

Monthly Report  
March 1912.

Albuquerque, N. M., April 5, 1912.

Mr. John J. Granville,  
Acting Chief Engineer,  
526 Federal Building,  
Los Angeles, Cal.

Dear Sir:

I herewith submit my report for the month of March 1912.

PERSONAL MOVEMENTS. The 1st and 2d I was in the office. Sunday the 3d went to Santa Fe for a consultation with the Special Attorney for the Pueblo Indians relative to the Taos water rights etc. From the 4th to the 11th was in the office. On the 12th left for Taos in company with Asst. Engr. Kinney to go over matters with him on the ground. Returning, arrive in Albuquerque the night of the 18th. Was in the office until the 22, leaving that day and visited the work at Ignacio and the Hogback and also went to Mancos, Cortez and Dolores in reference to water right matters for the Diminished Southern Ute Indians, arriving home the night of the 31st.

During the month I travelled 1792 miles by train and 182 by team, a total of 1974 miles.

NAVAJO. Hogback Canal. Weather conditions for the month on this work were good with the exception of several days when a high wind prevailed.

A large force, averaging about 60 Indian teams and 50 Indians laborers worked from the 1st to the 23d of the month, at which time owing to the fact that funds for the fiscal year were begining to run short, the force was cut down to 22 teams and 28 laborers.

During the month the construction force has been engaged in ex-

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tributing system, and assuming that there would be sufficient water stored to irrigate the land that could be covered. I considered that the project was questionable in value.

UNDERGROUND WATER DEVELOPMENT. Well Drilling. Rig No. 1. This rig still continues on the deep well at Keams Canyon, and at the end of the month was about 750 feet down - was still in the shale formation. There is no indications yet that the Dakota Sandstone, in which it is hoped that water under pressure will be encountered is near. Prof. Gregory gives 800 feet as the probable maximum depth to this sand stone.

Rig No. 2. Four wells put down by this rig during the month.

207 - Depth 102 feet. Water encountered at 86 feet. Not enough water to make a well. Abandoned.

208. Depth 95 feet. Water struck at 85 feet. Not enough to develop.

209. Depth of well 94 feet. Water struck at 57 feet. On developing had 600 gallons <sup>hour</sup> per minute. A pump was installed and a windmill erected.

This well is 7 miles north of Weepo on the west side of the First Mesa.

210. Depth of well 80 feet. No water at all. Abandoned.

Rig No. 3. This rig is working on the Zuni Reservation. Well No. 305 in the village. Water was struck at 16 feet, but not in quantities. The well was put down 63 feet and developed 250 gallons per hour.

Well No 306. This well is also in the village. The water was struck at 16 feet and the well carried down to 55 feet. The well discharged 240 gallons per hour, and after pumping 12 hours no lowering of the water plane was noticed. Well 307 was put down 9 miles west of the village. Water was encountered at 27 feet and the well was sunk 43 feet. The discharge was 300 gallons per <sup>hour</sup> minute.

Rig No. 4, in the upper Chin Lee Valley. Well no. 402 was put down

within a mile and a half of the top of the Chinlee-Pueblo Colorado divide. Depth to water 108 feet, to bottom of well 162 feet. On the test run 70 gallons per hour were pumped. This is not a very big discharge, but in a place where there is no other water for ten miles is quite valuable. A pump was set and wind mill erected. The rig then moved to a point some six miles down the valley. The report on this well has not been received.

Mr. Womack who has charge of the Hopi Spring Development work and who is also looking after the wells when completed reports : "After the extreme weather broke up it was necessary to repair all of the pump rods broken during the cold weather (from the freezing of the pumps), also the sand had packed around the sucker making it necessary to remove the suction pipe and clean the cylinder. This work at various places required our attention until the 11th". The concrete storage tanks at wells No 18, 203 and 204 were built during the balance of the month. They were delayed by storms - there being heavy snow on the 29th and 30th.

Work on the spring development will be recommenced as soon as the weather will permit.

Cost Data sheets, photographs etc are appended herewith.

Very truly,

Superintendent of Irrigation.