

# **1962 Magna, Utah Earthquake**

**September 5, 1962  
9:05 a.m.**

**Magnitude 5.2**

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**Newspaper Articles**

**This publication is an archive of newspaper articles  
written about the**

**1962 MAGNA, UTAH EARTHQUAKE  
Wednesday, September 5, 1962  
9:05 a.m.**

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Newspaper articles were collected as the basic step of an earthquake education project funded by the U.S. Geological Survey under the National Earthquake Hazards Reduction Program (NEHRP). The project, entitled *Personalizing the Earthquake Threat in the Intermountain West*, involves researching and archiving newspaper articles, individual accounts, photographs, and additional sources of information for 48 earthquakes that have occurred in Utah, Idaho, Wyoming, and Montana since settlement. This information forms the basis for several earthquake education products: World Wide Web site publication of information collected, travelling photographic exhibit, scripted slide sets, manuscript for short book, and classroom activity packets.

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# Information Categories

The content of each newspaper article has been classified by the categories of information it contains. The first letters of the information categories assigned each article are listed by the headlines in the Table of Contents that follows. Listed below is an explanation of the types of information that can be expected within each category.

**A — Aid:**

provide medical services, shelter, donations, loans, advice, encouragement,  
implement safety measures

**B— Building Damage:**

damage to structure itself plus windows, chimneys, facade  
(typically damage visible from outside the building)

**E — Earthquake Description:**

where, when, duration, direction, sound, motion, number and timing of aftershocks

**G — Geologic Effects:**

changes at the Earth's surface—fault scarps, rockfalls, landslides, ground cracks,  
ground subsidence, sand boils, water spouts; effects on springs, lakes, wells

**H — Humor**

**I — Impact:**

changes in daily routine; rumors; influx of reporters and politicians; cost in dollars

**L — Lifelines:**

effects on transportation—roads, bridges, railroads, airports, vehicles  
effect on communications—telephone, telegraph  
effects on power, gas, water, and sewer lines  
effects on dams

**N — Nonstructural Effects:**

effects on plaster, furnishings (typically damage or rearrangement of furnishings visible  
inside a building)

**P — People:**

emotional and physical effects on people, responses during and after;  
includes deaths, injuries, near misses

**R — Recovery:**

clean up, rebuild, returning to normal routine

**S — Scientific Explanation of the day**

# 1962 Magna, Utah earthquake - listing of newspaper articles

**NEWSPAPER: Deseret News (Salt Lake City, UT)**

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/05/1962	Sharp Quake Rocks S.L. Valley	1	B, E, I, L, N, P	Magna, Salt Lake City, Logan
09/05/1962	Latest Temblor No Aftermath, U Expert Says	2	E, P, S	Salt Lake City
09/05/1962	S.L. Reaction Varies on Quake Shock	3	B, E, L, N, P	Granger, Salt Lake City, Provo
09/05/1962	Don't Spread Rumors In Quakes, Police Urge	4	A, I, P	Salt Lake City
09/05/1962	Many Earthquakes Hit Utah Over the Years	4	E, P	Corrinne, Salt Lake City, Cache Valley
09/05/1962	Damage Minor In Downtown S L	5	B, N	Salt Lake City
09/05/1962	Quake Seemed Stronger, It Wasn't, S L	5	E	Salt Lake City
09/05/1962	Quake Shakes Cuckoo Loose	5	H, P	Magna
09/06/1962	S L Valley Cleans Up After Quake	6	A, B, E, I, L, N, P, R,	Salt Lake City, Magna, Spanish Fork, Logan, West Point
09/06/1962	House Still Shaking? It's Your Imagination	7	E, P	Salt Lake City
09/06/1962	What To Do In A Quake? Find Protection Inside	7	A	Salt Lake City
09/06/1962	Agency Studies Quake Effects	8	A, R	Salt Lake City, Cache Valley
09/06/1962	Richter Scale Applied to Utah Quakes	8	E, S	Salt Lake Valley, Cache Valley
09/07/1962	S.L. Returns To Normal After Tremor	8	B, E, I, P, R	Salt Lake City
09/11/1962	Last date searched			



## 1962 Magna, Utah earthquake - listing of newspaper articles

### NEWSPAPER: Herald Journal (Logan, UT)

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/05/1962	Salt Lake Valley Has Quake Scare	9	B, E, I, L, N, P, S	Salt Lake City, Logan, Provo, Ogden, Magna
09/06/1962	Cache Scientists Aid In Locating SL Quake Center	11	B, E, N, S	Cache Valley, Salt Lake Valley
09/06/1962	Safest Place In A Quake	11	B, E, N, S	Utah
09/10/1962	Last date searched			

### NEWSPAPER: Magna Times

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/06/1962	Earthquake	12	E, N	Magna, Logan
09/13/1962	Magna Area Suffers Damage From Quake	12	B, E, I, N, P, S	Magna
09/13/1962	Cyprus Capers	13	A, E, H, P	Magna
09/27/1962	Last date searched			

## 1962 Magna, Utah earthquake – listing of newspaper articles

**NEWSPAPER:**    **Ogden Standard-Examiner**

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/05/1962	S.L. Valley Shaken By Quake; Wide Area Damaged Slightly	14	B, E, I, N, P, S	Magna, Salt Lake City, Provo, Ogden
09/05/1962	Temblor Rattles Ogden; No Reports Of Damage	15	E, I, P	Layton, North Ogden, Clearfield, Roy, Ogden, Eden
09/05/1962	Jolt Revives Cuckoo Clock	15	H, I	Salt Lake City
09/06/1962	S.L. Jolt Linked To Cache Quake	16	B, E, I, N, P, S	Salt Lake City, Magna, Cache Valley
09/07/1962	More 'Quakes Lately? No, Says Seismologist	17	E, S	Utah
09/11/1962	Last date searched			

# 1962 Magna, Utah earthquake - listing of newspaper articles

**NEWSPAPER: Salt Lake Tribune**

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/06/1962	Sharp Quake Cracks Homes, Schools Across S.L. Valley	18	B, E, I, L, N, P	Magna, Salt Lake City, Cache Valley
09/06/1962	Quake Center At Magna	20	E, S	Magna, Salt Lake Valley, Cache Valley
09/06/1962	Area Utilities Normal In 'Shock' Belt	21	B, E, L, P	Salt Lake Valley, Spanish Fork, Tintic, Clearfield, Hunter, Granger, Magna
09/06/1962	Quakes Still Jolt Imaginations	22	P, S	Wasatch Front
09/06/1962	Quake Tips: It's Debris That Hurts	23	A	Salt Lake City
09/06/1962	Richter Scale -- What Is It?	23	E, S	Salt Lake Valley, Cache Valley
09/06/1962	It's Cracking Good Yarn	24	B, H	Salt Lake City
09/06/1962	Cathedral Untouched	24	B	Salt Lake City
09/06/1962	Quake Perfumes Plumbing Job At Liquor Store	24	B, H, P	Magna
09/06/1962	Quake Smashes 'Time Barrier'	24	H, I	Salt Lake City
09/06/1962	Quake Jitters Stir Cache	25	A, E, I, P, S	Logan
09/06/1962	Temblor Jiggles Weber County	25	E	Weber County and North Davis County
09/07/1962	Light Shocks Shown On U.'s Gauges	26	A, B, E, L, R	Salt Lake Valley, West Point, Cache Valley
09/09/1962	Index To Earthquakes: File Under P, S, L and T	27	S	
09/13/1962	Last date searched			

## SHARP QUAKE ROCKS S. L. VALLEY

### Stores Hard-Hit, 2 Schools Close

By Hal Knight

A rolling earthquake rocked Salt Lake Valley at 9:05 a.m. Wednesday, closing several schools and causing widespread structural damage.

No serious injuries were reported, but residents were jittery inasmuch as it was the second major quake in one week. Another quake centered in Cache Valley jolted the area only last Thursday.

Windows shattered, several homes had walls or ceilings collapse and cracks appeared in houses and buildings throughout the valley.

The quake was not as heavy as the one last week, but it was felt more strongly in the Salt Lake area because the tremor apparently started right in the valley.

Measuring stations in California said the intensity of the quake was about 5 on the Richter scale. Last week's tremor was measured at 6.1 by these same stations.

#### Light in Logan

Logan, which suffered heavily in last week's quake, barely felt this one. Effects of the tremor reached from Ogden to Provo, but no real damage was reported north or south.

However, in the Salt Lake area the phone company was nearly swamped as reports of damage to homes and buildings poured in.

School work was totally disrupted as pupils were rushed outside as the quake struck.

#### School Dismissed

Both Granger and Cyprus high schools were dismissed for the day because of damage to the buildings.

Jackson Elementary was temporarily closed until 1 p.m. on 1st North between 6th and 7th West.

Jordan Junior High School was evacuated for 25 minutes. There were many cracks in the windows and walls, but the youngsters were allowed back in school with the auditorium declared off limits.

#### Granger Hard Hit

At Granger High Deputy Sheriff Darr Harward reported extensive damage to the upper floor of the center wing of the school.

Walls were pulled from window frames, a ceiling sagged and a network of cracks spread across many walls and ceilings, he said.

At Cyprus High windows were shattered and cracks appeared on walls of a dozen classrooms. The

hallway of the second floor was weakened and plaster was on the floors.

#### Just Misses Students

Two students narrowly escaped injury when a large statue toppled from a shelf. Aquariums in the biology room were overturned and asphalt tile in the science building was torn along floors.

Damage elsewhere was widespread and varied.

Several homes around the valley were shifted on their foundations and grocery stores had merchandise dumped in the aisles.

Mrs. Vern Oliver, 2888 S. 9150 West, Magna, manager of Cornet Store, 9071 Main St., suffered a possible fractured leg when she slipped on hand lotion spilled on the floor.

Several bottles were broken on the floor during the quake. She was listed in "good" condition later Wednesday at St. Mark's Hospital.

The Bishop's Central Storehouse of The Church of Jesus Christ of Latter-day Saints, 1600 Wallace Rd., reported severe damage to windows and plaster walls.

Bishop Charles M. Knighton said several quarter-inch-wide cracks had spread along walls while about 90 feet of wallboard had pulled loose on the second floor. Another 70 feet was damaged on the ground floor.

Plaster was shaken loose and cracks appeared in the new State Office Building, the police station, the new airport terminal, and the city and county building.

#### Stores Stay Open

Many downtown business institutions reported similar damage which was quickly cleaned up. Retail stores were open for business as usual.

At the Deseret News building, 16 windows were broken and a light fixture dropped from the ceiling and hairline cracks appeared in walls.

Some stores reported heavy damage to merchandise. Grand American Market at 34th South and State said the quake caused "a real mess."

#### Barber Shop Hit

A barber shop at 181 W. 8th South reported that windows, mirrors, a show case, and bottles all shattered during the tremor.

At the Mori Market in Magna several thousand dollars worth of stock went cascading to the floor, completely filling four aisles.

First Security Bank in Magna reported that the vault was cracked by the tremor.



Communications, gas lines and electrical service were generally not interrupted by the quake, but electric clocks all over town stopped.

A state liquor store in Magna had a major cleanup job when 400 to 500 bottles fell from shelves, many shattering on the floor.

Some older homes in Salt Lake City suffered severe damage. A roof fell in at 17 N. 5th West and wall and ceiling collapsed at a residence at 430 E. 7th South.

Similar but less severe damage also was reported in several other locations.

Reports indicate that the quake started in the western part of the valley and rolled eastward, mainly through Salt Lake City.

Both Ogden and Provo felt the tremor, but no calls were received reporting serious damage. The quake was felt slightly in the Logan area, but no further damage was reported in that still-shaken region.

No reports were expected on the intensity of the quake from the University of Utah seismograph office until arrival of additional information from the U. seismograph office at Carbon College in Price.  
[Deseret News; September 5, 1962]

### **LATEST TEMBLOR NO AFTERMATH, U. EXPERT SAYS**

"Wednesday's upheaval was a brand-new earthquake, not an aftermath of last week's tremors," said Dr. Kenneth L. Cook, professor-head of the geophysics department, University of Utah.

His comments followed a check of the university's seismograph which showed Wednesday's quake struck at 9:04:50 a.m., lasted 11 minutes, peaked one minute after the tremors began and knocked the recording instrument off the chart for a little less than 60 seconds.

"Last week's earthquake lasted 15 to 20 minutes," said Dr. Cook. "It knocked the instrument off the chart for two to four minutes. It was a lot stronger than this

one appears at first glance."

Dr. Cook explained that Salt Lake City may have been hit harder this time because the epicenter of the quake could have been closer than last week. At that time Logan took the brunt of the shock since the center was in Cache Valley.

"We won't be able to pinpoint the center until we check our instruments at Price and Dugway," reported the professor. "But it doesn't seem as bad."

To downtown Salt Lakers, it seemed a lot worse.  
[Deseret News; September 5, 1962]

## S. L. REACTION VARIES ON QUAKE SHOCK

### Sway 'N' Bounce

Most Salt Lakers were up and about and felt the earthquake that shook the valley at 9:05 a.m. Wednesday.

As soon as the earth—and nervous tension—subsided, reports of quake incidents began pouring in.

Jim Reece, copy writer for Axelsen, Finlayson and Brown Advertising Inc., on the 13th floor of the Continental Bank Building, said it definitely "felt stronger than the other quake."

#### Rolling Motion

"The building had a rolling motion," he said. "It was like walking on a trampoline." There were no cracks or other damage to the building.

The 16th floor of the Walker Bank Bldg. "experienced a slight swaying sensation," according to Alex Walker Jr., district vice president of Columbia Geneva Steel.

"I hit for the first exit," declared Mrs. Mildred Breitling, secretary in the administration office of Salt Lake General Hospital.

#### Building Rattles

She said glass partitions were shaking and the whole building was rattling. Many of the people in the hospital ran out into the parking lot.

At LDS Hospital operations were suspended momentarily until the earth settled down, but there were no injuries and no damage to the building although it got a good shaking.

Operators at the swaying switchboard were swamped with calls both in and out immediately after the quake.

No damage was reported to phone lines in the Salt Lake area, but so many calls jammed the circuits it was next to impossible to dial several exchanges until several hours after the quake subsided.

"Things really rocked" at the eight-story control tower at the Salt Lake Municipal Airport, but no damage was reported.

On the lighter side, at Dee's Hamburgers, 437 S. Main St., everyone tried to pay his breakfast bill at the same time and rush from the cafe.

Mrs. Joseph M. James, 809 N. Redwood Rd., said, "It felt like the house was coming off the foundation. My husband was outside and he said he felt the ground rumbling before the house started to shake." Later inspection showed the whole foundation on the north side of the house had pulled away, both in back and in

front.

Donna Slater of Lehi, who was visiting in Kearns, said she was standing outside her car in a field by the Jordan River when the quake struck and turned the car around.

#### Barely Felt It

Paul Robinson, 558 Downington Ave., said the quake was quite sharp in that area, the house and pictures on the wall swayed.

However, Judith Moss, 1981 Siggard Dr., said she "just barely felt it," and thought it might be an overloaded automatic washer.

Mrs. Maurice A. Newman, 1325 S. 1700 West, said the Riverton area was shaken much worse from this quake than the one last week.

She said she was standing out on the sidewalk and it felt like the whole earth shook and the tile roof "sounded like teeth chattering."

The tremor broke some bottles and knocked canned goods from shelves at the Granger Market, 19th West and 3500 South, but no other damage was reported.

#### In 'Fringe' Area

Utah County appeared to be on the "fringe" of the new quake, although it was felt by many students and faculty members at Brigham Young University, especially those in multi-story buildings.

"It gave us a definite rock," one faculty member reported. Another said, "It moved me from my desk."

A Pleasant Grove woman said the dishes in her cupboard shook and a woman from American Fork said it shook the chairs.

Most residents of Provo who reported the quake said they felt the rocking.

A timely discussion on "school dropouts" is scheduled for Thursday at 1:30 p.m. at Bryant Junior High School, but fortunately it has nothing to do with the quake as little damage was reported at schools.

The earthquake made like a yegg in Magna and cracked the bank vault at First Security Bank.

#### See 'Bounce'

Observers in the State Office Building said as they looked across at the State Capitol it appeared to be bouncing during the earthquake.

However, no damage was discovered in the Capitol, but the State Office Building had a crack in the plaster on the third floor near the Driver License Office and several other hairline cracks. J. G. King, assistant

director of the State Building Board, said there was no structural damage.

Employees in the Federal Building said they felt like they were sitting on a bowl of jelly. A few cracks

were found over the doors of City Commission chambers in the City and County Bldg., and a few employees left the building during the quake.

**[Deseret News; September 5, 1962]**

## DON'T SPREAD RUMORS IN QUAKES, POLICE URGE

An appeal not to spread rumors, stories and reports without knowing the facts following an earthquake, or any other type of possible disaster, was made Wednesday by police officials.

Several unfounded reports following Wednesday morning's earthquake had a school in Salt Lake City "severely damaged."

Such was not the case, but early reports by several radio and television stations frightened a lot of parents who flocked to the scene, expecting to find the worst.

Police officers, dispatched to the school to check

out the reports, found the scene crowded with worried and frightened parents who had to be assured that there was no serious damage.

Chief L. C. Crowther urged people to stay at home in case of a disaster, and to let police officers handle any problems that might arise.

If there is trouble, those involved will be notified. By rushing to the scene the work of officers is only hampered and delayed, he added.

**[Deseret News; September 5, 1962]**

## MANY EARTHQUAKES HIT UTAH OVER THE YEARS

The ground in Utah has shuddered many times with earthquake tremors since the pioneers arrived in 1850, but none of the temblors caused catastrophic results.

Utah's first earthquake was recorded in 1850. Following is a summary of other ones recorded in the state since then:

1897 and 1898—Repeated light shocks reported.

1897, Feb. 8—Corinne, Box Elder County, reported heavy disturbances.

1906, April 18—San Francisco quake felt in Utah.

1934, March 12 to April 17—Repeated quakes in Utah, with those striking Salt Lake City described as the most intense ever to hit the city. Schools closed for two days to avoid danger of building cave-ins on March

12. Thirty shocks were felt in northern Utah March 15, and more than 100 struck the Locomotive Springs area. A moderate quake hit Salt Lake City April 2, and a major one struck the city April 14. Light shocks followed on April 15 and April 17.

1959, Aug. 18—Southwestern Montana quake in Yellowstone area felt in Utah.

1962, Aug. 30—Temblor recorded in Cache Valley area at 6:36 with damage in Richmond, Logan and Lewiston areas. Epicenter near Logan.

In addition, many relatively minor quakes have been recorded since Utahns became more "earthquake-conscious" after the 1934 shocks.

**[Deseret News; September 5, 1962]**

### DAMAGE MINOR IN DOWNTOWN S. L.

Damage to downtown buildings during Wednesday morning's earthquake which shook the Salt Lake Valley was reported relatively slight, even though the shock was a "terrifying" experience.

Along Main Street where Salt Lake City's tallest structures are located, damage was confined to minor plaster cracks.

A building engineer at Deseret Building at 1st South and Main reported "a couple of plaster cracks on

the fourth floor." He also said water from the water tanks splashed up the walls about eight inches. Plaster cracks were also reported in the Newhouse Building, 10 Exchange Place.

One custodian at Continental Bank Building said he was on the 11th floor at the time of the quake. "It was a pretty terrifying experience," he said.

[Deseret News; September 5, 1962]

### QUAKE SEEMED STRONGER - IT WAS IN S. L.

Wednesday morning's earthquake gave Salt Lakers a more severe shaking than last Thursday's tremor even though the latest quake wasn't as strong.

The reason it seemed stronger was because this time it apparently was centered just west of Salt Lake

City, while the one last week was centered in Logan, said Dr. Kenneth L. Cook of the University of Utah's Geophysics Dept.

[Deseret News; September 5, 1962]

### QUAKE SHAKES CUCKOO LOOSE

It is a cuckoo world, says Mrs. Sarah E. Dellier, 2831 S. 9100 West.

Wednesday's jolt of the Salt Lake Valley stopped a lot of clocks—at precisely 9:05 a.m.

But out in Magna, Mrs. Dellier has an old family heirloom cuckoo clock which hasn't run for six years.

"The jewelers and watchmakers don't like to fool with it, because it is so old, so we haven't had it fixed.

But we still keep it on the wall."

The earthquake Wednesday morning was hardly over when the clock began ticking and out popped Mr. Cuckoo himself, after six years' hibernation.

The old time piece was still ticking away late Wednesday afternoon.

[Deseret News; September 5, 1962]



## **S. L. VALLEY CLEANS UP AFTER QUAKE**

### **Inspections Show Damage Widespread, But Minor**

A cleanup and review of damage was under way Thursday in the wake of an earthquake which rocked the Salt Lake Valley Wednesday morning.

No serious injuries were reported, although one woman was hospitalized when she slipped on a broken bottle during the tremor.

After the excitement, inspection showed damage to be widespread, but mostly of a minor nature—generally broken glass and cracks in walls and ceilings.

Two high schools, both on the west side of the valley, which had been closed because of quake damage Wednesday, were back in normal operation.

The tremor, which rumbled across the valley at 9:05 a.m., was centered about a mile west of Magna and was felt strongly throughout Salt Lake City.

#### **Spanish Fork To Logan**

The quake was less intense than the one which twisted Cache Valley six days previously, but was felt more sharply in the Salt Lake area because of its nearness.

The quake was felt from Spanish Fork to Logan. The latter city barely noticed the tremor.

As the quake shuddered its way across Salt Lake Valley, schools in the Salt Lake, Granite, and Jordan districts were evacuated.

#### **Back To Class**

When the tremor subsided, however, most went back to class after an inspection of the buildings.

Jackson Elementary School, 750 W. 1st North, one of the oldest in the city, had classes delayed for several hours until a thorough check of the structure could be made. School resumed at 1 p.m.

At Granger and Cyprus high schools, both closer to the epicenter of the quake, damage was more extensive and classes were dismissed for the day.

An inspection at Granger High showed some acoustical tile was torn loose for about 100 feet in one area, but no further damage was found.

At Cyprus High, a parapet around the top of the school was damaged and had to be removed and plaster cracks were found in several places.

Both schools resumed normal operations Thursday and Dr. O. C. England, deputy superintendent, said total damage to schools in the Granite District probably would not be much over \$1,000.

In the Salt Lake District about 14 schools reported damage, none of it of a serious nature, and all schools were in session Thursday.

Several homes and businesses had a major clean-up problem after the earthquake sent plaster and merchandise crashing down.

Mrs. George Miller, 17 N. 5th West, was seated on a bed with a son when the ceiling fell in, covering the other end of the bed with debris.

Mrs. Oral Martineau, 271 W. 5th North, had a similar experience. She was in the bedroom with two small children when portions of the ceiling and an inner wall collapsed near the bed.

Mrs. Carl Wesemann, 430 E. 7th South, was struck by falling plaster as blocks from an inner wall fell through the ceiling. An outside wall was cracked from foundation to roof.

Retail stores cleaned up the mess and were back in business shortly after the quake. Merchandise toppled from shelves at several food markets but was quickly replaced.

#### **Liquor Store Hit**

In Magna a liquor store had 400 to 500 bottles come crashing down and sewer and water pipes in the building were ruptured.

Mrs. Vern A. Oliver, 56, 2888 S. 9150 West, Magna, manager of the Coronet Store, 9071 Main St., Magna, suffered a broken leg when she slipped on a broken bottle of hand lotion during the quake.

At ZCMI in downtown Salt Lake City, a crystal display was being set up when the tremor rumbled. A great deal of broken glass resulted.

At the Deseret News building, which bounced hard during the earth movement and had 16 windows broken and a light fixture fall, more damage was found Thursday.

Investigation of some telephone trouble turned up the fact that an entire wall had pulled away from interior supports a fraction of an inch.

Public buildings such as the post office, police station, city and county building, and the airport terminal all reported cracks in the walls, although no serious structural damage resulted.

#### **Facilities Swamped**

Telephone, water, gas and electric service generally was interrupted, although the phone company temporarily had its facilities swamped as everyone reached for a phone after the quake to check on families and buildings.

A high pressure gas leak on a valve at 3000 West and 300 North in West Point, Davis County, kept

repair crews busy for more than five hours.

Max Swenson, district manager for Mountain Fuel Supply Co., said he didn't know for sure what caused the leak "but because the break was coincidental with the quake, we are assuming it was responsible."

Traffic was detoured around the area for a while to forestall the danger of a spark from a car and some 68 homes in West Point were without gas service for a time.

**[Deseret News; September 6, 1962]**

## **HOUSE STILL SHAKING? IT'S YOUR IMAGINATION**

Understandably, people are a little jittery after two earthquakes have rumbled across the Salt Lake area in a single week.

But those who think that the house keeps trembling since the last one are probably victims of their own imaginations.

Officials at the University of Utah seismograph station on campus reported Thursday that their

instruments have recorded no aftershocks.

There was one small movement at 8 p.m. Wednesday night, but it was so tiny it could only be picked up by instruments and wouldn't be felt. It was not certain where it came from.

No other shocks of any kind were picked up by the seismograph station through the night.

**[Deseret News; September 6, 1962]**

## **WHAT TO DO IN QUAKE? FIND PROTECTION INSIDE**

When an earthquake rumbles and plaster starts to fall, the first impulse people have is to run for the outdoors.

This is exactly the wrong thing to do.

Most injuries in an earthquake are caused by falling debris, glass or electrical wires just outside a building.

State Civil Defense authorities warn that if you are indoors, stay indoors. Don't run through or outside doorways or outer walls.

If inside, take cover under a desk, table or bench or in a doorway, hall or against an inside wall. Stay away from windows or skylights.

If outdoors already, get away from buildings

to a clear area away from walls or utility poles.

Turn off all utilities and if you smell gas after a quake, don't use matches or candles. Just open doors and windows and notify authorities.

After a quake turn on the radio or television, but don't use the telephone, except to report emergencies.

(This was a problem in Salt Lake City's Wednesday quake when all phone lines were immediately swamped after the tremor.)

Finally, the Civil Defense warns not to go sightseeing after a quake. You may just interfere with rescue or repair operations.

**[Deseret News; September 6, 1962]**

## AGENCY STUDIES QUAKE EFFECTS

WASHINGTON—Sen. Frank E. Moss (D-Utah) said Thursday that the Small Business Administration was investigating the effects of Wednesday's earthquake in Salt Lake City.

FBA Administrator John E. Horne was awaiting

reports from Salt Lake City and nearby affected areas.

The FBA could provide low-interest loans to repair quake damage, as it did in last week's Cache Valley quake.

[Deseret News; September 6, 1962]

## RICHTER SCALE APPLIED TO UTAH QUAKE

Intensity of the earthquake which shook Salt Lake Valley Wednesday was measured at 5.1 on the Richter scale by University of Utah instruments.

These same measuring devices recorded the earth shock at Cache Valley last week at 5.7.

Just what is the Richter scale and what do these measurements indicate?

### Indicates Intensity

The scale itself is the work of Dr. Charles Richter of the California Institute of Technology. It provides an indication of intensity.

Moving upward on the scale shows multiplication of the strength of an earthquake.

For example, each point on the scale indicates that the strength of the quake must be multiplied by 10.

### 6 Times As Severe

A reading of 5 on the scale would indicate a quake

10 times stronger than a measurement of 4 and a reading of 6 would be 100 times stronger.

Using this measurement, the Cache Valley quake was about six times as severe as the one which rattled Salt Lake Wednesday.

The Hebgen quake three years ago at West Yellowstone was approximately 100 times heavier than the tremor which jarred the city.

### 1000 Times

According to the Richter scale, the 1906 earthquake which ripped San Francisco apart was some 1,000 times stronger than Wednesday's tremor in the Salt Lake Valley.

The measurements indicate the shock of the quake at its center.

[Deseret News; September 6, 1962]

## S. L. RETURNS TO NORMAL AFTER TREMOR

Most of Salt Lake Valley was settled back to normal Friday after an earthquake had rocked the area Wednesday morning.

Widespread minor damage caused by the tremor was cleaned up and some slight structural damage to buildings was being inspected and repaired.

Two extremely light aftershocks were recorded by seismograph instruments at the University of Utah, but both were too mild to be felt.

One small tremor was picked up by the sensitive instruments at 8:05 p.m. Wednesday and another was recorded at 4:28 p.m. Thursday.

Both of these tremors were so small they were not rated on the scale.

Despite some minor damage caused by the quake all schools were open Friday, and being used to normal capacity.

[Deseret News; September 7, 1962]

## SALT LAKE VALLEY HAS QUAKE SCARE

SALT LAKE CITY (UPI)—The Salt Lake Valley was jolted by an earthquake this morning for the second time in a week, but damage was reported light.

Seismological reports on the magnitude of the quake differed. At Berkeley, Calif., the University of California seismograph picked up the temblor but said it wasn't strong enough to determine location.

However, at Pasadena, Calif., Dr. Charles Richter said the earth tremor was "not small" and his equipment indicated a magnitude of 5 on the Richter scale. The earthquake that caused extensive damage in Cache Valley last Thursday was recorded at a magnitude of 6.1.

At Carbon College, where a seismograph is maintained under a University of Utah program, a spokesman said the quake was strong enough to knock the needle off the paper at one point. However, a computation as to magnitude on the Richter scale was not available immediately.

Following last week's quake, Dr. Richter had forecast a followup quake at a later date. However, it was not determined immediately what relationship, if any, today's tremor bore to that of last week.

J. Stewart Williams, in charge of seismology equipment at Utah State University at Logan, said the quake showed "pretty strong" on the apparatus.

This morning's earthquake in Salt Lake Valley was not felt, for the most part, in Logan and Cache Valley, but it set nerves on edge and made people "tremor conscious" again.

Tuesday night the Logan-Cache fire department personnel reported a mild tremor about 8 p.m. and several of the cracks in the fire hall, caused in last week's temblor, were widened.

In one area near the front of the fire station plaster came tumbling down.

But Wednesday morning most people didn't feel anything. An employee of the U. S. Geological survey, Glenn Anderson, however, reported that he felt the quake.

He was working at his desk at 170 North Main and called to his companion, Bud Robison, "Did you feel that quake?"

Both laughed off the sensation as there was no strong shock but rather Mr. Anderson just felt a swaying motion. But some minutes later they heard the report of the Salt Lake tremor.

With Salt Lake City reporting the quake, nationwide attention turned to Cache Valley again.

Radio stations and newspapers from many areas called to see if the center of the quake were in Cache Valley again.

American Broadcasting System in New York City called Police Chief Eli Drakulich to see if any damage was reported here. Both Provo and Ogden papers called The Herald Journal for a report on local conditions.

But the only damage reported was to people's nerves as they became jumpy and fearful of a repeat of last week's tremor.

Today's quake was stronger in the Salt Lake Valley than elsewhere.

Windows were reported broken at several downtown buildings, light fixtures fell in some firms and schools in general sent their students outside on the lawns while maintenance personnel checked for damage.

A woman suffered a heart attack at a downtown bank during the quake, which struck at 9:05 a.m. mst and was taken to a hospital by police ambulance.

The roof of a house was reported to have caved in at 17 No. 5th West and a crack was reported in South State St.

The quake lasted about 10 seconds in Salt Lake City and appeared to be much stronger on the flatland of the valley than on the residential areas of the east benches.

However, in Provo it was reported the temblor was felt more along the bench areas than in the valley.

Several professors at Brigham Young University reported feeling the quake strongly. One reported it rolled his chair away from his desk.

Mountain States Telephone and Telegraph Co. reported the quake did not cause any of its circuits to fail. However, about two minutes after the quake there were temporary line blocks due to over loads.

Howard Blood, a spokesman for the phone company, said "it looked as if everybody in Salt Lake City tried to call everybody else at the same time."

Cracks appeared in the walls of several buildings, among them the American Oil Building and Deseret News Bldg. At the Deseret News 16 windows were broken on the fourth floor and a light fixture ripped down on the third.

A number of stores reported merchandise had tumbled into the aisles during the quake. At one Grand Central market a spokesman said things were "a real mess."



Police at Ogden reported receiving far fewer calls from today's quake than from that of last Thursday.

Occupants rushed outside several large buildings in Salt Lake City when the temblor sent them rocking, among them the City and County Building and the State Office Bldg.

A woman identified as a Mrs. Newbold of Magna reported the quake appeared to travel from west to east. Mrs. Newbold said she was talking to her mother in Murray at the time and that she felt the shocks several seconds before her mother did.

For one Salt Lake woman the quake revived unpleasant memories. Mrs. Don Benson, a native of England who underwent numerous bombing raids during World War II, said her first thought was that Salt Lake City had been bombed when she saw dishes rattle in the cupboard and her baby's bed roll across the floor.

Dr. Kenneth L. Cook of University of Utah said it was his opinion today's quake was a brand new one, not an aftermath of the temblor last Thursday. He said the seismograph at Utah indicated the quake started 10

seconds before 9:05 a.m. and lasted 11 minutes, peaking about one minute after the first tremor. Dr. Cook said the needle was knocked off the chart for about one minute.

At Cyprus High School authorities said it was not known if the 650 students would be able to return to school Thursday. On the north and west sides of the building, particularly at the old section, the facade of the structure pulled about two inches away from the rest of the building. Inside the old part cracks up to two inches wide and eight to 10 feet long could be seen in the plaster.

Inside the front door the floor of the hall had pulled about one and one half inches apart from the floors of the classrooms.

Plaster had fallen in several rooms and seven windows in one room were cracked.

Authorities at Murray, Davis, Jordan and Salt Lake City School Districts reported little damage and no schools closed.

**[Herald Journal; September 5, 1962]**

## CACHE SCIENTISTS AID IN LOCATING S L QUAKE CENTER

Following continuing inspections of Wednesday's earthquake results throughout Salt Lake Valley, officials today characterized the damage as "minor but widespread."

Calculations by seismologists at Utah State University, University of Utah and from Stanford Research Institute placed the quake's epicenter near the northern tip of the Oquirrh Mountains, about 18 miles southwest of the center of Salt Lake City.

The temblor followed by six days one which shook a wide area of Northern Utah, causing damage estimated now in excess of \$1 million.

Dr. J. Stewart Williams, head of the geology department at USU, noted today that through the cooperation of Stanford geologists and additional seismographic equipment, the epicenter of Cache Valley's quake a week ago has been fixed as just north of the Richmond Cemetery.

Seismographs have been installed at the former Boy Scout lodge in Logan Canyon, at Tony's Grove, and in Cache Valley. These readings complement those at the Oldham Seismograph, and the more recently installed strong motion recorder at Utah State

University.

Dr. Williams and other scientists are expecting to inspect the High Creek Canyon area for possible discovery of fissures. A major landslide in Franklin Basin was reported to have been spotted last Thursday morning during the Cache quake.

Wednesday's shock, which struck the Salt Lake Valley area at 9:05 a.m., knocked bricks from chimneys, cracked walls, broke glass, dumped merchandise from store shelves and sent some interior structures crashing to the ground. One woman was injured.

Cyrus and Granger High Schools in Salt Lake County suffered the heaviest damage, although officials said it was confined to cracks in the walls and floors.

Dr. S. Theodore Algermissen, associate professor of geophysics at University of Utah, said he did not believe Wednesday's shock, which swayed buildings in downtown Salt Lake City, was an "after shock" to the earlier one which wreaked heavy damage on Logan, Richmond and Lewiston, Utah.

[Herald Journal; September 6, 1962]

## SAFEST PLACE IN A QUAKE

SALT LAKE CITY (UPI)—The earthquake hits and the building starts shaking, so you run outside where it's safe—right?

Wrong.

State Civil Defense authorities warned today that the safest place to stay during an earthquake is inside the building. The reason: no protection outside from falling debris. While rushing to "safety" you're likely to be clobbered by a falling roof tile or a shattered

windowpane.

In the wake of Utah's second earthquake within a week, the officials warned that the danger from falling debris is especially prevalent in downtown areas where objects can be shaken loose from tall buildings.

Debris falls inside buildings too, of course, but it doesn't have as far to fall—especially if you crawl under a bed or table.

[Herald Journal; September 6, 1962]

## EARTHQUAKE

The second earthquake struck the Utah area and Magna, together with other portions of the state "trembled" about 9:05 a.m. on Wednesday.

This shake was distinctly worse than the one last week when Logan suffered great damage. Windows

were broken in Magna, including two large ones at Bradshaw Auto Works and housewives said that dishes were knocked down from shelves.

Small loss was reported.

[Magna Times; September 6, 1962]

## MAGNA AREA SUFFERS DAMAGE FROM QUAKE

Last Wednesday morning's earthquake which rocked the Magna area and caused devastation in a half-dozen stores, also brought damage to many homes and schools.

The tremor, the epicenter of which was located just west of Magna, shuddered with varying intensity through this valley at 9:05 a.m.

It rumbled and rattled in Magna with a ferocity that shook dishes and buildings.

Local markets reported that jars of pickles, jams and other food items were knocked from shelves, creating a veritable chaos in the stores from the savage destructiveness.

### Buildings Damaged

A number of buildings and homes were slightly damaged from the blast through cracked plaster, broken cement foundations and a few broken windows.

The only person reported injured was Mrs. Vern A. Oliver, 2888 S. 9150 W., manager of the Magna Cornet Store. She suffered a broken leg when she slipped on a broken bottle of lotion, in attempting to get out of the shaking building.

Seismologists do not believe there will be a followup tremor—although they add this conclusion is not absolutely infallible.

### Jittery Residents

Residents were jittery in as much as it was the second major quake in one week. Another quake centered in Cache Valley jolted the area on August 30.

School work was totally disrupted as pupils were rushed outside as the quake struck. Cyprus High School students were dismissed for the day because of investigation damage to the building. However, the students returned for regular class schedules on Thursday.

### School Damage

At Cyprus High windows were cracked and cracks appeared on walls of classrooms.

### Liquor Store Hit

In Magna a liquor store had 400 to 500 bottles come crashing down and sewer and water pipes in the building were ruptured.

Local grocery stores were the hardest hit, when glass merchandise broke. However, they cleaned up the mess and were back in business shortly after the quake. Damage at the Magna grocery stores ran from estimates of \$400 to \$1,000 at each store.

Ernest and Galey Colosimo of the Standard Market said it took them until 2:30 in the afternoon to get their store back in "shape" for selling. Down at Safeway's, Lee Gull, manager, had crews immediately get busy to clear the aisles of broken jam bottles and cans of other food.

### Homes Hit

Practically every house in Magna suffered some kind of damage—either cracked ceilings, house foundations or broken dishes. Lynn N. Walters, 2920 S. 8750 West, reported that the foundation of his house was cracked, as well as houses of four next-door neighbors.

The residence of E. G. Paulos, 2911 S. 8700 West, was damaged when an outside cooler was thrown to the ground, a stereo broken and other damage occurred.

The Cyprus Drug, Dyches Rexall Drug and Martin Drug report bottles of lotion and creams were smashed in the short rumble.

But all in all, citizens of Magna consider themselves most fortunate that no one was seriously hurt and property damage was comparatively low.

[Magna Times; September 13, 1962]

## CYPRUS CAPERS

By Lucy Carlson

"Don't push the panic button!" These were the words of many of the teachers as the earthquake struck Cyprus last week.

It was a quiet routine day when all of a sudden we heard a deep rumbling sound from down in the ground and then the buildings started doing the "twist."

When Mr. Peterson, our algebra and chemistry teacher, felt the tremble, he ran out of his classroom and down the hall before he remembered his class was back in the room waiting for instructions pertaining to what they should do. Lynda Arnone, Cyprus

cheerleader, screamed, jumped from her seat and ran around the room a couple of times before Mr. Herbert was able to calm his second period English class. A falling piece of plaster barely missed Jim Carlson as he walked from the office to class. All students were dismissed to report to the football field while the building was inspected. Everyone congregated around the cheerleaders for a short Pep Rally to take our minds off the tumult we had just experienced. Of course fifteen cheers for the earthquake were inevitable as it had been the reason for dismissal from school.

**[Magna Times; September 13, 1962]**



## **S. L. VALLEY SHAKEN BY QUAKE; WIDE AREA DAMAGED SLIGHTLY 2 High Schools Emptied For Day; No Injuries**

SALT LAKE CITY (AP)—A strong earthquake shook Salt Lake valley for almost a half minute at 9:05 a.m. today, causing widespread minor damage and forcing two high schools to close for the day.

At least three homes were damaged and books and merchandise were knocked from shelves throughout Utah's capitol city.

Dr. Kenneth Cook, head of the geophysics department at the University of Utah, said today's quake was not as strong as the one that caused between \$500,000 and \$1 million damage in Logan and the Cache Valley area last Thursday.

But he called it "a good jolt."

Some 2,300 students were sent home from Granger and Cyprus High Schools when visible damage to both buildings occurred during the quake.

Dr. Reed Call, principal at Granger, said the inner walls in about 10 second-story classrooms separated from the outer main wall by a half-inch. He said at least one window was broken and ceiling tile was knocked loose.

"But building inspectors assure us the damage is only superficial, not structural. Classes will resume tomorrow," Dr. Call said.

It was the same thing at Cyprus High where classes also are scheduled to take up again Thursday.

Several Salt Lake City residents had close calls during the quake.

At least one heart attack was blamed on the earthquake. Salt Lake City police said a woman collapsed in the Tracy-Collins Bank in Salt Lake City.

Several other residents had close calls.

Janet Hallet, 15, said she woke up to the sound of bricks crashing through her bedroom window. "I screamed and screamed. I didn't know what was happening," she said.

Janet is the daughter of Leo C. Hallet. She said the chimney collapsed and some of the bricks smashed through her window and landed on the bed beside her.

The vacant house next door to the Hallet residence also was damaged. Janet said a number of bricks fell off one wall.

Dr. Cook said this quake, like the one last Thursday, knocked the university's seismograph instruments off the scale, making it impossible to get an exact reading.

Last week's quake was centered in the Cache Valley area and most of the damage was in Logan, Richmond and Lewiston areas.

Today's quake apparently was centered in the Salt Lake City area. It knocked down the ceiling of at least one home and left cracks in some downtown buildings which swayed during the tremor.

The California Institute of Technology estimated the quake's magnitude as 5 on the Richter scale. Last week's quake was recorded at 6.1. A magnitude of 7 or above is considered a major quake.

Today's quake was felt as far south as Provo and Spanish Fork. It lasted about 10 seconds in Salt Lake City and appeared to be much stronger on the valley flatland than on the east bench residential areas.

In Provo it was felt more along the bench area than in the valley. The lights went out briefly in Spanish Fork.

A tremor was felt in Ogden.

To workers in downtown Salt Lake City, the "center" appeared to be right in the metropolitan district. Buildings swayed and floors rumbled.

"It was a first class shocker," said Police Lt. Don Ferguson, who was called to a residential area to check damage reports.

He found Mrs. George Miller in tears, the bedroom ceiling at her home a mass of rubble on the floor.

"It was awful, terrible," said Mrs. Miller. "The bricks and plaster and everything fell right down on me and the boy."

Neither Mrs. Miller nor her 3-year-old son was injured, but police said they would probably have to abandon their damaged home.

The floor shook violently in the Associated Press Bureau in Salt Lake City on the sixth floor of the Tribune Building.

[Ogden Standard-Examiner; September 5, 1962]

## TEMBLOR RATTLES OGDEN; NO REPORTS OF DAMAGE Residents Throughout Area Report Jolts About 9 A.M.

Area residents still jittery from the big earthquake of a week ago, were shaken up at 9:03 a.m. today with another earth tremor.

The 'quake lasted for about four seconds and was felt over a wide area.

Residents telephoned the Ogden Standard-Examiner from Layton, North Ogden, Clearfield and Roy.

And the shake was felt in Ogden Canyon, Ogden Valley and in Eden.

There was no local damage reported and no injuries.

There was considerable confusion in Ogden when a Salt Lake City TV station reported the 'quake had not been felt in Ogden. Many people called to report they had felt the tremor and had also heard the characteristic rumble.

Robert Van Dyke, 15, the son of Mr. and Mrs. Garrett Van Dyke, 1024 25th, said his bed shook and a wall mirror trembled for about four seconds.

Mrs. Melvin Caldwell of 2322 Jefferson said her TV set shook and she felt the tremor in the couch where she was sitting.

Mrs. Raymond Robles, whose husband is a colonel at Hill Air Force Base, said she was talking on the telephone to a friend in Layton when the 'quake hit.

"Hey, is that another earthquake?" she said to her friend.

"It sure is. I felt it too," her friend said.

Mrs. Robles said she has lived in California and

Iran and is somewhat used to earthquakes. "You can't mistake that noise," she said.

Mrs. John J. Martinez of 228 Arizona in Clearfield was at a neighbor's house drinking coffee. "The coffee pot jumped and her potted plants were shaking," Mrs. Martinez said.

Mrs. Florence Buschjost of 1578 24th was still in bed in her basement. "My bed is on casters and it rolled back and forth," she said.

Mrs. Sam Gillespie of 3157 Iowa said she was in her kitchen when she felt her house quiver. She also heard the noise.

Mrs. Pearl Rosenlos of 4479 E. 2075 W., Roy, was cleaning the wash basin in her bathroom when the 'quake occurred. "I heard a pitcher fall in the front room," she said. "The same pitcher was knocked off a table in the big earthquake of a week ago," she added. She also heard the rumble.

Mrs. Florence Vogel was sitting on a couch watching television. "The windows rattled and my chair shook," she said. Mrs. Vogel remarked about the rumbling sound also.

Sheldon Austad of 1486 23rd, superintendent of the post office at the Naval Supply Depot in Clearfield, was typing when the 'quake hit. "I thought the typewriter was going to land in my lap."

Mrs. Alice Neff of 5810 S. 2000 W., Roy, was sitting at her kitchen table. "I felt the whole house shake," she said.

[Ogden Standard-Examiner; September 5, 1962]

## JOLT REVIVES CUCKOO CLOCK

SALT LAKE CITY (AP)—The cuckoo clock on the wall of the Albert G. Hauser home stopped two days ago and they couldn't get it started again.

It looked like the cuckoo was as dead as the dodo.

At 9:05 a.m. today, an earthquake shook Salt Lake

City. It gave the Hauser home a good rocking but the only noticeable effect was on the clock.

"It's going again," said Mrs. Hauser, "as good as ever."

[Ogden Standard-Examiner; September 5, 1962]

## S. L. JOLT LINKED TO CACHE QUAKE

SALT LAKE CITY (AP)—Residents of Utah's capitol city settled back into their normal routines today after an earthquake that probably damaged more nerves than buildings.

The shock Wednesday, coming just six days after an earthquake that violently shook the Cache Valley, caused relatively little damage and only one serious injury.

Mrs. Vern Oliver, 56, hurt a hip when she slipped on a bottle that had been toppled to the floor in a store she manages in Magna.

The Jackson elementary and Cyprus and Granger high schools in Salt Lake City suffered some damage, but students were back in all three today.

A few private dwellings and small business establishments were badly damaged. Cracks appeared in some major buildings, but most were tiny.

The epicenter of the quake was placed about a half mile west of Magna by Dr. S. Theodore Algermissen, associate professor of geophysics at the University of Utah.

He estimated its magnitude at 5.1 on the Richter scale. The tremor that shook the Cache Valley was rated at 5.7, or six times stronger.

### Probably Related

Dr. Kenneth L. Cook, head of the University's geophysics department, said the Salt Lake City tremor probably was related to the Cache Valley temblor.

"Any quake of the magnitude of that in Cache

Valley could set up disturbances all along the seismic belt extending through the Intermountain Area from Mexico to Canada," he said.

"The Salt Lake Quake probably was triggered by the Cache Valley quake, but we can't use the term 'trigger' in the sense of something that happens immediately."

Noting that Wednesday's tremor was much less violent than the one that shook Northern Utah and parts of five other states last week, Cook said:

"I hope we are on a downward trend of activity throughout the length of the seismic belt, but, of course, no one can predict when or where an earthquake might occur."

Buildings in downtown Salt Lake City were shaken violently by the tremor that began at 9:05 a.m. and lasted about 30 seconds.

A number of people reported close calls as plaster ceilings and windows shattered, among them Mrs. Oral Martineau, 24, of Salt Lake City.

"I was in the bedroom and the children were tumbling on the bed when the tremor began," she said.

She snatched up her son, Raymond, 6, and daughter, Kimber Lee, 2, moments before the bedroom ceiling plaster and part of an inner wall crashed at the foot of the bed.

"It fell just where I'd been standing when I decided to get the children out of the bedroom," she said.

[Ogden Standard-Examiner; September 6, 1962]

## MORE 'QUAKES LATELY? NO, SAYS SEISMOLOGIST

PASADENA, Calif. (AP)—In Iran, in Utah, in California, the earth has been quaking. For a week the headlines have been full of earthquake stories. Why?

Is it earthquake weather?

Ask a seismologist that one and you're apt to get a reaction good for magnitude 3 on the Richter scale. When the tremor eases, you'll get this explanation:

Neither the weather, nuclear testing nor the signs of the Zodiac have any influence on earthquakes which are due to shifts in the earth's crust. They occur continually.

### Why So Many?

Then why have there been so many lately?

"We can dispose of that one quickly," said Dr. Charles Richter of the seismological laboratory of the California Institute of Technology. There has been no unusual activity at all. It's just that a few occurred

where they drew a great deal of attention."

The Caltech lab at Pasadena has equipment to measure the major quakes of the world—and the minor ones close at hand. Such was the tremor which rocked nearby Inglewood last Saturday.

### Just a Pipsqueak

"The Inglewood shock was a pipsqueak," Dr. Richter said. "We get one or two a day like that. But this one happened to be in a heavily populated area."

What about a quake in Iran, which killed 10,000 or more?

"Major shocks of this nature occur about 20 times a year," Dr. Richter said. "This one took such a heavy toll because it occurred in an area with a large population, living in structures of the weakest type of construction."

[Ogden Standard-Examiner; September 7, 1962]

## SHARP QUAKE CRACKS HOMES, SCHOOLS ACROSS S. L. VALLEY

### Jittery Area Starts Damage Cleanup

The Salt Lake Valley, shaken and damaged, rolled with a punch delivered Wednesday about 9:05 a.m. by an earthquake centered about a mile west of Magna.

Public and private property owners started to tally the damage cost. The temblor's expense to at least one set of school buildings was placed at less than \$1,000.

By Wednesday afternoon, assessment of the quake's effect had revealed structural damage to some homes, superficial damage to many public buildings and dwellings and a widespread case of the jitters.

The shock, occurring just six days after an earthquake rumbled out of the Cache Valley area, knocked bricks from chimneys, cracked walls, broke glass, dumped merchandise from store shelves and sent some interior structures crashing to the ground.

Two area high schools closed Wednesday will reopen Thursday.

A woman injured during the quake was reported "progressing comfortably" at St. Marks Hospital.

Mrs. Vern (Verda) Oliver, 56, 2888 S. 9150 W., Magna, suffered a severe hip injury when she slipped trying to reach the street as her place of business shook violently.

Manager of the Coronet Store, 9071 W. 2700 South, Mrs. Oliver said she was trying to gain the street when she slipped on a broken lotion bottle that had fallen on the floor. She was treated at St. Mark's Hospital in Salt Lake City.

Cyprus and Granger High schools, noticeably damaged during the Wednesday morning jolt, excused classes for the rest of the day.

Both, following a close structural examination, will resume classes at the regular time Thursday.

Jackson Elementary School in the Salt Lake District excused pupils and delayed resumption of classes until 1 p.m. Wednesday until a full building inspection could be completed.

Authorities said the building is one of the district's oldest and it was considered necessary to check it thoroughly for structural damage before children were allowed back in classrooms.

Dr. O. C. England, deputy superintendent in charge of Granite School District building and grounds, said loss from damage to district schools will not be much more than \$1,000.

He said there was no structural damage.

Granger, Cyprus and Brockbank Junior High, Dr. England confirmed, were hardest hit.

The parapet around the top of Cyprus High, Dr. England said, was jarred enough to require removal. Superficial plaster cracks also were found at Cyprus.

At Granger High, about 100 feet of one-row acoustical tile in the second-floor hallway was jarred loose. It will be replaced, Mr. England said.

Engineers found cracks in classrooms along the east wall at Granger High, but said they were old ones.

Most Granite District schools evacuated buildings by the orderly fire drill method.

Salt Lake and Jordan School districts reported quake evacuations, but Murray and Davis County districts reported little or no effects of the temblor.

Salt Lake District itemized damage to at least 14 schools, none of it great.

E. F. Smith, district department of building and grounds superintendent, reported Salt Lake school damage as:

South High School—Very little damage except for a few cracks around the exterior main entrance.

West High School—Some plaster cracks in the technical building.

Jordan Junior High—Some cracks in the gym area.

Bonneville Elementary—A crack in exterior brick work on the Southeast corner.

Dilworth Elementary—Plaster down and a crack in the main office.

Hamilton Elementary—Loose acoustical tile.

McKinley Elementary—Clock knocked from wall.

Onequa Elementary—Cracks in pipe tunnel below building.

Washington Elementary—Plaster cracks in four classrooms.

Webster Elementary—One interior wall crack.

Grant, Jackson, Jefferson and Columbus

Elementary—Old interior wall cracks reopened.

East and Highland High schools—The oldest and the newest high schools in the district, little or no damage.

Some schools in the Jordan District—Jordan High, West Jordan Junior High and South Jordan Elementary of those reporting—evacuated as the quake thundered.

A three-man team of Marion Penrod, maintenance director; Alma Dowding, assistant maintenance director, and Kenneth B. Dunn, director of new construction, inspected district buildings following the tremor.

Damage was reported "almost negligible."



Numerous close calls were reported by Salt Lake residents caught during the shake.

Salt Lake City police reported a downtown woman worker was given oxygen for a mild heart seizure immediately after the shock.

Mrs. Ruth Kelsey, 57, 621 S. West Temple, was aided by a police department resuscitator when she suffered a mild seizure in the Tracy-Collins Bank Bldg. basement, 151 S. Main.

A housewife, Mrs. Karl (Minna) Wesemann, 47, 430 E. 7th South, was struck on the head by plaster falling from her living room ceiling.

Mrs. Wesemann said she was in her kitchen when the morning tremor hit. Walking into the living room, Mrs. Wesemann told police, she was hit on the head by a piece of falling plaster.

An outside front wall at the Wesemann residence was cracked from ground to roof gable top and inside wall blocks, police said, fell crashing through the plaster ceiling onto a desk.

Cracks, fallen chimneys, broken and loosened glass were reported from many Salt Lake residences and business establishments. State, city-county and federal buildings also suffered wall and doorway cracks.

"I was in the bedroom and the children were tumbling on the bed when the tremor began," said Mrs. Oral Martineau, 24, 271 W. 5th North.

Mrs. Martineau said she barely snatched up her son, Raymond, 6, and daughter, Kimber Lee, 2, before bedroom ceiling plaster and parts of an inner wall

crashed at the foot of the bed.

"It fell just where I'd been standing when I decided to get the children out of the bedroom," Mrs. Martineau said.

Mrs. George (Connie) Miller, 38, 17 N. 5th West, an expectant mother, was seated on the foot of her bed with a son, Larry, when the tremor shattered loose an inside wall, sending blocks and ceiling plaster showering down on the head of the bed.

The old Salt Lake City-County Bldg. registered the Wednesday morning quake with several new interior cracks.

A building inspection disclosed a crack in one third-floor wall that extended the full length of the parks and public properties office.

In the building's south end, a crack was found above the county auditor's office entrance on the second floor and one had developed above Third District Judge Aldon J. Anderson's court room entrance on the third floor.

City Engineer Roy W. McLeese said no serious damage had been done to Salt Lake City streets. Salt Lake County officials reported no word of county road damage following the quake.

Deputy Sec. of State Wendell L. Cottrell reported a "few" hairline cracks along walls in the new State Office Building. None is serious, he said.

The State Capitol itself, he said, suffered no apparent damage.

[Salt Lake Tribune; September 6, 1962]

## QUAKE CENTER AT MAGNA Scale Rates It 5.1

By William C. Patrick  
Tribune Science Editor

The earthquake that gave Salt Lake County a violent shaking Wednesday morning and made itself felt in a number of other Utah counties originated near the northern tip of the Oquirrh Mountains, 18 miles southwest of the center of Salt Lake City.

Dr. S. Theodore Algermissen, associate professor of geophysics, University of Utah, made a preliminary location of the epicenter at a point about one half mile west of Magna.

The calculations were based on records of seismographs at the University of Utah, Carbon College, Price, and Dugway Proving Ground, all operated by the Department of Geophysics.

The first shock wave hit at 9:05 a.m., and for one minute the recording needle of the seismograph was off scale.

The U. scientist estimated the magnitude at 5.1 on the Richter scale, which can be compared with 5.7 recorded in the Cache Valley quake a week ago. This means that the Cache quake was six times stronger at the epicenter than the Salt Lake temblor.

Tremors were noted for 10 minutes. The Cache quake bounced the needle off scale for more than two minutes and the effect of the shock lasted for between 15 and 20 minutes.

The intensity of the Wednesday disturbance as felt by residents of Salt Lake County was much greater for the simple reason they were only up to 20 miles from the epicenter and nearly 100 from that in Cache Valley.

Although the epicenter cannot be placed directly on an observable fault, Dr. Algermissen explained that the focus, or point of slippage, occurred three or four miles below the surface on a diagonal fault having an outcropping several miles from the epicenter, or the surface point from which the magnitude is measured.

Geologists have traced the Basin Range fault along the west face of the Oquirrh Mountains as far north as Bacchus.

Other faults have been defined in several other parts of Salt Lake Valley, some close to the western sector in which the disturbance occurred.

Dr. Kenneth L. Cook, head of the Department of Geophysics, said the Salt Lake quake most likely was related to that in Cache Valley, but he doubted that it properly could be called an aftershock.

"Any quake," he said, "of the magnitude of that in Cache Valley could set up disturbances all along the seismic belt extending through the Intermountain Area from Mexico to Canada, provided stresses along fault lines have been building up.

"The Salt Lake quake probably was triggered by the Cache Valley quake, but we can't use the term 'trigger' in the sense of something that happens immediately. We must think of the triggering period as being a matter of days or weeks."

Noting that the Salt Lake quake had only one-sixth the magnitude of that in Cache Valley, Dr. Cook said:

"I hope we are on a downward trend of activity throughout the length of the seismic belt, but, of course, no one can predict when or where an earthquake might occur."

Dr. Cook said that with its three seismographs, the Department of Geophysics hopes to be able to determine the most active faults in the area.

The instrument at Carbon College has been operating only since last April, and the one at Dugway, since May. The Dugway seismograph is one of 125 being installed around the world by the U. S. Department of Defense for the specific purpose of studying the effect of underground nuclear explosions.

He announced that at his request, Stanford Research Institute has sent experts to study the results of the Cache Valley quake.

Recent investigation indicates there is activity along the East Cache fault, although earlier calculations placed the main epicenter near the middle of the valley close to Bear River.

[Salt Lake Tribune; September 6, 1962]

### AREA UTILITIES NORMAL IN 'SHOCK' BELT

Utilities operating in the Salt Lake Valley reported no damage to facilities or interruption in services.

Inspection tours of electric, natural gas, water and sewer systems were conducted immediately following the shock.

The Union Pacific Railroad reported receiving word of shock waves of diminishing intensity as far north as Clearfield and as far south as Spanish Fork and Tintic.

Signal maintenance and section forces, the railroad reported, examined track and facilities in the area without locating any serious damage. Train traffic was operating normally.

The Utah State Highway Patrol also reported shock wave reactions as far west as Tooele and as far north as Logan.

Logan, where the brunt of last week's Cache Valley quake was taken, reported very little immediate awareness of Salt Lake's Wednesday jolt, which was of less magnitude.

Nerves, it was cited, were set on edge in Logan when news of the Salt Lake County tremor reached the northern Utah community still recovering from its shaking up.

Grocery stores in the Hunter, Granger, Magna area—some faced with a large quake clean-up job—marked the Wednesday jolt's shock wave.

The quake caused the most extensive amount of damage in the Granger, Hunter, and Magna areas of Salt Lake County and the northwest section of Salt Lake City.

[Salt Lake Tribune; September 6, 1962]

## QUAKES STILL JOLT IMAGINATIONS

By Dr. Robert R. Kadesch  
University of Utah

The lore of earthquakes is as rich and extensive today as it has been in the past. The present week, with apparent increased activity both in the Intermountain Area and in the world at large, seems to prove the point.

Centuries ago earthquakes were commonly thought to result from underground explosions. Later came the view that earthquakes were closely associated with volcanoes.

Volcanoes were visualized as a type of safety valve to vent internal pressures building up within the earth. So long as the volcanoes were active, pressures were held to a safe level.

When volcanic activity ceased, so it was believed, earthquakes were bound to ensue to relieve the pressure build-up.

Still another theory from the past held that mountains were largely hollow.

Earthquakes were supposed to be caused by the internal collapse of rock inside the hidden mountain chambers.

Now, of course, we know better. Although volcanic activity is the source of some earthquakes, today faulting is seen as their major cause.

When rock slips against rock, tremendous energy is released which is propagated in all directions from the point in the form of complex vibrations in the solid earth.

Current earthquake activity engenders some of the questions people have always asked, and some new ones in the bargain.

Is there a connection between the recent earthquakes which have occurred both locally and abroad? The answer to this one is a definite No.

When one considers that some 150,000 natural earthquakes are observed every year the world over, two or three major quakes are bound to occur in some given week, and who's to say that one is related to another?

One could consider that all earthquakes are in a sense cousins—related one to the other by the mere fact of the earth's creation some billions of years ago.

It has been reliably estimated that as many as a million earthquakes occur annually that could be recorded if suitable measuring devices were distributed widely over the globe.

Still another question involves possible relation of recent earthquake activity to underground nuclear testing. Have the Nevada tests touched off the tremors here, and did underground testing by the Russians trigger the severe quake in Iran?

Chances for an affirmative response are so remote as to be almost completely out of the question.

Our feeble nuclear blasts are puny indeed compared to nature's storehouse of energy.

We have also begun to wonder if earthquakes have been "in season" in recent weeks. All studies to date have shown no periodicity in the occurrence of quakes, with the sole exception of aftershocks.

The quakes along the Wasatch, that of a week ago and that of Wednesday, may or may not be related.

Sometimes quakes which originate but a few miles apart have no apparent connection whatsoever.

[Salt Lake Tribune; September 6, 1962]

## QUAKE TIPS: IT'S DEBRIS THAT HURTS

What should you do when an earthquake hits?

State Civil Defense authorities warned Wednesday citizens risk serious injury or death if they fail to take proper action during or immediately after an earthquake tremor.

Because most people, generally, can be expected to be indoors at any given time, the first point to remember is to stay indoors, said Leonard A. Higgins, state civil defense director.

Do not attempt to vacate a building during or immediately after an earthquake tremor.

If you are indoors, seek safety under a bed, under a table, under a desk.

Of several buildings damaged in Salt Lake City in Wednesday's quake, Mr. Higgins noted, debris fell on beds, tables or desks and the areas under those pieces

of furniture remained unscathed.

Do not, under any circumstances, run from a building during or immediately after the earth tremor.

There is much greater danger of serious injury or death, he warned, from falling debris from great heights under the eaves of buildings, particularly in the downtown area.

If you are on the street when an earth tremor occurs do not under the eaves of buildings, or under the eaves.

You are safest in a clearing where nothing can strike you from above. In this situation, too, the greatest danger may be from debris falling from the facings or eaves of buildings.

[Salt Lake Tribune; September 6, 1962]

## RICHTER SCALE — WHAT IS IT?

By William C. Patrick  
Tribune Science Editor

The Richter scale was devised by Dr. Charles Richter of the California Institute of Technology to make possible the recording of distant earthquakes on delicate teleseismic instruments, such as the one at the University of Utah.

The numbers on the scale begin at one and range upward. The progression in the measurement of earthquake magnitude is logarithmic. In other words, an increase of one on the scale indicates a multiplication of magnitude by 10.

For instance, if the magnitude of the Wednesday Salt Lake quake were taken at five this means the Cache Valley quake generated nearly 10 times as much energy.

The U. of U. gave it a Richter rating of 5 and seven-tenths, and Caltech, six. The Hebgen quake of

1959 had a rating of slightly over seven. Therefore it had 100 times the magnitude of the Salt Lake quake.

Magnitude readings are approximately the same, whether measured 20 miles from the epicenter, or several hundred.

When a teleseismic instrument is close to a temblor of some magnitude, the needle is thrown off the recording device for the duration of the heaviest shock. This happened at the U. of U. instrument in both the Cache Valley and Salt Lake quakes.

Utah State University, Logan, and Carbon College, Price, have what are called strong motion seismographs.

They will not show far distant tremors, but they give a picture of nearby quakes, because the needles are not thrown off the recording device.

[Salt Lake Tribune; September 6, 1962]



### IT'S CRACKING GOOD YARN

Yessir, there was a genuine crack in the State Office Building after Wednesday's quake.

The discoverers pointed it out to fellow workers. The news spread quickly of the crack above the fountain on the east end of the third floor. More employees came to look at the genuine crack in the wall. Visitors were told of its appearance. It was featured in some radio news reports.

The only thing wrong with it is that it was not new. Mrs. Georgia Rytting, deputy director of the drivers' license division—with offices adjacent to the crack—figures the crack has been in business for about a year.

It just didn't get any attention before people became crack-conscious.

[Salt Lake Tribune; September 6, 1962]

### CATHEDRAL UNTOUCHED

Officials of the Catholic Church said there was no damage to the Cathedral of the Madeleine, 331 E. South Temple, due to Wednesday's earthquake, although some plaster dust fell from two areas that

regularly drop dust whenever there is a strong wind or rainstorm. No structural damage was noted.

[Salt Lake Tribune; September 6, 1962]

### QUAKE PERFUMES PLUMBING JOB AT LIQUOR STORE

MAGNA—An unidentified plumber probably had a tough time convincing his wife Wednesday night he had indeed worked all day repairing earthquake damage.

Ray B. Packard, manager, State Liquor Store No. 11, Magna, said the plumber asked him to stop pouring spilled liquor in the store toilet and washbasin.

When the 9:05 a.m. quake hit, it smashed liquor

store merchandise on the floor and ruptured the building sewer and water pipes.

While the plumber worked in the basement to repair line breaks, Mr. Packard poured spilled liquor from above into the severed pipes.

"He smelled like a distillery," Mr. Packard said. "I hope his wife believes his story."

[Salt Lake Tribune; September 6, 1962]

### QUAKE SMASHES 'TIME BARRIER'

Some constructive value was seen in earthquakes Wednesday by at least one Salt Lake family.

Mrs. Valjean Chapman, 808 Coatsville (1790 South), reported an old mantel clock that has refused to run for years suddenly started ticking shortly after the

Wednesday morning Salt Lake Valley quake.

About 9:20 a.m., Mrs. Chapman said, she went into the basement where the clock is stored and found it "ticking away like new."

[Salt Lake Tribune; September 6, 1962]

## QUAKE JITTERS STIR CACHE

By Associated Press

LOGAN, Sept. 5—Nerves of Cache Valley residents were set on edge Wednesday by the earthquake in Salt Lake City, but few persons reported feeling the tremor.

The Logan-Cache Fire Department reported a small tremor Tuesday about 8 p.m. shook the fire station and knocked plaster from the walls. But no one else felt the shake.

Dr. J. Stewart Williams, collaborator for Utah for the U. S. Coast and Geodetic Survey, and B. J. Morrill, San Francisco, of the agency's seismological field

survey, released data on the quake that shook Cache Valley last week.

The tremor lasted for approximately 35 seconds and a second small quake started approximately 55 seconds after the beginning of the first one, their report noted.

As inspection of damage in last week's temblor continued, more damage was found to homes and the Red Cross unit in the area has reported some 42 families have been interviewed after applying for assistance.

[Salt Lake Tribune; September 6, 1962]

## TEMBLOR JIGGLES WEBER COUNTY

OGDEN (AP)—Although the Wednesday morning earthquake shook Weber County slightly, it was over in about four seconds, and there were no reports of damage or injuries.

Law enforcement officers said they received some calls shortly after the temblor, but they were largely for

information and reassurance.

Calls also were reported from Weber and north Davis counties from persons who said they felt the mild shake and heard the rumble.

[Salt Lake Tribune; September 6, 1962]

## LIGHT SHOCKS SHOWN ON U.'s GAUGES Aftershocks Go Unnoticed As Valley Sweeps Debris

By William C. Patrick

Only two mild aftershocks have been recorded since an earthquake rocked Salt Lake Valley Wednesday morning causing some property damage but no deaths or serious injuries.

Dr. S. T. Algermissen, associate professor of geophysics, University of Utah, said the U. seismograph registered a tremor Wednesday at 8:05 p.m. and another Thursday at 4:28 p.m.

They were not rated on the scale, and likely few if any inhabitants of the area noticed either one.

He had placed the epicenter of the main Wednesday shocks one mile west of Magna and the magnitude on the Richter scale at 5.1.

Meanwhile, cleanup of minor but widespread damage, particularly in the northwest sector of the county, was going ahead Thursday, and inspections of buildings with cracked walls were being made to ascertain safety for use.

Salt Lake building inspectors were instructing owners of four damaged homes in steps to be taken to prevent further damage or injury to inhabitants should more violent shocks cause weakened walls or ceilings

to fall.

Both Granger and Cyprus High Schools, which had been closed pending assessment of minor damage, were reopened Thursday.

Jackson Elementary School, 750 W. 1st North, was closed for only a few hours Wednesday until a thorough structural check had been made.

Emergency repairs already were under way Thursday in four damaged homes in Salt Lake City, and cleanup operations were virtually completed in several stores where the shock caused merchandise to be thrown from shelves to the floor.

Utilities continued to function after the quake, although crews were kept busy for several hours repairing a high-pressure gas leak at 3000 West and 300 North in West Point, Davis County.

Although the Salt Lake temblor was of lower magnitude than the Cache Valley quake of a week earlier, it was felt with greater intensity in Salt Lake City because the origin of the earth displacement was closer.

[Salt Lake Tribune; September 7, 1962]

## INDEX TO EARTHQUAKES: FILE UNDER P, S, L AND T

By Dr. Robert R. Kadesch  
University of Utah

Far below the surface of the earth millions of tons of rock have been moving slowly year by year.

Urged on by forces not yet completely understood, the rock gradually builds up strains that cannot continue to increase indefinitely. Suddenly and unpredictably, something gives.

Either the rock fractures to relieve the strain or, as is more often the case, the rock slips along a line of fracture that had been formed previously thousands or millions of years ago.

The pent-up energy contained in the deformed rock is suddenly released to radiate in all directions. The result—an earthquake that may range from the barely perceptible to the enormously devastating and destructive.

Waves are radiated from the point of slippage much like water waves that form when a pebble strikes the surface of a quiet pond. The waves in the solid earth, in contrast, are far more complex and contain almost inconceivable amounts of energy.

At a distant point, the first waves to arrive move the earth's surface largely in an up and down direction.

These so-called primary, or P waves have outsped the more complex waves to follow. P waves are compressional waves, like sound, that produce motion in the solid earth.

A completely different type of wave arrives a little later. Solid bodies, unlike the air, are capable of transmitting a kind of wave known as shear waves. When these arrive the vibrational motion of the earth may be largely horizontal.

Imagine standing on a rug with someone pulling on both ends, first one way and then the other.

Shear waves, also called secondary or S waves, are usually larger vibrations than the P waves.

Adding this fact to the back and forth motion they often produce, one can understand why earthquakes are often so destructive to buildings and structures of all kinds.

Man-made structures are usually designed to withstand vertical forces such as those produced by P waves, for even a building must support its own weight. Buildings are not usually designed, however,

to withstand a horizontal shaking back and forth.

The last to arrive are the so-called long, or L, waves.

L waves are the most complex of all, and many different types are known.

In contrast to both P and S waves, these hug the earth's surface exclusively.

The San Francisco quake of 1906 provides the classic example of the kind of earth motion usually involved in the production of large earthquakes.

The ground along the northeast side of the San Andreas fault was left displaced up to 21 feet with respect to the earth on the southwest side of the fault.

The earth shifted to some extent for a distance of about 250 miles along the fault line.

In this instance the motion of the land was largely horizontal.

The movement northeast of the fault having moved southeasterly with respect to the ground on the southwest side of the fault.

One can imagine a similar occurrence for most large quakes in which the direction of slippage might be nearly vertical or inclined at some angle to the ground surface.

The depth below the surface at which this occurs might be from 5 to 45 miles.

The most active earthquake regions the world over lie along or near a belt called the continental fracture system.

This belt is divided in two parts which form a great T that enfolds the earth.

The stroke of the T extends along the Mediterranean region through the Alps, through Turkey, Iran, through the Himalayan Mountains, and through Indonesia, New Guinea, and New Zealand.

The stem of the T starts in the Celebes to encircle the Pacific Ocean through the Philippines, Japan, Alaska and down the western coasts of both Americas to Antarctica.

The earth's second principal fracture system is outlined by the mid-ocean ridges.

These form a second, continuous, and worldwide system near which many shallow earthquakes originate. [Salt Lake Tribune; September 9, 1962]