

Hydraulic Dredger for British Columbia.

The Polson Iron Works, Toronto, are building for the Dominion Government a self-propelling hydraulic dredger, which is to be transported to the Pacific Coast in sections & completed there by midsummer of this year. Following is a description as it will be when completed: It is capable of working to a depth of 40 ft. below the water surface & excavating any ordinary material, discharging it by either of three methods, viz., 1st, to shore through a long-distance pontoon pipe; 2nd, through a suspended side-discharge pipe, 85 ft. long, & 3rd, into scows alongside. It is self-propelling at a speed of 8 statute miles an hour. It is fitted with crew's quarters on the upper deck sufficient to accommodate 20 men. The machinery & equipment is first class in every respect & of a substantial description. The dredger, as a whole, is made of the very best materials & workmanship & adapted for permanent service in either fresh or salt water.

The hull is 125 ft. long, 32 ft. wide & 7 ft. 6 in. deep at the side. It is square ended at bow & stern for the purpose of carrying the suction pipe & stern wheel respectively, but has a rake on the underwater body forward & aft, & round bilges, making her easy to propel. The construction of the hull is composite, that is to say, it has steel frames & trusses over the entire length with the plank-

ing & sheathing of wood, by which great strength is obtained, the steel frames being practically indestructible, while the planking can be readily & cheaply renewed at any time when necessary from injury or decay. The hull is stiffened by two internal trusses extended the whole length of the boat, which also serves to carry the deck house & sustain the weight & thrust of the front A frame. It also furnishes the necessary support for the wheel beams at the after end. There are 4 watertight steel bulkheads, & each compartment is fitted with means of removing the bilge water independently. The keel is ingeniously constructed in the form of a gutter, which drains the perfectly flat bottom of the vessel completely & forms an efficient well for the pump suction.

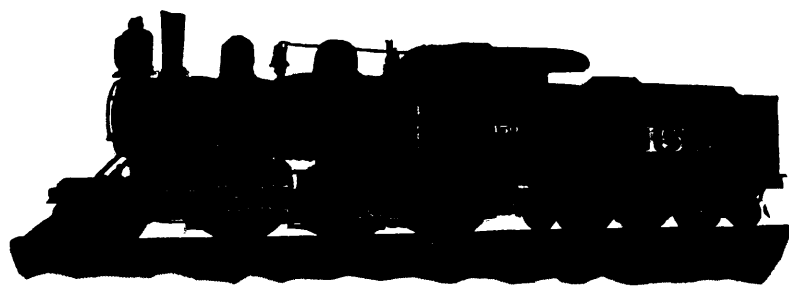
The main engines for driving the dredging pump are of the vertical triple expansion type—13½", 22" & 36" by 21" stroke of the standard marine type. The main dredging pump is centrifugal of improved type, having 20" diameter suction & discharge. The suction pipe is designed to make a cut 50 ft. wide when stationary & 175 ft. wide when swinging on the stern spud. A complete outfit of auxiliary machinery is provided for handling the suction pipe, spuds, anchors, hull, etc. The two boilers are of the Heine water-tube type, having 3,000 ft. of heating surface. The builders guarantee that the dredger is capable of doing effective work at 1,500 feet distance

from discharge with only one boiler in operation. There is a surface condenser of the latest & best construction, having 1,200 sq. ft. of coating surface. The vessel is propelled by a stern wheel 20 ft. diameter, driven by double-horizontal engines 16 in. diameter & 72 in. stroke, of the Polson Iron Works standard patterns, which have been thoroughly tested in service.

The hull will be ready for shipment about the middle of Jan. & will be erected at New Westminster & completed there by W. E. Redway, the Superintendent of the shipbuilding department of the Polson Iron Works.

Electricity for Motive Power on the C.P.R.—With reference to a paragraph which appears on pg. 360 of this issue, copied from the Nelson Miner, stating that the C.P.R. had decided to operate the Rossland, B.C., grade by electricity, we are informed that no decision has yet been arrived at in regard to the matter. Inquiries are being made with a view of ascertaining if it will be in the Co.'s interests to operate the grade by electricity. It will take considerable time to obtain all the information & an early decision is, therefore, not to be looked for.

The Canadian exhibit of railway ties at the Paris Exposition proved of such interest that a new trade may spring up in that line between this country & the Continent. Many enquiries are being made.



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MANITOBA

The Government Crop Bulletin issued Dec. 12th, 1899, gives the following statistics for the year:

CROPS.		
ACRES.	AVERAGE YIELD.	TOTAL.
Wheat.....1,629,995	17.13 bus.	27,922,230 bus.
Oats.....575,136	38.80 "	22,318,378 "
Barley.....182,912	29.4 "	5,379,156 "
Potatoes..19,151	168.5 "	3,226,395 "

STOCK.

Beef Cattle exported during the year	12,000
Stockers exported	35,000
Total value dairy products.....	\$470,559 09

10,500 FARM LABORERS

Came from Eastern Canada to assist in the harvest fields of Manitoba in 1899—and the demand was not fully satisfied.

MANITOBA FARMERS ARE PROSPEROUS.

Farmers erected, last year, farm buildings valued at one and one-half million dollars.

MANITOBA LANDS—For sale by the Provincial Government. Over 1,600,000 acres of choice land in all parts of the Province are now offered at from \$2.00 to \$5.00 per acre. Payments extend over eight years. **Special Attention** is directed to 500,000 acres along the line of the Manitoba and Northwestern Railway at \$3.00 and \$3.50 per acre.

FREE HOMESTEADS are still available in many parts of the Province.

For full information, maps, etc., **FREE**, address J. A. DAVIDSON, Minister of Agriculture and Immigration, Winnipeg, Manitoba. Or JAMES HARTNEY, Manitoba Emigration Agt., Union Station, Toronto, Ont.

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