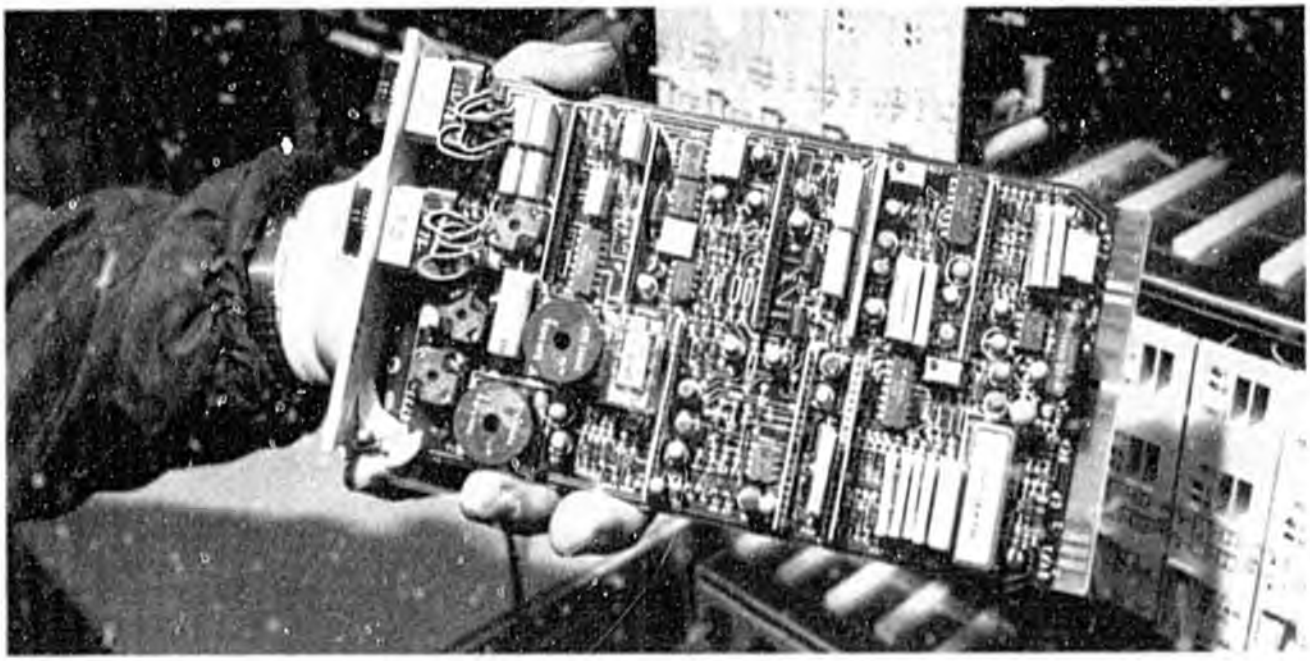
3. The Beginning of a New Era

In 1968, a Congressional symposium was held in Washington, D.C. focusing on the current state-of-the-art in international satellite communications (there was no domestic satellite communication at that time). It also concentrated on Alaska's unique communications problems and a proposal for a domestic satellite communications pilot program in the western U.S. by the Communications Satellite Corporation (COMSAT).

The military also decided to sell its ACS system and carefully looked over bids from seven major communications corporations. In June 1969, the RCA corporation was announced as the successful bidder. Later that year RCA Alaska Communications was incorporated.

By January 1971, Alascom had assumed control of the ACS system. That was also the year of transition from an all military statewide communications system to the beginnings of a commercial long lines carrier — Alascom.

The ACS building on Government Hill, Anchorage, as it appeared at the time of its purchase by Alascom in 1971. The building was later expanded to house new switch systems, computer terminals and associated equipment.



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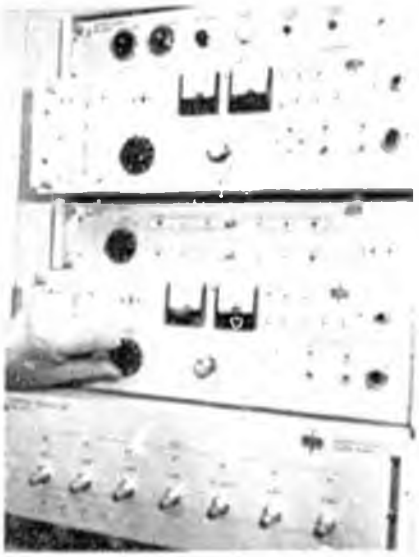

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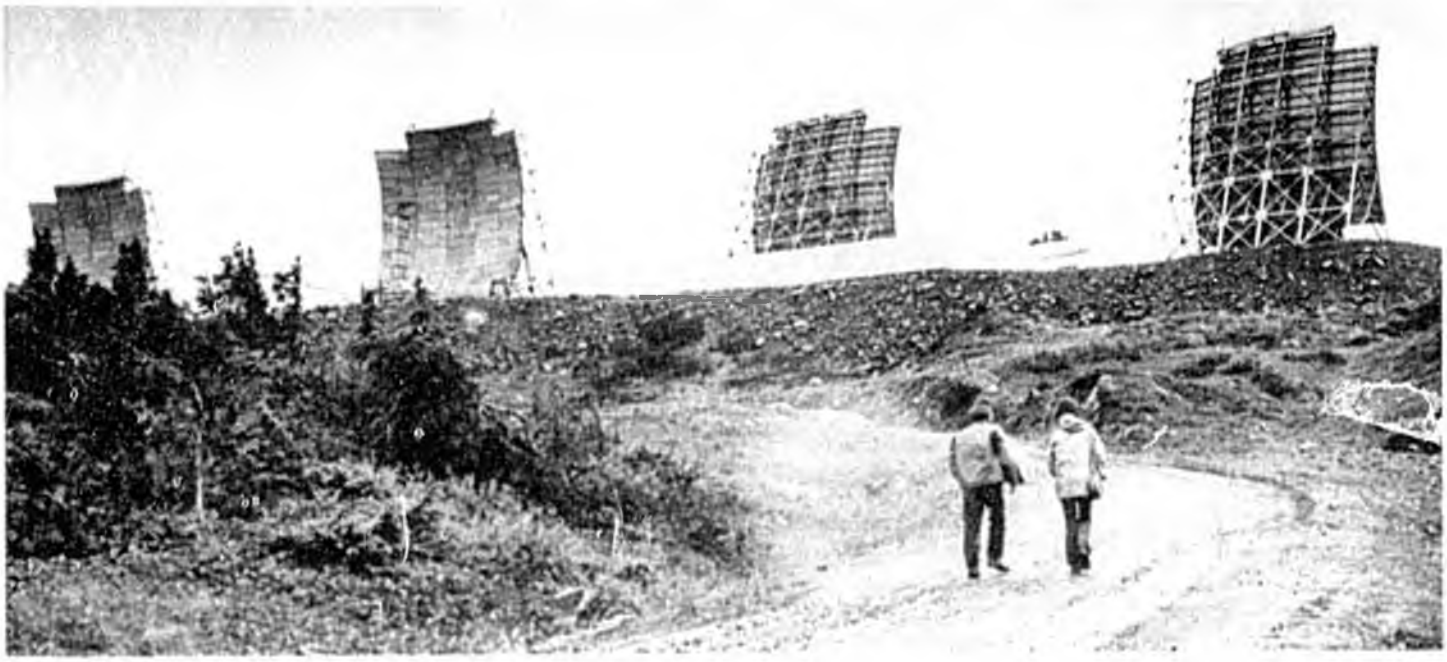


5

1
Modern day technology now makes it possible to reduce the size of components to fit into solid-state circuit boards that take very little space and use a lot less energy

2
Two Alascom employees stand near the five meter antenna of the earth station at Indian Mountain. The WACS site at this location was replaced by this smaller and more advanced facility

3
These frequency interchange units turn low level frequencies into high level frequencies that are carried by the satellite. They also unscramble the incoming high level frequencies coming into the earth station

4
Thousands of circuits are integrated on this solid state board and can be replaced if something should go wrong

5
Looking like four drive-in movie screens set on a hill, the tropospheric scatter antenna at Duncan Canal in Southeast Alaska are no longer active. The site was replaced by Alascom's Angoon to Ketchikan microwave system

a. WACS Replacement Program

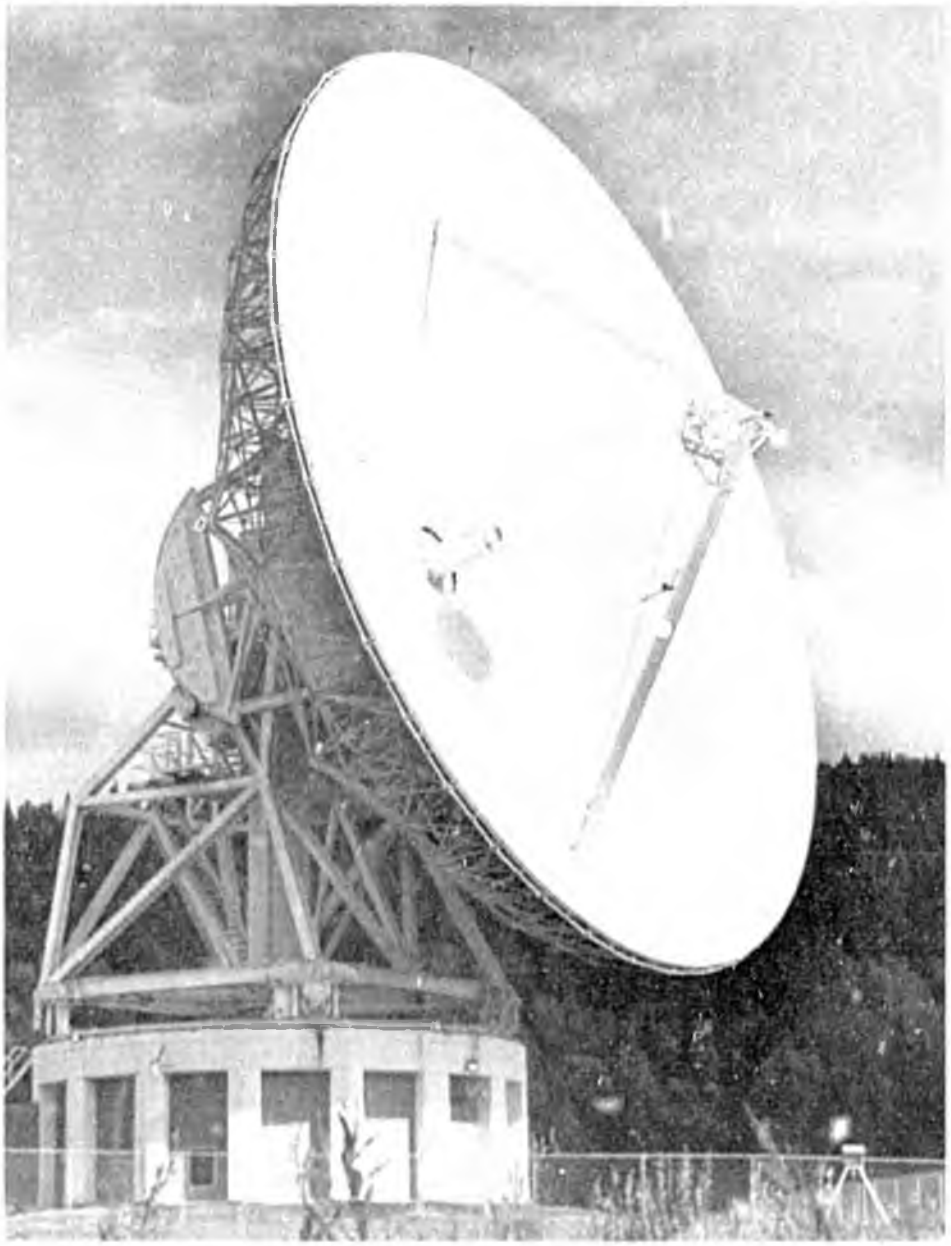
One of the most extensive communications systems in the world was the White Alice Communications System which provided long distance telephone and telegram service throughout much of Alaska. It was the first large scale project to use the tropospheric scatter method. This method utilizes huge antennas (resembling drive-in movie screens) to reflect high powered radio signals into the troposphere — a portion of the atmosphere located below the stratosphere. A tiny portion of the signal is recaptured as it bounces down to the next station. With some 60 stations, both tropo and microwave sites, and thousands of miles of circuits, the White Alice System was an extremely extensive and expensive network.

To supplement the facilities purchased from ACS, Alascom leased circuits on the WACS and immediately began to develop expansion programs to alleviate traffic bottlenecks. Between 1970 and 1973, Alascom completed several projects to expand the WACS including a program to add 280 circuits to the long distance network and the expansion of the WACS tropo link from Diamond Ridge to King Salmon which added urgently needed channels to the commercial system in that area.

By July 1974, Alascom reached an agreement with the Air Force giving the firm the operation and maintenance of the White Alice Southeastern "A" Route facilities from Palmer to Ketchikan with circuits leased back to the military for defense purposes.

By July 1976, Alascom had entered into a lease agreement with the Air Force to operate and control the remaining White Alice System. The lease enabled the company to begin a construction program to replace obsolete White Alice facilities with a network of 21 satellite earth stations.

In addition, Alascom built a 51-foot twin antenna earth station at Eagle River. While not part of the White Alice agreement itself, the Eagle River Earth Station is essential to the WACS replacement program. The new station serves as a second "gateway" providing relief for the Bartlett Earth Station at Talkeetna.



1

The Bartlett Earth Station at Talkeetna, 90 miles north of Anchorage, was purchased from COMSAT in 1973. It is an integral part of the nation's first domestic satellite system and one of the two "gateway" earth stations in Alaska. Bartlett's 30-meter dish is the largest ground facility of its kind in the state.

2

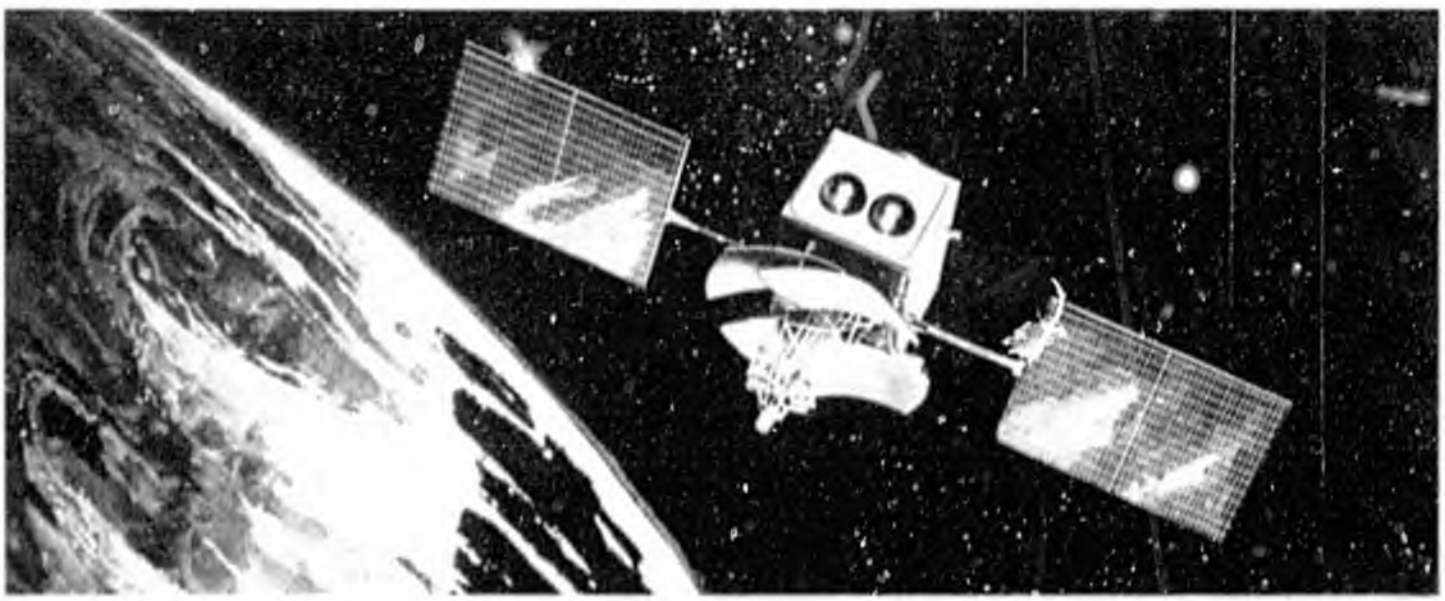
In this artists sketch, the RCA Satcom satellite is shown in position above the earth. Today, the Satcom I and II are the primary carriers of voice, video and data to, from and within Alaska. The large "slats" on either side of the satellite are solar panels which provide power for the "bird".

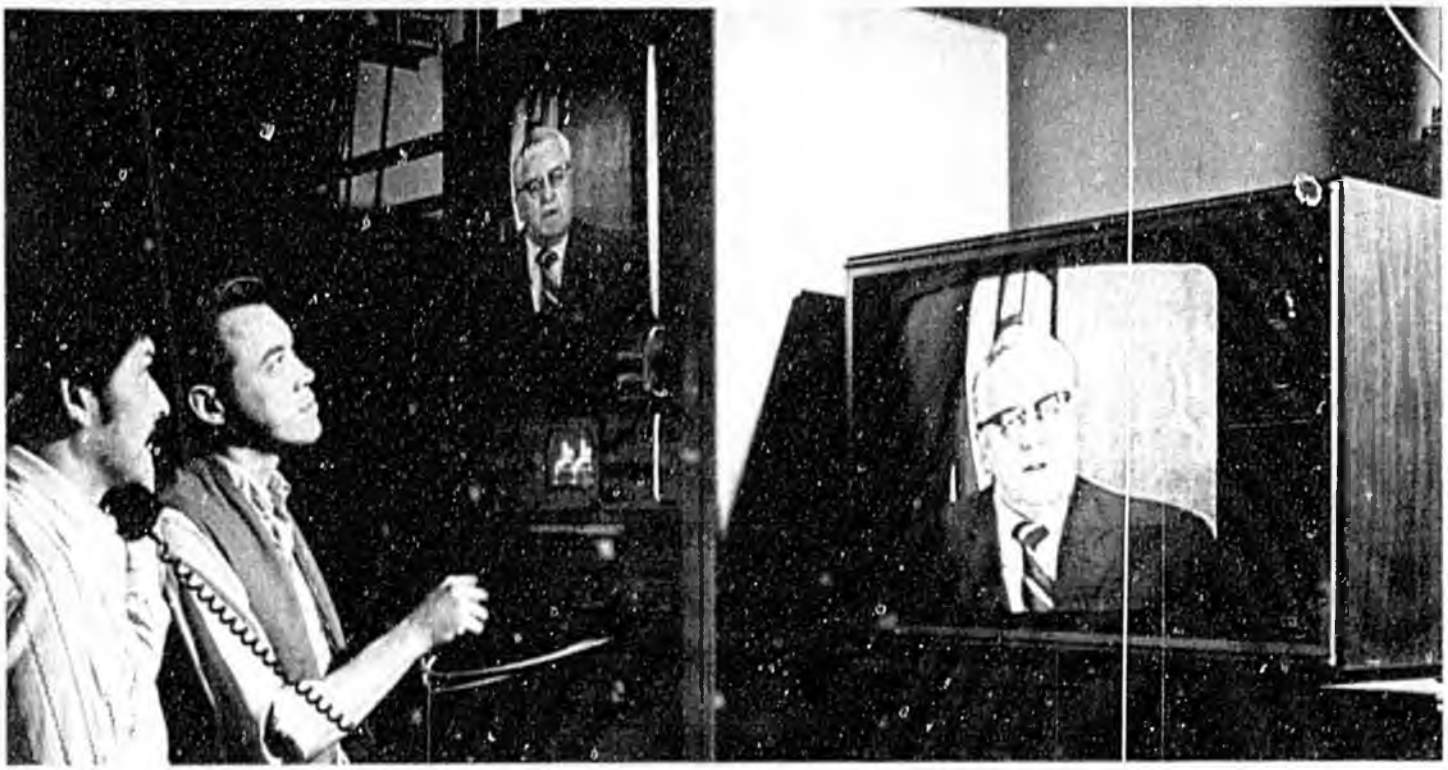
3

Former Governor William A. Egan is shown during a broadcast of a State of the State message during 1973 via the INTELSAT IV Satellite. In this picture, the governor is shown on the two video monitors at the Alascom Anchorage Toll Center, the one on the left is the color picture received from the Juneau earth station at Lena Point and the one on the right is the local TV reception for comparison. This was the first time the governor's message had been carried live via satellite to Anchorage and Fairbanks.

4

Alascom's small earth station and microwave repeater tower at Lena Point near Juneau.





3

b. COMSAT and Alascom

4

At the time Alascom was incorporated, COMSAT had already built a major earth station at Talkeetna to operate as part of the international system by using the INTELSAT-IV Pacific Ocean Satellite.

Since Alascom was the only user of the COMSAT Earth Station, the firm purchased it in December 1972. Shortly thereafter, Alascom constructed another smaller earth station at Lena Point near Juneau. In November 1973, the Lena Point Earth Station was re-oriented to face the Canadian Satellite, Anik I, which, for several reasons, was deemed responsive to Alaska's unique communications needs.

In December 1973, Alascom commenced domestic satellite operations in the U.S. utilizing the Canadian Anik I Satellite. Long distance telephone service between Alaska and the Lower 48 via satellite began the same month and on December 30, two football games were beamed live to Alaska over the new satellite link.

In granting Alascom's application to use the Canadian satellite, the FCC had stipulated that the traffic was to be transferred to a U.S. domestic satellite when a suitable one became available.

Western Union Telegraph Company launched its first WESTAR spacecraft in April 1974 and a second in October 1974. Alascom transferred its traffic to WESTAR in May 1975 and continued to use it until the launch of the RCA Satcom I and II Satellites in December 1975 and March 1976 respectively.

Alaskans had come a long way since seeing their very first live satellite broadcast on July 20, 1969 the day Neil Armstrong walked on the moon.

1

1
The television, as an educational tool, made its first appearance in Alaskan villages during the ATS-6 experiments.

2
One of the most poignant realizations during ATS experiments was that reliable communications in rural Alaska can literally make the difference between life or death.

c. ATS-1 and ATS-6 Satellites

In the early days of satellite experimentation, the state government, Congress and several federal regulatory agencies approved the first steps of what would eventually become one of the world's most sophisticated communications systems. The governing bodies authorized telecommunications experiments using NASA's ATS-1 Satellite. These experiments, although proving unsatisfactory for an operational system, made test use of medical and emergency radio channels available between local health aides and regional doctors. In the first two years of experimentation, lives were saved in 26 villages. ATS-1 was also used for educational radio experiments in over two dozen Eskimo, Indian and Aleut villages that lacked telephone service.

Television experiments began in 1974 with NASA's ATS-6 Satellite. Two-way video medical consultation and expanded data information were demonstrated. Local health aides were given professional assistance in diagnosis and treatment. And ATS-6 was used for educational experiments, allowing students in 15 rural communities to respond to Alaskan-produced TV courses in health education and English as a second language. During ATS-6 experiments, health aides were involved in training programs otherwise unavailable. Village parents and teachers helped design the educational programming, and were trained to operate the equipment. Recently, the ATS system was abandoned because the satellite was repositioned over the earth.

But as a result of the ATS experiments, it was apparent that reliable communications in rural Alaska can mean survival.

2

1

d. Direct Distance Dialing

Alascom introduced Direct Distance Dialing to Anchorage on February 6, 1972 and to Fairbanks on May 21, 1972. A few years later DDD was brought to the Southeastern area. At the same time, new switch additions, new buildings and associated equipment were installed to meet the demands of long distance calls to, from and within Alaska.

2

1 & 2

Manual operator switchboards have been replaced in Alaska's long-lines system by computer terminal stations such as this TOPS position. These have not only greatly improved service and efficiency but the operator's working environment as well.

3

3

Alascom technicians installed Traffic Operator Position System (TOPS) units as part of a new DDD switching system at the Anchorage toll center. The new Northern Electric SP-1 switch helped handle dramatic increases in long distance traffic in Anchorage and other Alaska communities.

e. Microwave Systems

Terrestrial facilities, such as microwave systems, connect many of the more urban areas of the state

One major system serves central Alaska, running north from Anchorage to connect the Bartlett Earth Station and the Fairbanks Toll Center to the Canadian microwave route to the Lower 48 states. The same network extends sou. to connect Anchorage to Homer through Southwestern Alaska. It also serves communities along the way on the western Kenai Peninsula. Along the eastern portion of the Kenai Peninsula is yet another microwave route extending to local communities from Anchorage to Seward.

The second major microwave system was built in Southeast Alaska to help introduce DDD and replace many of the Air Force's WACS in the area. This includes a system between Lena Point and Sitka, Lena Point and Juneau and a 222 mile Angoon/ Ketchikan system. This system winds its way down Southeast Alaska traversing dense forests, narrow waterways and numerous mountain ranges often withstanding winds of 125 mph and tremendous loads and ice and snow.

1

Three ironworkers make their way down the large microwave antenna tower at Ketchikan, Alaska.

2

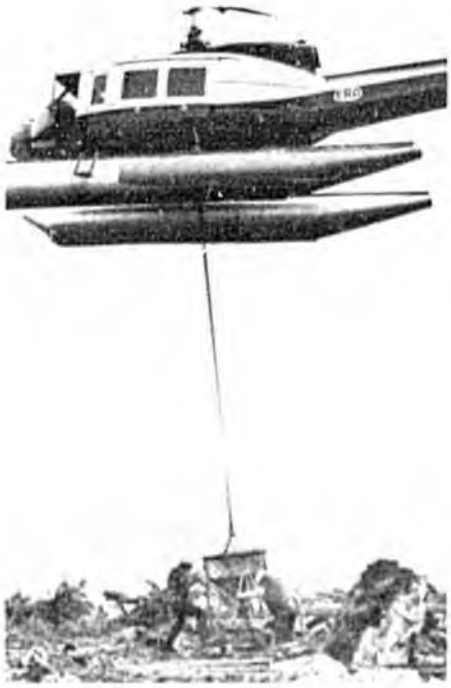
While the helicopter pilot checks his position, Alascom workers get ready to dump a load of concrete into the foundation forms for a microwave antenna along the 222 mile Angoon/Ketchikan microwave system. With the completion of this system, Direct Distance Dialing came to Southeast Alaska in 1976.

3

One of the many microwave repeater stations located between Anchorage a. Seward, a distance of 128 miles.

4

The Tern Peak passive microwave rep is located along the Anchorage-Seward microwave system. Passive repeaters generate no power but simply reflect microwave signals between active (power generating) repeaters.



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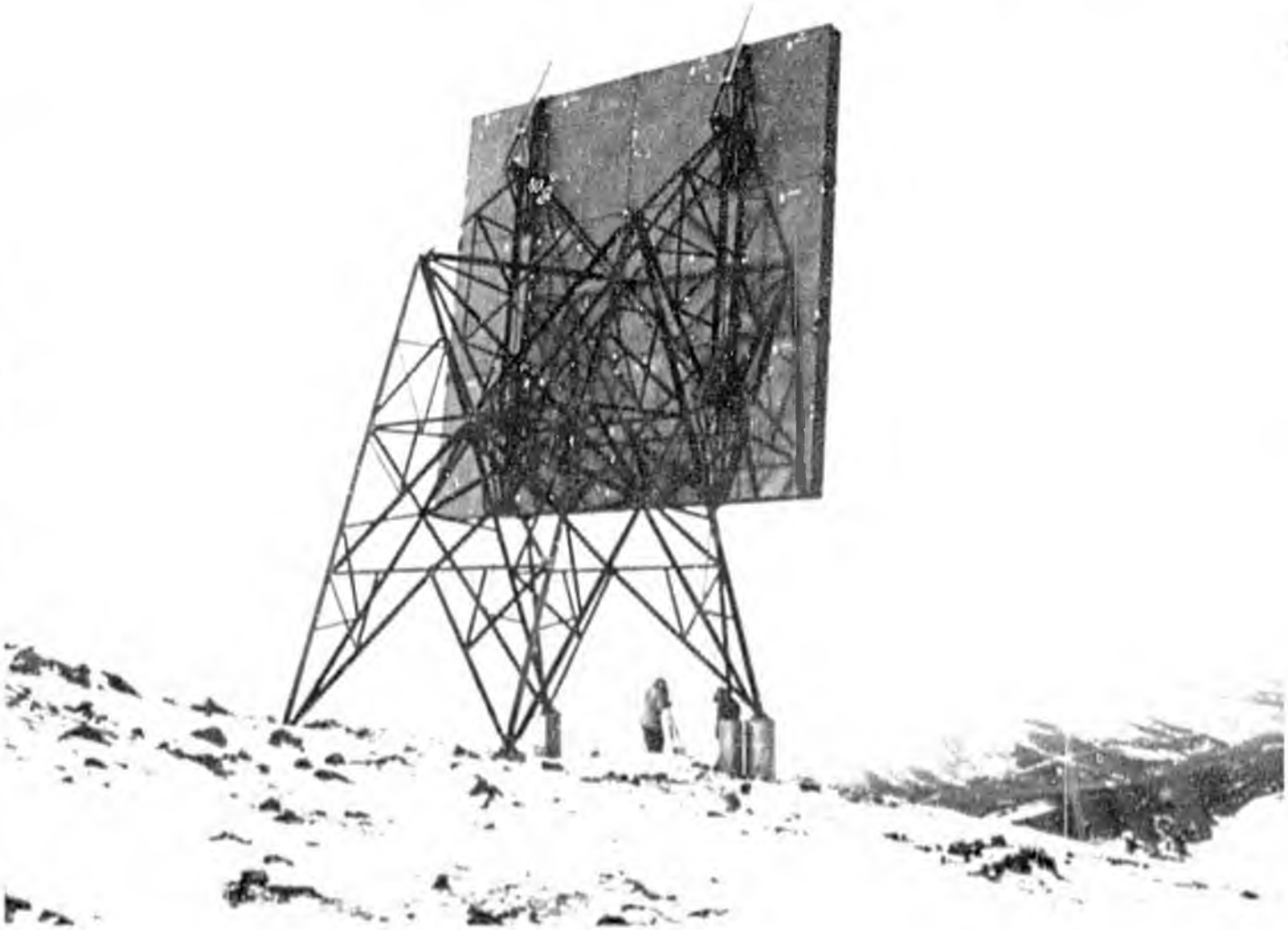

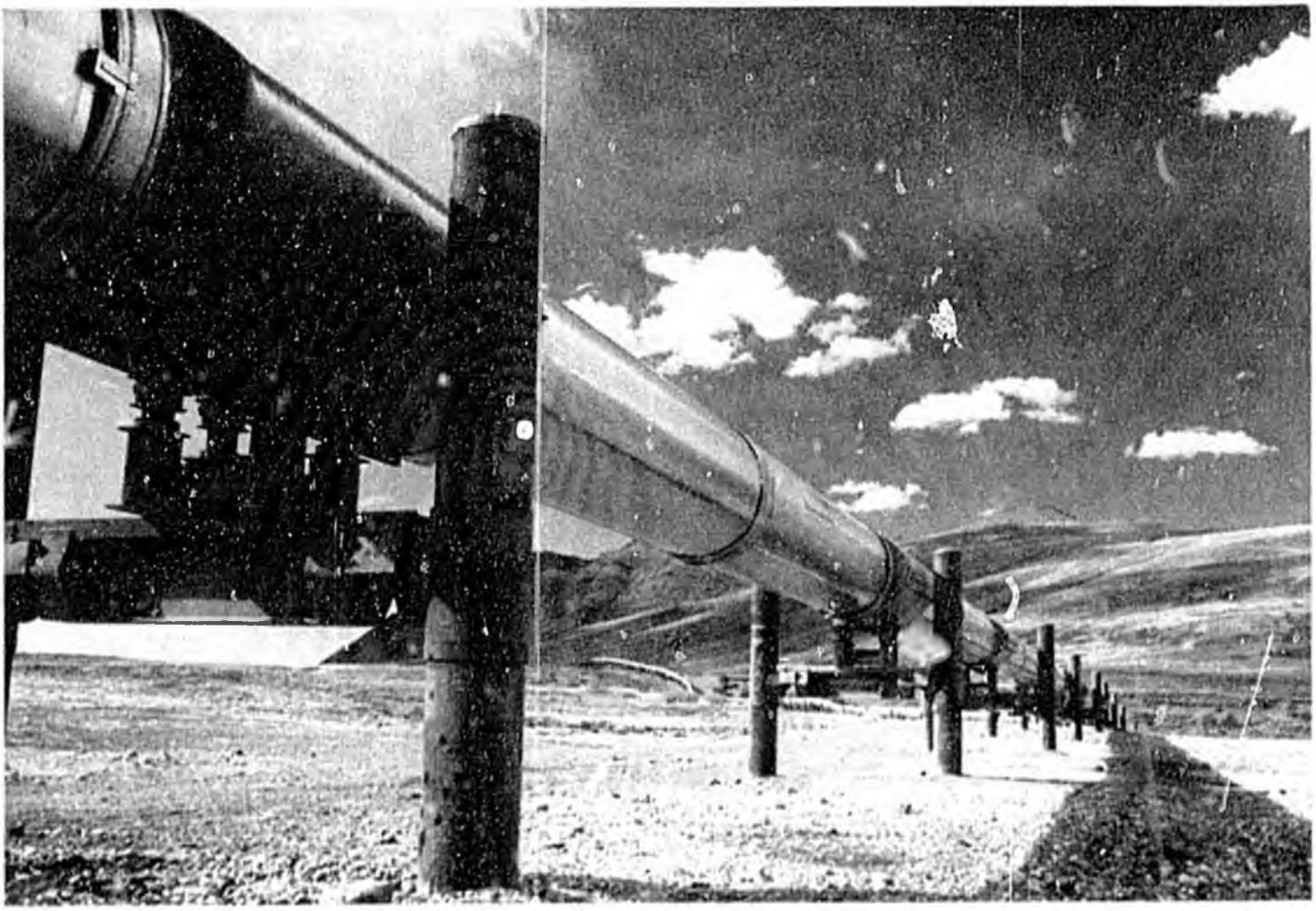

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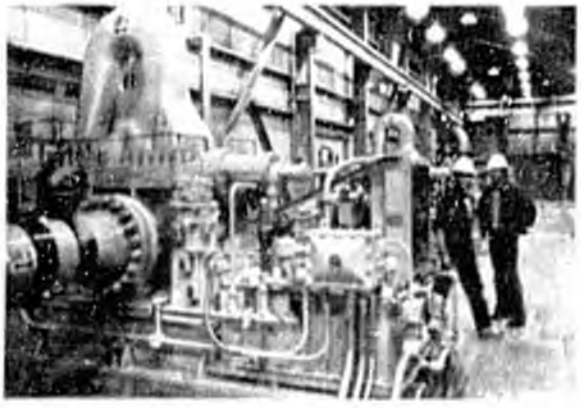

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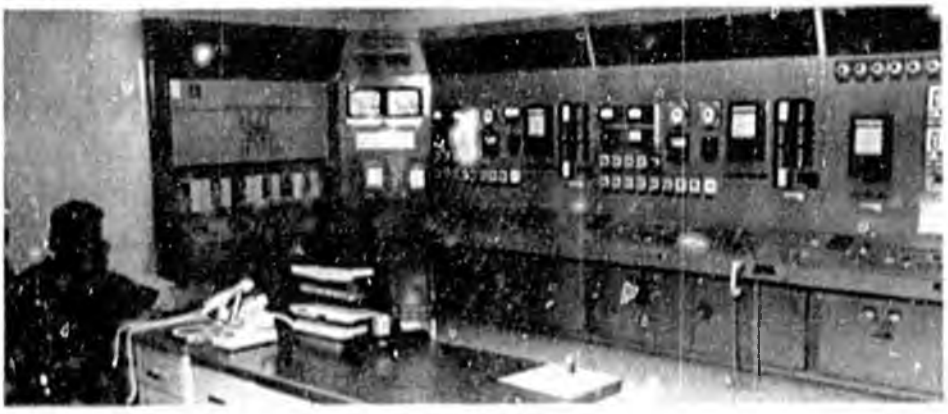

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f. Trans-Alaska Pipeline Communications System

Flow of the oil through the pipeline is monitored and controlled in Valdez via the microwave/satellite network built by Alascom. The prevention of oil spills is a primary objective of the communications system. It will automatically shut down the line for instance, if seismometers detect an earthquake. The Backbone Communications System (BCS) is backed up by an alternate system which can take over instantly in the event of a failure.

The permanent communications system is made up of three fundamental parts: The Backbone Communications System (BCS), the Alternate Route Communications Sytem (ARCS) and the Block Valve Communications System (BVCS).

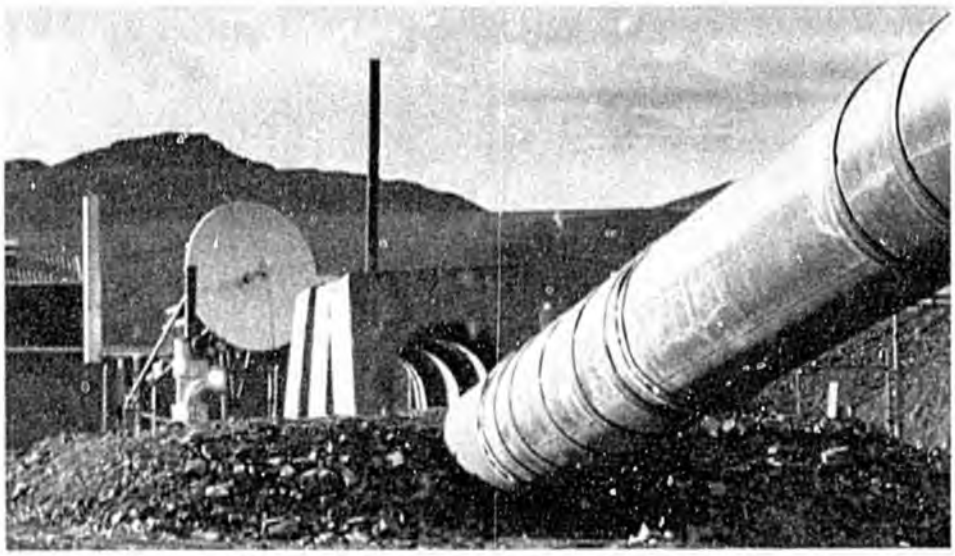
The BCS is a microwave communications system which enables Alyeska Pipeline Service Company to communicate along the route of the pipeline. Twenty-eight of the 40 relay

stations are placed on mountains adjacent to the pipeline corridor at elevations of up to 5,761 feet.

The ARCS is a satellite system which serves as a backup to the critical circuits on the BCS. The ARCS uses four earth stations communicating with each other via satellite and provides communications between several pump stations and to the Valdez terminal.

The BVCS enables Alyeska to communicate with remotely located block valves and channels to transmit seismic alarm signals from the block valves. These remote block valves are capable of stopping oil flow from either direction. They limit drainage in event of a leak and isolate pump stations, terminals or any damaged sections on the pipeline so that maintenance may be carried out.

All equipment had to be taken to remote sites via helicopter. Forty-eight power and equipment buildings were airlifted to the mountain tops along with fuel tanks and equipment all surplus materials and work debris were flown out.



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1

The Trans Alaska Pipeline runs 800 miles from Prudhoe Bay to Valdez. Much of the pipeline is elevated above the ground to prevent heat transfer to the ice-laden soil.

2

Inside Pump Station Number Four huge generators help build up the oil pressure inside the pipeline for the trip over the Brooks Range.

3

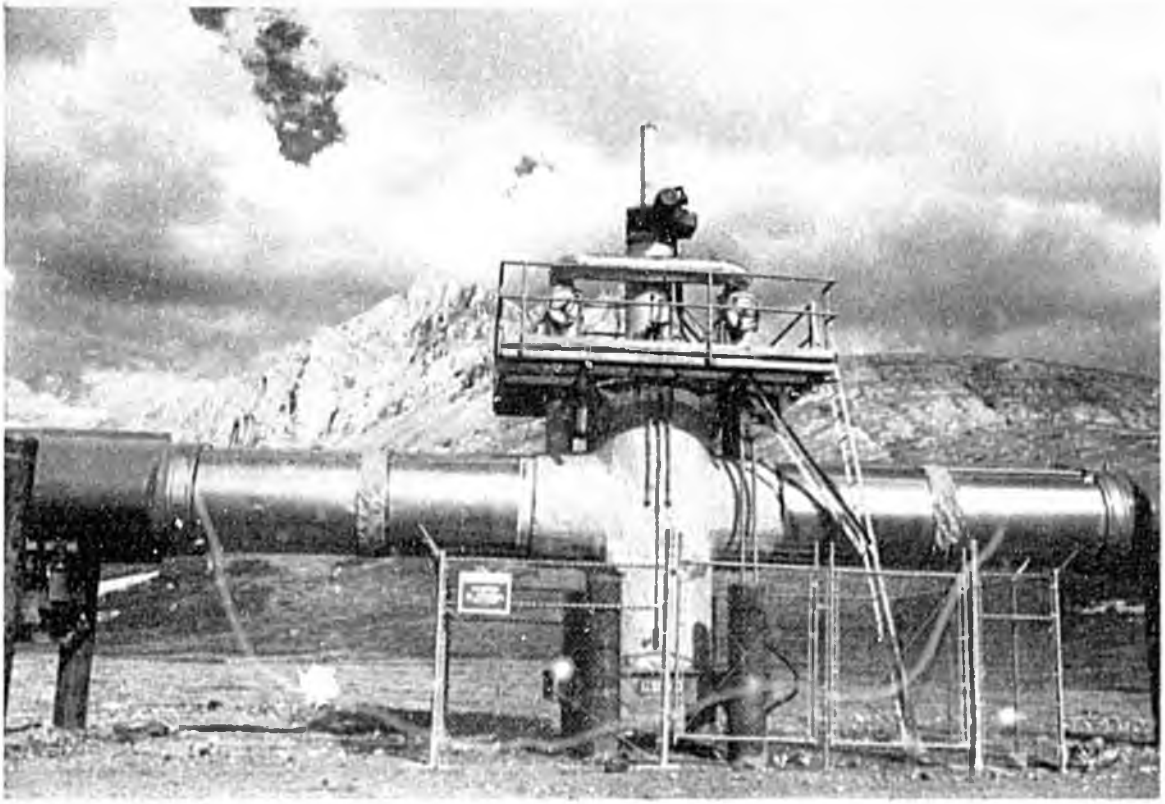
All vital functions of Pump Station Number Four are displayed in the main control room.

4

Alascom's earth station at Pump Station Number Four practically straddles the oil pipeline. Operation of the pipeline would be impossible without reliable communication links.

5

The Atigun Pass microwave repeater is a part of the pipeline Backbone Communication System. The mountaintop site is completely self-contained, two generators provide power and alternately turn off and on. Fuel must be transported to the facility by helicopter.



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6

Remote controlled gate valves regula e the flow of oil through the pipeline. There are 62 .e valves built into the pipeline

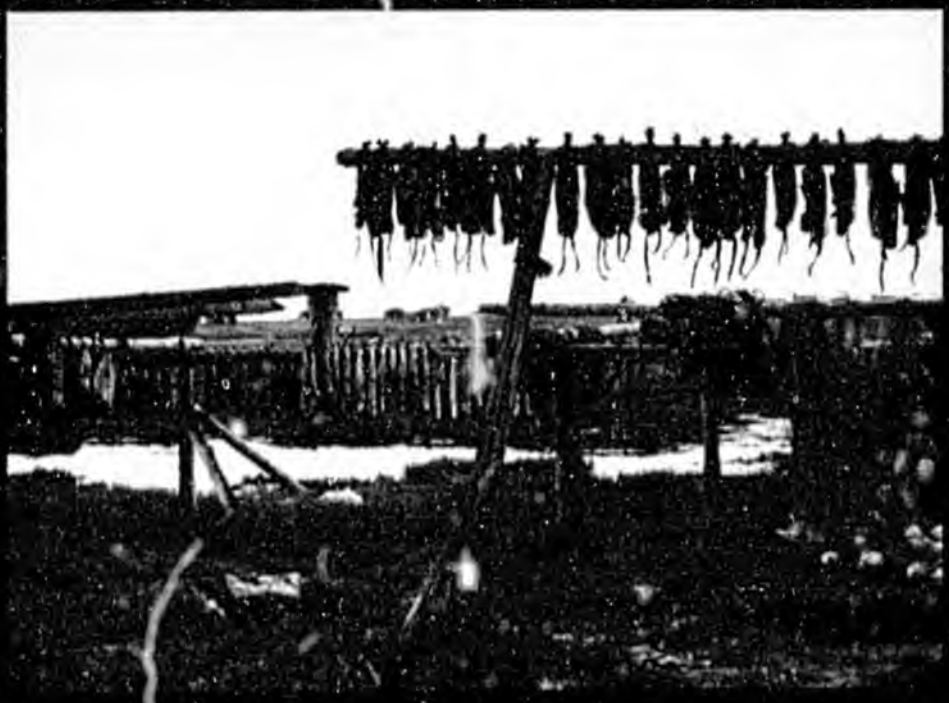
/

The earth station at Pump Station Number Four is one of four satellite facilities along the pipeline. These handle regular commercial traffic as well as pipeline operations

8

Alongside each gate valve is the communications equipment that receives messages and signals the valve to automatically open or shut. This building is supported on thermal pilings that dissipate any heat that enters the ground from the building

Telecommunications in the Alaska Bush



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1. Bush Villages

Alaska is the only state in the union, and one of the few areas of the world, where the majority of the native population still lives with much the same value system their ancestors had for the past several thousand years.

The Alaska Native Claims Settlement Act affirmed the right of the Alaska Natives to their historical heritage and lifestyle. The number of isolated small villages that dot all areas of a state as large and with as hostile an environment as Alaska, testify to the determination of the villagers to preserve their way of life. Many are reluctant to forfeit their lifestyle despite what an urban dweller would consider to be quite obvious hardships. The rhythm of daily life in the village is dictated more by the change in natural surroundings, which can be extreme in Alaska, than by the urban schedule.

While these older values persist in much of Alaska, the advancement of the dominant culture, contributing sometimes gentle and other times radical change, inevitably continues. There is often some confusion generated at the points where old ways are replaced by new ways, no matter how benevolent the intentions. This manifests itself in a variety of contradictory situations found in the Alaskan bush. It can only be hoped that the situations, where new and stronger "hybrid" solutions between the two cultures can be found, will outnumber the attempts that realize no solution at all.

3

1

The old and new come together in Wales as the postmaster makes his round in an all-terrain vehicle, one of the few vehicles in the village. Wales is the most westerly point of the continent of North America.

2

Villagers of Little Diomede help unload supplies that have just arrived by barge. The village is isolated from the rest of the world for most of the year and supplies often run low before the next boat arrives. Across the way is Big Diomede Island, U.S.S.R., just three miles from Little Diomede Island.

3

Innovation is common in the bush. This woman is scraping a seal skin clean with a makeshift tool of bone and a hollow metal pipe.

4

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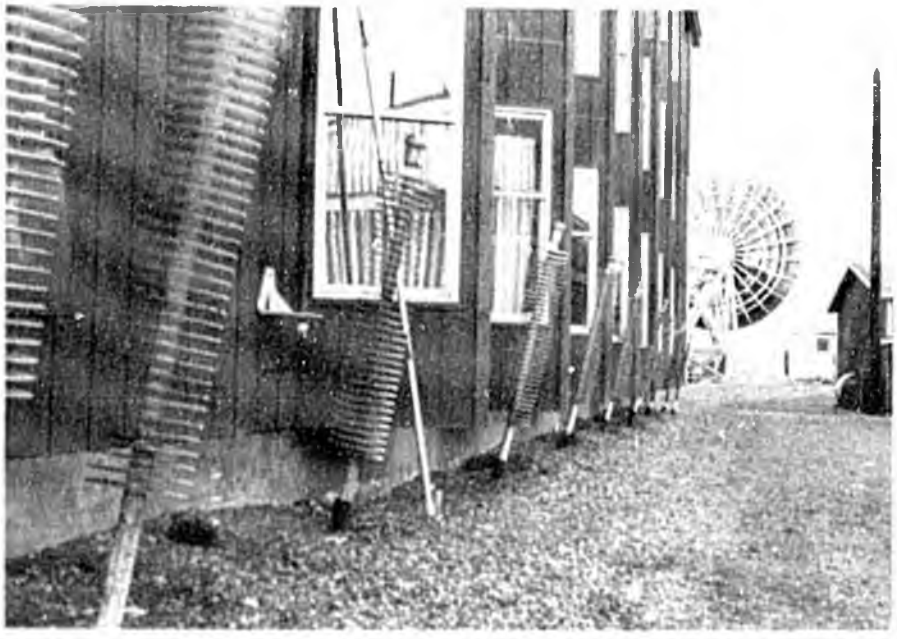

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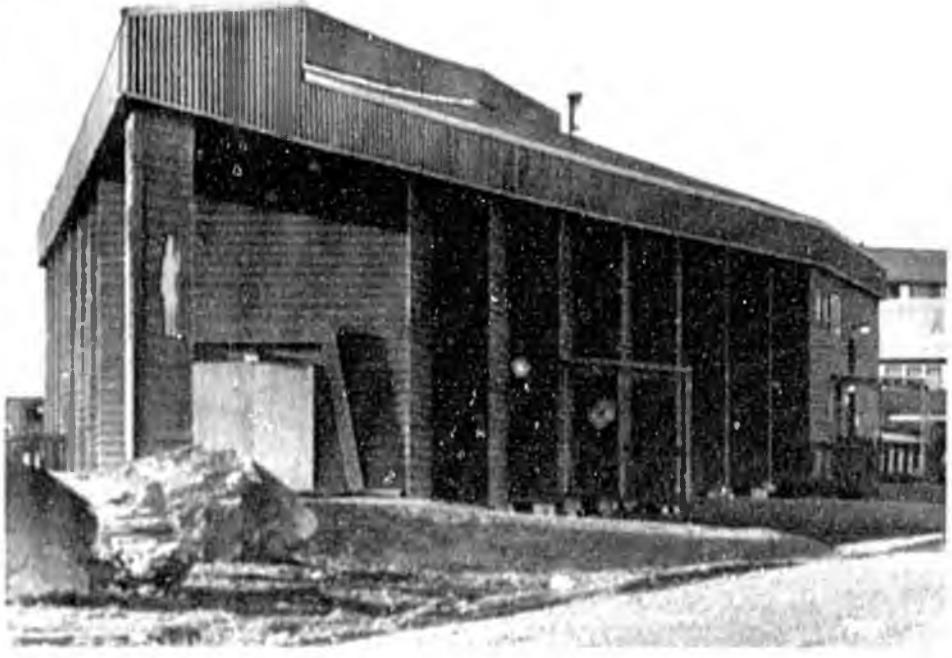

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Children in the village of Ambler on the Kobuk River enjoy the long hours of summer sun. During the school year, they will attend classes at the local school. In the past, children had to leave their homes during the school year and attend regional schools. The state legislature recently funded a bill providing for construction of local schools in bush villages throughout the state.

8

The NANA Regional Corp. owns and operates the Nul Luk Vik Hotel in Kotzebue, located just west of Alascom's earth station. Special thermal poles are inserted into the ground around the perimeter of the hotel. The poles contain a substance that absorbs excess heat in the ground, becomes gaseous and rises to the top of the poles. As the gas dissipates its heat through the exposed fins it condenses and flows back down the pole into the ground to repeat the process indefinitely. This protects the foundation of the hotel from sinking into the ice-laden soil.

9

The NANA Regional Corporation building in Kotzebue, an example of the continuing progress and influence of the native regional corporations.

4

If progress is noted by the number of fast food chains making their imprint in the far north, then Dairy Queen must feel as though it has broken new territory. This outlet is located in Kotzebue.

5

Freshly skinned seals lie on the beach at Kotzebue, a sign that even though modern day technology exists in most areas of the state, the old fashioned ways of survival are still followed.

6

Hooper Bay, located on Alaska's west coast on the Bering Sea, has a population of about 500 people. The main source of food is fish, seal, walrus and whale. United Utilities provides local exchange service in this area of the state with switches in Hooper Bay, St. Mary's, Emmonak and Alakanuk.

10

America's closest point to the Soviet Union is Little Diomede, located on Little Diomede Island, just three miles from Big Diomede, U.S.S.R. Diomede is cut off completely from the outside world during parts of the year and getting there is tricky year round. Diomede has had an Alascom bush telephone since July of 1973.

11

Barrow, just south of Point Barrow, is one of the farthest north points in North America. In the summer, during June, the sun does not set. During December and through the winter months, the sun will not rise for 67 days.

12

Typical of the many "tarpaper" shacks of villages and towns across Alaska, this home is located in Kotzebue in the northwestern part of the state. Each year, residents of Kotzebue will hunt whale, seal, fish and walrus. Each year it becomes a fight to ensure that enough meat is available for the long winter months.

13

Fish racks, full of drying sheefish and salmon, are a common sight, not only in Ambler, but in most of the villages. The annual salmon migrations in Alaska have been an important food source for Alaska natives for hundreds of years.

2. Telephone Service

When Alascom filed its application to take over the ACS, Alaska had some 300 shortwave bush stations scattered throughout the state and located in fishing villages, isolated mining settlements and logging camps which tied into 14 land radio systems.

Telephone service to these bush stations was erratic and inefficient. If the call was for anyone other than the radio operator, the radio had to be kept available until the called party was located and came to the telephone. Transmission suffered atmospheric interference common to shortwave usage. Maintenance of the bush station equipment depended on the ability of the station owner and how much interest he had in providing good service.

Despite attempts to get a bush phone project installed as quickly as possible, Alascom had, from the beginning, become involved in a number of problems. Due to a federal land freeze, land permits could not be issued for the construction of mountain top facilities needed to link the radio telephone together. The red tape involved in getting simple paperwork processed frequently delayed construction into the winter months when it often became physically impossible to work in remote areas. Added to these problems was the ever increasing high cost of labor, transportation and materials. Originally committed to spend $[illegible] million to improve communications to rural Alaska, Alascom eventually spent some $[illegible] million on the radio telephone portion of the bush program alone.

1

2

1
Location of the village telephone was determined through meetings with the residents. They have been placed in city halls, health clinics, stores, personal homes and other places depending upon the desires of the villagers and the physical requirements needed to install the phone.

2
A worker at the Toksook Bay School makes a call over the two way radio [illegible] at one time was plugged into the IMTS System for communications. The IMTS was later replaced by a small earth station at Toksook Bay and a more conventional telephone is now used to place calls.

Problems in setting up a complete system in the state ranged from getting construction permits to developing ground receiver antennas large enough to meet FCC requirements. But, the company continued its radio telephone program and by 1975 installed an additional 47 village phones. By that time, Alascom fully realized the potential of satellite facilities in solving communications problems of an area the size of Alaska.

Alascom then entered into negotiations with the State of Alaska in which the state and the company would share the cost of constructing earth stations around the state and, in turn, own them jointly.

At first it was agreed that 20 small earth stations would be built. The number later climbed to 50, then 80 and finally to 100. The agreement called for the state to purchase specified equipment for the 15-foot earth stations. Alascom would be responsible for the installation and operation of the stations that were to bring a public telephone, emergency medical communications and eventually television to the remote areas of the state.

3

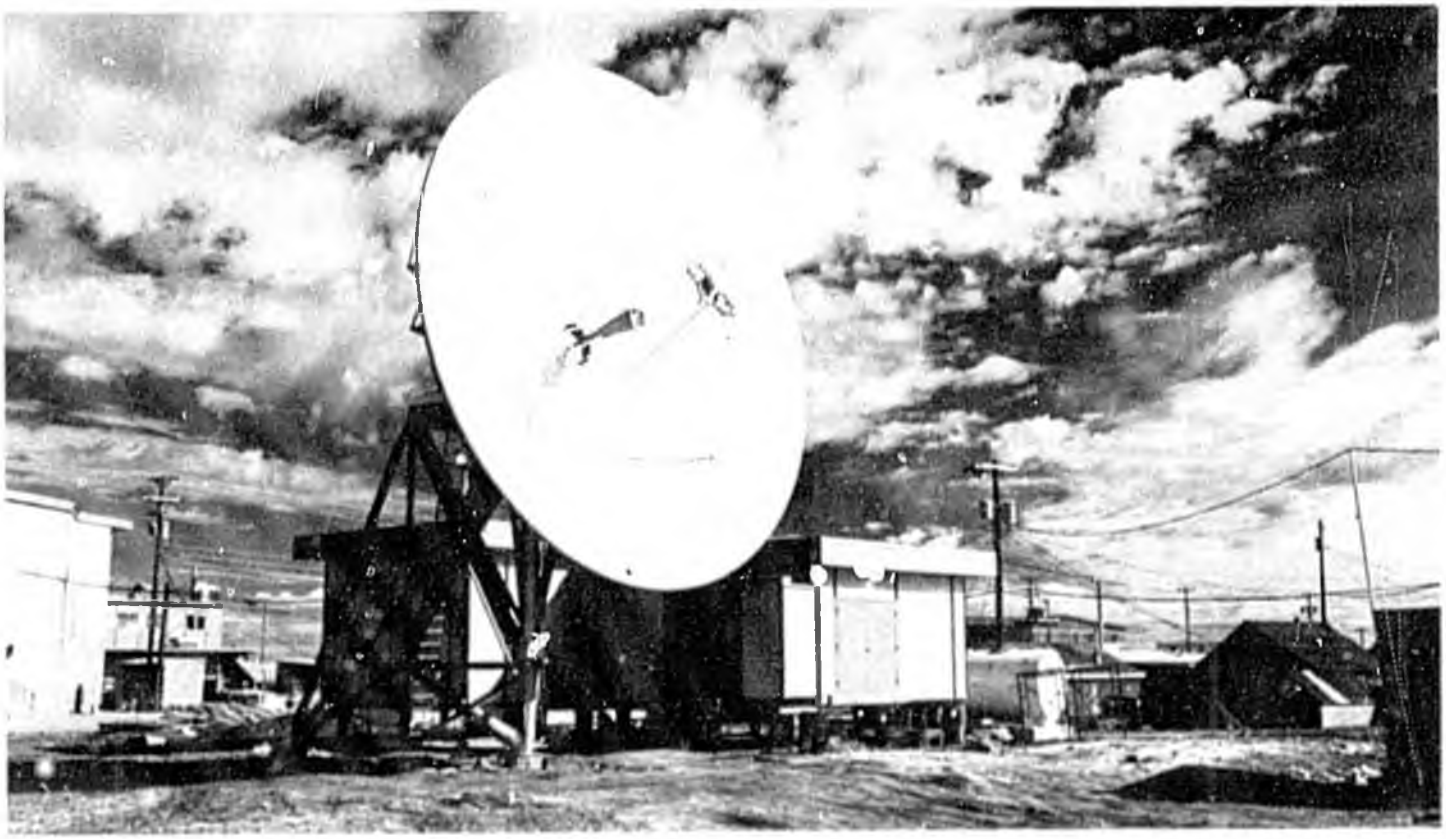
A young village girl of Ambler places a call to a nearby village. Villagers of Ambler not only enjoy the use of long distance calls via satellite, but also have their own local exchange.

4

With the rules of telephone courtesy posted near the phone, these villagers line up to use the phone.

3

4



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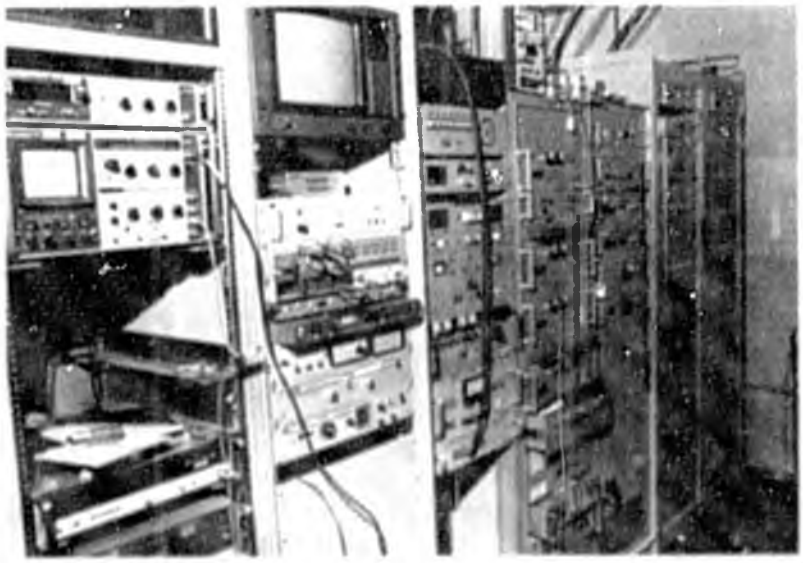

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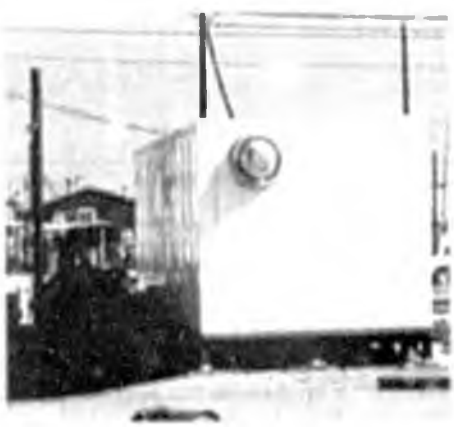

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5

The earth station at Kotzebue is a major earth station. The angle to the satellite is very slight, indicating that this dish is well above the Arctic Circle.

6

Inside the Kotzebue Earth Station the equipment needed to handle television and long distance calls is considerably larger and more sophisticated than what is used in the village small earth stations.

7

The metal building next to the small earth station in Manley Hot Springs houses the earth station electrical components and the Manley Utility Co. local exchange switch.

8

The large refrigerator van houses the equipment of the OTZ telephone co-op local exchange in Kotzebue. OTZ is based in Kotzebue and presently operates local exchanges in eight surrounding bush villages.

3. Telemedicine Service

Since the early 1940's, health aides have been the main source of health care in the villages. Selected by the village council, the health aide receives training at the Alaska Native Medical Center in Anchorage. The aide returns to the village supplied with a medical kit, a reference manual and some type of communications link — until recently, usually a shortwave radio.

However, it had been clear for some years that the Native Health Service had a problem of the highest priority for proper health care delivery to the bush via telecommunications. It remained a priority with the state and Alascom, and as a result, most of the villages served under the small earth station program were equipped with a second telephone dedicated to the Alaska Area Native Health Service (AANHS). Each village and the regional hospitals are assigned a channel with two regions on each channel. To make a call, the health aide pushes the assigned button and depresses the signal button on the telephone receiver. The aide would then call out the name of the village or hospital. The telephone does not ring. Instead, health aides listen for messages to come over the speaker.

The party line satellite channel allows aides to pick up information by listening to discussions between other health aides and the doctors. Aides are instructed to keep the volume low on the telephone speaker to protect the privacy of the patient during consultations.

1

2

3

1 & 2

Ambler Community Health Aide, Lillian Johnson, is the only trained medical person in that village of nearly 200 people.

3

Doctors at the Alaska Native Medical Center in Anchorage, as well as other regional hospitals, can be called by the Village Health Aide for consultations.

4

5

4

The sign outside the Native Health Center in Ambler clearly lets all the villagers know when and where the health aide will be. Point number four stresses that everyone should take good care of the Community Health Aide — for both your sakes!

5

The push-to-talk medical telephone used by the health aide is equipped with a speaker instead of a dial and five buttons. Four frequencies are available for calls between health aides and regional doctors with the fifth frequency reserved for calls between hospital personnel only.

6

The Community Health Aide in Noatak gives an examination to a patient.

1

2

4. Satellite Television

In mid-1975, Alascom began making plans to bring live television to bush areas of the state. In December 1976, the state and Alascom reached an agreement to provide TV transmissions via satellite to 23 rural villages. Five urban centers around the state also benefitted from the increase in live TV in their areas.

Satellite TV transmission to the bush began on January 15, 1977 as programming was sent to 11 of the 23 villages. By the early months of 1977, most of the 23 villages began receiving TV for the first time. To date, 72 villages are on the satellite TV program.

1

Live television from the Lower 48 is initially received in Alaska at one of Alascom's "gateway" earth stations. This technician is adjusting a test pattern at Bartlett Earth Station prior to live television reception. The earth station will retransmit the signal via microwave to the three commercial TV stations in Anchorage. The stations videotape the incoming programs.

2

The three commercial TV stations in Anchorage provide the video tape programming received from the earth station to the Tape Relay Center of the Alaska Satellite Demonstration Project. That office is in charge of TV programming to the Alaska bush. They will send their programs back through Alascom's circuitry to one of the "gateway" earth stations for instantaneous transmission to the small bush earth station.

3

The small earth station in Ambler receives television from the Tape Delay Center through one of Alascom's "gateway" earth stations.

4 & 5

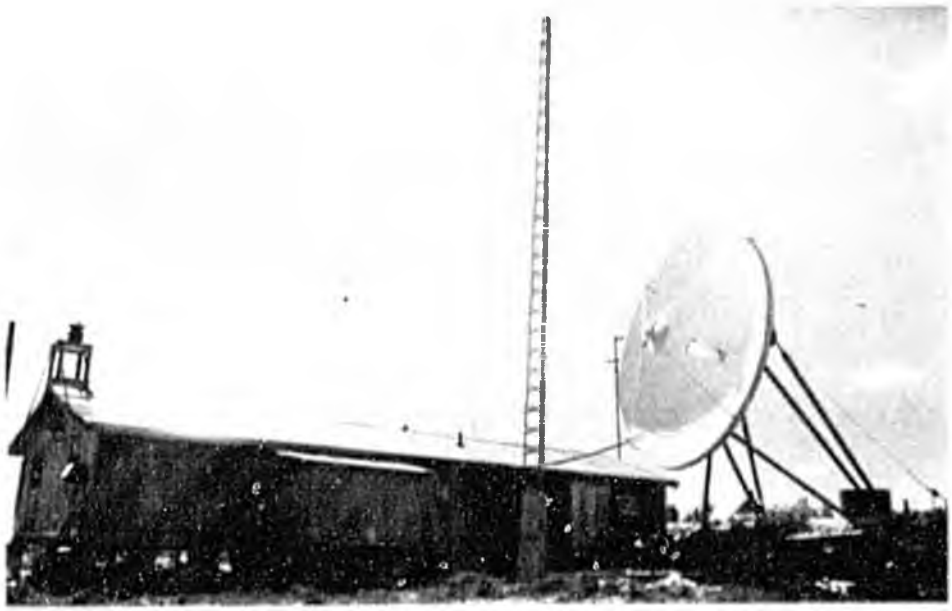
The small earth station television receiver and transmitter are located in a corner of a general store in Ambler. These components process the TV signal received over the earth station antenna and then instantly retransmit the television program within the village over a "mini TV transmitter" antenna for reception within village homes.

6

The "mini TV transmitter" antenna in Ambler

7

In the Kotzebue Teen Center, youngsters enjoy the end product of one of the most unique satellite television projects in the world.



3

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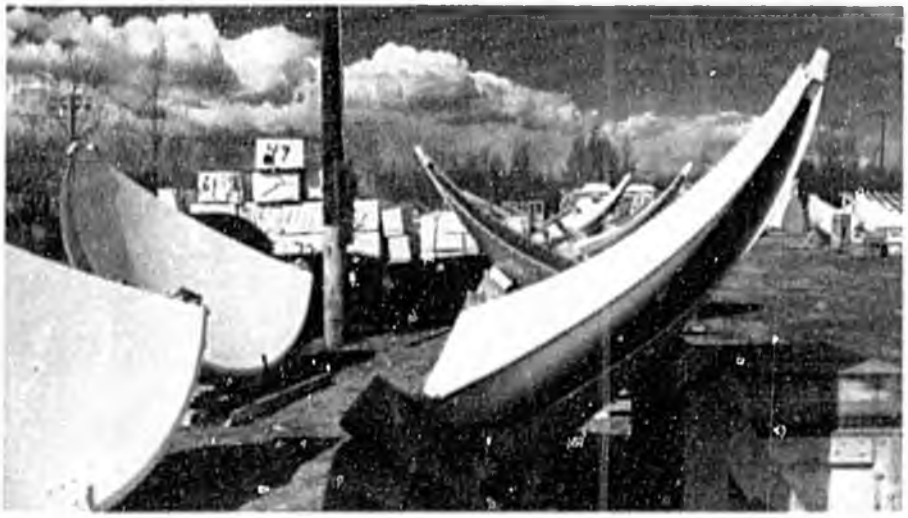
4

6

7



1

2

3

4

5. Small Earth Station Construction

Today, 15-foot diameter antennas are installed and operating in 100 villages from above the Arctic Circle to far west in the Aleutian Chain. The Alaska Federation of Natives, which for many years had wanted to improve communications in outlying areas, was asked to form a committee to advise the state in selecting communities to receive the small earth stations.

Erecting these earth stations was costly and difficult. But village people — who understand that permafrost, tundra and muskeg all demand special treatment — participated as paid crew members. The villagers also know what it takes to survive the subterranean of 50 to 60 degrees below zero weather.

One or two weeks are normally required to install a small earth station but at Atka in the Aleutian chain it took six weeks due to storms and treacherous seas.

9

1

Portions of dish antennas sit unassembled in Anchorage, prior to being shipped to bush villages.

2, 4, & 5

The villagers in Noatak assisted Alascom crews as they assembled the earth station during the winter of 1975.

3

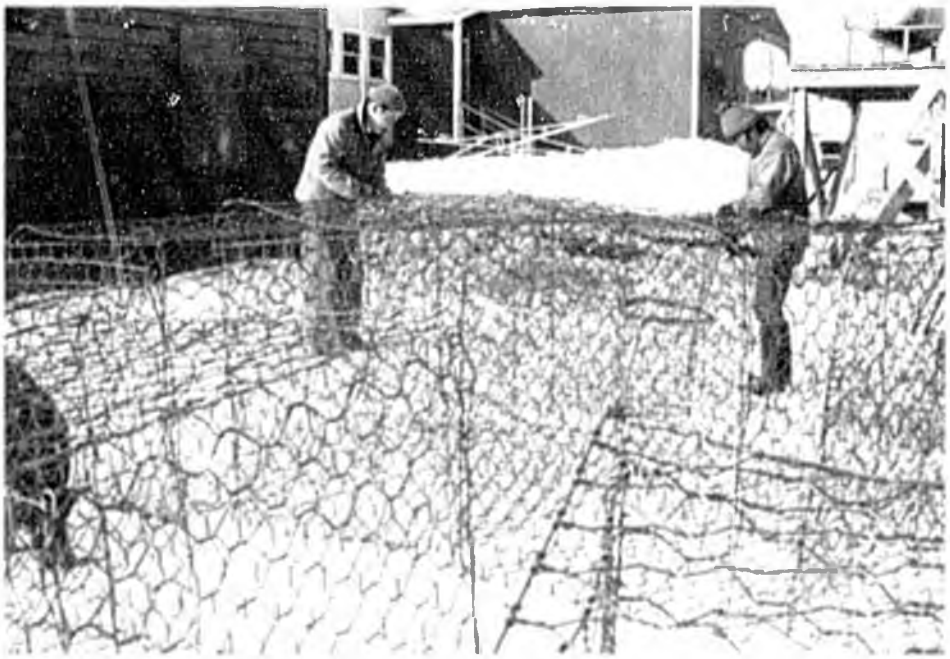
The early stages of construction have started on the small earth station at Noatak. A more modern type of sled — the snowmobile — is parked in front of the traditional dog sled. Behind the dog sled can be seen the disassembled pieces of the 15-foot diameter antenna for the earth station.

6 & 7

Villagers at Atka, in the Aleutian Chain, help assemble the wire gabions. The gabions are placed at the base of the three feet of the 15-foot dish antenna and filled with sandbags to act as a reliable foundation on unstable soil such as permafrost.

8 & 9

Detail of the gabions and sandbags.



6

8

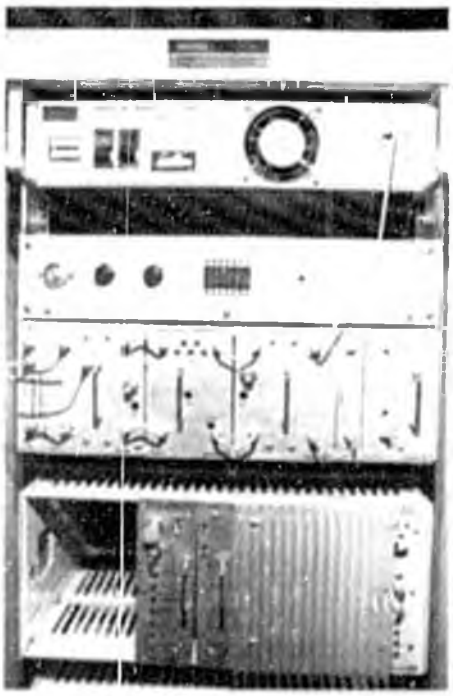
7

10

12

11

13



10

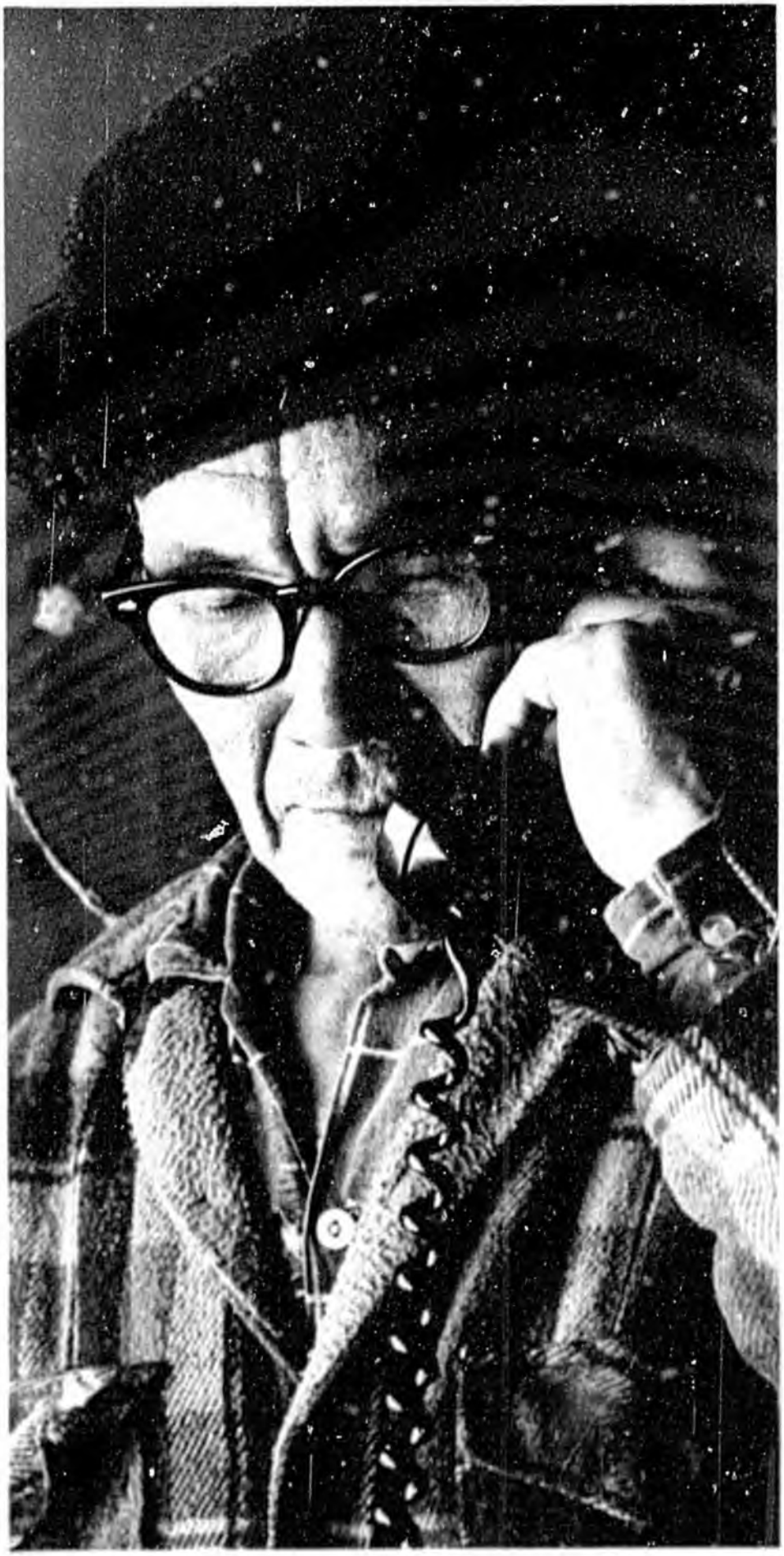
The Deering small earth station equipment and the local telephone exchange share space in the building directly behind the antenna

11

An Alascom engineer looks over the satellite components and the local telephone exchange system set up in the village of Deering, south of Kotzebue on Kotzebue Sound. The village is not only served by satellite, but has a local exchange owned and operated by the OTZ Telephone Cooperative

12 & 13

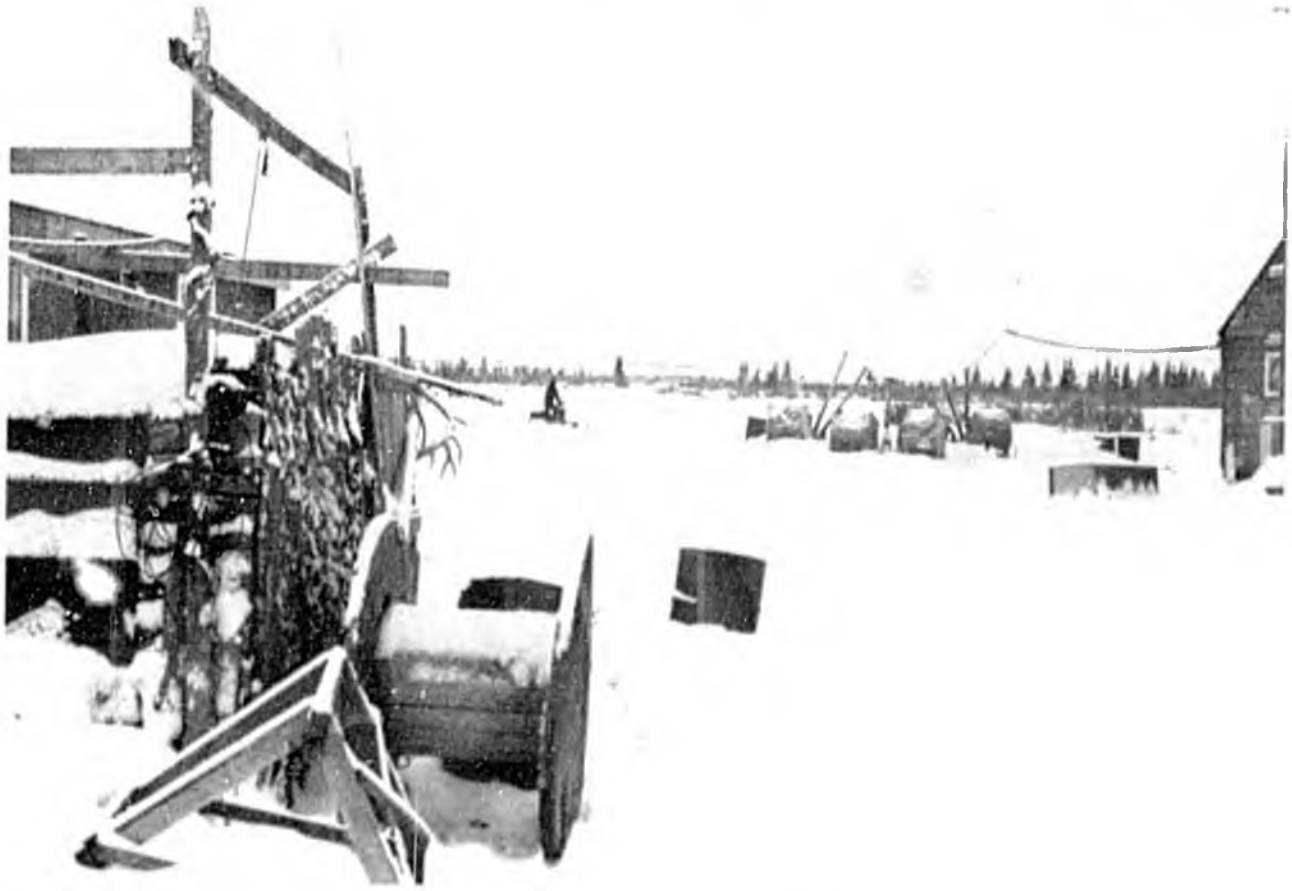
The heart of the small earth station is the component cabinet containing telecommunications equipment manufactured by California Microwave. The equipment is single channel per carrier and this cabinet in Deering is representative of the other small earth stations in Alaska



6. Summary

In the past decade, Alaska has made great strides in fulfilling the national policy of universal telephone service. This was accomplished in spite of the harsh environment and economic realities associated with remote communications systems.

Necessary future development in Alaska will be possible only with continuing national dedication to this policy.



Appendix

CONNECTING COMPANY EXCHANGE INFORMATION

July 6, 1979

NAME	TYPE OF OWNERSHIP	LOCATIONS	B1	R1	# OF TELEPHONES
Anchorage Telephone Utility	Municipality owned	ATC-North	$18 40	$ 9 05	127,744
		ATU North	18 40	9 05	
		ATU South	22 40	10 15	
		ATU East	22 40	10 15	
		ATU West	18 40	9 05	
		ATU CTX	18 40	9 05	
		Girdwood	16 50	11 00	30[illegible]
		Bird/Indian	16 50	11 00	62
		Hope	16 50	11 00	
Bettles Telephone Co , [illegible]	Privately owned	Bettles	*	*	35
Bristol Bay Telephone Communications Co-op Inc	REA Co-op owned	King Salmon	24 00	16 00	157
		[illegible]	24 00	16 00	114
Bush Telephone Inc	Privately owned	Aniak	20 00	13 00	100
Continental Telco	Holding Company	Delta Junction	30 70	20 95	594
		[illegible]	30 70	20 95	347
		North Pole	30 70	20 95	3019
Glacier State Telco	Continental Telco owned	[illegible]	[illegible]	14 85	[illegible]
		[illegible]	29 20	19 70	183
		Kenai	27 60	18 05	[illegible]
		[illegible]	27 60	18 05	1103
		[illegible]	20 55	13 35	3813
		[illegible]	20 55	13 35	
		[illegible]	27 60	18 05	[illegible]
		[illegible]	[illegible]	18 05	2870
Juneau/Douglas	Continental Telco owned	Juneau	[illegible]	11 20	8892
		Douglas	[illegible]	11 20	919
		[illegible]	21 00	11 20	4718
		AK State Office	21 00	11 20	
Copper Valley Telephone Co-op	REA Co-op owned	[illegible]	[illegible]	12 00	[illegible]
		Valdez	16 00	10 00	[illegible]
Circle Utilities	Privately owned	Circle City	*	[illegible]	
Cordova Telco Co-op	Municipally owned	Cordova	[illegible]**	[illegible]**	[illegible]

Fairbanks Municipal Utilities System	Municipality owned	Fairbanks	18 40	10 35	24,898
General Telephone Company of Alaska	General Telco owned	Metlakatla	15 30	9 00	381
		Wrangell	16 50	11 00	1278
		Haines	14 30	8 00	784
		Petersburg	16 50	11 00	1660
		Barrow	21 00	14 00	1168
		McGrath	20 00	13 00	136
		Nome	14 40	9 05	1557
		Unalakleet	21 00	13 00	126
		Bethel	20 00	13 00	1745
		Seward	16 50	11 00	1495
		Moose Pass	16 50	11 00	99
		Annette	15 30	9 00	50
Great Land Telephone	Privately owned	Fort Wainwright	17 00	8 00	
Interior Telephone Company	Privately owned REA Financed	Fort Yukon	24 50	16 50	229
		Galena	24 50	16 50	199
		Cold Bay	24 50	16 50	145
		Cooper Landing	24 50	16 50	76
		Unalaska	24 50	16 50	349
		Hamm	24 50	16 50	59
		Port Lions	14 50	9 00	83
		Sand Point	14 50	9 00	222
		King Cove	24 50	16 50	109
Ketchikan Public Utilities	Municipality owned	Ketchikan	17 35	11 55	6445
		Ward Cove	24 50	16 75	637
Manley Utility Co	Privately owned	Manley Hot Springs	18 00	15 00	20
Matanuska Telephone Assn	REA Co-op owned	Healy	21 00	16 85	288
		Big Lake	23 15	15 45	995
		Cantwell	21 00	16 85	49
		Eagle River	23 15	15 45	5260
		Palmer	23 15	15 45	3105
		Talkeetna	24 95	18 25	319
		Willow	21 00	15 45	239
		Tyonek	20 20	13 45	97
		Wasilla	23 15	15 45	2109
Mukluk Telephone Co	Privately owned	Unalakleet	••	••	88
		Teller	••	••	30
		Wales	••	••	31

National Utilities Inc.	Privately owned	Tok	15.00	12.00	386
		Craig	12.00	10.00	185
		Hydaburg	12.00	10.00	86
		Skagway	10.75	8.00	445
Nushagak Telephone Co-op Inc.	REA Co-op owned	Dillingham	24.00	16.00	395
OTZ Telephone Co-op Inc.	REA Co-op owned	Kotzebue	21.00	14.50	574
		Ambler	21.00	14.50	33
		Buckland	21.00	14.50	34
		Deering	21.00	14.50	32
		Kiana	21.00	14.50	51
		Kivalina	21.00	14.50	34
		Noorvik	21.00	14.50	72
		Selawick	21.00	14.50	74
		Shungnak	21.00	14.50	45
Sitka Telephone Co.	Privately owned	Sitka	14.50	9.00	4138
		Mt. Edgecumbe	14.50	9.00	711
		Angoon	14.50	9.00	122
		Yakutat	14.30	8.00	261
		Hoonah	14.50	9.00	316
		Pelican	14.50	8.00	65
		Gustavus	14.50	9.00	131
		Kake	14.50	9.00	150
		Klawock	14.50	9.00	103
		Northway	25.00	15.00	68
		Thorne Bay	14.50	9.00	109
Summit Telephone	Privately owned	Summit	*	*	
United Utilities Inc.	Privately owned - REA Financed	St. Marys	27.50	16.00	40
		Emmonak	27.50	16.00	10
		Hooper Bay	27.50	16.00	25
		Alakanuk	27.50	16.00	25
Whittier Telephone	Privately owned	Whittier	16.50	11.50	75
Yukon Telephone Co.	Privately owned	Tanana	15.00	8.00	105

* No Tariff
** Tariff on file — not approved

Telecommunications on the Last Frontier

WAMCATS to Satellites

Public Safety

↙

communications - network — "manned" by their personnel

* maintained by DOT-PF

plans for expansion

all Public Safety dispatchers turn on the switch - if it doesn't work they go to DOT-PF (Admin. w/ E.O. #50)