

1962 Cache Valley, Utah Earthquake

**August 30, 1962
6:35 a.m.**

Magnitude 5.7

Newspaper Articles

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 Cache Valley, Utah earthquake - listing of newspaper articles

NEWSPAPER: Deseret News (Salt Lake City, UT)

Date	Headline	Page	Information Categories	Utah Towns Mentioned
08/30/1962	Sharp Quake Rocks Northern Utah	1	A, B, E, G, L, N, P	Lewiston, Logan, Richmond Ogden, Provo, Salt Lake City
08/30/1962	Utahns Jolted By Earth Shock	2	E, N, P	Bountiful, Granger, Kearns, Murray, Salt Lake City
08/30/1962	Damage Toll High In Logan Area	3	B, E, G, I, L, N, P	Logan, Lewiston
08/30/1962	Tembler's Jolt Knocks U. Seismograph 'Off the Record'	4	E	
08/30/1962	Beehive State Ranks High in Frequency of Quakes	4	E	
08/30/1962	No Tremor Felt at Yellowstone	4	E	
08/31/1962	Cache Valley Mops Up Costly Quake Damages	5	A, B, G, I, L, P, S	Lewiston, Logan, Richmond
08/31/1962	1934 Temblor Remains Worst on Utah Record	6	E	Salt Lake City, Ogden, Kelton, Locomotive Springs
08/31/1962	What's Haven From Quake?	6	A	
09/01/1962	Cache Near Normal In Quake Cleanup	7	A, G, I, R	Logan, Richmond
09/01/1962	Disaster Loans Okayed For Cache Residents	8	A, I	
09/01/1962	Quake Loss Minor at USU Campus	9	B, R	Logan
09/03/1962	Cache Still Checking Quake Damage Toll	9	B, I	Logan, Richmond
09/10/1962	Last date searched			

1962 Cache Valley, Utah earthquake - listing of newspaper articles

NEWSPAPER: Herald Journal (Logan, UT)

Date	Headline	Page	Information Categories	Utah Towns Mentioned
08/30/1962	Quake Spawned By East Cache Fault Rocks Area; Damage High	10	B, I, L, N, P	Lewiston, Logan, Richmond Brigham City
08/30/1962	Fallen Plaster...Cracks And Bricks	11	A, B, G, I, L, N, P	Logan
08/30/1962	'Follow-up' Note Causes Concern	13	A, B, E, I, P, S	Logan, Richmond, Smithfield
08/30/1962	A Newspaper Office As A Quake Hits	14	A, B, I, P	Lewiston, Logan, Richmond
08/30/1962	About Town	15	I	Logan
08/30/1962	Crawlers Shaken, Too	15	H, I	Draper
08/30/1962	Observations And Comments Following Today's Earthquake	15	B, H, N, P	Logan, Providence
08/31/1962	Condemns Historic Richmond Tabernacle	17	B, E, I, S	Logan, Richmond
08/31/1962	Schools Assess Temblor Damage	18	A, B, I, P, R	Cache County
08/31/1962	USU Surveys Bring Out Quake Damage	19	B	Logan
08/31/1962	Red Cross Disaster Offices Set Up In Richmond, Logan	20	A	Logan, Richmond
08/31/1962	Six Calves Since The Quake	20	H, I	Logan
09/02/1962	Some Citizens Give Reaction To The Quake	21	A, B, H, I, P	Lewiston, Logan, Richmond
09/02/1962	U.S. Small Business Agency Labels Cache Disaster Area	23	A	Cache County
09/04/1962	City Engineer Reports On Quake Probes	24	B, I	Logan
09/04/1962	Repairs To Make School Safer Than Before Quake	25	B, R	Logan
09/05/1962	Quake Lasts 35 Seconds; East-West Motion .13g	26	E	Logan

1962 Cache Valley, Utah earthquake - listing of newspaper articles

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

Date	Headline	Page	Information Categories	Utah Towns Mentioned
09/05/1962	Red Cross Aids Victims Of Cache Quake	27	A	Lewiston, Logan, Richmond, Smithfield
09/06/1962	Church Building Committeemen Give Verdict On Logan Chapel	27	I, R	Logan
09/07/1962	USU Geologist Requests Cache Earthquake Data	28	R, S	
09/07/1962	Logan Junior High Will Reopen Monday Morning	29	R	Logan
09/09/1962	Red Cross Disaster Advisory Committee	29	A, B, R	Cornish, Cove, Lewiston, Logan, Richmond, Trenton
09/09/1962	In Your Rebuilding --	30	A	Logan
09/10/1962	Aftershock Is Recorded Sunday Morn	30	B, E, G	Logan, Richmond, Smithfield
09/12/1962	County Schools Assess Quake Damage	31	A, B, P	Lewiston, Richmond, Smithfield
09/21/1962	Last date searched			

1962 Cache Valley, Utah earthquake – listing of newspaper articles

NEWSPAPER: Ogden Standard Examiner

Date	Headline	Page	Information Categories	Utah Towns Mentioned
08/30/1962	Quake Rocks Area, Centers Near Logan	32	A, B, E, I, L, P	Layton, Ogden, Lewiston, Logan, Richmond
08/30/1962	Last Tremor For Ogden Came In 1934	33	E	Ogden
08/30/1962	New Tremor To Follow, Expert Says	33	S	Northern Utah
08/30/1962	Logan, Provo Firms Jolted By Earthquake	34	B, I, N	Logan, Provo
08/30/1962	Quake Effect In Ogden? 'The Jitters'	35	B, E, G, I, N, P	Ogden, Plain City, Roy, Lewiston
08/30/1962	Ceiling Falls On Bed, But Girl, 18, Safe	35	B, P	Richmond
08/30/1962	Quake Potential High In Utah, Experts Reveal	36	S	
08/30/1962	Takes A Quake To Wake Boy, 17, In Salt Lake	36	H, P	Salt Lake City
08/30/1962	Nightcrawlers Upset, Too!	36	H	Draper
08/30/1962	Earthquake Sidelights -- Birthday Party--For Me?	37	E, G, H, P	Ogden, Plain City, Uintah
08/31/1962	Apprehension Clings To State In Wake Of Area Earthquake	38	B, I, P	Logan, Richmond
08/31/1962	The Bride-To-Be Was Shaken	39	B, E, N, P	Richmond
09/02/1962	Cache Area To Receive Disaster Aid	40	A, G, I, R	Lewiston, Logan, Richmond
09/03/1962	Cache County Weighing Quake Loss	40	B, I	Logan, Richmond
09/10/1962	Last date searched			

1962 Cache Valley, Utah earthquake - listing of newspaper articles

NEWSPAPER: Salt Lake Tribune

Date	Headline	Page	Information Categories	Utah Towns Mentioned
08/31/1962	Quake Rocks Northern Utah	41	E, S	Cache Valley
08/31/1962	6 West States Feel Tremor	42	B, E, G, I, L, N, P	Lewiston, Logan, Richmond, Salt Lake City, Smithfield
08/31/1962	Store Opens By A Crack	44	A, I	Logan
08/31/1962	Large Blast? Hundreds Thought So	44	P	Salt Lake City, Logan
08/31/1962	Temple Ruin Listed Slight	44	B, R	Lewiston, Logan, Richmond
08/31/1962	Jolts Silence Logan City School Bells	45	B, I	Logan, Richmond
08/31/1962	Quake Wake Rumbles In South Idaho	45	H, N, P	
08/31/1962	S.L. Water Lines Escape Quake	46	L	Salt Lake City
08/31/1962	Jar Marks Birthday	46	H, P	Ogden
08/31/1962	Next Quake? It's Really Anybody's Guess	46	E, H, I, N, P	Hunter, Salt Lake City
08/31/1962	Quake 'One Of Worst' For Utah	47	E	Salt Lake City, Kelton, Richfield, Ogden, Snowville, Promontory, Corinne, Milford, Hansel Valley, Logan, Provo, Kanab, Manti, Ephraim, Cache Valley
08/31/1962	Shock In Richmond Shatters 30 Years	48	B, E, P	Richmond
09/01/1962	Fear Of New Quake Haunts Cache Crews	49	A, B, G, I, R	Lewiston, Logan, Richmond
09/01/1962	Cache Areas Open For SBA Loans	51	A	Cache County
09/02/1962	Quake Area Jitters Easing As Crews Speed Repairs	51	A, R	Logan
09/06/1962	Last date searched			

SHARP QUAKE ROCKS NORTH UTAH

3 States Jolted; Logan Hard-Hit

A sharp, rolling earthquake, centered in northern Utah, rocked a three-state area early Thursday and caused thousands of dollars damage in Cache Valley.

It was the sharpest quake since 1934.

Seismologists predicted that another quake of lesser intensity could "almost certainly" be expected in the near future.

Reports indicated that only one person received injuries from the temblor, a Richmond, Cache County, girl who cut her foot on a bottle broken by the shock.

Hardest Hit Areas

Logan, Richmond and Lewiston were the hardest hit areas. The earthquake sent masonry from building walls in those communities flying to the sidewalks, shattered plate glass show windows, and loosened plaster that plummeted from ceilings.

The primary shock wave rolled across northern Utah, southern Idaho and southwestern Wyoming at 6:35:55 a.m.

Strong tremors were felt as far north as the Blackfoot, Idaho, area east to Lander, Wyo., west to Wendover, and south to Wellington, Carbon County.

Intensity Noted

A California seismograph recorded the earthquake's intensity at a reading of 6.1 on the Richter scale.

However, preliminary studies at the University of Utah indicated a Richter reading of 5.5, and pinpointed the earthquake's epicenter—the point directly over the tremor's origin inside the earth—at eight to ten miles northwest of Logan.

The San Francisco earthquake of 1906 had a measurement of 8.25, and the 1959 Yellowstone quake scaled 8.

Dr. Charles F. Richter of the California Institute of Technology said he expected "another one of magnitude of about 5" to follow the Wednesday tremor.

Seismologists said they could not predict when the follow-up shock would occur, stating that it might happen immediately, in days, or in weeks.

Not As Strong

They did state that it would not be as strong a shock as Wednesday morning's.

The Red Cross dispatched a field representative to the Logan area. That agency declares any such incident that affects five or more families is a "disaster," and

provides affected families with funds to re-establish themselves, if needed.

More significant effects of the Wednesday tremor were:

—Structural damage to the Logan Temple, Church of Jesus Christ of Latter-day Saints, Logan Fourth Ward chapel, two school buildings and downtown businesses at Logan.

Wall Collapsed

—Collapse of a drug store wall, which toppled on a vacant cafe building at Lewiston.

—Building damage to several homes in Richmond.

—Temporary power failure and damage to water lines in the Logan area, and a rockslide in the Logan Canyon that submerged half of U.S. Highway 89 beneath tons of displaced earth.

"We could have had some injuries if there were people walking by buildings, because there's plenty of glass on a lot of sidewalks."

Mayor Ross Plant, of Richmond said older homes in the community received masonry damage.

Leonard Bowne, a 48-year-old night watchman at the First Security Bank Building on 1st South and Main streets in Salt Lake City, felt the quake's effects in dramatic fashion.

He said the 15-story building swayed six to eight inches back and forth.

"I was on the top floor when it happened," he said, "and I got right out of there."

The primary shock wave jounced the three-state area for several seconds, and was followed by six small aftershocks.

Recorded at U.

Dr. S. T. Algermissen, University of Utah geophysics professor, said instruments at the university recorded the aftershocks, but that they probably were not noticed by persons in the quake area.

He said the primary shock wave and after-shocks lasted about 20 minutes.

Utah public officials expressed concern early Thursday that dams in the state might have been damaged, but a check of the structures showed no apparent problems.

Superficial Damage

President A. George Raymond of the Logan Temple said the structure received only "superficial damage," and that it would reopen after the summer recess Tuesday as scheduled.

Seismologists said the earthquake was of sufficient intensity to cause considerable structure damage if it had been centered at a large concentration of population.

Many residents of the Provo, Salt Lake City and Ogden areas awakened when the earth shuddered just after dawn.

"Swing and Sway"

The earth seemed "to swing and sway" on several occasions during a period estimated between 10 and 20 seconds.

At Logan, the scene took on a more calamitous atmosphere.

When the ground shivered, the sound of shattering glass, splintering timbers and falling bricks alarmed the sleeping city.

Residents had no electricity, and some communications lines were knocked out.

A dollar estimate on the damage in that area was not immediately available.

University of Utah seismologists said they would not be able to determine the exact location of the epicenter nor the precise Richter scale measurement until late Thursday.

[Deseret News; August 30, 1962]

UTAHNS JOLTED BY EARTH SHOCK

Shake, Rattle And Roll

Residents all over the northern Utah area were startled by the earth tremor which shuddered across Utah early Thursday.

"It almost knocked me over," said James Cook, 3300 S. 3200 West, Granger, "just like an airplane hitting the north end of the house. A lamp rolled around a table."

"I heard a rumble," said Mrs. Melba Standing, 464 3rd Ave., and my bed moved sideways across the room on the hardwood floors."

Mirror Nearly Fell

"A mirror almost fell off the wall," said D. F. Likes, 446 Tuttle Ct., and my wife became quite frightened."

"It felt like the house was shaking and a door swung open," said Mrs. Clara Baldwin, 473 5th Ave. "My son saw his bureau rocking back and forth."

"We could feel the house sway and cabinet doors began to rattle," declared Loren McCormick, 175 W. 4th South, Bountiful. "The house was really moving."

"I tried to stand up, but the chair rocked like a ship," said Margaret Shirley, 160 Garden Ave., a receptionist at the Primary Children's Hospital.

Length of Tremor

"It lasted long enough for me to have walked to the front door—if I could have gotten out of that chair," she said.

"A table danced all over the floor and the lights swayed," related Mrs. Eddie Sanchez, 5190 W. 7th South.

"Our bed swayed north and south in a constant motion," said Mrs. Marvin Brown, 4085 W. 5540

South, "and plumbing bubbled up in one of the bathrooms."

"Woke Me Up"

"It woke me from a deep sleep," reported Carl Goodwin, 175 N. 1st West, "and it takes quite a bit to do that."

"Cracks spread all over our driveway," said Julie Pendleton, 4190 W. 4775 South, "and raised a half inch ridge in the cement in one place."

"I was outside and felt no reaction at all," said Reed Christofferson, 3140 20th East, "but my cement porch sounded as if it were cracking."

Started Swinging

"Lights, doors and the chandelier all started swinging north and south," said John K. O'Driscoll, 4410 W. 5615 South, Kearns.

"I was shaving," said Ohlan Campbell, 5476 W. Paulette, "when the whole wall started to shake and the cupboard swayed and the windows rattled."

"I talked to a milkman and he said it felt like a car had hit his truck," Mr Campbell added.

"My dog woke up and started to bark and I heard a rumbling in the ground," said Mrs. Lamar Holmes, 815 E. Southwood Dr., Murray.

"A portable television in the bedroom rocked and nearly fell off the table. It sounded like an underground explosion," she explained.

"My house creaked and groaned and the back porch shook," said Mrs. E. S. Ertmann, 1001 8th East. "It really startled me."

[Deseret News; August 30, 1962]

DAMAGE TOLL HIGH IN LOGAN AREA

By Christian P. Nielsen

LOGAN—The sharp earthquake which shook northern Utah and Idaho early Thursday left the Logan area with cracked walls, collapsed roofs and broken windows.

Major damage occurred at the Model Billiards on West Center Street, where the swaying movement appeared to spread the walls apart as the roof crashed to the floor. No one was injured although the lunch counter in the front of the building was occupied.

The Logan Fourth Ward chapel, Church of Jesus Christ of Latter-day Saints, also had a portion of the roof caved in over the choir seats, and a large crack was opened in the ceiling of the chapel.

Walls Tumble

Sections of walls tumbled to the ground in various parts of the city. Smith Printing Company on Federal Avenue lost approximately 40 feet of the outer west wall, to a depth of about two feet. Parts of walls fell from the Crystal Furniture Company stores on 2nd North and on Main Street, and from the bowling center and other stores.

Large plate glass windows were shattered in stores in the central part of town, including Keith O'Briens, Pack's Motor Company and Baum's Motor Company. Many other smaller windows were broken in other stores.

Cracks Visible

Several buildings have visible cracks. The outer wall at the Superior Cleaners and Dyers appears to have been pushed outward at least six inches at the top. The Ford Motor Company also had a wall pushed outward.

At the Logan Temple, the weather cock and lightning rod on the west tower collapsed. In the building a great deal of plaster was jarred loose from the walls and ceilings.

A water flume, carrying water to the Utah Power

and Light Company plant at the mouth of Logan Canyon, collapsed and caused a slide that covered half of U.S. 89.

Schools Closed

The Logan Junior High School, the Richmond Elementary School and North Cache High Schools were closed because of window and other damage.

Traffic in downtown Logan, swollen to abnormal size by the curious, moved at a snail's pace through the intersections because the semaphores were inoperable due to the power failure, caused when the quake hit.

Power was restored at 9:20 a.m.

No injuries were reported during the earth movement, but Douglas Glead, about 18, assisting in the cleanup at the IGA Foodliner on South Main Street, suffered undetermined back injuries when he slipped and fell in some spilled baby food.

Other grocery stores reported major damage as food stuffs were dumped into the aisles. Hardest hit was the Albertson Food Store on 4th North Street where damage was estimated at \$5,000. Cleve's Foodland, 1st North and 1st West Street, The Temple Grocery, 2nd North and 3rd East, and other stores had their racks emptied and some suffered broken windows.

The movement started with a rolling sound that was soon lost in the rattle of windows and doorways and the sound of falling bricks and breaking glass. It seemed to last for possibly a minute and at least a minute later the utility wires were still swaying.

Ernie Jaeger, 19, of 1473 Alden St., Salt Lake City, driving an 18,000 pound gross weight truck on Logan's Main Street, said the vehicle swayed so badly he had a hard time holding it on the road.

Damage was reported in communities surrounding Logan. In Lewiston the wall of the Lewiston drug store collapsed and went through the roof of the City Cafe.

[Deseret News; August 30, 1962]

TEMBLOR'S JOLT KNOCKS U. SEISMOGRAPH 'OFF THE RECORD'

Shock of the earthquake which hit Utah early Thursday caught the University of Utah's seismograph machine totally "off guard."

The measuring device was near the top of the paper, which records the shock via a photographic-like process, when the jolt hit.

The shock sent the measurement completely off the paper for more than a minute. When it finally got back on, long vertical lines of several inches were

recorded, compared to a normal movement of a fraction of an inch.

"We are simply not geared for quakes of such magnitude," said Dr. S. Theodore Algermissen assistant professor of geophysics.

He explained that the seismograph measures several hundred earth movements in a year, but a shock like this was way out of any expected range.

[Deseret News; August 30, 1962]

BEEHIVE STATE RANKS HIGH IN FREQUENCY OF QUAKES Faults Dot Landscape

Earthquakes are no rare thing in Utah.

Despite the excitement generated by a tremor in the state, Utah is actually one of the leading places in the nation in earthquake potential.

Since 1850 a total of 261 quakes which have trembled in the West have had their origin within the boundaries of Utah.

More Tremors

The state has had more earthquakes exceeding moderate intensity than any other state in the entire Mountain West.

And the Pacific Coast Uniform Building Code rates Utah in Earthquake Zone 2, second only to California, which ranks in Zone 1.

However, despite the frequent quakes which have shaken the area, little damage has been caused and not much public stir created.

This is because Utah has such vast areas of unpopulated land that most quakes pass relatively unnoticed, except on scientific instruments and in a small locality.

Worst In Cities

It's only where there are concentrations of buildings and people that the quakes have any marked effect.

There is a potential earthquake disaster in Utah's most heavily populated area, however. The Wasatch front, where most of the residents of the state live, is right on top of the Wasatch Fault.

This fault, one of the biggest anywhere, has produced many quakes over the past hundred years, but fortunately they have been of a mild nature.

[Deseret News; August 30, 1962]

NO TREMOR FELT AT YELLOWSTONE

WEST YELLOWSTONE—The sheriff's office here reported no earthquake was felt Thursday morning. "Things are perfectly normal," a deputy said.

West Yellowstone was the scene of a severe

earthquake almost three years ago, which caused a major landslide at Hebgen Lake. The quake claimed 29 lives.

[Deseret News; August 30, 1962]

CACHE VALLEY MOPS UP COSTLY QUAKE DAMAGES

Experts Put Epicenter Near Logan

By Christian P. Nielsen

LOGAN—Cache Valley residents Friday were mopping up in the wake of a sharp earthquake that caused many thousands of dollars in damage early Thursday.

The quake, felt strongly in at least three states, was centered about eight to 10 miles northwest of Logan, according to Utah seismologists.

Significant damage was done to structures in the Lewiston, Richmond and Logan areas, but personal injuries were reported as minor.

At Richmond, the Benson Stake Tabernacle of the Church of Jesus Christ of Latter-day Saints was so badly damaged that it was ordered razed.

9 Homes 'Lost'

Richmond Mayor Ross Plant said at least nine homes in his community will have to be rebuilt.

Crews are removing 600 pound capstones from the North Cache High School, and will attempt to remove a loosened chimney capstone that weighs a ton. The school is closed.

The only other school in the valley that remained closed Friday was the Logan Junior High School, which was undergoing an intensive inspection before any decision was made to reopen it.

Clean-up Projects

Crews Friday were cleaning up buildings, discarding loosened bricks, patching cracks and disposing of debris following the earthquake that made the ground roll and pitch in the Logan-Richmond-Lewiston area.

DeWitt Springs in Logan Canyon, the city's source for culinary water, had increased its flow by three second feet as a result of the tremors.

Mayor Plant said a crew would check the Richmond water line to the springs in Cherry Creek Canyon. A large cloud of dust was reported high in the canyon after the quake—indicating a landslide.

Water Warning

In the Clarkston-Newton area, residents Thursday were warned to boil their water after the line had ruptured. The line had been repaired Friday morning, but there was still a water shortage.

A Trenton farmer reported cracks in the Bear River bottomlands—the first such opening reported after the earthquake.

At Smithfield, a 64-ton electric transformer at the substation of the Utah Power and Light Co. shifted two

inches. Damage at Smithfield, however, consisted mostly of falling plaster and bricks.

Further tremors were reported by Logan and Richmond residents during the night.

Four injuries were reported as a result of the quake.

At Logan, Douglas Gleed, 18, slipped and fell while cleaning up fallen canned goods in a grocery store. He was treated at a Logan hospital and released.

Corliss Ann Bullen, 18, daughter of Mr. and Mrs. L. J. Bullen, Richmond, suffered bruised legs when concrete blocks and brick tumbled onto her bed.

Nadine Housley, about 15, daughter of Mr. and Mrs. Calvin Housley, Richmond, suffered cut feet when she descended the stairs, stepping on some shattered fruit bottles.

Robert Halverson, 19, was scratched when rubble from a chimney fell onto the bed of his Richmond home.

Asks Designated

Ross Tyson, Salt Lake branch manager of the Small Business Administration, said he recommended to his Washington office that the affected area be designated a "disaster area."

That would have the effect of making persons with damaged homes or businesses eligible for 3 per cent interest loans to be used to repair the structures.

He said loans could be extended for as long as 20 years.

Dr. S. T. Algermissen, of the University of Utah geophysics department, fixed the earthquake's magnitude at 5.6 to 5.7 on the Richter scale. The 1959 Yellowstone temblor had a Richter reading of 7.1.

Second Scale

The Richter readings are made instrumentally.

Another measurement of earthquake intensity is the Mercalli scale, which determines the magnitude by visible effects.

Dr. J. Stewart Williams, professor of geology at Utah State University, said the Mercalli measurement of Thursday's tremor was 6.5. The Yellowstone Mercalli reading was 10.

As for the possibility of aftershocks, Utah seismologists said some would probably follow. But they said they could not predict the intensity or time.

Jarred into Action

Dr. Williams said the quake jarred the Utah State University seismograph into action for the first time. A

machine that is triggered by violent earth shocks, it was installed after the 1934 quake in Utah.

The earthquake's damage seemed to be concentrated on the east side of Cache Valley, said Dr. Williams. He added that it caused little damage to new buildings, but wrought most of its damage on old or poorly built structures.

Richmond Edgy

Residents of Richmond were edgy late Thursday in the wake of predictions by seismologists that aftershocks would probably occur.

It was those aftershock forecasts that caused schools in the area to be closed Thursday.
[Deseret News; August 31, 1962]

1934 TEMBLOR REMAINS WORST ON UTAH RECORD

"Utah Rocked By Severe Earthquake," read the headline in the Deseret News on March 12, 1934.

That earthquake still remains the worst in the recorded history of the state, according to geology experts at the University of Utah.

Thursday's earthquake has been given a Richter scale reading of 6.1 by the University of California.

2 Deaths in '34

The '34 quake resulted in two deaths, one indirectly.

Charles Thithel, a city waterworks employee, working in a six-foot deep trench at 60th South and Highland Drive, was seriously injured by a cave-in. He died the following day.

Ida May Venable Atkinson, 21, of Ogden, ill in bed, sat up during the first shock and said to relatives, "Why are you shaking my bed?" She fell back dead.

2 Major Jolts

The '34 quake came in two major parts, a sharp temblor at 8:05 a.m., followed by a second one at 11:21 a.m.

Schools were dismissed in northern Utah following the second shake.

The Salt Lake City and County Building was

evacuated and offices were closed for the day. Courts were also cleared.

Deseret News Report

The Deseret News reported: "It might be said that the courts adjourned informally as the bailiffs were among those seeking fresh air."

Gov. Henry H. Blood was in Hotel Utah leading a highway conference of western states governors. He grasped the podium firmly in the 11:21 a.m. shock and said to his fellow governors:

"I want you to understand that we do not have these all the time. This is just a little special performance that we are putting on for the entertainment of our visitors."

The 1934 quake centered at Kelton, Box Elder County, just west of Locomotive Springs, was on the Great Basin Fault, geologists said. Fissures up to 18 inches in the ground were found in the area the following day.

The quake was felt as far north as Twin Falls, Idaho, west to Elko, Nevada, south to Delta and east to Green River, Wyo.

[Deseret News; August 31, 1962]

WHAT'S HAVEN FROM QUAKE?

Where is the safest place to be in an earthquake?

Under something strong—or out in the open where nothing can fall on you.

Safety experts urge that if you are inside a building—a home, an office or factory—get under something strong so you won't be hurt by a falling ceiling or roof.

A table, a desk, a bench or a heavy piece of equipment is a relatively safe place to be under.

If nothing else can be found, stand under a

doorway.

Don't move outside of a building during the actual quake. There is serious danger of falling material.

After the quake, move out into the open, away from buildings and other structures which might fall and cause injury.

If buildings and structures look like they are damaged, stay away from them, even if the earthquake is over.

[Deseret News; August 31, 1962]

CACHE NEAR NORMAL IN QUAKE CLEANUP

By Christian P. Nielsen

LOGAN—Cache Valley continued its return to normal Saturday in the wake of Thursday's earthquake that caused damages unofficially estimated at \$500,000 to \$1 million.

Officials are reluctant to set a damage figure until damage can be carefully assessed, so an official dollar value estimate of the destruction may be several days away.

The \$500,000 to \$1 million estimate may be distorted because of the quake's widespread effects and the lack of reports in cases of minor damage.

New Stake House

Among the changes that residents of the area face are construction of another stake house for the Benson Stake, Church of Jesus Christ of Latter-day Saints, and extensive repairs and reconstruction of homes, businesses and schools.

Workers Saturday began removing musical instruments from the Benson Stake House. Plans call for razing it and building another.

Benson Stake President T. R. Holt said the high council and the stake presidency would meet Sunday to discuss building plans.

In Other Wards

Meanwhile, members of the Richmond Ward which meets in the Benson Stake House will meet with other wards of the stake.

Bishoprics of the Logan Fourth-Sixteenth Wards also announced that no meeting will be held in that chapel until further notice. They too, have urged their members to attend other wards in the stake. Damage to the Fourth-Sixteenth Wards' chapel ranges upward from \$40,000.

The Logan Hotel's front is being removed and will have to be rebuilt. It was pushed outward from the building. Three street-level stores are open for business, with customers using rear entrances.

Complete Repairs

Repairs to a wall of the J. P. Smith Printing Co. building were completed Friday, and the Lundberg building's earthquake repairs also were nearing completion.

Some 20 rooms in the Townhouse Hotel have been cleaned and most of the effects of the water damage from a ruptured main have been erased.

Work began Saturday morning on repairs at the Logan Junior High School, and reports indicated that students at that school would receive three weeks more

of summer vacation.

Estimated costs of repair to the school were pegged at \$19,000. The work will consist of rebuilding a broken parapet, placing a cast bondbeam around the top of the halls at roof level, repairing a section of roof, lowering the chimney about 12 feet and setting a new cap.

Sherman G. Eyre, superintendent of Logan schools, said the students may have to make up time lost because of the repairs by attending classes on Saturdays or extending the year into next June.

At Richmond, classes were expected to resume at North Cache High School Tuesday after repairs to the school building.

Damage to the Amalgamated Sugar Co. factory in Lewiston was estimated at \$25,000, and the company sought to hasten repairs in time for the fall sugar beet harvest.

The American Red Cross, the Farmers Home Administration and the Small Business Administration have designated Cache Valley as a disaster area.

The Red Cross set up a station in Richmond's city office and will be open each day from 8:30 a.m. to 6 p.m. and Sunday from 1 to 5 p.m.

Miss Mildred Schilling, a Red Cross disaster representative, invited persons seeking aid to visit the emergency station to discuss their problems.

Reports of faults and earthquake cracks were investigated in the Trenton-Cornish area Friday by Dr. J. Stewart Williams, professor of geology at Utah State University. He said the "fault" resulted from soft sand bank of a delta which had been jolted loose by the tremor and slid to the bottom land.

Cracks on the Harold Spackman farm, adjacent to the Bear River west of Richmond, and in adjoining farms bordering the river were caused by drought, Dr. Williams said. The water and sand beneath the baked earth crust was forced upward by the tremor's motion and spurted and flowed like small geysers through some of the cracks.

Some of the eruptions carried an odor of gas. In one area the crust was forced upward approximately a foot, but settled within 24 hours after the tremor.

Dr. Williams said the cracks appeared in the same area where similar results were noted after the 1934 earthquake, which was centered in Hansel Valley, 60 miles to the west.

[Deseret News; September 1, 1962]

DISASTER LOANS OKAYED FOR CACHE RESIDENTS

Cache County residents will be able to make applications for loans to repair earthquake damage starting Tuesday in Logan.

The Salt Lake branch of the Federal Small Business Administration will set up headquarters Tuesday in chamber of commerce offices in Logan to start processing the loans.

Cache County was declared a disaster area Friday making it eligible for help under the disaster loan program of the SBA.

Ross S. Tyson, SBA branch manager, said the SBA Washington office will appoint an advisory committee of Cache County citizens to screen the applications and make recommendations for approval.

Loan Eligibility

Individuals, business concerns and non-profit organizations, such as churches, are eligible for the loans. There is no dollar limit on the loans, but the branch office only has authority to approve loans up to \$50,000. Mr. Tyson predicted few of the Cache Valley requests would go over this amount.

Loans to individuals may be used to repair or replace damaged furniture and household belongings as

well as homes. Businesses may use the money to repair or replace buildings, fixtures, machinery, equipment and merchandise.

Loans will not be made to repair or replace summer or winter cottages, camps or lodges used for recreational purposes, Mr. Tyson said.

Collateral Pledge

Applicants will be expected to pledge whatever collateral they can furnish, Mr. Tyson said.

Purpose of a SBA disaster loan is to restore homes or business property as nearly as possible to pre-disaster condition.

Interest rate on an SBA loan is 3 percent and the repayment period may extend to 20 years.

Mr. Tyson said step-by-step procedure for making applications generally includes making a list of damaged or destroyed property, obtaining estimates of damage, making a list of debts and assets, submitting business records, obtaining loan application, discussing possibility of bank loan, a bank SBA disaster loan, or a direct disaster loan from SBA.

[Deseret News; September 1, 1962]

QUAKE LOSS MINOR AT USU CAMPUS

Damage to Utah State University buildings by the Thursday earthquake was largely superficial, Glen R. Swenson, state building board director, reported Saturday.

Mr. Swenson inspected the buildings Thursday afternoon with USU officials, who are making further inventories of the damage.

Two minor structural problems will require correction, Mr. Swenson said.

One is in the tower of Old Main. The rods there and in another section will have to be tightened right away, he said.

[Deseret News; September 1, 1962]

CACHE STILL CHECKING QUAKE DAMAGE TOLL

By Christian P. Nielsen

LOGAN—Continuing discovery of new and extensive damage is one factor holding up an official estimate of damage in last Thursday's earthquake.

Theral V. Bishop, Logan's mayor, said the city engineer has been assigned the task of compiling damage. He indicated it may be several days before an accurate figure can be reached.

Some officials have indicated the total may be over \$1 million.

In Richmond, Mayor Ross Plant said approximately 75 per cent of the homes received some damage. In response to a questionnaire sent Friday, Mayor Plant said 40 of the community's homes were not reported. Of those reporting, 202 were damaged by the tremor and of these 177 had chimney damage; 137 had plaster damage and 142 had cracked walls.

"The damage was much more extensive than we had first realized," Mayor Plant said.

[Deseret News; September 3, 1962]

QUAKE SPAWNED BY EAST CACHE FAULT ROCKS AREA; DAMAGE HIGH

By Jennie Christensen

Cache Valley received the brunt of a damaging earthquake which rolled through three western states this morning, leaving crumpled walls, shattered glass and twisted foundations on buildings in several communities.

Total damage estimates ranged from \$100,000 to \$500,000.

Although there were no reported injuries resulting directly from the tremor, an employee of IGA Foodliner in Logan received a back injury when he slipped on the floor while cleaning up earthquake debris. He is Douglas Glead, 18, who was treated and released at Logan LDS Hospital this morning.

Mrs. Charles Burbank of Richmond was taken to a neighbor's home in "nervous shock" after the walls on her older brick house completely collapsed.

The temblor, which was recorded at a magnitude of 6.1 on seismographs at Caltech Seismological laboratory at Pasadena, California, and University of California at Berkeley, hit hardest at older business establishments, schools and church buildings in Logan and surrounding towns.

Schools Close

There was no school at all at Logan Junior High, North Cache High School, Richmond Park School and Hyde Park elementary school where broken glass and plaster made conditions unsafe for students.

By noon today all Logan and Cache County Schools had closed as a precautionary measure because of the possibility of a follow-up tremor. All expect to re-open again Friday morning except Logan Junior High, where a complete inspection must first be completed, and North Cache High School, which is tentatively scheduled for re-opening on Tuesday, September 4.

In Cache's schools damage has been basically confined to cracks in plaster. At North Cache, however, some concrete blocks on top of the building have been thrown off and will have to be removed. After inspections, the architect stated that all buildings are structurally safe.

Perhaps the most pitiable sights were in Richmond where bewildered families were sitting out on lawns with their belongings close by, not knowing quite what course of action to take.

Typical of the damaged dwellings was that of

Lorenzo Bullen where the adobe of his brick and adobe home "completely broke loose" and a wall caved into the bedroom where his daughter Corliss was sleeping. "It was just a miracle she wasn't killed," Mr. Bullen contended. He pointed out that his chimney was ripped off violently, all the walls are badly twisted, "and its just not safe to be in."

At least four other Richmond homes were badly damaged by the quake, with many other chimneys appearing to viewers "as though they have been wrung like a dish cloth."

Sugar Factory

Copings of several buildings have been destroyed in the community and there are cracked walls and wrenched support pillars at both the Community Building and the Library at Lewiston. Mayor Ross Plant of Richmond was reasonably sure the Benson Stake House structural damages would result in it being condemned.

Damage is estimated at \$25,000 at the Amalgamated Sugar Company in Lewiston, according to Mr. K. E. Bailey, who pointed out that some ornamental brick work (cement copings) went completely through the roof, causing extensive brick and concrete loss.

At Lewiston, the parapet wall of the City Drug Store crashed into the roof of an adjacent cafe. All of the plate glass windows were broken in one of the quake's most noticeable targets. A ruptured water line was also reported in Lewiston, as were falling chimneys and bricks on business houses and family dwellings.

Fire Chief Ivo Borg of the Logan-Cache Fire Department and City Engineer Ray Hugie were making thorough checks of Logan buildings where structural damage had been reported. Most of the establishments visited had suffered cracked walls, while many also had shattered glass and scattered merchandise.

Hardest-hit buildings in Logan were the Model Billiards and the Logan 4th Ward Church (described elsewhere in this newspaper) although actual loss to others could not be ascertained at this time.

Inspectors from Salt Lake City were to tour the LDS Temple, while Utah State University officials were in the process of inspecting buildings on the entire campus.

Just Dill Pickles

As yet, no damage to the gas lines had been found although Wesley Reese of the Mountain Fuel Supply Company observed "we have been getting plenty of calls." At a Logan supermarket what was expected to be the odor of leaking gas turned out to be that of dill pickles in their broken jars.

The rattle of dishes in their cabinets was about the extent of the tremor's effect in Tremonton although A.

J. Rytting, publisher of the Bear River Valley Leader, said his entire valley felt a "great shock."

Charles Claybaugh, managing editor of the Box Elder News Journal said only minor damages had been reported in Brigham City and vicinity.

Two distinct after-shocks were felt in Preston, Idaho, where bricks were tumbling off the tops of some of the older buildings.

[Herald Journal; August 30, 1962]

FALLEN PLASTER . . . CRACKS AND BRICKS

By Val Hess

Damage in this morning's earthquake mounted throughout the day as reports came in of havoc raised throughout Cache Valley.

Extensive damage was reported at several locations but many homes and business houses received cracks and loss of plaster.

However, the damage was limited to property as no injuries were reported. An 18-year old Logan youth was injured a few hours after the quake and as an aftermath of the jolt.

Douglas Gleed, 18, son of Mr. and Mrs. Darrell T. Gleed, 426 S. 2nd W., was cleaning debris caused by the quake at the IGA Foodliner, when he slipped and fell, injuring his back.

He was x-rayed at the Logan LDS hospital and treated and then released.

One of the most badly damaged buildings in the Logan area was the Logan Fourth-16th ward chapel. Brick and timbers on a gable at the west end gave way and crashed into the interior of the chapel. Bricks, timber and plaster were scattered through the chapel and the ceiling was badly damaged.

The building also received big cracks and plaster loss throughout the whole structure.

Grocery stores, as well as other types of stores, were heavily damaged as plate glass windows crumbled, and merchandise tumbled into the aisles. Many bottles of food broke in grocery stores and many Logan businesses were closed for part of the day to clean up the mess caused by the quake.

A number of other buildings lost a quantity of brick off the facing as the shaking tore them loose from the mortar.

The Lundberg building on Third North was damaged, as was the west side of the Pack Motor Building. Baum Motor, Cleve's Foodland and many

other stores suffered broken plate glass windows.

Pepsi Cola company plant also lost brick from the side of the building.

Crystal Furniture had bricks plunge from the top and badly damage a car that was parked in a used car lot at the side of the building. Many other instances of broken bricks and tumbled chimneys were also reported.

Interior Damage

Typical of the interior damage was the Logan-Cache fire department, where many cracks appeared in ceilings and wall and one wall at the Herald Journal now sports four large cracks. Plaster was also shaken loose at the newspaper office.

The quake caused a power loss in Logan City that lasted for a varying length of time in different parts of the city. All power was restored about three hours after the 6:36 a.m. quake.

The tremor apparently caused a switch on the Utah Power & Light Company circuit to come loose and this interrupted all power going into Logan City. City crews searched for the source of trouble and it was some time before the exact cause was located and service was restored to normal.

The power failure interrupted the working day in several businesses and caused such places as the Logan Police station and Logan LDS hospital to use their auxiliary power units. The hospital reported a few cracked walls but damage was termed rather minor.

Several of the older buildings along Main Street in Logan suffered bad cracks and police officers barricaded the sidewalks in the most dangerous areas so that if any of the damaged walls tumbled that no one would be hurt.

Officers also requested persons who had to be in the business district to walk along the sidewalk as close to the curb as possible in case one of the walls should

crumble.

The quake caused a land slide in Logan canyon that took out a section of the Utah Power & Light company water flume and also filled in a canal. The slide was located about one-half mile up the canyon and blocked US Highway 89 for a short time. Highway crews quickly opened the road to one-way traffic and then began to clear away the debris that covered the other half of the road.

A Herald Journal telephone call to Sheriff Sherman Lutz in Garden City revealed that the quake was plainly felt in the Bear Lake area, but there was no reported damage from that area.

Union Pacific railroad stopped rail traffic through northern Utah and southern Idaho until railroad maintenance crews could check all the tracks but the regular service was resumed very shortly.

Logan City schools were relatively untouched although the Junior High School suffered extensive damage and the Logan High School received some damage.

About noon the Board of Education in Logan City closed all schools but indicated that classes will resume in all schools, except the Logan Junior High School, Friday morning.

Utah State University earlier reported no damage as a result of the temblor but then later investigation showed some damage, although it was termed as not too serious.

Although the damage is going to skyrocket as full reports filter in, Cache residents began mop-up operations and began to feel very fortunate that the damage and inconvenience was not more serious.
[Herald Journal; August 30, 1962]

'FOLLOW-UP' NOTE CAUSES CONCERN

By Ray Nelson

The announcement that Northern Utah and Southern Idaho can "almost certainly" expect a follow-up tremor to this morning's "potentially destructive" earthquake caused some consternation throughout the valley.

Especially among mothers whose children went to school today.

Several phone calls to The Herald Journal asked about Dr. Charles F. Richter's forecast that more temblors were yet to come. Such a prediction had been broadcast over the radio.

One mother said: "I want to get the straight of it, so I'll know whether or not to call my child home from school. I don't want him in a classroom if more earthquakes are expected."

Richter's Statement

A school principal also inquired, saying many anxious calls were coming to the school. He didn't know whether to close doors for the day, or what.

Here's what Dr. Richter, seismological expert at Caltech in Pasadena, Calif., said:

He expected "another quake of a magnitude of about 5 in the wake of this morning's 6.1 magnitude tremor. He could not predict when the follow-up shake would hit, explaining, "it could be immediately, it could be several days, or weeks."

Dr. Richter, who invented the Richter magnitude scale for measuring intensity of quakes, pointed out that a major earthquake of the type that jolted parts of Utah, Idaho and Wyoming have follow-up tremors.

"Actually," he added, "there probably are plenty of small tremors going on right now. Eventually there should be one around 5 or so. Nevertheless, all of those follow-ups will be what we regard as being considered small."

One At 8 a.m.

His explanation was borne out by the observations of Bill Adams, Logan, who at 8 a.m.—nearly 1½ hours after the initial quake—saw the dishes fall from cupboards in the Adams canyon home in the Bierdineau area.

In Salt Lake City, a scientist said that the main shock from the earthquake was centered somewhere in Cache Valley.

Dr. Kenneth Cook of the University of Utah geology department said there were four aftershocks over a space of about 15 minutes. The tremor hit first at 6:36 a.m.; there were aftershocks until about 6:55

a.m. His reading of 6.1 on the Richter scale coincided with the report from Pasadena.

Dr. Cook said the epicenter of the earthquake was in the East Cache fault, and most of the damage was there.

Dr. J. Stewart Williams, head of the geology department at Utah State University, made an inspection tour of Central and North Cache areas, and confirmed that the quake was in the East Cache fault. Most damage was in the Lewiston, Richmond, Smithfield and Logan areas.

"However, I don't give too much credence to the aftershock theory," he stated. "We could get a follow-shock, of course, but I rather doubt it.

Utah had had 261 recorded earth quakes since 1850, but in recent times the average has been about one a year.

The first motion of the rolling quake was recorded at 6:37 a.m. Mountain time, with the second and main wave from the same shock following at 6:39 a.m.

It was strong enough to have been destructive if it had hit in a heavily populated area, the good Doctor said. The business firms whose stores were damaged, the school districts where many buildings were weakened, and the residential areas where bricks were flung and walls were cracked, contend that the quake was plenty destructive.

The Richter scale, incidentally, is based on the logarithm of the distance a seismograph needle is deflected by the shock, adjusted from the distance the instrument is from the quake center.

A quake with a magnitude of 2, for example, is 10 times greater than a magnitude 1.

Not So Little

The great San Francisco earthquake of 1906 had a Richter magnitude of 8.3, and the West Yellowstone quake of 1959 produced a recording of 7.9.

The strongest quakes ever recorded were less than 9 on the Richter scale. So Cache Valley's "little 6.1" this morning was of substantial proportions.

Cache Sheriff Wesley Malmberg reported his conversation with an official in Los Angeles, who repeated Dr. Richter's warning.

"We feel concerned with the possibilities of follow-up quakes," the Sheriff stated. "Since many buildings have been 'shaken loose' by the initial quake of 6.1 intensity, another shake of 5 magnitude could be very damaging.

"Everyone should take extra precautions, where

necessary."

Sheriff Malmberg noted that he had recommended evacuation of the courthouse personnel for the duration of today—at least for 24 hours, and until a more thorough inspection of building damage could be made.

Further Reports

Many schools were dismissed today, in both the county and the city, either because of pending inspections, or because of Dr. Richter's warning.

Other reports that reached the Sheriff's office by midday:

The old Smithfield tabernacle is badly damaged, and probably should be condemned.

North Cache high school's parapet wall will have to come down, along with the chimney.

At Park School in Richmond, the chimney will have to be rebuilt and corners repaired.

Hotel Logan is reported as much as five inches "out" on the wall.

It was the opinion of Architect Gene Haycock, incidentally, that Richmond bore the brunt of damage throughout the valley. He and various officials inspected public and church buildings throughout the north part of the valley.

[Herald Journal; August 30, 1962]

A NEWSPAPER OFFICE AS A QUAKE HITS

Long deep cracks on each of the walls of the newspaper office this morning were solemn evidence that our typewriters would touch history before the day was finished.

Since our job is to transmit the news to others accurately and completely, there was no time for tension when an earthquake rocked the valley at 6:36 a.m.

Knowing of the overwhelming task before us, many employees got to work early and immediately began a round of contacts attempting to discover what had happened and where and to whom.

Obliging community leaders soon advised us as to a badly damaged church house, a wall cave-in at a billiards hall, a ruined home in Richmond, and trouble at the Lewiston sugar factory.

For a while we worked in a lightless office, not knowing whether or not the power would return in time to publish a paper.

There was a generous invitation from the publisher of a Box Elder County paper to use his equipment, if necessary, for publication late this afternoon.

Until almost 10 o'clock our incoming calls were blocked (due to the power failure) which undoubtedly

accounts for many not being able to reach the office by telephone this morning.

And for at least an hour after the return of power, metal pots for use in the electric linotype machines were having to reheat.

In the meantime there were photography visits down Logan's business section where [?] marks in the form of cracked walls, shattered windows, broken plaster, and occasionally, some damage of a much more serious nature.

There were photos to take and identify, damage estimates to receive from the most reliable sources and stories to transmit to the national wire services.

In the meantime there were anxious calls from parents and many visits from those who had something special to report concerning the effects of the quake.

The schools needed to report their closing, adding that most of the buildings would be open again tomorrow.

Students were jubilantly invading the streets, while many adults were staying close to home.

Politics, space shots, marriages and meetings were almost forgotten when the first earthquake since 1934 rampaged through Cache Valley.

[Herald Journal; August 30, 1962]

ABOUT TOWN

Bishop Heber Sharp of Logan 4th ward, and Bishop Burton Harris of the 16th, announced this afternoon that no meetings of any kind will be held in the quake-damaged chapel. "We urge ward members to attend other churches in the stake," they said. "Our

building has been condemned, until the Church General Building Committee's structural engineers can go over the entire chapel and recreation hall."
[Herald Journal; August 30, 1962]

CRAWLERS SHAKEN, TOO

DRAPER, Utah (UPI)—Even the nightcrawlers were disturbed by the earthquake that shook the Intermountain West this morning.

A Draper woman, Mrs. G. R. Savage, was watering her lawn before the heat of the day. She said

the ground suddenly started swaying and then "all the fish bait in the world came crawling up out of the ground."

[Herald Journal; August 30, 1962]

OBSERVATIONS AND COMMENTS FOLLOWING TODAY'S EARTHQUAKE Thoughts And Things

By Ray Nelson

Miscellaneous observations during and after the earthquake, which visited Cache Valley at 6:36 a.m., August 30, 1962 A.D.—

The damage to many buildings is considerable, according to officials who made cursory surveys during the day. But as more careful inspection is conducted, the damage may turn out to be more serious.

Cracked walls, damaged chimneys, broken windows are just the obvious results. When you get down to the fundamentals—entire walls knocked out of plumb, or partially off foundations; weakened roofs and rafters, you may discover deep-seated troubles.

One of the most-frequently-heard complaints along Main Street until power was restored: "Trouble is, the coffee percolators won't work, either."

One of the office ladies who lives in Providence described her reaction:

"When the walls began to wave, and the floor buck, I fled right out into the pasture with the cows and horses. They were prancing, and so was I."

The Model Billiards appeared to be one of the worst-hit buildings in the business section. The entire roof is straggling from the walls onto the pool tables, with shafts of light piercing the rubble.

The couple of patrons were seated at the bar, drinking a bottle of beer. They left tout de suite, leaving their bottles standing on the bar.

As the crowds circled the front door later in the day, trying to peek a glimpse, a lady toward the rear of the circle asked excitedly:

"Oh, what does it look like in there?"

A man on the front row replied sardonically: "Just like a pool hall, hit by an earthquake, lady."

The Hotel Eccles building was the scene of some excitement during and immediately following the temblor. Some water lines or vessels had been fractured on the top floor, and water subsequently seeped down through the stories, dripping into the hotel lobby and the First Security Bank offices.

Prof. Dell Gardner noticed a crack along the wall—a jagged, graph-like break something like a rise-and-fall-of-business indicator. He read from the graph something like this:

The quake was from east to west, with a sudden and quite large initial shock, then a couple smaller ones, then finally a heavy lurch.

He could be right.

"Despite some damage in the Hotel, the Democratic headquarters (in a second-floor hotel room) remain unscathed and intact," Dr. W. W. Merrill

informed us, with some humor and considerable satisfaction.

(Dr. Merrill, as many citizens know, is one of the County's Demo party bellweathers.)

There are as many interesting stories as to personal situations and reactions as there are inhabitants in Cache Valley. In retrospect, some are amusing. At the time, all were pretty fearsome.

One Logan woman phoned The Herald Journal (after the power finally returned and the incoming phone calls could be detected) and related something like this:

"I was standing by the stove when it began, and it practically shifted away from me. Then I noticed my cat was fear-stricken: he arched his back, and his fur stood out electrically, and he let out a cry. Just then, the quake rumbled the goldfish out from his bowl of water.

"And that cat, which for months has wanted to get at the fish, paid no attention to it as it lay practically at his feet."

A fine Swiss couple who lives in the Tenth ward reacted differently:

The man was outside, working in his garden.

His wife rushed out with considerable excitement: "Papa, that was an earthquake!"

"Vell?" he responded. And went back to his hoeing.

At the Claude Robbins home, 192 East 1st North in Logan, there was lamenting at the damage in the living room. The large mirror over the mantel was cracked to pieces; some bricks were scattered about, and a beautiful clock had been thrown into the center of the room.

Claude unhappily surveyed the damage and muttered: "And the clock was a most prized gift."

So far as Herald Journal surveys can determine, Richmond was one of the hardest-hit communities.

The Park School was closed immediately; North Cache high soon after. Several homes were badly damaged, some reportedly beyond repair.

One woman was in a state of shock, and was taken to the home of a neighbor.

Such results as this are tragic, and despite the fact that no deaths have been traced directly to the quake, and effects will long be felt.

We recall the strong quake of March 17, 1934. We were in a classroom, on the top floor of the Utah State University library building. The class was French; the teacher was the late Prof. Frank R. Arnold.

As the floors began to rock and the walls crack as the students began to stir, preparing to stampede, Prof. Arnold held up his hand and said:

"My young friends, if we are to die let us die with French on our lips!"

[Herald Journal; August 30, 1962]

CONDEMNS HISTORIC RICHMOND TABERNACLE Church, Public Structures Are Inspected

By Jennie Christensen

Fifty-eight years after the cornerstone was laid by Apostle Marriner W. Merrill, an earthquake's violent force demolished one of Cache Valley's most historic landmarks, the LDS Benson Stake Tabernacle in Richmond.

The loss will be immediately felt by the stake's nine wards and by Richmond Ward, which has used the building exclusively for its various functions.

Stake President T. R. Holt of Lewiston stated today that the general church building committee has completely condemned the building. "It will have to be torn down and plans are to begin work on another structure as soon as possible," he stated.

Remove Equipment

Church officials were to remove musical instruments and usable furniture from the building today and a meeting of high council and stake presidency has been called for Sunday to discuss building plans.

In describing the demolition, stake officials pointed out that a wall on the west has moved in five or six inches "and could topple off any time." The chimney is off center and badly cracked, the east side is badly damaged and has been moved off its perpendicular course.

Until permanent arrangements can be made, Richmond Ward members will be meeting in other wards of the stake—wherever accommodations are found to be most adequate.

In the meantime, Logan 4th and 16th ward bishoprics have announced that no meetings of any kind will be held in their chapel until further notice. "We urge members to attend meetings of other wards in the stake," Bishop Burton H. Harris of the 16th Ward and Bishop Heber Sharp of Logan 4th Ward, declared.

Logan Chapel

The building, located on the corner of 3rd North and 1st East in Logan, has been condemned until the Church General Building Committee's structural engineers can go over the entire chapel and recreation hall.

The building's steeple collapsed and both the east and west walls were severely damaged in the Thursday

quake.

The only tremor trouble at the Logan LDS Temple was listed as "superficial damage to plaster," according to Wendell B. Mendenhall, chairman of the LDS Church building committee and Temple President A. George Raymond.

Repair work on the plaster is already underway and there is no major structural damage to the temple.

Slight damage also occurred at the Lewiston LDS Ward. There were only minor cracks at the Logan LDS Tabernacle.

Follow-ups

Meanwhile tense residents of Northern Utah were braced for a possible follow-up to Thursday's damage-dealing earthquake.

While experts agree that some aftershocks can be expected, there is absolutely no way of predicting their intensity.

Tremors of a minor nature were reported by several Cache residents in Thursday late afternoon, while aftershocks which "rattled windows and produced a distinct vibration" were felt in Logan at 6 p.m. Thursday and again at 3:30 this morning.

Meanwhile, the epicenter of the Thursday morning earthquake that gave northern Utah and southern Idaho a violent shaking, was placed at a point approximately 10 miles northwest of Logan by members of the University of Utah's department of geophysics.

The area of the sub-surface slippage that sent shock waves through the earth in all directions for hundreds of miles was determined by calculations from seismograph records, obtained in Salt Lake City, Price and Dugway Proving Grounds.

Experts have pointed out that major earthquakes are the result of slippage along fault lines miles below the earth, followed by readjustments of deep-lying rock strata. They say the Cache quake may have originated anywhere from 5 to 10 miles under the earth's surface.

The rearrangements of such deep rock layers, extending upward, is shown in the case of the Cache quake by the fact that the volume of water from Logan municipal spring has increased, and farmers north of Logan have reported dry wells are starting to flow.

[Herald Journal; August 31, 1962]

SCHOOLS ASSESS TEMBLOR DAMAGE

By Val Hess

Students in two schools remained on vacation today but one of the schools will open its doors again Tuesday while the other may remain closed a few days longer.

North Cache High school remained closed today as crews worked to repair damage suffered in Thursday's earthquake but Superintendent Oral L. Ballam of the Cache County School District indicated that the school will be back in operation Tuesday.

Logan Junior High school remained closed Friday and Logan City School Superintendent Sherman Eyre indicated it may be several days before students can be accommodated there.

An architect has studied the junior high school and has estimated that cost of repairs will be \$19,000.

Most of this is to strip the broken parapet walls that were badly damaged and to cast a bond beam around the top of the walls at roof level.

A section of roof about 18 x 60 feet will have to be replaced as a portion of the wall fell through the roof and the smoke stack on the heating plant will have to be shortened about 12 or 15 feet. It will then be recapped at the lower height.

The Board of Education has approved the work and Ace Raymond Construction Company has been hired and will begin repair work Saturday morning.

Eugene Haycock, the architect, has indicated that the parapet walls should be stripped by the first of next week and it may be possible at that time to determine just when the building can be opened for use.

However, safety will guide the decision but the school will be opened as soon as safely possible.

Superintendent Eyre has indicated that there is no definite plan at the present for the operation of the school, but as the situation now exists, the school will be opened as soon as possible and any time lost will probably have to be made up by Saturday classes, or perhaps a later closing time this spring.

Course of Action

However, Superintendent Eyre stressed that the exact action has not yet been determined and if any other plans can be made, the details will be announced as soon as possible.

The Logan Senior High school is being operated as usual, although two areas will be closed for an estimated two weeks. Plaster in the library and the Nibley Hall auditorium has fallen and the Logan High school library ceiling will be covered by acoustic tile

and the sections of the auditorium ceiling will be replastered.

It is estimated that it will take about two weeks for the work to be finished and the two areas will be closed to students during that time.

Logan City elementary schools escaped serious injury, with most reporting only a few broken windows and cracked plaster.

All other Cache County schools are open and classes are progressing as usual.

In Business District

Logan businessmen and city officials today began closer examinations of business establishments throughout the Logan business district and the more seriously damaged buildings had work begun on them.

Three businesses, Smith's Clothing, S. E. Needham Jewelers and The Sportsman, had front doors closed Friday and Saturday and the front entrance of the Hotel Logan has also been closed.

This is because the front wall of the building has been pulled out and will have to be demolished and rebuilt. Work has already begun and the sidewalk in front has been barricaded. Main Street in front has been closed to one lane of traffic for southbound vehicles.

City engineer Ray Hugie has been studying the various buildings and reports that work will start Saturday or Sunday on the front wall of the building directly across the street from the Hotel Logan.

Work on the back and side walls of Smith Printing was started today and the front of the building running north from Hotel Logan to the American Food is also damaged and studies are being made to determine what should be done.

Hotel Eccles and the First Security Bank suffered heavy plaster and ornamental damage, according to Mr. Hugie, but the structural parts seem unharmed.

Pepsi Cola company will have to replace one whole corner of its building and the Model Billiards has begun rebuilding work after its ceiling crashed down Thursday morning.

At Foodland

The front wall of Cleve's Foodland was shifted more than an inch out of line and this has made it impossible to replace the broken windows in the front of the store. Engineering studies are being made as to what should be done.

Many other buildings and businesses reported plaster damage but nothing very serious or anything

that would interfere with safety or business.

The Cache County Courthouse suffered large cracks along the west wall and was closed Thursday afternoon in dread of a second major shock. But the building and offices are open for business as usual today.

With reports that a second tremor is likely, the Logan-Cache fire department moved all equipment from its building so that a second quake cannot trap the equipment in the structure.

Thus the apparatus will be available for any emergency that should arise in case of a second quake.

A dollars and cents value has not yet been placed

on the damage because of the investigation and study that is still being carried out.

DISASTER AREA

Administrator Horne of the Small Business Administration today declared Cache County a disaster area, making local firms eligible to apply for SBA loans.

He stated further that a temporary disaster area office will be established in Logan within the immediate future.

[Herald Journal; August 31, 1962]

USU SURVEYS BRING OUT QUAKE DAMAGE

Visible evidence of Thursday's forceful earthquake will confront Utah State University students when they return to the campus for Fall Quarter registration later next month.

Although final investigations have not been completed and damage has not been evaluated in dollars and cents, Utah State University officials and members of the State Building board have reported damage in many of the USU buildings.

No building is damaged, however, to the point where it is not being used now and all buildings will be in use at the opening of school, Dee A. Broadbent, vice president for business at the University, reported.

The Student Union Building has extensive damage in the skyroom and there are cracks and broken plaster throughout the structure.

There is a crack in the main tower on the north wall of the university's Old Main and the firewall in the attic has been damaged to the extent that it will have to be replaced. One wall in the entomology lab is severely damaged and there are numerous cracks scattered throughout the building.

The south and west walls of the Mechanics Arts

building suffered serious cracks and the two engineering labs will require major repair. There are other minor cracks throughout this building also.

In the Education Building (old Engineering Building), an excessive glass breakage is noted, with more than 100 windows having been completely shattered.

Plaster is down and there are extensive cracks in the west area of the Plant Industry Building's second floor, while the Smart Gymnasium received cracks and broken plaster on the second floor and stairwell areas. Director H. B. Hunsaker's office was described as "a shambles," with pictures and trophies having been thrown "every which way."

The old Forestry Building has new splits and cracks and the Lyric downtown had a firewall fall from the roof but there was no damage to the USU Library as was previously reported.

The maintenance crew at the University has already begun to repair the damage to buildings but it is anticipated that all work will not be complete until later in the school year.

[Herald Journal; August 31, 1962]

RED CROSS DISASTER OFFICES SET UP IN RICHMOND, LOGAN

The American Red Cross has established a disaster headquarters in Richmond City Offices and Cache Red Cross office in Logan, according to Orin Wedgewood, chapter chairman.

All citizens wishing to apply for Red Cross disaster assistance, such as loans or grants, may phone Richmond CH 8-2092, or Logan SK 2-1125. Offices are open until 5 p.m. each day until the emergency is declared over.

There is a case worker enroute from San Francisco, and should arrive in Logan this evening.

"The Red Cross was on a 'ready alert' from 7 a.m. Thursday, and is standing by with its organization ready to meet any need that arises," Mr. Wedgewood stated. "Our first aid stations and workers, for instance, are prepared in case they are needed."

[Herald Journal; August 31, 1962]

SIX CALVES SINCE THE QUAKE

The earthquake may not have had anything to do with the sudden increase in the bovine population at the Dee Israelsen farm in North Logan.

Then again, it may have.

Dee reported today that his herd had grown by six new calves in the past 24 hours. A seventh calving appears imminent today.

"The calves had not been expected all at once, and not for a week or so," he remarked. Dee has a herd of 80 Holsteins and Jerseys. The newcomers include 3 bulls and 3 heifers.

The quake had an upsetting effect on farm livestock and wildlife, according to numerous reports. For instance, within a few minutes after the shock, cock pheasants came forth with lusty and nervous crowing.

The bulls at Cache Valley Breeding set up long-and-loud bellowing.

Horses snorted and pranced.

They, too, knew that something went awry with Nature.

[Herald Journal; August 31, 1962]

SOME CITIZENS GIVE REACTION TO THE QUAKE

The Public Pulse

This has been an historic week in Cache Valley; it brought what is probably the most vigorous earthquake during the Valley's era of modern settlement, which was in 1856.

Thursday morning's brief temblor—measured from 5.5 to 6.1 in intensity on the Richter scale—caused considerable damage in Richmond, Logan and Lewiston. Current estimates already are exceeding \$5,000, but the real extent will not be known for some time yet.

And certainly, if one were to figure the cost of building replacements, the total damage would be far above current quotations.

For instance, the selling price of the 58-year-old Benson Stake Tabernacle in Richmond may not exceed \$50,000 or so. But to replace it will cost possibly \$400,000.

In the Public Pulse column today, The Herald Journal is presenting the comments of some of our Cache folks as they looked back upon the August 30 quake:

MAYOR ROSS PLANT of Richmond—
"Although the catastrophe that occurred in our town this past week has been an extreme shock, I feel the people are reacting very well. Cooperation and neighborliness are some of the greatest assets of a small town and they have certainly been manifest here.

"I think we will perhaps emerge from this more united and with a greater respect for people and the Supreme Being than we have had before. Our townspeople have appreciated the many offers of assistance outside of town. Red Cross officials have produced a steadying effect here where we have been confused and hesitant about just what course of action to take."

RICHARD A. CHAMBERS, Logan City Commissioner—"When something like this happens it really 'cuts a person down to size.' I have marveled, however, at the calm and practical reaction of our people, in spite of the fact that there has been some apprehension over the possibility of another tremor.

"Our city engineer and fire department officials should be commended for their promptness in entering damaged buildings and helping remove hazards at their own risk. Those who have suffered damage to their

buildings have responded quickly in getting their structures repaired. I feel that before this is over we will find that our damage is much higher than was originally estimated."

ORRIN W. WEDGWOOD, new County Red Cross Chairman—"As our disaster relief continues, it appears that there is more need than was realized immediately after the earthquake. This is usually the case for victims of damage are at first in a minor state of shock and after conducting a more accurate survey, oftentimes find damage which was earlier overlooked. Our disaster team is in action, however, and those with major damage will be given Red Cross grants, with no repayment at all expected. Our organization is appreciative of the cooperation of the various civic services and communication media."

MARCUS SORENSON, Superintendent, Buildings and Grounds, Logan City School District—"The extensive earthquake damage to our junior high school has really put our district 'in the hole.' Whereas, we were trying to get money to put into a new junior high, we are forced to pour money into the old one. At first plans were to abandon this building after the new one is built but it may be used now to take care of the elementary growth problems. At the present time crews are working hard at the task of repairing damage to the building and it will be at least one more week, perhaps three, before it is ready for use."

DEE A. BROADBENT, Business Vice President at Utah State University—"With so much more serious damage from the quake occurring throughout Cache Valley, we feel very fortunate that our buildings received only minor damages. There are cracks, shattered windows, and broken plaster but we are happy to report that none of the buildings are unusable, even now."

PRESIDENT T. R. HOLT of Benson LDS Stake—"It was a tremendous shock to find that our historic Benson Stake Tabernacle was damaged beyond repair. Although it was an older structure, it had been well maintained and was in fine shape. However, there is only one thing to do now and that is to proceed as quickly as possible with plans for a new

building. The practical reaction of our stake people has been most rewarding."

GLENN BAUGH, Logan realtor—"When it first hit, my reaction was that it wasn't going to be too serious. However, after being in some of our buildings and looking at the damage, you realize the real intensity of the earthquake, and how much worse it could have been under different conditions."

CLEVE HANSEN, Logan Grocer—"We were quite heavily damaged by the quake but the thing that stands out in my mind about the whole affair is the friendliness and cooperation the people of the area have shown. The day of the quake we had many friends, acquaintances and even some we barely knew call and offer assistance. Many came to the store and pitched in and helped us clean up the mess. This was the case all over town and I think it really speaks well for our people and I really appreciate the help that was extended to me."

ROBERT DAHLE, North Cache High School Principal—"Damage to the high school will be repaired enough by Tuesday to start school but it will be several weeks before all the damage is repaired. As people examine their homes, more and more damage is being found as most of the homes suffered some damage.

The plaster in most of the homes in the Richmond area was cracked by the shock."

F. P. CHAMP, prominent business leader: "I well remember the Wasatch Fault quake of 1934, and it is my opinion that the 1962 tremor was much more severe. At least, it was sufficiently strong to plunge some bricks and a heavy cover from our home—which the other one did not. Nor was the interior of the home so badly disturbed in '34 as it was this week."

J. STEWART WILLIAMS, head of the geology department at Utah State University: "It was quite a quake—the only one strong enough to activate the large seismograph at the University since its installation in 1939.

"I've noticed there have been predictions of follow-up temblors. I'm not strong on this point of view. There may be after-quakes; there may not be. I prefer to think not."

EMMANUEL SKABELUND, who was having a snack at Model Billiards: "I thought the furnace had exploded at first. Then when part of the roof started to cave in, I thought it was time to get out. Then the clerk came out, looking like a snowman."

[Herald Journal; September 2, 1962]

U.S. SMALL BUSINESS AGENCY LABELS CACHE DISASTER AREA

WASHINGTON—The Small Business Administration has designated Cache County a disaster area as a result of an earthquake which hit the section Thursday this week.

Those qualifying will be able to obtain loans at an interest rate of three per cent, with the period for repayment of the principal extending up to 20 years. They will be required to pledge whatever collateral they can.

A representative of the branch office will be at the Logan Chamber of Commerce Tuesday to accept applications.

A committee of Cache County citizens will be appointed by the SBA Washington office to investigate loan requests and make recommendations to the branch office, which has authority to approve loans up to \$50,000 each.

Those eligible for borrowing are individuals, business concerns, and non-profit organizations, such

as churches and charitable institutions, provided they have suffered tangible property loss as a result of the earthquake.

In the case of individuals, loans may be used to repair or replace damaged furniture and other household belongings as well as homes and appurtenant structures.

Loans will not be made to repair or replace summer or winter cottages, camps or lodges used purely for recreational purposes.

Business loans may be used to repair or replace buildings, fixtures, machinery equipment and merchandise, but not for debt repayment except in cases where it has been necessary to borrow for temporary repairs of quake damage.

The purpose of the federal loan program is to restore homes and businesses as nearly as possible to pre-disaster condition.

[Herald Journal; September 2, 1962]

CITY ENGINEER REPORTS ON QUAKE PROBES

In a report to city commissioners this morning, Logan City Engineer Ray Hugie pointed out that complete investigation of earthquake-damage buildings is still underway.

"A preliminary check, however, indicates that loss will undoubtedly total much more than was originally anticipated," Mr. Hugie declared.

Because there are still buildings to be inspected, a financial estimate could not be made at this time, but most commercial establishments and a few residential dwellings have received complete safety checks.

Buildings which have brought the most concern are the Logan Junior High School, First Security Bank, Townhouse Hotel, Hotel Logan and Cleve's Foodland. There is also considerable work to do on the front of the American Food Store and Wilkinsons, front wall of Superior Cleaners, and at the Court House and Post Office buildings.

"The hardest hit public building was the junior high school and school board officials are contemplating spending some \$20,000 to \$25,000 for repairs," Engineer Hugie said. He added, however, that it would probably cost at least this amount to run two shifts at Logan High School or transfer the students to other buildings in Logan.

Although no gas line breakages were noted, city officials plan to meet with representatives of Mountain Fuel Supply Company to discuss investigations which have been and are being made.

Several Logan citizens residing in the area where the Central Milling Company operates complained to city commissioners about the "excessive and unnecessary" noise coming from the building at night, making it almost impossible for those in the neighborhood to sleep.

Those appearing were Lavon Nielsen, Mr. and Mrs. S. E. Clark, Ida Marie Logan and Fred H. Thompson. They claim that new machinery which has

been added at the firm during the past few months has resulted in "intolerable noises, annoying fumes and screeching whistles at all hours of the night, with doors and windows of the plant left open."

It was explained by Mayor Theral V. Bishop and City Attorney Preston Thomas that it is a legitimate business and to decide whether the noise is unnecessary and unreasonable, citizens would have to file a complaint and take the matter to court.

Approval of the city's participation in the proposed new renovation project at Logan-Cache Airport was given Floyd Hansen, manager. Federal participation will be 62.3 percent, with the state furnishing half of the balance and the city and county dividing the rest. Logan and Cache County will be participating to the extent of approximately \$11,705.40 each, which is less than the amount previously budgeted for.

Bids for a pickup truck for the city's engineering department were opened in city commission meeting and it appeared that either Axtell Chevrolet or Wilson Motor Company would be low bidder, depending on the model decided upon.

Aubrey Parker reported that he feels the building just north of his business at 244 South Main had been vacant for some time and presenting a real fire hazard. He pointed out that the place is falling to pieces, glass is knocked out, kids are going in and a fire has been started in one corner.

A meeting of the city's Condemnation Board has been called for Wednesday and a check of some of the earthquake damaged buildings as well as other reported as hazards will be made. The building referred to by Mr. Parker will be studied at that time by the committee which includes Fire Chief Ivo Borg, Health Officer Roger Stephens, the city engineer and the city building inspector.

[Herald Journal; September 4, 1962]

REPAIRS TO MAKE SCHOOL SAFER THAN BEFORE QUAKE

The repairs in progress at the Logan Junior High School will make the building safer than it was before the recent earthquake. So concluded a report to the Board of Education from Watkins, Cordon and Rich, engineering consultants.

Prepared by Reynold K. Watkins and Elliot Rich the report agreed with the findings of and recommendations of G. Eugene Haycock of Schaub and Haycock Associates who made an independent examination of the building.

"On the basis of the examination and recommendations made by these men the Board of Education decided to proceed with the necessary repairs to make the building safe for use. This course of action in the judgment of the Board is much better than any possible alternative," stated Superintendent Sherman Eyre.

Under the direction of the engineers and the architect, the Ace S. Raymond Construction Company moved on to the job Saturday morning and by working over the weekend has the project well advanced. Main repairs recommended include removing the parapet walls, casting a reinforced concrete bond beam around the walls at the roof line, and installing steel tie rods in some sections of the building. In addition the top part of the main smokestack which suffered some damage will be removed and a new concrete cap cast at a lower elevation.

"Since several parents have expressed concern about the safety of the building, the entire report of the engineers appears later in this article. Apparently some reports circulating in the community have overstated the extent of the damage to the building," Supt. Eyre said.

Probable date for reopening the school is Monday, September 10. Junior high school students should watch the newspaper for the definite announcement that will be made later this week.

The text of the report follows:

"According to your request we have personally inspected damage to the Logan Junior High School Building by the earthquake of 30 August 1962. We submit the following report of damage and recommendation for repair:

"1. Fragments of plaster were shaken from the walls and ceilings. This caused no structural damage and can be repaired by patching.

"2. Some parapet walls, abandoned chimneys and masonry air intake boxes on the roof were loosened.

This poses the danger of human accident or further damage to the building by falling masonry, but does not detract from the structural safety of the building. In the history of earthquakes the greatest destruction has been caused by falling masonry parapet walls. Since parapets are adornments and contribute no structural strength they are seldom tied to the building or reinforced with steel.

"It is recommended that all loosened parapet walls and chimneys be removed and not replaced. A reinforced concrete cap should be cast as a bond beam just above the roof line. This will make the building much safer than it was before the earthquake.

"3. About 20 ft. of roof over the east end of the auditorium failed when a section of parapet wall fell on it. This can easily be repaired since the steel trusses or columns were not damaged. The impact from the falling parapet accounts for most of the cracks and fallen plaster fragments in the halls and auditorium. The auditorium ceiling sustained no structural damage.

"4. The east wall of the building shifted outward about an inch at the top-center over the main entrance. This causes no structural hazard since the east wall is merely a curtain wall and supports no floors or roof. No shifting occurred at the corners of the building. It is recommended that the east wall be anchored by steel tie rods through the building. With the bond beam at the top and with intermediate tie rods, the east curtain wall will not present a hazard.

"5. Diagonal tension cracking occurred near the east end of the east-west interior walls. This cracking does not reduce the structural strength of the building since the walls are not intended to resist tension.

"6. The old smokestack sustained cracking and loosened some masonry. To prevent damage by falling fragments and to increase the factor of safety against future damage, the smokestack should be cut in height by at least 15 ft. With the present heating system the original height is unnecessary.

"We find no reason for the Logan Junior High School building to be condemned because of earthquake damage if the above recommendations are adequately followed. Structurally as soon as the imminent danger of falling fragments has been corrected, the building can be safely inhabited while repair work continues. The above recommended repairs will make the building safer than it was before the earthquake of August 30."

[Herald Journal; September 4, 1962]

QUAKE LASTS 35 SECONDS; EAST-WEST MOTION .13G

Statistical and photographic records from the seismograph nearest to the center of last Thursday's earthquake were reported today by Dr. J. Stewart Williams, collaborator for Utah for the U.S. Coast and Geodetic Survey, and B. J. Morrill, San Francisco, of the USCGS's Seismological Field Survey.

U.S. Coast and Geodetic Survey's Strong Motion Seismograph located at Utah State University was activated by the quake—the first shock strong enough to activate the instrument since it was installed in 1939.

Mr. Morrill, coming to Logan to assist Dr. Williams in interpreting data from the Strong Motion Seismograph, said that Cache Valley "fared pretty well considering the accelerations of the earth in the quake."

The record obtained by the USCGS seismograph shows that the east-west acceleration of the earth was .13g (13 hundredths the force of gravity), north-south acceleration was .10g, and vertical acceleration was .06g.

Felt motion lasted approximately 35 seconds and a second small quake started approximately 55 seconds after the start of the first quake, the record showed.

The Strong Motion seismograph should not be confused, the men pointed out, with the sensitive teleseismic instruments used to record distant earthquakes. These are shocked so badly by a nearby earthquake that they do not record and may even be

damaged by the shock. Last week's quake shocked the teleseismic instrument at the University of Utah so that it stopped recording, and Mr. Morrill said that highly sensitive one maintained by USCGS at Eureka, Nev., recorded one pip and then was out of action.

The Strong Motion Seismograph requires a nearby shock of about 4.5 to 5 magnitude on the Richter Scale to activate it. It records for about 90 seconds and shuts itself off if the strong motion subsides. It then resets itself and waits for the next strong shock. There was only one 90 second period recorded by the instrument last Thursday. Dr. Williams said the instrument provided a perfect record of the quake.

The instrument is designed to record data useful to engineers in designing buildings and structures to resist earthquakes. Hence it records only strong quakes likely to do damage to structures. Engineers use .10g as a threshold at which damage to structures may be expected, so the .10 and .13 readings from the Logan instrument are indicative of expected damage in Cache Valley.

The Seismological Field Survey of USCGS, of which William K. Cloud is chief, maintains about 100 Strong Motion Seismographs in the western United States. Included are instruments at Flaming Gorge and Glen Canyon Dams.

[Herald Journal; September 5, 1962]

RED CROSS AIDS VICTIMS OF CACHE QUAKE

As experts were evaluating the intensity of an earthquake that shook the Salt Lake Valley this morning, Red Cross officials were receiving numerous applications for financial assistance following last Thursday's costly Northern Utah tremor.

One of the developments in Cache County Tuesday was the visit of Senator Wallace Bennett (R-Utah) and other officials to Red Cross Disaster Headquarters at Richmond, where the number of persons applying for assistance is increasing daily.

So far, some 42 families from Richmond, Lewiston, Smithfield and Logan have been interviewed according to Mayor Ross H. Plant of Richmond, who pointed out that "we really didn't realize the magnitude of the earthquake during the first couple of days."

Panel Expected

Mayor Plant commended Red Cross personnel, headed by Miss Mildred Schilling, director of the disaster relief operation at Richmond, who was brought in from San Francisco late last week. Jesse V. Haws, Salt Lake City, field representative for Northern Utah has also been assisting.

According to Miss Schilling, a considerable amount of financial assistance will be given to disaster victims in this area. "Red Cross disaster aid is given free—no loans are made and no repayment is expected," she stressed.

Some experts from San Francisco are expected imminently to evaluate damages of the applications being filed. "These people are receiving our people courteously and sympathetically," Mayor Plant reported.

He explained that local contractors have been helping fire department crews inspect chimneys and assess other damage to buildings.

Orrin W. Wedgwood, Cache County Red Cross Chapter Chairman, urges all persons in need of disaster aid to apply immediately at Richmond City offices.

At the same time he invited the people of Cache County to contribute generously to the Disaster Relief Fund, Cache County Chapter, 151 North Main Street in Logan.

[Herald Journal; September 5, 1962]

CHURCH BUILDING COMMITTEEMEN GIVE VERDICT ON LOGAN CHAPEL

Representatives of the L D S Church building committee inspected the Logan Fourth-16th ward chapel Wednesday and confirmed the hopes of the officials of the two wards that the building could be repaired.

The entire east wall, along the side of the recreation hall, will have to be replaced, as well as the west wall in front of the chapel.

Bad cracks and falling debris have made these two areas dangerous and they will not be used. The organ in the chapel will also have to be replaced.

All cracks in the plaster of the building will also be patched.

The building committee has approved use of the chapel and the classrooms, but has closed the recreation hall and the choir area in the western part of

the chapel.

Ace Raymond Construction company will install a partition in the chapel to divide the unsafe part of the chapel from the area that can be used.

After the inspection, the building representative officially placed the estimate of cost of repairs at \$40,000.

Bishops Burton H. Harris of the 16th ward and Heber Sharp of the Fourth ward met together and outlined schedules for the two wards.

Regular fast day activities will be held Sunday, September 9 as follows:

4th Ward: Priesthood Meeting, 8 a.m.; Sunday School, 9 a.m. and Fast Meeting, 10 a.m.

[Herald Journal; September 6, 1962]

USU GEOLOGIST REQUESTS CACHE EARTHQUAKE DATA

A request for information from people who felt recent earthquakes in Utah and surrounding area was issued today by the Seismological Field Survey of the U. S. Coast and Geodetic Survey.

The Seismological Field Survey collects data of felt earthquakes particularly to obtain information useful to engineers in designing buildings and other structures that will resist earthquake damage, explained Dr. J. Stewart Williams, collaborator in seismology for the survey and head of the geology department at Utah State University.

A form published here, asks information about felt motion, effects of the motion on buildings, trees, and other objects, noise, damage and other items.

The Seismological Field Survey of USCGS asks that people fill out portions of the card which apply to their locality and drop the form in the mail. If the shock was not felt this should be marked on the form and the information mailed in.

Object of the questionnaire program is to supplement instrumental data and to promote public safety through a better understanding of earthquakes. Those who respond will perform a service for themselves and others, Mr. Williams said.

He asked that the accompanying form be mailed to:

J. Stewart Williams
Geology Department
Utah State University
Logan, Utah

U. S. COAST AND GEODETIC SURVEY

An earthquake was felt not felt on
Date of shock. August 30, 1962 Time. 6:34 a.m.
Place

Please return form even if shock was not felt as such information is essential.

Please underline words below which best describe shock at your location as given above.

Motion: rapid, slow Shook how long
Direction of motion: felt outdoors: N...NE...E...

etc.

Your location: Your home: in community, or

In building: Wood, brick

strongly, weakly built: on 1, 2 floor:

lying down, sitting, active

Outdoors: By you, by others: quiet, active

Ground underneath locality: Rock, sod, loose,
compact, marshy, filled in level, sloping,
steep.

Felt by you, several, many, all: (in your home) (in
your community)

Awakened no one, few, many, all: (in your home)
(in community)

Frightened no one, few, many, all: (in your home)
(in community)

Earth noises: Faint, moderate, loud

from N...NE...E... etc.

Pendulum clocks: did stop: faced N...NE...
etc.

Did not stop: faced N...NE...etc.

Trees, bushes: shaken slightly, moderately, strongly
.....

Shifted small objects, furnishings
.....

Overtured vases, etc., small objects, furniture
.....

Cracked plaster, windows, walls, chimneys,
ground
.....

Fall of knickknacks, books, pictures, plaster,
walls
.....

Broke dishes, windows, furniture

Twisting, fall, of chimneys, columns, monuments

Damage: none, slight, considerable, great: total in
wood, brick, masonry, concrete

Address

Remarks: Any additional information will be
appreciated.

Reports from other places, preferably on separate
forms, are also desirable.

[Herald Journal; September 7, 1962]

LOGAN JUNIOR HIGH WILL REOPEN MONDAY MORNING

Logan Junior high school will reopen for students at the regular hour Monday, Sept. 10, it was announced today by Superintendent Sherman Eyre.

Classwork begins at 8:40 a.m.

The repairs recommended by consulting engineers to make the building safe will be essentially completed by that time, the Superintendent stated.

There will be some work continuing throughout the week, in areas that will be barricaded, but such restricted spots will not interfere with normal school activity.

"The engineers, Elliot Rich and Reynold K. Watkins, have assured us that the structure will be safer than it was prior to the earthquake," Mr. Eyre said.

"Reinforced concrete bond beams have been installed at the roofline of the building, and have strengthened the building appreciably. Also, steel tie-rods are being installed at various places through the building, some of them immediately below the ceiling heights."

[Herald Journal; September 7, 1962]

RED CROSS DISASTER ADVISORY COMMITTEE

Orrin W. Wedgewood, Cache County Red Cross chapter chairman, announced today the appointment of a local volunteer disaster advisory committee. This committee will work with the five person disaster staff now assisting victims of the Utah earthquake.

The advisory committee is made up of local citizens from throughout the disaster area. In addition to representing their own individual area, this committee represents the citizens of Cache Valley as a whole. They will become familiar with the entire disaster operations step by step.

The latest information showing the committee how extensive the damage was in portions of Cache Valley, is shown in the results of house to house surveys just completed by the cities of Richmond and Lewiston in cooperation with the Red Cross.

These surveys show a total of 202 homes damaged in the Richmond Area. They also show a total of 152 homes damaged in the Lewiston, Cornish, Cove and Trenton areas. The Red Cross is attempting to get similar information from the cities of Logan, Smithfield and Hyde Park.

The advisory committee will share with the disaster director and her staff the responsibility for determining the Red Cross assistance given. They will review facts concerning individuals and families; advise the director and her staff on community economic conditions and the pertinent community

patterns and practices; participate in interpreting the Red Cross disaster relief program to individuals and community groups; and assist the director in the solution of problems encountered in the community during the course of the relief operation.

The advisory committee will meet regularly once each week to hear reports from each case worker who has completed working out a recovery plan with the individual family. The first meeting of the advisory will be held Monday, Sept. 10.

Red Cross Disaster Headquarters at the City office in Richmond is still accepting applications from individuals and families who suffered loss as a result of the earthquake and are in need of financial assistance. So far 72 families have made application for assistance.

"The Red Cross can and will assist you with your disaster-caused needs which you cannot meet yourself. Assistance is available to help with the rebuilding and repair of owner occupied homes. Applications should be made before Sept. 13," Mr. Wedgewood stated.

Because of the heavy damage many people have inquired about contributing funds to help their friends and neighbors. For those wishing to contribute funds, the Red Cross asks that contributions be sent to the Disaster Relief Fund, Cache County Chapter, 151 No. Main, Logan, Utah.

[Herald Journal; September 9, 1962]

IN YOUR REBUILDING —

A local architect, in viewing current rebuilding and restoration work following the earthquake, commented:

"We have found many buildings with old decorative parapet walls, without reinforcement and following many years of weathering, were hardest hit by the quake.

"If in repairing these structures we are content to just put brick upon brick—as was done in the first place, we will have gained nothing in the reconstruction endeavors. They will be just as vulnerable to quakes as before.

"But if we rebuild well, reinforcing walls with concrete and steel, doing a thorough job with professional consultation, then our structures will

withstand jolts of even greater severity than that of Aug. 30, 1962."

His observations were sound. We are happy to report that church and school officials, as well as many business firms, are following that policy.

Logan Junior high, for instance, is being strengthened to the extent that it will be even more structurally sound than before the quake.

There never has been any question as to the validity of the admonition: "Build ye well!"

Bearing as much value is a companion message: "Rebuild ye well!"

[Herald Journal; September 9, 1962]

AFTERSHOCK IS RECORDED SUNDAY MORN

An aftershock which has been described as the strongest since the big August 30 earthquake was widely felt in Northern Cache Valley early Sunday morning as rattling dishes, vibrating windows and rumbling noises were reported.

The aftershock was recorded by the University of Utah seismograph at 7:38 a.m. Sunday. Dr. J. Stewart Williams, professor of Geology at Utah State University, reported that three smaller aftershocks were also recorded on Friday morning.

Two more were recorded just ten minutes apart this morning—at 8:56 and 9:06, Dr. Williams explained. However he pointed out that Sunday's aftershock carried much more amplitude than those occurring Friday or today.

New Cracks

In Richmond, hardest hit Cache Community in the original quake, Sunday's tremor severely irritated damage that was already done, causing considerable number of new cracks and settling of houses. "Cracks have widened to the point where fingers can be put in them," Mayor Ross H. Plant declared.

Strangely enough, Sunday's aftershock was not felt immediately north of the Richmond Cemetery where Wayne Traveiller was examining some of his property.

His wife, however, felt a violent shaking at her home and "the cracks really popped as if it were real cold weather."

According to Mrs. June Budge of Smithfield, "it seemed to pass from east to west in this community." She noted that Sunday's aftershock aggravated damage which had already occurred, widening cracks and splitting cement in places.

Although it appears to have been felt in most parts of Logan, the city apparently suffered no further damage.

River Rises

It is interesting to note that there has been a decided increase in water measurement in Logan River since the Aug. 30 quake.

Measurements at the mouth of Logan Canyon by Grant Anderson indicate that there were 163 second feet on August 28, 165 on August 29 and 166 on August 30 (before the quake). Following the quake on Sept. 4, a measurement of 182 second feet was recorded.

Last year's comparative figures were 96 second feet on Aug. 28, 93 on Aug. 29 and 94 on Aug. 30. Measurements on Sept. 4 of 1961 was 97 second feet.
[Herald Journal; September 10, 1962]

COUNTY SCHOOLS ASSESS QUAKE DAMAGE

Work is progressing at North Cache High School, Richmond Park Elementary School, and the Lewiston Junior High School to repair earthquake damage.

North Cache High School was dismissed for two days while safety measures were being taken. These two days will need to be made up at a later date, according to Superintendent Oral Ballam.

The following report was issued by the Cache County School District Board of Education at its last meeting:

"Immediately following the earthquake, all schools in the district were carefully inspected by principals and custodians; wherever structural damage was noted or suspected, schools were evacuated as a safety precaution. These were Hyde Park Elementary, Richmond Park Elementary, and the North Cache High School.

"Eugene Haycock, architect, of Schaub-Haycock, Architects, Logan, made an on-the-spot inspection of these schools and others in the area on the day of the initial quake. Hoffman Hughes, structural engineer from Salt Lake City, with Mr. Haycock inspected the Lewiston Elementary and Junior High Schools, Richmond Park Elementary School, North Cache High School, and the Smithfield Summit Elementary School on Saturday following the earthquake.

"They reported structural damage at the Lewiston Junior High School. They recommended that the north wall of the stage area be removed to the lowest point of failure and reconstructed with adequate bracing from roof system over the gym area. Also, the small masonry failure on the east wall of the gym will need to be removed and reconstructed, with adequate reinforcement in the new masonry. A tentative estimate of cost is \$5,000.00.

"At the Richmond Park Elementary School there appears to be no structural damage even though the

quake caused plaster cracking, window breakage, and opened up some existing cracks. The chimney, however, was weakened and will need to be rebuilt with reinforcement ties. Estimated cost is \$1500.

"At the Smithfield Summit Elementary School, the quake had the general effect of opening existing cracks and opening new cracks between different wall masses. No points of extreme hazard were noted and the building appears to be structurally safe for continued use.

"At North Cache, the most serious damage was the structural failure of the brick masonry parapet walls. It is imperative that new reinforced concrete bond beam at the line of the roof joists and an anchorage between this beam and the roof structure be provided. The chimney will also need to be reconstructed with a concrete tie beam securely anchored to the new bond beam.

"LaVon Nielsen, mason, and Ace Raymond contractor are proceeding with this work while school is in session. Estimated cost is \$15,000.

"Some chimney caps and reinforcements are recommended at the Providence and Clarkston elementary schools and will be done.

"These repairs will make the buildings safer and more structurally sound than they were originally. Principals and custodians will watch the buildings closely and report any apparent or suspected structural weakness. These will be inspected by engineers and architects and remedied.

"There appears to be no further damage due to after shocks. However, the district will continue to be vigilant and take every possible precautionary measure to maintain the building as safe as possible for occupancy."

[Herald Journal; September 12, 1962]

QUAKE ROCKS AREA, CENTERS NEAR LOGAN

No Known Injuries; Buildings Damaged

SALT LAKE CITY, Utah (AP)—A sharp earthquake shook parts of five states early today.

It apparently centered in the Cache Valley 80 miles north of here where considerable damage was reported. It was felt as far away as Pocatello, Idaho, and Evanston in southwest Wyoming.

No injuries were reported.

Only minor property damage was reported in the Ogden area.

The temblor cracked some walls and swayed trees. Most of all, residents were frightened, fearing other temblors that might come.

At Lewiston, Utah, a drugstore collapsed onto a cafe, demolishing both buildings.

One wall of the Crystal Furniture Co. building in Logan, a city of 18,000, fell onto a used car lot.

The Utah Highway Patrol reported a slide across US 89 in Logan Canyon.

Several schools in the Cache Valley area were closed because of damage. They included schools in Logan and Richmond.

Blocks Lane

A slide blocked one lane of US 89 near the mouth of Logan Canyon but traffic continued over the other lane.

Electric power, which was knocked out throughout much of Logan City, was restored about three hours later. There was widespread damage throughout Logan. Police kept pedestrians away from older buildings in the city business district, many of which were damaged.

There also were reports of damage to buildings at Utah State University.

In Salt Lake City, Dr. Kenneth Cook, head of the geophysics department at the University of Utah, said the quake knocked the instruments off the scale at the

school's seismograph. Because of this he was unable to measure the full force of the quake. He said this was the first time this has happened since the Hebgen-Yellowstone earthquake of 1959.

Lander Reports

The quake was felt at Lander, in central Wyoming, more than 200 miles away. Slight tremors also were reported by residents of Grand Junction, in western Colorado, and at Hebgen Lake in Montana.

No damage was reported in any of these three states, however.

A building of the Church of Jesus Christ of Latter-day Saints in Logan was damaged.

The first tremor was felt at 6:36 a.m. and lasted about 30 seconds. It was followed by two smaller shocks.

Ogden residents reported a number of accidents connected with the earthquake.

Immediately after the quake the Southern Pacific Co., sent engineers to check the 13-mile long earth dike by which its trains cross the Great Salt Lake.

Howard E. Watts, chief clerk of the Salt Lake division, said there was no evidence the tremor shook the fill. "There had been no slippage and the tracks were not out of line," Mr. Watts said. "Trains are moving on schedule."

He also said tremors were reported by railroad workers as far west as Wells, Nev., but no damage resulted.

The Bureau of Reclamation said the shake caused no damage at their construction projects at Causey Creek, Willard Bay or the two Willard Canal pumping plants.

Layton residents were shaken by the quake but no damage was reported.

[Ogden Standard-Examiner; August 30, 1962]

LAST TREMOR FOR OGDEN CAME IN 1934

This morning's tremor was the first to shake Ogden since several hit the area on March 12, 1934.

One death was attributed to the 1934 tremors. A 21-year-old mother just home from the hospital with a new baby died of a heart attack as the walls and floors of her house shook.

The first of the 1934 tremors also was felt in the early morning—at 8:07. Similar shocks were felt later

in the day. Damage was negligible, confined mostly to cracks in walls, broken windows and dishes.

Like today's tremor, the 1934 shaking was felt throughout the area. In the vicinity of Kelton in western Box Elder County, cracks eight miles long appeared in the earth.

[Ogden Standard-Examiner; August 30, 1962]

NEW TREMOR TO FOLLOW, EXPERT SAYS

By Cliff Thompson

A seismological expert says Northern Utah can expect follow up tremors to today's earthquake for "several days or even weeks."

Dr. Charles F. Richter of the California Institute of Technology, Pasadena, said however the tremors will be of decreasing intensity and should be "no cause for alarm."

He told the Ogden Standard-Examiner, few if any of the follow up tremors probably will be felt in the Ogden area.

Largest of the expected follow up tremors should have a magnitude of about 5, Dr. Richter said, which

would have considerable less force than this morning's 6.1 magnitude.

Dr. Richter is head of Caltech's seismological laboratory and inventor of the Richter magnitude scale for measuring the intensity of earthquakes.

He said in a telephone interview that an earthquake of the size that hit Utah and parts of Idaho usually has follow up tremors.

"There should be another one with a magnitude of about 5," Dr. Richter reported. He could not predict when it might occur. "It could be the same day or several days later. Earthquakes are not predictable."

[Ogden Standard-Examiner; August 30, 1962]

LOGAN, PROVO FIRMS JOLTED BY EARTHQUAKE

LOGAN (AP)—Mrs. Thelma Olsen had a short grand opening day for her new Stork Shop Maternity store. Police ordered the building closed after cracks were found and the brick front at the top of the building sagged toward the street. She had a grand opening sign in the window and police put a rope barricade in front.

At the filing systems building across the street big front plate glass windows were knocked out and heavy ceiling beams inside were moved half an inch. Hundreds of bricks from an outside wall crashed down on a parking lot but did not hit any cars.

Lowell Jenkins, manager of the biggest glass store in town, was doing a booming business. He had calls to replace at least 15 large store front windows and was swamped by calls from home owners.

A water main broke in the attic of the Eccles Hotel on Logan's main street and at least 20 rooms were damaged.

There were bricks in the alleys and hunks of tile, and cracks on many Main Street, First North and Center Street buildings.

The ceiling fell in at the Model Billiards building on Center Street, tumbling down on the bar and tables, but there was no apparent extensive damage. Inside, however, it looked like a bomb had hit.

Provo Loss Minor

The earth tremor was felt in Provo early this morning, causing little damage but some concern in the city and in nearby areas. No injuries were reported.

It was reported that Carson's Food Center, at 1209 N. 9th E, received minor damage. The report said that several rows of canned goods were shaken from the shelves and that displays rattled against the walls.

The Provo police department said that they received a few reports of lights rattling, walls rocking, houses shaking, and trees swaying, but no major damage.

The Utah State Highway Patrol reported that there were no problems with the road conditions in this area, and that they had received a few calls because of "bed shaking and window rattling."

Miss Melva Hon, of Provo, said, "I was making the bed and the door behind me started shaking, so I turned and opened it to see if something had fallen down."

The seismograph on the Brigham Young University campus was not operating at the time of the reported earthquake.

[Ogden Standard-Examiner; August 30, 1962]

QUAKE EFFECT IN OGDEN? 'THE JITTERS'

By Robert Agee

Ogden was shaken at 6:36 a.m. today by a sharp earthquake that rattled windows, caused minor property damage and frightened thousands of citizens.

The temblor cracked some concrete walls and swayed trees.

The usual rumbling noise that sounds during a quake was heard in some places in the area, noticeably in Plain City.

The temblor frightened residents and switchboards at the police and fire departments, and at the Ogden Standard-Examiner board lit up like a Christmas tree within minutes.

Porter M. Gooch, state maintenance superintendent for the Utah Highway Department, said some rocks rolled down on area highways.

Ralph Wadley of Mountain States Telephone Co., said the utility poles and lines were not damaged.

Byron Blood, service manager of Utah Power & Light Co., reported no damage and Mountain States

Fuel Co. said their gas lines were not affected.

The quake toppled rolls of carpets from racks at the H. D. Sparrow Co., in Roy.

A concrete wall at the home of Roger Spendlove, 1171 41st, was split.

George Parker of 941 23rd, maintenance man in the Municipal Building, was going down in an elevator when the tremor occurred. He said, "The car bucked and jumped and I thought the cable had broken."

The Amalgamated Sugar Co. factory in Lewiston received about \$25,000 damages from falling bricks and concrete chunks that crashed into the laboratory, according to Burnall Brown of Ogden, general superintendent.

"The factory will open for treating beets on time, early in October," the superintendent said.

The Preston sugar factory was not damaged, Mr. Brown reported.

[Ogden Standard-Examiner; August 30, 1962]

CEILING FALLS ON BED, BUT GIRL, 18, SAFE

RICHMOND, Cache County—"I was so frightened and startled that it left me frozen and speechless for several minutes."

Carliss Ann Bullen, 18, was in bed at her father's home in Richmond when the earthquake struck with full force.

Carliss told Ogden Standard-Examiner staff photographer Ralph Collins she was in bed when the

tremor started.

Her father, L. J. Bullen, was up and when he heard a loud crash, he ran to his daughter's bedroom. He found her bed full of rubble—bricks, plaster and mortar that had crashed from the ceiling.

Carliss was hit and bruised on her left leg, but more shaken up from the experience than anything.

[Ogden Standard-Examiner; August 30, 1962]

QUAKE POTENTIAL HIGH IN UTAH, EXPERTS REVEAL

SALT LAKE CITY (AP)—Despite the fact little major earthquake damage is reported in Utah, the state is considered one of the leading places in the nation in earthquake potential.

Geologists say that is because the Wasatch Fault—a major point of slippage between rock layers along the Wasatch Mountains.

Since 1850, a total of 261 quakes have been recorded in the West which had their origin within

Utah.

Geologists also say the state has had more earthquakes exceeding moderate intensity than any other state in the mountain west.

The Pacific Coast uniform building code rates Utah in earthquake zone 2, second only to California, which is in zone 1.

[Ogden Standard-Examiner; August 30, 1962]

TAKES A QUAKE TO WAKE BOY, 17, IN SALT LAKE

SALT LAKE CITY (UPI)—Wednesday, the first day of the new school year, 17-year-old Barr Taylor of suburban Salt Lake City slept through his alarm clock—and was late to high school.

When he finally did get up, his father, Lee Neff Taylor, Salt Lake City attorney, casually told his boy "it practically takes an earthquake to get you out of bed."

Wednesday night, when Barr retired, he set not

only his regular clock but borrowed a spare from his parents.

This morning, both clocks went off at precisely the time an earthquake, first in this area in years, rocked Salt Lake Valley.

Barr today got out of bed with no delay.

[Ogden Standard-Examiner; August 30 1962]

NIGHTCRAWLERS UPSET, TOO!

DRAPER (UPI)—Even the nightcrawlers were disturbed by the earthquake that shook the Intermountain West this morning.

A Draper woman, Mrs. G. R. Savage, was watering her lawn before the heat of the day. She said

the ground suddenly started swaying and then "all the fish bait in the world came crawling up out of the ground."

[Ogden Standard-Examiner; August 30, 1962]

EARTHQUAKE SIDELIGHTS Birthday Party—For Me?

By Robert Agee

Mrs. Addie Newcomer of 1525 Childs was 73 today and when she felt the earthquake early this morning, she said, "That's quite a birthday celebration for me."

Severity of the 'quake was shown by a jiggling needle on the artesian well gauge at the Becker Brewing Co., 1900 Lincoln. Robert L. Becker, president and general manager, said the gauge shows the vertical line of the well and is normally at the figure 5. This morning the gauge jumped from 3½ to 7, indicating a considerable side slippage of the well, the brewery official said.

The telephone switchboard at the Ogden Standard-Examiner was swamped with calls within seconds after the 'quake.

One woman said breathlessly: "I thought—this is it! I'm ready."

Any number of persons asked, "When is the next earthquake due?"

A man called to say he and a friend had an argument as to whether it was a sonic boom from a jet plane breaking the sound barrier. He said he had won the bet because there was no "boom."

A Plain City man said he was standing by his front

window and saw two trees in his front yard sway back and forth.

Glen Kap at Pine View Reservoir said the 'quake shook his house on the north side of the dam and some rocks toppled down on the highway.

Some of the women callers had definite southern drawls. One said, "I didn't know you-all had ea'thquakes up heah."

The typical rumbling noise accompanying an earthquake was heard only in scattered spots. The sound is like that of a fast freight train going across a bridge.

Mrs. Robert Salmon of 4592 S. 950 E., said she was nearly shaken out of bed.

C. O. Bybee, Route 4, Uintah, said his hot water tank shook so violently he thought it would topple over.

Mr. and Mrs. Jack Brown, 1291 24th, parents of four small children, looked at each other when the 'quake hit and said, "What can the kids be doing in the basement to make all that noise?"

[Ogden Standard-Examiner; August 30, 1962]

APPREHENSION CLINGS TO STATE IN WAKE OF AREA EARTHQUAKE Epicenter Of Shock Placed 10 Miles Outside Of Logan

LOGAN, Utah (AP)—There were still some apprehensive feelings today after Thursday's earthquake shook the buildings and beings of this Northern Utah community.

The tremors at 6:36 a.m. also rumbled through sections of Wyoming, Montana, Nevada, Idaho and Colorado.

No injuries were reported. One grocery clerk at Logan fell, but was not seriously hurt.

Six old brick homes in nearby Richmond were ruined. The Amalgamated Sugar Co. plant north of Logan was badly damaged. Cracks appeared inside and outside at downtown stores in Logan. Four buildings at Utah State University here were damaged.

Logan Junior High School remained closed today because of the possibility of cave-ins at the structure where walls were jarred loose.

But most of the schools in the area planned classes as usual today.

The University of Utah Department of Geophysics placed the epicenter of the quake 10 miles northwest of Logan.

The shock was so strong it sent the needle off the seismograph at the university.

But from other instruments, scientists estimated the shock at about 5.7 on the Richter scale. The San Francisco quake in 1906 was 8.25 on that scale.

Small Tremors

There were several small tremors after the initial shock. Residents of the area were cautioned that larger aftershocks were possible, but could not be predicted.

The possibility gave rise to some fears of further misfortune.

No overall estimate of damage was available.

But the Henry Miller family in Richmond lost a \$10,000 house they had recently bought.

Son Jerry, 17, said, "I was just getting out of bed and the bricks started falling down on me." He wasn't hurt.

His father said he was giving up the house after that. "I wouldn't sleep in there again."

A widow with seven children, Mrs. Florence Halverson, was also left homeless at Richmond.

An old brick building in downtown Logan was hit hard and bricks jarred loose. Police ordered a new women's apparel store closed up for safety sakes. In the window was the sign: "Grand Opening."

Sighed Mrs. Thelma Olsen, the owner: "What a way to start in business."

SALT LAKE CITY (UPI)—Residents of northern Utah were braced today for another earthquake to follow Thursday's damage-dealing temblor in three western states.

Dr. Charles F. Richter of the California Institute of Technology said he expected another quake of a magnitude of "about 5" to follow Thursday's tremor.

Seismologists said they could not predict when the follow-up temblor would occur. It might happen immediately, in days, or in weeks, they said.

The American Red Cross in Salt Lake City announced it had placed all of Cache County under its disaster area designation.

Reports indicated that only one person received injuries from the temblor. A Richmond girl cut her foot on a bottle broken by the shock.

[Ogden Standard-Examiner; August 31, 1962]

THE BRIDE-TO-BE WAS SHAKEN

Narrow Escape

By Flora Ogan

RICHMOND, Cache County—If Thursday's earthquake had happened a week later circumstances would have been much different for Carliss Ann Bullen.

Carliss Ann is a young 18-year-old bride-to-be who was in bed when the roof collapsed sending a ton of brick and debris onto the bed where she was sleeping.

Luckily, Carliss Ann, the daughter of Mr. and Mrs. L. J. Bullen, was only slightly bruised.

A week later and the young girl would have been honeymooning. She plans to marry Dallas Olsen, serving with the Army, in just a week.

Carliss Ann said she was sleeping when the house began shaking. "I woke up and couldn't seem to realize what was happening when suddenly the roof caved in.

"I was so startled for a minute I couldn't move,

then I screamed and ran from the room just as my father came in to see if I was all right," she recalled.

"The chimney of the house came in through my bedroom ceiling. It made a slice about 10 feet by eight feet.

"The rest of the walls are cracked and it looks like the house is ready to tumble. It's a mess . . . we'll have to find another place to live."

Carliss Ann said she spent the remainder of the day helping her grandmother, Mrs. Mary Johnson, clean up the mess at her house.

Dishes fell to the floor in pieces and the water heater burst at Mrs. Johnson's house.

"The temblor, while it only lasted 20 seconds, really played havoc with our town. I was over to the neighbors, the plaster is cracked on all their walls. Things are really in a mess."

[Ogden Standard-Examiner; August 31, 1962]

CACHE AREA TO RECEIVE DISASTER AID

LOGAN (AP)—Although no one would give an official estimate most guesses in Logan Saturday placed the damage from Thursday's earthquake between \$500,000 and \$1 million.

The Small Business Administration in Washington has declared the region a disaster area. The agency will set up a disaster relief office here.

Cleanup operations were under way in northern Utah with residents inspecting buildings and walls and trying to determine if they will hold up.

Residents were also concerned about reports that after-jolts may strike the area causing further damage to weakened walls.

The quake, which was centered about 10 miles northwest of Logan, caused the greatest damage in Logan, Richmond and Lewiston, Utah.

"Hot Pots" Painted

Geologists attention was called to a series of small cracks and miniature "hot pots" which bubbled a blue, fine sand to the top of the ground. The cracks, about two or three inches wide and several feet long, followed the Bear River for about five miles south of Trenton, Utah.

School officials were still wondering whether Logan Junior High School should be closed for three weeks for repairs. Logan School Superintendent Sherman Eyre said it is possible the school will be shut down if the crews find the walls unsafe. Damage to the school has been tentatively estimated at \$19,000.

Many other schools, churches and homes throughout the area are also undergoing investigation to determine their safety. A number of buildings will have to be demolished, officials said.

[Ogden Standard-Examiner; September 2, 1962]

CACHE COUNTY WEIGHING QUAKE LOSS

LOGAN (UPI)—It may still be several days before an estimate of dollar damage caused by the earthquake in Cache County last week is available.

Mayor Theral V. Bishop of Logan said the city engineer has been used to compile a damage report.

Speculation has placed the damage at between

\$500,000 and \$1 million.

In Richmond, Mayor Ross Plant said damage to his community was more extensive than realized at first. He said about 75 per cent of the homes received some damage, in many cases just cracks.

[Ogden Standard-Examiner; September 3, 1962]

QUAKE ROCKS NORTHERN UTAH

Shock Center Near Logan

By William C. Patrick
Tribune Science Editor

The epicenter of the Thursday morning earthquake that gave northern Utah and southern Idaho a violent shaking, was placed at a point approximately 10 miles northwest of Logan by the department of geophysics, University of Utah.

The area of the sub-surface slippage that sent shock waves through the earth in all directions for hundreds of miles was determined by calculations from seismograph records obtained in Salt Lake City, Price and Dugway Proving Ground.

Location of an epicenter cannot be made on the basis of what is shown by a single instrument. It requires a correlation of data obtained from at least three widely-spaced seismographs.

The initial shock at 6:36 a.m. was so violent it sent the needle off the record at the U. of U. seismograph for a minute and a half.

Calculation of the intensity was made from the record on the instrument in Price. All three are operated by the department of geophysics.

Their estimation of the magnitude of the shock is between 5.6 and 5.7 on the Richter Scale.

This is somewhat lower than the rating by scientists at the University of California and California Institute of Technology, who place it at between 6.0 and 6.1 on the same scale.

Although Dr. Charles F. Richter of Caltech, who devised the scale, said he expected an aftershock "of a magnitude of about five," other scientists both in California and Utah were of the opinion he was "sticking his neck out."

They said while some aftershocks can be expected, there is absolutely no way of predicting their intensity.

In most earthquakes the first shock is more intense, although subsequent ones may be hard enough to topple buildings already in a weakened condition.

The Richter scale, devised by Dr. Richter about 30 years ago, is the only one that is "strictly instrumental," it was pointed out by Dr. Kenneth L. Cook and Dr. S. Theodore Algermissen, professor and associate professor, respectively, of the department of geophysics.

The so-called Mercalli Scale measures intensity of shock at given locations in terms of human reactions

and types and degrees of damage.

But this is more subjective than objective. In other words, types of construction and the feelings of the people themselves, as well as other factors, enter into the estimation of the magnitude of the temblor.

In calculating the intensity of earthquakes before scientific measuring devices were available, it was necessary to apply the Mercalli Scale.

Dr. Algermissen explained that major earthquakes are the result of slippage along fault lines miles below the earth, followed by readjustments of deep-lying rock strata. He said the Cache quake may have originated anywhere from 5 to 10 miles under the earth's surface.

Rearrangement of such deep rock layers, extending upward, is shown in the case of the Cache Valley quake by the fact the volume of water from the Logan municipal spring has increased, and farmers north of Logan have reported dry wells are starting to flow.

After the U. of U. seismograph needle was thrown off the record for a minute and a half by the violent first shock, it automatically came back to the record and noted ground motion for a period of about 20 minutes.

There was then a period of quiet, following which a series of small aftershocks at periods of 18, 27, 28, 32 and 47 minutes after first tremor was recorded.

The intensity of the Cache Valley quake of nearly six on the Richter scale was lower than that of the Hebgen Lake quake on August 17, 1959.

Until it is realized that the Richter Scale progresses logarithmically, it would appear to be almost as intense.

Apply this principle it means the Hebgen Lake earthquake had a magnitude approximately 11 times greater.

The Richter scale progresses from one upward. A magnitude of 9 to 10 means total destruction at the epicenter. But a magnitude of 9 would be 1,000 times greater than that of the Cache Valley quake, and of 10 it would be 10,000 times greater.

Since historic times, Cache Valley has not been considered as one of Utah's earthquake hot spots, although the entire Intermountain Area is laced with fault lines, most of them extending in a generally parallel position with respect to the mountain ranges.

[Salt Lake Tribune; August 31, 1962]

6 WEST STATES FEEL TREMOR

By Grant V. Messerly and George A. Sorensen

The ground under Utah's Cache Valley heaved in a sharp earthquake early Thursday, and shock waves surged outward to rattle windows and shake homes in six western states.

No deaths or serious injuries were reported, but heavy property damage was caused along the eastern half of Cache Valley. The quake touched off landslides, collapsed buildings and knocked out Logan's power system.

Timed at 6:35 a.m., the temblor registered between 5.6 and 5.7 on the Richter scale at the University of Utah seismograph.

Severe damage was concentrated near Logan, Richmond and Lewiston where schools, homes, church structures and business buildings were destroyed or heavily damaged.

Minor damage was reported at other nearby southern Idaho and northern Utah communities, and the tremor was felt by residents as far away as southern Montana, central Wyoming, central Nevada and northwestern Colorado.

All Logan city schools and three Cache County schools were closed Thursday, but officials said all but the damaged ones would reopen Friday.

Thousands of Salt Lake City residents were awakened by the quake, and early risers reported watching tall buildings in the downtown area sway and tremble as the shock wave passed beneath them.

Calls jammed the switchboards at The Salt Lake Tribune and the city police department as citizens sought information on the tremor.

But aside from merchandise tumbled from a few store shelves and some minor plaster cracks, no damage was reported in the city.

In Lewiston, one exterior wall of the Lewiston Drug Co. fell onto and through the roof of the City Cafe, which had not opened for business. Other stores in the city were heavily damaged by cracked walls, broken plate glass windows and fallen merchandise.

K. E. Bailey, superintendent of the Amalgamated Sugar Co. plant at Lewiston, said the factory was heavily damaged by ornamental brick work falling through the roof on lower portions of the plant. He made a "wild guess" that damage would reach \$25,000.

Pieces of concrete weighing as much as 500 pounds fell onto the building and plunged all the way to the first floor. Mr. Bailey said only one piece of

machinery was damaged, and the quake would not slow production on the sugar beet run due to start soon.

Further north, on the S. B. LaMont farm west of Fairview, Idaho, two large pieces of pasture totaling some four acres were cut loose to a depth of five feet and slid 300 yards down a hill.

Mr. LaMont said the slippage opened up a number of new springs, and reduced the flow of other springs further down the Bear River Valley.

Also hard hit was the community of Richmond, where the 58-year-old Benson Stake Tabernacle of the Church of Jesus Christ of Latter-day Saints was so badly damaged it will have to be demolished.

Every wall was cracked, the chimney was cracked and threatening to fall, and the brick walls had moved away from the eaves as much as four inches.

At North Cache High School, capstone weighing 150 pounds per square foot rimming the top of the two-story structure was knocked loose.

Crews were removing the rest Thursday afternoon because of the danger that more would fall.

Principal Robert Dahle said the school would be closed at least until Tuesday. Workmen will work through the weekend, he said, to put the building in shape.

Several Richmond homes were so badly damaged they cannot be lived in before they are repaired, and some will be razed.

At the L. G. Bullen home, the east wall collapsed inward on the bed of Carliss Ann Bullen, 18. Half a ton of concrete blocks and debris fell on the bed.

Mr. Bullen said he was sitting in the living room when he heard the wall start to collapse and his daughter start to scream. "Then she came flying out of the bedroom," he said.

The girl who suffered only a bruised knee, said she did not remember how she got out of the bed.

At the home of Mrs. Florence Halverson, the chimney inside the house tumbled onto the bed of Robert Halverson, 19, who was scratched but otherwise unhurt. The building was so heavily damaged it will likely have to be razed, officers said.

Marvin Pullan's brick garage collapsed on his auto, but when workmen lifted the roof he drove the vehicle out. The old garage was demolished.

The front porch was torn off the home of Charles Burbank. The chimney also fell off, and walls were broken or cracked open.

In Cherry Creek Canyon east of Richmond a huge

cloud of dust was observed immediately after the quake, and officers said a massive landslide had been touched off high in the canyon.

A 64-ton electric transformer of the Smithfield substation at Utah Power and Light Co. was shifted two inches by the quake, but there was no damage and service was not interrupted, company spokesmen reported.

At the mouth of Logan Canyon, the Utah Power and Light Co. flume cracked open, and the resulting flood sent a slide of shale four feet deep across the canyon and U.S. Highway 89. The highway was opened to traffic after a short delay.

Extensive damage was reported to many Utah State University buildings, and the steeple fell through the roof of the Logan 4th-16th LDS Ward chapel.

Officials said damage to the chapel would total at least \$40,000, and more if the weakened east wall has to be replaced.

Logan's power supply was knocked out at 6:35 a.m. and remained out until 10 a.m. City power superintendent F. Lyman Spillman said the trouble was caused when the quake swayed two lines together and shorted out a switch.

Several downtown buildings had cracked walls, fallen capstone or ornamental brick and extensive damage to interior plaster. A number of neon advertising signs on building walls were knocked down or tilted.

The Cache County Courthouse had a cracked west wall which forced closure of all offices except the sheriff's department, but officials said all departments would be open Friday.

One bright spot in the quake scene was at the

spring which supplies Logan's culinary water. Alton P. Eames, city water superintendent, said the spring had increased its flow by three second feet.

For the first time in memory, water from the spring was muddy Thursday, but he said the city reservoir was settling silt out and there had been few complaints about the water.

In the Town House, once called the Eccles Hotel, a water line broke and caused damage to about 20 rooms.

Another water line feeding the joint reservoir of the communities of Newton and Clarkston was severed by the quake. Clarkston officials said it would be fixed by Thursday night.

J. Stewart Williams, chairman of the USU geology department, said a day-long survey of damage showed it concentrated mainly on the east side of the valley, with relatively little on the west side.

Damage reports from elsewhere were few, but in Pocatello the tremor collapsed an abandoned mine shaft at the east end of Terry Street, creating another dust cloud similar to the one observed high in Cherry Creek Canyon near Richmond.

Also north of the main quake center in the upper Cache Valley farmers reported a number of wells which had been dry for years were flowing good streams of water.

At Downey, Idaho, the chimney of the Oxford Hotel was knocked off and the roof was damaged.

At McCammon the tremor jarred open the locked door to Mom Lindy's Kitchen, a restaurant on U.S. 89-91.

[Salt Lake Tribune; August 31, 1962]

STORE OPENS BY A CRACK All Shook Up

By Associated Press

Logan, Aug. 30—It was a short business career for Mrs. Thelma Olsen, Logan, Thursday.

All ready for the grand opening of her new Stork Shop maternity store, Mrs. Olsen arrived at the building Thursday morning to find her "grand opening"

signs behind a police department rope barricade.

The building in which the business had just been established developed cracks during the earthquake and was found unsafe by the police department and closed for repairs.

[Salt Lake Tribune; August 31, 1962]

LARGE BLAST? HUNDREDS THOUGHT SO

"Where's the explosion?"

This was the question asked dozens of times Thursday morning by persons calling The Salt Lake Tribune switchboard for information following the earthquake.

Nearly everyone at first thought there had been an explosion rather than a quake.

First call the switchboard received was from Mrs. William Dahle, 2996 S. Redwood Rd. Her call came almost before the tremor had stopped.

At 6:40 a.m. the University of Utah called to report there had been an earthquake.

Throughout the day, calls continued to pour into the Tribune library and to the switchboards. Some callers were concerned over injuries and property damage in the Logan area because of relatives there.

Others, and this included the majority, simply wanted to confirm reports that what they felt in the way of shaking buildings had actually been an earthquake.

[Salt Lake Tribune; August 31, 1962]

TEMPLE RUIN LISTED SLIGHT LDS Report

The only earthquake damage to the Church of Jesus Christ of Latter-day Saints Temple at Logan was listed as "superficial damage to plaster," according to Wendall B. Mendenhall, chairman of the LDS Church building committee.

And, he added, repair work on the plaster was already under way. He said there was apparently no major structural damage to the temple.

At Logan, the Utah State University Student Living Center had some plaster damaged, he said, but repairs there have also already started.

Other damage to church property included a Lewiston, Cache County, LDS ward that had

superficial damage.

Major damage was to the Richmond, Cache County, LDS Tabernacle which, Mr. Mendenhall said, "is damaged beyond repair. It is closed, condemned and we will make no attempt to repair it."

He said the 4th-16th LDS Ward in Richmond has considerable damage, and that: "We are not allowing any meetings until a complete engineering study is completed, because we know there is severe structural damage."

He said that building's steeple had toppled and both the east and west walls were severely damaged.

[Salt Lake Tribune; August 31, 1962]

JOLTS SILENCE LOGAN CITY SCHOOL BELLS

LOGAN, Aug. 30—Early discovery of extensive damage in some school buildings in Logan resulted in closing all the city's schools Thursday. Cache County School Supt. Oral L. Ballam ordered Richmond schools closed also.

Supt. Sherman D. Eyre of Logan schools said all the schools except Logan Junior High will reopen Friday, barring further earthquakes.

The architect began study early on structural damage at the junior high, an old building which the board intended to replace in about two years. Principal damage is broken firewalls that will have to be replaced, Mr. Eyre said.

At the senior high school, where parts of the buildings are the oldest in the system—some were built for Brigham Young Academy prior to 1910—broken plaster repairs probably will range between \$5,000 and

\$6,000, Mr. Eyre said.

Whittier Grade School, built in 1907-08, withstood the quake as well as any of the new buildings and reported no damage. Several grade schools had minor damage, mostly cracked glass and cracked plaster, the superintendent reported.

"I don't know when we can reopen the junior high," he added.

Supt. Ballam said North Cache High School at Richmond will remain closed at least until Monday to permit removal of loose marble decorative blocks and some loose bricks.

The smokestack was damaged, he said, and may have to be removed also.

All other schools reporting damage were found to be structurally sound, Supt. Ballam said.

[Salt Lake Tribune; August 31, 1962]

QUAKE WAKE RUMBLES IN SOUTH IDAHO

Food Rolls

PRESTON, IDAHO—Many southern Idaho communities were awakened Thursday morning with a tremble, felt as a result of the Cache Valley earthquake which caused damage in nearby Utah points.

Some students in the Preston School District were a little disappointed with the announcement that buildings would likely all be in shape for the scheduled start of school on Tuesday.

Schools in nearby Logan were closed Thursday, giving pupils an unscheduled holiday. But in Preston and vicinity classes had not opened. There will be no vacation.

One of the major problems for Preston merchants was the matter that plagued grocery store operators. In most of the stores, all of the round canned goods, oranges, apples and other items were rolled into the

aisles of the stores by the tremors.

Store employees were busy restacking the merchandise most of the day.

In Burley, residents were awakened and police officers said the department was swamped with inquiries as to what caused the shaking of their homes.

Pocatello, still further from the quake center, reported no damage, but hundreds of calls.

A police sergeant on duty at the Pocatello department said he knew of at least some damage. That, he said, was his arm, tired and sore from the constant answering of the telephone.

In the Magic Valley area of southcentral Idaho, no damage was reported and few persons, other than in the Burley area, even felt the shock.

[Salt Lake Tribune; August 31, 1962]

S. L. WATER LINES ESCAPE QUAKE

A survey of the Salt Lake City watershed dams, reservoirs and water lines Thursday indicated there was no earthquake damage to the system.

This was reported late Thursday afternoon by

Water Commissioner Conrad B. Harrison, and his superintendent, Charles W. Wilson.

[Salt Lake Tribune; August 31, 1962]

JAR MARKS BIRTHDAY

OGDEN (AP)—"That's quite a celebration for my birthday," commented Mrs. Addie Newcomer of Ogden who observed her 73rd birthday anniversary

Thursday.

[Salt Lake Tribune; August 31, 1962]

NEXT QUAKE? IT'S REALLY ANYBODY'S GUESS

Earthquake tremors which rocked Cache Valley shimmied through much of the rest of Utah and southern Idaho, causing freak situations and puzzling many residents.

While many said they were shaken from their beds by the quake, others slept through and were completely unaware anything had happened.

Others were blaming the quake, legitimately or otherwise, for their being late for work or for other problems. Alarm clocks that usually functioned failed to sound Thursday morning, while others not supposed to awaken anyone put on unscheduled performances.

In Salt Lake City, several unusual incidents occurred and residents reported they thought someone was "shaking the bed" or that "the children were running through the house" at an unusually early hour.

Frank G. Pollard, operator of a coin operated laundry at 262 E. 33rd South, said the quake knocked two four-foot long fluorescent tubes from the laundry ceiling sockets. Four or five bottles also tumbled from a shelf in the laundry. Of 16 tubes lighting the

building, two were shattered, Mr. Pollard said.

One of the most frequent questions asked at The Salt Lake Tribune information service was "When will the next one occur?"

One young school girl said her teacher told her to hurry home because there would be another earthquake at five o'clock. Others asked if the "noon quake" would be on schedule.

As for this, University of Utah experts said all quakes are different but usually there are several aftershocks. As many as four to five were recorded during the day, most of them not severe enough to be felt in Salt Lake City.

Aftershocks, the university expert said, are usually less severe than the main shock, but they added, "earthquakes don't follow a set pattern."

A. W. Nickel, a Hunter farmer, said his family thought another blast had occurred in the Bacchus plant.

[Salt Lake Tribune; August 31, 1962]

QUAKE 'ONE OF WORST' FOR UTAH

By Bonnie Baird

Earthquake history in Utah and surrounding areas over the past 112 years indicates the Thursday morning temblors were among the most severe ever recorded here.

Intensity of the quake was reported at 6.1 on the Richter Scale at seismographs at Caltech Seismological Laboratory, Pasadena, Calif. This is above the intensity reports on a 1934 quake. It was well below the intensity of the 1959 quake in the West Yellowstone area of Wyoming and Montana.

The first earthquake record made in Utah was in 1850. From that time, tremors from mild to major intensity have been recorded almost annually.

In 1934, a temblor on March 12 at approximately 8:05 a.m. included a total of five shocks which drove some Salt Lake City residents from their homes and caused evacuation of office buildings. Schools in Salt Lake City were closed for two days while buildings were inspected for damage.

Geologists set the center of the 1934 quake in the vicinity of Kelton, Box Elder County, but it was felt as far south as Richfield; west to Ely, Nev., east to Rock Springs, Wyo., and north to Boise, Idaho.

There was no extensive damage to buildings or other property. The death of one Ogden woman, who was critically ill, died from overexertion because of the quake.

Most recent and most serious quake in the Intermountain Region was on Aug. 17, 1959, when heavy damage and the loss of at least 28 lives occurred in the Hebgen Lake region of Montana near Yellowstone National Park.

Recorded at an intensity of 7.1, or 11 times greater than the Thursday shake-up, the quake caused a dirt slide which covered a section of a resort area, trapping campers in their beds and trailers.

Shock waves from this were felt as far as Utah and caused damage in several surrounding communities. Heavy damage to highways and dams in the region also resulted.

A record of Intermountain Area quakes as maintained by The Salt Lake Tribune information department shows:

1850—First recorded earthquake in the Salt Lake Valley.

1893, Aug. 30—Light earth shock felt at Snowville at 4:30 p.m.

1896, Oct. 2—Light quake felt at Promontory.

1897 and 1898—Prolonged light earth disturbances.

1897, Feb. 8—Heavy shocks during the afternoon in Corinne, Box Elder County.

1897, Feb. 13, 14, 20 and 21—Shocks felt. On the 21st, a report of gas escaping a mile or two out in Great Salt Lake from the mouth of Bear River.

1897, Aug. 3 and Sept. 15—Fairly heavy quakes.

1898, Feb. 20—Tremors of less intensity than in previous year, around the north end of Great Salt Lake.

1900, April 9—Light quakes at Promontory point.

1905, Nov. 11—Light quakes felt at Snowville.

1909, Oct. 5—Disturbances extending in a line from Preston, Idaho, south through Utah as far south as Midvale. Damage at Malad, Idaho.

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

1915, Oct. 2—Quakes of moderate intensity felt at Kelton.

1919, Nov. 19—Quakes of moderate intensity at Kelton.

1932, Feb. 26—Two distinct shocks felt at Naba, south of Milford at 8:40 p.m.

1932, Nov. 12—Tremor felt at 2:44 a.m., epicenter on Wasatch Fault.

1932, Dec. 20—Pronounced tremor at 11:13 p.m. Epicenter in Nevada, felt throughout the West.

1934, Jan. 30—Light tremor at 1:20 p.m., epicenter in Nevada.

1934, March 12—Five distinct tremors described as the most severe shocks ever felt in Salt Lake City. Schools were closed for a day and a half to avoid danger of damaged buildings. Epicenter was apparently at Kelton.

1934, March 13—Slight tremor at 3:15 a.m. in Salt Lake City.

1934, March 15—Thirty temblors felt in northern Utah. Three were felt in Salt Lake City. More than 100 temblors felt at Locomotive Springs, a few miles from the epicenter, between March 12 and 16.

1934, April 2—Temblor of moderate intensity felt in Salt Lake City. Epicenter apparently same as earlier quakes.

1934, April 14—Major shock felt in Salt Lake, distinctly felt at 2:25 p.m.

1934, April 15—Light shock felt in Salt Lake between 9 and 10 a.m. believed to have originated in Hansel Valley where shocks had been reported almost daily.

1934, April 17—Light shock felt in Salt Lake at 7:47 p.m.

1935, June 4—A slight tremor was felt in Salt Lake City, apparently originated in Hansel Valley, western Box Elder County.

1936, Jan. 15—Minor quake at Cutler Dam, 20 miles west of Logan.

1937, Nov. 18—Minor quake felt in Salt Lake City.

1938, Jan. 26—Minor quake felt in Cedar City.

1938, March 18—University of Utah recorded shock 150 miles northwest and southwest of Salt Lake City.

1938, May 4—Slight quake in Logan area.

1938, May 15—Slight quake in Elsinore and Monroe.

1938, May 30—Fair quake in Salt Lake City. No damage.

1938, June 1—Slight quake in Salt Lake City. No damage.

1940, Jan. 26—Minor quake felt at Logan.

1940, March 28—Minor quake jarred southeastern Idaho and northern Utah at 1 p.m., with strong tremors recorded at Logan from 12:55 p.m. to 1:01 p.m.

1949, March 6—Slight quake of minor intensity.

1954, Aug. 23—10:50 p.m. Fairly severe shock felt in Salt Lake City.

1955 Feb. 6—Shocks felt throughout the area, but no damage.

1958, Feb. 13—at 3:52 p.m. Shocks felt in Provo. No damage.

1959, Aug. 18—Severe quake in southwestern Montana, Hebgen Lake area. Extensive damage, 28 killed and 60 or more injured. Felt in parts of Utah.

1959, July—Slight quake in Kanab area.

1961—Temblors felt in the Sanpete Region, Manti and Ephraim. Windows rattled, no damage.

1962, Aug. 30—Shocks recorded in Salt Lake City at 6:36 a.m. Center in the Cache Valley area. Some damage to buildings and communications. Little damage in Salt Lake City.

[Salt Lake Tribune; August 31, 1962]

SHOCK IN RICHMOND SHATTERS 30 YEARS

By Robert Rampton

RICHMOND, Cache County—Northern Utah's rolling earth shock early Tuesday shattered more than 30 years of working, saving and remodeling of an old home by a Richmond couple.

Mr. and Mrs. Charles Burbank, 149 E. 1st North, who only last year finished a major refurbishing job on what was once an old school house, had to move from their home following Tuesday's earthquake.

Said Mr. Burbank, "The old home just isn't safe anymore. Even if another tremor doesn't follow, the inside of the structure is shattered and it just isn't safe."

His family's experience with the earthquake Tuesday was a hair-raiser.

Mrs. Burbank was already up when the shock hit. She was fixing breakfast for her husband and 15-year-old daughter, Judy Lynn. Mr. Burbank was still in bed.

"When the quake hit, I jumped out of bed. I could see my wife on the floor in the other room—the shock had knocked her down.

"Because she is in poor health, I tried to get to her, but the floor seemed like I was walking on a roller

coaster. I fell down twice trying to reach her.

"Sometime a large piece of plaster fell from the ceiling and hit me on the head. I grabbed mother and started for the door just as Judy Lynn came screaming down the stairs.

"We didn't know which way to go, we were so scared and confused. Finally we got outside. We found the front porch had fallen off and the chimney had crumbled.

"I don't know where we'll go now. I have a daughter living next door," but the inside of her home isn't much better than ours. Maybe we'll stay with my son-in-law in Logan. I don't know whether my insurance covers earthquake damage," Mr. Burbank said.

Judy Lynn told The Tribune she knew immediately it was an earthquake.

"I started to run down the stairs and went by the window just in time to see the front porch falling off. I don't remember just how we got out, I was too scared," she said.

[Salt Lake Tribune; August 31, 1962]

FEAR OF NEW QUAKES HAUNTS CACHE CREWS Residents Inspect Ceilings, Walls In Cleanup On Debris

By George A. Sorensen

LOGAN—Cleanup operations began in Cache County Friday with residents gingerly inspecting building walls and ceilings—still fearing a sharp after-jolt from Thursday's earthquake.

Centered about eight miles northwest of Logan, the quake caused the greatest damage in Logan, Richmond and Lewiston.

Geologists attention Friday was called to a series of small cracks and miniature pots which bubbled a blue, very fine sand to the top of the ground. These cracks, approximately two to three inches wide and up to several feet in length, were evident along the Bear River for about five miles south from Trenton.

The water was not flowing Friday, but miniature volcanic-shaped mounds up to six inches high were noted.

Walter Wood, Trenton, said water was bubbling out of them Thursday evening.

"They looked like the hot pots in Yellowstone and a bluish vapor hung over them," Mr. Wood said.

No Cache County official would put an exact amount on damage, but most estimates placed it near \$500,000.

Friday it seemed possible that the 909 Logan Junior High School pupils might get an extended vacation for up to three weeks.

Logan School Supt. Sherman Eyre said it is possible that school may not be held for three weeks if reconstruction work shows that the school's walls are damaged. He said tentative estimate of damage to the school Friday was set at \$19,000.

However, the pupils could take little cheer from the superintendent's next statement.

"If we have to close down the school, we will try to make up the lost time either by having students attend classes on Saturdays or extend the calendar into June," he said.

Only one other school remained closed Friday. That was the North Cache High School at Richmond where workers finished removing the capping stones on outside walls. Students will return Tuesday.

Supt. Oral L. Ballam, Cache County School District, said engineers checked all schools Thursday and Friday that reported damage.

All others will be checked by engineers over the weekend and it appears that the district schools, including the high school, will open Tuesday, he said.

The other schools suffering more than minor damage were the Richmond Park Elementary and Lewiston Junior High School.

The boiler chimney at the elementary school will have to be removed and the cap stone at the junior high will have to be taken down, Supt. Ballam said.

Meanwhile, Friday the American Red Cross set up disaster headquarters in the Richmond City Hall and flew in an official from San Francisco to assist.

Richmond apparently was struck the hardest by the earthquake.

Mayor Ross Plant said nine homes will have to be rebuilt. This does not include very old homes which were in poor shape before the quake struck, he said.

Also condemned at Richmond was the tall, red-brick Benson Stake Chapel, Church of Jesus Christ of Latter-day Saints. This building has stood for many years as a landmark.

Mayor Plant said he received word Friday that this building will be torn down because damage left by the quake has made it a hazard.

Officials—both civic and business—blamed much of the damage on the "Gay 90s architecture and ornamental work."

They point out that a good portion of the damage, other than fallen plaster and cracks in the walls, came from falling parapets on walls above the roof levels.

At the Lewiston factory, Amalgamated Sugar Co., K. E. Bailey, manager, said damage would not have been too great if the parapets had not fallen.

Falling concrete and brick from the parapets punctured several holes in the roofs. Some machinery was damaged and some steel roof support beams bent.

Damage to the building was estimated by Mr. Bailey at \$25,000.

A crew of 30 men moved in Friday to get the building back into shape. More will be added Tuesday in a rush to get the factory in condition for the fall sugar beet harvest.

Mr. Bailey said the building must be ready by Oct. 1 to start receiving beets on Oct. 10.

"We want that 10-day grace period in case we find that boilers or steam lines have been damaged," Mr. Bailey said.

Scaffolds were erected in front of the Logan Hotel Friday afternoon after it was decided to remove some of the front wall.

All pedestrian traffic was diverted to the other side

of the street as one corner of the front wall continued to pull away from the rest of the building.

Although several buildings at Utah State University suffered minor damage, university officials would not make an estimate until after further investigation.

Miss Mildred Schilling, disaster representative, American Red Cross Pacific Area office, San Francisco, arrived in Richmond Friday about noon to assist residents who need help in restoring their homes.

"I will work with the people to determine their needs over and beyond their own resources and to determine if the Red Cross can help them," she said.

Jesse V. Haws, field representative in Northern Utah and Eastern Nevada, said approximately 24 people sought some assistance Friday.

Mayor Plant said relatives, friends and the LDS church are helping those of Richmond who have been forced out of their homes.

An air of watchful waiting filled the valley Friday as residents discussed the reports out of California which said it is possible for after-shocks to cause additional damage.

LDS church officials indicated the Logan Fourth

Ward Chapel also might be abandoned. The church building committee has inspected the buildings and still has to make a decision.

They estimated damage to this structure Thursday at \$40,000.

Workers in the Cache County Courthouse returned to work Friday. They were sent home after several cracks appeared in the walls Thursday morning.

The Logan-Cache Fire Department continued to keep all its equipment in a yard because of cracks in the building housing the fire trucks and ambulances.

Dr. Kenneth L. Cook, professor and head of the department of geophysics, and Dr. S. Theodore Algermissen, associate professor at the University of Utah, visited the earthquake area in Cache County Friday.

After a study of damage, they said it was "about what we would expect from a tremor of this intensity."

Dr. Algermissen said no aftershocks were felt during Thursday or Friday, but the seismograph at the university will be studied to see if new shocks were recorded, but not felt.

[Salt Lake Tribune; September 1, 1962]

CACHE AREAS OPEN FOR SBA LOANS Quake Relief

Earthquake damaged Cache County has been declared a disaster area to make it eligible for rehabilitation loans under the disaster loan program of the Federal Small Business Administration, according to word received Friday from Washington, D.C. by Ross S. Tyson, SBA branch manager in Salt Lake City.

Those qualifying will be able to obtain loans at an interest rate of three percent with the period for repayment of the principal extending up to 20 years. They will be required to pledge whatever collateral they can, Mr. Tyson said.

A representative of the branch office will be at the Logan Chamber of Commerce Tuesday to accept applications.

A committee of Cache County citizens will be appointed by the SBA Washington office to investigate loan requests and make recommendations to the branch office, which has authority to approve loans up to \$50,000 each.

Those eligible for borrowing are individuals,

business concerns and non-profit organizations, such as churches and charitable institutions, provided they have suffered tangible property loss as a result of the earthquake.

In the case of individuals, loans may be used to repair or replace damaged furniture and other household belongings, as well as homes and appurtenant structures.

Loans will not be made to repair or replace summer or winter cottages, camps or lodges used purely for recreational purposes, Mr. Tyson explained.

Business loans may be used to repair or replace buildings, fixtures, machinery equipment and merchandise, but not for debt repayment except in cases where it has been necessary to borrow for temporary repairs of quake damage.

Mr. Tyson explained the purpose of the federal loan program is to restore homes and businesses as nearly as possible to pre-disaster condition.

[Salt Lake Tribune; September 1, 1962]

QUAKE AREA JITTERS EASING AS CREWS SPEED REPAIRS

By Associated Press

LOGAN—Workmen and equipment Saturday moved ahead with the gigantic task of cleaning up and repairing damage inflicted on Cache Valley by Thursday's earthquake.

Estimates on damage are now running between a half million dollars and a million dollars although an official estimate has not yet been released.

The Logan Junior High School, Model Billiards and several buildings along Logan's main street all had repair crews on the job early Saturday morning.

Tension began to relax as fears of a second tremor lessened and the Logan-Cache fire department felt safe enough that all emergency equipment was put back into the building.

The Small Business Administration announcement that local firms may apply for loans to repair damage brought encouragement to many small businesses.

Although a few slight tremors have been reported since the big shaking last Thursday, the tempo of life in Cache Valley is gradually returning to normal.

[Salt Lake Tribune; September 2, 1962]

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

**1962 CACHE VALLEY, UTAH EARTHQUAKE
Thursday, August 30, 1962
6:35 a.m.**

Magnitude 5.7

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.

Edith (Deedee) O'Brien and Susan J. Nava
Earthquake Education Services
University of Utah Seismograph Stations
705 Browning Bldg.
Salt Lake City, Utah 84112

phone: 801-581-6201
fax: 801-585-5585
email: obrien@seis.utah.edu