



ROGER SANDOVAL, 60, is afraid he might have to close his Shell gas station in Trona, Calif., which suffered major damage to its holding tanks in the recent 7.1 magnitude quake that struck in the Mojave Desert.

Ridgecrest quake packed the power of 45 nuclear bombs

Despite tremor's strength, towns were spared from the worst

By RONG-GONG LIN II

When the magnitude 7.1 earthquake ruptured the earth in the Mojave Desert, it packed the energy of 45 nuclear bombs of the type that fell on Hiroshima.

But a variety of factors lessened the potency and impact of what was the most powerful Southern California earthquake in nearly two decades.

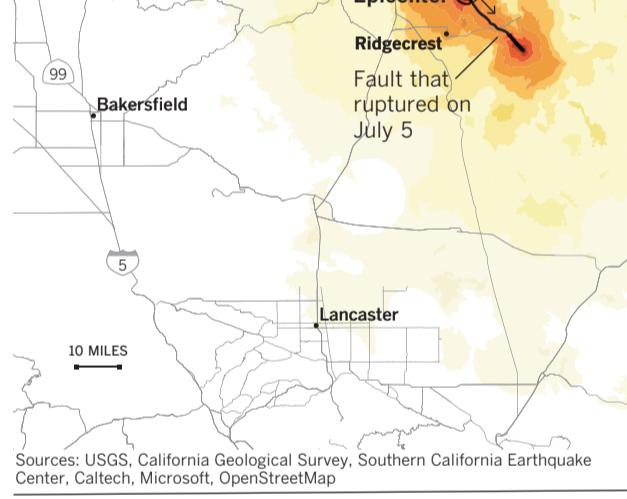
The massive tremor, it's important to note, ruptured on a fault whose northwest-southeast direction pushed the worst shaking away from populated areas.

The area Ridgecrest sits in is riddled with faults — in the Eastern California Shear Zone — that have produced some of the state's biggest quakes in the modern record, like the magnitude 7.5 Owens Valley earthquake of 1872 and the magnitude 7.3 Landers earthquake in 1992.

A glancing blow

The magnitude 7.1 Searles Valley earthquake that ruptured in the Mojave Desert on July 5 sent the worst shaking to sparsely populated areas.

More intense shaking →



Sources: USGS, California Geological Survey, Southern California Earthquake Center, Caltech, Microsoft, OpenStreetMap

ZACH LEVITT Los Angeles Times

But this particular fault packed its biggest punch either toward the Sequoia National Forest to the northwest or largely uninhabited expanses of the Mojave Desert. The most populated area that got the worst shaking was Naval Air Weapons Station China Lake, which was right on top of the fault rupture and saw damage to its elementary school.

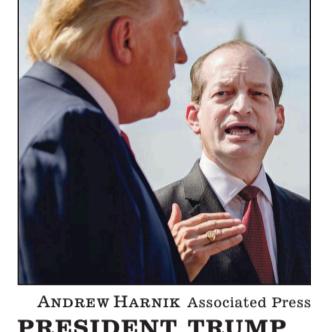
Northern Los Angeles County would have experienced more shaking had the quake occurred on a fault with a different tilt. For example, a rupture on the nearby Garlock fault, one of California's faster-moving faults that runs on a northeast-southwest alignment, would be capable of directing heavier shaking to areas like Bakersfield and Ventura County.

"If this earthquake had been on the Garlock fault, then, yeah, Bakersfield, the [See Quake, A8]

Labor chief quits over criticism of Epstein plea deal

Prosecutors had challenged Acosta's account of the 2008 sex crimes settlement with financier.

By CAROLINE S. ENGELMAYER AND NOAH BIERMAN



ANDREW HARNIK Associated Press

PRESIDENT TRUMP praised R. Alexander Acosta, but didn't say if he had asked him to stay.

CITY LOSES ITS APPEAL FOR LAPD FUNDING

Justice Department's grant rules do not unfairly punish police in 'sanctuary' cities, 9th Circuit decides.

By MAURA DOLAN

When Los Angeles police officials requested \$3.125 million in federal funds in 2017 to hire 25 officers, they said their focus would be on "building trust and respect" through community policing.

In keeping with long-standing city policy, they did not cite "illegal immigration" as a focus for the new officers or indicate that the proposed hires would work with immigration agents to help deport immigrants being held in local jails.

The grant money went elsewhere, and Los Angeles sued, saying it was being punished for its stance.

A federal appeals court rejected that lawsuit Friday, ruling 2 to 1 that the Trump administration may give preference in awarding grants to police departments that help federal authorities nab immigrants.

The ruling by the U.S. 9th Circuit Court of Appeals was a setback for Los Angeles, which won a nationwide injunction against the grant application process last year.

Los Angeles City Atty. Mike Feuer said the city [See Grants, A10]

Vietnam's a winner in U.S.-China trade war

By DAVID PIERSON

HO CHI MINH CITY, Vietnam — The requests that textile factory manager Huynh Thi Ai Diem receives are almost always the same: A foreign company is desperately trying to relocate production from China to Vietnam. Tariffs imposed by the U.S. have eaten away its profit margin. Can she help?

Huynh would like nothing more but is swift to provide a reality check. She only has enough workers, raw materials and factory space to produce one-fifth the volume of bath towels and apparel churned out by her chief competitors in China. Her prices are competitive, she says, but contrary to popular belief, they aren't cheaper than those of her Chinese rivals.

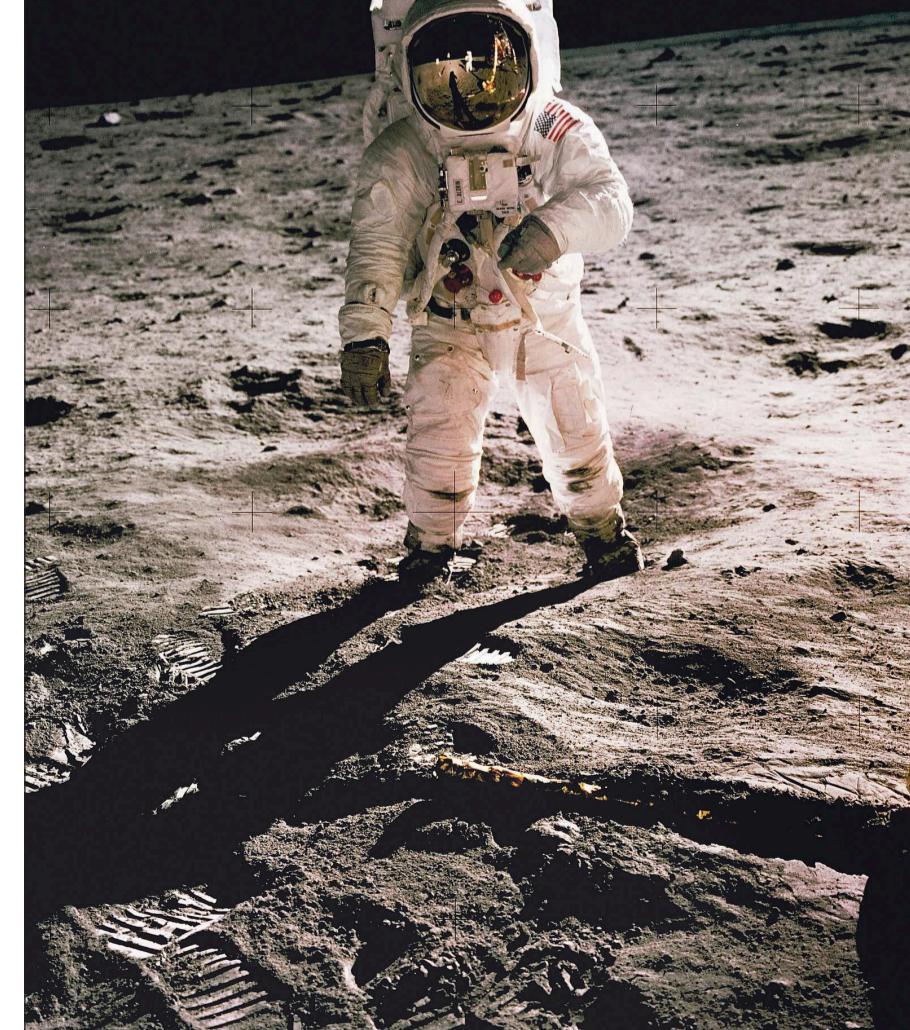
"Our prices are reasonable and we can deliver good quality, but we can only take small orders," said Huynh, a manager at Phong Phu, a 54-year-old manufacturer.

Few countries have benefited more than Vietnam from the year-old trade war between the United States and China. Companies, already under pressure from rising production costs in China, have been scrambling to identify factories to work with in the Southeast [See Vietnam, A4]

COLUMN ONE

Moon's allure still resonates

50 years after Apollo 11, legacy of lunar landing is undeniable



NEIL ARMSTRONG NASA

BUZZ ALDRIN on the moon on July 20, 1969. The photo was taken by fellow astronaut Neil Armstrong, whose reflection can be seen in Aldrin's helmet.

By DAVID SHIRIBMAN

London Wainwright Jr., father and grandfather of songwriters and musicians, was a prominent literary balladeer of 1960s culture, and — just as Americans might tire of 50-year commemorations of humankind's greatest space adventure — he felt a creeping sense of tedium, almost boredom, at Cape Kennedy as he awaited the launch of Apollo 11.

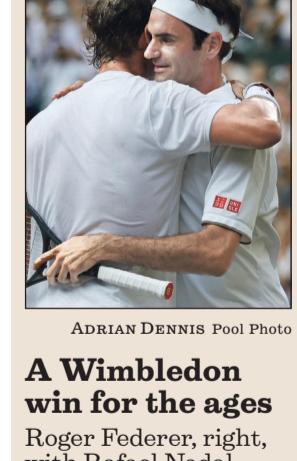
But the night before the liftoff, Wainwright heard this observation:

"What we will have attained when Neil Armstrong steps down upon the moon is a completely new step in the evolution of man. For the first time, life will leave its planetary cradle, and the ultimate destiny of man will no longer be confined to these familiar continents that we have known so long."

Those words were spoken by Wernher von Braun, and they jolted Wainwright, stirred him, as he put it in a Life magazine essay, "in ways that no amount of engineering brilliance, astronomical competence, and the cool confidence of the entire Apollo project ever could."

Consider what we know now since Armstrong fulfilled President John F.

[See Moon, A6]



ADRIAN DENNIS Pool Photo

A Wimbledon win for the ages

Roger Federer, right, with Rafael Nadal after beating him in the semifinals. Federer, 37, faces defending Wimbledon champion Novak Djokovic in the final; he could become the first man over 30 in the Open era to win five Grand Slam titles. SPORTS, D1

Weather Sunny and warm. L.A. Basin: 89/65. B6

