WATER POWER

on

DOLORES RIVER, COLO.
Montrose & Mesa Counties.

Report of Interior Dept. Engineer.
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By

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WATER POWER ON DOLORES RIVER, COLORADO.

Report of Interior Department Engineer Released by the Geological Survey for inspection.

Dolores River, a tributary of the Colorado, on leaving the mountains, flows southwest in a canyon 2,000 feet deep. The surface of the region through which the river flows slopes gently to the south, but the floor of the canyon is so flat that the canyon becomes shallower downstream until it is 100 feet or less in depth. The stream then suddenly changes its course to the northwest and cuts back into the plateau until it again flows in a canyon 2,000 feet deep.

The canyon has very little bottom land, the talus or rock debris from the cliffs nearby reaching almost to the river, but in most places the canyon is not narrow enough to afford good sites for high dams. The low gradient of the water surface renders development of power by diversion impracticable except at one site; the irregular flow makes regulation necessary, and dams to develop the head available would be comparatively long and expensive. All these obstacles could be overcome if a market for power were available, but for the present the demand for electric energy can be supplied from other streams adapted to more economical development.

A reconnaissance survey of Dolores River below Paradox Valley was made in 1924, by E. E. Jones, a hydraulic engineer of the Department of the Interior, Geological Survey, and his report shows two practical reservoir sites and one good power site. To utilize the potential power of the river outside of these three sites would require the construction of several long, low dams at high cost. The total potential power of Dolores River below Paradox Valley would amount to 62,000 horsepower for 50 per cent of the time and 61,000 horsepower for 90 per cent of the time if the flow were regulated by two reservoirs; or 17,000 horsepower for 50 per cent of the time and 11,000 horsepower for 90 per cent of the time with natural flow. At the one good power site there is a fall of 265 feet in 5 miles. The power available at this site amounts to 5,700 horsepower and 3,700 horsepower for 50 per cent and 90 per cent of the time, respectively, with the natural flow. By regulation these quantities could be increased to 21,000 and 20,000 horsepower.

A manuscript report describing the water-power resources of Dolores River, prepared by Mr. Jones contains a topographic map of the river from Paradox Valley to the mouth, based on a reconnaissance survey and the Paradox Valley standard topographic map. The scale is 1:63360 (1 inch to a mile); the contour interval is 50 feet. The contours show the level of the land to a height of about 300 feet above the water. This report may be examined at the office of the Geological Survey in Washington, D. C., or at the district office of the Survey at 403 Federal Building, Denver, Colorado. A copy of the report will be sent to any other district office of the Survey for inspection on application to the Director of the Geological Survey, Washington, D. C.