

COPY

PUMPS AND POWER, LIMITED,

40 Cordova Street East,
Vancouver, B.C.

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Jan. 2nd. 1931.

West Canadian Hydro Electric Co. Ltd.,
VERNON, B. C.

Dear sirs:- ATTENTION: Mr. H.C.H. Verrall.

In answer to your enquiry for motor driven pumping equipment, we are pleased to submit data and prices for the following conditions, namely:

Elevation, 405' and 430' respectively; distances, 3900' and 4200' respectively; quantity of water required per season, 120 days, 400 acre feet.

This requires a pump with a capacity of 3.3 acre ft. per day of 24 hours, or approximately 755 U.S. g.p.m.

In order to keep friction losses down to a minimum, we would recommend the use of 10" pipe, but are quoting alternatively on a pumping plant which will deliver water to the higher heads if 8" pipe is installed.

For your information would say that the friction losses in a 8" wood pipe line, 3900' long, when pumping 755 U.S. g.p.m., would be approximately 47', and in a 10" wood pipe line, under the same conditions, approximately 18'. The friction losses in a 8" wood pipe line, 4200' long, when pumping 755 U.S. g.p.m. would be approximately 50', and in a 10" wood pipe line, under the same conditions, approximately 19'.

On the 405' elevation, using 8" and 10" pipe, the respective total heads would be 452' and 423', The respective H.H.P. requirements would be 122 and 114.

see foot note.

The cost per acre ft. with current at 1¢ per kilowatt hr., less 10% discount, would be \$9.70 and \$8.98 respectively.

We are figuring a 90% motor efficiency and a 70% pump, efficiency, but have not taken into account power factor, which should be very good, since the motor would be almost fully loaded.

On the 430' elevation, using 8" and 10" pipe, the respective total heads would be 480' and 449'. H.H.P. 130 and 121. Cost per acre ft. \$10.24 and \$9.54 respectively.

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When pumping through the 8" pipe line we would be compelled to use a 150 H.P. motor, which would not improve the power factor.

We wish to offer you for this service.

1 - 5" PUMPS AND POWER Type "HS", 2-Stage Centrifugal Pump; fitted with bronze enclosed impeller and ball bearings, capacity 755 g.p.m. for above head conditions, 6" suction, 5" discharge connections; mounted on extended cast iron base and direct connected through flexible coupling to 125 H.P., 1800 RPM., 2200 Volt, 60 Cycle, 3 Phase, Westinghouse Induction Motor, with standard Manual Starter.

1 - Standard set of suction and discharge fittings, including foot valve, gate valve, check valve, elbow, reducers, bypass and pressure gauge, also 20' of suction pipe in lengths (two lengths).

Price, complete, fob. Vancouver, \$2375.00

Shipping weight, 7800 lbs.

Extra for 150 H.P. Motor \$140.00

We shall be pleased to co-operate with you on this or any other pumping proposition which you may come in contact with, and trust that the information we have given you is what you require. If we can furnish data, please let us know.

Wishing you the compliments of the season, we are,

Yours very truly,
PUMPS AND POWER LIMITED.

Sales Mgr.

JLM/C

P.S: \$35.00 per H.P. less 10% -- \$31.50
 122 x \$31.50 = \$3843 ac. ft. = \$9.70 per ac. ft.) To Elev. 405'
 114 x \$31.50 = \$3591 ÷ 400 ac. ft. = \$8.98 per)
 \$252. annual saving in power. ac.ft.)

To Elev. 430')
 (130 H.P. x \$31.50 equals \$4095 divided by 400 = \$10.24 per ac. ft.)
 (121 H.P. x \$31.50 equals \$3811.50 " by 400 = \$ 9.54 per ac. ft.)