

TECHNICAL NOTES

USDA-Natural Resources Conservation Service
Boise, Idaho

ENGINEERING TECHNICAL NOTE NO. 14

July 1, 1963

PHOTO-TOPOG METHOD FOR FARM PLANNING SURVEYS

developed by

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and
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This method requires that two copies of the plain farm planning print, at the desired scale (330' per inch is now being used), be available at the start of farm planning at the time the planner visits the farm.

The planner and the farmer carefully review the photographs of the farm and determine where elevations are needed including the entrance weir. Care is used to select points that can easily be located on the photograph, such as ditch intersection, field boundaries, structures, fences, etc. Each location selected for elevations will be marked and numbered identically on both photographs, in the sequence desired.

The planner then sets up the level so as to obtain the maximum readings with the least number of moves. The farmer takes one copy of the photograph on which is recorded the sequence of readings to be taken and proceeds to location No. 1. The planner makes a rod reading at location No. 1 and records same. The farmer then proceeds to location No. 2, etc. until elevations are taken on all numbered locations.

Immediately thereafter, contour lines are sketched on the planner's copy of the photograph. The points where irrigation water enters and leaves the farm are located. The farm planner and the farmer are then equipped to discuss possible irrigation system revision or irrigation layout, fields to be leveled, field boundaries, etc.

It is not intended that this method be used where it is obvious that irrigation systems are satisfactory or can be planned without such information.

Following are the advantages of the above method.

1. Provides satisfactory planning information with the minimum number of elevational readings.

2. Requires approximately one fourth the time as compared to the usual topographic survey method.
3. Creates considerable interest and aids in understanding by the cooperator.
4. Enables the cooperator and the planner to work together at earliest phase of planning, insuring joint participation and understanding as the information develops.
5. Fosters technical quality in the conservation plan.
6. Enables cooperator to make decisions progressively.
7. No elaborate set of notes required. It eliminates the necessity of angles, distance plotting and the bulk of office time.
8. Provides the opportunity to discuss irrigation water management in planning the irrigation layout.

Exhibits Attached

1. Plain planning print showing numbered locations of elevations desired.
2. Photo showing contours.
3. Proposed irrigation layout.

This method has been proven to be a timesaver and valuable planning tool. We strongly encourage its use.

Luther Jones, State Soil Conservationist

Meader H. Wilkins, State Conservation Engineer

CS-346-72
2-14-58



CONSERVATION PLAN MAP

Prepared by UNITED STATES DEPARTMENT of AGRICULTURE * SOIL CONSERVATION SERVICE
cooperating with
WEST CANYON S.C.D.
S. C. DISTRICT

OWNER Mrs. R. E. McLure

FARM No. 94 DATE 1-17-61

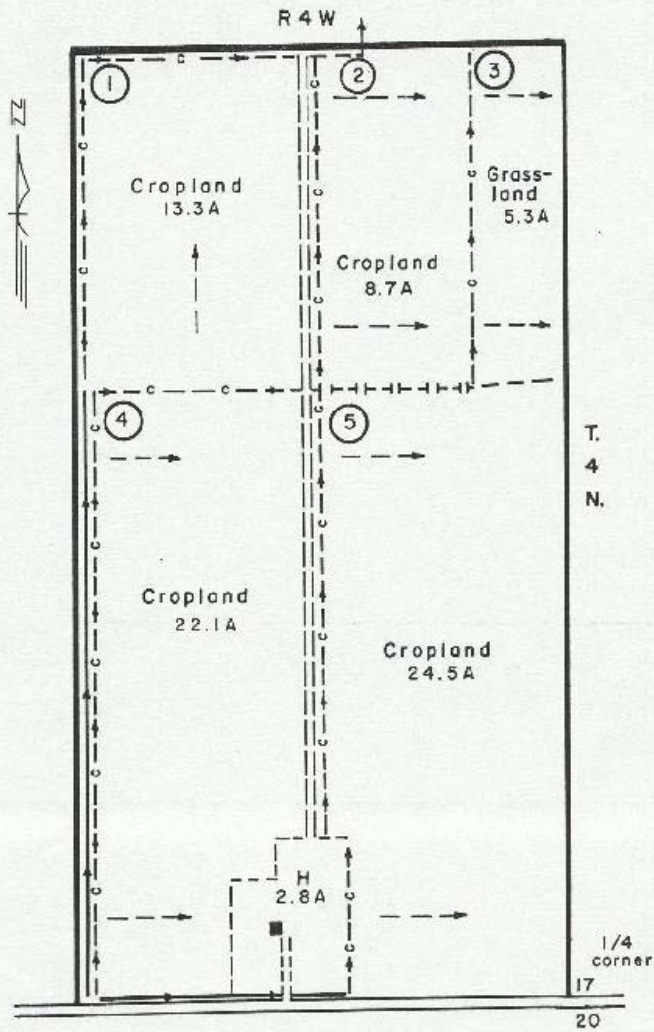
OPERATOR Gerald Gilbertson

SCALE 1" = 400' ACRES 80
APPROXIMATE

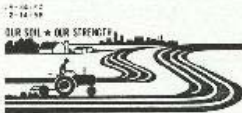
Canyon
COUNTY

Idaho
STATE

PHOTO No. 2T-14



Planned Irrigation System



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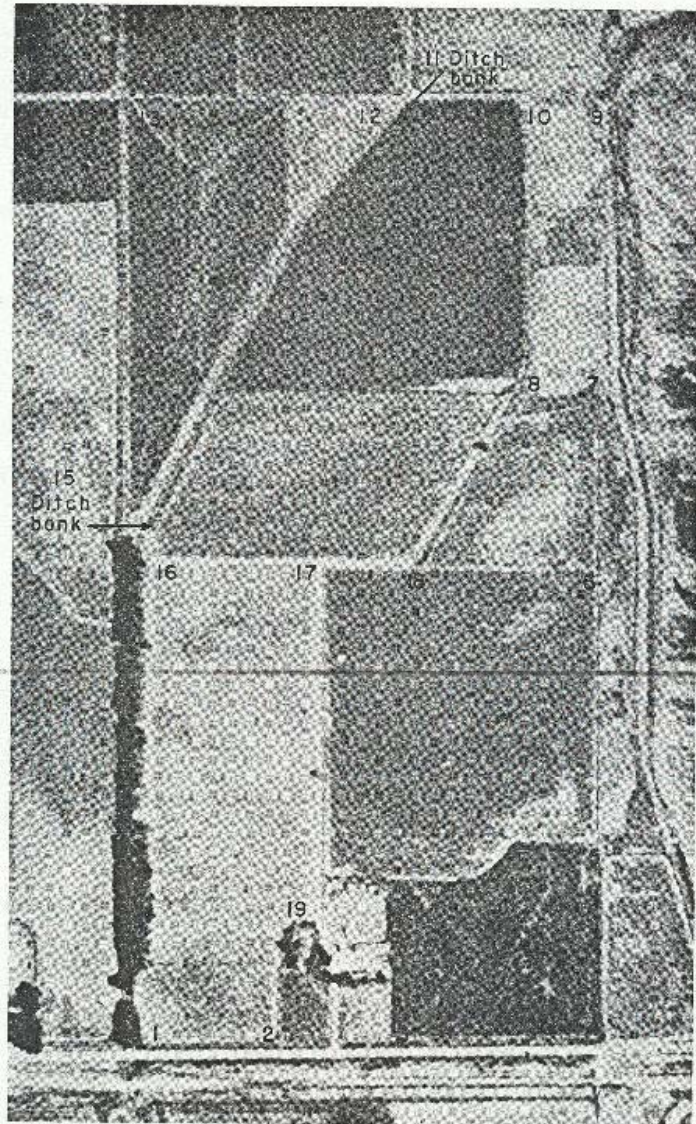
SCALE 1" = 400'

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Canyon

Idaho

PHOTO No. 2T-14



Farmers copy of print showing location and sequence of readings



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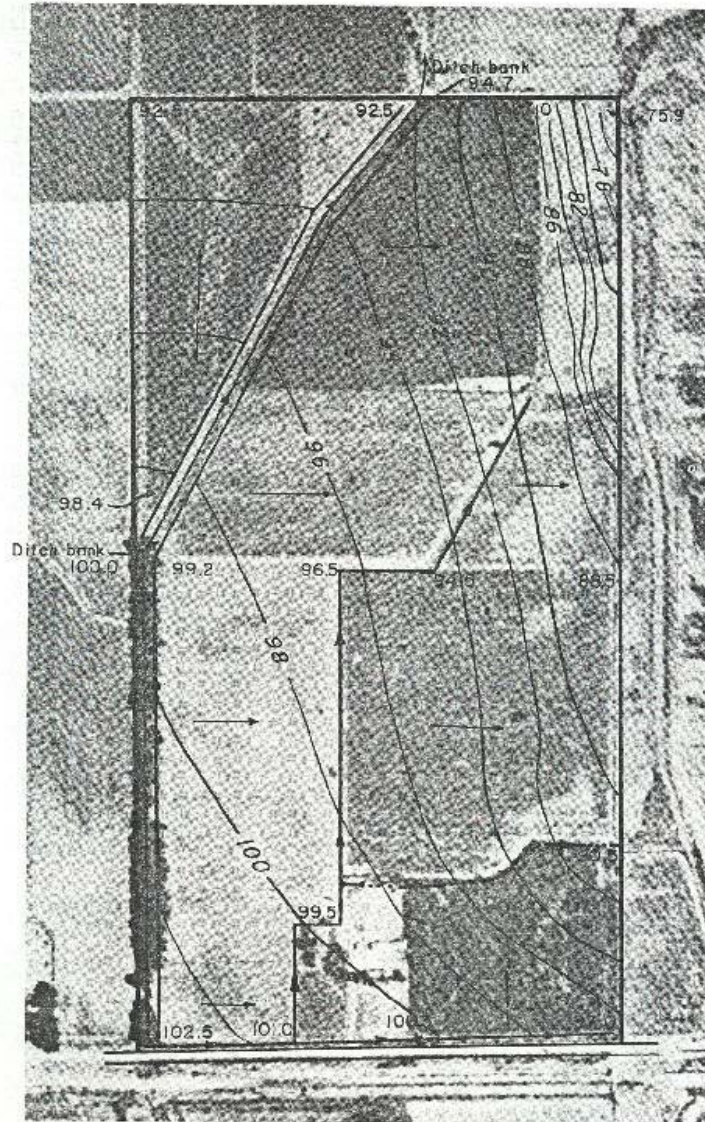
OPERATOR Gerald Gilbertson

SCALE 1" = 400' ACRES 80

Canyon
COUNTY

Idaho
STATE

PHOTO No. 2T-14
APPROXIMATE



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R 4 W

Existing Irrigation System