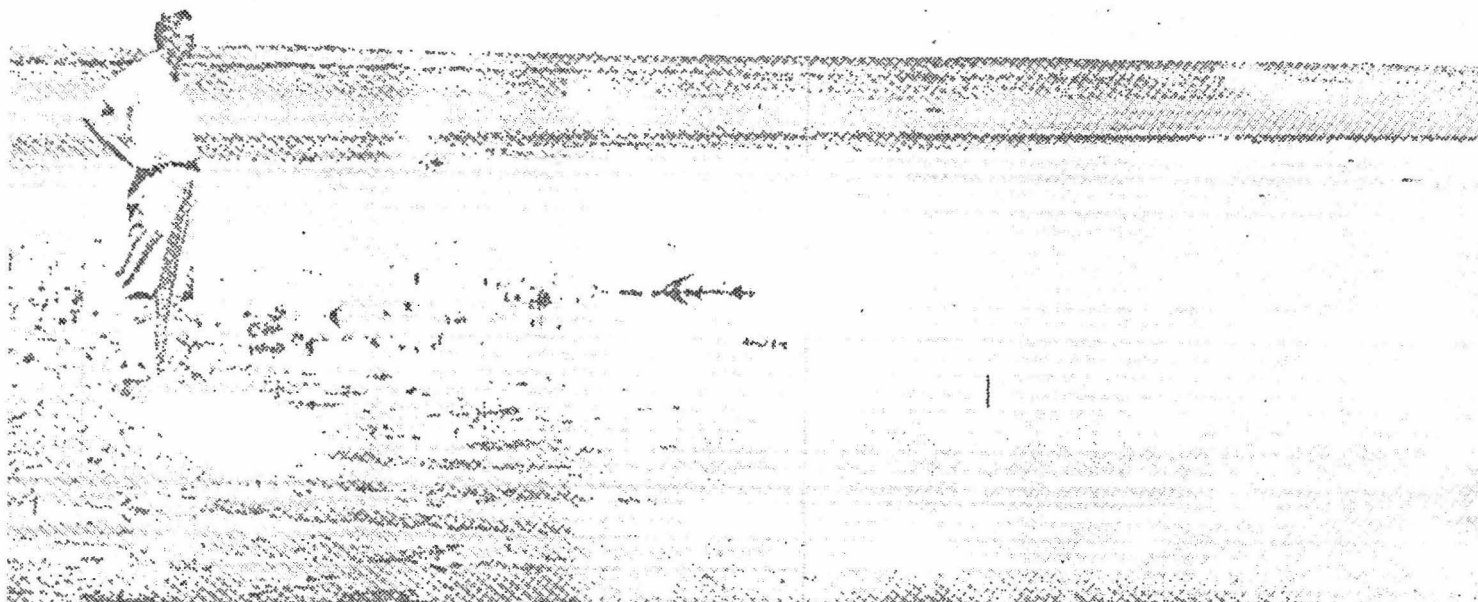




Morton Bittinger, assistant irrigation engineer, looks out over Olds Reservoir in southern Weld county. The photo was taken in July after the water supply to the reservoir had been shut off.

Farmers Applaud Seepage

Leaky Reservoir Aids Water Table

An irrigation reservoir in southern Weld county lost up to 60 acre feet of water per day this spring, and farmers in the area didn't do a thing to stop the seepage.

In fact, they wanted the reservoir to lose water—the more the better.

What appears to be a reversal of sound water economics actually is a boon to the farmers, according to Morton Bittinger, assistant irrigation engineer with the Colorado State University Experiment Station.

Bittinger said the pond is Olds Reservoir in Prospect Valley, located about 10 miles southeast of Keenesburg. It was constructed some 30 years ago by the Henrylyn Irrigation District in an area of extremely sandy soil.

In the early days the reservoir lost water so fast district officials gave up trying to use it for storage.

Meanwhile, irrigation wells were drilled in the 1930's and '40's to supplement ditch water. During the dry years, 1950-56, heavy pump-

ing of ground water in the Prospect Valley lowered the water table as much as 25 feet.

W. E. Gode, Experiment Station irrigation engineer, now retired, noticed the influence of seepage from Olds Reservoir on observation wells when he began keeping records of water tables in the valley in

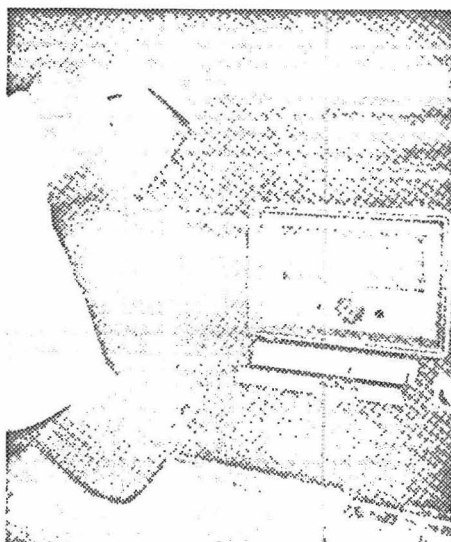
1933. He advised irrigation district officials to put as much water as possible in the reservoir during years when water is plentiful.

Both Gode and Bittinger made observations during the past year. The latter took over the work when Gode retired July 1.

With an ample supply of water last fall and winter, the CSU engineers had a good opportunity to see how much improvement could be made on the water table by pouring water into the reservoir. This is not the first year water was run into the reservoir for this purpose, but it is the first year that a significant amount was available.

Capacity of Olds Reservoir is only 250 acre feet. In eleven months beginning July 24, 1957, nearly 12,000 acre feet of water was delivered to the reservoir, according to R. V. Rouse, secretary-manager of the irrigation district.

This amount is 48 times the pond's capacity. Since there is no



Bittinger checks water table recorder in Prospect Valley.

(Continued on page 4)

(Continued from page 3)

face outlet, seepage is the only y the water can escape.

Evaporation losses are low rough the fall and winter months, d once the water is underground is completely protected from aporation. Underground storage often much more efficient than rface storage of water.

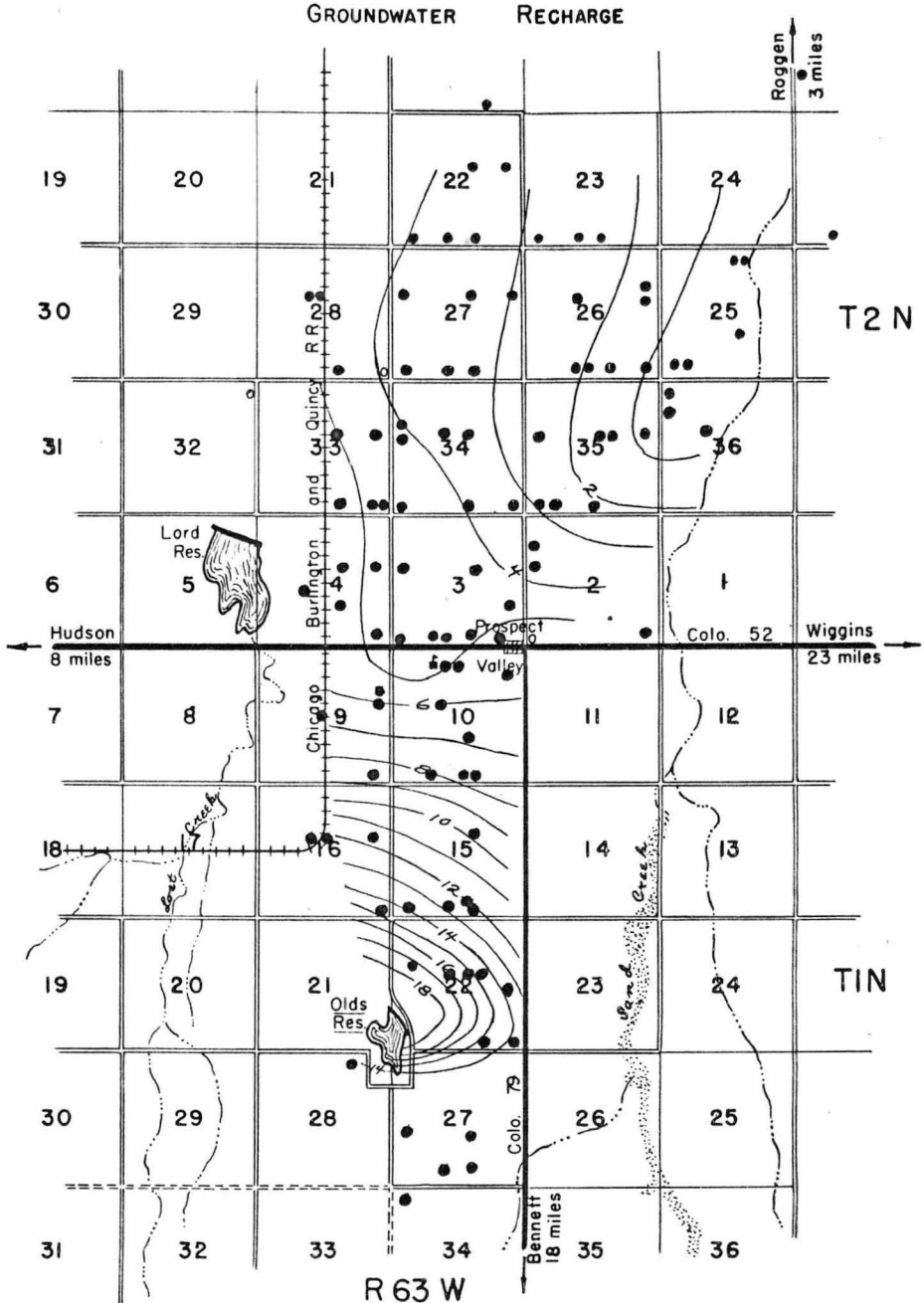
This artificial recharge situation unique in Colorado, although her states, mainly California, are ing the principle to replenish igation and municipal water pplies. Among civil engineers, e practice is known as "water reading."

Influence of Olds Reservoir's epage can be observed in water bles several miles away. On June Bittinger found the underground ater level a half mile north of the servoir had risen 17½ feet since ec. 18. Three miles away the ater table was up 5 feet. Some itural increase is expected, he id, but not nearly this much.

The reservoir's influence is mov- g north, benefiting an increasing mber of farms. Bittinger said here is already a definite influence orth of State Highway 52, three iles from the reservoir.

Olds Reservoir receives its water om Prospect Reservoir, some five iles to the west. One reason the epage works so well is because of e clean water. The sediment set- s and remains in Prospect, so ere is almost no foreign matter seal the bottom of the Olds pond.

"Officials of the Henrylyn Irriga- on District are to be commended r recognizing and taking advan- ge of this means of artificially charging the groundwater in rospect Valley," Bittinger said. They are making good use of ater that otherwise would not be ed and would be a loss to the ate."



WATER-TABLE RISE (feet) - DEC. 18, 1957 to JUNE 2, 1958

Seeding Colorado Rangelands, Bulletin 498-S. Includes tips on planning the seeding job, methods of seeding, and management of range. Types of vegetation also considered.

Agronomy Research, San Juan Basin Branch Station, G.S. 686. Summary of field crops research for 1957, including alfalfa, barley, oats, wheat and hybrid corn.

Western Slope Branch Station, 1957 Progress Report, G.S. 684. Latest experiments with dwarf fruit trees, fruit tree nutrition, hormone sprays, and weed control in orchards.

Improving Sagebrush Ranges for Grazing Use, Great Divide, G.S. 688. Ways to control sagebrush on cattle range in northwestern Colorado..

132567