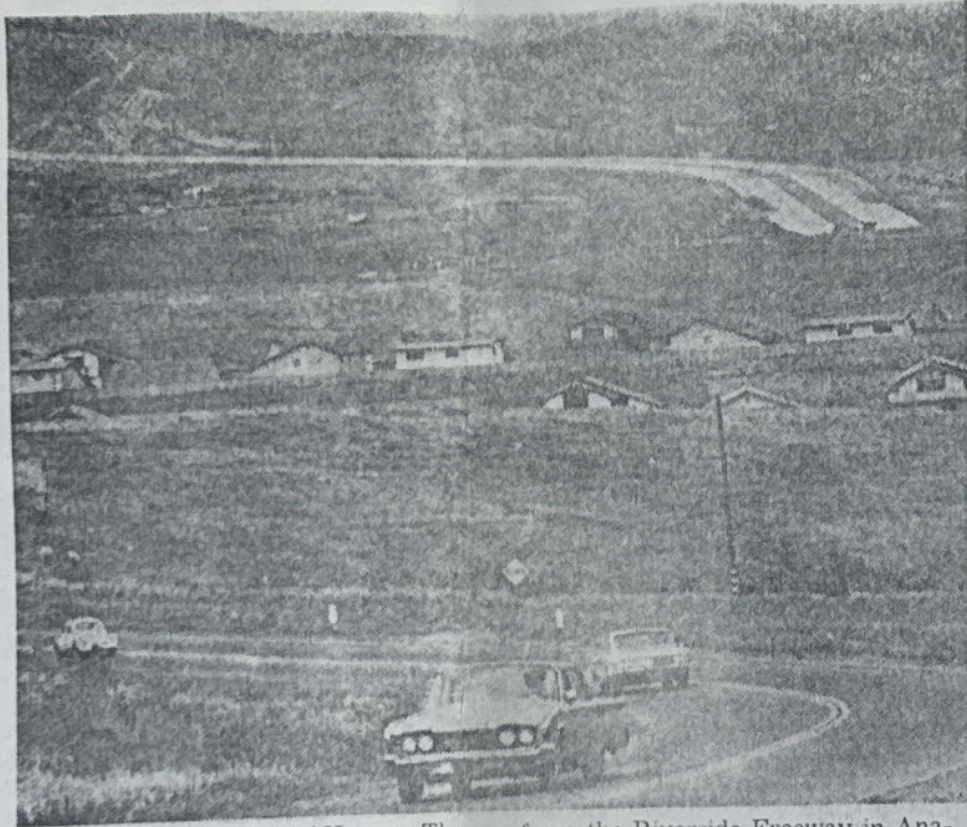
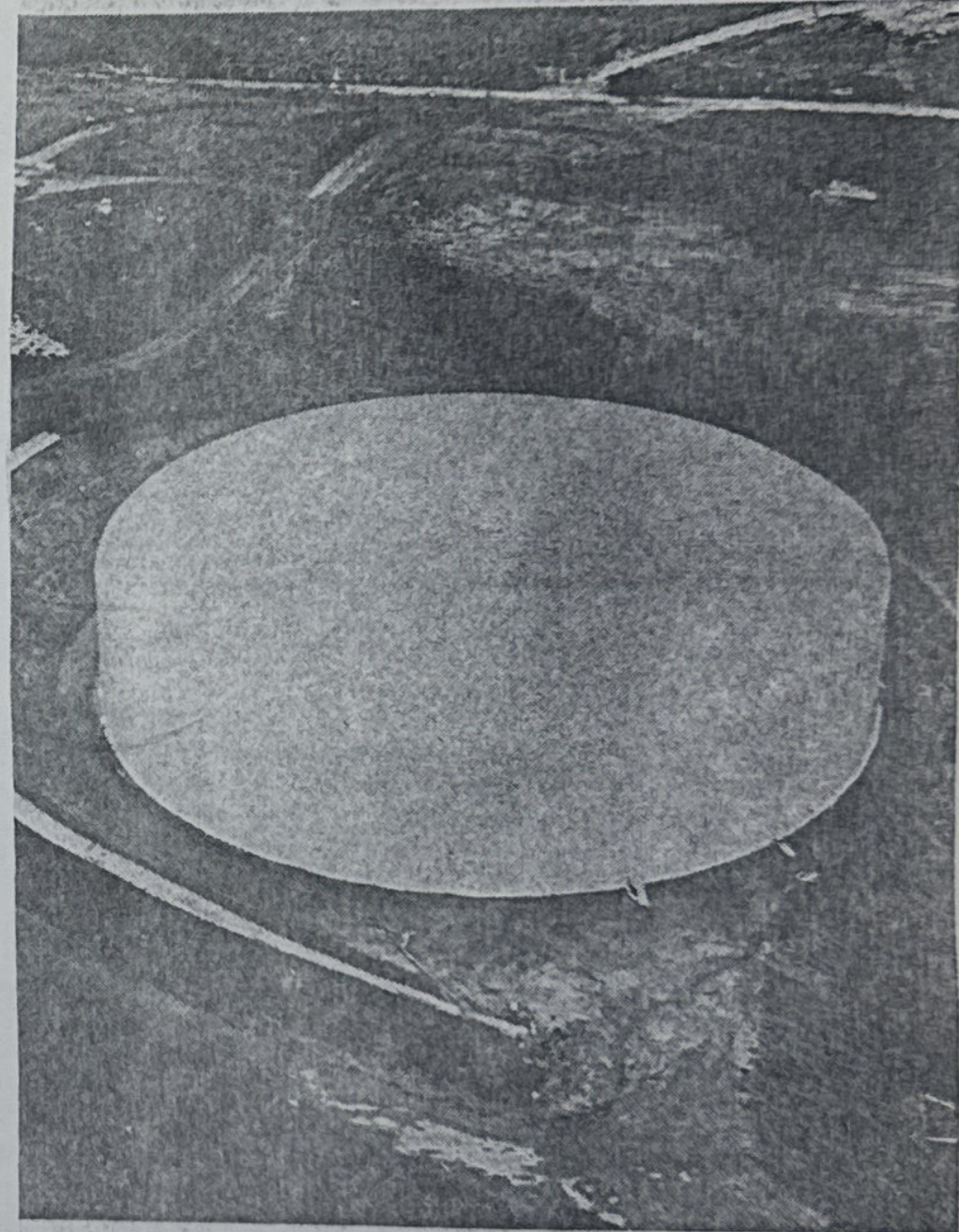


Brea Thinks Big



RIBBON OF HIGHWAY — The new Orange Freeway appears like a ribbon of highway on the Brea landscape. The freeway is now open

from the Riverside Freeway in Anaheim to Imperial Highway in Brea. It will be open through Brea Canyon early next year.



NO FLYING SAUCER — This photograph is not one of a downed flying saucer, but rather the largest potable water tank in Southern Cali-

fornia, one of the newest additions to the city of Brea. The 10-million gallon reservoir was completed recently.

MARCH 8, 1971

L.A. TIMES



RESHAPING OF CANYON—Aerial photo shows how face of Brea Canyon is changing as segment of Orange Freeway is being constructed.

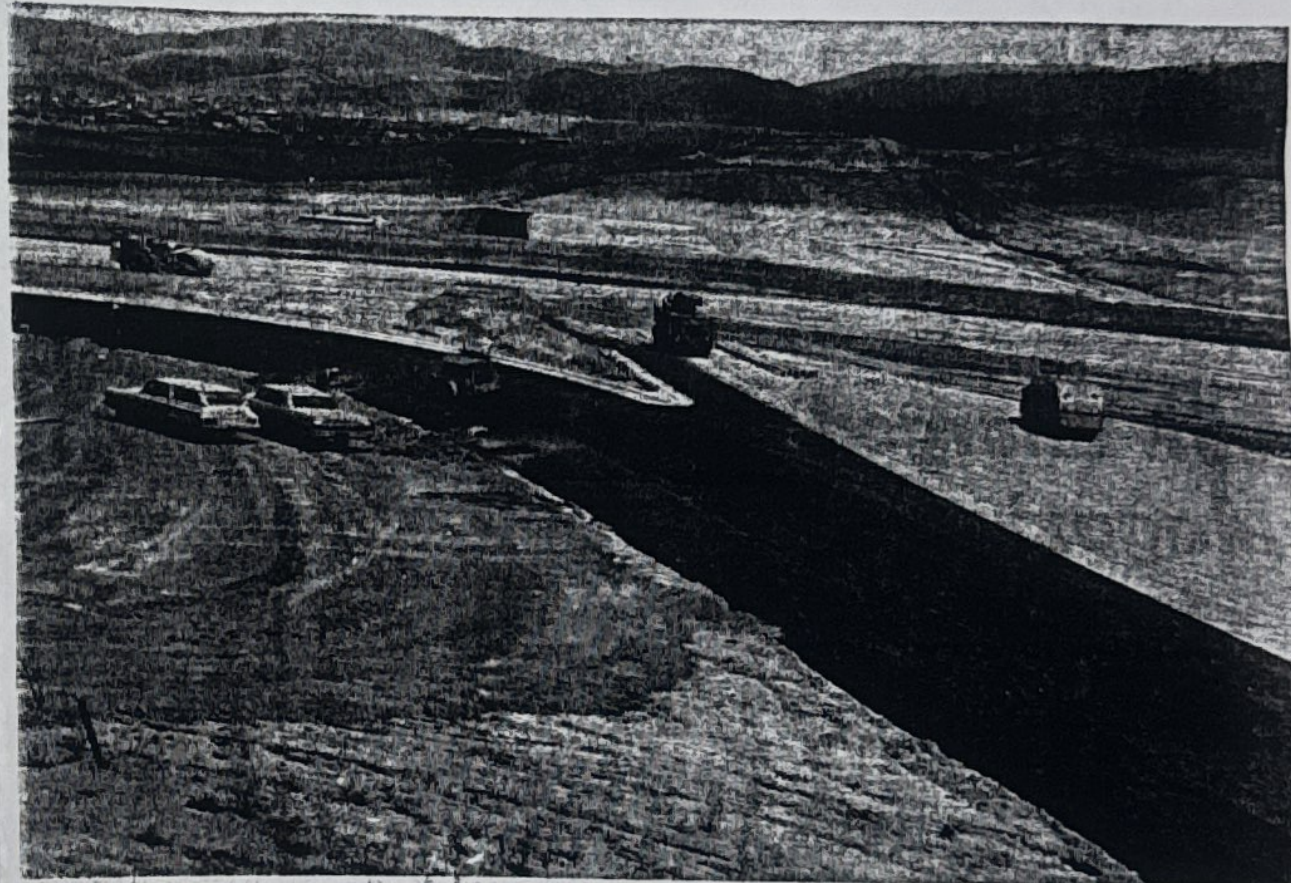
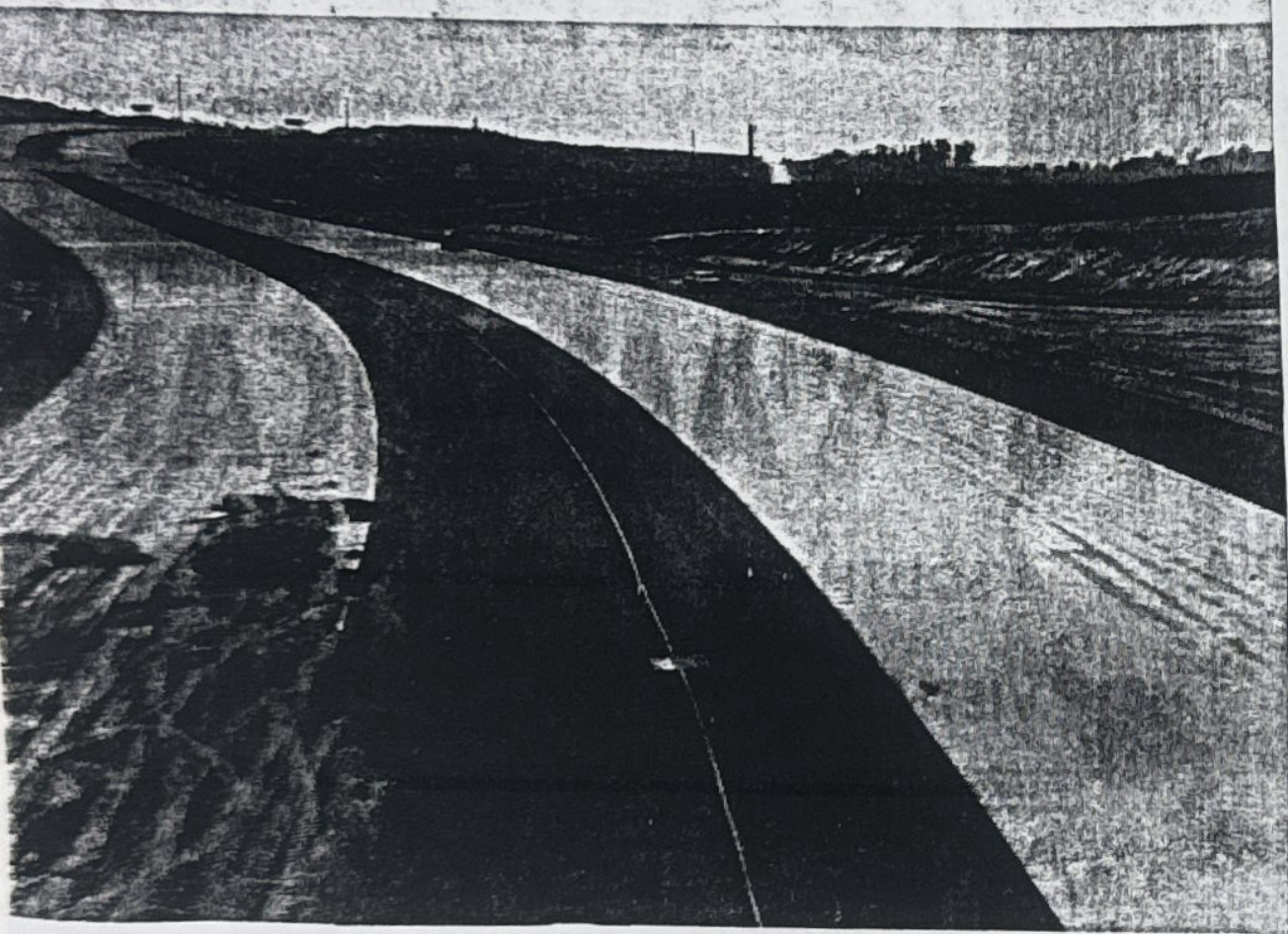


News Tribune Photo by Ray Rhoads

ORANGE FREEWAY — Another section of the Orange Freeway has gone to bid to carry the north-south right-of-way through Brea Canyon to the Pomona Freeway. Two other jobs not yet complete, reach from Nutwood in Fullerton through the Puente Hills to Brea Canyon Road north of Brea. Shown above, the construction can be seen from a point south of Bastanchury in Fullerton through the hills at the top of the picture where the new job will begin.

June Freeway Completion Seen

1974



ORANGE FREEWAY PROJECT REACHES BREA

News Tribune Photos.

Snaking concrete ribbon of the new four-lane freeway slithers under the bridge at Imperial Highway just west of Associated Road. The top view shows the freeway as it goes under the bridge while the lower view shows work being done on a clover leaf and the northern end of

the freeway as it goes through Brea and into the Puente Hills to its eventual connection with the San Bernardino Freeway. Supplementary projects include the widening of Imperial Highway through Brea. Dedication ceremonies for the freeway are anticipated early in June.

JANUARY COMPLETION DATE

New Freeway Construction Changes Idyllic Brea Canyon

BY HOWARD SEELYE

Times Staff Writer

At the southern end of Brea Canyon oil derricks stand silhouetted against the sky.

Cattle can be seen grazing behind white rail fences, pepper trees line what once was a dusty trail and eucalyptus trees rise majestically over a twisting two-lane road.

Rising above the canyon are rolling hills covered with oak trees and underbrush which protect an occasional deer and other wildlife.

A tiny stream trickles down the canyon floor, fed as much by gardeners as by mountain springs.

For decades Brea Canyon had remained pretty much in this picturesque state, mostly unspoiled by progress and the population crunch occurring to the north and to the south.

But, all that has changed now.

First came the subdividers to carve up the charming Diamond Bar ranch into homesites, with split-level homes, shopping centers and other urban developments taking over.

And then comes the freeway to replace the often dangerous two-lane Brea Canyon Road with a modern, high-speed, eight-lane highway.

7-Mile Respite

Soon Brea Canyon will be something more than a 7-mile respite between the urbanization of the Fullerton and Pomona areas.

It will be the vital last link of the Orange Freeway connecting the Riverside Freeway on the south with the Pomona and San Bernardino freeways to the north.

When the Brea Canyon freeway segment is completed next January a second exit from Orange County will be available for motorists heading for the mountains, desert or Las Vegas.

The completion of the Santa Ana Canyon portion of the Riverside

Freeway—scheduled for this fall—will not supply adequate superhighway facilities for the residents of northern Orange County and the Pomona-Covina-West Covina area.

Thus, the Orange Freeway was born of the necessity to ease traffic in a northeasterly direction out of Orange County and provide a direct route from inland areas to the freeway's ultimate terminus at Newport Beach.

Overwhelming Need

So, because of the overwhelming need for more and better traffic arteries, a quiet, pastoral piece of California landscape in Brea Canyon is falling victim to progress.

The new freeway segment is being shaped out of mountains, lifted across a producing oil field and routed through tracts of homes.

At one point it rises 70 feet above the old Brea Canyon Road. A bridge 1,000 feet long spans the oil pipelines of Tonner Canyon. In the middle of the seven-mile stretch, a cut was made 380 feet deep.

A complex interchange is being constructed where the Orange and Pomona freeways meet. Off-ramps are being built at Pathfinder Road, Diamond Bar Blvd., Tonner Canyon and Lambert Road.

The southern portion of the project is due for completion in September, but because of inadequacies of the present Brea Canyon Road, only northbound traffic will use that segment of the freeway until the northern portion is completed in January.

Today Brea Canyon Road handles about 10,000 vehicles a day in both directions. But highway projections estimate that 40,000 vehicles will use the canyon after the freeway link is completed in January, and this total will rise

steadily to 76,000 daily by 1990.

Total cost of the project is \$21.8 million, which will bring to \$35.3 million the amount spent on the freeway when the work is done. Already spent is \$13.5 million to develop an interchange with the Riverside Freeway and build 4.3 miles north to Imperial Highway.

Another \$4.7 million is being spent on the final northerly section which will connect the Pomona and San Bernardino freeways.

Ultimately, when two sections of the freeway between the Riverside and

Garden Grove freeways are built—at a cost of \$23.8 million more—the total 24 miles from the San Bernardino to the Garden Grove freeways will have cost \$53.8 million.

This does not include two miles of the Pomona Freeway, where the Orange Freeway runs concurrently, nor a portion of the Kellogg Hill interchange allotted to the Orange Freeway.

Construction of the Orange Freeway was pushed ahead several years ago when the Angels moved to Anaheim Stadium because it was believed that the freeway—which will run near the stadium—would help ease traffic problems in the area.

Orange Freeway Leg Provides Many Hurdles

The two wells which were abandoned are part of an oil field which was discovered by Union Oil in 1905.

It is the Brea-Olinda field, considered one of the best producers in the Union system. The field ranks 10th in California among the larger fields.

Original Wells

Most of the original wells were drilled prior to 1910, but a spokesman for Union Oil said in an interview that wells still are being drilled.

The two wells were not considered heavy producers but were pumping oil steadily and were considered by the oil company as profitable.

The pipeline relocation project involves an area about 2,800 feet across Tonner Canyon, including moving lines which run up slopes 200 feet high.

At the base of the canyon 10 pipelines converge on an automatic metering satellite which records the amount of oil pumped from each well. The satellite will not be disturbed by the relocation, however.

Not Unusual

Negotiating for rights-of-way to build a freeway through an oil field involves unusual problems, although an official of Union Oil said that it is not unusual any more.

In the Brea field, the State Division of Highways acquired rights to 100 feet below the surface of the ground but the oil companies retained mineral rights.

Thus, they will be able to remove oil from beneath the freeway by using slant drilling techniques.

One of the major cases on record of a freeway encroachment into an oil field occurred in Long Beach when the state was building the San Diego Freeway through the Signal Hill oil fields in 1961.

Before work could begin on the freeway, 95 abandoned wells had to be capped and reabandoned in five rights-of-way clearance projects.

Miscellaneous Trash

Some of the wells had been abandoned for years and were filled with wire, casing pipe, wood, rock, gravel, stones, concrete and miscellaneous trash.

Before the project was completed there were 134 wells which were abandoned, 32 of which were producing crude oil. They were abandoned in groups of 20 under separate contracts.

Since that time, there have been a number of instances in which highway construction has caused oil well abandonment. A Union Oil official said that there have been many cases in San Joaquin Valley and in one case, wells were abandoned to make way for the State Water Project.

While abandonment of two wells in the Brea field

is a relatively small project, bridging Tonner Canyon presents one of the larger construction efforts in Orange County freeway development.

A dirt fill has been put in place on the northern edge of the future junction with Brea Canyon Road, where a bridge 60 feet high will span Tonner Canyon, where a road, small creek and the relocated pipelines will pass underneath.

To move the large hill at the south of Tonner Canyon, the Griffith Co. contractors on the project, must move 2 million cubic yards of dirt.

The dirt is being hauled out by a fleet of 40 trucks, which make five to six round trips a day to a dumping site 15 miles away in Orange. Each truck carries 23 tons of dirt (16 cubic yards),

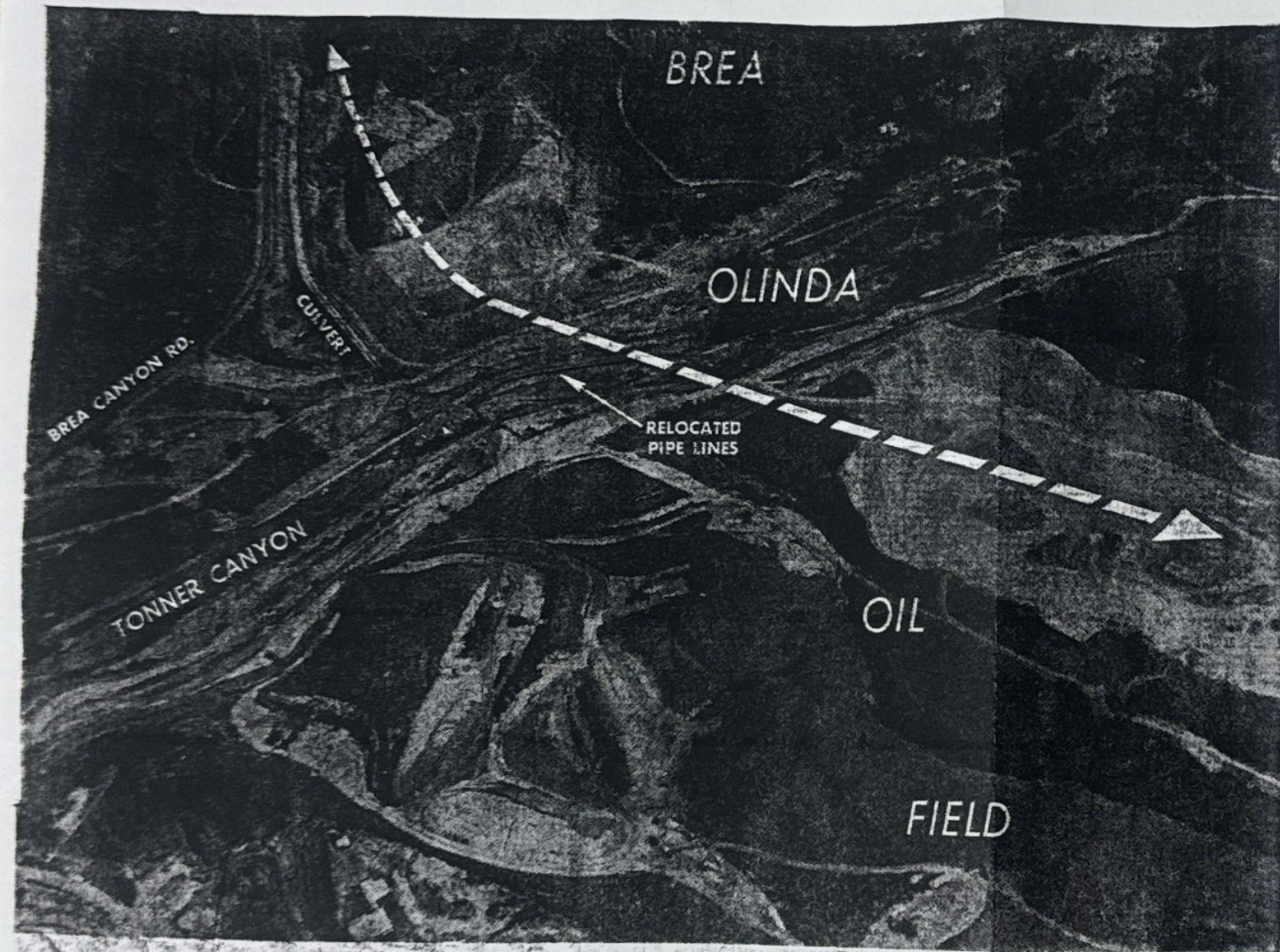
which are loaded by two skiploaders.

The 6 giant scrapers are moving 30 tons of dirt in each trip down the face of the cut to provide embankment material for Lambert Road and Brea-Olinda Blvd. overcrossings. Off-ramps will be located at Lambert Road.

The oil field project is the second of two construction projects on the Orange Freeway presently under construction. The

other spans the distance from Nutwood Ave. in Fullerton to Imperial Highway and is expected to be completed this year.

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Building Segment of Orange Freeway Is Logistic Nightmare

BY HOWARD SEELYE

Times Staff Writer

BREA—Cutting the Orange Freeway through a canyon oil field had all the characteristics of a logistic nightmare for State Division of Highways engineers.

An intricate network of oil and gas pipelines had to relocate, two producing oil wells had to be capped and a small mountain had to be moved to provide an approach to a bridge which will cross the oil field.

The problem was further complicated by negotiations and condemnation proceedings.

Earth-Moving Machines

But the problem is being solved, thanks to a fleet of mammoth earth-moving machines and the expenditure of an estimated \$900,000 beyond the normal cost of freeway construction.

The freeway segment covers a distance of 2.2 miles from Imperial Highway in Brea to the entrance of Brea Canyon at the Orange-Los Angeles county line.

The route cuts across Tonner Canyon, where 18 pipelines ranging from 2 to 14 inches in diameter, are being relocated. They are owned by three oil companies—Union, Shell and Mobil—and Pacific Lighting Services Co., holding company for Southern Counties Gas Co.

Two wells which were in the freeway path have been abandoned and the state and Union Oil are conducting negotiations over a settlement.

Biggest problem encountered by construction workers in the oilfield was sorting out the tangle of pipelines. The lines were scattered all over the canyon and surrounding hill-sides and had to be gathered together before the freeway could be built.

The 18 lines are being relocated at the bottom of Tonner Canyon, where a 60-foot high bridge will span the canyon. Some of the lines came from the 200-foot hilltop, where the 140-foot cut is being made.

Freeway engineers say that the Tonner Canyon site for crossing the field was chosen because it disrupted fewer wells—and thus cost less.

Standard Procedure

Because of the state's standard procedure of filing condemnation proceedings at the outset to gain use of property and negotiating settlements later, the project has not been materially delayed by the oil field, a spokesman for the state reports.

The mountain removal project involves cutting a 140-foot deep swath through a hill south of Tonner Canyon by removing 2 million cubic yards of dirt.

A fleet of 40 trucks and 6 giant scrapers is busily engaged in the job of leveling the hill for the 8-lane freeway, which will be completed to the county line in another 18 months.

CUTTING THROUGH OIL FIELD — Broken line on aerial photo shows path being cut through Brea Olinda oil field for Orange Freeway. Times photo by Maxine Reans

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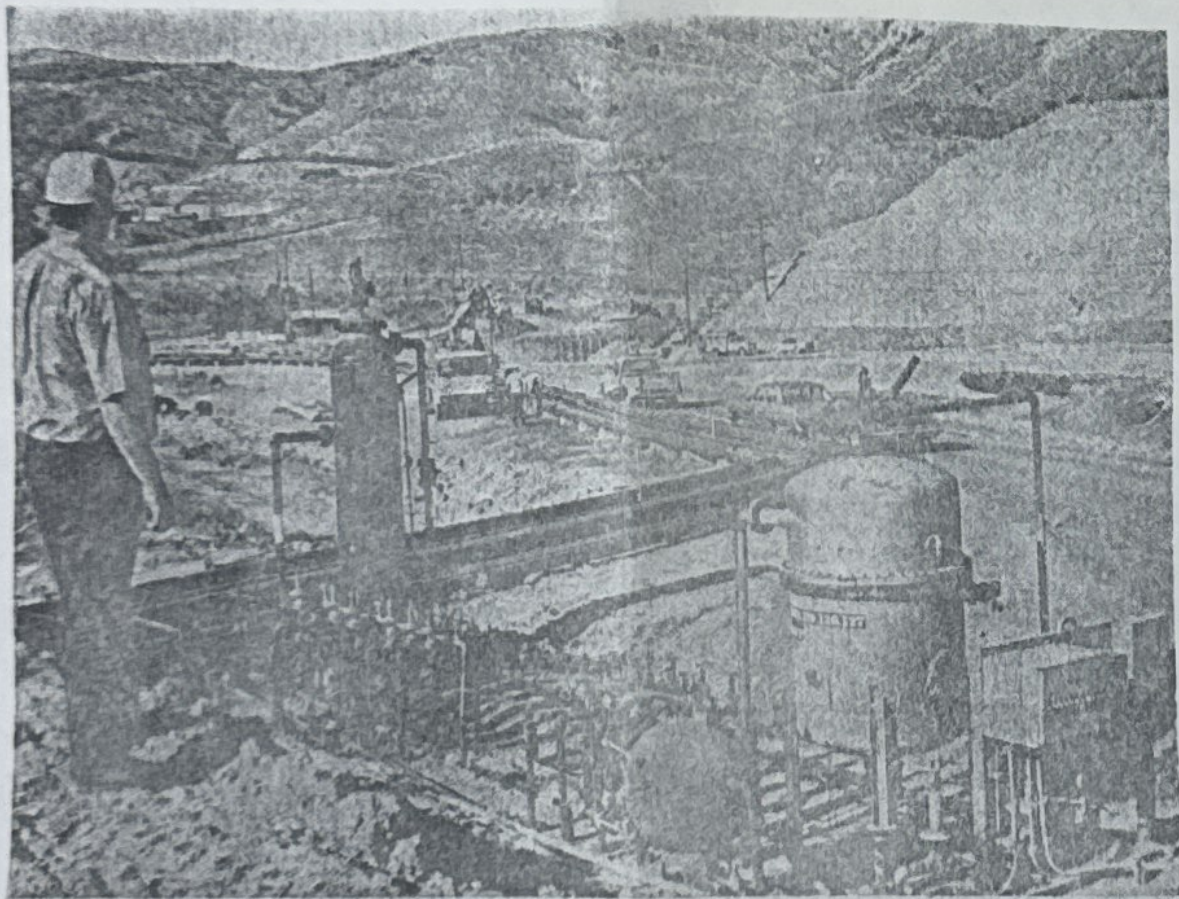
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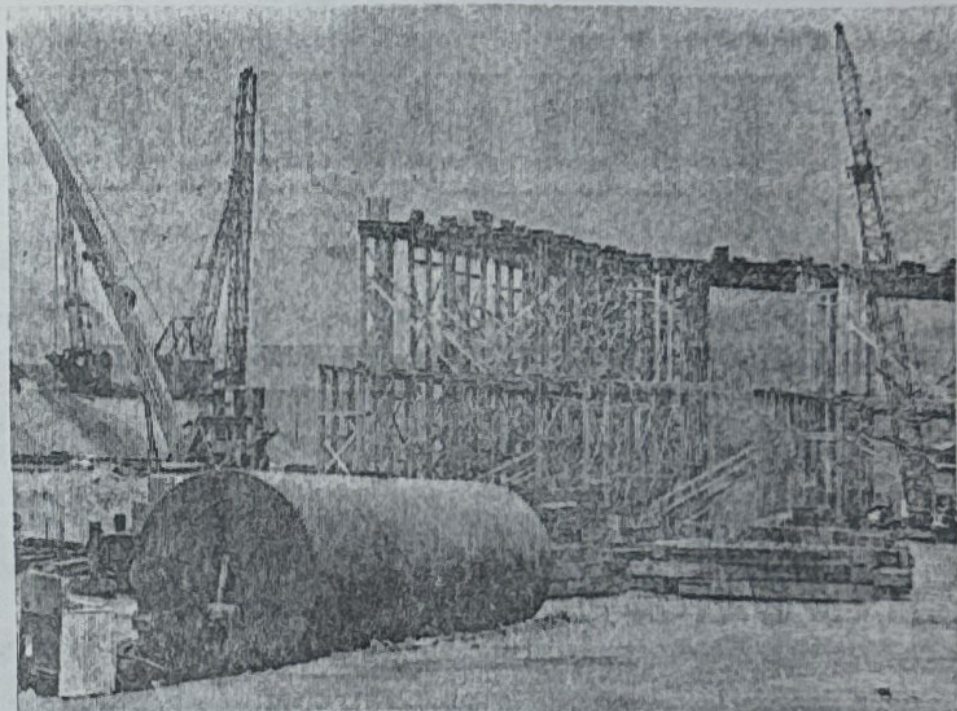
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RELOCATED PIPELINES — Pipelines relocated through cut in Tonner Canyon meet at oil well

meter station, in foreground. Relocation was needed to provide area for building Orange Freeway.

Times photo by Vince Streano



News Tribune Photo

BRIDGE BUILDERS — Tonner Canyon will be spanned by this structure which is part of the north-south Orange Freeway north of Brea which is expected to be completed around March of next

year. The Freeway now extends to Imperial Highway. Latest segment will complete the Orange County phase of the Freeway which eventually connects to the San Bernardino Freeway.