ing into forms on Matilija dam as work resumed today ending stoppage ordered by the state afte liscovery of a clay pocket beneat wo blocks of the project.
The concrete was being pourea into forms on blook M. It was when this block was being poured that the soft spots were first found on the left abutment. Pouring of new foundations and additional gravity sections in the newly stripped aveas is expected to begin ater.
REPORT DUE
Tomorrow, the zone one directors and county supervisors are to
hear a report made by Dr. Charles
Berkey of Columbia university.
The report was compiled by Ber-
key after he was called here from
the east by the district as consult-
ant. His report was in the hands
of County Surveyor Robert Ryan today and was being prepared for presentation to the board.

The report is expected to not only cover the present status of the dam and its prospects for completion, but will also serve as a review of the entire project and present Berkey's views as to whether proper preparation was made prior to starting construction of the arch-type dam.

## STUUDIES PIRU SITE

Berkey last week made an exfensive tour of the Piru canyon alea with V:R. Freeman, hydraulic engineer for the Santa Clara Conservation district to study the possibilities of the damsite now being discussed by zone 2. Freeman said that he and Berkey inspected a site on Piru creek just below the junction with San Felicia creek.

Preliminary ob́servation, Freeman said, disclosed a favorable reservoir site but a rather wide dam site. Berkey's report on the tour is expected this week as to the prospects of the San Felicia location. tilija dam project. It has been asked to make such an inquiry by the local oil workers' union.
The union contends that this important public undertaking has been grievously bungled at great cost to the taxpayers. It suggests that some of the persons who have been entrusted with the responsibility for planning and building the dam may be guilty of criminal or culpable acts or of neglect of duties. A culpable act is one deserving of censure or moral blame.
The Star-Free Press has no "pipeline" knowledge of what the grand jury intends to do. It does seem to us that an official investigation might be salutary if conducted properly. By that, we mean if the grand jury would devote sufficient time and a sufficient degree of collective intere: $t$ and determination to get together all the facts, to check, double-check and sift them; and to set them forth in systematic fashion understandable to the publie. Then to base a straightforward recommendation on whatever those facts showed.
Any lick-and-a-promise hearing, designed either to whitewash anybody or to make anybody a scapegoat, would be worse than useless. Such a performance would be a public disservice.
In case the grand jury does decide to investigate the handling of the dan project, a suitable starting point has been provided by the foin h report just submitted to the county by Charles P. Berley, geological consultant. For example, he states:

> .... it appears thatethere has not been at any time an adequate exploratory investigation of the site. Superficial exlamination and random subsurface tests were apparently considered adequate despite the fact that the local rock foraions are well known to be strongly folded and deformed ineternally with development of minor structures in the form of slips, crush-zones and local displacements, all of which when exposed are potential weaknesses.
> Even the natural undisturbed formations are not of uniform quality, but are made up of a succession of beds of alternating sandstrie and shale of differing quality.
> This hard members are associated with comparatively - .-.n- es. repeated one set after another in succession.

When such a formation is deformed by folding and powerful crowding as this one has been, it is inevitable that internai adjustments must result in just such structural complexities as are seen almost everywhere in the Matilija districk. Under such conditions, no one can predict with full assurance just where the next weakness will be encountered, and in consequence it is more important than usual to make rather detailed exploratory tests before venturing upon an important construction undertaking.
For these reasons, it seems to me, a more systematic program of foundation exploration ought to have been adopted in the beginning. It would have found at an earlier stage the weakness now attracting special attention and perhaps thers that have not been discovered. Such a program was evidently not thought necessary and clearly was not done, with the result that it can not be done as thoroughly as is desirable. The dam is placed, the foundation is occupied, the structire is half finished; the practical question is not what should have been done, but what can be done now to advantage in finishing the present structure and in further treatmont to make it safe.
That statement, in itself, is a serious indictment. Dr. Berkey is a top-ranking specialist on geology as applied to engineering problems. He states that certain steps which should have been taken were not taken. If the grand jury did nothing more than determine definitely why the essential foundation exploration was not made, and who was to blame for its not being made, one, at least, of several important questions would be answered.


## faULTY

CAN BE REMEDIED, SAYS NOTED GEOLOGIST, COUNTY CONSULTANT

## Completion Of Matilija Project With Safety Held To Be Possible And Practical, Cost-Plus Contract Discussed; Lack Of Pre-Construetion Work Hit

County Supervisors today awaited recommendations from County Engineer Bob Ryan and Engineer Don R. Warren on the Dr. Charles P. Berkey report and investigation of Matilija Dam. Dr. Berkey, employed by the supervisors because he is an outstanding geologist, studied the dam and surfaces it contacts with the re-

> sult that the hitherto unnoticed floor of the south side of the dam was found to be of a sugary quality.

The revelation followed the question raised recently by Supervisor Sanford Butts and printed exclusively May 9 in The Ventura County News questioning the formation at right, or south, end of the dam. Mr. Butts then demanded a comprehensive report from an outstanding outside engineer which would consider the entire proposition, and not alone the left, or sfinth abutment, which then was in the public eye.
Dr. Berkey, outstanding in his profession, then was engaged, and gave his report this week. He said the left, or north, abutment where soft formations had been encountered could be completed in safety. He then made the startling revelation concerning the right abutment and floor formation near blocks C, D, E, F which had been left in a sugary state by erosion. He suggested a plan of "anchoring" by which cement could be poured into deep holes as the cure for this condition.
Extensive testing and grouting of future construction was urged.
The Dr. Berkey report criti-
cized the initial exploration of the site, and also the failure to take coring tests before starting construction. In this connection, the CiO oilworkers union recently asked that the Grand Jury consider the case. Recently, also, another Ventura newspaper in a front page editorial, suggest. ed that the County and its enginieer on the dam, Don R. War: rer company, part company.
Another angle was injected into the case this week with the ralsing of the question of the Warren contract in veiw of, the fact that the job has assumed ilgantic proportions compared 0 what the people first expect$\$ 1$, and that the engineering job浬erefore has jumped greatly. ivestigation at the Court House idicates that the Warren conact is on a $45 / 8$ per cent cost lus basis. This was held in at east one source, a responsible nan who wished to remain annymous, to mean that a new :ontract with Warren is not necessary, and also that Warren probably stands to make a considerable larger fee as a result of the increase in money to be spent.

## CITY STARTS BUS RUNS TO DAM

City bus service will begin on vers employed on the school run for the contractor, Atkinson Kiex

Monday to the Matilija dam area to transport workers for the day, swing and graveyard shifts, leaving the terminal at 7 a.m., $3: 30$ p.m. and 11 p.m., Citizens' Transit Boss Jim Myers said today.
The bus taking the graveyard shift out will wait to bring the swing shift workers back to Ventura, Myers said.
"We will probably use the dri-

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during the winter months," the Bressi and Bevanda, said the new director said. $\quad$ service was going to be a great The service was worked out help in keeping a steady supply through the labor temple and the of labor for the jobs. "We certaindam contractors, Myers reported. ly are appreciative to the city of P. E. Noble, personnel director P. E. Noble, personnel director



Ventura for obenitis this service," he said. "It will aid greatly in solving a tough transportation problem."
"It's going to save a lot of rough wear and tear on private cars," he
opined. wear and tear on private cars," he
opined. opined.


# Gravity Apron Being Poured On Upstream Side of Dam 

CONCRETE is being poured into a big apron on the uzstream side of Matilija तam in preparation for closing up the "bear hole" under block N .

The concrete is being poured into a chute which has been installed down the face of the dam at about a 45 degree angle. A crane swings big buckets of concrete into position and workmen rurod it on its way with shovels. CREWS BUSY
On the downstream side of the dam, crews still are busy stripping away soft, chale and clay from the huge slabs of rock that support the dam. The excavation now has progressed downstream nearly 50 feet from the block v/here soft material was first discovered.

When the state erigineer's office is satisfied that all of the crumbly shale has been removed, the contractor plans to pour another gravity section, or apron on the downstream side, filling in the excavation.

## TO POUR SOON

Inside of the "hear hole" beneath block N , some concrete is exijected to be puured soon to serve as support for the block before additional pouring takes place on top. The contractor is to fill the hole with concrete be1ween a supporting wall to be built and the solid concrete of the idjacent block. During this pouring, pipes will be placed into the hole and will he used to force grout under prescure into all of the pockets and crevices of the excavation.
On top of the clam, a trestle has been completed and pouring from this device is expected to begin soon. The trestle constructed at

(Star-Free Press Photo)
POURING APRON BLOCK-Tons of concrete are being poured down a chute on the upstream side of the dam to form an apron around the blocks where soft, clay material was discovered. When this apron is completed, crews will begin to grout and concrete a section under that portion of the block where stripping has
been completed.
the eventual height of the dam, |crete now are in the dam. reaches from the north to south sides of the dam.

At the extreme north end (above the left abutment) a bunker has been situated neal the mixing plant, in swinging distance for a long-boomed crane. The crane will swing buckets of corcrete into the bunker and mar-powered, rub-ber-tired carts will convey it to the pouring forms. With this sys tem, a steady stream of concrete can be maintained into the forms.
According to the contractors' records, 52,400 cubic yards of con-

On the left abutment,
On the left abutment, new gravity sections are being poured where additional stripping has been completed. These new sections soon will be ready for the pouring of blocks which will complete the arch of the dam into the rock of the abutment.
On the right abutment, high on the face of rock cliffs, workmen are stripping and washing the rock in preparation for pouring the gravity sections, and blocks which will complete the dam on which wil


