



3 April 1964

Dear Mother,

We've composed a descriptive letter of our earthquake experience. Dave brought copies of it home at noon to send out to friends and relatives. While we were lunching, about 12:30, another tremor occurred. The radio stated it registered 6 on the instruments. That of last week hit 8 something; I believe. Reports were that apartments with questionable foundations would be watched for settling with possible evacuation necessary.

Our family is well and busy. Kathy has been working at Red Cross. David is too young to help evacuees in the hard-hit areas so he helped with clothing drives and sorting and packing at the Chapel.

Karen and Paras school
have resumed full day
schedule —

Spring has sprung and I
hope all the relatives in
Missoula had a nice
Easter. We've been getting
more snow but today
it's warm and sunny.

It's time for our "breakup"
to get started up here.

Are you out into yard work?
Are you painting some?
Parts of the States had a
snow fall, also I read but
it's usually quick to go!

In covering all the mattresses
Dove has cut for our beds on
the bus. The slip cover material
should be here this week; part
of the order came. The material
for bias strips and seam
Cording came so I'll be
busy with that. Dove is putting
^{sub} flooring in the bus now!
Leah is sewing a skirt & pull over
(Jerkin). Hurrying to mail these
letters before I start the evening meal.
Hope you're well. Love
Liz

April 3, 1964

The earth shook and the clock stopped at 5:35 the afternoon of Good Friday. Part of our family had returned from religious services at the Chapel at four o'clock. We had finished the evening meal and the children were gathered around watching cartoon on the television program. I was reading the evening paper as Dave said his "goodbye" preparing to leave for the Hobby Shop to work on his Bus. As he got to the side of the Ford station wagon, he thought he saw it moved backwards about six inches. He quickly discounted this because he knew the car was in gear. At the same instant, he noticed the car start to rock. He quickly assumed a neighbor was on the other side rocking it. Then the car started to rock violently. He realized it was an earthquake, and support himself on the fender, thinking the tremor would subside. Then everything started to rock. Cars, houses, poles. Bouncing between cars and the house, Dave made it back into the house.

Inside the house, feeling the tremor, I looked up from my reading to see a shuddering of the living room. It would cease in a moment, I reasoned, as we had experienced these tremors before. I proceeded to replace the table lamps which were being displaced from their usual resting places on the tables. Noises from the kitchen prompted me to go there to push canisters, etc which were sliding toward the edge of the counter. With the electric frying pan caught in mid-air and placed in the sink, I must have felt the kitchen "secure" and returned to the living room. The children nor I had enough arms to right the bird cage or the lamps, we need what we had to attempt to steady ourselves. Lisa was asleep in her crib upstairs. Tara was whimpering for it to stop and Karen was complaining that she had motion sickness. When Dave came in, he ushered us all outside. Fortunately, the temperature was about 35, nobody had a coat, some had no shoes on, and the concrete was cold and wet. Dave then rushed upstairs, retrieved Lisa from her crib and grabbing several coats struggled back down the steps and joined us outside. There was some heady sensation and unsteadiness felt by us all while we stood there while the violent shaking subsided to a quiver and finally dissipated. The total elapsed time was between three and five minutes.

By now you have probably read that it was the most intense quake ever recorded. What it did, is unimaginable. We did not realize the extent of the damage until some time later as all the communications were out. Just looking around us in the housing area, everything appeared normal and we returned in the house to survey our damage.

Just inside the front door, we climbed over a large pile of books which had fallen from the shelves. The plate glass mirror, approx. 30 x 40, departed its usual hanging place to seek shelter behind a book case. Upstairs, its twin did likewise, finding refuge behind the dresser. Neither mirror was broken, didn't even crack anyplace. Table lamps were toppled as was the bird cage. Furniture was moved about as it slid with the tilting of the house. A large pile of glass, at the base of the china closet in the dining room evidenced that some of our shipping problems were solved. We wouldn't have to pack them. Most of the glass was inexpensive. We lost several plates and cups from our dinner set. Some attractive ice cream cone serving dishes that Dave had made, were broken. Every shelf in the house lost something, or

had the things moved. We lost very little of the ceramics Dave has made. Upstairs, a floor lamp fell and broke the glass globe. Oddly enough, things on the shelves in the bathroom did not fall, nor did any of the bath salts and hand lotion come off the water box.

In the kitchen the refrigerator door had come open and a three quart container of milk spilled out over a broken jar of maraschino cherries and an open container of shelled pecans added its contents to the mess. Other usual kitchen containers and some jars, dishes (Melmac, thank goodness) and Jello boxes, etc took a bath in the milk which covered the floor. It was an awful looking mess.

Damagewise, we really suffered no great loss. Fortunately, the incident occurred early enough to allow us to clean it up while it was still daylight. Some people on the base suffered the loss of a lot of good china and expensive knick knacks. Tara Lee fretted for quite a while for fear we would have another one. Fortunately we did not, though we did have many tremors and even this morning around two, we had a very noticeable shake. (3 Apr)..

Several hours after the quake, a radio station, on emergency power, was picked up on our transistor radio. It was then we began to realize the severity of the earthquake. Our electricity was off that night as was the heat, so we bedded down in the living room. With the moon reflecting off the snow, we were not really in the dark of night as usually imagined. Dave was called in to work at midnight.

Leah was at Hillberg Ski Lodge, which is on the base, about four miles from home. She was outside and said the trees appeared to be swaying. Inside she said the chandelier was swinging freakishly. A large plate glass window shattered. The ice in the lake cracked open. She said the auto seemed to jump about. Kathy was at the Base Exchange, which is our department store. The few people in the store ran outside and jumped in the snow. Needless to say, things came flying from the shelves and considerable breakage was apparent. In driving around the base, we can see buildings cracked, a warehouse has collapsed and considerable damage has been done to the interiors of the larger buildings. Considering it all, the military bases in this area have come through rather well. Our seven story hospital was evacuated that same evening. Patients were moved into quarters nearby. I understand, three babies were born during this period, practically in transit.

The city of Anchorage was damaged quite heavily. Most large buildings need major repair or have been condemned. A fourteen story apartment building will have to be torn down. Perry's department store, a five story, year old building practically shook apart. Walls came tumbling off it and it appears it will have to be stripped to the metal framework, if it is to be rebuilt. A whole block in the middle of town settled about 25 to 35 feet. Stores on one side of the street dropped even more so. You can stand on the sidewalk and look into the second story window and turn around and look up about 20 feet to the sidewalk on the other side. It is really unimaginable. Just outside the base, the high bluff split, and an elementary school situated on the fissure, fell into the crevasse. Several homes in this area also dropped about 50 feet. In the most exclusive residential area, homes valued from 20,000 to 150,000 dollars were twisted and torn and moved about, as another bluff area moved out to sea and spread an area about 1/4 mile wide into a 3/4 mile area while dropping it about 50 feet.

The entire area looked like a giant plow had created furrows and the trees and broken houses were strewn around like so much corn stubble. Schools are closed. The West Anchorage High school a 5,000,000 dollar building about five years old had been condemned and probably will require much razing and rebuilding. One of the problems is the matter of rebuilding. Much of the area that is devastated is gravel and silt layed down by the glaciers of eons ago. It is very unstable now and many homes that have been unscathed during the quake must be evacuated for fear of constant settling that is taking place. Geodisists are now taking surveys to determine the suitability of the sub surface. It'll will take months to really completely determine the extent of damage.

It appears that the two high schools will double up in the East High building, with the pupils from West going in the morning and East in the afternoon. The schools on base are operating normally.

Severe damages have been inflicted on the towns of Seward, Valdex and Kodiak. These places will have to start from scratch. A new development of the quake is the settling of the country. Valdex now has tide marks 14 feet lower, while Kodiak approximately a few hundred miles to the westm has tide marks which are eight feet higher. This is an indication that the whole land mass has tilted.

The listing of damage could go on and on... you have probably read much of it in the papers. The situation is less tense here now, with the passing of time. The most remarkable thing of the whole matter is the fantastically low fatality toll. If you could see the damage, to the homes alone, you could not imagine how it is possible that scores were not killed or injured. The personal messages and survival warnings are decreased appreciably from the airwaves and some of the disc jockeys are just about back to their ole form. Humorous incidents and the oddities are being announced, we aware that the shock has somewhat worn off and we are glad.

The distress, heartache and pain felt in Alaska has been immense, but the burden has been shared by the many who have answered the call of distress. Schools were used for havens for the homeless. Home owners and the more fortunate offered shelter and food, the military set up mobile kitchens and first aid stations and water points were established. Typhoid inoculation was advised and shot stations were set up.

Actually, the Maloney's suffered only a chilly night's sleep and the usual anxiety at every subsequent tremor. We had drawn emergency water supply immediately after the quake and supplemented our "bug out" kit which we maintain as survival insurance. The car was packed in case a quick exodus was indicated. Electricity and heat was returned early Saturday morning, and on that day we dyed eggs and made gestures at normal daily living. Easter Sunday Masses were said on the hour in the one good chapel. At three o'clock Karen, with 129 other boys and girls, made her first Holy Communion. It was a Good Friday, not soon to be forgotten, and it was a most grateful gongregation, as we counted out blessings.

Nov. 8, 1964

Earthquake Remodels Geography Of Alaska

The mighty earthquake that shook Alaska gave the Nation's biggest state an unexpected facelifting.

Studies made by the U. S. Geological Survey in the months following the cataclysm on Good Friday, 1964, show that some 12,000 square miles of southeastern Alaska rose and remained eight feet above old levels.

Conversely, a 35,000-square-mile region around Kodiak and Anchorage sank two to six feet, the National Geographic Society says.

"Like a gigantic hinge, the earth moved upwards southwest of the hinge line and downward to the northwest," explains Arthur Grantz, geologist of the Geological Survey.

ISLAND RISES 33 FEET

The strongest earthquake to shake North America since 1899 had even more dramatic impact on Montague Island in Prince William Sound.

This uninhabited island some 100 miles from the focal point of the quake shot up more than 30 feet. A surrounding strip of sea floor was left high and dry.

Measurements of Alaska's upheavels and subsidence show spectacular effects in localized areas along major crack lines.

The bottom virtually dropped out of two ports. Seward's harbor, normally 30 to 120 feet deep, sank to levels ranging from 390 to 450 feet deep. At Valdez, the sea bottom slid out into the channel, deepening the port by as much as 150 feet.

In downtown Anchorage, buildings and pavement plummeted 30 feet in seconds. The Denali Theater on 4th Avenue dropped 10 feet below the sidewalk without popping a single lightbulb on its marquee.

Alaska's quake sent shock waves 'round the world, though earth tremors originating in the Pacific are rarely strong enough to be felt beyond the Rocky Mountains.

In Georgia, well water pumped up and down 10 to 20 feet. Streets in Houston, Texas, bobbed nearly five inches. Water slopped out of swimming pools. A showboat at Vicksburg, Mississippi, was torn loose from its mooring by canal water swishing back and forth violently.

In far-off Iran, the ground surface rose and fell a third-of-an-inch during the Alaskan

catastrophe.

QUAKES ARE BENEFICIAL

Geologists say the earth is still quivering from the impact of the quake. The lingering effect has proved a boon to research since seismic waves provide almost the sole means of studying the earth's deep interior.

Despite the terrible suffering caused by Quakes such as Alaska's, they are essential to life, wrote Dr. Maynard M. Miller, professor of geology at Michigan State, in the National Geographic.

"Mountains are constantly eroding," he said. "If they were not raised again, the world would become an awful place of stagnant seas and swamps."

Record Alaska earthquake remembered after 25 years

EDITOR'S NOTE — On March 27, 1964, an earthquake of record-breaking proportions seized southcentral Alaska and set off sea waves that punished far-off Pacific ports. Ward Sims, now retired as AP bureau chief for Alaska, covered the disaster.

By **WARD SIMS**
Associated Press Writer

ANCHORAGE, Alaska — The earthquake that shuddered across Alaska on that Good Friday packed so strong a punch that it knocked out a seismograph in Fairbanks. It took a seismologist at a small college in Mobile, Ala., to warn the world of what was to come.

"It could cause great devastation," Louis Eisele predicted. "You can expect tidal waves from this one."

The earthquake had been felt by Eisele's Spring Hill College seismograph. It said the temblor was centered about 3,600 miles northwest of Mobile, in the Gulf of Alaska or near Kodiak Island.

At 8.5 on the Richter scale, the 1964 earthquake was the most powerful ever in North America and one of the strongest on record.

In the words of the U.S. Geological Survey: "The entire earth vibrated like a tuning fork."

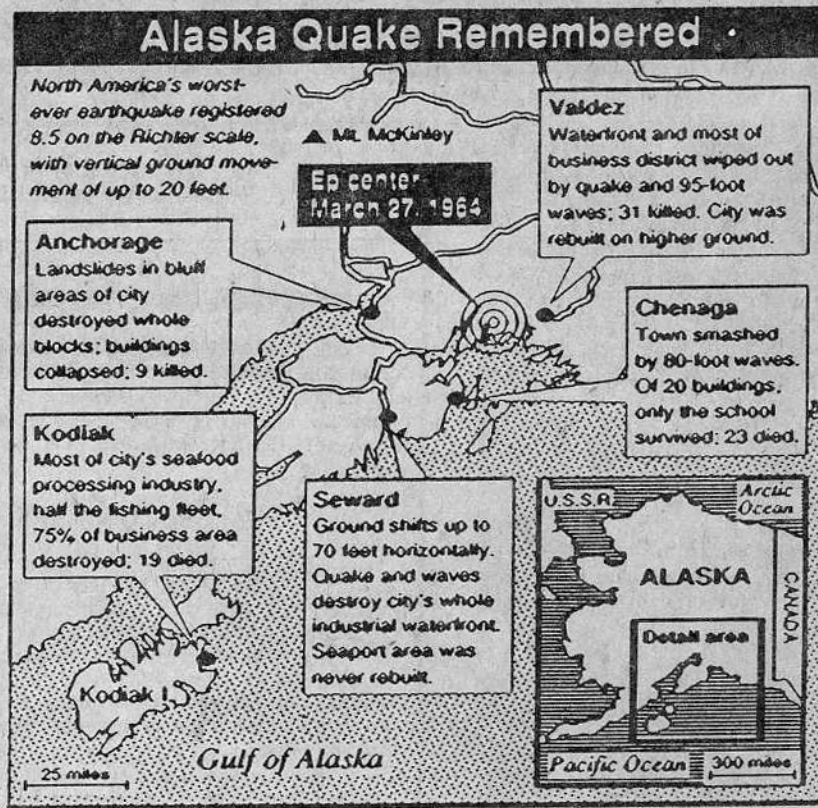
The quake started at 5:36 p.m. Alaska Standard Time on March 27. Centered under a glaciated peninsula 75 miles east of Anchorage, it altered 100,000 square miles of landscape.

Along a 600-mile arc from Cape Yakataga on the eastern Gulf of Alaska to the Trinity Islands southwest of Kodiak, the land to the north subsided by as much as six feet; to the south it rose by as much as 50 feet.

Land shifted horizontally as much as 70 feet in several places south of Seward, tangling railroad tracks, splitting roads, yanking down buildings.

Property damage exceeded \$311 million.

The earthquake and the seismic sea waves it spawned killed 114 people in Alaska. More than a dozen



others died at DePoe Bay, Ore., and Crescent City, Calif., when seismic waves crashed ashore at those communities.

In the aftermath came the stories of the lucky and the luckless. Often, merest circumstance determined who died and who survived.

In Anchorage, William Tobin had just parked his car outside the new J.C. Penney Building when he felt a jolt. He stepped from his car ready to have words with another driver.

"I thought some stupid jerk had rammed me from behind," says Tobin, managing editor of the Anchorage Times.

As he got out, a huge slab of the building crashed down, flattening his car.

Nine people in Anchorage weren't so lucky.

In Valdez, many residents had turned out as usual to watch the

son, Oliver, helped secure several fishing boats which had broken loose. He checked the lines of his own 72-foot Neptune.

The level of water in the harbor started fluctuating wildly, and then Holm heard "the terrible roar of water coming up the channel, the frightening noise of docks and buildings collapsing."

The Holms sprinted for shore as the dock creaked and groaned under the pressure of the rising water. At the head of the dock, Holm fought the impulse to seek safety atop an eight-foot wooden tank used to keep crabs alive. He and his son raced about 150 yards farther to the base of Pillar Mountain, the hill which forms

Kodiak's backdrop.

With the sound of bedlam in the harbor behind them, they clawed their way up the steep slope to an elevation of about 150 feet. Holm was too exhausted to go farther. He told his son to go on, but the boy stayed with his father.

The two watched in awe as huge waves battered Kodiak for six hours. The city lost most of its seafood processing industry, 75 percent of its business district and half its fishing fleet — including the good ship Neptune. The wooden crab tank vanished.

Nineteen people died.

In Chenega, Avis Anderson was preparing to take a bath when the

tiny Prince William Sound village began shaking. She scooped up her two sons, and dashed up a forest trail to the safety of a high knoll.

Behind her she could hear the sound of waves estimated up to 80 feet tall smashing the village only 70 miles from the quake's epicenter. Of the 20 buildings in the town, only the school was spared.

Twenty-three people died, including Anderson's daughter, parents, a grandmother, an uncle and an aunt.

"I had horrible, horrible nightmares for almost 20 years," she says. "Always they were the same. I would be climbing up and up, and the waves would be creeping higher and higher."

freighter Chena disgorge its cargo. The arrival of the 400-foot ship always was something special for Valdez folks, and on this day — typically — a crowd was on hand as longshoremen unloaded the vessel.

In an eternity that lasted only moments, Valdez was shaken unmercifully, and the Chena began wallowing insanely, snapping her mooring lines. The dock heaved, rocked, shook and then pitched into the water, carrying onlookers and warehouses.

The Chena survived; the Valdez waterfront and most of the business district were obliterated by collapsing ground and seismic waves.

Thirty-one people died.

In Kodiak, Norman Holm and his son were fishing for herring from a skiff in the harbor. Holm could not understand why he suddenly lost control of the small boat.

"I just couldn't make it respond. It kept bouncing, bouncing," he says.

When the movement subsided, Holm headed to the dock. He and his

Minkow back in court





D ST

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STOP

NO
PARKING
10:00 AM
20 FT

TERRITORY





5

NO PARKING
FOR 100 FEET
MORNING
7AM-9AM





























































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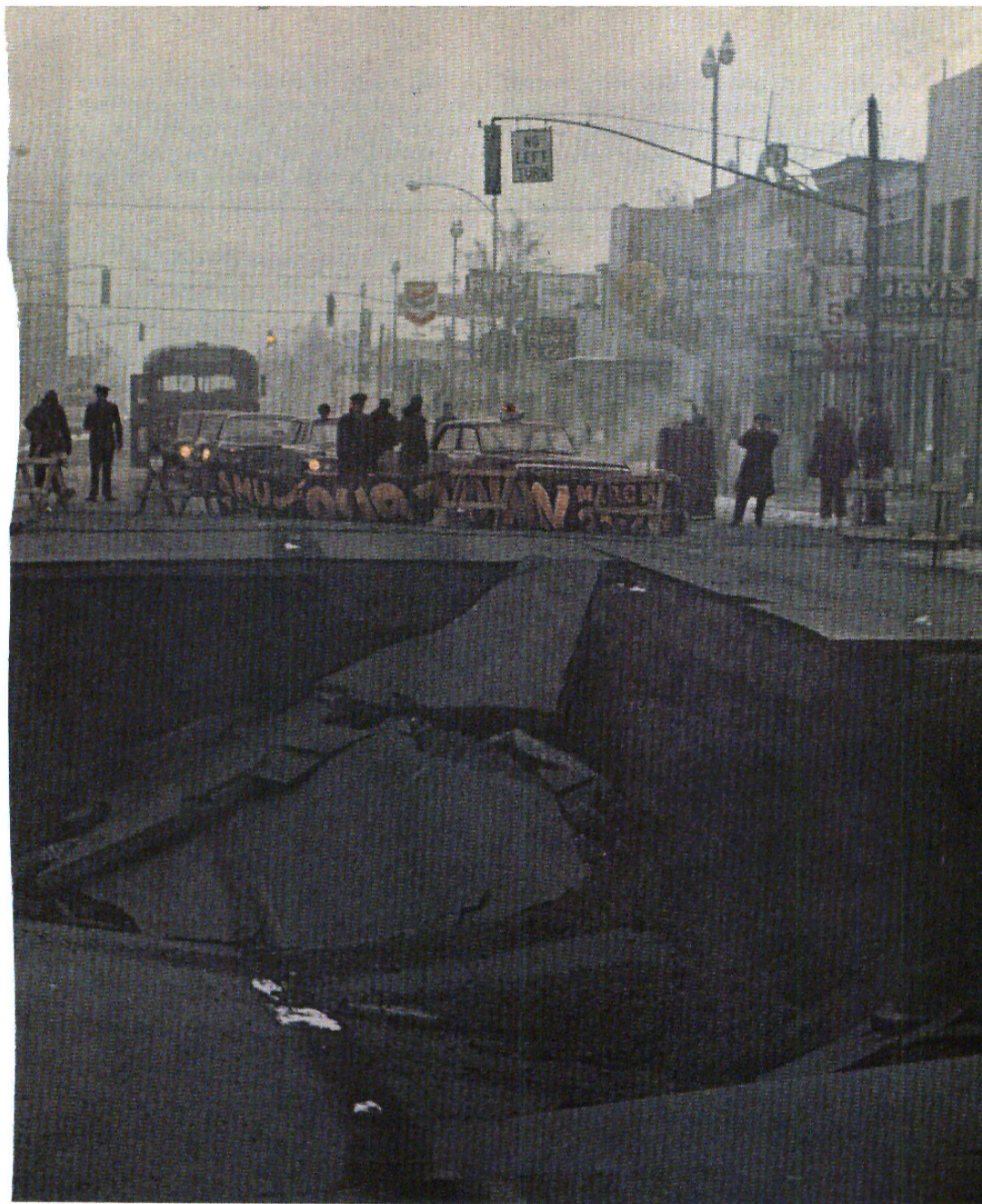
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ANCHORAGE “And, behold . . . the earth did quake, and the rocks rent.” St. Matthew’s account of the first Good Friday saw fearful repetition almost 2,000 years later when, on March 27, 1964, the earth again strained its thin coat and burst its seams, spewing sudden destruction. The gruesome dance, strongest quake to strike North America since an 1899 shock in Alaskan wilds, dropped buildings and pavements as much as 30 feet in downtown Anchorage. In the chill morning mist two days later, troops patrol the shambles of 4th Avenue.



KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER WINFIELD PARKS © N.G.S.

AS CAROL TUCKER watched, fascinated, the small porcelain figures began to dance on the counter top. Earthquakes were nothing new in

Alaska—out on the Chain, as old-timers call the Aleutian Islands, Mrs. Tucker had been through scores of heavy tremors. Here in Anchorage, on the third floor of a modern,

FEEL THE DREAD

EARTHQUAKE!

windowless department store, instinct warned her that this was no ordinary quake. Instead of subsiding after a moment or two, it grew steadily stronger. The building began making ominous sounds.

Mrs. Tucker started across the heaving floor toward the escalators. Before she could reach them, the lights went out. . . .

- One hundred and twenty miles to the east, Bernard Whalen and his friend Jim Aubert were helping unload the 10,000-ton Liberty ship S.S. *Chena* at the pier in Valdez, a town of 1,100 people on Prince William Sound.

Aboard ship, Whalen glanced at his watch. It was 5:36 p.m., less than half an hour until quitting time for the workers on board and for two dozen other longshoremen on the pier. Whalen felt a shudder run through the ship. His first thought was that the "jumbo gear"—the heavy cargo-lifting rig forward—had giv-

By WILLIAM P. E. GRAVES National Geographic Staff

en way on the deck. Jim Aubert, standing beside No. 3 hatch, thought that for some reason *Chena* was getting under way. Both men glanced toward the pier. . . .

- Far down the Gulf of Alaska, on bleak Kodiak Island, U. S. Navy Lt. Raymond Bernosky set out in the late afternoon from Kodiak Naval Station to tend beaver traps with a friend. The two men left their car, an International Harvester Scout, several hundred yards from the beach and started on foot for a low hill inland.

After a time, Lieutenant Bernosky looked back at the car. What he saw sent him and his friend streaking for high ground. The Scout was afloat on a nightmare flood tide that was sweeping silently and swiftly up the hill. Both trappers made it to the hilltop—the friend only after colliding with a floating chunk of ice three and a half feet thick. . . .

- Meanwhile, to the east in Juneau, Alaska's capital, State Senator Yule Kilcher of Homer sat trimming his fingernails in the Baranof Hotel. He had just finished the fourth nail when a prolonged tremor shook the building.

With a sense of foreboding—yet unaware that he had just experienced the most violent shock to strike North America in this century—Senator Kilcher got to his feet and went in search of a radio. It was to be more than a week before he could spare the time to trim the other six fingernails.

Shocks Slam Across 500-mile Arc

It began years before that fatal Good Friday of March 27, 1964. Deep in the earth, perhaps 12 miles beneath the region north of Prince William Sound, fearful and little-understood forces were at work on the earth's crust, twisting and straining the great layers of rock as a truck strains its laminated springs going over a bump. Eventually, at a point called the focus, the rock gave way, snapping and shifting in an instant with the force of 12,000 Hiroshima-size atomic explosions.

The devastation spread with terrible speed in an arc 500 miles long (maps, pages 120-21). Crackling through the earth at thousands of miles an hour, the shock wave sliced,

churned, and ruptured the land like some enormous disk harrow drawn over the surface. Highways billowed with the upward thrust of the shock, great concrete slabs overlapping one another like shingles set awry. Rail yards heaved and buckled, twisting tracks into bright curls of steel. Serene, snow-capped mountains shuddered, loosing cascades of ice and rock that sheared slopes razor clean of brush and trees.

Towns and cities suffered bizarre torments. Among neat buildings and ordered streets, the earthquake seemed to give way to caprice, demolishing one building and sparing its neighbor, leaping hundreds of yards—often half a mile—to deliver massive, jackhammer blows. Where power lines and fuel tanks lay, circuits occasionally ruptured; the crackle of their sparks was like the sputtering of fuses connected to gigantic powder magazines.

The shock wave struck and raced on, but in passing it stirred other, sequel forces. Somewhere off the crescent of Alaska's southern coast, the sea bottom had heaved and plunged violently, setting millions of tons of water in

SEWARD Secure in his mother's arms, a young survivor rests in a temporary shelter. Eyes still reflect the fear inspired by seismic sea waves, tsunamis, that swept through the port. Honored recently by selection as one of 11 All America Cities, Seward suffered a knockout blow from the seismic sea wave that destroyed docks, warehouses, and rail yards (pages 128-9). When asked what the All America City would do now, the mayor responded, "Work on our second award."







motion. It was the motion of a tsunami, a seismic sea wave, whose effect onshore can be that of a battering ram. The time was 5:36.

In those agonizing moments, the 49th State suffered damage estimated as high as \$750,000,000—slightly more than 100 times what it cost to buy Alaska from Russia in 1867. On the floor of the United States Senate, Ernest Gruening of Alaska declared that the disaster “surpasses in magnitude that suffered by any state of the Union in our Nation’s entire history.”*

Fortunately, the loss of life proved far below first estimates. After three weeks, Alaska announced 115 people had been lost; 4,500 were rendered homeless.

Control Tower Reveals Earthquake’s Power

I arrived at Anchorage International Airport by jet from Seattle two days after the first shock. Like my fellow passengers—many of them Alaskans hurrying home to what could be either minor inconvenience or complete ruin—I spent the flight up the state’s panhandle hunched by a window for a glimpse of the damage. Far below, the land lay seemingly serene and unscarred beneath its white mantle. Experience was soon to teach me that, even during a treetop pass in an airplane, the eye can overlook frightful disaster.

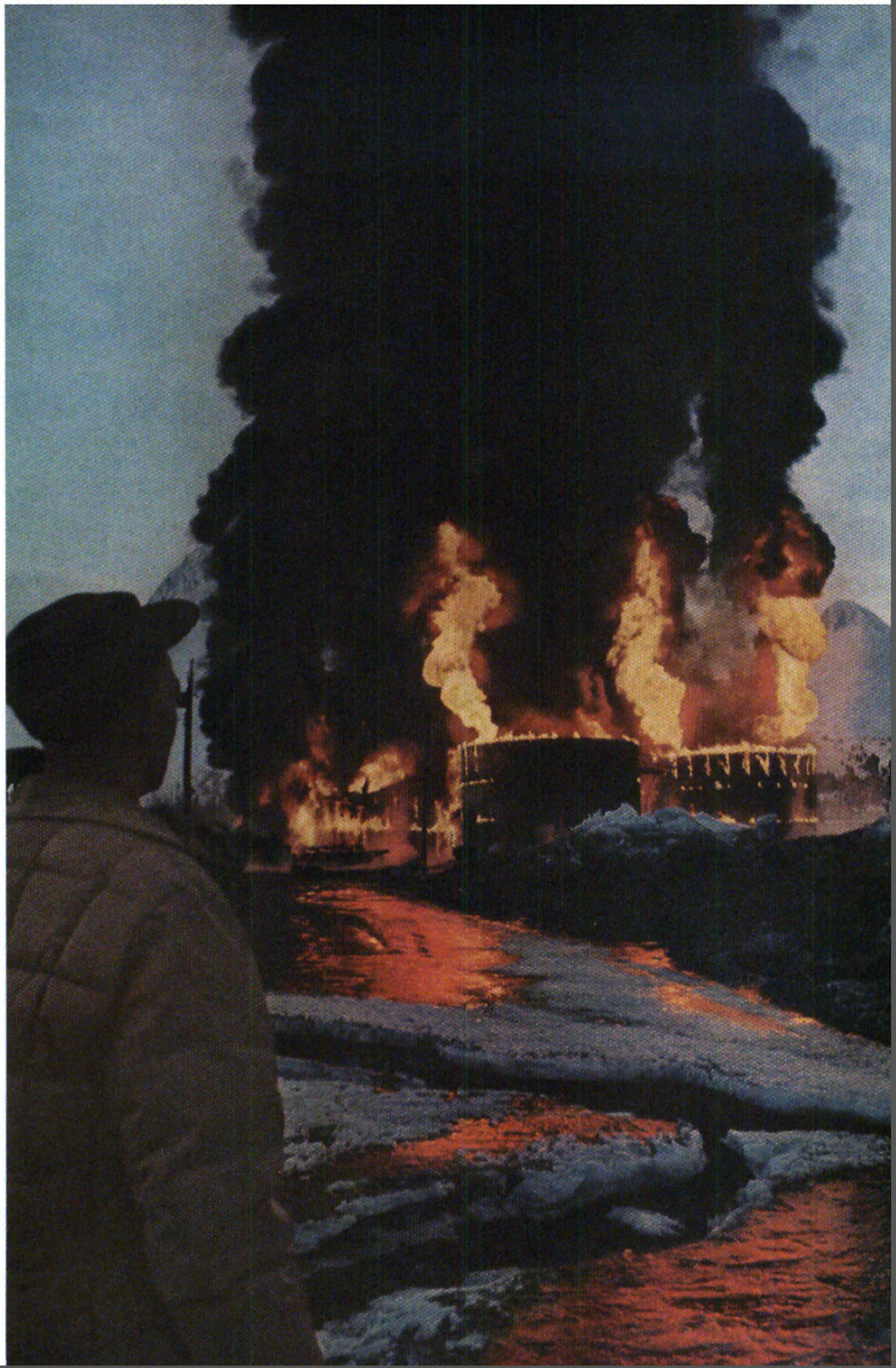
There was no overlooking the Anchorage control tower. It was a sickening jumble of twisted steel girders and shattered glass, in which the controller had died. The capriciousness of the earthquake began to sink in—the terminal beneath the tower seemed virtually unharmed.

Aside from the horror that had once been the Turnagain residential area, Anchorage’s greatest ruin was 4th Avenue, its main street and amusement center (pages 124-5). There was something uncannily selective in the destruction of 4th Avenue. For the most part, the street’s south side is lined with thriving stores, a fur shop or two, and small company offices. On the north side stood a scattering of dingy cafes, tired amusement parlors, and an over-age movie theater.

*Senator Gruening vividly portrayed his state for NATIONAL GEOGRAPHIC in “Alaska Proudly Joins the Union,” July, 1959.

KODIAK Snow’s gentle veil fails to disguise the hideous wreckage that was Kodiak. Quake-spawned floodwaters ravaged the downtown area, sinking dozens of fishing boats and hurling others atop homes and stores, blocks inland from the waterfront. But, like stricken Alaskans everywhere, Kodiak’s people tried to take the catastrophe in stride, and even managed an occasional wry smile. Said one man to City Manager Ralph Jones: “I wished you every success when you campaigned to clean up Kodiak, but this is ridiculous!”

Weeks after the quake, Kodiak’s foundations appeared to have permanently slumped some five feet. Other areas along Alaska’s southern coast suffered similar settling or rising of the land.



In the split second it took the earthquake to flicker the length of 4th Avenue, the shock scythed the ground out from under a score of buildings on the northern, older side of the street (pages 112-13). So neat was the job on the Denali Theater that the building dropped 10 feet below sidewalk level without popping a single lightbulb on its old-fashioned marquee. On the south side of the street the shops and offices quivered, lost a window or two, and stood firm.

Shopper Gropes Her Way to Safety

A block south at 5th Avenue and D Street, in Anchorage's newest department store—a five-story building with solid vertical panels in place of windows—there were still 25 minutes until closing time. Good Friday shoppers had thinned to a handful, and the store had a pleasant, leisurely air about it. Carol Tucker, the wife of George Tucker, a prominent Anchorage builder, browsed among china and bedding on the third floor.

Friends in Anchorage today who know Carol Tucker's story find it hard to explain just how it is that she's alive. Carol has given up trying to explain. I called on her one day not long after the earthquake and found her hobbling about the house in a leg cast.

"It's really a luxury," she said, smiling and tapping the cast with her knuckle. "I tore a few ligaments falling down the escalator in the dark, and the doctor thought they would heal quicker this way."

She is a very pretty woman, in her late twenties. I found it hard to picture her amid the horror of a darkened and crumbling building. As she began quietly to talk, however, the picture grew appallingly clear.

When the lights failed, Mrs. Tucker had stumbled to the escalators and started down.

"I'm not quite sure whether I used the 'Up' or the 'Down' escalator," she told me. "The power was off, and it didn't seem the time to stand on ceremony."

On the way down the first flight, she tripped and fell, perhaps because she refused to brace herself with her hands, but instead kept them clapped to her head.

"I knew I had little hope of getting out of the building alive," she explained, "but if I were knocked unconscious, then I had no hope at all. Things were falling all around in the dark, and I couldn't take the chance."

After what seemed hours, she reached the second floor. It was then that Mrs. Tucker came close to despair.

"The floor was heaving so badly," she said, "that I couldn't stay on my feet. It was like the floors in fun houses, the ones that spin and float up and down." She frowned. "I used to think they were wonderful."

Somehow she managed to climb down the next escalator. On the ground floor, for the first time, she had light to see by from the show windows. Desperately she struggled across the still-rippling floor to an alcove inside the main entrance. She cannot explain why she didn't make a dash for it right then, past the glass doors to the relative safety of the street. But she paused, and a moment later great sections of the building's façade broke loose and sheared down outside the doors like so many guillotine blades (page 123).

One section killed a young man crouched on the sidewalk. Another mortally injured a woman in a passing car. A third slab struck a parked car, reducing it to a height of 18 inches. Carol Tucker turned for the back door.

"I came out in the parking lot," she said, "and I remember a man taking my arm. They say that I passed out then for a second or two. It seems a silly time to have done it."

Bouncing Autos Herald Quake

Looking back, Carol thinks the thing that troubled her most was the loss of her purse on the third floor.

"It wasn't the money," she says, a trifle embarrassed. "It was the identification—if I'd been killed in there without it, my family might never have known what happened."

Older hands than Carol Tucker were momentarily mystified by the earthquake. Joe Kramer, a longtime Anchorage taxi driver, thought his fellow motorists had gone berserk. Automobiles began fishtailing toward him like dodgem cars at an amusement park.

VALDEZ

In a nightmare scene, fuel-oil tanks ignited by sparks from severed power lines splash fire across the cracked, ice-paved land. In the wake of the first great shock, harbor waters rushed landward, then seaward as if someone had pulled the plug in a giant bathtub. The town of 1,100 counted 31 dead and 225 homes destroyed or damaged.



"It was when they started bouncing two feet off the ground," Joe recalls gravely, "that I knew it was more than just the drivers." Sensibly, he parked his cab in an open spot.

Where the earthquake did not demolish outright, it often left grotesque scars. When the rocking died, several of Anchorage's large office buildings and apartment houses showed walls veined with hundreds of branching fissures in patterns that suggested lightning in a summer sky.

Alaskans Call Upon Their Faith

Other buildings offered pathetic contrasts. One 4th Avenue florist shop was snapped violently in two. In the rear half of the shop, tall bouquets of Easter flowers stood serenely untouched in their vases. In the yawning show window, a breeze idly rocked the small wicker Easter baskets slung on ribbons and filled with miniature cotton-wool rabbits.

Anchorage, indeed, was filled that weekend with the spirit of Easter. In the city's agony, more than one Alaskan must have recalled the terrible words of St. Matthew describing

Christ's death upon the Cross: "And, behold . . . the earth did quake, and the rocks rent" (27:51). Prophetically, that dreadful moment, too, had fallen on a Friday—the first Good Friday—at the ninth hour of daylight.

Many reacted from the depths of their faith. The wife of an Army sergeant at Fort Richardson, just to the northeast of the city, remembers standing with her 16-year-old daughter in their violently quaking front yard and hearing the girl say tearfully, "Lord, that's enough now. Please stop it."

Comedy lightened the ordeal of others. On a bluff overlooking Anchorage, Air Force Maj. John Mandeville was taking a nap when the earthquake struck. As the major was putting on his boots, the shock neatly dislodged his home from its foundation and tipped it down the slope (page 126).

"I got the left boot on all right," he explained later, "but when I reached for the right one, it had disappeared. Then I saw one of my oxfords passing by, so I grabbed it and put it on."

Other crises called for invention. In the



Force of thousands of atomic blasts shakes a 500-mile-long swath of the Nation's largest state. Orange bursts mark heaviest hit towns. Huge sea waves, born of the quake's impact, sweep down the west coast of North America and lash Hawaii's beaches. Coastal configurations, rather than distances, determine wave height. A nine-foot wave rolls over Crescent City, California; yet in Puget Sound, 400 miles to the north, water rises only half as high. Scientists speculate that waves up to four feet high in the Gulf of Mexico 15 minutes after the quake were caused by vibrations of the earth.



Aladdin Beauty Palace at 6th Avenue and C, hairdresser Myrtle Barnes had just applied a powerful permanent-wave solution to a customer's hair when the earthquake struck.

"I had to get that solution off," Myrtle told me, "or the lady would have lost her hair. But the earthquake had cut off the water."

I asked how she had solved the problem, and Myrtle blushed.

"I scooped the water out of the tank above the toilet," she said. "It's perfectly clean, and the customer didn't feel like arguing."

Weather Eased Quake's Aftermath

Anchorage, for the most part, will always be grateful for two things about the earthquake: that it occurred late in the day, when few people were downtown, and that temperatures for at least a week following the disaster were normal for March—in the 20's and 30's. Had Alaska had a cold snap—and in the 49th State, March cold snaps can run well below zero—not only would rescue and shelter problems have become nightmares, but urgent repair jobs, such as the splicing of ruptured water mains and gas conduits, would have been dangerously—in some cases, perhaps fatally—delayed.

Alaskans, I learned during those first days in Anchorage, are incurably stouthearted and possessed of a saving sense of proportion. Time and again as I walked through the ruins, I passed homeowners and shopkeepers burrowing among the indescribably forlorn remains of their lives. And almost always as I passed, there was the brief glance upward and the smile. Finally, pausing beside what once had been a home and what now more than anything resembled a giant pile of jackstraws, I asked the owner outright how he managed a smile.

His answer was simple yet perhaps representative of all Anchorage as it faces the challenge of rebuilding:

"It's easy. I'm alive."

Anchorage, for all its suffering, had one great advantage over most of Alaska's other stricken communities—the city stands roughly one hundred feet above sea level. That fact probably accounts for the city's incredibly low death toll. After three weeks, with almost all wreckage searched, authorities placed the figure at nine known fatalities out of a population of 55,000. In terms of cold percentage, the number is almost grounds for rejoicing. There are, after all, towns like Valdez.

The port of Valdez lies at the head of a fiordlike sliver of water some 30 miles from

the open expanse of Prince William Sound. Majestic snow-girt mountains—Valdez calls itself the "Switzerland of Alaska"—shoulder the small community almost into its own deep-water harbor. I flew to Valdez—Alaskans pronounce it "Valdees"—one crystal day in a light Army plane piloted by a National Guard lieutenant, John W. Spalding.

The dark, spruce-tufted islands, home of deer and Alaska brown bear, slipped by in blue water laced with spray and now and then flecked with floe ice. At the mouth of Valdez Arm the first ominous signs—a green plank several shades too bright to have been long afloat, a shattered orange crate, a red-handled house broom—broke the pattern of whitecap and ice. As the fiord narrowed, what

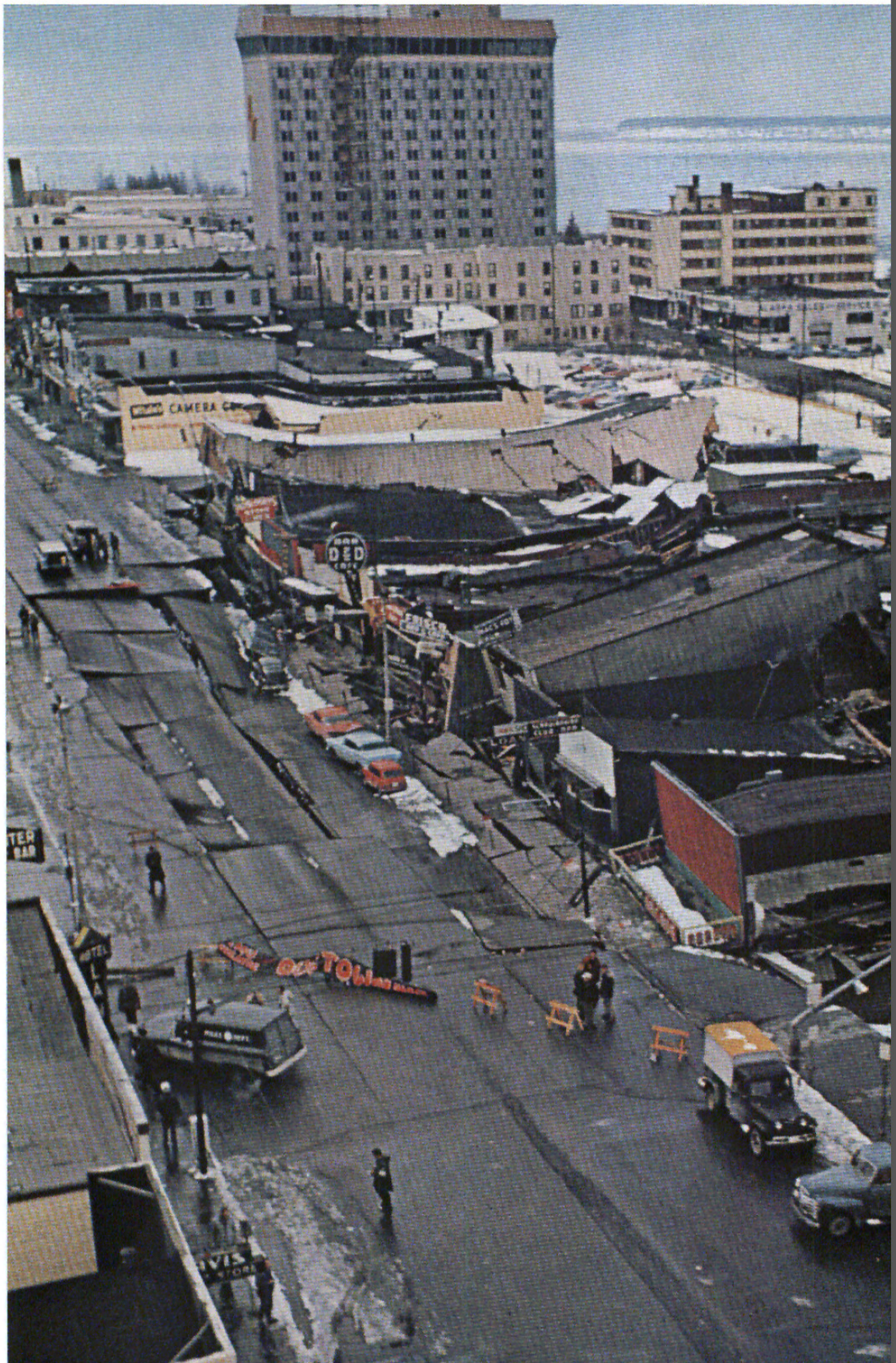
KODACHROME (BELOW) BY WINFIELD PARKS AND
EKTACHROME BY M/SGT. AL VARNES, U. S. ARMY © N.G.S.



"Did it truly happen?" The Honorable Ernest Gruening, junior United States Senator from the 49th State, shares the shock of fellow Alaskans as he surveys damage.

Crashing into the street, the front wall of the five-story J. C. Penney store in Anchorage killed two people and crushed several cars. Opened only a year and a week prior to its destruction, Penney's today plans to rebuild.







Wrenched Remains of 4th Avenue Buildings Attest the Earthquake's Fury

The day in Anchorage was seasonably warm, only four degrees below freezing. A few last-minute Easter shoppers were still in downtown stores; traffic was light on the main streets. Then at 5:36 p.m.: "Oh, my God, what is happening?" cried a motorist as the pavements rippled like ocean waves. For horror-filled moments, Alaska's largest and fastest growing city trembled on the brink of total destruction. But, miraculously, though property damage in Anchorage exceeded 285 million dollars, only nine people are known to have died. The 15-story Anchorage-Westward, city's largest hotel (background), survived almost intact.

No gun-slinger of the old West ever cleared out a saloon faster than the quake emptied the D&D Cafe on 4th Avenue. Overturned chair and plaster-dusted cards face up on the table depict the frantic exodus better than words.



KODACHROME (OPPOSITE) BY MARSHALL LOCKMAN, BLACK STAR, AND HS EKTACHROME BY W. E. GARRETT © N.G.S.



KODACHROME BY W. E. GARRETT, NATIONAL GEOGRAPHIC STAFF © N.G.S.

Torn in two when the earth opened at its roots, a birch tree testifies to awesome forces that split the Government Hill section of Anchorage. Red house slid 70 feet down the slope, carrying its owner, Maj. John Mandeville (in green jacket).

had begun as random debris thickened, until at last the shoreline became fringed with a ghastly gruel of wreckage and ice.

The tragedy of Valdez is only partly due to the quake (page 118). Despite the hammering the town took, it lost no greater proportion of its homes and buildings than many another Alaskan community. What brings a stricken look to the eyes of Valdez residents even today is mention of the wave.

It came up the fiord, just after the earthquake, like some monstrous sea creature. Witnesses differ over its appearance—some say it came as a fearful, instantaneous rising of

the tide; others recall a mountainous wall of water. One thing is certain: In the triphammer impact of the wave and its terrible backwash, the pier at Valdez, with 28 stevedores and on-lookers, vanished forever.

"One second she was there, the next she just wasn't," Jim Aubert told me, still in tones of wonder. "I saw maybe a dozen people turn and break for the beach, but she was a long pier—maybe a hundred yards—and they hadn't the littlest chance. She was sucked under all at once, like—well, just like the bobber on a fish line when a big one hits."

There was a catch in his voice. "My eyes can't seem to get rid of it."

Disaster and miracles ran together that day. S.S. *Chena* "bottomed" three times—touched down with her keel on the harbor floor. The first drop sheared her lines clean, and with unimaginable skill and luck, her captain rang for power, got it, and bounced off the bottom twice more before he could stand down the fiord, running a blockade of derelict fishing boats and insane currents to the safety of open water. I asked Bernard Whalen why the ship hadn't broken up. He thought a moment and then shook his head.

"Just wasn't our time, I expect."

Valdez that day, and for many days after, was more ghost town than a living community. Because the earthquake had knocked out the water and sewage systems, all but about 50 of the 1,100 residents had been evacuated. I joined the 50 for lunch at a mess hall in the town's nursing home. At the height of the meal, a strong tremor—one of more than a thousand that occurred in the week after March 27—rattled the building. But fear had done its worst and passed on. Dutifully, yet wearily, everybody got up and unhurriedly filed to the doors.

Unlike Valdez, Kodiak felt the earthquake's jar well before the wave. To Karl Armstrong, editor of the weekly *Kodiak Mirror*, walking during the tremor was like marching across a field of Jell-o. Yet Karl was determined to

Serpentine fissures furrow the snowscape adjoining Anchorage's 9th Avenue (right). Ruins of a new but still-unoccupied apartment house strew the ground at upper center; scores expected to move into the six-story building the following week. Old Providence Hospital, now a nursing home (top), fortunately suffered only minor damage.





reach a phone, to cover what he thought at first was a great, but strictly local, story.

"But when I tried to get Anchorage," he told me, "the line was blocked. I knew then that the quake was everywhere."

Like Valdez, Kodiak had a wave. Actually, it had more than a dozen of them—Karl stopped counting after that—but only four really mattered. The first was the incredible, almost silent tide, the one that temporarily marooned Lieutenant Bernosky and his friend. Coming that way—smooth and fast but without a crest—the wave probably saved countless lives in Kodiak, for it warned

the 5,000 townspeople to take to high ground.

"We got out," Karl recalls, "and most of us gathered on Pillar Mountain with our blankets and our flashlights. After a while, Pillar looked like a hill in summer with hundreds of fireflies on it."

Kodiak's King-crab Fleet Swept Away

Down in the harbor, Capt. Bill Cuthbert of the 131-ton crab boat *Selief* felt a jar as he was having supper in the galley, and silently damned all greenhorn fishermen who couldn't steer clear even of an 86-foot boat. By the time he got on deck, most of Kodiak's 160 crab and



PAINTING © NATIONAL GEOGRAPHIC SOCIETY

Raging Wall of Water Topped by Flaming Oil Sweeps Into Seward

Fleeing for their lives, dockworkers race frantically for high ground. Behind them a thirty-foot-high wave, covered with burning oil, surges at a speed of more than 100 miles an hour across the railroad tracks and into the port's east end. Locomotives and boxcars, their wheels shorn off by the impact, hurtle ahead of the comber. Twisted rails, oil drums, and pier pilings ride the lip of the fiery flood, second and largest of a succession that swept over the ill-fated town.

Railroad agent Earl Chambers witnessed this never-to-be-forgotten moment. He watched the wave swallow the workshop at left and bear down on his automobile as he and his wife sped for the hills.

Artist Pierre Mion—one of a six-man NATIONAL GEOGRAPHIC team that flew to Alaska to cover the disaster—interviewed Mr. Chambers and other residents on the spot. From their recollections he re-created the climax of Seward's agony.

salmon boats were bucking at their moorings. Quickly, unbelievably, the first high tide disappeared, and for a brief time Kodiak's fleet looked as if it were all in one gigantic dry dock. Then the sea came back, and in moments Alaska's largest king-crab fishing center was all but wiped out, boats, canneries, and all.

No one argues about Kodiak's big wave—it was a cresting, thirty-foot-high wall of water that thundered up the channel, lifting 100-ton crab boats on its shoulder and flinging them like empty peanut shells over the harbor's stone jetty and sometimes two or three blocks into town (page 116).

"Couple of boats went over the jetty and come back without a scratch," one crab-boat skipper remarked dryly. "But that's nothing—Kraft's store, she done it twice."

Another saying grew up in town that night: "Come to Kodiak to see the tide come in and the town go out."

Selief logged a good many hundreds of yards by wave action that night. At one point Captain Cuthbert remembers a breather between waves, or tides, when he ran out a mooring line to the nearest thing at hand—a telephone pole. Finally he came aground several blocks in from the waterfront.

“About that time the marine operator was calling boats on the radio,” Bill Cuthbert said with a faint smile. “When she got to me, she says, ‘Where are you, captain?’

“So I told her—‘By dead reckoning, in the schoolhouse yard.’”

Another crab fisherman managed to anchor his boat in the harbor channel after the big wave came in, but found himself harassed by debris coming out on the backwash.

“I didn’t mind the little stuff,” he told me, slightly aggrieved, “but then I got hit by the Standard Oil Company building. Lousy thing, she cracked my bow.”

As I walked through Kodiak a few days later, I could well believe the figures—77 of

160 crab and salmon boats gone or fearfully mauled, two of three canneries swept away, and the other unable to operate for two to three months.

Seagoing Store Survives Disaster

Benson Avenue, Kodiak’s main street, was a nightmare jumble of heeled-over boats and crippled buildings, jammed together prow to window sill. In the thick of it all was the town’s conversation piece—the much-traveled Kraft’s general store.

Several residents of Kodiak insist that they saw Kraft’s picked up on the first tide to sail majestically out on the ebb, clearing the jetty neatly. The store then altered course, they say,

Pre-quake port of Seward—a section photographed last September by a United States Army reconnaissance plane—shows rail yards, docks, oil tanks, and a few homes.



floated back into port, reversed, streaked out once more and back, and came to rest at last, as one fisherman put it, "only a couple hundred yards from her mooring."

I never found anyone who would swear to the story, but from the look of Kraft's that day on the beach, I could believe she had been to sea.

Kodiak's story was widely reported, and offers of help poured in from the "Lower 48," as Alaskans fondly call the other mainland states. One letter came from the manufacturer of Kodiak's parking meters. The president graciously offered free replacements.

"Thanks for your kind letter about the meters," the city manager promptly wrote back.

"How about a few streets and sidewalks to go with them?"

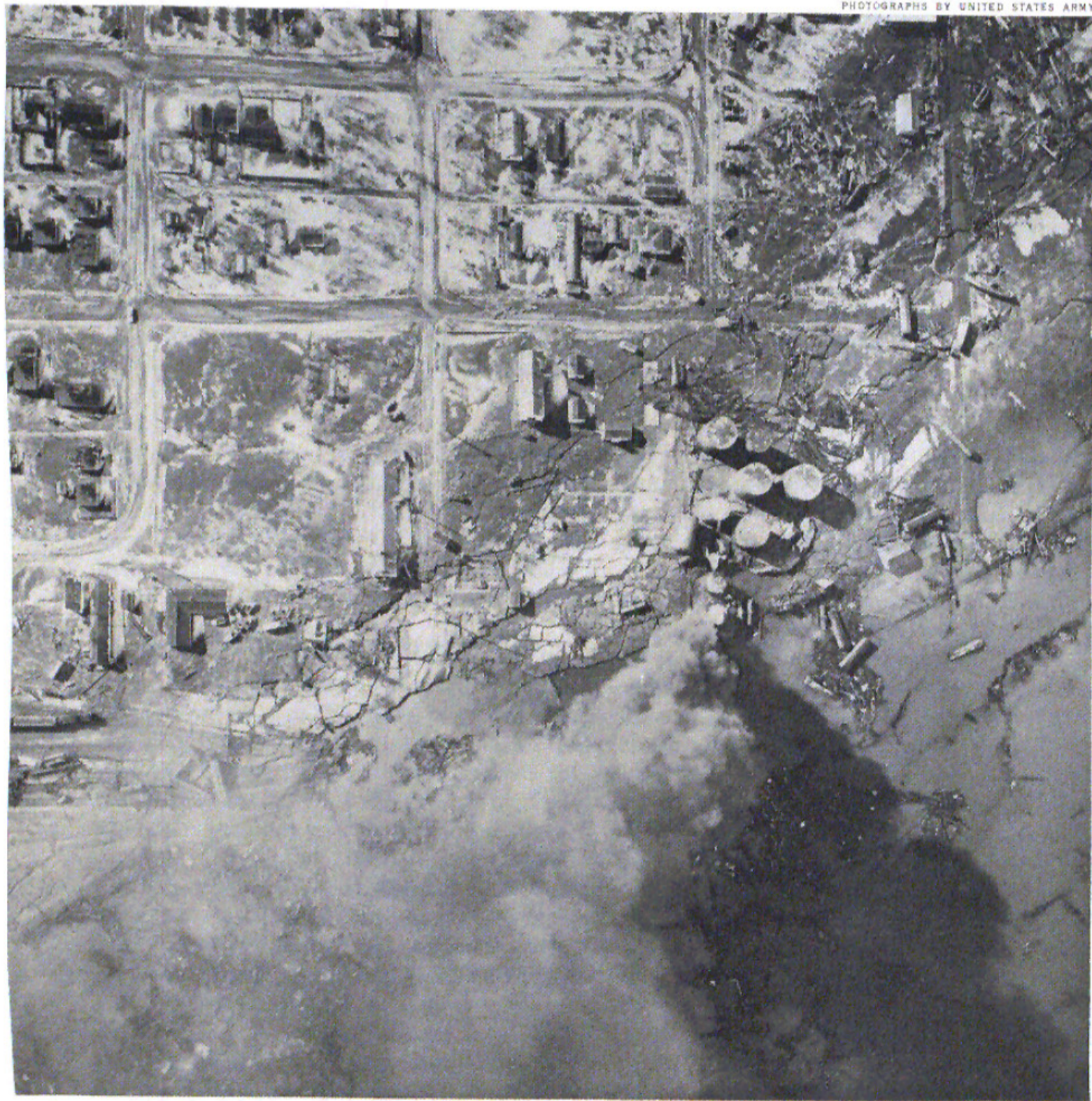
Kodiak town was far from the only segment of Kodiak Island life to take the earthquake hard. Alf Madsen, a hunting guide, described the back areas.

"Around the lairs where the big Kodiak bears had been hibernating," he said, "the tracks showed the animals were troubled. Usually when a bear leaves hibernation, his tracks meander, like he was still getting the sleep out of his head. This time those tracks went straight as an arrow downhill, with a lot of big leaps in between. Those bears woke up in a hurry."

By an eerie coincidence, down the coast

Pall of disaster funnels skyward from still-blazing fuel tanks in Seward one day after the earthquake. All dockside facilities have vanished, swept away by the tsunamis.

PHOTOGRAPHS BY UNITED STATES ARMY





EKTACHROME BY WINFIELD PARKS © NATIONAL GEOGRAPHIC SOCIETY

Expressions mirroring their calamity, the homeless and dispossessed file through a Civil Defense emergency kitchen at Seward. Even as aftershocks rocked the state, Army, Navy, Air Force, Coast Guard, and commercial transportation rushed in tons of supplies.

from the town of Kodiak, a half-forgotten legend seems to have foretold disaster. It came about in Kaguyak, a fishing village of Aleuts, Alaska's hardy mixture of Eskimos and early Russian settlers.

On a low-level aerial tour of Kodiak Island's badly battered east coast, I spotted what had once been Kaguyak's trim harbor and cluster of a dozen homes. The homes were strewn along three miles of reed bank bordering a lagoon behind the village site. The seismic waves had breached a barrier of land seaward of the community and simply bulldozed Kaguyak into extinction.

It was a wonder that anyone survived, yet in Anchorage a few days later I found 38 of the original 41 villagers living in a grade school turned temporarily into a refugee camp. Among the three dead or missing was Simmie Alexandroff, the village chief. I talked with the newly elected chief, 26-year-old Roger Williams.

Williams, a slender, quiet-spoken man with

faintly Asian features, began his account of that terrible afternoon seemingly with little emotion. It was only when I glanced down to make a note that I realized his fingers were desperately locked together and that both hands trembled pathetically.

Third Wave Washes Kaguyak Away

The story of Kaguyak is repeated in the fate of many small villages along the Gulf of Alaska—the initial high tide with its warning to the experienced, the fearful ebbing of the water, and then the monstrously high wave, thundering ashore and carrying everything movable—boats, houses, even fair-size churches—into terrible oblivion with it. What makes Kaguyak different is that it died on the third, rather than the second wave, and that Roger Williams had a premonition it would.

Like experienced Alaska fisherfolk, when the tremor brought the first high tide, Kaguyak's two-score villagers took to the slope of a nearby hill. There they waited as the water

receded once, knowing they would probably spend the night there.

When the water had come in and withdrawn a second time, far below normal ebb tide, several of the men, Williams included, made a dash for the village to pick up essentials for the coming night—flashlights, a small portable radio, blankets.

Williams split off from the main party at his house, rummaged quickly for what he wanted, and then sprinted back among the sodden but still-standing houses for the refuge on the hill. Only then did he realize that the others were still in the village. But it was too late.

Dories Offer Only Hope

Those on the hill watched in horror as a terrible wave mounted offshore and swept in on the village. The six tiny figures trapped in the open did the only thing they could—they raced for two small dories beached beside the houses, bravely hoping somehow to ride out the incredible wall of water.

The miracle is that three of the men managed it, abandoning their boat as it swept past the hill in the wave's fantastic backwash. One villager was found the next day, drowned where he had been pinned under the roof of a house. The other two had vanished.

All through the account, Williams seemed to hint at some foreknowledge of the third wave and its terrible danger. Finally I asked him outright if that was so, and he nodded his head sorrowfully.

"All of us should have known," he said. "Once long ago—too long to count—our village was wiped out in such a way. And I remember the old people saying always, 'The third wave is the worst—watch out for the third one.' They were right."

It fell to Mrs. Alexandroff, Simmie's widow, to compose an epilogue to the tragedy. Asked by refugee workers for a formal statement of her loss, she answered with great dignity: "Simmie my husband is a fisherman, and he was swept out to sea and die. I didn't see him go, but I know he gone as we don't find him after last wave."

On my way out of the school I met another Kodiak Islander, Mitchell Inga, aged 9. Like the other Aleut children there, Mitchell was bright of eye and quick to laughter—reassuring signs that among the youngest, at least, memories were beginning to fade and soften. Mitchell had clearly been having some

fun with his Anglo-Saxon benefactors, for when he saw me, he raised his hand in the best tradition of the old West and said, "How! I'm an Indian."

"You're nothing of the kind," I said. "You're an Aleut, and you know it."

"That's right," he answered, delighted. "From Old Harbor. Who are you?"

Old Harbor was a village 30 miles from Kaguyak that had been almost as completely wiped out. From the air I had seen its ten forlorn and battered buildings—all that remained of the village's original 30 homes—and a derelict fishing boat or two in the wreckage-choked harbor. Of its 240 residents, 227 had been evacuated to Anchorage.

"I was in an earthquake," Mitchell said proudly.

"What does an earthquake feel like?"

Some of the laughter went out of Mitchell's eyes, and he thought a long moment. "It feels," he said gravely, "like the ground will never stop."

I asked him then if he wanted to go back to Old Harbor. Most of the Aleut people, I had found, were fiercely loyal to their villages and planned to return as soon as possible. But not Mitchell.

"No," he said, rubbing his stomach opulently, "it's fine here. Lots of good stuffs to eat. And besides,"—once more his voice took on a solemn tone—"back there the mountains are split, like my house."

Seward Wrecked by Water and Fire

In the days following the earthquake, there was a touch almost of macabre pride among the towns that were hardest hit. In any competition for the most ruinously blasted, however, Seward would have swept the field. The small port and railroad terminus south of Anchorage on the Kenai Peninsula almost went under from the triple blow of earthquake, fire, and wave (painting, pages 128-9).

Seward's waterfront had the dreadful look of something worked over by a blowtorch. What had once been freight yards now was a terrible gray wasteland, broken only here and there by the barely recognizable shapes of melted oil tank cars and boxcars. Near the site of a former oil storage tank farm, a 60-ton locomotive had been overturned and fused with two freight cars into some giant suggestion of a Chinese puzzle.

The work of fire has at least a certain cleanliness to it. Water's devastation has none. Back



Wading icy, ankle-deep water in the devastated dock area at Valdez, military pallbearers move the weighted body of a longshoreman to a boat for burial in the outer bay. Flooded ground prevented normal interment. Happily, Alaska's figures for loss of life proved far below the first estimates. Only 115 people perished in the earthquake and seismic sea waves.

Alaska Governor William A. Egan (right) arrives in his home town, Valdez; he finds it badly damaged, his own house included.



EKTACHROME (OPPOSITE) BY MARSHALL LOCKMAN, BLACK STAR,
AND KODACHROME BY MAX A. HAUETER © N.G.S.

of Seward's burned-out no man's land ran a broad and sickening belt of smashed houses, upended freight cars, flattened automobiles, and boats with their backs so badly broken they had an almost surrealistic look.

Gene Kirkpatrick and his brother Jim, one a railroad man, the other a stevedore, described the holocaust that had been Seward that afternoon and night.

"The lid blew off in the storage-tank area almost the first thing," Gene remembered. "Then, when the fire was really roaring, the wave came up Resurrection Bay there and spread it everywhere. It was an eerie thing to see—a huge tide of fire washing ashore, setting a high-water mark in flame, and then sucking back."

To Jim Kirkpatrick, perhaps the most memorable sight in a night few will ever forget came just as dark crept over the town.

"We had lost our waterfront by then," Jim said, "and a lot of the snapped-off pilings were floating around upright, because their lower sections were waterlogged. Then the top sections with all that coating of tar and oil caught fire, and when it got dark, you could see them out on the water, like a string of candles on Resurrection Bay."

For many years Seward's fortunes have been joined to the 470-mile-long Alaska Railroad. The town provides the main transfer point for oil and other cargo from ship to rail and thence into the state's vast and hungry interior. Seward residents insist that without reconstruction of the port and the rail line—a job that may run beyond 20 million dollars—the town cannot survive.

The blow would be ironic for Seward. The week after the earthquake, the community was to have received an All America Cities Award for industry and civic improvement.

"That's all right," one Seward resident answered grimly when I offered my regrets. "That bay out there and the pass behind the

town aren't named Resurrection for nothing."

One of the last flights I took in Alaska was a search and rescue sweep by helicopter among the islands in lower Prince William Sound. Nearly a week after the earthquake, there were still a few remote settlements—some no more than a single family—that had not reported in, and the Army and Air Force were both flying sorties at the request of the Alaska Government.

The Army Piasecki H-21 swung southeastward from Anchorage over Turnagain Arm and headed for the town of Whittier. We passed low over burned-out oil storage tanks, then for more than an hour we swept the shores of islands without seeing any sign of life. At last we came to Chenega Island and began a circuit from the south.

Pilings Mark a Vanished Village

Quite suddenly below us there was a single red roof and a twin-engined amphibian beached nearby. We banked for a landing, and I could see the neat white frame building beneath the roof, with a wide clearing all around.

The pilot passed word back that it was Chenega village, but I knew he had made a mistake. Chenega was listed as a fishing settlement of some 80 inhabitants and more than 20 homes. I should have noticed that the single building below was perched on a bluff, and that the clearing around it had a peculiar fringe.

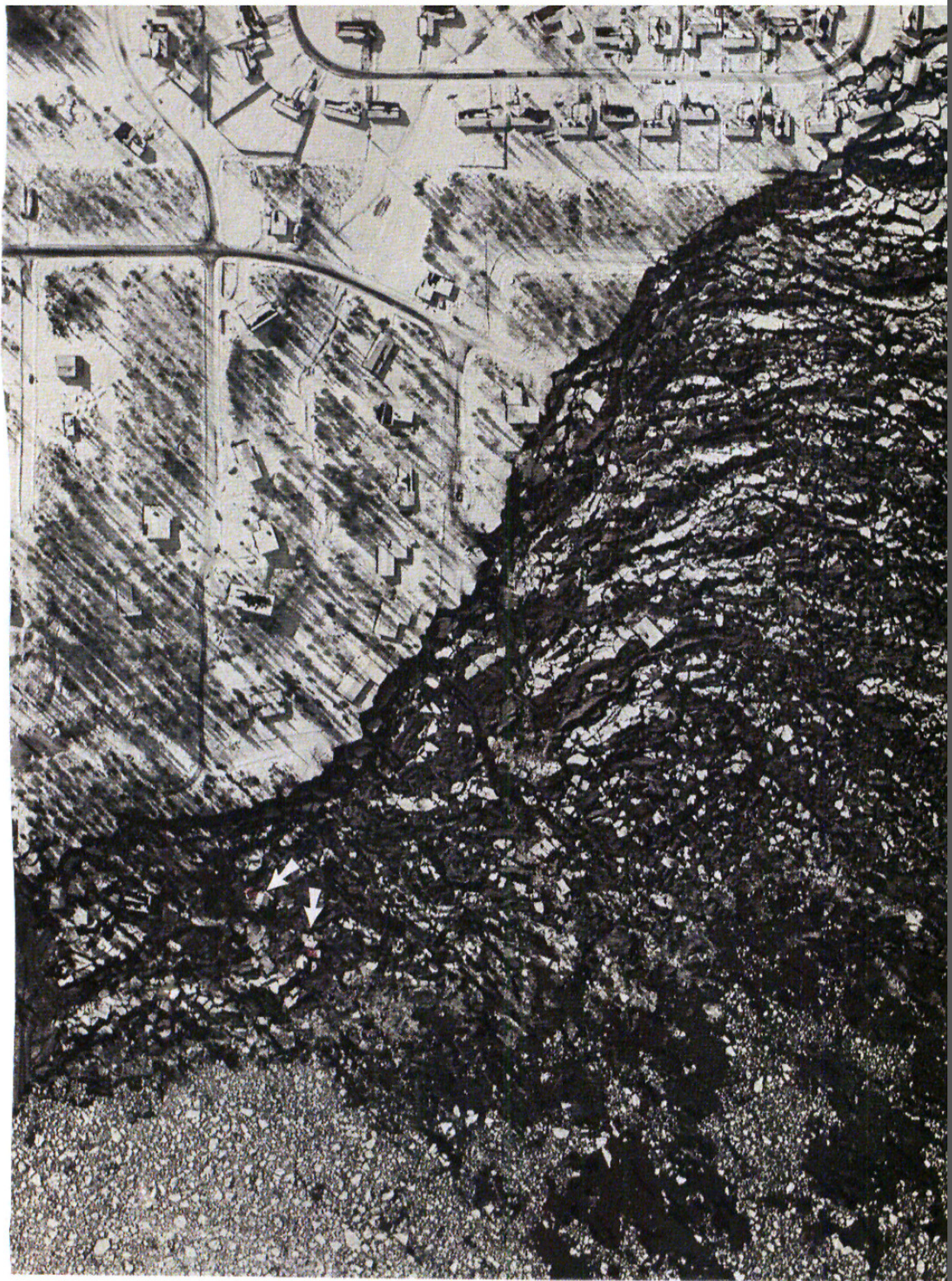
The building was Chenega's undamaged schoolhouse, and the clearing with its fringe had been Chenega. As I stepped out of the helicopter, I faced five or six acres studded with stumps.

For a moment I had the impression of a stand of timber cut to the last tree, then I realized that they were pilings. The pilings had kept Chenega off the cold Alaskan ground, and when the time came they had



TURNAGAIN

Waves of tortured earth, whitecapped with snow, flow into the waters of ice-clogged Cook Inlet. Lengthy shadows cast by early-morning sun streak the face of Anchorage's most heavily damaged



ANSCOCHROME BY U. S. DEPARTMENT OF COMMERCE, COAST AND GEODETIC SURVEY

residential section. White arrows locate largest remaining segments of the home of the Lowell Thomas, Jr.'s, strewn over two hundred yards.

Mrs. Thomas's unforgettable story begins on page 142. Aerial photograph will aid map makers in revising coastal charts made obsolete by the quake.



EXTACH

held it up for the tsunami as a golf tee holds a ball for the club.

All the homes had been swept away. When the wave caught Chenega, it simply plucked it forever from sight. There are no miraculously comforting figures to Chenega's death toll. Of 80 Aleut villagers, 23 were lost, 13 of them children. The amphibian on the beach carried a U. S. Bureau of Indian Affairs team who told us the story gruffly.

There was nothing to be done for the village—the survivors had already been evacuated to Cordova, across Prince William Sound. We gave the amphibian a push off the beach, then lifted off in our helicopter.

My last few days in Alaska a friend introduced me to Governor William A. Egan on

one of his inspection tours of the disaster areas (page 135). I remarked that the world knew only too well what Alaska had lost, but I wondered if the 49th State could find any comfort in its misfortune. The Governor's weariness dissolved in a smile.

Alaska Turns to Tomorrow

"Yes," he answered. "To begin with, thousands of new friends. But even more important, Alaska has found a reaffirmation of the spirit we all knew was in her people but that sometimes gets buried—the same spirit that tamed the land and that started rebuilding it the moment it stopped shaking."

It was no idle statement, I realized later, as I thought back over the Alaskans I had



EARTHQUAKE WAVES
radiate from the focus. Body waves foretell arrival of slower, destructive surface waves. Primary waves can penetrate the core; secondary waves are always deflected.

FOCUS OF EARTHQUAKE: birthplace of the main shock. In the March 27 Alaska quake, it lay approximately 12 miles within the earth. The epicenter is the surface point directly above the focus.

INNER CORE
believed to be solid metal at temperatures up to 10,800° F. Diameter, 1,700 miles.

OUTER CORE
believed to be molten metal at temperatures up to 7,200° F. Thickness, 1,300 miles.

MANTLE
probably composed of igneous rock. Temperatures range from 1,300° to 5,000° F. Thickness, 1,800 miles.

CRUST
composed largely of basalt overlaid with granite and sediments. Thickness under oceans, 3 to 6 miles; under continents, 18 to 30 miles.

OUR RESTLESS EARTH

By MAYNARD M. MILLER, Ph.D.

WHEN THE EARTH SHOOK, the Algonquian Indians used to say, the Great Tortoise who supported the world was shifting his weight. Aristotle had an equally mistaken notion: He thought earthquakes were caused by powerful subterranean winds.

What really does happen when the ground trembles violently, causing destruction and suffering as it did in Alaska on last Good Friday? Scientists still do not know for sure. But we have theories.

A simplified cross section of the earth shows four regions: inner and outer cores totaling about 4,300 miles in diameter, believed to be largely iron and nickel; then a mantle of rock, about 1,800 miles thick, that is neither liquid nor solid, but plastic, so that it yields or flows with infinite slowness under pressure; and, finally, a solid, generally brittle, outer crust, like the shell of an egg, only 3 to 30 miles in thickness.

Today's most widely accepted theory holds that many quakes are caused by titanic shifts in the crust along cracks or fracture lines called faults. Portions of the crust are under constant tension, like a bent bow. At frequent intervals,

when the strain becomes intolerable, the rock gives way at some weak point, often far beneath the surface.

As the crust makes this sudden shift, it releases pent-up energy in enormously powerful waves that make the whole earth vibrate like a giant bell. Some of the waves circle the globe; others may pass completely through the earth at speeds of more than eight miles a second. All record their passing in the jiggling of pens on sensitive measuring instruments called seismographs.

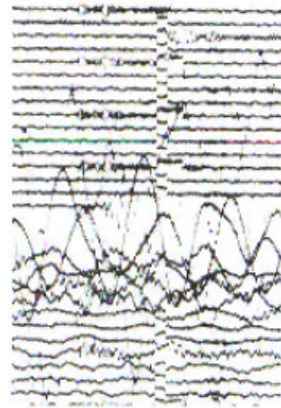
Here is a sample of the signature of the Alaska earthquake, as recorded by a seismograph at Georgetown University in Washington, D. C., 3,300 miles away.

But what creates these enormous stresses in the earth's crust? Years ago it was thought that the earth was cooling; as it shrank, the crust presumably buckled and cracked. Today most geologists believe exactly the reverse: The earth's interior is a mighty furnace, producing prodigious heat through the breakdown of radioactive elements such as uranium and thorium. I have felt that heat two miles deep in a mine in the Kolar gold fields of Mysore, India. There the rock walls registered 156° F.

Tests indicate that heat increases steadily with depth; at the base of the crust it may reach 1,300° F., the temperature of molten aluminum. Only enormous pressure keeps the mantle from becoming totally liquid.

Possibly, as some geologists believe, this heat causes expansion of the earth, stretching the crust like a balloon. Or it may be, as others suggest, that temperatures and pressures cause abrupt molecular changes in the rock, just as these forces can change graphite into diamond in the laboratory. Accompanying changes in volume could cause uplift or subsidence and a shifting of the crust.

Still another theory—most attractive to me—pictures the plastic material of the upper



mantle seething in slow convection currents, somewhat like jam boiling on a stove. These currents, though infinitesimally slow, drag against the solid crustal rocks, in places pulling and torturing them until they rupture, with shocking release of power.

Whatever the actual mechanisms that trigger earthquakes and their aftershocks, they seem to be associated with the same forces that build mountains. Preliminary reports indicate that some of Alaska's coastal land mass has been thrust upward six feet or more by the Good Friday quake.

Earthquakes also are intimately related to volcanoes. Four out of five of the world's shocks are recorded on the Pacific rim, called the "rim of fire" because of its many volcanic peaks. Alaska suffers because it lies within this earthquake belt, one of earth's most unstable areas.

Many active fault lines constantly threaten Alaska with tremors. As the diagram shows, four of these lines—the Lake Clark, Cook Inlet, Seldovia, and Fairweather Faults—are bent and compressed in the recent quake region. Three converge near Anchorage. This ominous pattern may well be the key to the Alaska shock.

However, it was not the rock slippage itself, but rather the vibration, sliding, and settling of loose glacial-alluvial deposits, that caused the heavy damage. These deposits respond to shocks much as grains of sand dance on a board when it is struck.

Earth Trembles Many Times a Day

During the course of a year there may be a thousand shocks that do some damage, and another 100,000 that could be felt by human beings. But the 1,200 seismograph stations around the globe may detect half a million tremors in 12 months' time.

This constant quivering of our restless planet, strange as it seems, has beneficial as well as destructive results. Seismic waves provide almost our sole means of studying the earth's deep interior.

But, more important, repeated uplifting of earth's crust, with its attendant quakes, is essential to life as we know it. Mountains are constantly eroding; if they were not raised again, the world would become an awful place of stagnant seas and swamps.

Thus these seismic tremors that sometimes alarm and hurt us are the inexorable ticks of our planetary clock, the pulse beats of earth. Were they to stop, ours would indeed become a dead world.

* * *

The Author: Maynard M. Miller, Professor of Geology at Michigan State University, has twice made glaciological studies under grants from the National Geographic Society's Committee for Research and Exploration—in Alaska in 1961, and with the 1963 Mount Everest Expedition. In Alaska he studied earthquake effects on glaciers, following up the classic Society-sponsored research of Ralph S. Tarr and Lawrence Martin in 1909-11.

A woman with dark hair, wearing a dark jacket, is shown in profile, looking out over a snowy, rocky landscape. The background features a body of water and a line of trees under a clear sky. The overall tone is somber and reflective.

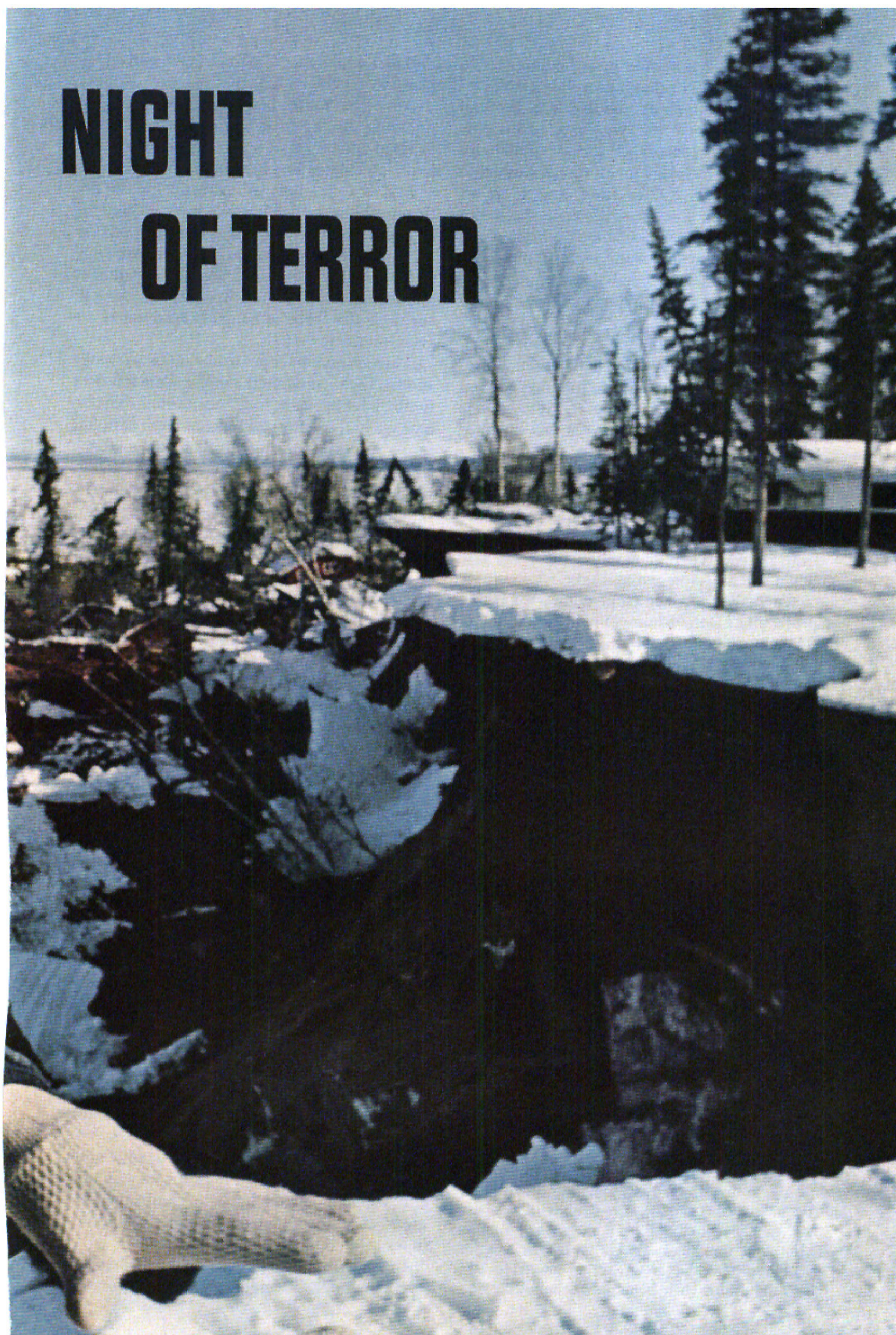
AN ALASKAN FAMILY'S

*"A crack opened
between Anne and me.
David screamed:
'We're going to die!'"*

MRS. LOWELL THOMAS, JR.,
*still stunned and disbelieving four days after
the disaster, stands on the street that
once led to her house. Its ruins lie on the
Cook Inlet beach far below. On the
following pages, Mrs. Thomas tells
how she and her children miraculously
escaped when both house and lot slid
from their clifftop perch.*

KODACHROME BY W. E. GARRETT © N.G.S.

NIGHT OF TERROR



I'LL START from the grim beginning. On that bad Good Friday, Lowell left for Fairbanks in our plane about 3 p.m. We had had a snow storm for two days, and it was just letting up enough for Lowell to take off.

About five o'clock I went upstairs with the children to watch TV. Dave and I sat on Anne's bed for a while with her—she had a headache. Of course we all took off our shoes.

David is six, and Anne eight. They both were in cotton shirts and pants, and I wore a red wool dress and nylon stockings.

House Collapses Behind Fleeing Family

It was a little after 5:30 that I heard a rumble. I had heard one before, just preceding a mild earthquake last summer, but we also hear frequent rumbles from the big guns firing at the Army base.

Something instantly told me that this was another earthquake. I leaped off the bed, yelling "Earthquake!" I grabbed Anne and called to David. They both moved with lightning speed. We had reached the front hall when the house began to shake.

We rushed out the front door with David protesting, "But, Mommy, I'm in bare feet. . . ." Bozie, our 80-pound German shepherd, must have slipped out with us.

We were about ten feet beyond the front door when it suddenly seemed that the world was coming to an end. We were flung violently to the ground, which was shaking up and down with the sharpest jolting I've ever felt. It seemed an eternity that we lay there in the snow.

Within a few seconds the entire house started to fall apart, splitting first right at the hallway we had just come through. We heard the crashing of glass, then that horrible rending sound of wood being broken apart. The trees were crashing all about us, adding to the terrible din.

I looked toward the car to see if it was shaking as much as during the last quake,

The Author: Tay Pryor Thomas's life has been filled with adventure ever since, as a girl, she flew to far parts of the world with her father, an airline executive. Marrying Lowell Thomas, Jr., she set out with him in a single-engine plane across Africa and Southwest Asia; they described their 45,000-mile odyssey in *NATIONAL GEOGRAPHIC* in "Flight to Adventure," July, 1957, and "Sky Road East," January, 1960. Then the Thomases, with 2½-year-old Anne, flew to Alaska to make a television film. Mrs. Thomas's book *Follow the North Star* appeared in 1960; the same year they moved to Alaska, establishing their home at Anchorage.

and as I watched, the garage collapsed on top of it!

Now the earth began breaking up and buckling all about us. A great crack started to open in the snow between Anne and me, and I quickly pulled her across it toward me.

This was the only moment during the entire quake when I felt any panic. Seeing that fissure widen next to me was the exact picture I'd always had in my mind of what happened in a violent earthquake. And the fact that it opened between me and Anne, threatening to separate the three of us, truly frightened me for a moment.

Then our whole lawn broke up into chunks of dirt, rock, snow, and ice. We were left on a wildly bucking slab; suddenly it tilted sharply, and we had to hang on to keep from slipping into a yawning chasm (painting, pages 146-7). I held David, but Anne had the strength and presence of mind to hang on by herself. Although crying, she was still able to obey commands—thank God, because poor Dave was hysterical, and I could only hold him tightly.

Now the earth seemed to be rising just ahead of us. I had the weird feeling that we were riding backward on a Ferris wheel, going down. I always hated riding on them anyway. And I also had the brief fearful thought that we were falling down into the sea. (Our beautiful home had stood on a high bluff about a hundred yards from Cook Inlet.)

The worst of the rocking stopped, and as I looked around, I realized that we and our entire property had fallen down to sea level. I could see nothing left of the house, except part of the roof, and it looked terribly close to the water.

Trapped Between Cliffs and Sea

I remember noticing the kids' bright-yellow and red swing set perched on a cake of ice of its own, but all I could think of was that the water would probably rise, and we would be trapped. The cliffs above us were sheer, with great sections of sand and clay constantly falling. The jumbles of earth all about us had stopped moving, but large hunks were breaking apart everywhere.

The children were both hysterical, crying and saying over and over, "What will we do? We'll die. . . ." I knew we'd have to move now, carefully, but fast. I had to find a way up that cliff, and we would have to climb over the great chunks of earth without falling into holes and crevasses.

I knew I couldn't carry both children, or even one—Dave weighs a chunky 75 pounds,

and Anne is a husky eight-year-old. So my first job was to calm them down and explain what to do. I told them that we would get out all right, but that we had to stay calm. (It's still an awesome thought to me that I never felt calmer—I had often heard that this happens to people at times of great crisis.)

I suggested that first we say a prayer asking Jesus to take care of us and guide us, and both children stopped crying, closed their eyes, and fervently pleaded with Him to take care of them.

This had an extraordinary effect on them and on me. Anne was ready now to climb on her own, and although David was still worrying about his bare feet and frostbite, he had stopped crying.

Neighbor's Children Call From Car Roof

The next 15 or 20 minutes were one great nightmare as we clambered up and down the great slabs of earth and snow. I found one large tree leaning against the cliff and thought for a few moments that we might be able to shinny up it (page 149).

Anne made a brave attempt but climbed only a few feet. I knew Dave could never do it, so I looked for another way up. We started walking to the right, staying far enough away from the cliff to avoid the still-falling sand.

It was then that I first noticed Dr. Perry Mead's house—he was our next-door neighbor. Nothing showed but the flat roof. I could see two of their little children standing on top of a car. (There were five kids in the family.) They were crying and yelling, so I called to them to stay right there, that I'd bring help.

I was terribly torn between going over there to try to get them, and moving on up the cliff. But I was literally carrying David at this point, and hauling Anne up and down the steep areas, and since I couldn't possibly handle two more small children, they would probably be safer standing on that car roof, I thought, than scrambling among the rocks and crevasses.

A man appeared above the cliff. All three of us immediately yelled, "Help, help, come get us!" and he shouted down that he would find some rope, then disappeared.

He was an unbelievably welcome sight, but the kids became hysterical again when he disappeared. I tried to assure them that help was on the way, and we found an extra-large mound of snow-free earth to wait on. Our feet were really in bad shape by now; none of us had any feeling left in them at all.

As we stood waiting for what was probably

only five to ten minutes but seemed an hour, I realized that there were many more houses flattened along the cliff in the direction we were heading—not just the four homes on the bluff side of Chilligan Drive.

The Bashaw home, originally directly across the street from us, was now sitting right on the cliff just above us. Broken water pipes stuck out beneath it. The electric wires were lying down the cliff and across the rocks near us. This alarmed me, and without scaring the kids any further, I tried to warn them not to touch any wires.

On the water side I recognized what was left of the Evanson home, and it was another heartening sight to see Dave Evanson standing by it. The children started calling to him for help, but I quickly hushed them, because it looked as if he was having plenty of troubles of his own.

I was puzzled by the position of the Evanson home. It had been quite a distance down the street from us, and now it appeared to be right next to the Meads'. With a shock I realized that I could not even see the Schultz home, which had been between the Evansons' and the Meads'. I wondered if little Julie Schultz, Anne's best friend, had been home at the time of the quake.

All these thoughts whirled through my mind as we waited for what seemed like an eternity. I kept glancing back to the sea, concerned that it might be moving in. For the first time I began to feel the cold and started to shiver. Poor David, in blue jeans and cotton shirt, was shaking now, his lips blue.

Suddenly six or eight men appeared at the top of the cliff. One man, whom I still cannot identify (a great pity because we feel eternally grateful to him), started down the cliff toward us.

The children both hugged our rescuer, and I could feel their sense of relief as they told him how cold they were. He put his black wool jacket around Anne—and for a week she wore it almost constantly. It is dirty and worn and much too big, but it will be her most prized possession for a long time to come.

She was all set for the climb now, starting right out on her own while our friend picked up David and carried him the rest of the way.

*"I knew
we'd have to
move now,
carefully,
but fast"*



With the children taken care of, I turned to poor Bozie, our dog. He was whimpering and shivering, and I tried to coax him up the cliff, but he wouldn't come. I had to leave him, and it hurt, but there was nothing else to do. We still had a treacherous climb ahead ourselves.

At the top there was still a steep, sheer rim which I really don't think I could have scaled by myself. But many willing hands hauled us up quickly. I remember thinking, why, I don't even have to help, they can just lift me as an inert bundle.

Once over the top of what was left of our street I saw Wanda Mead, her face so strained

and white, and told her about her two children. Then we were hurried to a car, and before I could look around at what was left of our lovely street, we were whisked away. The man driving, Harold Rhett, took us to his home a few blocks away. There we were rushed inside and wrapped in many blankets.

Earth Continues to Tremble

We must have lain on the Rhetts' couch about an hour. The biggest job was trying to warm up. We were shaking, but there was no heat or electricity, so we were unable to warm anything hot to drink.



PAINTING BY NATIONAL GEOGRAPHIC ARTIST ROBERT C. MAGIS © N.G.S.

I had the children rub their feet, and the feeling seemed to come back fast, much to David's relief. My own were staying numb, and I began to think that I might have a real frostbite problem.

Suddenly we had another strong earth tremor. We all ran out of the house. I had taken off David's wet pants and my soaked dress, so we were just wrapped in blankets. The wife of our host suggested we get into their pickup truck to stay warm.

We sat there another half hour, feeling the earth continue to tremble and seeing the trees wave above us. The people from the houses

Riding a maelstrom of earth and snow, Tay Thomas and her children, David, 6, and Anne, 8, dig stiffening fingers and toes into their disintegrating chunk of front yard. Shocks sever sleeping from living quarters as their house toboggans downward. Only moments earlier they fled the dwelling, shoeless and thinly clad, into a below-freezing temperature.

around us were standing in the street in small groups—no panic, no emotion showing—calmly discussing what to do next. Their calmness helped me.

Another great help was the radio in the pickup. Station KFQD was broadcasting, and the announcer was matter-of-factly discussing the quake, including the after-tremors, and saying that there was no need for alarm.

"Stay in your homes or cars and wait for further word," he kept repeating, saying that so far as he knew there was little actual damage anywhere.

This bothered the kids. "Wait till he sees our street," they said.

People now began bringing armloads of blankets and food from their homes, loading their cars to move farther away from the inlet. This was fine with me. I became very impatient to move on, especially when the announcer began to broadcast warnings of possible tidal waves.

Mementos of a Life of Travel

I suddenly felt overwhelmingly alone without Lowell there to make decisions, and wondered where we should go. Then I remembered that our church and the minister's home were both well back toward the mountains, and would be the perfect place to head for. It was now, too, that it first dawned on me that we had nothing left of our personal belongings—not even the clothes on our backs, because we had shed most of them for our neighbors' blankets.

Lowell and I have always been the sentimental kind. We had collected albums of family pictures which we treasured. And we had boxes and boxes of slides and movies which we had collected all over the world. Lowell's office had been in our home, and he kept all his valuable camera equipment there, all his papers and manuscripts.

But we were also collectors of other things—antique furniture, china and silver, and curios from our travels. We had Tibetan religious paintings, straw beads from Timbuktu,

petrified wood from the Saudi Arabian desert, and brass from India.

They had all meant so much to us, partly reminding us of our pleasant travels, I guess. But at this moment of realizing that all this was gone, it just didn't seem to matter. I was too overcome with thankfulness that we had escaped unharmed, and I could sense that both children felt the same.

They did not even talk about Bozie, perhaps because he had been suffering from a crippling hip disease, and we knew he had only a few months to live. But David cried over our two cats. He was especially attached to the impish black kitten, Sylvester.

Another thought I had while waiting in the pickup truck was what extraordinarily calm, cool-headed people these Alaskans were. The men made plans, the women and children went on carrying armloads to cars—while everything around us shook with after-tremors.

We had often thought, during our four years here, that Alaskans were a special breed of people, made from the same strong mold as early American pioneers. Now the community reaction to this sudden catastrophe was dramatic proof of it.

Neighborhood Accounts for All Except Two Children

I'm afraid I was feeling less and less calm with every passing moment. I was greatly relieved when the Rhett family, who had given us shelter, were ready to move out to a safer area. The wife drove the station wagon, loaded with their children and overnight supplies; the husband led the way in the pickup with the three of us. He had just made another quick trip over to Chilligan Drive, and he reported that everyone was accounted for except two of the Mead children.

My heart sank. Could these be the two I had left standing on the car? This horrible thought tormented me for many hours that night and the next day. Did I make the right decision? Should I have tried to return to collect those children?

As we drove down the familiar streets of Turnagain, I was appalled at the wide cracks in the roads—gaping, jagged fissures that looked bottomless. I began to think we would inevitably find some too wide to cross, that we might have to remain in the area after all.

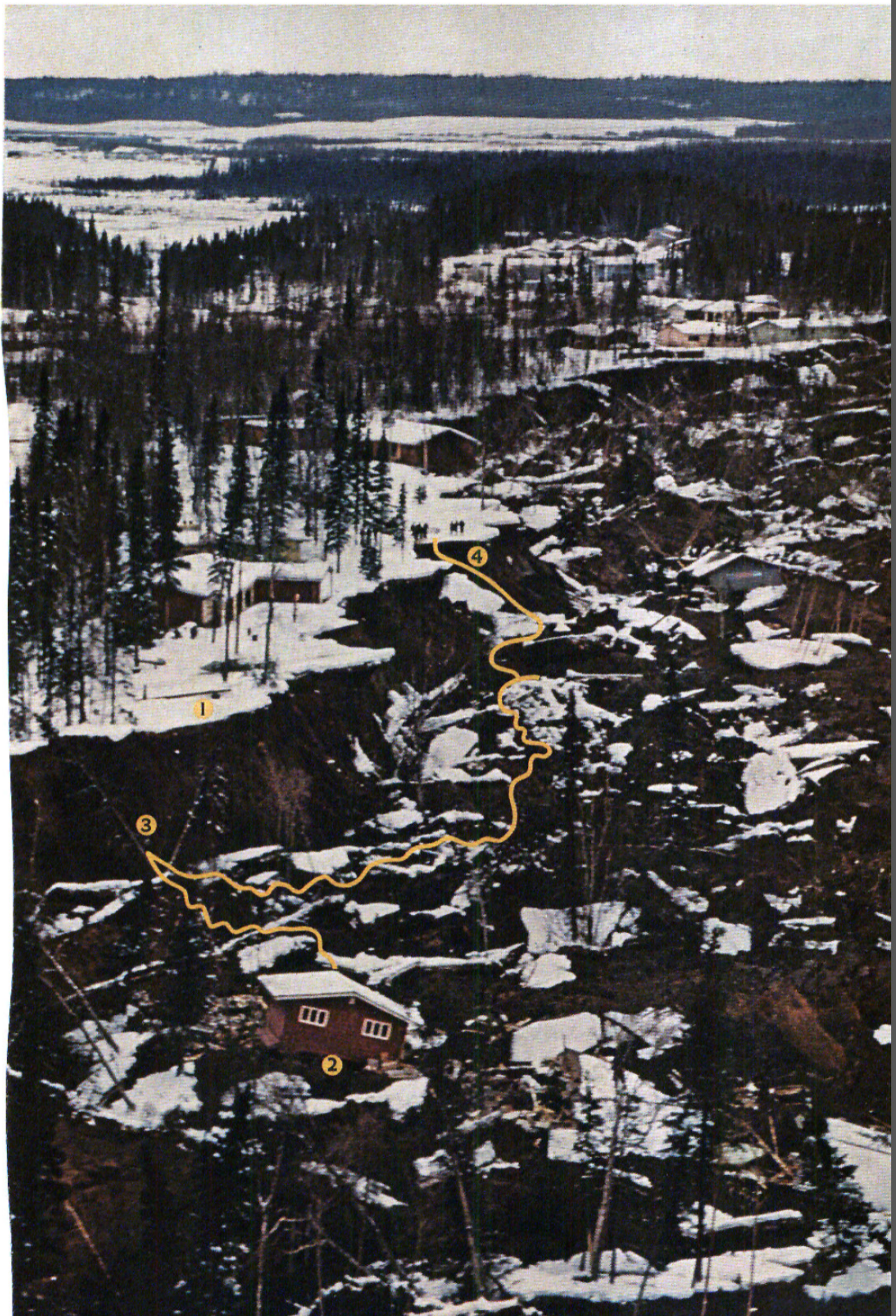
We made our way, surprisingly quickly, out to the Seward Highway—the main artery out of the city. Traffic was amazingly light. Ambulances and police cars with flashing red lights sped past us, and soldiers directed traffic. The world was inky black, pierced only by car headlights and—surprising to me—the brilliant flashing of the railroad crossing lights. The bells were clanging too, and I wondered where the train was: I realized later that the quake must have triggered the warning mechanism, and it probably clanged needlessly for hours.

Soon we were climbing the hill to St. Mary's Episcopal Church and its rectory. Both buildings were dark, and for a moment I was terribly afraid that no one was there. Now what would I do? I had forgotten that all electricity was off, and when our minister, Alexander "Sandy" Zabriskie, greeted us at the door I felt another tremendous wave of relief.

But once in the doorway we found a cold, dark, thoroughly messed-up house. Sandy's family had gone to a less damaged home for the night, and

Saw-tooth edge of a quake-carved escarpment overlooks scrambled remnants of Turnagain homes. Driveway 1 is all that remains of the Thomas property. From the driveway's end, the bedroom wing slid to its present position 2, beside wreckage of the rest of the house. Here the Thomases' harrowing ride aboard their island of frozen earth ended. The three tried vainly to use a tipped tree 3 to reach high ground. They finally scaled a bluff of shifting sand 4, where neighbors and friends hauled them to safety.





he had returned only briefly to check on his own house.

The moment Sandy closed the door and turned to tell me what to do next, I felt better. First he lit candles, and then brought us a platter of cold roast beef and a carving knife.

This was all the kids needed. Candles meant a party, and they forgot fear and became excited over a greasy platter of cold, almost raw meat. It was food, and they were starved—it was now about 8:30. They needed no forks, plates, or napkins. We knelt around the table, and I whacked off big chunks of the rare meat which the kids gobbled up.

Their spirit was contagious and I began to eat some myself. No beef ever tasted better!

While we ate, Sandy collected clothes for us. His four children were much younger than Anne and David. Wool socks were the most welcome find for all of us, oversized boots for Anne, pants for David—which came only to his hips and couldn't be buttoned—and pants and a shirt of Sandy's for me. His wife Margy wore a smaller size, I found regretfully.

A Long Night of Running to the Door

Just when warmth was returning to our bodies and spirits, we heard another slight rumble and the house began to shake. There was no need to yell to the children. They rushed ahead of me to the front door. I did stop to blow out the candles, to avoid danger of fire. Then, in the darkness, I fell right over the Zabriskies' great black dog who was running in the same direction. The two big bruises from this mishap were virtually the only injuries suffered by the three of us during the entire quake.

By the time I had picked myself up, the tremor had stopped and Sandy was assuring us that we needn't worry about any more strong jolts, and that we shouldn't try to run outside each time. We tried to accept this, but during that long night ahead, when the area was almost constantly shaken with afterquakes, the kids and I rushed toward the door almost every time.

While Sandy was talking of moving us down to join his family, the Warren Twiggses came to the door. He is the senior warden

of the church and had come by to see if there was any damage or something he could do to help. Since they had plenty of space at their home, it was quickly decided that we should join them for the night.

I noticed no more cracks in the pavement, but it was snowing heavily and the street was a sheet of ice. Ordinarily I worry about such driving conditions, but at this point it didn't concern me in the least.

Nightmares Break Children's Sleep

My thoughts, now that we were assured of a place for the night, were about Lowell. Surely he must be worrying terribly about us. How could I possibly get word to him? I was concerned that he might try to fly right back, and the weather at that moment couldn't have been worse. I also wondered if Fairbanks could have suffered from the quake.

Warren Twiggs was due at his Federal Aviation Agency communications job at midnight, so I asked him to try to get word through to Fairbanks. I had not heard a radio since leaving the pickup, and I did not know what the communications problem might be.

The Twiggses' home looked normal, except for no heat or electricity. Margaret Twiggs and I decided our first move would be to bed the children down for the night.

This was easier said than done; they refused to consider leaving me to go into one of the bedrooms, and the couch right by the front door looked the most inviting to me. So we made a bed on the living-room floor with all the blankets we'd collected that evening, topping them off with two of the Twiggses' sleeping bags. Soon the children were warm and comfortable. They slept for a few hours after midnight, but both frequently awoke in terror from nightmares.

I lay on the couch under blankets, still not really warm. We were lucky that the temperature outside did not drop below 20 degrees that night. Sleep was out of the question, because I wanted desperately to get in touch with Lowell. A constant monitoring of the radio seemed wisest. The Twiggses had one portable, and I perched it on the arm of the couch and lay listening all night long.

Collapsed like a house of cards, a family-room wall supports Tay Thomas as she sifts through the ruins of her home. Most of their furniture gone, the Thomases managed to recover many cherished possessions, including a rare Tibetan flag, memento of Lowell's travels with his father. To their daughter's delight, her doll survived (below).





EKTACHROME BY WINFIELD PARKS © N.G.S.

Sudden tragedy etches the face of Mrs. Perry Mead (left), who lost two sons. Perry, aged 12, re-entered their crumbling house to rescue his baby brother; both perished. Their father, Dr. Mead, exemplifying Alaskan spirit, toiled day and night to save others despite his own grief. Mrs. Thomas and Anne seek to comfort their neighbor.

I heard that all the homes along the Turnagain bluff had fallen away. The relief was tremendous to hear reports from rescuers that all persons appeared to have escaped—all but the two Mead children. I winced at the frequent pleas “Urgent to Dr. Mead . . . needed immediately at Providence Hospital.”

Perry Mead is Alaska’s only neurosurgeon, and he spent the next 24 hours as a truly heroic individual—going from bed to bed at the hospital tending to the needs of his patients, tears streaming down his face from the sorrow of losing his two children.

It was not for another 24 hours that I finally learned that the two I had seen, Penny and Paul, had been rescued at just about the same moment we were pulled up the bluff. The oldest boy, 12-year-old Perry, had helped them out of the house and then returned to save his baby brother. Neither was seen again.

I also learned for the first time, via the radio, of the tremendous damage suffered by the downtown area. We, living in Anchorage, watching it grow day by day, felt tremendous pride in each large new building rising up into the sky, a dramatic symbol of our growth and progress. Now, one by one, I heard that many of our major buildings might have been severely damaged and would be closed until they could be inspected.

By midnight, communications were beginning to filter in from communities around us, and we heard terrible stories of sea-wave destruction in Kodiak, Seward, and Valdez. It was an eternity to me before contact was re-established with Fairbanks, and I heard with relief that it had felt merely a strong jolt.

The broadcasters began to relay messages from local families to relatives in other Alaskan towns. There was no hope of getting any word out to the “Lower 48” yet. The Twiggses’ phone was not working properly, and I could only listen to “Please tell my husband John Smith that his wife and children are fine,” and “To my mother, Mrs. James in Fairbanks, all is well.”

Word Comes of an Inbound Plane

Locally, there was a continuous stream of “Tell John his father and mother are at the Stewarts,” or “The Johnson family wants to know the whereabouts of daughter Ann.” I heard many of our friends asking about family members, and, as the night wore on, reports poured in locating the lost.

It was several hours later that I first heard that a Wien Airlines propjet was en route from Fairbanks to Anchorage, bringing doctors and supplies. I just knew that Lowell would be on that plane.

I knew that the pilot would be Merrill Wien, the airline's head pilot and one of our closest friends. The weather was still grim—snow and fog—but Lowell and I had both flown with Merrill under many tough conditions. We knew he was just about the best there is, and I had no fears for them that night.

Radio Call Reunites the Family

Suddenly the radio announcer said, "If anyone knows the whereabouts of Mrs. Lowell Thomas, Junior, and family, please contact us immediately." I ran to the telephone and was so overwhelmed to find it working that I could hardly talk to the person who answered. But I got the essentials through, and just half an hour later, in the first light of dawn, I watched our Travelall roar up the street.

I practically laughed out loud at the sight of this great, muddy station wagon—I thought it had disappeared with the house! I had completely forgotten that Lowell had taken it to the airport. It was like receiving an unusually exciting Christmas present to realize that one material possession was left.

Words cannot describe our reunion. The kids and I were tremendously relieved, but Lowell's emotions were those of a man who had not known for many hours whether his family was dead or alive.

All I wanted to do now was to cling to him and talk. But he felt he should return to Chiligian Drive immediately to see if there was anything he could salvage, and if he could find the dog, to whom he was greatly attached.

We tried to keep occupied during his absence with the practical necessity of cooking breakfast for six people over one tiny Coleman stove. Margaret Twiggs did a remarkable job of producing eggs, bacon, and coffee for all. But the children! They jumped and rolled and ran all over the small living room, their leaping and laughter shaking the house. I was distressed at such behavior, but Margaret assured me that it was a very good sign of return to normalcy.

I was beginning to wonder how much of this new development I could put up with, when the kids screamed that Daddy was back. They were out the door like a shot—and no wonder.

Lowell was coming up the walk with little black Sylvester in his arms and Bozie trotting along beside him. That kitten and the big German shepherd were never so overwhelmed with lavish affection.

When the excitement died down slightly, Lowell told us of making his way down the cliff—to find a thoroughly subdued and shaking Bozie lying by the bedroom wing.

The bedroom stairs were exposed, and he walked up them and into the rooms. Pictures were still on walls and some furniture still standing. But other belongings were everywhere. Lowell realized that much of this could be salvaged if the water did not rise any farther. Waves were lapping at the garage, and the sea had virtually covered the Mead home.

At David's bedroom door he pushed the bed back to get inside and out popped a little black head. Lowell has never been overly fond of cats, but at this moment he said he was highly pleased to find little Sylvester.

Struggling to salvage belongings, Tay and Lowell Thomas remove a cushion and one-legged table from their splintered home. In Fairbanks when the quake struck, Mr. Thomas suffered an agonizing night before he learned the fate of his family.

KODACHROME BY W. E. GARRETT © N.G.S.





Exhausted survivors
David, Anne, and Mrs. Thomas stand on a fragment of land where earlier their German shepherd, Bozie, trotted toward a whole house, a warm hearth, and carefree children playing near the trellis. Now the bedroom wing tilts like a sinking ship in the tangle of toppled trees.

KODACHROMES BY TAY THOMAS (INSET)
AND W. F. GARRETT © N.G.S.





(Next day friends digging among our debris picked up a box of clothing and out walked mama cat—unhurt but probably having run through seven of her nine lives.)

Easter Sunday, 1964, will always have a special place in my memories—and it won't be visions of Easter bonnets or a leisurely holiday dinner. The church was cold at 8 a.m., without heat, and we and many of our friends who were homeless, too, clumped down the aisles in borrowed boots and weird assortments of misfit clothing. Anne was still wearing her rescuer's coat, far more meaningful to her than a new Easter bonnet; David was still holding up his pants, and I was still wearing Sandy Zabriskie's corduroy pants and wool shirt.

Victims Offer Aid to Others

The singing has never sounded so enthusiastic, nor has the spiritual warmth been so noticeable, although it was so cold in the building that people's breath showed as they sang. Prayers of thanksgiving have never had more meaning, and the Epistle for Easter Day is indelibly etched on my mind: "If ye then be risen with Christ, seek those things which are above. . . . Set your affection on things above, not on things on the earth. . . ."

Sandy told the congregation there were two lists hanging in the hallway, one for the "haves"—those who had clothing and household goods to contribute—and one where those who had lost everything could write down what they needed.

At least 20 of St. Mary's 150 families were homeless, and yet at the end of the three services that Sunday the "have" list was more than three pages long, and only two names stood on the "have not" list, put there by the minister himself!

When the service was over, several of the men offered to help Lowell salvage some of our goods. I had not wanted to return to the ruins, to see my lovely home in such a grim state, but Lowell felt I had to go. Only I would know what feminine things would be most important, and where to look.

Within an hour after the church service a large group of Lowell's friends had gathered by the bluff, including many members of his mountaineering club. The house was one horrible, twisted mass of wreckage—with only the bedroom section fairly intact.

As I crawled up the stairs after the mountaineers, I had the silliest thought—all those

muddy feet on my carpets! But then I made myself think practically and helped pick out the items for first priority: all clothing, the pictures on the wall which could never be replaced, my jewel box containing little of value but many sentimental mementos, Anne's dolls, some medicines, and a few books. Our large library was in the destroyed section.

Then I wandered about the debris for a while, finding the oddest items in the most unlikely places. Boxes of Lowell's precious film were scattered all over the sand. One of my Steuben vases perched on a mound of clay, looking as if on display in a store window.

The men pulled away one of the kitchen walls, revealing the refrigerator, almost intact. When Lowell opened the door, he found two dozen eggs, all unbroken!

Like almost all other Alaskans, we had no earthquake insurance to cover any of this great loss. Lowell worked around the clock for three days to salvage whatever he could. And we could never adequately thank the mountaineers and the Spenard Rotary Club, whose teams of men and boys spent all three days carrying heavy packs up those cliffs.

I'll never forget watching what some might call rough, carefree teen-agers, carefully digging in the dirt and debris, then gingerly bringing me some small piece of antique china, or a small box of Kodachrome slides.

Pride in Being an Alaskan

Now, as I sit writing this, just one week later, I look out the window of the new little home we have bought. I feel a sense of gratitude for each material possession we were able to salvage. But I feel many more, stronger feelings: a tremendous pride at the privilege of being called an Alaskan.

What a magnificent people to have endured what they have with calmness and strength, and to be ready to tackle an almost hopeless recovery task ahead! Here are people who still live with the desire to help their neighbors rather than just outdo them. I look forward to the long months and years ahead when we will all be working together to rebuild our shattered city and state.

The strongest feeling of all, I know I share with Lowell, the children, and thousands of other fellow Alaskans: a fervent thankfulness toward God for having spared our lives during one of the world's worst earthquakes. We are thankful for the opportunity to rededicate our lives to His service.