

Operating Facts

Volume pumped, April 10, 1987 to June 30, 1989

- 2.73 million acre-feet

Pumping Rate

One pump:

- 450,000 gpm (1,000 cfs)

Two pumps:

- 900,000 gpm (2,000 cfs)

Three pumps:

- 1,350,000 gpm (3,000 cfs)

Pumps

Type:

- Ingersoll-Rand vertical axis mixed flow.

Impeller:

- 3 blades, 119 in.dia., 12,000 lbs.

Shaft:

- 10.7 in. dia., 45.5 ft. long, 18,750 lbs.

Gear Drive

Weight:

- 36,000 lbs.

Speed ratio:

- 22.37

Manufacturer:

- Brad Foote Gear, Inc., Cicero, IL.

Engines

Dimensions:

- 27 ft. 11in. long, 11ft. 10 in. wide
- 17 ft.10 in. high, 16-cylinder 3,500 hp rating,
- 16.25 in. bore, 18 in. stroke

Operating speed:

- 330 rpm

Weight:

- engine and skid - 162,800 lbs.

Manufacturer:

- Dresser-Rand, Painted Post, NY.
- A contract for procurement of pumps, gear drives and engines was awarded to Ingersoll-Rand, Painted Post, NY, for \$7,829,378.68

Pumping Plant

Dimensions:

- 110 ft. long, 55 ft. wide, 85 ft. high.

Engine deck elevation:

- 4230

Sump bottom elevation:

- 4175

Construction:

Steel and reinforced concrete

- (13,000 cu. yds. of reinforced concrete)

Contractor:

- Layton Construction Co., Salt Lake City, UT

Engineer:

- Eckhoff, Watson and Preator Engineering

- Morrison-Knudsen Engineers, Inc.

Original bid:

- \$7,891,378.68

Final cost:

- \$10,387,560

Outlet Canal

Length:

- 4.1 miles

Bottom elevation:

- varies between 4207 to 4210

Bottom width:

- varies between 75 to 100 ft.

Top width:

- varies between 120 to 150 ft.

Operating depth:

- minimum 10 to 11 ft.

Slope of canal:

- avg. .18 ft. per 1,000 yds.

Material dredged:

- 640,000 cu. yds.

Contractors:

- Southern Pacific Transportation Co./Lost Dutchman, Inc.

Engineer: Eckhoff, Watson and Preator Engineering

Access Road

Length:

- 10 miles

Height:

- 13 ft.

Width:

- 18.5 ft.

Volume of fill:

- 1.2 million cu. yds., Lakeside to Hogup

Bridges:

- 4 (3 - 150 ft. long, 1 - 180 ft. long)

Contractor:

- Southern Pacific Transportation Co.
- SPTC's contract included excavation of the pumping plant foundation, excavation of the Outlet canal, construction of four bridges, reconstruction of the damaged 10-mile long causeway, and raising 25 miles of railroad track for a total of \$22,980,000

Engineer:

- Eckhoff, Watson and Preator Engineering

Bonneville Dike

Length:

- 24.4 miles

Height:

- 3-6 ft.

Volume of fill:

- 486,500 cu. yds.

Rip rap:

- 152,000 cu. yds.

Contractor:

- W. W. Clyde Construction, Springville, UT

Contract:

- \$3,872,845

Newfoundland Dike

Length:

- 8.1 miles

Height:

- 3-7 ft.

Volume of fill:

- 249,000 cu. yds.

Rip rap:

- 85,000 cu. yds.

Control weir:

- 1,000 ft. long

Contractor:

- Herm Hughes and Sons, Bountiful, UT

Contract:

- \$2,464,030