

Upstream to Kopi

By

Geoff Walker

One afternoon, just after returning from lunch, I was sitting in my office in Singapore when the phone rang. It was an old friend from my seagoing days, who now resided and worked in Australia as a Marine Advisor for a large conglomerate engaged in the development of LNG Pipeline project in remote Papua New Guinea. Since I was General Manager of an offshore company operating a significant fleet of specialized ocean-going vessels, and related equipment designed for the Oil and Gas sector, the crux of my friend's enquiry was to seek my views as to the viability of towing a 300man accommodation vessel up the **Kikori River** to a small township called **Kopi**, in remote Papua New Guinea.

The logistics Base at **Kopi** was situated almost 40 river miles upstream from the mouth of the **Kikori River**, about 10 miles further upstream from the main regional township of **Kikori**. My clients had established a significant development and distribution facility at Kopi in support of a major LNG project. Entry to the Kikori River delta was at the head of the relatively wide **Pai Inlet**, which was mainly used by log ships. The river was extremely fast flowing and had its source at **Lake Kutubu**, which flows into the Kikori River, then out into the Gulf of Papua.

The telephone call was indeed fortuitous, because my employers had recently acquired a new building accommodation/work barge of almost identical specifications, as was proposed for the job, on a long-term Bareboat Charter. I later discovered that the phone call was not entirely coincidental, since there are few secrets in the O&G sector.

A feasibility study conducted by my operations staff gave an initial indication that the Kikori River did not have the water depth to allow for the safe navigation of such a vessel 40 river miles upstream. However, I knew the inland rivers of PNG from previous experience and considered we were in with a reasonable chance, reasoning that there would be more water depth once past Paia Inlet and into the narrows of the Kikori River. The river was also influenced by tides in the lower reaches where the shallowest water would likely be encountered. With this rational in mind, I decided to explore options more thoroughly.

My first reaction was to organize with the potential charterer to arrange a trip upstream on one of their small coastal craft, from Paia Inlet to Kopi. This little boat was operated by a couple of Australians who kept the 2.5m water depth theory on the boil. True enough, at low water there was only about 2.8m water depth in certain places of Paia Inlet but in other areas it ranged between 5-7m and of course it was tidal towards the estuary. I worked on the premise that if 5000 DWT log ships could cross the shallows and reach deeper water close to Gouri logging camp at the head of Paia Inlet, then so could our Barge with a minimum draft (even Keel) of around of 3.2m. If we could cross the shallows with minimum fuel and fresh water on board at the top of the tide and safely reach the entrance to the Kikori River where the water was deeper, albeit in very narrow channels, then there was an excellent chance we could reach Kopi where we could replenish our consumables.

Having completed the trip up to Kopi, (and parts of the Ivy River which I thought may be an alternative route), I became more convinced that the venture was feasible, so I set about talking with local River Pilots, who endorsed my reasoning. Having completed my investigations, I took the Twin Otter charter flight from Gobe to Port Moresby, where I planned to meet with the potential charterers at their offices to discuss the pros and cons of the intended mission. The worst-case scenario was that the barge would ground on soft mud or sand, and sustain no damage as it was flat bottomed, to refloat again, on the next rising tide. After much discussion, the charterers confirmed they wished to proceed so I returned to Singapore on the first available flight with the view to holding discussions with our Managing Director and Board of Directors.

The 12month (extendable) charter at a very lucrative daily hire rate certainly aided their decision making, but I was at lengths to point out the strictest safety procedures must be observed, I would conduct a very in-depth Risk Assessment, and at the first hint of anything untoward I would pull the barge out and proceed to Port Moresby, whilst we reassessed the situation. They fully agreed, so I started the ball rolling by tracking down two of the very best river helmsmen that had served with me when I worked on the Fly River, some years earlier.

The national shipping community in PNG is quite small so they were not difficult to trace. When offered the job they both accepted immediately. Obviously, the high pay and good conditions (compared to local standards) which I offered, played significantly in their decision making. They needed to be at ease with their working conditions so they could focus exclusively on the tasks ahead, besides, in reality it was their local river knowledge that would make or break our enterprise, since they would be on the tug designated for the river tow. They knew all the deep-water channels and shallow patches and I had no hesitation concerning taking their advice seriously, since we had worked together previously with good results. I wanted to hire their “River Savvy”, the technicalities I could handle.

The Barge was located at Batam, in Indonesia, just across the Singapore Straits, so once the Charter Party had been agreed, ensuing weeks comprised of preparing the barge and selecting the most suitable crew. I was fortunate to be able to secure the services of a very experienced Barge Master from Australia, who had worked in Papua New Guinea for years. The venture was all slowly starting to come to fruition as our plans were converted into realities. In the meantime, I had become engrossed in numerous scenarios and calculations that would provide optimal stability at minimum draft – I finally came up with a solution that provided an even keel minimum draft of 3.2m. There was no scope for error so I checked and rechecked until I was fully satisfied.

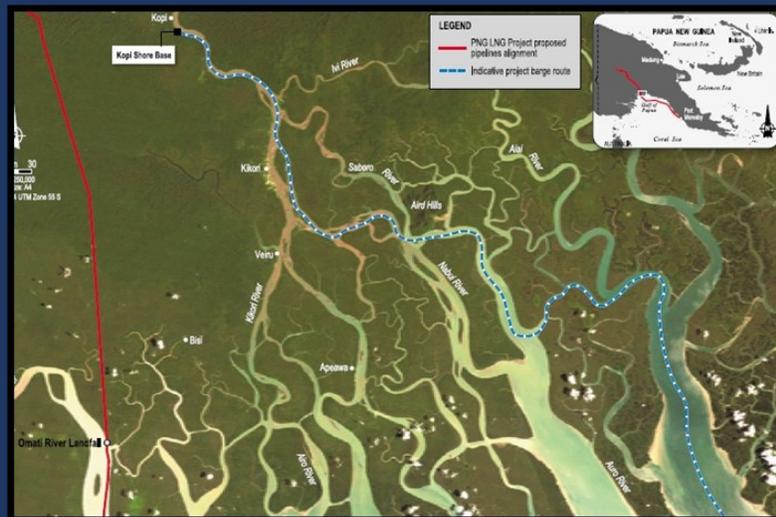
Included in the charter was one of our ocean-going Tugs, one of the 6000 BHP Class, ideally suited for the tow from Batam to Paia Inlet, located at the head of the Gulf of Papua and which was the point of entry to the Kikori River. Our intention was that our tug would tow the barge as far as Paia Inlet, then transfer the tow to one of the charterer’s smaller inland tugs (small but powerful little ships) which they used for towing barges up to **Kopi**, to complete the upstream part of our tow. In the meantime, our tug would proceed to Port Moresby to stand-by until the Accommodation Barge had safely arrived in Kopi and was situated alongside the main wharf, before returning to our base in Singapore. Our two PNG “River Pilots” who would be-in-charge of the river transit, would be onboard the towing tug from Paia Inlet to Kopi. I would be on the accommodation barge maintaining the closest radio communications with them.

We were fortunate inasmuch the intended tow to Papua New Guinea would be during the inter-seasonal Monsoon period, so under normal circumstances we could expect relatively benign conditions for the ocean passage. Nevertheless, it was decided that the Accommodation Barge would be crewed with essential personnel only during the passage for security and safety purposes. This would also give the crew who would be remaining with the Barge at Kopi an opportunity for some degree of familiarization and to redistribute ballast water as stipulated in my calculations to ensure arrival at Paia Inlet on an even keel of 3.2m, after her ballasted ocean passage trim.

Below, the identical sister to the 300 passenger, Accommodation Barge towed to Kopi - pictured at anchor off Batam Island, Indonesia.



(Unknown Photographer)



The tow route of the Accommodation Barge to Kopi – Approximately 40 miles inland, up the treacherous Kikori River. (Best viewed @150%)

Once all was in order with our Ocean-going Tug and Accommodation Barge we set off. I arranged departure for 0700 Hours so that the tow would be well clear of the Singapore Straits by the onset of darkness. This was important because only weeks before one of our towing combos almost came to grief when rundown by a rogue vessel (which turned out to be Iranian manned). The tow was cut but fortunately there were no casualties. All because the vessel did not observe the Anti-Collision Regulations or the officer of the watch on the offending vessel who obviously did not know of their existence. The rogue vessel did not stop but just continued, on her way, as if nothing had happened, which we later found out to be Hong Kong. However, the incident was reported to both Singapore and Hong Kong Marine Authorities.

The sea distance between Batam and Paia Inlet was about 2700 Nautical miles, so at an average speed of 5 knots it was estimated to take just over 21 days. So, the towing combo departed from Batam on its voyage to Paia Inlet. We also sent along another Tug to act as an escort and safety vessel in case of any emergency.

The voyage was uneventful, and the accommodation barge arrived at Paia Inlet on schedule. I had travelled to Papua New Guinea a day or so earlier, took a small charter flight to Gobi Airfield which serviced **Kopi**. The one hours drive to Kopi was hell, potholes in the rough jungle road the size of dustbins. Once I had arrived at Kopi and recovered from the hellish drive I embarked on the same fast workboat on which I had undertaken the initial river survey, for the trip downstream to Paia Inlet. The two Aussie crewmen were still on board, just as skeptical as ever. Our intention was to send this workboat upstream about a mile ahead of the main tow to warn us of any rogue illegal log barges coming downstream and to check water depths. In fact, upon my arrival at Paia Inlet I found it to be quite crowded with several medium size log ships busy loading their timber cargoes. Amongst them was our Accommodation Barge at anchor, with the towing arrangement already connected up to the tug, that was to perform the tow upriver to Kopi. The Barge was nicely trimmed exactly as prearranged. Our other two vessels were there obviously, awaiting my instructions.

A review of the tide prediction charts indicated that they were rising over the next 3–4-day period, which was advantageous to us, so we decided to remain at anchor overnight and commence our tow at first light the following morning. A good survey of the Accommodation Barge's draft confirmed it was exactly as predicted, 3.2m even keel. At my request our charters had provided an additional, small shallow drafted tug, which we intended to secure to the stern of the Accommodation Barge by means of a short towing wire, to act as an "Emergency Stop", a safeguard in case our towing tug grounded ahead, to prevent the Barge colliding with the grounded tug.

There was no difficulty navigating Paia Inlet and we reached the delta of the Kikori River incident free. The river was quite high and consequently flowing fast. As we slowly progressed upstream some of the river bends became quite acute, causing the barge to drift sideways as we rounded the bends, gently brushing the soft muddy riverbank. It should be remembered that the Accommodation Barge was 100m long, add to which was the length of towing wire from tug to barge (which was maintained as short as possible due to the narrows and extreme bends encountered in the river) so some lateral movement or drift, was only to be expected when rounding the sharp bends. In any event the riverbanks comprised only of the softest of mud, so no damage was sustained to the Barge when it brushed the riverbank; the worst was a few tree branches on deck which was easily remedied.

The surrounding jungle started to crowd in on us as the river continued to narrow. Our small picket boat that was running ahead reported that the river broadened about 1 mile further upstream and that slightly less water was detected. As the tide was on the ebb there was every possibility we could ground, but at least we were ready and prepared for the eventuality. True to prediction we grounded about 15 minutes later, right on the river bend that had been reported by the picket boat. The riverbed was even and flat, so we sat comfortably. At this point we had transited about 15 miles upstream, it was about 3pm and the next high tide was estimated to be about midnight at our river location. We would be monitoring the rise in water and ready to move once we refloated. Meantime the picket boat was on station about one mile upstream acting as our sentinel.

By 9pm the water had risen sufficiently, and we floated free, once again we progressed slowly upstream. Our guard ship reported that there was a long reach a little further upstream – this is where I intended to run an anchor fore and aft and hold up until daylight. This was a safety measure because of two reasons; from this point upstream the river bends became far more acute and navigation at night was not recommended in addition to which, our worst nightmare was illegal log barges moving down stream under the cover of darkness. The illicit logging barges were usually more active at night. Navigating upstream during darkness is quite common in Papua New Guinea, using powerful searchlights is amazing how well the riverbanks are illuminated. Additionally, the many deck lights on the Accommodation Barge set the surrounding jungle alight and created a loom that could be seen for miles, hopefully as a warning to any rogue loggers. We had tried to keep to one side of the channel, as much as water depth permitted, leaving sufficient room for any downstream river traffic to pass.

At about 1 am we were alerted by our picket vessel to a motorized barge loaded with logs detected moving downstream in our direction. The crew on the safety vessel had attempted to warn the log barge of our presence. No acknowledgement was received from the river barge. Some 15 minutes later we heard the engines of the approaching craft. The noise of her engines was very distinct in the still quietness of the jungle which engulfed us on every side. Sure enough, she soon emerged and having sighted us thankfully moved to pass down our Port side, clearing us by about 10 meters. Even then there was not a sign of any movement on board of her, no lights, nothing. Fortunately, that was the only vessel we encountered, but it clearly indicated the dangers involved and posed by such illegal ships of the night and the absolute necessity for a picket boat.

By 9am we had recovered our anchors back to the “Cowcatchers” and were once again underway towards Kopi. Slow but steady progress was made. As the river looked quite full, I anticipated a clear run all the way to Kopi. We negotiated the sharp river bends without much difficulty due to the skill of our 2 local river pilots and by lunchtime we were passing the township of Kikori (really, little more than a large village of ramshackle array wooden huts and buildings). Our towing combo attracted many onlookers who came out in their canoes – perhaps many had never seen a vessel of our size previously so far upstream. Kopi, was only about 10 miles further upstream, so all going well we should arrive and be anchored by 4-5 pm.

The remainder of the tow was uneventful and by 4.30pm we had laid a spread of 4 anchors, in mid-stream. Each anchor being marked by a yellow buoy. Naturally, we were soon visited by various managers and section heads from the Logistics Base, all eager to see their new “floating hotel”. The plan was that we would remain mid-stream for several days whilst preparations were made to secure permanently, for the duration of the charter, alongside the main wharf. Then we would take on

freshwater and diesel ready for the catering contractors to join, followed the next day by the “residents”. Every possible safety precaution had been undertaken in the operation which resulted in an incident free and safe river transit. The only moment of anxiety being the illegal logging barge.

Once I was satisfied all was under control it became necessary for me to negotiate that terrible jungle track in a four - wheel drive vehicle to Gobe Airfield, to get the charter flight back to Port Moresby. The treacherous road was littered with potholes the size of which cannot be imagined and if you fell into one, perhaps you would never be seen again!

I considered the Barge Master aided by our two river pilots was more than capable to place the Accommodation Barge alongside the jetty. I had instructed the barge be swung and berthed starboard side alongside, bow heading downstream, so to make matters easier when departing or casting off in case of emergency.

I was quietly pleased we had satisfied our charterers and clients; my team had achieved the objective of a safe arrival at Kopi, despite all the earlier noise made by various skeptics who had now become conspicuous by their silence. Having arrived back in Moresby I went to our client’s office to present my report. After a rather heavy night at the Airport Hotel Bar with the charterers, I boarded the flight the following afternoon back to Singapore.

The Accommodation Barge performed very well and was popular by all who stayed on her during her stay at Kopi, remaining on site for about 11 months when she did depart and return to Singapore, the Kikori River was running very high (and fast) but she had an incident free trip down stream to Paia Inlet where she once again rendezvoused and connected to her towing tug for her passage back to Singapore.

End

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