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A TRIP OF INSPECTION

Representatives of Water Companies and C. D. Co. Examine Alamo Channel

The Party Travels Many Miles by Boats and Learn Many New Facts Concerning the Situation. All Unite in Reporting Water Supply Safe.

On Wednesday of last week a party consisting of C. N. Perry, of the California Development company; L. F. Farnsworth, superintendent, and W. A. Van Horn, a director, of Imperial Water Co. No. 1; G. R. Wade, superintendent of Water Co. No. 5; William Brandenburg, of the California-Mexican Land and Cattle company, and Fred Fuller, a leading farmer in Water Co. No. 1, left on a trip of inspection and investigation to the Alamo channel above Sharp's heading. They went up by team, taking two good, strong boats with them. They crossed the Alamo at Sharp's heading and went out past the headgates of Water companies Nos. 5 and 7, and thence to the mesa, and along on top of the mesa to a point some 15 miles or more southeast of Sharp's heading. Here they unloaded their boats and camped for the night. From the point on the mesa where they camped they could see over considerable of the country to the south and east and could easily trace the courses the water has flowed through during the flood that is just now subsiding. From their observation it was not believed that any water was leaving the Alamo channel west of the Quail river outlet except such as they would find by coming down the channel from this point. So, on Thursday morning early the party took to the boats and started down the stream examining its banks and looking for the place where the water breaks over to New river. They all expected to find this at Beltran Slough which was known to be an open slough leading out from the Alamo channel and discharging its water through various wasteways into New river. For several miles along the Alamo channel in that part of its course the water was still above its banks in many places and was spread over considerable low, brushy land. Arriving at Beltran Slough they were much surprised to find its course almost entirely clogged by young willows, arrow weeds and tules to such an extent that only a small amount of water was leaving the Alamo channel at that place. After making as good an inspection at this point as they could on account of the brush and thoroughly satisfying themselves that no considerable amount of water was leaving the channel at that point the party again manned their boats and resumed their journey down the stream. Below Beltran Slough the channel narrows somewhat with better defined banks and channel and a good stiff current. Coming along under full speed the occupants of the boats noticed a smaller stream or slough leading off to the north, but as the main channel kept on in a due westerly course with a good strong current they kept to it. In a few minutes they ran out of the timber and the appearance of the banks on both sides underwent a marked change. The channel also spread out and got shallower. So they pulled up to a large red clay hill that stands alongside

the stream and got out to investigate. They soon decided that it was the break from Alamo to New river they were navigating and that what they took for a slough leading off to the north was in reality the channel of the Alamo river leading to Sharp's heading. After looking over the situation from the top of the clay hill and learning all they could from that point of view the party again took to the boats. Messrs. VanHorn, Wade and Fuller toiled back up to the outlet and there take the channel to Sharp's heading and Messrs. Perry, Farnsworth and Brandenburg to follow the stream across from the red clay hill to New river. Messrs. VanHorn, Fuller and Wade completed their journey without further incident, arriving at Sharp's heading in the evening. They state that at least three fourths of the water in the channel is leaving it at this break, which is about six or seven miles above Sharp's heading and at a place where apparently no water ever overflowed before. It is their opinion that the water is as deep in the outlet as it is in the channel and that as the water volume decreases the flow coming to Sharp's heading will decrease. But that it will be a small matter to build a dam across this outlet and confine all the water at low stage to the channel leading to Sharp's heading for the reason that the fall is greatest coming that way. Their report is reassuring in that while they all agree that some work may be necessary to keep the water coming in sufficient quantity when it gets low they all agree that the work can be easily and quickly done and will be effective. Messrs. Perry, Farnsworth and Brandenburg made the trip across the overflowed country and arrived at Calexico some time Friday. They report that the water spreads out over the country in a great way, being four or five miles wide in some places and not having any channels. They however discovered a new channel of New river or rather one they had not known of before. Their report agrees with that of the other party concerning the water situation in the Alamo river and our ability to control it. Mr. Perry is also quoted as saying that by the route the channel would be most liable to take, New river still had about fifteen miles to erode before the big channel it is cutting would reach the Alamo river. The overpour in New river beyond Mexicali has cut away the long railroad bridge over the old channel of New river and has advanced its channel well back toward Packard station. The water seems to be dividing up into several small channels and does not appear to be cutting very fast at any place. The large channel that runs over near Signal Mountain is carrying quite a large per cent of the water, but does not appear to be cutting back very fast. It is reported as being somewhere in south of Packard, but is not believed to have tapped the

main channel of New river as yet. The river at Calexico is doing no damage at all, but it is still slowly cutting away Mexicali.

The decline of the volume of water and the conditions that have appeared render it improbable that much more channel cutting will take place. Meantime the water supply of the valley is safe for the present and can be easily controlled as the water declines. Such control, however, will be subject to being carried away by a sudden rise in the river. Before anything of this sort occurs the Southern Pacific will undoubtedly have the dam across the intake and the river under control.

We see no reason for fearing a water shortage for the valley. Nothing of the kind can occur unless we neglect to look after that outlet above Sharp's heading. And Mr. Cory has given orders to take care of that situation regardless of what it may cost.

PERMANENT HEADGATES

Structures of California Development Co. at Hanlon's are Completed — Means for Regulating Flow Ready For Use.

The management of the California Development company is getting ready for the big work of turning the immense volume of the Colorado river back into its natural channel on its way to the Gulf of California. For months as has been told times without number most of the water of the big river has been leaving its natural bed at the Mexican intake of the Development company's canals and flowing through New river and Alamo river to the Salt-on sea, filling it up and causing much damage. In order to turn it back into its old bed and to control it at the intake, to be used hereafter, massive cement and concrete headgates have been built, and the officers and engineers are beginning to think of the time when it will be possible for them to make use of the massive structures.

Saturday's Los Angeles Times contained an illustrated article on the subject, the illustrations being of the massive headgates and machinery for controlling the flow of the water. In part the article says:

The California Development company has just completed the greatest headworks which are to form the permanent intake for conveying irrigation water from the Colorado river to the rich territory formerly known as the Colorado desert, but now recognized as containing the richest soil, perhaps, in the world.

The colonization taking place there at a very rapid rate during recent years has been interrupted and threatened by the breaking in of the whole great flood of the mighty river through the so-called intake constructed by the California Development Co. below the international boundary line, which ought really to be called the inbreak.

The headworks just finished for the California Development company, at a cost of \$75,000, is one of the finest pieces of hydraulic engineering and cement construction in the great southwest. This work was begun about December 1 last and has occupied the continued efforts of from 100 to 150 men until almost the present time. The undertaking was one beset by peculiar difficulties.

This new intake is situated wholly within the United States—indeed, at some little distance above the international boundary line. It is where the Colorado river runs along near Pilot

Knob, and is about nine miles from Knob station, on the Southern Pacific railroad. At this point occurs the only rock formation along the whole lower stretch of the Colorado river. This was what was needed in the construction of permanent headworks. But it required an enormous amount of heavy work to put in these gates. It meant a cutting of about 26 feet below ground level and 41 feet in all through solid rock. At the eastern edge of the headgates the work had to be driven to a depth of 18 feet more than this through moving quicksand, almost impossible to handle, before the bedrock was reached. The deposit here is of river silt, and immense pumps had to be used all the time to keep the water from rising above the men at work, and every device also had to be used to keep the silt from sifting continually into the excavation.

UNDERTAKING OF MAGNITUDE

There are in all eleven of these gates. With the navigation gate at the eastern end of these works there are altogether twelve gates. The regular intake gates are what are known as radial gates. The navigation gate is intended to permit the considerable-sized boat used by the California Development company to pass in and out of the canal.

There are a series of gates worked from the high framework which go one after another down into the water and cut off the stream when it is desirable, or by raising them one after another, finally the stream rushes through unimpeded, and the boat can enter the canal or leave it, as the case may be. The regular intake gates are 12x12 feet. Each gate representing 144 square feet, the eleven gates give a total capacity of 1584 square feet. Under normal conditions, the flow of the Colorado river is between 4000 and 6000 cubic second-feet. These eleven gates will carry the entire flow of the river at a normal stage of the water. During the recent floods

which have been working so much destruction the flow of the river has run as high as 100,000 cubic second-feet.

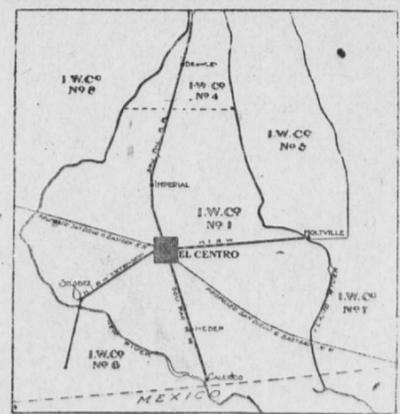
By the time the low-water stage comes in the fall the intake canal from the new headworks to the river will probably be completed and the canal below the headworks will be also enlarged in capacity, so as to carry all the water passing through the gates, and the Colorado below this intake will be practically the dry bed of the stream. Then work will be carried on with the utmost vigor to construct a permanent dam at the big inbreak near the international boundary line, and the old channel will be thoroughly deepened so as to give a capacity for the Colorado, even when it is running bank full with flood water, as it has been doing during the past summer.

There has been, perhaps, nothing undertaken in modern hydraulic engineering calling for the skill and energy with which the California Development company has been taxed during the past summer in its efforts to turn this mad stream from the fertile valley of the Colorado sink into its natural course in order to find its way to the Gulf of California. First and last, the California Development company will be called upon to spend not less than \$100,000 in this great undertaking.

The work of constructing the intake was in the hands of Contractor Carl Leonhardt, who had it under the supervision of T. F. Osborn.

Prof. W. Olin Lowe announces his candidacy for the office of tax collector of San Diego county, subject to the decision of the Republican county convention. Prof. Lowe is strongly endorsed by his friends in the back country and is making a winning canvass. Should he be successful in his ambitions the county will be well served, for Prof. Lowe is well equipped for the position to which he aspires.

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