Campbell devised a plan to build a fleet of canal-sized, bulk-carrying barges, using Sin Mac's Montreal harbour fleet to tow the barges in the canals between Montreal and Prescott. The main purpose of the barges would be to carry grain from Port Colborne down to Montreal. Campbell intended to use BELVOIR to tow the barges on the upper St. Lawrence River and across Lake Ontario. How BELVOIR could have been expected to look after more than one barge at a time, when Campbell planned and eventually built a whole fleet of them, is not clear.

In any event, Red Barge Line Limited, of Montreal, was formed early in 1930. Its original incorporators were James Playfair, Frank M. Ross, Senator Donat Raymond, L. G. Mickles, Jos. Simard, John E. Russell, Noah A. Timmins and J. A. Mathewson. Robert A. Campbell was to manage the vessel operations. It would appear that James Richardson & Sons Ltd., the prominent grain dealers, had more than a passing interest in the new company, as James Playfair long had been associated with the Richardson organization in the transportation of grain down the lakes.

Red Barge Line immediately placed orders for the construction of six self-trimming, steel-hulled barges of maximum size and draft for the 14-foot canals. (The actual maximum draft then permitted in the old canals was 14 feet, 3 inches.) Five of the contracts were let to Canadian Vickers Ltd., Montreal, which built REDCLOUD, REDWING (renamed REDWOOD in 1930), REDSTAR (likewise renamed REDFERN almost immediately), REDCHIEF and REDHEAD. The sixth barge was REDRIVER, built by Les Chantiers Manseau Ltee. at Sorel, Quebec. All six were completed and in service by July of 1930.

REDCLOUD was Canadian Vickers' Hull No. 115, completed in July, 1930. She was registered at Montreal under official number 155292. She was 255.6 feet in length between perpendiculars, 43.7 feet in the beam, and had a depth of 19.0 feet (sometimes reported as 19'11"). Her maximum draft was $14'4\frac{1}{4}$ ". Overall length was 256.0 feet, which shows that little space was lost in non-revenue-earning spaces.

REDCLOUD's original tonnage was 1726 Gross and 1530 Net. She had only one deck, five watertight bulkheads, and was of web frame construction, with side tanks 206 feet long. The hull was of "self-trimming" design, which meant that the sides slanted inward toward the narrow spar deck from just above the loaded waterline in order to prevent the shifting of grain cargoes. Such hull design often led to vessels of this type being referred to as "semi-turrets", because of certain similarities to the Doxford turret design popular around the turn of the century. REDCLOUD, of course, had no propulsion machinery, but steam for heating, steering, and the operation of the winches was provided by a donkey boiler built in 1930 by Sorel Mechanical Shops.

REDCLOUD had flush decks, neither the forecastle nor the poop being raised. There was a closed steel bulwark on deck forward, and at the bow a rectangular plate joined the two sides of the bulwarks. Into this plate was set a round fairlead for the starboard anchor chain, and also a large roller with a plate over it to handle the towing cable. The port anchor was carried in a recessed, square pocket just above the loaded waterline. The starboard anchor, however, was carried on a sloping shelf which formed part of the starboard bulwark, with a short, vertical (not radial) davit with boom and tackle provided to lift the anchor if the need arose. A wooden rubbing strake ran from below the anchors out to the full width of the hull. Also set on deck at the bow were a windlass for the snubbing cable (on the port side) and a booby hatch which provided access to the forepeak. Landing booms were placed on each side at the break of the bow to put crew ashore when needed to handle lines.

The hull was almost totally devoid of sheer, and there were four cargo holds, the longest of which was 52 feet. There were four hatches, each of which measured 26 feet by 36 feet, and they were equipped with strongbacks,