1991 Report

Deer Pellet-Group Surveys in Southeast Alaska

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INTRODUCTION

This report summarizes the deer pellet-group survey work conducted by the Alaska Department of Fish and Game and the United States Forest Service in southeast Alaska during 1991. It supplements previous volumes covering surveys in the region since 1981. The reader is referred to Kirchhoff and Pitcher (1988) for a more detailed discussion of objectives, sample design, and field methodology of this program.

Pellet-group data are used by biologists to monitor deer population trends in specific watersheds (or VCUs) throughout the region. The data also permit general comparisons of deer numbers from area to area within the region. A word of caution is advised when interpreting these data. First, comparisons over time, or from area to area, are most valid when weather conditions are similar. Pellet groups tend to decompose more rapidly with increasing precipitation and warmer temperatures, potentially confounding comparisons. Secondly, there is a notable lag between the time a deer dies, and the time the pellet groups it has been depositing disappear (pellets persist for 6-11 months). When significant over-winter mortality occurs (commonly in March), pellet groups counted in April and May will not reflect that population decline.

These comments have particular significance for the 1991 survey results reported here. Although pellet-group densities measured in Game Management Unit 4 (Admiralty, Baranof, and Chichagof islands) do not show a decline compared to previous years, deep, persistent snowpack in late winter (see Appendix II), and early fall reports of poor hunting success caused us to suspect significant mortality had occurred in early spring 1991. As a result, the State recommended shortening the 1991-92 sport hunting season. The extent of late-winter mortality last year in GMU 4 should be reflected in our pellet-group counts in the spring of 1992.

RESULTS

During 1991, 34 watersheds, (or value comparison units - VCUs), were surveyed. For each VCU, transect locations, physiographic information, deer population density, and trend are described. Overall, deer pellet group densities were up region-wide compared to previous years. Fifteen VCUs showed increases, while eight VCUs showed decreases. Eleven VCUs were new. Complete results for each VCU are found in Table 1. Also, for the first time, pellet-group densities in each VCU are reported by individual transect and by elevation. These results can be found in Tables 2 and 3.

NARRATIVES

N. Douglas (VCU 35) - Three new transects were established on the north end of Douglas Island in 1991. Douglas Island is located immediately opposite Juneau and is heavily used by local hunters. In the past, the department has run deer pellet transects on the west side of the island at Pt. Hilda. Access to Pt. Hilda is by boat only, and rough weather the last few years has prevented safe travel there. Thus, we decided to establish three new transects on the north end of the island that are accessible by the Juneau road system. The transects are similar to those at Pt. Hilda, rising to over 1,000 feet in elevation and composed mainly of low to moderate volume hemlock. Deer pellet-group densities were low, less than one pellet group per plot. Generally, crews found more pellet groups the farther away from the road they traveled. Because of the island's importance to Juneau hunters, ADF&G will try to survey N. Douglas and /or Pt. Hilda every year.

Pleasant Island (VCU 185) - Pleasant Island is located in Icy Strait close to the community of Gustavus. The island is the main source of deer to Gustavus residents, and in response to local's concerns about winterkill in 1990, the ADF&G decided to establish transects there in 1991. Greg Streveler, a local naturalist, indicated that the western half of the island was most hunted, and that a good anchorage could be had along the north shore; hence the location of the three transects. Pleasant Island is a low-lying island with extensive muskeg; the highest point on the island is a 600-foot knob. Most of the good timber (volume class 5) is found along the beach fringe and creeks. Deer pellet-group densities were moderate, between one and two pellet groups per plot.

Port Althorp (VCU 189) - This VCU, on the NW corner of Chichagof Island, is an important deer hunting area for Elfin Cove residents. Three transects were established here in 1988. Transect #1 starts at the head of Salt Chuck Bay and ascends a south-facing slope to 1500 feet. A lot of blow down was reported. Transect #2 starts near the old Port Althorp cannery and ascends a north-facing slope to 1200 feet. The beginning of the transect runs through a second-growth stand. The remainder of the transect runs through muskeg and low- to mid-volume old growth. Transect #3 starts at the entrance to Salt Chuck Bay and travels along a ridge through mid-volume old growth. Most deer sign was found along the top of the ridge. In 1991, heavy snows at higher elevations caused two of the three transects to be shortened. Pellet-group densities were moderate.

Finger River (VCU 247) - The Finger River drainage, in lower Hoonah Sound, has consistently exhibited some of the highest deer pellet-group densities in all of Southeast. Three transects were established here in 1983, and they have been surveyed almost every year since then. Transect #1 ascends an 1100-foot knob and then goes inland for a mile. Persistent snow is sometimes a problem on this transect; the starting point can also be difficult to find, and will be re-marked the next time this transect is run. Transect #2 parallels the Finger River, has lots of deer sign, and the walk back along the river is very

scenic. Transect #3 is short and steep to 1500 feet elevation. In 1991, because no maps were available, Transects #1 and #2 were run on incorrect compass headings, resulting in fewer plots than normal. This may have biased 1991 results, which were very high, nearly four pellet groups per plot.

Lisianski (VCU 249) - This VCU on Chichagof Island is an important subsistence area for the residents of nearby Pelican. Six transects were established in 1988; they are mostly short and steep, with limited forest cover above 1,000 feet elevation. In 1991, pellet-group densities were moderate, between one and two pellet groups per plot. Snow was unusually deep and persistent at low elevations this year. Snow caused two transects to be terminated below 300 feet elevation.

Soapstone (VCU 254) - Three transects were established in Soapstone Cove on northern Yakobi Island in 1988. This is a favorite hunting ground for Pelican and Elfin Cove residents. The habitat surveyed in this VCU is mostly low-volume old growth or scrub. In 1991, pellet-group densities were high, over two pellet groups per plot.

Chichagof (VCU 271) - Three new transects were established in Klag Bay on the west coast of Chichagof Island in 1991. Transect #1 crosses a peninsula from east to west and samples muskeg and low-volume old-growth forest. Most deer sign was found on the steeper slopes. Transect #2 runs up to 1500 feet on Doolth Mountain. Little deer sign was found. Timber volume was low until the 1200-foot level was reached where there were several nice stands of spruce. Transect #3 samples a SW facing slope at the head of the bay. The habitat sampled was mostly muskeg, non-commercial forest, and low-volume old growth. Deer pellet-group density in this VCU was moderate, between one and two pellet groups per plot.

Cobol (VCU 275) - This VCU is located in Slocum Arm on the west coast of Chichagof Island; it was first sampled in 1984. The three transects run through low-volume old growth, reaching sub-alpine vegetation at approximately 1,000 feet. This VCU, along with VCU 271, provides information on relative density and trend along Chichagof's outside coast. Pellet-group densities in this VCU were considerably higher in 1991 than 1984.

Nakwasina (VCU 300) - This VCU, north of Sitka, is a popular local hunting area which has been sampled almost every year since 1984. Typically, deer pellet-group densities in Nakwasina have been very high; 1991 was no different, with almost four pellet groups per plot recorded. Unusually heavy snow at higher elevations shortened two of the three transects this year. Heavy browsing on *Vaccinium* (blueberry) was noted on all transects. We suspect the range will not continue to support current high deer numbers. Biologists will continue to monitor this VCU closely for trend.

Kalinin Bay (VCU 305) - Located on northern Kruzof Island, this VCU has been sampled almost every year since 1984. In the past, very heavy browsing pressure was observed on all three transects. Populations declined in 1989, probably in response to over-utilized winter range. Populations declined again in 1991 (range is still in poor condition) with deer persisting at moderate levels.

Knight Island (VCU 361) - This VCU is a wilderness area in Yakutat Bay. Deer have frequently been seen on the island's beaches in the past, and the island is considered to be one of the best places to find deer near Yakutat. In 1991 three new transects were established on Knight Island, but because of inclement weather, only one transect was completed - #2. This transect traveled through an open hemlock-blueberry forest. Deer pellet-group density was low, less than one pellet group per plot.

Humpback (VCU 363) - This VCU is located on the mainland several miles east of Yakutat. Two new transects were established here in 1991. The habitat is mostly mid-volume spruce and deer sign was scarce; no pellet groups at all were found on one transect even though forbs were plentiful.

Yakutat Islands (VCU 368) - This VCU incorporates many of the islands found in Yakutat Bay: Krutoi, Kriwoi, Khantaak, and Dolgoi. One or two transects were established on each island in 1991. Habitat is generally mid-volume hemlock with a blueberry understory. Krutoi was notable for the amount of blowdown it contained. While the islands are not ideal deer habitat, the maritime influence, lesser snow, and lack of wolves probably explains their persistence on these islands. Deer pellet-group density was quite low on Khantaak and Dolgoi islands, and slightly higher on Krutoi and Kriwoi islands.

Ankau (VCU 369) - This VCU is located on the mainland west of Yakutat near Ocean Cape. A transect was located here because several deer had been seen in the area by locals. The habitat observed was very wet with low- to mid-volume spruce. There is an abundant understory of *Vaccinium* present but we saw little evidence of browsing. Deer pellet-group density was extremely low.

Conclusion Island (VCU 417) - Located in Keku Strait 1.5 miles east of Kuiu Island, this VCU has historically been an important hunting area for residents of nearby Port Protection and Point Baker. The island is uniformly forested with mid- to high-volume timber, and it supports an abundant understory of blueberry. In 1987, the first year Conclusion Island was sampled, pellet-group densities indicated high deer numbers on the island. In 1989, the next year the Department surveyed the island, deer pellet-group densities were much reduced. In 1991, they were lower still. The State Game Board has closed Conclusion Island to hunting in order to allow deer numbers to recover.

Big Level Island (VCU 434a) - Seven transects were established on Big Level Island in Sumner Strait in 1981. The island has been extensively logged, and the Forest Service has initiated a pre-commercial thinning program. There is an abundance of slash on the ground making walking difficult. A six-person Forest Service crew sampled the island in 1991, and noted an increase in pellet-group densities relative to prior years. This may be due to a favorable understory response to thinning, or to temporary immigration of several deer from nearby Kupreanof Island where wolves are common. It may also be a result of the Level Islands being closed to hunting in the late 1980s. The ADF&G and Forest Service will continue to sample Big level Island every three to five years to look at successional changes in the vegetation and its possible influence on deer populations.

Little Level Island (VCU 434b) - Five transects were established on Little Level Island in Sumner Strait in 1981. All five were again surveyed in 1983, 1986, 1989, and 1991. The deer pellet-group density trend had been downward until last year when the count increased. The ADF&G and the Forest Service plan to continue surveying Little Level Island every three to five years to continue monitoring trend.

Woewodski (VCU 448) - Three transects were located on southwestern Mitkof Island in 1984. They are all well-marked and easily reached by skiff from Petersburg. Starting in 1988, a fourth transect on neighboring Woewodski Island was added. These four transects were run by Fish and Game crews in 1991 and the deer-pellet group density was moderate, between one and two pellet groups per plot.

Woewodski Island (448a) - In 1991 six new transects were established on Woewodski Island to measure deer use in anticipation of a future timber sale. Five of these transects were completed by Forest Service crews in late April. Generally the transects run through some of the best timber available on the island and the deer pellet-group densities recorded were moderate to high. By recording the areas most important to deer during the winter, we hope the Forest Service will arrange timber sale units so that important deer habitat can be protected.

Woronkofski Island (VCU 461) - This island VCU, located near Wrangell, was first sampled in 1985. The three south-facing transects on the island travel through mid- to high-volume old-growth forest. Deer pellet-group densities have been high in the past, but in 1991 were down; this may be due to more severe winter weather conditions, high hunting pressure, and/or an increase in the island's wolf population.

Onslow (VCU 473) - This VCU, on southern Etolin Island, has been sampled since 1984. One transect is actually on Onslow Island itself, the two others are on Etolin. Deer pellet-group densities have always been in the low range, and 1991 was no exception. Fifty elk were introduced to Etolin Island in 1987 and the herd has grown since then. Because Etolin Island is unique in Southeast Alaska for its combination of elk and deer,

this VCU will continue to be sampled in the future to determine how these two species are interacting.

Frosty Bay (VCU 524) - This VCU, located in Ernest Sound, was picked as a new site in 1991 because of an imminent timber sale in the drainage. The three transects chosen begin at Frosty Bay itself and access low- to mid-volume old-growth forest. Deer pellet-group density was low on all three transects; most deer sign was found in cedar stands. Transect #3 had to be curtailed because Frosty Creek could not be crossed.

Warm Chuck (VCU 561) - Located on Heceta Island off the west coast of Prince of Wales Island, this VCU is a popular hunting destination. Of all the "Outside Islands," it would appear Heceta has the healthiest deer population based on trend and high 1991 deer pellet counts. Much of Heceta is now being logged, and with the gradual advance of second growth, we expect that deer numbers will decline over time.

Baker Island (VCU 569) - Three new transects were established on Baker Island, off the west coast of Prince of Wales, in 1991. Transect #1 crosses the island from Port San Antonio to Veta Bay. The east side of the ridge is low-volume cedar and the west side of the ridge is high-volume spruce. Deer use was minimal in both habitat types, with most sign seen along the ridgetop. There was abundant *Cornus* and *Vaccinium* along the route but little evidence of browsing. Transects #2 and #3 originate from the same spot at the head of Port San Antonio and ascend to two different summits. Habitat type on Transect #2 is hemlock on the beach, then mixed conifer-salal and hemlock-yellow cedar as one ascends the slope. Along the way a patch of 100-year-old second growth was encountered. The few pellet groups found on the transect were concentrated in this stand. Transect #3 also has hemlock on the beach, then goes into a brushy yellow cedar-lodgepole pine mix. Deer sign was scarce. Overall, pellet-group density on the island was surprisingly low; nearby Suemez and Heceta islands have much higher populations.

12 Mile (VCU 621) - This VCU, located near Kasaan Bay on Prince of Wales Island, has been sampled by the Forest Service every year since 1985. Pellet-group densities have been low in the past, but the trend lately has been upward, and in 1991 deer pellet-group densities were moderate, between one and two pellet groups per plot.

Port Refugio (VCU 635) - This VCU is located on Suemez Island off the west coast of Prince of Wales Island. Pellet groups were first counted here in 1985 by the Forest Service. Initially, deer populations were high, but pellet-group density dropped off in 1987, and has remained low since then. Locals attribute the decline in deer to increased wolf numbers. 1991 pellet-group data showed Suemez populations are still well below their 1985-86 peak.

Helm Bay (VCU 716) - Helm Bay on the Cleveland Peninsula north of Ketchikan was intensively sampled by Fish and Game crews in 1981. Three permanent transects were

established in 1984. Transect #1 travels over lowlands to Smugglers Cove. Habitat type includes low and medium volume cedar stands. Transects #2 and #3 go up east-facing slopes to 1500 feet. The habitat traversed is mostly low- to mid-volume hemlock and spruce. In the early 1980s deer pellet-group densities were low in Helm Bay, but since 1988 have been moderate. 1991 results were also moderate, between one and two pellet groups per plot.

Margaret (VCU 738) - This VCU, on northern Revilla Island, was first sampled by the Forest Service in 1985. Pellet-group densities were low. The VCU has been sampled several times since then and pellet-group densities have remained low. 1991 data was no different. The three transects are characterized as brushy and containing much second growth.

George Inlet (VCU 748) - This VCU on Revilla Island is accessible by skiff from Ketchikan. It has been sampled since 1981. Deer pellet-group densities were initially low, but the trend in recent years has been upwards, and 1991 results showed moderate deer pellet-group densities. Because of limited manpower, only Transects #1 and #2 were completed in 1991.

Lucky (VCU 760) - This southern Revilla Island VCU was first sampled by the USFS in 1985 and has been sampled almost every year since then. Deer pellet-group densities have always been moderate, and remained so in 1991. The transects run through muskeg and mixed-conifer forest with cedar predominating.

Alava Bay (VCU 769) - This VCU, located on the southeastern tip of Revilla Island, was sampled by the USFS in both 1985 and 1986. Deer pellet-group densities were low. In 1991, pellet-group densities were moderate, between one and two pellet groups per plot. Only two transects were run this year because of limited manpower.

Wasp Cove (VCU 772) - Wasp is another southeastern Revilla Island VCU sampled by the USFS in both 1985 and 1986. Extremely low to low pellet-group densities were found. In 1991 pellet-group densities were again very low.

Winstanley Island (VCU 821) - Three new transects were established by the Forest Service on Winstanley Island in 1991. The transects were mostly short and run through a cedar dominated forest. Deer pellet-group density was low, less than one pellet group per plot. Caution should be used in interpreting this particular data. Only 49 plots were run, far short of the desired 300 plots per VCU.

Gravina (VCU 999) - Gravina Island, across a narrow channel from the City of Ketchikan, was first sampled in 1981 and has been sampled almost every year since then. Pellet-group counts in 1991 declined to the lowest level since 1984. Locals attribute the

decline to increasing wolf numbers on the island. Because of limited manpower, only transects #1 and #2 were run in 1991.

LITERATURE CITED

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Table 1. Pellet-group count statistics from southeast Alaska, 1981-91.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
27	Auke Bay	15,245	45%	1987	381	0.99	0.87-1.12
35	North Douglas	4,430	49%	**1991**	**300**	**0.80**	**0.65-0.96**
36	Inner Point	3,965	44%	1985	256	1.30	1.10-1.51
				86	235	1.97	1.68-2.25
				87	262	1.76	1.53-2.00
				88	200	1.21	1.02-1.39
				89	258	1.31	1.08-1.53
65	Sumdum Glacier	40,906	15%	1987	262	1.76	1.53-2.00
82	Negro Creek	12,212	31%	1989	312	0.21	0.13-0.29
94	Sullivan Island	3,985	78%	1990	250	1.39	1.17-1.62
124	Shelter Island (All Transects)	6,162	43%	1984	713	1.46	1.33-1.60
				85	774	1.82	1.67-1.97
				86	727	2.20	2.02-2.37
124	Shelter Island (Trans. 4-8, 18)			1984	300	1.52	1.34-1.70
				85	296	2.52	2.24-2.81
				86	292	3.24	2.91-3.57
				87	288	2.91	2.57-3.24
				88	130	3.16	2.62-3.70
				89	300	1.43	1.23-1.62
				90	300	1.60	1.37-1.82
125	Barlow Cove	13,712	24%	1982	2,567	1.07	1.01-1.12
				84	347	1.69	1.46-1.92
				85	347	1.55	1.35-1.76
				90	270	1.42	1.18-1.65
127	Calm Station	4,941	66%	1982	1,054	1.65	1.53-1.77
128	Hawk Inlet	14,318	57%	1982	1,605	1.21	0.99-1.42
				84	339	1.42	1.22-1.63
				85	270	1.69	1.43-1.95
				86	286	1.92	1.64-2.19
				87	278	2.54	2.19-2.89
				89	364	1.82	1.56-2.08
				90	250	2.24	1.94-2.53

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
140	Dorn Island	9,485	81%	1984	230	1.27	1.02-1.53
148	Lake Kathleen	14,693	57%	1987	207	2.13	1.76-2.49
150	Lake Florence	21,342	52%	1988	294	1.48	1.27-1.69
162	Thayer Lake	25,342	79%	1987	313	2.81	2.49-3.12
				89	283	2.04	1.75-2.32
171	Hood Bay	44,355	79%	1987	358	2.31	1.99-2.63
				89	366	1.77	1.54-2.00
				90	375	1.85	1.61-2.09
182	Pybus Bay	41,501	62%	1981	390	1.34	1.16-1.52
				84	300	1.02	0.86-1.18
				85	269	1.86	1.60-2.12
				86	235	2.00	1.70-2.29
				87	242	2.03	1.69-2.37
				89	199	2.00	1.63-2.36
				90	221	1.72	1.44-2.01
185	Pleasant Island	8,738	16%	**1991**	**311**	**1.38**	**1.18-1.57**
189	Port Althorp	8,040	27%	1988	195	1.80	1.47-2.13
				91	**223**	**1.92**	**1.55-2.29**
190	Idaho Inlet	53,183	22%	1988	258	1.34	1.09-1.60
202	Port Frederick	16,619	52%	1988	242	1.87	1.62-2.13
208	First No. 2	6,613	32%	1983	1,155	1.12	1.01-1.22
209	Suntaheen Cr.	13,198	49%	1988	272	1.22	1.00-1.44
211	Point Augusta	4,688	63%	1983	757	1.78	1.62-2.01
218	Pavlof River	18,866	50%	1988	325	1.78	1.50-2.06
221	Whip Station	4,708	53%	1981	193	0.86	0.64-1.08
222	Sand Station	12,231	50%	1981	253	0.60	0.48-0.73
223	Upper Tenakee	3,833	54%	1988	253	1.47	1.24-1.70
231	Saltery Bay	18,478	31%	1988	256	2.02	1.69-2.35

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
234	Inbetween	6,002	62%	1981	35	0.49	0.08-0.89
235	Kadashan	33,641	53%	1981	96	0.54	0.32-0.76
				88	221	2.67	2.18-3.16
236	Corner Bay	10,930	66%	1981	60	0.35	0.17-0.53
246	Broad Island	17,145	38%	1981	209	1.41	1.18-1.63
247	Finger Mountain.	15,918	38%	1983	2,145	1.17	1.11-1.24
				84	302	1.83	1.57-2.09
				85	279	3.23	2.79-3.67
				86	277	2.88	2.57-3.19
				87	236	3.11	2.71-3.52
				89	305	2.99	2.57-3.40
				90	225	3.36	2.99-3.74
				91	**150**	**3.93**	**3.36-4.51**
249	Lisianski	19,677	24%	1988	255	0.97	0.79-1.14
				91	**170**	**1.53**	**1.22-1.84**
254	Soapstone	17,695	29%	1988	274	1.92	1.67-2.17
				91	**270**	**2.05**	**1.77-2.33**
271	Chichagof	20,680	10%	**1991**	**301**	**1.39**	**1.19-1.58**
275	Cobol	14,618	49%	1984	224	1.15	0.92-1.37
				91	**185**	**2.96**	**2.37-3.54**
279	Rapids Point	7,637	65%	1983	2,734	0.77	0.73-0.81
281	Ushk Bay	20,770	38%	1981	94	0.63	0.41-0.85
288	Range Creek	6,929	33%	1983	1,788	0.51	0.46-0.55
				84	303	0.71	0.61-0.92
				85	224	1.32	1.02-1.62
295	Lake Eva	12,362	65%	1987	172	1.81	1.46-2.15
296	Portage Arm	16,101	59%	1981	213	0.53	0.39-0.68
				90	214	3.09	2.70-3.48
298	Middle Arm Kelp Bay	28,424	21%	1990	306	2.68	2.35-3.01

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
300	Nakwasina (All Transects)	19,575	48%	1984	196	2.51	2.14-2.88
				85	1046	3.92	3.67-4.17
				86	715	3.50	3.26-3.76
300	Nakwasina (Trans. 2,3,8)			1984	138	2.51	2.10-2.93
				85	218	3.65	3.13-4.17
				86	205	3.38	2.91-3.84
				87	195	2.31	1.90-2.71
				89	244	2.32	2.00-2.65
				90	255	2.98	2.56-3.40
				91	**175**	**3.98**	**3.39-4.57**
305	Sealion Cove	9,293	69%	1984	320	1.36	1.15-1.58
				85	292	2.57	2.23-2.91
				86	235	2.87	2.44-3.29
				87	226	3.31	2.82-3.80
				89	303	1.75	1.50-2.00
				90	227	2.03	1.71-2.35
				91	**219**	**1.63**	**1.36-1.91**
315	Basin Kelp Bay	8,460	60%	1990	151	1.85	1.41-2.28
321	Redoubt Bay	9,045	58%	1989	304	2.17	1.88-2.47
348	West Crawfish	57,434	16%	1989	360	1.35	1.36-1.57
339	Cape Ommaney	13,725	32%	1988	172	1.74	1.43-2.05
361	Knight Island	10,419	40%	**1991**	**100**	**0.81**	**0.61-1.01**
363	Humpback	7,721	74%	**1991**	**118**	**0.01**	**0.00-0.03**
368	Yakutat Islands	1,021	99%	**1991**	**415**	**0.32**	**0.24-0.39**
369	Ankau	---	---	**1991**	**116**	**0.03**	**0.00-0.05**
400	Security Bay	28,040	79%	1984	360	0.02	0.01-0.04
				89	304	0.25	0.16-0.34
403	Pillar Bay	28,227	65%	1988	337	0.16	0.10-0.22
408	Malmesbury	18,151	68%	1990	206	0.11	0.05-0.18

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
417	Conclusion Island	12,561	99%	1987	207	2.66	2.32-3.01
				89	200	0.95	0.72-1.18
				91	**200**	**0.71**	**0.53-0.88**
431	Point Barrie	22,187	27%	1988	357	0.23	0.17-0.29
434a	Big Level Island	727	61%	1981	399	1.54	1.45-1.63
				83	336	1.56	
				86	382	1.66	1.41-1.90
				89	227	1.07	
				91	**456**	**2.16**	**1.90-2.41**
434b	Little Level Island	263	92%	1981	114	2.48	2.02-2.94
				83	136	2.34	
				86	122	1.39	1.07-1.70
				89	137	1.52	
				91	**132**	**3.59**	**3.07-4.11**
435	Castle River	32,724	36%	1984	312	0.19	0.12-0.26
				87	305	0.51	0.37-0.65
				89	312	0.40	0.25-0.56
437	E. Duncan	23,744	55%	1990	227	1.12	0.92-1.32
448	Woewodski	20,931	53%	1984	295	0.88	0.69-1.08
				85	209	1.00	0.82-1.19
				87	195	1.65	1.85-2.61
				88	433	1.33	1.16-1.51
				89	417	1.35	1.24-1.73
				90	355	1.46	1.28-1.64
				91	**316**	**1.80**	**1.52-2.07**
448a	Woewodski Island	20,931	53%	**1991**	**461**	**1.86**	**1.66-2.05**
449	Frederick	6,835	70%	1981	945	0.08	0.06-0.11
				90	180	0.55	0.36-0.74
452	Blind Slough	30,655	55%	1990	324	1.35	1.15-1.56
454	Dry	11,033	74%	1981	91	0.92	0.56-1.28

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
455	Vank	8,437	99%	1981			
	a) Sokolof				900	1.73	1.61-1.85
	b) Rynda				281	0.25	0.18-0.32
	c) Greys				284	0.25	0.18-0.32
461	Woronkofski (All Transects)	14,500	63%	1985	646	1.63	1.45-1.81
461	Woronkofski			1985	218	2.01	1.62-2.39
	(Trans. 10,11,12)			87	201	2.23	1.85-2.61
				89	223	2.52	2.18-2.85
				91	**203**	**1.59**	**1.32-1.85**
473	Onslow	28,947	55%	1984	321	0.37	0.28-0.46
				85	334	0.59	0.48-0.70
				86	347	0.72	0.59-0.84
				87	336	0.42	0.31-0.55
				88	329	0.44	0.32-0.55
				91	**322**	**0.66**	**0.51-0.80**
524	Frosty Bay	17,959	41%	**1991**	**266**	**0.70**	**0.55-0.86**
528	Mt. Calder	9,232	83%	1988	252	2.14	1.78-2.49
532	Red Bay	15,145	66%	1987	177	0.32	0.18-0.47
539	Exchange Cove	10,406	74%	1988	266	1.39	1.15-1.64
554	Sarkar	32,183	60%	1988	298	1.28	1.06-1.50
549	Sarheen	11,875	52%	1989	310	1.73	1.44-2.01
561	Warm Chuck	12,348	85%	1984	326	1.02	1.02-1.38
				85	295	1.60	1.36-1.84
				89	302	2.21	1.91-2.50
				91	**291**	**2.05**	**1.73-2.37**
564	Coronation	19,107	69%	1983	696	1.20	1.04-1.36
				85	228	2.34	
				88	408	1.41	1.17-1.66
				89	293	1.63	1.28-1.98
569	Baker	31,802	68%	**1991**	**256**	**0.08**	**0.04-0.12**

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
578	Snakey Lakes	6,431	84%	1986	279	0.62	0.51-0.73
				88	300	1.05	0.84-1.26
				89	200	1.56	1.26-1.86
581	Luck Lake	19,818	67%	1986	178	1.74	1.41-2.07
				88	300	2.11	1.80-2.41
587	Tuxekan	12,129	77%	1988	300	1.06	0.84-1.28
621	12 Mile	23,344	59%	1985	196	0.31	0.19-0.43
				86	300	0.64	0.48-0.81
				87	370	0.65	0.49-0.81
				88	302	0.62	0.46-0.77
				89	235	0.78	0.59-0.98
				90	176	1.18	0.84-1.52
				91	**231**	**1.84**	**1.48-2.21**
635	Port Refugio	9,118	50%	1985	317	2.69	2.27-3.12
				86	324	2.52	2.09-2.96
				87	369	1.76	1.46-2.07
				88	270	1.15	0.90-1.40
				89	507	0.80	0.68-0.93
				90	232	1.25	1.03-1.48
				91	**367**	**1.13**	**0.95-1.32**
679	Kitkun Bay	15,359	75%	1988	240	0.31	0.20-0.42
				89	273	0.89	0.71-1.07
685	Nutkwa	17,079	73%	1988	234	0.09	0.02-0.16
716	Helm Bay	16,127	57%	1981	704	0.16	0.12-0.19
				84	302	0.54	0.44-0.65
				85	181	0.85	0.65-1.05
				88	247	1.66	1.38-1.95
				91	**240**	**1.63**	**1.35-1.92**
738	Margaret	19,286	67%	1985	515	0.57	0.47-0.66
				86	251	0.84	0.69-1.00
				88	110	1.31	0.96-1.67
				89	129	0.62	0.44-0.80
				90	274	0.56	0.44-0.68
				91	**272**	**0.76**	**0.58-0.94**

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
748	George Inlet	19,448	28%	1981	110	0.21	0.09-0.33
				84	344	0.27	0.19-0.35
				85	313	0.52	0.39-0.65
				89	169	1.41	1.08-1.75
				90	240	1.03	0.82-1.25
				91	**168**	**1.49**	**1.15-1.84**
752	Whitman Lake	6,015	38%	1981	45	0.18	0.02-0.33
				87	187	0.16	0.09-0.23
				90	193	0.46	0.32-0.59
758	Carroll Pt.	11,629	34%	1985	118	0.66	0.46-0.86
				86	118	0.75	0.56-0.95
				88	85	1.15	0.81-1.48
759	Moth Bay	7,652	23%	1985	140	0.59	0.42-0.74
				86	156	0.98	0.79-1.17
				88	78	0.71	0.46-0.97
760	Lucky Cove	12,377	43%	1985	335	1.16	1.00-1.33
				86	258	1.16	0.95-1.32
				88	65	1.01	0.68-1.34
				90	263	1.10	0.92-1.27
				91	**271**	**1.39**	**1.07-1.70**
764	Blank Inlet	3,640	19%	1981	108	1.24	0.89-1.59
765	Dall Head	4,803	63%	1981	69	0.52	0.31-0.74
769	Alava Bay	13,563	60%	1985	311	0.52	0.39-0.65
				86	326	0.85	0.68-1.01
				91	**143**	**1.64**	**1.22-2.05**
772	Wasp Cove	4,882	90%	1985	271	0.41	0.31-0.51
				86	300	0.50	0.38-0.62
				89	145	0.58	0.39-0.77
				91	**207**	**0.13**	**0.07-0.18**
821	Winstanley Island	14,104	45%	**1991**	**49**	**0.27**	**0.11-0.42**
999	Gravina (All Transects)			1981	226	1.06	0.89-1.22
				84	1,087	0.86	0.78-0.94
				85	1,172	1.23	1.13-1.32
				86	1,267	1.40	1.30-1.50

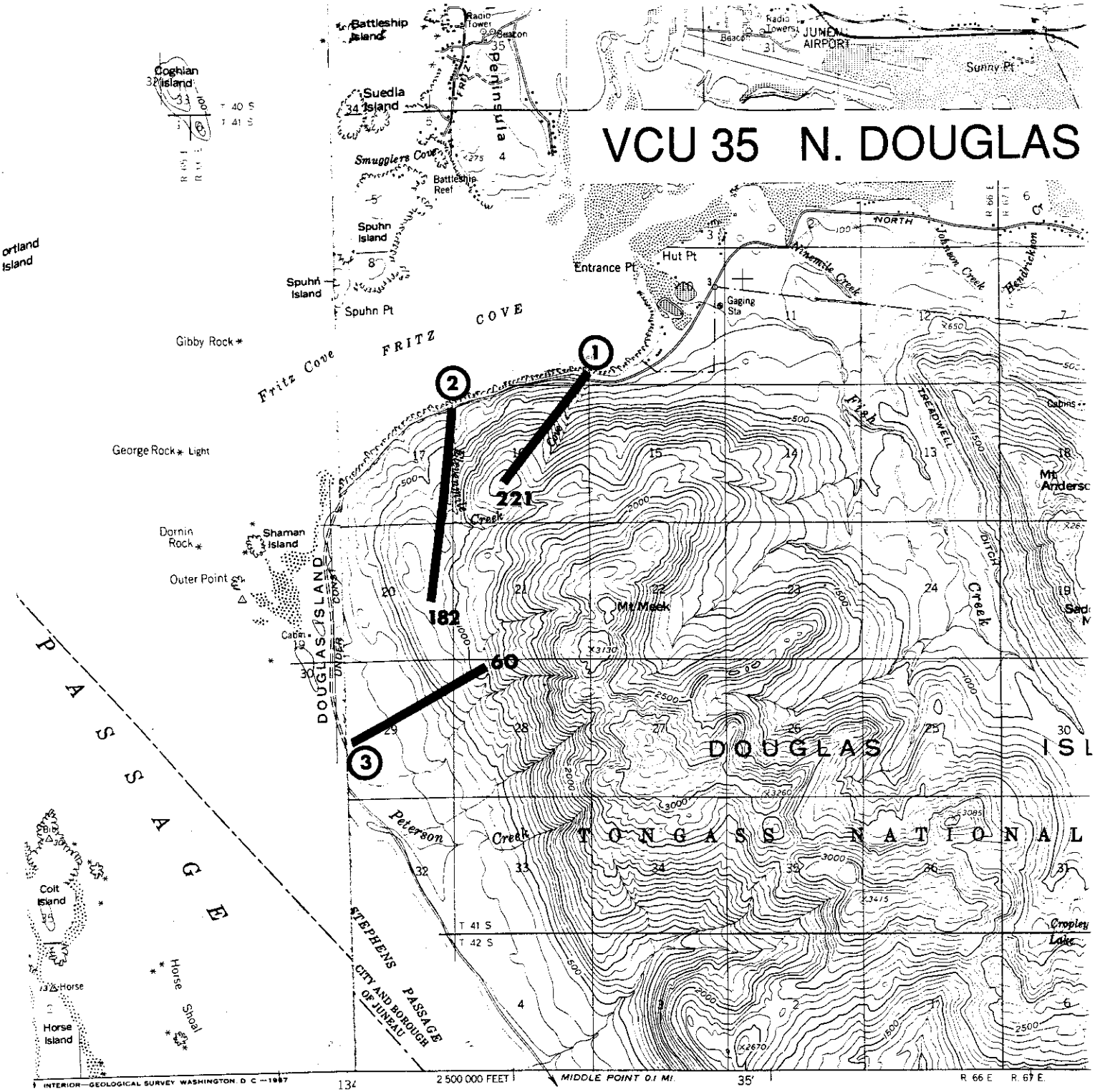
VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
999	Gravina (Trans. 1,2,3)			1984	376	0.88	0.73-1.03
				85	224	1.44	1.20-1.67
				86	346	1.62	1.43-1.81
				87	334	1.63	1.41-1.84
				88	278	2.06	1.78-2.35
				89	182	1.13	0.86-1.41
				90	279	1.40	1.12-1.68
				91	**154**	**1.12**	**0.80-1.43**

APPENDIX I

New VCU's Sampled in 1991[a]

[a] Transect location forms for these and all other VCU's are located in the ADF&G Southeast Regional Office, Douglas.

VCU 35 N. DOUGLAS



ROAD CLASSIFICATION

Medium-duty ——— Light-duty ——— Unimproved dirt - - - - - -

...ped, edited, and published by the Geological Survey

...rol by USGS and USC&GS

...graphy by photogrammetric methods from aerial photographs ... 1948. Culture revised 1962. Map field checked 1962

...ted hydrographic data compiled from USC&GS ... 8235 (1962). This information is not intended ...vigational purposes

...rsal Transverse Mercator projection, 1927 North American datum ...0-foot grid based on Alaska coordinate system, zone 1 ...-meter Universal Transverse Mercator grid ticks, ...8, shown in blue

...lines represent unsurveyed and unmarked locations ...termined by the State of Alaska, Division of Lands ...CR-12 Copper River Meridian

...int indicates areas in which only landmark buildings are shown

...ons shown in purple compiled from aerial photographs taken 1974. ...nformation not field checked

... tint indicates extension of urban areas

APPROXIMATE MEAN DECLINATION, 1962

TRUE NORTH

MAGNETIC NORTH

29½°

CO... NATION... DEPTH CURVES ... SHORELINE SHOWN R... THE MEA...

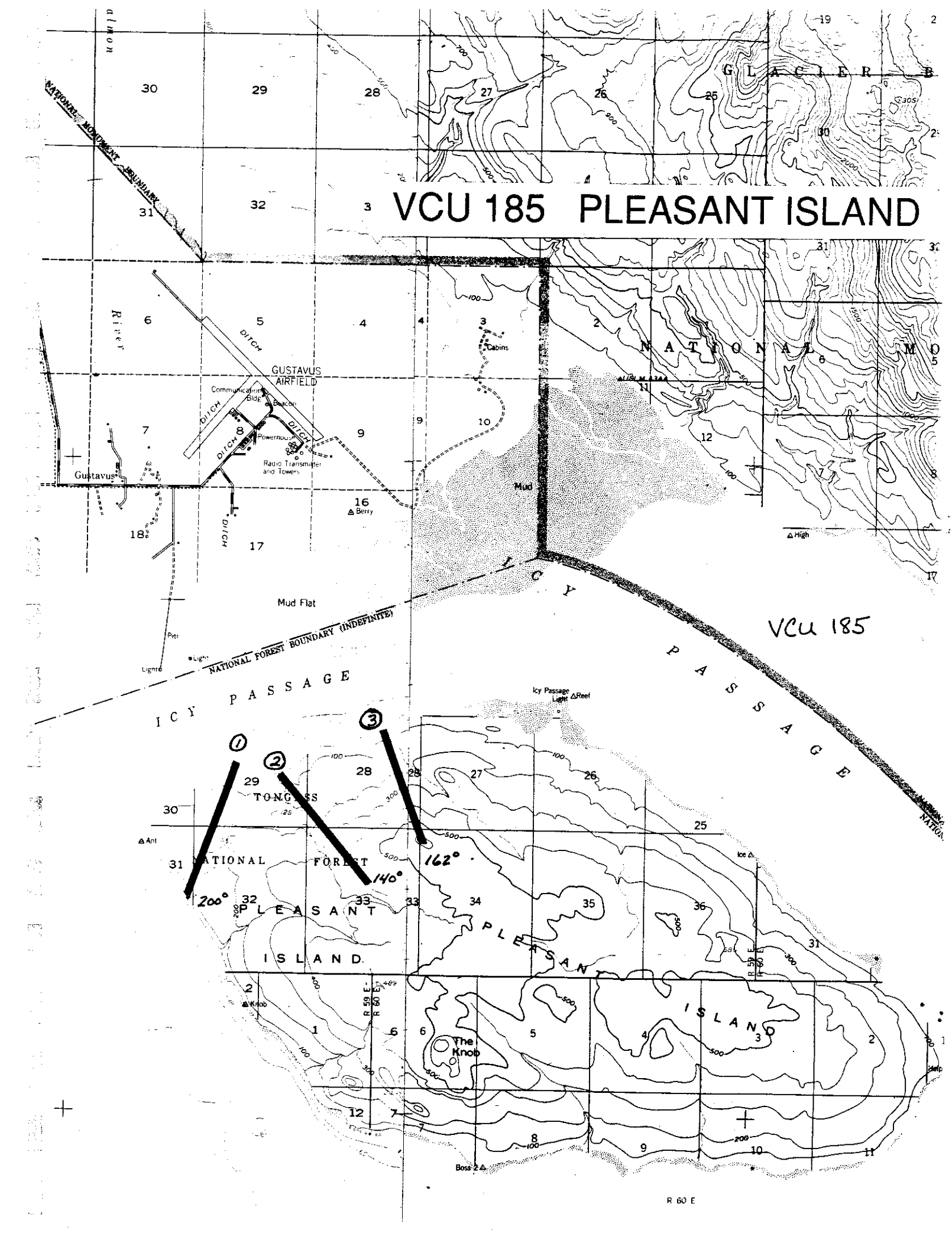
JUNEAU (B-3), ALASKA

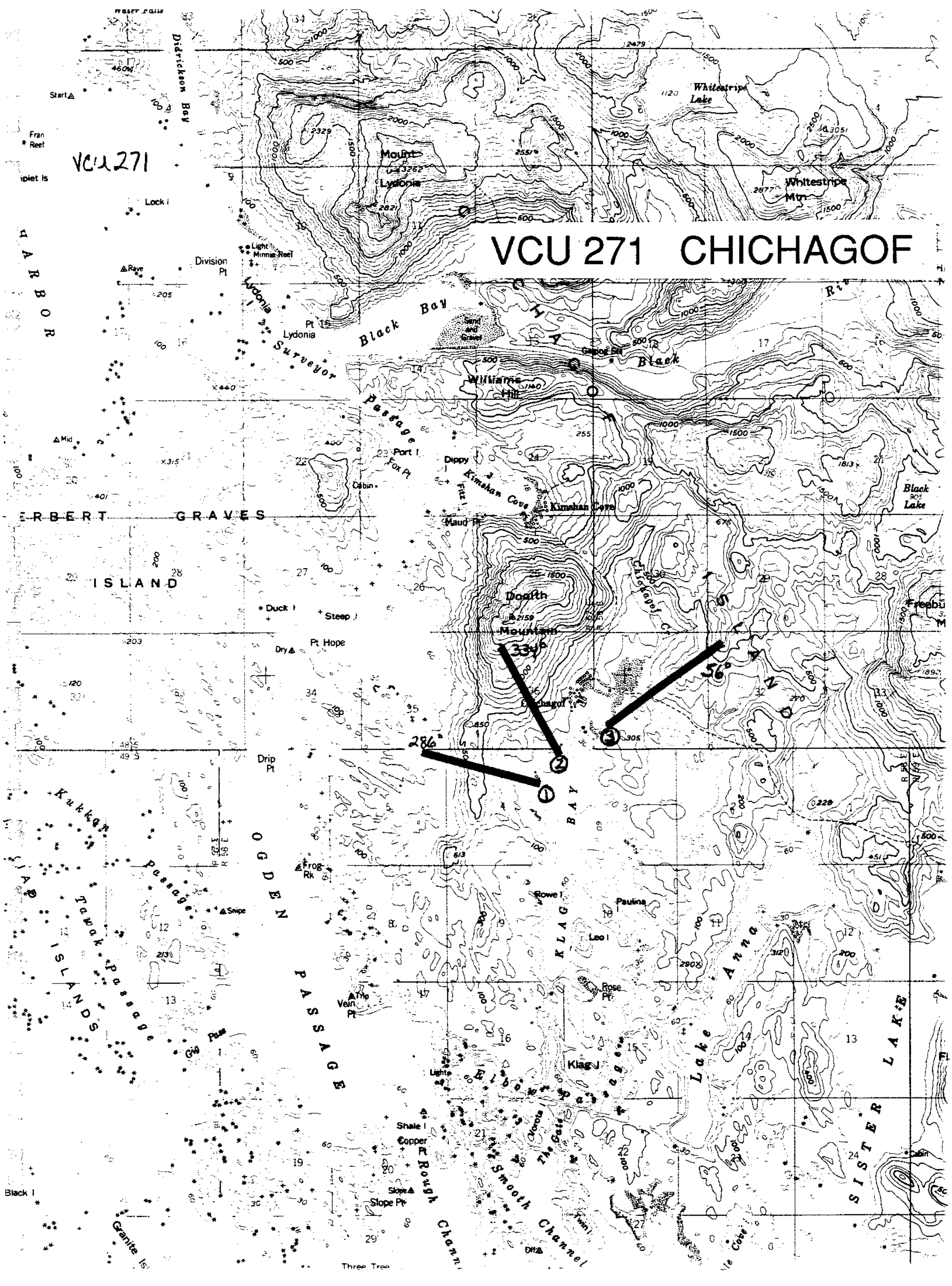
N5815-W13440/15X20

1962

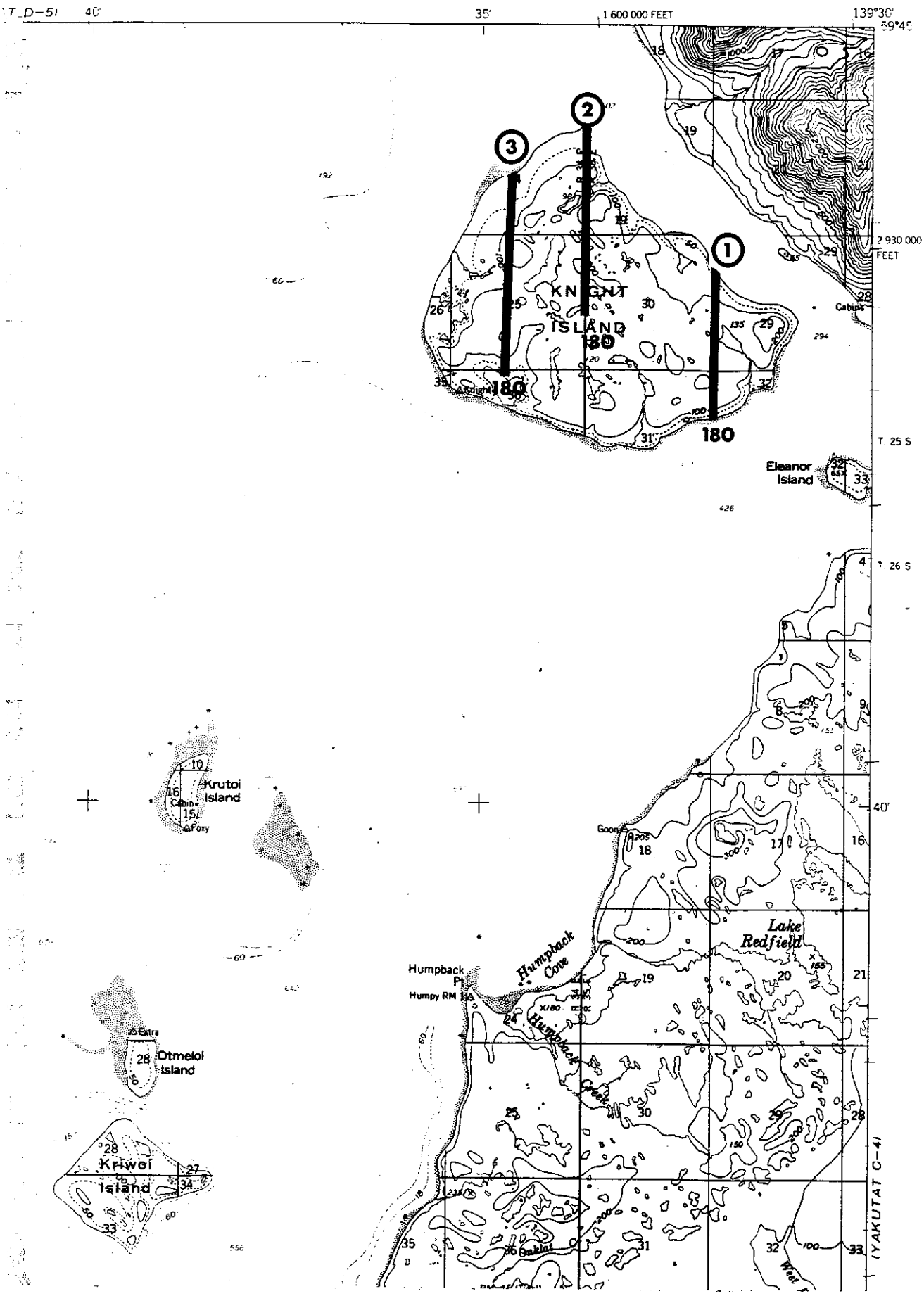
MINOR REVISIONS 1966

FOR SALE ... FAIRBANKS, ALASKA 99701. DE... A FOLDER DESCRIBING TOPOGR...

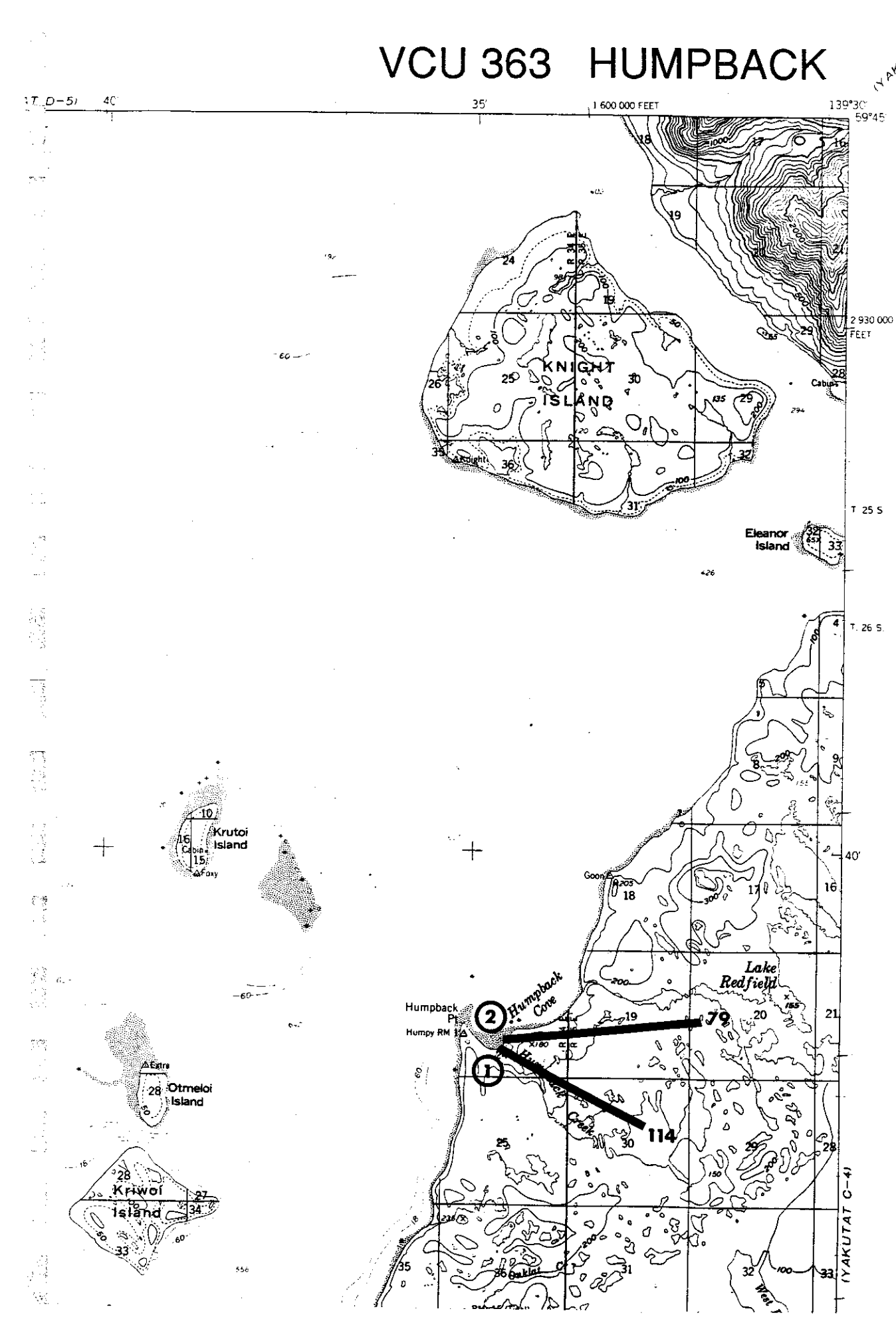

VCU 185 PLEASANT ISLAND
GLACIER
NATIONAL MONUMENT BOUNDARY
GUSTAVUS AIRFIELD
Communications Bldg
Beacon
Powerhouse
Radio Transmitter and Towers
Cabins
Gustavus
Mud
Mud Flat
Berry
High
Pier
Light
NATIONAL FOREST BOUNDARY (INDEFINITE)
ICY PASSAGE
Icy Passage Light
Reef
TONGASS
NATIONAL FOREST
PLEASANT ISLAND
Ant
Knob
The Knob
Ice
Boss
R 59 E
R 60 E
VCU 185
1
2
3
200°
140°
162°


VCU 271 CHICHAGOF
VCU 271
Mount Lydonia
Whitestripe Lake
Whitestripe Mtn
Didrickson Bay
Division Pt
Lydonia Pt
Black Bay
Surveyor Passage
Williams Hill
Port I
Fox Pt
Dippy I
Kimshan Cove
Maud Pt
Black Lake
Herbert Graves Island
Duck I
Steep I
Pt Hope
Doolth Mountain
Chichagof
334°
286°
56°
1
2
3
Drip Pt
Klag Bay
Kukkan Passage
Ogden Passage
Frog Rk
Tawak Passage
Rowe I
Paulina
Leo I
Rose Pt
Vein Pt
Lake Anna
Sister Lake
Klag I
Elbow Passage
Shale I
Copper Pt
Slope Pt
Rough Channel
Smooth Channel
The Gate
Black I
Granite Is
Three Tree

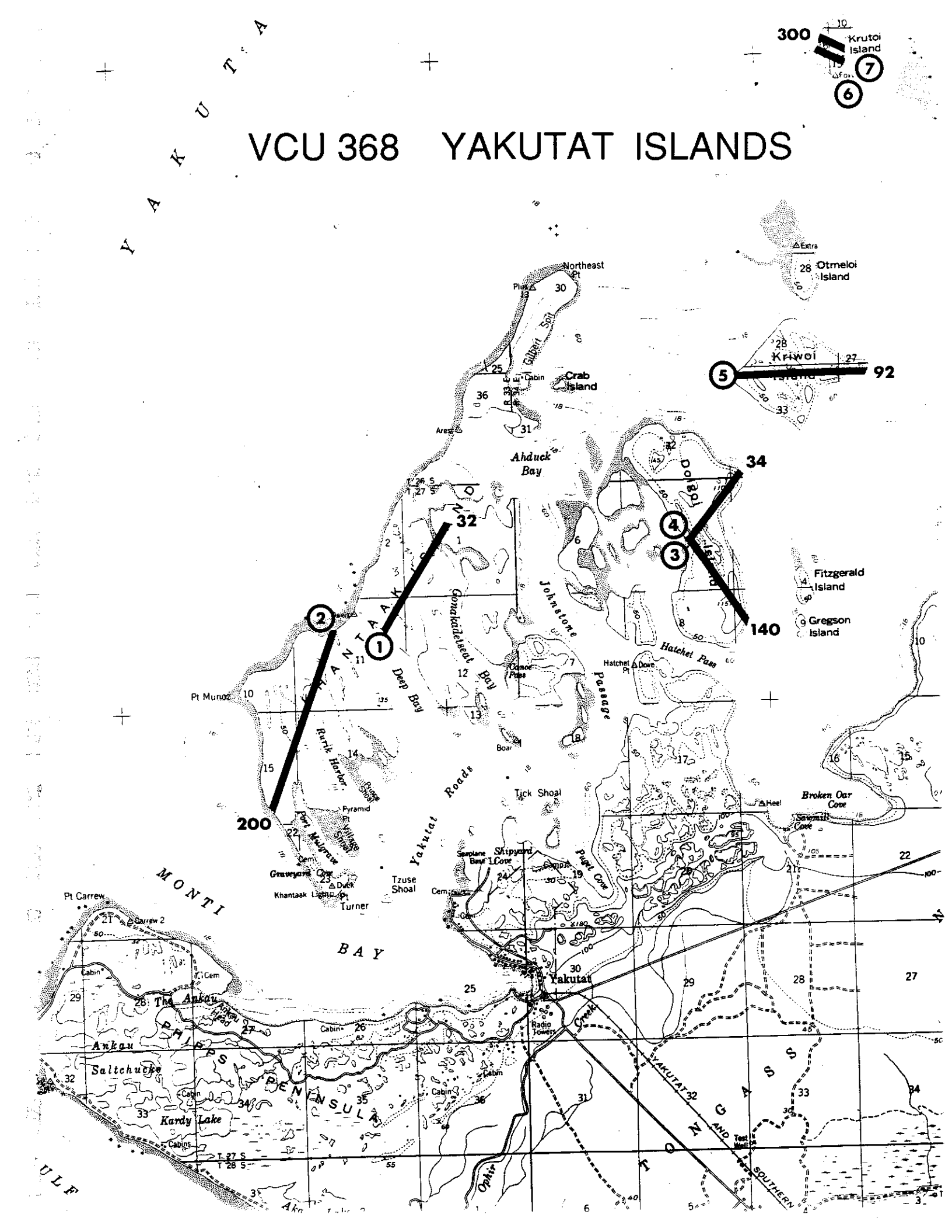
VCU 361 KNIGHT ISLAND



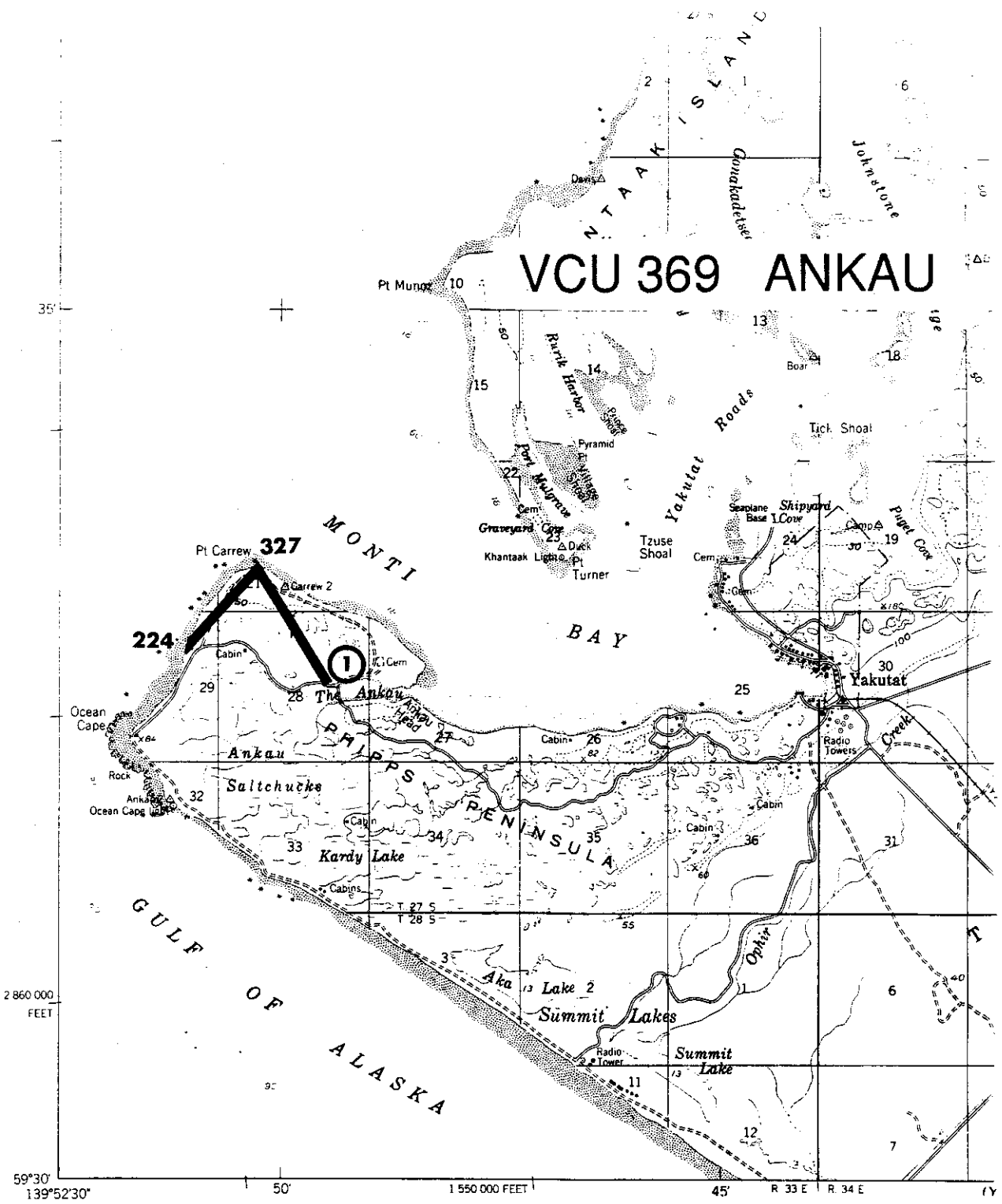
VCU 363 HUMPBACK



VCU 368 YAKUTAT ISLANDS



VCU 369 ANKAU



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1948, field annotated 1959. Map not field checked

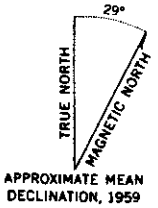
Selected hydrographic data compiled from USC&GS Charts 8455 (1952) and 8402 (1960) and from aerial photographs
This information is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American datum
10,000-foot grid based on Alaska coordinate system, zone 1
1000-meter Universal Transverse Mercator grid ticks, zone 7, shown in blue

Land lines represent unsurveyed and unmarked locations predetermined by the Bureau of Land Management
Folio CR-8, Copper River Meridian

Swamps, as portrayed, indicate only the wetter areas, usually of low relief, as interpreted from aerial photographs

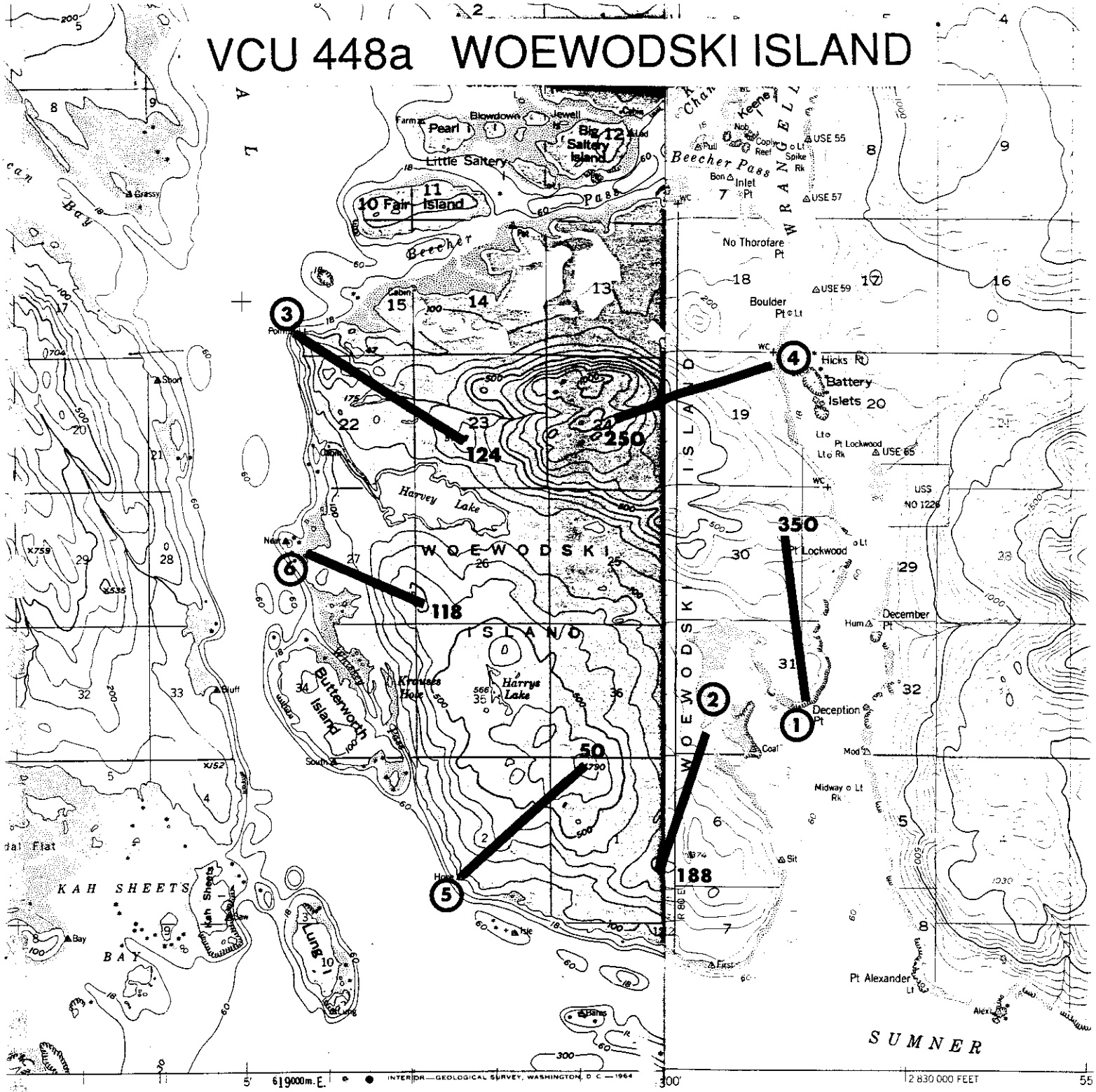
Lake elevations are unchecked



APPROXIMATE MEAN DECLINATION, 1959

CONTO
DOTTED LINE
DA
DEPTH CURVES AND SOUNDI
SHORELINE SHOWN REPRE
THE MEAN RA

VCU 448a WOEWODSKI ISLAND



4 MILES

18000 21000 FEET

5 KILOMETERS

ALASKA

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Trails .....

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1964

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken ... field annotated 1953. Map not field checked

Selected ... graphic data compiled from USC&GS Charts 8160 (... 2), 8170 (1951), and 8201 (1:217,828 scale) 1957
This ... rmation is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American datum
10,000-foot grid based on Alaska coordinate system, zone 1
1000-meter Universal Transverse Mercator grid ticks, zone 8, shown in blue

Land lines printed in gray represent unsurveyed and unmarked locations predetermined by the State of Alaska, Division of Lands Copper River Meridian

Entire land area is within the Tongass National Forest except the Petersburg exclusion area

TRUE NORTH

APPROXIM... DECLINAT...

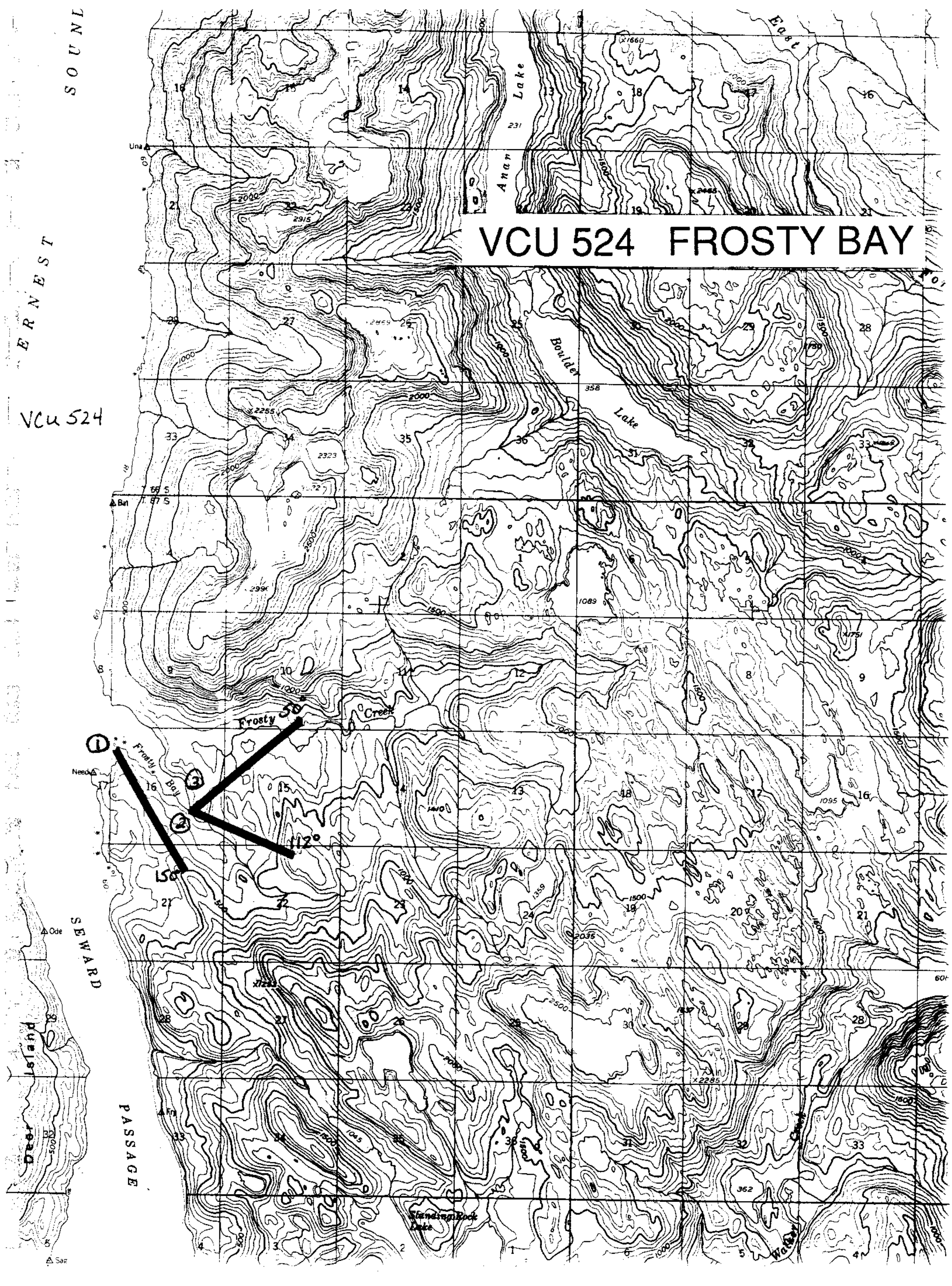
PETERSBURG (C-4), ALASKA

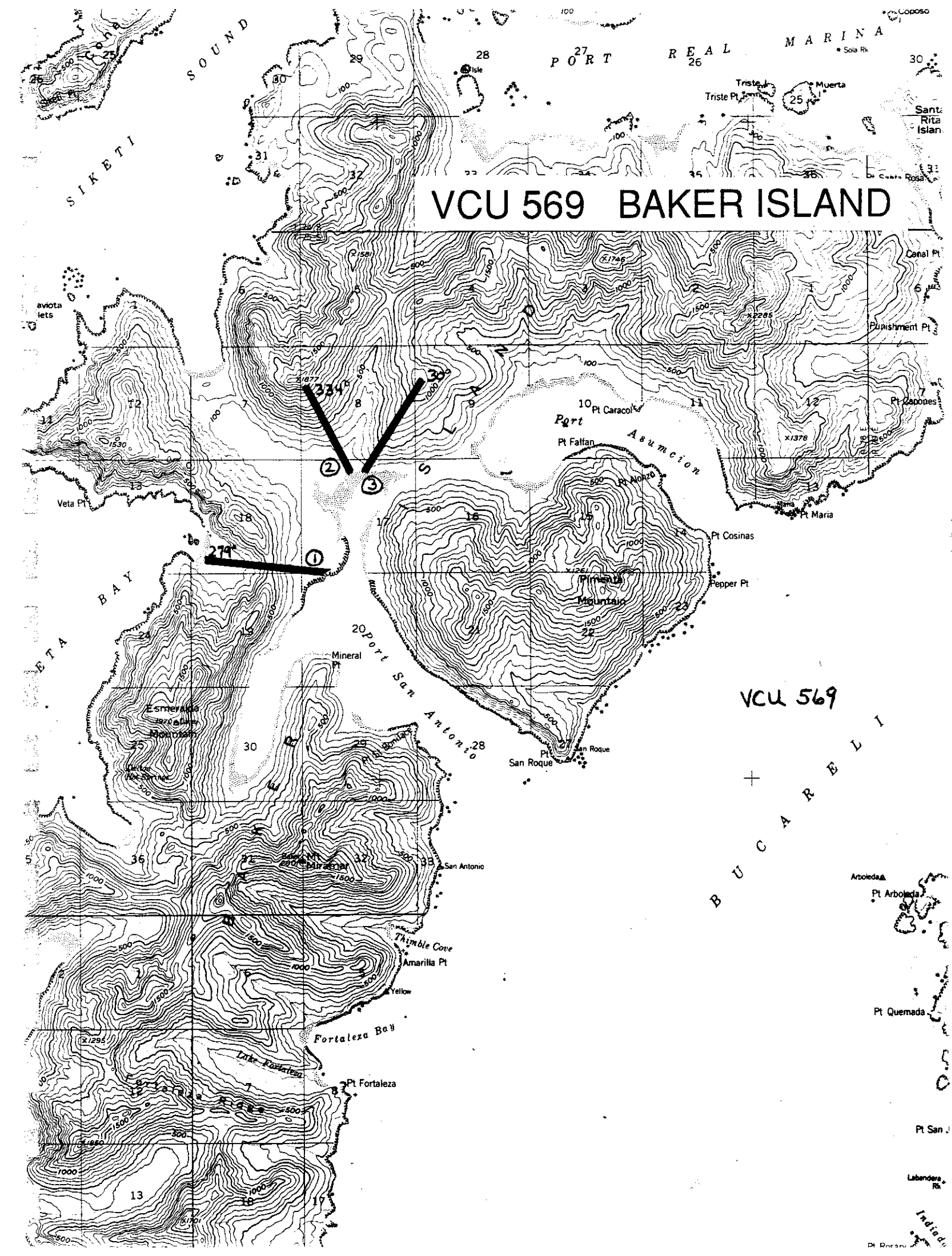
N5630—W13300/15X20

1951

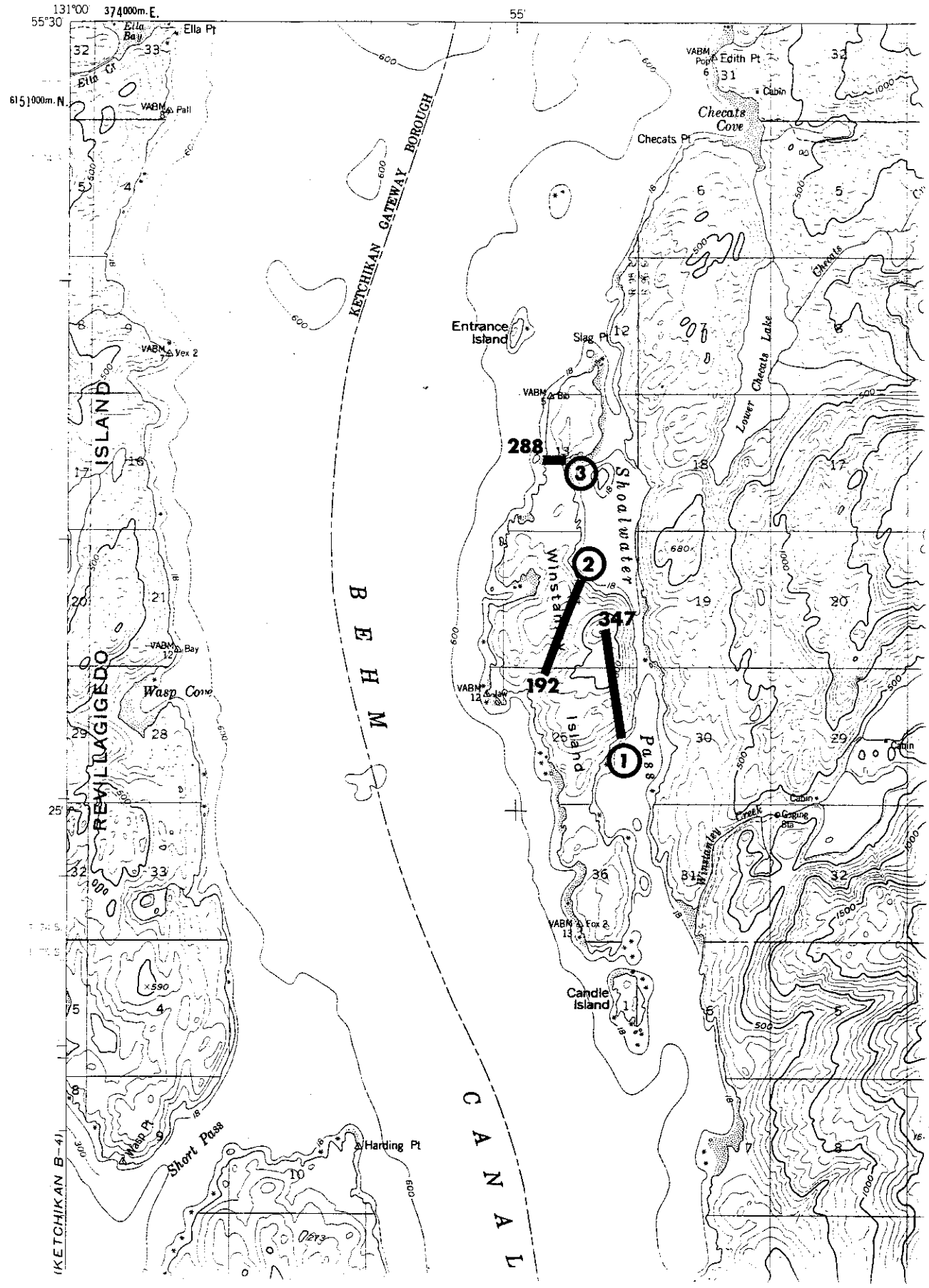
MINOR REVISIONS 1963

D. C.


VCU 524 FROSTY BAY
VCU 524
ERNEST SOUND
SEWARD PASSAGE
Deer Island
Anan Lake
Boulder Lake
Frosty Creek
Frosty Bay
Standing Rock Lake
Walker Creek
East
50
112°
150
1
2
3


VCU 569 BAKER ISLAND
SIKETI SOUND
PORT REAL MARINA
Triste Pt
Muerta
Santa Rita Island
Canal Pt
Punishment Pt
Pt Caracol
Port Asumcion
Pt Falfan
Pt Cosinas
Pepper Pt
Pimenta Mountain
Pt Maria
Veta Pt
VETA BAY
Mineral Pt
Port San Antonio
Esmeralda Mountain
Pt San Roque
San Antonio
Thimble Cove
Amarilla Pt
Yellow
Fortaleza Bay
Lake Fortaleza
Pt Fortaleza
Arboleda
Pt Arboleda
Pt Quemada
BUCARELI
334°
304°
279°
VCU 569

VCU 821 WINSTANLEY ISLAND



APPENDIX II

Winter Weather Conditions

1991

Winter Weather Conditions

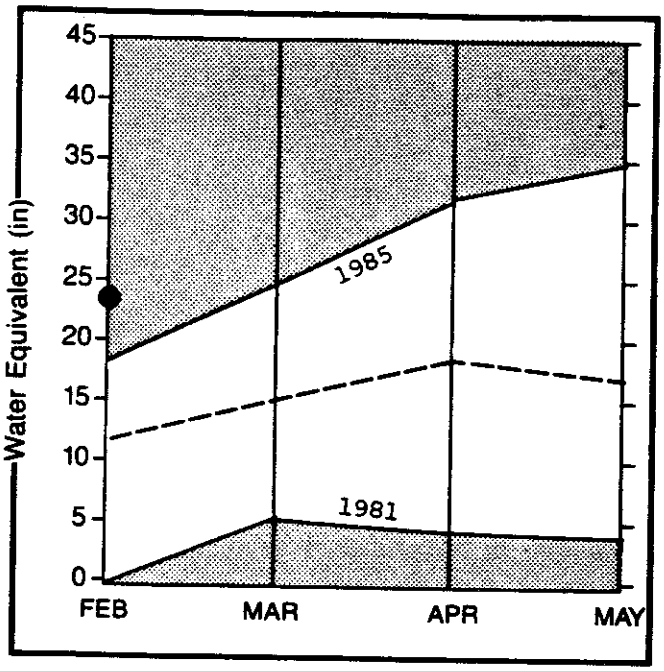
January - April 1991

Data from: Alaska Snow Surveys, USDA Soil Conservation Service, Anchorage, AK.
Monthly reports on file, ADF&G, Douglas.

Southeast

February 1, 1991

Douglas Island snowpack* (inches)



*Based on selected stations

Maximum

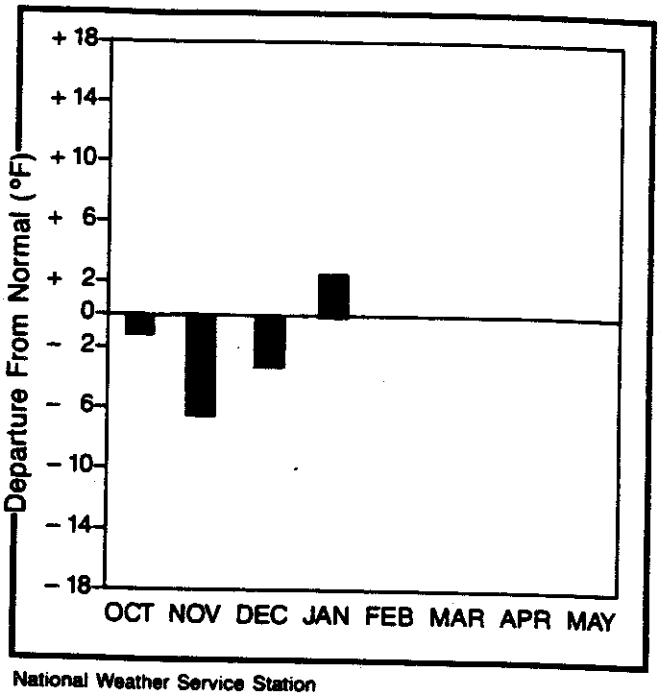
Minimum

Average

Current

since 1977

Juneau Temperature (degrees F)



National Weather Service Station

Monthly temperature

SNOWCOVER:

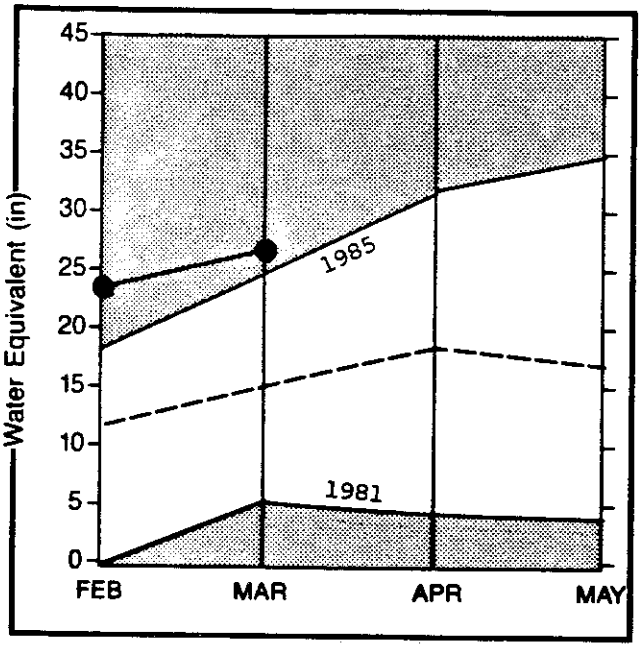
The northern two-thirds of the region has an extremely heavy snowpack. Douglas Island, near Juneau, has the most snow in the last 15 years, but not as much as it had in either 1972 or 1975 on February 1st. Prior to 1977, snow surveys were made at the old Douglas Ski Bowl snow course. Measurements there in 1972 and 1975, exceed the amount that would have been measured at the newer Eaglecrest courses. Snow in the Petersburg area, while well above normal, is not quite as heavy at this time as two winters ago. White Pass, north of Skagway, also has a very heavy snowpack.

For more information contact your local Soil Conservation Service office in Anchorage, 271-2424.

Southeast

March 1, 1991

Douglas Island snowpack* (inches)



*Based on selected stations

Maximum

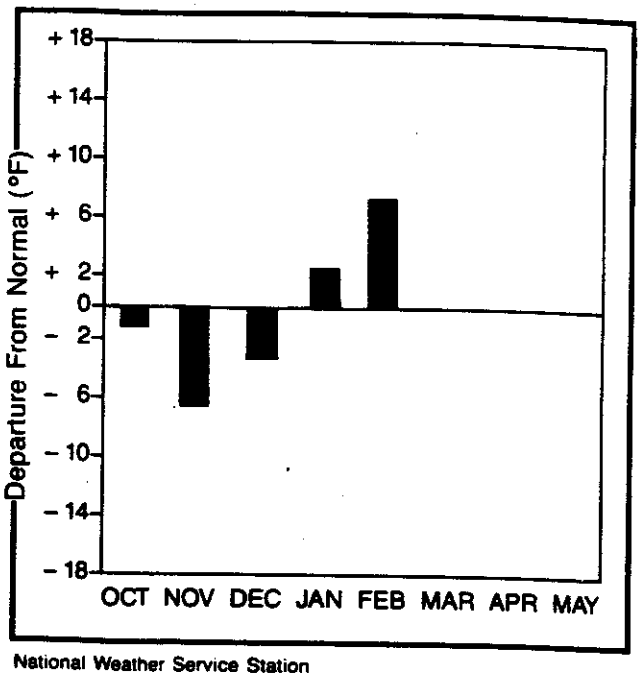
Minimum

Average

Current

since 1977

Juneau Temperature (degrees F)



National Weather Service Station

Monthly temperature

SNOWCOVER:

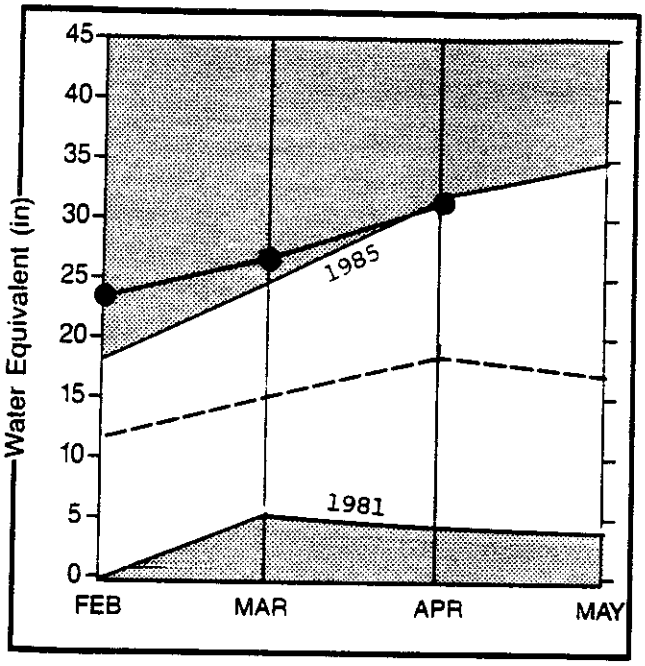
More heavy snow fell on an already record snowpack in the northern portion of southeast. However, considerable melting also occurred during the month so that even though the snowpack remains at a maximum of record level at the Eaglecrest Ski Resort near Juneau, it is well down, percentagewise, from a month ago. Snow in the Petersburg area is also maximum but only for a 13-year period of record. The Speel River course, near the Snetisham Power Plant, has the third heaviest pack in the last 27 years.

For more information contact your Soil Conservation Service office in Anchorage, 271-2424.

Southeast

April 1, 1991

Douglas Island snowpack* (inches)



*Based on selected stations

Maximum

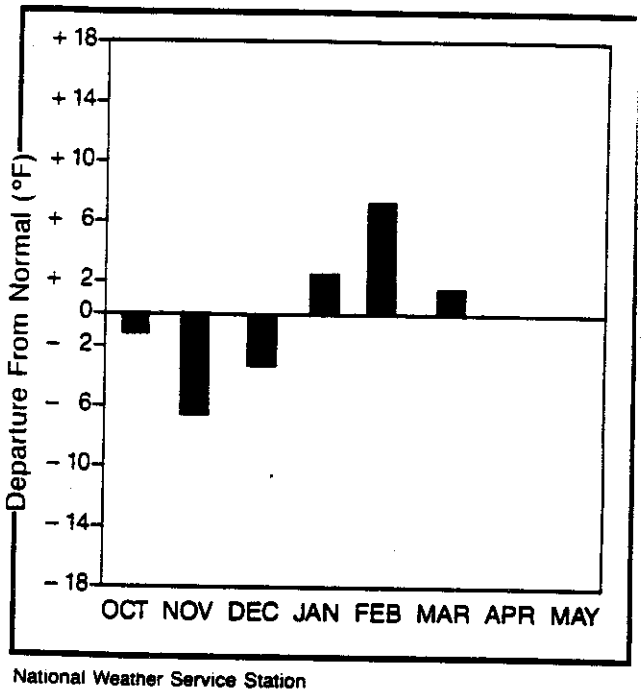
Minimum

Average

Current

since 1977

Juneau Temperature (degrees F)



National Weather Service Station

Monthly temperature

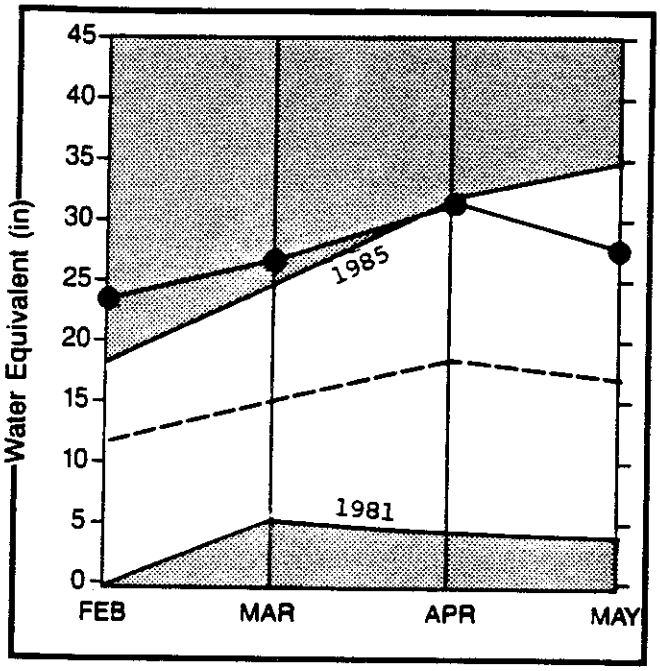
SNOWCOVER:

Extremely heavy snow conditions continue to burden the mountains of southeast. Most measurement sites with 15 years of record or less have a maximum of record snowpack. Both Cropley Lake and Speel River courses, with 24 and 27 years of record, respectively, are exceeded only by 1976. The heaviest snow, percentagewise, was found at the lower elevations, then the percentage compared to normal decreased significantly with increasing elevation on both Douglas and Mitkof Islands.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

Southeast

Douglas Island snowpack* (inches)



*Based on selected stations

Maximum

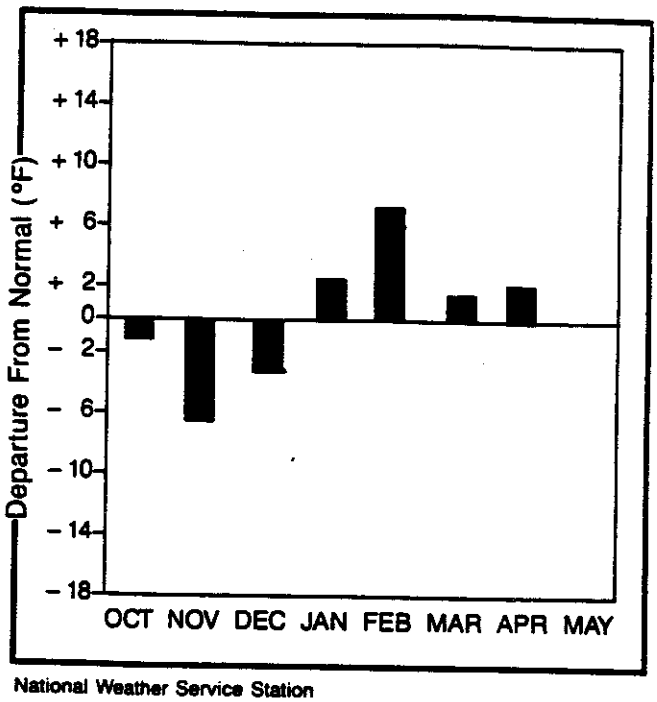
Minimum

Average

Current

since 1977

Juneau Temperature (degrees F)



National Weather Service Station

Monthly temperature

SNOWCOVER:

Overall, April was a little warmer than normal and precipitation varied from near normal at the northern and western portions to well below over the southern and eastern half. Generally the snowpack continues far above normal at the higher elevations of the northern two-thirds of the region.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

APPENDIX III

Pellet-Group Densities Reported by Transect and Elevation

Table 2. Pellet-group density by VCU and by transect, Spring 1991.

Variable	Value	Label	Mean	Plots
For Entire Population			1.4403	8058
VCU	35	N. DOUGLAS	.8033	300
TRAN	1		.9770	87
TRAN	2		.7900	100
TRAN	3		.6814	113
VCU	185	PLEASANT ISLAND	1.3762	311
TRAN	1		2.1700	100
TRAN	2		.8160	125
TRAN	3		1.2674	86
VCU	189	PORT ALTHORP	1.9193	223
TRAN	1		1.5735	68
TRAN	2		2.8852	61
TRAN	3		1.5426	94
VCU	247	FINGER RIVER	3.9333	150
TRAN	1		4.7105	38
TRAN	2		4.4340	53
TRAN	3		2.9831	59
VCU	249	LISIANSKI	1.5294	170
TRAN	1		1.7419	31
TRAN	2		2.2083	24
TRAN	3		1.8182	11
TRAN	4		1.2069	29
TRAN	5		2.4400	25
TRAN	6		.7400	50
VCU	254	SOAPSTONE	2.0481	270
TRAN	1		2.3063	111
TRAN	2		1.8542	96
TRAN	3		1.8889	63
VCU	271	CHICHAGOF	1.3854	301
TRAN	1		1.1848	92
TRAN	2		1.0549	91
TRAN	3		1.7966	118
VCU	275	COBOL	2.9568	185
TRAN	1		1.8267	75
TRAN	2		2.7931	58
TRAN	3		4.7692	52

VCU	300	NAKWASINA	3.9771	175
TRAN	2		3.8919	37
TRAN	3		3.2027	74
TRAN	8		4.9219	64
VCU	305	KALININ BAY	1.6347	219
TRAN	1		1.1216	74
TRAN	2		2.0111	90
TRAN	3		1.7091	55
VCU	361	KNIGHT ISLAND	.8100	100
TRAN	2		.8100	100
VCU	363	HUMPBACK	.0085	118
TRAN	1		.0159	63
TRAN	2		.0000	55
VCU	368	YAKUTAT ISLANDS	.3157	415
TRAN	1		.0132	76
TRAN	2		.2500	100
TRAN	3		.2500	68
TRAN	4		.1447	76
TRAN	5		.8462	52
TRAN	6		1.0800	25
TRAN	7		.3333	18
VCU	369	ANKAU	.0259	116
TRAN	1		.0259	116
VCU	417	CONCLUSION ISLAND	.7050	200
TRAN	1		.7500	72
TRAN	2		.7167	60
TRAN	3		.6471	68
VCU	434a	BIG LEVEL ISLAND	2.1557	456
TRAN	1		1.0741	54
TRAN	2		1.7361	72
TRAN	3		1.9759	83
TRAN	4		2.8000	80
TRAN	5		2.7250	80
TRAN	6		2.5735	68
TRAN	7		1.0000	19
VCU	434b	LITTLE LEVEL ISLAND	3.5909	132
TRAN	1		2.7037	27
TRAN	2		4.0909	33
TRAN	3		2.9394	33
TRAN	4		5.1500	20
TRAN	5		3.4737	19

VCU	448	WOEWODSKI	1.7975	316
TRAN	1		1.5507	69
TRAN	2		2.0462	65
TRAN	3		2.5968	62
TRAN	4		1.3917	120
VCU	448a	WOEWODSKI ISLAND	1.8590	461
TRAN	1		1.9700	100
TRAN	2		2.0300	100
TRAN	3		1.1273	110
TRAN	4		1.3210	81
TRAN	6		3.2286	70
VCU	461	WORONKOFSKI	1.5862	203
TRAN	10		1.5286	70
TRAN	11		1.6226	53
TRAN	12		1.6125	80
VCU	473	ONSLOW	.6553	322
TRAN	1		.3796	108
TRAN	2		.9386	114
TRAN	3		.6300	100
VCU	524	FROSTY BAY	.7030	266
TRAN	1		.9455	110
TRAN	2		.3827	81
TRAN	3		.6933	75
VCU	561	WARM CHUCK	2.0481	291
TRAN	1		2.6833	120
TRAN	2		1.1840	125
TRAN	3		2.7391	46
VCU	569	BAKER ISLAND	.0781	256
TRAN	1		.0316	95
TRAN	2		.0897	78
TRAN	3		.1205	83
VCU	621	12 MILE	1.8442	231
TRAN	1		2.7200	50
TRAN	2		2.0128	78
TRAN	3		1.2913	103
VCU	635	PORT REFUGIO	1.1335	367
TRAN	1		1.2080	125
TRAN	2		1.0940	117
TRAN	3		1.0960	125
VCU	716	HELM BAY	1.6333	240
TRAN	1		1.6364	110
TRAN	2		1.3273	55
TRAN	3		1.8533	75

VCU	738	MARGARET	.7610	272
TRAN	10		.7556	90
TRAN	11		.7700	100
TRAN	25		.7561	82
VCU	748	GEORGE INLET	1.4940	168
TRAN	1		2.1321	53
TRAN	2		1.2000	115
VCU	760	LUCKY	1.3875	271
TRAN	4		1.6000	105
TRAN	5		1.8636	66
TRAN	6		.8500	100
VCU	769	ALAVA BAY	1.6364	143
TRAN	1		2.6604	53
TRAN	2		1.0333	90
VCU	772	WASP COVE	.1256	207
TRAN	1		.1818	110
TRAN	2		.0732	82
TRAN	3		.0000	15
VCU	821	WINSTANLEY ISLAND	.2653	49
TRAN	1		.2414	29
TRAN	2		.1818	11
TRAN	3		.4444	9
VCU	999	GRAVINA ISLAND	1.1169	154
TRAN	1		1.1750	80
TRAN	2		1.0541	74

Total Plots = 8058

Table 3. Pellet-group density by VCU, by elevation category, Spring 1991.

Variable	Value	Label	Mean	Plots
For Entire Population			1.4403	8058
VCU	35	N. DOUGLAS	.8033	300
RELEV	1.00	0-500 FT	.7553	94
RELEV	2.00	501-1000 FT	.8031	127
RELEV	3.00	1001-1500 FT	.8608	79
VCU	185	PLEASANT ISLAND	1.3762	311
RELEV	1.00	0-500 FT	1.4068	295
RELEV	2.00	501-1000 FT	.8125	16
VCU	189	PORT ALTHORP	1.9193	223
RELEV	1.00	0-500 FT	2.2870	108
RELEV	2.00	501-1000 FT	1.6126	111
RELEV	3.00	1001-1500 FT	.5000	4
VCU	247	FINGER RIVER	3.9333	150
RELEV	1.00	0-500 FT	4.4844	64
RELEV	2.00	501-1000 FT	4.2642	53
RELEV	3.00	1001-1500 FT	2.3333	33
VCU	249	LISIANSKI	1.5294	170
RELEV	1.00	0-500 FT	1.4774	155
RELEV	2.00	501-1000 FT	2.0667	15
VCU	254	SOAPSTONE	2.0481	270
RELEV	1.00	0-500 FT	2.1546	207
RELEV	2.00	501-1000 FT	1.7258	62
RELEV	3.00	1001-1500 FT	.0000	1
VCU	271	CHICHAGOF	1.3854	301
RELEV	1.00	0-500 FT	1.5068	221
RELEV	2.00	501-1000 FT	.8421	57
RELEV	3.00	1001-1500 FT	1.5652	23
VCU	275	COBOL	2.9568	185
RELEV	1.00	0-500 FT	5.7714	70
RELEV	2.00	501-1000 FT	1.3125	80
RELEV	3.00	1001-1500 FT	1.0857	35
VCU	300	NAKWASINA	3.9771	175
RELEV	1.00	0-500 FT	3.6591	88
RELEV	2.00	501-1000 FT	5.1020	49
RELEV	3.00	1001-1500 FT	3.2632	38

VCU	305	KALININ BAY	1.6347	219
RELEV	1.00	0-500 FT	2.1944	108
RELEV	2.00	501-1000 FT	1.2639	72
RELEV	3.00	1001-1500 FT	.7692	39
VCU	361	KNIGHT ISLAND	.8100	100
RELEV	1.00	0-500 FT	.8100	100
VCU	363	HUMPBACK	.0085	118
RELEV	1.00	0-500 FT	.0085	118
VCU	368	YAKUTAT ISLANDS	.3157	415
RELEV	1.00	0-500 FT	.3157	415
VCU	369	ANKAU	.0259	116
RELEV	1.00	0-500 FT	.0259	116
VCU	417	CONCLUSION ISLAND	.7050	200
RELEV	1.00	0-500 FT	.6296	108
RELEV	2.00	501-1000 FT	.7935	92
VCU	434a	BIG LEVEL ISLAND	2.1557	456
RELEV	1.00	0-500 FT	2.1557	456
VCU	434b	LITTLE LEVEL ISLAND	3.5909	132
RELEV	1.00	0-500 FT	3.5909	132
VCU	448	WOEWODSKI	1.7975	316
RELEV	1.00	0-500 FT	1.7931	203
RELEV	2.00	501-1000 FT	1.6667	60
RELEV	3.00	1001-1500 FT	1.9623	53
VCU	448a	WOEWODSKI ISLAND	1.8590	461
RELEV	1.00	0-500 FT	1.8759	427
RELEV	2.00	501-1000 FT	1.6471	34
VCU	461	WORONKOFSKI	1.5862	203
RELEV	1.00	0-500 FT	1.4035	114
RELEV	2.00	501-1000 FT	2.2623	61
RELEV	3.00	1001-1500 FT	.8571	28
VCU	473	ONSLOW	.6553	322
RELEV	1.00	0-500 FT	.6087	276
RELEV	2.00	501-1000 FT	.9744	39
RELEV	3.00	1001-1500 FT	.7143	7
VCU	524	FROSTY BAY	.7030	266
RELEV	1.00	0-500 FT	.7360	250
RELEV	2.00	501-1000 FT	.1875	16
VCU	561	WARM CHUCK	2.0481	291
RELEV	1.00	0-500 FT	2.0391	256
RELEV	2.00	501-1000 FT	2.0333	30
RELEV	3.00	1001-1500 FT	2.6000	5

VCU	569	BAKER ISLAND	.0781	256
RELEV	1.00	0-500 FT	.0252	159
RELEV	2.00	501-1000 FT	.1064	47
RELEV	3.00	1001-1500 FT	.2200	50
VCU	621	12 MILE	1.8442	231
RELEV	1.00	0-500 FT	2.2400	100
RELEV	2.00	501-1000 FT	2.3115	61
RELEV	3.00	1001-1500 FT	.8714	70
VCU	635	PORT REFUGIO	1.1335	367
RELEV	1.00	0-500 FT	.7500	144
RELEV	2.00	501-1000 FT	1.6266	158
RELEV	3.00	1001-1500 FT	.7846	65
VCU	716	HELM BAY	1.6333	240
RELEV	1.00	0-500 FT	1.4619	197
RELEV	2.00	501-1000 FT	2.7027	37
RELEV	3.00	1001-1500 FT	.6667	6
VCU	738	MARGARET	.7610	272
RELEV	1.00	0-500 FT	.7962	211
RELEV	2.00	501-1000 FT	.5000	26
RELEV	3.00	1001-1500 FT	.7429	35
VCU	748	GEORGE INLET	1.4940	168
RELEV	1.00	0-500 FT	1.2736	106
RELEV	2.00	501-1000 FT	1.7755	49
RELEV	3.00	1001-1500 FT	2.2308	13
VCU	760	LUCKY	1.3875	271
RELEV	1.00	0-500 FT	1.4223	251
RELEV	2.00	501-1000 FT	.9474	19
RELEV	3.00	1001-1500 FT	1.0000	1
VCU	769	ALAVA BAY	1.6364	143
RELEV	1.00	0-500 FT	1.6875	96
RELEV	2.00	501-1000 FT	1.5319	47
VCU	772	WASP COVE	.1256	207
RELEV	1.00	0-500 FT	.1161	155
RELEV	2.00	501-1000 FT	.1538	52
VCU	821	WINSTANLEY ISLAND	.2653	49
RELEV	1.00	0-500 FT	.2821	39
RELEV	2.00	501-1000 FT	.2000	10
VCU	999	GRAVINA ISLAND	1.1169	154
RELEV	1.00	0-500 FT	1.3883	103
RELEV	2.00	501-1000 FT	.6000	45
RELEV	3.00	1001-1500 FT	.3333	6

Total Plots = 8058