Project No.

REPORT ON PLANS AND ESTIMATES FOR CONSTRUCTION PROJECTS

INDIAN IRRIGATION SERVICE

Hopi Agency: Hopi Reservation: Phillips Farms Unit
State: Ariz. County: Navajo Nearest town or city Polacca
Stream Polacca Wash SW 24 Miles from Polacca (town or city)

1. Kind of project: Ck.
   a. Irrigation system x
   b. Flood control
   c. Storage
   d. Water development Pumping
   e. Land development x

2. Purpose of project: Ck.
   a. Subsistence gardens
   b. General farming x
   c. Pasture
   d. Stockwater
   e. Domestic water

3. Description and character of work: (Use reverse side of sheet)

4. Status of project:
   a. Date begun? Mar. 1939
   b. Percent completed 100
   c. Cost to June 30,1942 $ 15,805.43
   d. Time req. to comp. 0
   e. Est. cost to comp. $ 300

5. Status of plans and investigations:
   a. Surveys % comp.
   b. Investigations % comp.
   c. Sketch Plans % comp.
   d. Detail Plans % comp.
   e. Specifications % comp.
   f. Time required to comp.
   g. Est. cost to comp. $ 0

6. Status of land sites:
   a. Acquired x ; Negotiations completed? ____ Negotiations pending? ____

7. Labor required in mandays:
   a. Common
   b. Semi-skilled
   c. Skilled
   d. Tech. and Clerical
   e. Supervisory
   f. Av. daily employment
   g. Est. cost of labor $ ____

8. Materials required:
   a. Cement Bbls.
   b. Lumber FBM
   c. Steel Tons
   d.
   e. Estimated cost $ ____

9. Quantities involved
   a. Embankment _____ Cu. yds; b. Excavation _____ Cu. yds.
   c. Lineal feet of pipe _____, Kind _____, Sizes _____

10. a. If irrigation project, state number of acres 50
    b. If storage project, state capacity in acre feet. . . . . .
    c. If land development, state number of acres 43.2

11. . . . . Total estimated cost of this unit. . $ 16,105.43

Date submitted June 30 1943. Submitted by HERBERT V. CLOTTS
Asst. Director of Irrigation

Project No. 43-4

CV-6417-201 NN009463

The Phillips Farms project consists of a masonry check dam on sandstone foundation in the bottom of Polacca Wash, which is 60' deep at this point. The dam consists of concrete piers and abutments 8' high sunk 2-1/2' into bed-rock, with 3 - 4' x 16' overflow radial gates, with a 4' x 95' masonry spillway on the right side, having been extended 60' in April, 1941. A rectangular slide gate controlled pump pit is located on the left side. The pumping plant consists of a 6", 900 g.p.m., F.M. horiz. cent. pump, direct connected to a 25 h.p. F.M. gasoline engine. The pump house is of stone 8' x 12'. The suction lift is 10' and the total lift is 58', plus friction. The discharge line includes 220' of 8", 12 gage dipped and wrapped pipe, with Dresser couplings extending to a concrete discharge basin on top of the bank. See report 11/18/39, Clotts to Wathen, with 2 photos. During low water the flow is about 150 g.p.m., when it takes 72 hours to fill the pond and 12 hours pumping to empty it. The main canal is 2800' long, with 2 laterals, each 1100' long. The construction work was completed in the spring of 1940. 21.4 acres were subjugated in 1939 and 21.8 in the spring of 1941. The first crop was planted in 1940, when 11.8 acres were to garden and 9.6 acres in field crops. In 1941 there were 9.6 garden and 11.8 acres in alfalfa, which did not take. In 1942, 16 acres were in field crops and 9 acres in gardens. Raised 3000 lbs. beans, 4500# sweet corn, 900# cabbage, 800# onions, 400# green peppers, 900# peas, 600# potatoes, 110 gal. sorghum (2 acres), 400# turnips; total value $900 from 9 acres, stock ruined balance. The fuel cost for pumping is $1.82 per ac. ft., or 4.75 per acre for estimated 2.6 ac. ft. per season.

Proposed work consists of completion of subjugation, 6.8 acres $ 300

Topog. map, 1" = 200', 2' contours, plane-table sheet, in pencil.

S.C.S. soil survey, 1939 (Coyote Springs) shows land in classes B and C, the best land being at the lower end, having better drainage. The water has an alkali coefficient of fair plus, requiring fertilizing and special care to prevent alkali accumulation, especially on the upper area.