

Marcon International, Inc.

Vessels and Barges for Sale or Charter Worldwide

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Barges

An Overview of the Workhorses of the Marine Industry

By: Bob Beegle

Barges are the workhorses of the towing industry. They perform myriads of chores from cargo transport, pipelay, heavy-lift, water-desalinization, and power generation to offshore floating production and storage. Barges haul millions of tons of cargoes or otherwise work offshore and through the river systems and harbors of every continent in the world. Although there are no accurate records, I would not be surprised if there are at least 150,000 barges from the coasts of Albania to Lake Kariba in Zimbabwe.

Non-propelled barges range from under 10' to almost 1,000' in length. While usually built out of steel, Marcon has over the years listed and sold barges constructed of concrete, aluminum and, even, wood. At the top of the range of cargo barges are the 30,000dwt+ ocean tank barges, 40,000dwt+ Great Lakes bulk barges and the 25,000dwt+ submersible and launch barges for ocean transport of equipment, such as drill rigs, drydocks, floating storage & production units, and of high value project cargoes requiring dry-tows for secure and/or faster deliveries. The world's largest launch and float-over/cargo barge designed for worldwide operation is Heerema's 852' x 207' x 49' with a maximum 130,514mt and launch capacity of 40,000mt "H-851". Although "H-851" may be the largest, she is not necessarily the longest. That distinction probably belongs to the 1973 built, self-unloading, 57,500dwt, Great Lakes bulk carrier "Presque Isle" operated by GLF Great Lakes Corp. which was built in two sections by different shipyards and is 974.5' x 104.6' x 45.7'



depth. Combined with her 141', 14,840HP companion tug in the notch, the length overall is approx. 1,000'. (photo credit at left: www.boatnerd.com) "Presque Isle" was recently joined on the Lakes by the new 33,892ldwt, 740' x 78' self-unloading bulk barge "Lakes Contender" and 10,000HP tug "Ken Boothe, Sr." built by Donjon Shipbuilding & Repair in Erie, Pennsylvania and christened in April 2012. "Lakes Contender" / "Ken Boothe, Sr." departed on their maiden voyage for American Steamship Co., a subsidiary of GATX Corp., on Saturday 5th May 2012 to load iron ore pellets. Their overall combined length with the tug mated up in the notch is about 825'. Note that "Lakes Contender" has a narrower beam than "Presque Isle" in order to meet

St. Lawrence Seaway's maximum beam restriction for transit. As a broker regularly selling barges into or out of the Lakes, the maximum beam is one of the first things we base computer searches on. We once had a European ice-classed hopper barge listed that would have made a wonderful addition to the Canadian flag Lakes fleet, but her overall beam was about 1.5" over the maximum allowed. No one thought my idea of greasing up her side shell and running full speed ahead would work.

Runner-ups in length are Trailer Bridge's 750' x 104' x 20' triple deck ro/ro barges "Jax-San Juan Bridge" and "San Juan-Jax Bridge" operating in the Caribbean. Both were originally built in 1984 by Marine Power & Equipment in Seattle as the 487' former SeaWay Express barges "Resurrection Bay" and "City of Seward" barges for the Seattle-Alaska trade, sold to Trailer Bridge, Inc. and stretched in 1996 with a 250' mid-body section. They are followed by Great Lakes Marine Leasing's 2000 built, 34,000dwt, 740' x 78' Great Lakes bulk barge "Great Lakes Trader" with her 135,' 11,000BHP tug "Joyce van Enkavort"; and Crowley Maritime's four 730' x 99.5' x 20', triple deck ro/ro barges "TMT Fortaleza", "TMT Jacksonville", "San Juan" and "Miami", all built as 400' deck barges and lengthened in the mid-1980s.

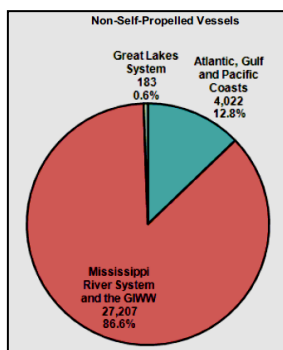


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Barges – Workhorses of the Marine Industry



In the United States, as of 31st March 2012, there were 24,179 freight barges, including deck and hopper, with an average age of 19 years and 4,512 tank barges (average age 22 years) documented with the U.S. Coast Guard. This is up from 22,895 freight (25 years age) and 4,065 tank barges (30 years) five years ago. These do not include crane/derrick barges, passenger barges and a thousand or more undocumented barges. According to the U.S. Army Corps of Engineers there were 31,412 non-self-propelled cargo barges with a capacity of 59,255,348 short tons in the United States as of 31 December 2010 with 86.6% of the barges working the Mississippi River System and the Gulf Intracoastal Waterway. This excludes dredges, crane and other work / industrial barges used in construction work. The oldest documented freight barge on record where the year built is known is the 110 year-old, 185' x 48' barge "109" built in 1902 out of Holland, Michigan, which is not surprising due to the cold, fresh water in the Lakes. The two

oldest "tank barges" on record are the 170' x 29' x 17.2' barge "Catawissa" built in 1896 by Harlan & Hollingsworth Co. of Wilmington, Delaware (later operated by Bethlehem Steel and Dravo Corp.) and the 307' x 52' x 17' barge "Manistee" built 1898 by The Globe Iron Works Co. of Cleveland, Ohio (most likely riveted construction). I seriously doubt that they are still in tank service. This is one of the problems reviewing vessel and barge statistics – we always have to take them with a "grain of salt", but at least they give us a general overview of the industry.

There are also likely older units still in service both in the U.S. and worldwide where records and build dates have been lost in the mists of time. It would be interesting for a historian to research old barges like these further, as their history is not only that of the iron or steel but of commerce and the people / companies who built and operated them for over 100 years. In contrast to these vintage barges, as of 31st March 2012, there were 1,198 U.S. flag freight barges between 96' and 400' and 219 tank barges from 46' to 620' built after 2011 and construction continues - slowly. Excluding inland barges, which predominate the building scene, there are only 11 barges, excluding inland river, under construction in the U.S. according to MarineLog and Tim Colton – a fraction of past activity.



Most barges are purpose-built and designed for a specific trade, although ships have been converted throughout the ages. During the late 1890s and early 1900s many sailing ships were down-rigged and towed with coal, lumber or other cargoes. After World Wars I and II surplus military ships were popular conversion candidates with many ex-Navy 328' x 50' LSTs (Landing Ship Tank) converted to haul bulk, containers and trailers on ocean routes, trading 40-50 years after their keels were first laid. With their double bottoms and wing-tanks, they were relatively inexpensive hulls, but they also had limitations. Forty years ago I towed a LST grain barge in the Hawaiian Islands that acted more like a water skier constantly crisscrossing back and forth across my wake. Occasionally we could see her out the open pilothouse door on the port beam and then two hours later on starboard unless she was trimmed with a 2-3'+ deeper draft aft, which was seldom the case. She was also well-known for rats which were big enough, had enough longevity on board and sea-time to sail as Able-Bodied Seamen if we could have trained them to handle the mooring lines. There is a 328' x 50' former



LST barge built by Bethlehem Ship in 1943 and converted to a self-discharge cement barge still in service in Puget Sound today, sixty-nine years later. Hundreds of cargo ships were built and sold surplus at end of World War II, with many sold foreign, scrapped or converted. Throughout the 80s and 90s many barges recognizable as ex- T-2 tankers or C1, C2, C3, C4, Liberty or Victory ships regularly appeared on the market. One 324' x 68' x 25' conversion ended up in the Pacific Northwest about 25 years ago after a long, slow and expensive tow from the Gulf bringing around a load of pipe bound for Alaska. She only got as far as Tacoma before the oil company pulled the plug on her and fired their representative who booked the tow. I was happy to see this barge eventually sold,

even though it was not by Marcon. Although she had a lot of life left in her hull, both the Owner and Marcon spent more time explaining why someone should not buy her than actually marketing her. Ten years later she might have been a good AT/B conversion candidate with a deep notch fitted, but in the 1980s towing on the wire astern was the norm. Fuel consumption, even at 80s prices, would have bankrupted any tug operator considering working her.

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Today there are many more successful ship-to-AT/B barge conversions operating in the Great Lakes than probably anywhere else in the world – under both U.S. and Canadian registries. One, which Marcon sold in 2005, was the Canadian, 594' x 72' x 40' depth self-unloading bulk barge “*Sarah Spencer*” (ex-*Sea Barge One*) converted in 1989 from the steamship “*Captain Edward V. Smith*” (ex-*Adam E. Cornelius*) built 30 years earlier by Manitowoc Shipbuilding. Initially pushed by the 7,200HP “*Atlantic Hickory*” wired into the barge’s deep notch, “*Sarah Spencer*” is now mated with the 8,000HP articulated tug “*Jane Ann IV*” (ex-*Tignish Sea, Bomare, Ouro Fino*) with an hydraulically controlled articulating coupler system. The AT/B unit can discharge 22,105 tons of cargo at about 4,000 tons per hour. (photo credit: www.boatnerd.com)

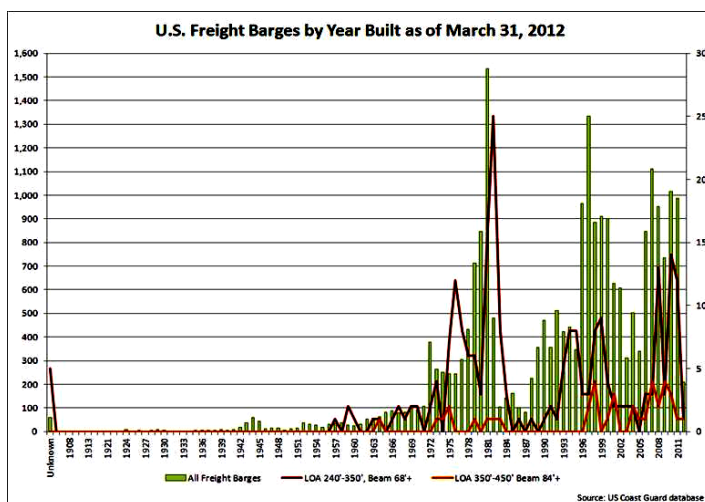
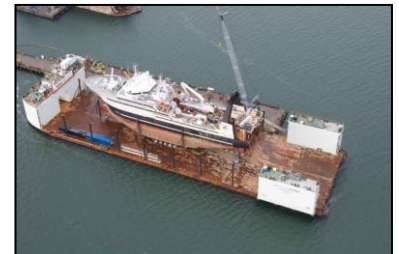


Deck Barges



Flat deck barges, usually flat bottom and rectangular in structure, carry cargoes on deck, such as containers, rail cars, construction equipment, multi-million dollar project cargoes, rolling stock, cattle, and just about any cargo you can think of. Most deck barges have a single flat deck, although there exist covered house barges, combination deck, double and triple deck ro/ros and barges with both deck and lower hold capacity also in service. Flat deck barges fitted with steel or wooden bin walls, many times even carry bulk cargoes such as coal, wood chips and aggregates. Some have also had covers fitted over the bin walls to further protect special cargoes such as on the 340' x 78' x 19' “*Niagara Spirit*” (ex-*Timberjack, Alaska Trader*) which Marcon sold to McKeil Marine of Hamilton, Ontario in 2008.

Most deck barges are non-propelled, also known as “*dumb*” barges, towed astern, but there are no hard, fast rules. A few can be found fitted with propulsion and many are pushed ahead – especially inland river barges in multiple tows or AT/Bs capable of operating in ocean, coastal or sea-river service such as on the Yukon River in Alaska. Of the 3,570 barges Marcon tracks (as of 10th May 2012), 1,699 are deck barges with 271 listed for sale up from 169 in Fall 2008. Historical data on an equal number of deck barges is archived. Today’s global listings for sale range from a small 30' x 27' unit made up of three truckable sections to the 492.0' x 131.2' x 27.9' submersible heavy-lift “*Faithful Servant*” in service as a drydock just a hour’s drive away from our office. 111 of the deck barges Marcon has listed for sale are under U.S. registry and 185 are foreign flagged. The oldest deck barge listed for sale was built in 1945 and this is offset by 28 deck barges worldwide ranging from 150' to 420' in length listed built after 2010. 260 barges worldwide from 38' in length inland units up to 460' ocean semi-submersible, heavy-lift barges are also listed as periodically open for short or longterm employment.



Although demand for ocean deck barges in the U.S. is not as strong in today’s economy as in the past, supply is limited which tends to buoy prices and charter rates for better quality barges when they are needed. U.S. ocean deck barge construction, as with tugs and OSVs, came to a virtual standstill in the mid-80s following the roller-coaster ride of the previous build-up, oversupply and market crash three decades ago. Standard 140' x 39' (885stdw), 160' x 54' (2,080dwt), 180' x 54' (2,380dwt) and 250' x 72' (5,400st) ocean flat deck barges became a glut on the North American market and relatively few were built from the late 1980s through present day. Peaks in construction shown in the late 70s / early 80s and late 90s / early 2000s for Freight Barges were primarily 195' – 200' inland hopper barges which are included along with deck barges in the Freight category by the U.S. Coast Guard.

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There were a couple of notable exceptions to this dry spell of U.S. operators building deck barges. Cashman Equipment ordered a mixture of over sixty-five 125' – 400' ABS deck barges from U.S. and Chinese yards between 1998 and 2011. Gunderson Marine in the Pacific Northwest also had a good run of building deck barges primarily for Pacific Northwest operators including nine "455 series" 400' x 105' x 25' ocean heavy-lift barges for Crowley Maritime built from 2007 through 2010; seven 360' – 420' x 100' container barges for Alaska Railbelt Marine, five 380' x 96' container barges between 2004 and 2010 for Northland Services and one 250' x 72' ocean deck barge with hydra-lift sklegs to be delivered shortly for another Alaskan operator.



Reflecting the tight U.S. market in ocean deck barges, Marcon currently only has 23 of these barges officially on the market for sale, ranging from 150' – 492' for sale with build dates ranging from 1952 to 2010. Three of the U.S. flag barges, including the 492 footer, do not have U.S. Jones Act coastwise trading privileges due to foreign built and two additional barges are questionable as far as trade restrictions. Additional U.S. barges can periodically be developed for sale or longterm charter "*at the right price*" on a private and confidential basis out of competition. The majority of inland, coastal and ocean deck barges which Marcon tracks for sale are in North America with approx. 120 barges in the United States, Caribbean, and Central America. This is followed by 52

barges in Southeast Asia and the South Pacific; 42 in the Far East; 29 in Europe, U.K., Mediterranean and Caspian regions and 16 available in the Middle East.

Even in today's weak economy, deck barges are still being built worldwide with Southeast Asia and China probably delivering more 5,000dwt+ ocean deck class deck barges than in any other region. Standard sizes of flat deck barges built in Southeast Asia and the Far East are close to those built in North America, although variations can always be found.

Standard Size Asian Ocean Deck Barges

Length	Beam	Depth	Deadweight
100'	30'	8'	360T
120'	40'	8'	600T
180'	50'	10'	1,500T
180'	56'	12'	2,200T
210'	60'	14'	2,800T
230'	60'	14'	3,300T
230'	64'	14'	3,800T
250'	80'	16'	5,500T
270'	70'	16'	5,500T
300'	80'	18'	7,800T
300'	80'	20'	8,200T
300'	90'	18'	8,500T
330'	90'	20'	10,000T
330'	100'	20'	12,000T
365'	92'	23'	12,000T
400'	120'	20'	15,000T

Typical uniform deck strengths for Asian built ocean barges are 5mt/m² (1,024psf), 7mt/m² (1,433psf), 10mt/m² (2,047psf), 15mt/m² (3,071psf) and 25mt/m² (5,119psf) – with, of course, higher prices as the deck strengths increase due to the greater amount of steel and welding in a barge with a 25mt/m² deck load than a 5mt/m² barge. Over the years, Marcon has sold over two dozen of these Asian barges worldwide including approx. a dozen newbuildings direct from the shipyard – with most of the deliveries arranged through our auspices. One newbuilding 300' x 90' x 18' ocean flat deck barge built in Jiangsu Province, China was converted to a 100.5m x 27.4m cable layer to support wind farm and other subsea operations as far away as Germany and five were recently sold into Latin America. Since 1981, Marcon has sold 126 ocean deck barges worldwide totaling approx. 792,000dwt and 71 inland deck barges totaling abt. 127,035dwt. Several additional deck barge sales are pending, awaiting governmental approval for sale abroad.



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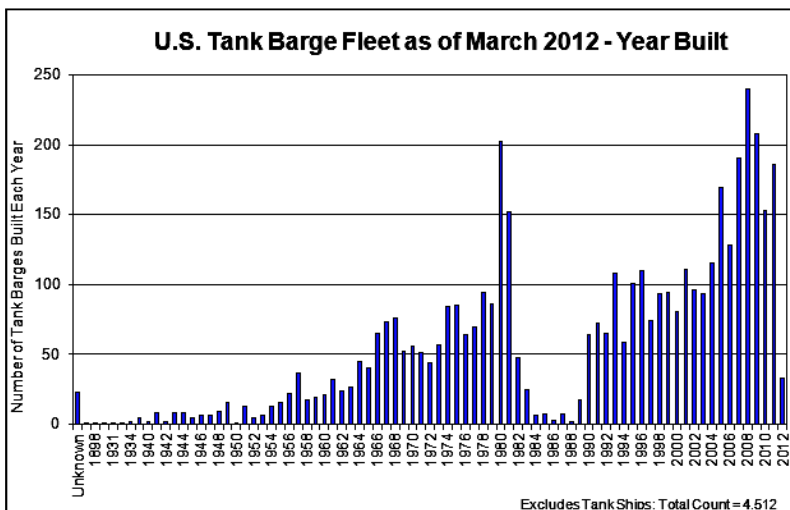
Tank Barges



Tank barges are constructed and designed for carriage of liquid cargoes such as petroleum, chemicals and LNG/LPG in below deck tanks either integral to the hull (single hull) or independent of the hull (double hull). Tank barges can be towed astern on a wire, pushed ahead in multiple units on inland rivers or individually by integrated or articulated tugs at sea. Demand for coastwise transportation fluctuated over the years depending on the economy, however petroleum and chemical products have always been a significant portion of domestic trade. For example, all commodities tracked by the U.S. Army Corps of Engineers carried on internal waterways excluding U.S. Coastwise and Great Lakes traffic in 2011 totaled 492 million short tons. Petroleum and chemical cargoes during that period consisted of 198.7 million short tons, or 40.4%, during that period.

Of the 3,570 barges Marcon currently tracks, 723 are tank barges with 71 currently listed for sale. Historical data on 1,261 tank barges is also maintained in Marcon's archives. The greatest change in tank barge fleets in the U.S. came about when the Oil Pollution Act of 1990 (OPA 90) was implemented after the "*Exxon Valdez*" oil spill in 1989. This law regulated the gradual phase-out of single hull tank barges and tankers by 2015. OPA 90 regulations caused the U.S. tank barge S+P market to be flooded with 20 - 30 year old single hull tank barges, especially during mid-2000s, as new replacement double hull barges were launched and some single hulls retrofitted at a rapid pace. Most single hull barges were retired prior to their designated retirement dates and the phase-out is almost complete - two years before the deadline. The number of secondhand inland, coastal and ocean tank barge listings for sale dropped significantly over the last few years as U.S. single hull barges were sold for further trade in petroleum abroad, scrapped, or in some cases converted to alternate service such as deck barges, dry bulk barges and in at least one case a drydock. Although there are a few exceptions, mid-large size ocean tank barges seldom make ideal deck barge conversions. Tank barge deck strengths are traditionally lighter than required for deck service and the hulls generally too long, narrow and deep to handle heavy loads on deck with their consequently higher center of gravity. Those few barges though that were built with heavier deck strengths and length-to-beam-depth ratios in line with traditional deck barges retained a higher residual value as they reached their retirement dates in the United States.

As of 31st March 2012, there were 4,512 inland, coastal and ocean tank barges in the United States. While U.S. Coast Guard data reports today's average age as 22 years, realistically it is most likely younger. Included in current data are a number of older barges officially designated as tank barges, long since retired from petroleum trade to other services - plus several fleets of large 100 - 200,000BBL ocean barges refitted with double hulls at great cost 10-15 years ago and still showing original 1970s – 80s build dates.



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According to the latest data available from the U.S. Army Corps of Engineers, there were 4,564 non-self-propelled barges with a cargo capacity of 14,518,933 short tons in the United States as of 31 December 2010, with 3,914 (85.8%) of the barges working the Mississippi River System and the Gulf Intracoastal Waterway and 640 (14.0%) operating on the Atlantic, Gulf and Pacific Coasts. Between 1990 and 2000 the total number of tank barges operating or available decreased, while overall capacity grew from 10,842,430 to 11,169,087 short tons. As of 2010, total tank barge capacity in the U.S. was 14,518,933 short tons.

Summary of U.S. Flag Non-Self-Propelled Tank Barges Operating or Available

	1990	1995	2000	2005	2009	2010	31 st March 2012
Total Tank Barges	4,252	4,003	3,985	4,011	4,561	4,564	4,512 (*)
Capacity (short tons)	10,842,430	10,757,295	11,169,087	11,678,593	13,984,199	14,518,933	

Waterborne Transportation Lines of the United States – National Summaries
(*) USCG data as of 31st March 2012

Summary of U.S. Flag Non-Self Propelled Tank Barge Fleet Construction

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total Tank Barges	66	80	83	128	178	167	213	292	200	132	186	(**) 32
Single Hull	0	1	1	5	2	2	11	16	3	2		
Double Hull	31	55	68	92	141	123	147	179	105	88		
Other Tank (*)	35	24	14	31	35	42	55	97	92	42		

(*) Double-sided only, double bottom only, or elsewhere not included.

(**) USCG data as of 31st March 2012.

Waterborne Transportation Lines of the United States – National Summaries

Summary of U.S. Flag Non-Self Propelled Tank Barge Fleet Rebuilt

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total Tank Barges	9	6	3	4	1	0	5	3	1	0		
Single Hull	0	0	0	0	1		2	1	0	0		
Double Hull	8	6	3	4	0	0	2	2	1	0		
Other Tank (*)	1	0	0	0	0	0	1	0	0	0		

(*) Double-sided only, double bottom only, or elsewhere not included.

Waterborne Transportation Lines of the United States – National Summaries

Although others can be developed for sale on a P&C basis out of competition, Marcon's active 71 ocean, coastal and inland tank barge listings for sale presently include 38 U.S. flag and 33 foreign flag barges. 17 of the U.S. flag and 7 of the foreign barges currently listed with Marcon are double hull. During the 1990s and 2000s, it was rare to see a full double-hull barge meeting all OPA 90 requirements on the market, but some are starting to appear in the normal course of events - especially with a few Sellers interested in seeing under-utilized equipment going foreign and out of competition. They are not cheap. Overseas buyers looking for storage barges or units for future trading and used to yesteryear's prices for large, ocean single-hull barges are in for a shock. Good 100 - 250,000bbl+ ocean classed, double hull barges can be developed, but some prices may be close to the unit's book value. We recently suggested to some buyers that they consider older tankers for storage in situations where U.S. flag and a shallow operating draft is not required - especially after receiving a quote on one 135,000bbl ABS ocean, double hull barge which was higher than one might pay for a vintage VLCC today. That is not to say that double hull barges are not being sold. We have several buyers today actively looking at double hulls. In 2010, Marcon International sold 17 double hull, inland tank barges to Ingram Barge. It was reported that American Commercial Lines this year purchased eight 20,000BBL tank barges from SeaRiver Maritime, a subsidiary of Exxon Mobil. We do not expect any major increase in the number of tank barges on the S+P market in the near future. Double hulls coming available in the near future will not offset the ready source of single hull barges which could be purchased relatively cheaply over the past few years.



Eighty ocean tank barges with an aggregate capacity of 6,366,716bbl (abt. 891,697dwt) and sixty inland tank barges totaling 949,848bbl (abt. 133,032dwt) have been sold by Marcon International since 1981. Peak sales occurred during 2008 with 12 ocean barges total 1,854,995bbl (abt. 259,802dwt) sold. The sale of one additional large ocean tank barge expected to close shortly and other barges are under discussion.

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Hopper Barges

Hopper barges are dry cargo barges with cargo holds below deck used to transport bulk commodities in ocean and coastwise trade or on rivers and other inland waterways. Typical cargoes are grains, coal, ore, scrap and aggregate, although just about any cargo you can think of has probably been carried. Hopper barges are generally of double-hull construction with the sides and bottom of the cargo hold(s) separated from the hull by void spaces. Sizes range from under 100' in length to over 600' in the case of some of the Great Lakes AT/B barges or Hawaiian Sugar's 14,000BHP integrated Catug design "Moku Pahu" / "HSTC-1".

Standard size inland hopper barges traditionally used on U.S. Mississippi river system are the so-called "standard" 175' x 26' carrying about 800 tons and "stumbo" 195' x 26' hoppers, both of which have actually long since been replaced as the norm by the "jumbo" 195' – 200' x 35' open and covered barges which can carry about 1,500 short tons of cargo. Traditional Mississippi River style inland river hopper barge hulls can be box-shaped, having square ends with no rakes and generally integrated into the middle of a tow, single raked or double raked – with boxes and single rake being the most popular. They may be open hold barges or have roll-top telescoping or lift-on/lift-off stacking covers. Open "super jumbos", which are 260' x 52.5' x 12' and generally built in the 1980s, can carry around 3,000 tons.... Inland grain barges on the Columbia



River in the Pacific Northwest developed independently from the Mississippi river style hoppers and are typically are 224' – 298' long with a beam of 42' and depth of 16.5'. These barges are capable of transporting from 2,100 to 4,200 short tons of grain and many times are fitted with self-discharge systems using augers. At least four or five new grain barges are being ordered due to improving grain exports and expectations of a record U.S. crop projected for 2012/13.... A vast network of rivers and waterways also link many ports in Europe and dry bulk barges on Western and Eastern European waterways can be either self-



propelled or non-propelled. A common size for non-propelled covered or open units is about 76.5m – 110.0m x 11.4m x 4m depth of hull with a deadweight ranging from abt. 2,700dwt – 4,500dwt. Unlike in the U.S., European inland waterborne container traffic is more common. Even in these weak economic times many European ports have reported an increase in inland transport... South America's Hidrovia river system, like the Mississippi, is a vast natural highway flowing for almost 2,200nm through navigable waters of the Parana, Paraguay and Uruguay Rivers and part of the River Plate. Thousands of barges carry iron ore, agricultural & forest products, containers, petroleum products, vegetable oils and other chemicals. Many barges operating on the Hidrovia river system are either former Mississippi River barges delivered as dry-tows or locally built barges of similar design – as a number of operators either started as



joint ventures or still have an affiliation with U.S. operators. UABL, a subsidiary of Ultrapetrol, for example operates about 570 dry and 77 tank barges in the region. Fluivalba's inland fleet consists of about 223 dry and 32 tank barges and InterBarge, affiliated with SCF Marine, part of the Seacor Holdings Group, has approx. 112 Mississippi River barges with an average 12 year age, to name a few of the many operators in the area. Not all barges operating on the Hidrovia system are former U.S. barges. Last fall, the Chinese shipyard Yuexin Ocean

Engineering started cutting steel in Dongguan for two of the twenty-four 61m, 2,600 ton river barges ordered by P&O Maritime Service Paraguay in addition to this month delivering the first 45m, triple screw, azimuthing river pusher "P&O Mburucuya" capable of pushing ten 2,500dwt barges at a reported 12.2kn speed.

Other types and sizes of dry bulk barges can be found on almost every inland waterway in the world.

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One unique inland hopper unit which Marcon has available as exclusive broker is the “Ms. Angel” and barges “LTO-1” and “LTO-2”. Although U.S. flag, this 595’ inland towboat / barge combination is closer to European style and is capable of transporting approx. 8,000 tons of aggregate, 345TEU (3 high x 5 across) or over-size project cargoes at speeds up to abt 14mph. The boat and barges were built in 2005 by Halimar Shipyard in Morgan City, Louisiana. Lines of the boat and bow of lead barge were designed by Development Center for Ship



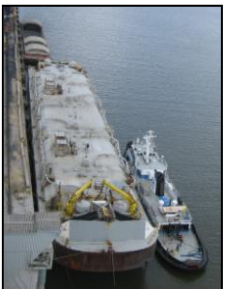
Technology & Transport Systems in Germany. Lead barge “LTO-1”, with her specially designed bow and a 540HP 4-channel thruster, is 275’ x 54’ x 12’ with a 221’ x 44’ open hold with a 10.3’ depth plus 3’ high steel coamings and a ½” plate bottom. “LTO-2” is 260’ x 54’ x 12’ depth with a 244’ x 44’ clear open hold. Both are pushed by the 60’ x 54’ x 12’, 3,000HP twin screw pushboat “Ms. Angel” fitted with a hydraulic retractable wheelhouse providing 17’ – 30’ height of eye.

A small version of a hopper barge is a steel or honeycombed fiberglass 61.5’ x 31.2’ x 12.0’ – 14.0’ covered Lash (Lighter Aboard Ship). A Lash or a similar Seabee barge would be loaded aboard a specially designed ocean going self-propelled barge-carrier or lash ship usually by a large onboard gantry crane. After completing the ocean passage, ships offloaded their barges into the water at the various ports or even open roadsteads when no ports were available and they were towed or pushed to the final destination. This allowed cargoes to be delivered to inland waterways and shallow water areas where a port infrastructure may not exist. Typical Lash barges had a grain capacity of abt. 20,100cft and were built in the late 70s / early 80s. Most have already been scrapped or sold off to alternate trades such as pontoons for floating structures, afloat and ashore storage and other purposes. One of the most creative uses we discovered for Lash barges was when Marcon sold several to an aquarium in Rotterdam.



Dump barges or scows are primarily used by dredging companies to transport dredging spoils to other locations sometimes miles away for disposal. These barges can be classed for ocean service or used in inland service only, and may be non-propelled or self-propelled. Non-propelled barges are more common in North America. Two common types are barges with the individual hold(s) having hinged transverse opening bottom doors controlled by hydraulics, wire or chain and hydraulically operated split-hull dump or hopper barges where the entire hold section of the barge is hinged and actually splits in half to release the cargo to fall to the ocean bottom. In both cases, the doors or split

sections are fitted with heavy rubber seals to contain the cargo. Hold capacities range from under 100 to over 5,000 cubic yard. Many dump barges are fitted with radio controls so that the tug can remotely dump the spoils at the designated location without having a man on board the barge. Marcon currently has 31 dump barges for sale worldwide, but only one 140’ x 40’, 850 cubic yard, 2007 built split barge in the United States. It is rare for “newer” U.S. flag dump barges to come on the market due to competition issues. The Owner expects that this barge will be sold shortly.



Another type bulk barge which does not come on the market often are self-discharge cement barges, designed and built for either inland or ocean service. These barges, up to 18,000 tons deadweight, generally have double-hull holds loaded by gravity and discharged by mechanical or pneumatic means. Unloading systems can be cement pumps with air slides and aerated cargo bottoms, Sauerman drag with a scraper bucket & cement pump, augers or pure pneumatic. Barges may be set up to discharge to other ships, barges, and/or trucks, and sometimes are fitted with an on-board bagging facility. In 2009, Marcon sold a 340’, 8,000dwt self-discharge cement barge in the U.S. Gulf Coast to West Coast operators and in 1989 sold an 18,000dwt double hull tank barge with integrated 7,200HP tug in the Canadian arctic to St. Mary’s Cement for conversion to a self-discharge cement barge. Marcon has one inland 800 ton barge and one 13,800dwt floating cement terminal for sale.

Marcon presently tracks 367 inland, coastal and ocean hopper barges of all flags with over 103 for sale. Historical data is also maintained on 866 hopper barges. Many inland units are sold in blocs of 10, 20, 30 or more under one listing. Since 1981, Marcon has sold 14 ocean hopper barges with an aggregate deadweight of 153,065 tons and over 120 inland hoppers totaling 180,000dwt. In 2010, Marcon sold 62 jumbo covered hopper barge with fiberglass lift covers and 13 jumbo open hopper barges all built between 2004 and 2008, along with 17 other type barges, in a single en-bloc sale.

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Marcon International, Inc.

Barges – Workhorses of the Marine Industry

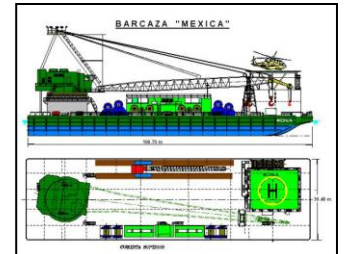
Crane or Derrick Barges

Crane or derrick barges are designed to support a crane or “A” frame and can either have the crane permanently installed on a pedestal mount or outfitted with wooden crane mats to distribute the load when used with an independent crawler crane. Sizes range from around 28’ x 10’ with a small knuckle boom crane to the 783.9’ x 164.0’ x 66.9’ self-propelled “*Lanjing*” capable of lifting 4,000 tons at 40m radius. Most conventional non-propelled inland and many ocean non-propelled crane barges have a bow rake and a square, box stern which provides maximum flotation when the crane is working over the stern. Many crane barges are also fitted with mooring / anchoring systems and / or spudwells and spuds to hold them in position while on the project.



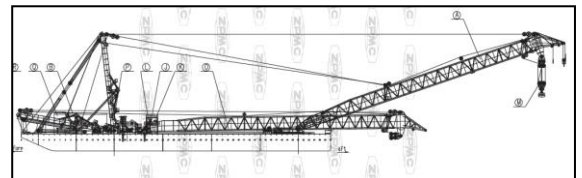
Two ocean crane barges which Marcon can currently develop for sale are good examples of the different types of non-propelled units available. The “*Mexica*” (ex-Derrick Barge No. 2 - our file DK34999), which Marcon has exclusively in our hands for sale, is a good example of a traditional ocean construction and crane or derrick barge designed and built for oilfield work. This 350’ x 100’ x 25’ barge was built in 1969 by Livingston Shipbuilding Co. of Orange, Texas and is fitted with a 550 short ton lift capacity AmClyde Model 52DE revolver on a pedestal mount and a 150 ton Link Belt LS-418 crane plus a six-point mooring system, accommodations for 238 persons and a heli-deck

suitable for a Bell-212 helicopter or equivalent. Both the drawing and photograph show the square, boxed stern mentioned above. Other operators of large ocean construction and crane / derrick barges worldwide include McDermott, General Construction, Offshore Specialty Fabricators, Swiber Offshore, Technip, Hyundai, Saipem, Guangzhou Salvage and Heerama, to name a few. As a side-note, the 100% indigenous Fenog Nigeria, Ltd. just christened their similar size / age combination derrick/pipelay barge “*Akpevwēoghene*” (ex-*Cherokee*) in Warri, Delta State, Nigeria purchased from Global Industries, Ltd. last year.



The ABS +A1 classed, 400’ x 100’ x 22’ “*Left Coast Lifter*” is a good example of a 1,750 ton lift capacity, floating sheerleg crane capable of heavy picks at high elevations, but unable to revolve without physically turning the barge itself. “*Left Coast Lifter*’s” hull or barge itself was built by U.S. Barge in Portland, Oregon in 2008 and comes with six removable barge stability floats, four 90’ long spuds, eight anchor winches and four spud winches. The crane, or more accurately, “A” frame itself was manufactured by ZPMC of Shanghai and has a 328.1’ long by 65.7’ wide boom with two 875mt hooks with a maximum lifting height of 246’ above the deck, an auxiliary 120mt hoist lifting over 300’ high and a 10mt lift whip with a max lifting height of over 295’. The boom and “A”-frame come with a skidding feature allowing it to boom down and collapse nearly flat with sea transport braces for transport at sea. “*Left Coast Lifter*” was built to place suspension bridge deck sections and lower tower portions of the San Francisco-Oakland Bay Bridge in San Francisco

Bay. As brokers only, we are inviting best reasonable offers for Owners’ consideration. Once very rare on the market, due to the present slowdown in marine infrastructure construction there are more floating sheerleg crane barges for sale today than at any time in the past. I look forward to that changing someday.



Some other operators of large floating sheerleg cranes worldwide include Smit, Asian Heavy Lift, Fukada Salvage, Smit Transport & Heavy Lift, Fratelli Neri, with 10 floating sheerleg cranes ranging from 120 tons up to an impressive 3,700 tons lift capacity in Fukada’s fleet alone.

Marcon presently tracks 354 inland, coastal and ocean crane barges of all flags with 82 now officially on the market for sale. Historical data is also maintained on 838 hopper barges. Since 1981, Marcon has sold 4 ocean and 18 inland crane barges.

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Miscellaneous Barges

One of these days when I have time I am going to have update our file number designations and break up what we currently classify as “*Miscellaneous Barges*” which include all barge types not already mentioned in this article. Presently the “MB” designation contains everything from accommodations barges to work barges including liftboats, jack-ups, pipe & cable lay barges, floating power generation plants, floating prisons, drilling rigs and a few that are truly unusual enough that can be called nothing else than a miscellaneous barge.

Accommodations barges or “*flotels*” (floating hotels) range from under 60' x 20' to over 400' in length, housing from five to over 800 persons. Most are converted from or built on new flat deck barges. The stacking of maritime approved portable quarters, galley and washroom modules on barges was the norm in the past, but since the 1990s accommodations generally have been purpose built. While a few former cruise-ships are still in flotel service, most modern units were designed for the specific trade and may also be fitted with added features such as sophisticated four – eight point mooring systems, cranes, watermakers, external firefighting,



heli-decks and, sometimes even, dynamic positioning. Some of the most sophisticated units today are semi-submersible accommodations rigs such as Prosafe's Pacesetter design 101.1m x 61.0m DP-2 “*Safe Regency*” which has accommodations for 644 persons, an eight-point mooring system, 100 ton crane, four azimuthing thrusters, six diesel generators with a total capacity of 13,225kW and classed FiFi-1. Marcon has 24 inland and offshore accommodations barges for sale across the world with accommodations from 20 to over 300 persons built from 1944 to 2012.

Liftboats are self-propelled jack-up barges and the early ones ranged from around 40' – 65' with beams of about 18' – 32' with basic quarters, a small crane and three legs pads capable of working in water depths up to around 50'. Most supported offshore exploration and production, maintenance and decommissioning projects, but they were also useful in marine construction projects. In 1955, Lynn Dean and his brother Orin, married the concept of a jack-up with a supply vessel. They lowered legs to the bottom and elevated the boat to the level of the platform. This provided a stable work platform that could be lowered and propelled to another platform. There were hundreds of the platforms to service - no short supply of work for the two brothers. They formed a company simply called Elevating Boats, Inc. to design, build, and operate their new vessel concept - the liftboat. As the years went on and drilling moved further offshore, these boats continued to increase dramatically in size. EBI's fleet today consists of approx. 30 liftboats of various sizes ranging from 48' long by 18' wide up to 150' long by 65' wide with leg lengths ranging from 47' to 200' and deck cranes from 5 tons with a 40' boom to 250 ton with 100' of boom. Marcon currently tracks 78 liftboats from 41' x 18' to 225' x 120' with legs up to 250' of length and two 175 ton cranes. At this time Marcon only has two available for sale out of competition, with max working depths from 46' – 60'. Earlier this year Seacor Marine purchased 18 liftboats in the U.S. Gulf of Mexico from Superior Energy Services for US\$ 134 million plus working capital. Seacor Liftboats LLC today operates a modern fleet ranging from 150' to 265' in length.



Pipelay and cable lay barges are basically a barge version of ships like Allseas Group's 984' x 133' pipelay ship “*Solitaire*” or Tyco's cable layers 467' x 69' 2001 – 2003 built cable layers “*Responder*”, “*Resolute*”, “*Dependable*”, “*Decisive*” and “*Durable*” in that they are designed and built or converted to lay pipe or cables on the ocean floor. The pipelay barges are generally outfitted with 8 – 10 point mooring systems, in some cases thrusters and dynamic



positioning and are capable of laying from 2" to 60" coated pipe diameter pipe. Deck gear consists of cranes, davits, tensioners, a stinger, welding & coating stations and accommodations for the many workers required to complete the project. Marcon currently tracks 48 pipelay barges from 164' to 554' in length with five listed for sale and seven for charter. Over the years Marcon has sold three pipelay barges from 256' to 350' in length. We also track 8 cable barges with none currently on the official market for sale and one available for charter.

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Since 1981, Marcon has sold fifteen “*miscellaneous barges*” including fish processing, lay, jetting and accommodations barges. One of the more unusual which Marcon sold last in 2011 was the unfinished newbuilding hover barge “*Monty*” sold by builder Sundial Marine Construction & Repair of Troutdale, Oregon, to private buyers. This unique hover or air cushion barge (ACB) was designed to hover about 5’ above the surface while carrying about 450 tons of deck cargo on a clear deck of abt. 9,000ft². She was originally built to transport cargoes of supplies in and ore concentrates out for Vancouver-based Redfern Resources, Ltd. of British Columbia, Canada to/from a multi-metal gold, zinc, copper and lead mine on the Tulsequah River in Canada, 40 miles northeast of Juneau, Alaska. With no roads in the area, the Tulsequah Chief Mine could only be reached from Alaska via the Taku River. “*Monty*”, reportedly the world’s largest hover barge, was designed to be capable of operating year-round over shallow water, ice and land, while being towed by a vessel during ice-free conditions in the summer and amphibious tractors such as Amphitracs or Rolligons with large, soft, low-pressure rubber tires over the ice and crossing open leads during the winter. From Juneau, Redfern intended to barge the ore to the Skagway Ore Terminal where it would be loaded on ships bound for smelters in Asia. The mining company declared bankruptcy in March 2010 and the barge was not completed. “*Monty*” was designed by Hovertrans, Ltd. and engineered by BMT Nigel, UK. She measures 210’ x 82.67’ with a 5.58’ depth of hull. She is built of DH-36 low temp (minus 20 degree Fahrenheit) steel with sound attenuated aluminum houses which contained the four muffled CAT 3412 diesel driven Woodcock and Wilson fans which provide lift in the hover mode. Electrical power was provided by a 150kW generator and hydraulics by two CAT 3126 power packs. The hover barge was also fitted with two Grove M977 hydraulic cranes, four 30 ton hydraulic deck winches at the corners and one main heavy-duty bow ramp the width of the barge plus two side access ramps.



Marcon International currently tracks a total of 3,586 barges worldwide with 645 officially for sale and 384 for charter. A day does not go by where Marcon does not receive at least one inquiry for a barge of some type or another. Even in today’s challenging economic conditions, good barges still hold their value and, depending on a client’s specific requirements, may prove to be difficult to locate. Since we opened our doors in 1981, Marcon International has sold 512 barges of all types worldwide. We expect to close sales shortly on four barges ranging from 180’ to 400’ in length.

Waterborne Commerce – Moving Cargo Efficiently Today & Tomorrow

How many times have you heard on the radio in the United States that CSX is “*How tomorrow moves*” and that one train can carry the load of 280 trucks? I am neither anti-rail nor anti-truck. They are all necessary for a strong and efficient transportation system, but how many times have you heard on the radio or read publically, openly and not buried in a maritime journal seen only by a very small percentage of the U.S. population that a single 1,750dwt loaded covered inland hopper barge can carry the same as 16 railcars or 70 semi-tractor/trailer trucks and that it would take 144 semi-tractor/trailer trucks or 46 railcars to carry the same liquid cargo as a single 27,500bbl loaded inland river tank barge. A hypothetical inland tow of 15 barges could carry the same dry cargo as 240 rail cars or 2,160 trucks. Based on 2009 figures, the amount of cargo carried on the Mississippi River, Ohio River, Gulf Intracoastal Waterway, Tennessee River, Cumberland River and Columbia River System in the Pacific Northwest is the equivalent of 51,000,000 truck trips annually. CSX touts that every year their train operations reduce the amount of CO₂ being pumped into the air by more than 6.5 million tons and that it would take 152 million tree seedlings 10 years to absorb that much carbon. Below is a comparison of emissions between the three modes of transportation. I’ll let you do the math.

Summary of Emissions - Grams per Ton-Mile - 2009.

	HC/VOC	CO	NOx	PM-10	CO ₂
Inland Towing	0.01423	0.0432	0.27435	0.007955	16.41
Eastern Railroad	0.018378	0.56189	0.34854	0.010351	21.35
Western Railroad	0.17272	0.5283	0.32758	0.009728	20.36
Truck	0.01	0.37	1.45	0.06	171.83

Inland towing can deliver 616 tons of cargo per gallon compared to 478 tons for rail and 150 for trucking with a negligible ratio of fatalities per million ton-miles for inland towing, 18.1 for rail and 132.0 for truck freight.

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Barges – Workhorses of the Marine Industry

North American Barge Construction News

Jeffboat, Inc. out of Jeffersonville, Indiana, the manufacturing segment of **Commercial Barge Lines** (formerly American Commercial Barge Lines), sold 65 new barges during the first quarter of 2012 compared to 29 in the prior year period. The manufacturing segment's external revenue backlog at the period end was \$75.8 million, approx. \$21 million lower than the March 31, 2011 backlog and approximately \$25 million lower than the December 31, 2011 backlog. Jeffboat expects to experience a decline in external revenue backlog through the remainder of 2012 as they complete the construction of third-party barges and shift their production capacity to the manufacture of barges for CBL's transportation segment. CBL is the third largest provider of dry cargo barge transportation and second largest provider of liquid tank barge transportation on the U.S. Inland Waterways, which consists of the Mississippi River, the Ohio River, the Illinois River and their tributaries and the Gulf Intracoastal Waterway, accounting for 10.9% of the total inland dry cargo barge fleet and 10.2% of the total inland liquid cargo barge fleet as of December 31, 2011. As of 31st December 2011, CBL operated 1,961 dry cargo and 316 liquid cargo barges.... **Conrad Industries, Inc.** sold six 297.5' x 54' x 12', 30,000bbl double hull inland tank barges during the first quarter of 2012, which were stock barges in progress as of December 31, 2011. The new business added during the first quarter of 2012 includes the signing of new contracts and sales of stock barges brings estimated current backlog to approx. US\$ 68.7 million, compared to US\$ 47.1 million as of December 31, 2011.... **Trinity Industries** of Dallas, Texas' Inland Barge Group reported revenues of \$169.4 million and an operating profit of \$30.0 million in the first quarter of 2012 which included a \$3.4 million net gain from the sale of 15 of the 17 barges in the barge lease fleet. This compares to revenues of \$137.9 million and an operating profit of \$21.7 million in the first quarter of 2011. During the first quarter of 2012, the Inland Barge Group received orders of approximately \$187 million, and as of March 31, 2012 had a backlog of approximately \$512 million compared to a backlog of approximately \$495 million as of December 31, 2011.... US Fab LLC of Portland, Oregon, a Vigor Industrial subsidiary, delivered a new 180' x 52' x 12' covered paper barge to Georgia-Pacific Consumer Products.

MarineLog and Colton Current U.S. and Canadian Shipbuilding Contracts as of 21st May 2012

Shipbuilder	Location	Type of Vessel	Customer	Yard #	Name	Description	Contract Price (\$mm)	Delivery
AMFELS	Brownsville TX	Jack-Up	Perf. Central		Papaloapan	Super 116E	205	Mar-13
AMFELS	Brownsville TX	Jack-Up	Perf. Central			Super 116E	205	Mar-14
Bollinger SY	Amelia LA	Tank Barge	Bouchard Tptn.	583	B. No. 250	55,000bbl		2013
Campbell Tptn.	Dunlevy PA	Deck Barge	For stock			114-ft.		Oct-12
Campbell Tptn.	Dunlevy PA	Deck Barge	For stock			114-ft.		Feb-13
Gulf Island	Houma LA	Liftboat	CS Liftboats			150-ft.		Jul-12
Metal Trades	Hollywood SC	Tank Barge	U.S. Navy	12				2012
Metal Trades	Hollywood SC	Tank Barge	U.S. Navy	13				2012
Patti SY	Pensacola FL	Crane Barge	Corps of Engineers		CB 1201			Dec-12
Signal Int'l	Orange TX	Dry Bulk ATB	Kirby Ocean			20,000dwt	47	May-12
Signal Int'l	Orange TX	Dry Bulk ATB	Kirby Ocean			20,000dwt	47	Dec-12
Steel Style	Newburgh NY	Crane Barge	Corps of Engineers				9.0	Mar-12
Vigor Industrial	Portland OR	Deck Barge	Young Bros.					2012
Vigor Industrial	Portland OR	Deck Barge	Young Bros.					2012
VT Halter	Pascagoula MS	Tank Barge	Crowley Marine	1994	750-2	330,000bbl	85	2H 2012
VT Halter	Pascagoula MS	Tank Barge	Crowley Marine	1995	750-3	330,000bbl	85	2H 2013
Zidell Marine	Portland OR	Tank Barge	Harley Marine	680		31,500bbl		Mar-12
Vancouver SY	N. Vancouver BC	Tank Barge	Seaspan Int'l.					

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