

JUDGMENT : Mr Justice Morison : Commercial Court. 10th October 2003.

1. There are two issues before the court. First, have the defendants [Petco] established on a balance of probabilities that the cargo of oil which they received on board the DEVON from the cargo tanks of the CENTAUR during a ship to ship transfer [STS], contained more than the permitted level of water? Second, what is the nature of the contractual liability for demurrage and are Petco liable to the Claimants [Fal Oil] for it? The first issue is much the more important. The parties have engaged two distinguished experts who disagree. The case was well argued and the quality of the evidence was high. There is one witness, Mr Pantouvakis, a cargo examiner employed by Saybolt Oman whose credibility and competence is, indirectly, in issue. Saybolt were appointed by both parties to attend the STS and make measurements and take samples on both vessels.
2. The places involved in this dispute are Yanbu, a refinery and port in Saudi Arabia in the Red Sea where the CENTAUR was loaded with the cargo; Port Sudan, a Yemeni port, also in the Red Sea, outside which the STS took place; the Caltex oil terminal in Singapore Harbour where discharge commenced; the Feoto Terminal in the port of Pasir Gudang, Malaysia, where the cargo was finally discharged.

Findings of fact in relation to the contamination issue.

3. The CENTAUR was constructed in 1975. At the relevant time she had ten cargo tanks [6 centre tanks and two on either side, together with 2 slop tanks one on either side] available for cargo. There are four segregated ballast tanks (for ballast water), two on either wing. CENTAUR is a 42,585 gross tons oil tanker. DEVON was built a year later with a slightly higher gross tonnage of 44,993. She had 9 cargo tanks, two slop tanks and four ballast tanks: 2 forward and 2 midships. The cargo was approximately 75,000 tons of high viscosity oil. Its viscosity gives the cargo a density similar to water, namely 1. The weight of a cargo is calculated by multiplying the cubic metric volume of the cargo by its density. For all practical purposes, in this case the weight of the cargo is equivalent to its volume in cubic metres. Even with a cargo of this density, water is marginally more dense, and, if in the cargo, will tend to settle down in the bottom of the tanks.
4. There are three ways in which a cargo can be sampled: a running sample where an open sample can is lowered through the tank and then retrieved; a spot sample where a closed can is lowered to a particular spot and its cork is then removed and the sample taken from that particular point; a line sample where a valve is located on a line through which the oil is passing whilst being pumped from one location to another [especially from or to shore tanks] diverting a sample to a tap from which the sample is then drawn.
5. The cargo originated from Yanbu. The shore tanks there were inspected by Saybolt, a well recognised and respected company which, amongst other things, carries out inspections of this sort of cargo. Two inspection certificates of quality were issued by Saudi Aramco-Mobil. The oil had been tested at the refinery laboratory. Both certificates were stamped and countersigned by Saybolt's Saudi Arabian offices. These certificates show that the water and sediment content of the oil in the shore tanks was 0.2% compared with the contractual specification, which permitted a level of water up to 1% of the volume of oil.
6. According to a bill of lading dated 25 February 2001, a total of 75,363.23 tonnes of the oil was shipped. Immediately prior to loading, the cargo inspectors checked CENTAUR's tanks. They found a minimal amount of cargo left in the tanks, and no free water was found. After loading, the vessel's tanks were inspected and the measurements showed that there was slightly more oil loaded than recorded on the bill of lading, but the difference was small and well within the tolerances for this type of bulk cargo.
7. CENTAUR anchored off Port Sudan shortly after noon on 26 February 2001, and was boarded by Mr Pantouvakis, a cargo inspector employed by Saybolt's Oman Office, about three hours later. He had had to fly to the Yemen in order to carry out his inspections during the ship to ship transfer. He had spoken to Captain Nannos, who was in charge of Fal Oil's shipping operations. The latter did not come to give evidence; he refused to do so having ceased to be employed by the Claimants nearly two years ago. I can understand him not wishing to become involved in a matter which took place shortly before he left his employment. But his absence is regrettable and, apparently, rather sudden – a decision he took a week or two before the trial was to begin. As he is an overseas witness his written witness statement was admitted into evidence, for what it is worth. On the question whether there was anything unusual or suspicious about Fal Oil asking the surveyor to call Captain Nannos "just to confirm all is OK" the evidence is clear. First the request was made in the context of travel arrangements: "We understand surveyor is going to get the flight on Thursday 22 February, however, before embarking the 'plane, surveyor is to call Captain [Nannos] just to confirm that all is OK." Second, this was a request made on 20 February, before CENTAUR had sailed from Yanbu. Rather than have the surveyor wait around for the vessel's arrival at the STS point, it was sensible to request that he telephone the Claimants' operations department to check that what was planned was in fact going to occur. Third, Mr Pantouvakis, whose evidence I accepted as the truth on this issue, is a professional cargo examiner and he confirmed that this was what the telephone conversation was about and said that such requests were quite normal. Finally, the instructions to the surveyors contained in this telefax transmission were sent to the Defendants' Dubai Office. There was nothing covert about it. Fal Oil confirmed in evidence, [Mr Babrawalla, the senior trading manager at the time] that this was the first occasion they had come across Mr Pantouvakis, as he was located in Oman and Oman "is not our territory". Petco clearly remain suspicious about Fal Oil's involvement in the contamination of the cargo, but I regard the implicit suggestion that 'special instructions' were given to the surveyor over the telephone behind Petco's back as quite implausible. I did not need Captain Nannos' evidence on this point to confirm this conclusion.

8. There was a slight swell at the time [about 2 metres] and Mr Pantouvakis was taken alongside the CENTAUR and did not, or did not have a chance to, read the vessel's depth in the water: both because he was taken to the vessel in a boat over which he had no control and was taken straight to the gangway, and because the swell made an external reading of the marks on the hull quite difficult. He therefore relied on what he was told by the crew. The crew gave him the draft figures which pertained when the CENTAUR sailed from Yanbu to the STS. On sailing from Yanbu, apart from the cargo of oil which had been loaded, CENTAUR carried 2,700mts of water distributed between the forepeak ballast tank [1200mts] and two tanks amidships [750mts each]. At some stage she discharged most of her ballast, leaving a total of 70mts. Whether the discharge occurred en route to the STS location, some 23 hours sailing time from Yanbu, or immediately before the STS itself is not known. The effect of discharging the ballast water might, according to Mr Severn, Petco's expert witness, have altered the draft by some 36cms, the recorded draft being 14.15mts fore and aft [even trim] and would have affected the trim. If the trim were affected then the ullage readings would have to be adjusted: the cargo tank testing points being slightly aft of centre. Mr Pantouvakis was of the view that the trim effect would be "small" "even maybe no change". As he said, he did not have the "ship's particulars, ships plans" but "according to my experience I am not expecting much of the trim difference". In my view, given the sea state the effect on trim might well not have been noticed or noticeable to those on deck taking measurements.

9. Mr Pantouvakis did not take any samples from CENTAUR's cargo tanks. According to his log or time sheet, he went on board at 15.00 hrs and started his "tank inspections" at 15.40 hrs, completing them at the end of one hour and completing his cargo calculations at 17.00 hrs, around the time when the DEVON was coming alongside. Each of the ten cargo tanks and the two slop tanks were all measured and he calculated the metric tonnage loaded on board this vessel, pre-transfer, as 75,438.548, which is very close to the measurement of the cargo when loaded at Yanbu [75,440.878]. There are no grounds for suggesting that the ullage report which Mr Pantouvakis prepared was other than genuine. He has not simply copied the Yanbu ullage figures. It is noticeable that all Mr Pantouvakis' ullage figures are slightly different, as one might expect, from the measurements at Yanbu, where the vessel was moored alongside. The ullage report he prepared confirms that no free water was found in any of the cargo tanks on the CENTAUR prior to the transfer. He had used MMC tape [Marine Moisture Control] for this purpose, and was entitled by industry practice to do so. It must be recognised however, that detecting water in this sort of heavy viscous cargo is difficult. According to a tank inspection report timed at 18.20 hrs, the cargo tanks on the DEVON were inspected. Mr Pantouvakis told the court that the crew had opened up the tanks and, using a sounding rod with water finding paste, he detected a total of 45.9cms of liquid oil on board and no free water was found.

"Having conducted pre-transfer inspections on both vessels and finding that they were suitable to commence STS operations, I issued the relevant documents to both vessels which were signed by the relevant Chief Officer or Master and copies were given as per our Receipt of Documents Report."

According to the Time Sheet, STS operations commenced at 19.12 hrs on 26 March 2001 and were completed at 21.12 hrs on the following evening. The DEVON commenced de-ballasting about 50 minutes later and de-ballasting continued until 17.00 hrs the following after-noon. DEVON had been carrying about 21,000mts of water in its permanent [segregated] ballast tanks. At the end of de-ballasting she was left with 4,500mts of water. Her sea valves were checked closed, and sealed. After the STS was complete, or possibly whilst it was under way, the CENTAUR took on board approximately 21,750mts of water, although the time sheet does not record when this was done.

11. Mr Pantouvakis says that as the STS commenced he and the Chief Officer of DEVON took samples from the DEVON's manifold "in order to check for free water". And drip samples [intermittent manifold samples] were taken from time to time thereafter. The drip samples were collected into two canisters, each holding about 15 litres, and after they were combined they were transferred to two 1 litre sample cans. The cans were sealed in the presence of the Chief Officers of both vessels, and one was retained by the CENTAUR and one was given to Barwill, Fal Oil's port agent in Sudan. No analysis has been carried out on these samples which can no longer be found. The evidence shows that the port agents apparently mislaid their sample and that CENTAUR's sample no longer exists. So far as Mr Pantouvakis is concerned, I have no reason to doubt that such samples were taken and sealed as he told the court. The lack of information about what happened to the samples is tiresome, but I do not infer that they have been mislaid on purpose. Such a suggestion carried with it the unspoken assumption that Fal Oil knew that water had been added to the cargo discharged into the DEVON. If that were so, then the whole of Fal Oil's case could be described as dishonest. There would need to be some good evidence which would justify my drawing such an inference. There is not.

12. When the STS was completed, Mr Pantouvakis proceeded to sample the DEVON's cargo tanks. Petco had asked, as a condition of their agreement to an STS operation, that the "quality of each sample taken from individual tanks of daughter [the DEVON] to meet the contractual quality". That request was accepted by a telefax the next day. However, on 20 February 2001 Fal Oil nominated, and jointly instructed, Saybolt Saudi Arabia "as an independent surveyor to attend the STS transfer and conduct a [quality] and [quantity] survey as usual".

This communication was copied to Petco and seen by Ms Lim, who manages Petco's fuel division. She was a very good witness and the direct and open way she dealt with questions was refreshing. She did not question these instructions to Saybolt who were effectively the parties' joint agents, even though the express requirement that samples should be taken from individual tanks on DEVON did not feature. In my view she cannot be criticised. The

words "as usual" might well have meant to her that separate samples were to be taken (and kept) from each of the loaded tanks. Indeed, that would have been normal industry practice when sampling a loaded cargo whilst the vessel was alongside. In fact, Mr Pantouvakis did take samples from each of DEVON's tanks after the STS, but then composited them and divided the one sample into four portions. This means that there is no sample for each individual tank containing the transferred cargo. I am satisfied on the totality of the evidence, assisted by both experts, that making a composite sample was not contrary to industry practice. In any event, there were good practical reasons why a composite sample was a sensible way for Mr Pantouvakis to proceed in this case. He had travelled by air and did not bring with him sample containers and could not have travelled back with full ones. Provided that the samples were properly taken then a composite was a fair way of measuring the amount of water within DEVON's tanks. The description I received of the process of sampling makes it clear, I think, that using MMC equipment is not as reliable as one might wish, with a cargo of this viscosity. First, the sampler can does not 'pick up' liquid which is right at the bottom of the tank, because the opening through which it collects the sample is located about 30 cms above the bottom of the can. Second, with a cargo of this density, water is likely to become entrained within the cargo and can be found at different levels within the cargo, rather than being found at the bottom of the tank. Third, the thickness of the oil will tend to 'rub off' the water paste put on the tape, both as the sampler is lowered and when it is raised. The industry is aware of these difficulties and they are the subject of much discussion.

13. Making a composite sample requires a calculation of the different tank volumes so that the compositor may work out what proportion of the total oil recovered should come from which tank. The right amount then needs to be poured into a measuring can so that the proper proportions can be checked and then the measuring can needs to be carefully mixed before the contents are transferred to 4 different receptacles, for subsequent testing. Doing this task on board a vessel in a swell cannot be easy and there is obvious scope for miscalculation and error. Mr Pantouvakis explained what he did and he was confident that he had properly carried out the sampling and compositing processes in this case. He is a very experienced cargo examiner. On the basis of his work after the STS had occurred, the cargo in the DEVON contained no more water than was permissible under the contract: .25%.

14. But during his measuring process he had encountered traces of water in DEVON's cargo tanks, and in his judgment that required a letter of protest to be prepared and signed. He had contacted the Saybolt offices for their guidance and I infer that what he did met with their approval. He recorded his findings on a Saybolt form which is used by their surveyors. He also recorded his findings in the letter of protest which was formally addressed to both Masters.

He wrote:

"This is to advise you that we, Saybolt, as Independent Surveyors on behalf of our clients wish to draw attention of all parties to the following:

During measurements of MV "DEVON" we found traces of water as follows:

.... Because of the nature of the cargo (high density..) and because it was not possible to verify exactly the total amount of water the final amount of water will be verified at Discharging Port when the free water will be settled."

When he found the traces of water "I did these measurements by asking also Chief officer of CENTAUR to come down on the DEVON. Okay, and we check it very carefully all the waters and we agree on the figures and they sign it also both Chief Officers." He was asked whether he thought that there was more water than he had been able to measure. He explained that because he did not know whether he was finding 'pure water' or water and oil mixed together, the figures he measured were the maximum and at the discharge port the actual amount of water could well be less. He did not have a bottom sampler with him and he said that taking a bottom sample was much more easily done in the port. He said that if he had thought he had a big problem on his hands he would have considered calling his clients "but the problem is not so big. 275 cubic metres of water in a tank of 85,000 is not a big problem. I can say 80% of the loadings on fuel oil is similar to that." The 275cms of water would have resulted, when added to the 0.2% already measured at Yanbu, to a quantity of water representing 0.36% of the whole cargo, which was well within specification.

15. After the STS had been completed, then the tanks on the CENTAUR were checked and Mr Pantouvakis found that all cargo tanks were empty except for 17.3cms of non liquid material. Mr Pantouvakis said, and I accept, that he visually inspected the ballast tanks and could neither see nor smell oil in them.
16. The DEVON set sail from the STS point shortly after noon on 28 February 2001.
17. DEVON arrived at the Caltex terminal, Singapore Harbour, on 17 March 2001 and she was made fast at 9.20 hrs in the morning. At 11.30 a survey of her cargo tanks carried out by SGS, reputable cargo surveyors instructed on Petco's behalf, revealed that there was no free water within the cargo. I have no doubt that this survey was carried out using the same method as Mr Pantouvakis had used. Discharge commenced at 14.35 hrs and approximately 12,250mts were discharged although rather more was recorded as received into the Caltex tanks before the discharge was stopped at 22.50 hrs because an unusual amount of water had been found in shore line samples. One test at 16.45 hrs showed a water content of 31.4% and at 19.30 of 12%. After discharge had ceased, the tanks were again tested and there appeared to be water contamination in excess of the specification. For example a figure of 6.4% was found in cargo tank 2 Starboard. Captain Singh, of Redstar Marine Consultants, based in Singapore, who had been engaged by Petco as expeditors of the cargo, issued a

letter of protest to the Master of the Devon complaining about a number of defects which he had noted. He told me that he did not think that what he was complaining about could have caused a sufficient ingress of sea water to account for the findings which were made. Caltex ordered the vessel off its berth to await further instructions, and she anchored at the Western Petroleum anchorage. DEVON re-berthed again at Caltex on 20 March 2001 at 23.30 where here cargo tanks were measured again. Caltex had instructed their own surveyors [Pacmarine, Captain Sawant] to make a safety inspection and concluded that the DEVON was unfit to conduct cargo operations at Caltex's terminal and accordingly she was required to leave. DEVON berthed at Feoto on 23 March at 12.20 hrs. Further samples were taken of DEVON's tanks and traces of water were found which showed an average water content of 0.6% although high water readings were found in 2 port and 3 centre tanks. After discharging part of her cargo, DEVON was ordered to leave Feoto, after the shore tanks had reportedly been measured as containing 1.0% water. Tests confirmed that the water in the fuel oil was mostly sea water. Petco and Feoto both started legal proceedings against the DEVON, and Petco's action has only recently been stayed pending these proceedings.

The submissions of the parties

18. For the Claimants, Mr Millett QC submitted that

- (1) The burden of proof lies upon Petco to prove, on a balance of probabilities [ie that it was more likely to have occurred than not] that the cargo was contaminated with water in a quantity which exceeded the 1% limit "at the point it passed" the DEVON's manifold. Petco's approach was wrong in law. Petco appeared to say that either the water came from the CENTAUR or from the DEVON; if it can be shown that the water probably did not come from the DEVON then it follows that it probably came from the CENTAUR. But this is wrong, and repeats the error identified by the House of Lords in the *Popi M*.
- (2) Petco say that 1500 tons of water were discharged at Caltex/Feoto. That meant that there must have been a transfer of oil for water. Where did the 1500 tons of oil go to? Such a quantity would have been detected had it been discharged overboard at Port Sudan, during the voyage to Singapore or at the Caltex terminal. Petco are unable to answer this question and the answer to it must remain a mystery; hence Petco lose on the burden of proof.
- (3) In any event, the Court can safely rule out the possibility that water was in the cargo holds of CENTAUR when the STS took place and was somehow transferred to DEVON. The shore tank sample at Yanbu shows that the oil transferred to CENTAUR was within specification and showing a level of water which could be expected with this type of cargo. It is most unlikely that the shore tanks at Yanbu would contain any sea water. CENTAUR was inspected on her arrival at Yanbu by independent surveyors [Saybolt Saudi Arabia] and her cargo tanks and voids were inspected and the vessel was pronounced fit for loading. The discrepancy in the ballast figures between what was recorded in the report and the figures in the vessel's ballast report [23,1000 and 20,000 mts] says nothing about the presence of water in the cargo tanks. The Court can safely conclude that there was no sea water in the cargo tanks of CENTAUR when she was loaded.
- (4) After CENTAUR was loaded at Yanbu, Saybolt Saudi Arabia took running samples from each of CENTAUR's cargo tanks and when the samples were tested in Singapore (by an independent inspectorate) the result showed that the cargo was well within specification. Petco's expert was unable to say that as CENTAUR left for Yanbu she was carrying 1500 tons of water additional to the permitted quantity of water in the cargo [which, at 0.2% would be about 200 tons].
- (5) The amount of cargo measured on board the CENTAUR at the STS location was similar to the measurement made at Yanbu [75,438.548 mts against 75,440.878 mts]. The ballast tanks were also inspected by Mr Pantouvakis of Saybolt Oman, and no oil was detected in them [either by way of measurement or smell]. The inspector detected no free water and said so in his ullage report. The CENTAUR's ballast position was less clear. When she sailed from Yanbu, the Centaur was carrying 2,700 tons of ballast water. When she arrived at the STS and was inspected by Mr Pantouvakis, she was recorded as carrying 70 mts. The Saybolt report at Yanbu showed that the 2,700 tons of ballast water was divided between the forepeak tank [1,200 mts], and no 3 port and starboard ballast tanks [750 mts each]. If CENTAUR had discharged 2,700 tons of ballast water between Yanbu and the STS point, some 23 hours sailing, then that would or might have affected the vessel's draft and trim, since the bulk of the water was located towards the bow of the vessel. Yet Mr Pantouvakis noted first that the draft was the same as when the vessel left Yanbu and there was no trim correction to be applied to the ullage figures. It is clear that Mr Pantouvakis simply relied on the crew to tell him the trim; he could not, or at any rate, did not measure the draft himself [probably because of the sea state: 2 metre swell]. He did not detect any appreciable tilt and did not make any trim corrections when calculating the ullages. In fact the points for measurement of the cargo tanks were located near the centre, but slightly aft, and the trim problem would be less marked. Mr Millett submitted that I should accept Mr Pantouvakis' evidence that the discharge of ballast water would barely, if at all, affect the trim. He submitted that the ballast, draft and trim figures on the CENTAUR at the STS do not provide any support for a theory that the switch between 1500 tons of water for 1500 tons of oil occurred during CENTAUR's voyage to Port Sudan or during the STS. Apart from anything else, if there was a swap what happened to the other 1200 odd mts of water which did not turn into oil and disappeared in some way? In any event, I should conclude that there was no sign of oil in the CENTAUR's ballast tanks prior to the STS transfer. Therefore, I should discount the possibility that the CENTAUR arrived at the STS with 1700 tons of water mixed within the cargo [200mts admittedly in the cargo as loaded at Yanbu, plus 1500mts].

- (6) The other theory raised by the defendants was that 1500 tons of oil must have been left in CENTAUR'S cargo tanks when the STS was completed, and that 1500 tons of water must have been pumped into DEVON, deliberately or otherwise, which then accounted for the similarity between the tonnages loaded onto CENTAUR and transferred to DEVON. The surveyor inspected the cargo tanks of CENTAUR post STS and found them to be, essentially, empty. He also visually inspected the CENTAUR's ballast tanks and could neither see nor smell oil. Records show that CENTAUR arrived back at Yanbu for her next lifting on 1 March 2001 and tendered Notice of Readiness at 11.00am. Loading commenced at about 8.00am the following morning and was completed some 14 hours later. It is recorded that she discharged segregated ballast to sea from 06.38am on 2 March for about an hour and a half. Having completed the STS, over 21000 tons of ballast water were loaded on the CENTAUR. Had the missing oil been located in the ballast tanks there would have been a pollution problem at Yanbu or between the STS point and Yanbu. If the water had been loaded at STS from CENTAUR on to the DEVON then Mr Pantouvakis would have found it. The quantities of water he found were not unusual and were entirely consistent with the cargo being up to specification.
 - (7) I should reject Petco's insinuations that there was something amiss with the CENTAUR. When built, she was permitted to carry oil in the ballast tanks which were not at that time segregated. But she was converted so that she had a segregated ballast system at the relevant time. I did not know enough about why she had been banned from the Caltex terminal. It would be speculation to suggest that she was considered to be a pollution hazard, since she was acceptable to most of the other terminals in Singapore Harbour, and she enjoyed Exxon approval at the time.
 - (8) Finally, I should reject any suggestions that somehow or another Mr Pantouvakis did not properly carry out his instructions or was in some way in cahoots with Fal Oil with whom he had or expected to have a close business relationship.
 - (9) If I were not persuaded that on a balance of probabilities the water came from CENTAUR that was an end to the Defendant's case.
 - (10) There was some evidence that the problem with the water arose through defects in the DEVON's ballast tanks, or alternatively, arose as a result of what happened at Caltex. I should either conclude that the problem was probably caused by the DEVON or conclude that the DEVON could not properly be excluded as the source of the problem; and in that event I could not conclude that the problem must have been caused by the CENTAUR or what happened at the STS transfer. There were two possible plausible explanations as to how the water came into the DEVON at the Caltex terminal. First, through a leaky valve system. As the pumps started pumping out the oil the pressure created by the head of oil would diminish with the risk that the pressure from sea water would force itself through the valve and into the cargo. It was significant that Caltex thought there was a pollution risk from DEVON; in other words, that there was a risk of oil coming out of the DEVON. If oil could get out then there was a risk of water coming in. If in fact DEVON sucked in water as she was discharging the cargo then that would provide a credible explanation for all the results of all the samples and tests on the cargo save in the shorelines and shore tanks. Second, there is the possibility that ballast water and oil became exchanged during the voyage from the Red Sea to Singapore. When the ballast tanks were finally segregated from the cargo tanks, shortly before the cargo in question was loaded, the ballast pipes in the cargo tanks had to be blanked off; if this was not done properly then there would be a point of entry of seawater into the cargo. Both SGS and Pacmarine found an oily mixture in DEVON's no 4 port and starboard ballast tanks. This suggests that there must have been a leak of oil from a cargo tank into a ballast tank.
19. For the Defendants, Mr Akka submitted that
- (1) In this case there are only two possibilities: either the water ingress occurred before STS or it occurred afterwards. If the ingress could not have occurred after the STS then the court must conclude that it occurred before it, and Petco will succeed. That is so even were the Court to take the view that the possibility of an occurrence before STS was improbable: *The Theodegmon* [1990] 1 Lloyd's reports page 52. I must look at the problem overall and not be deterred from making a finding even if certain aspects of that conclusion suggest that the conclusion is improbable; *Kapitan Sakharov* [2000] 2 Lloyd's reports 255 at 261.
 - (2) Mr Pantouvakis' evidence can properly be criticised: his witness statement says nothing about taking the vessels' draft from what the crew told him, as opposed to observing it for himself; he did not reveal that it was the crew rather than himself who took the measurements; it does not mention that he checked the sea valves on the DEVON, although it says that he checked them on the CENTAUR; it makes no mention of the 'phone call to his head office before preparing the letter of protest; it states incorrectly that he carried out a visual inspection of the ballast tanks by opening the manholes. I should pay more regard to what he said orally than to a statement prepared on the basis of specific questions to which he then responded.
 - (3) The Court is entitled to draw adverse inferences against Fal Oil in circumstances where live evidence from Captain Nannos might have been of assistance. Fal Oil have been dilatory over disclosure: their operations file was only disclosed at the end of the trial [apparently it contained nothing to which the parties wished to refer]; although Fal Oil were the voyage charterers of both vessels from a related company, Fal Shipping, for whom Captain Nannos also worked, a quantity of potentially valuable documentation, such as class documents, conversion information, piping diagrams etc relating to the DEVON had to be obtained by Petco from DEVON's owners and such documents as there are have come from Petco and not from Fal Oil's disclosure. If absence of documentation hinders the court in reaching its conclusions then adverse inferences should be drawn against Fal Oil in this respect.

- (4) Mr Severn's calculations are all accepted by Fal Oil and they present a highly coherent and consistent picture. There was no substantial overall increase in the quantity of liquid between loading and ultimate discharge. A small increase due to an ingress of *freshwater* from the leaking heating coils did occur, but this was of no significance. Thus, Fal Oil accept that something of the order of 1500 mts of water was discharged with the cargo (together with the 200 mts odd known to have been present on loading). Either the water was loaded with the cargo at Yanbu or at some stage there must have been a removal of 1500 mts of oil from the system. Mr Dann, Fal Oil's expert is simply unable to account for the 'missing' oil even with his preferred theory of a leaking sea valve. It is common ground that the missing oil was not discharged into the sea at any stage during the voyage or at the STS point, Caltex or Feoto. It either remained on board CENTAUR or on board DEVON.
- (5) But the oil could not have remained on DEVON because the vessel was 'crawled over' by teams of inspectors to ascertain what the problem was and there was no sign of a missing 1500 mts of oil. On arrival at Caltex all the ballast tanks were found to be empty. They were also empty after the initial discharge. SGS stated that 4 port and 4 starboard tanks [ballast] "contain oily mixture in between transverse frame and bottom longitudinal of an unquantifiable amount. Samples were unable to be taken due to too low a level". In other words the 'stains' of oil were on the bulkheads. Pacmarine reported that "it was noted that these tanks contained oily mixture and scattered small quantity of sludge on the horizontal girders". Samples could not be taken because "level of ballast water was low; below bottom longitudinal".
- (6) There are several anomalies relating to CENTAUR's ballast tanks. At Yanbu the ballast report shows 20,000mts of ballast on board whilst the crew informed the inspector there was 23,100 on board. The vessel would have wanted to arrive at the STS point with an even keel; there appears to be no operational need to discharge ballast during the very short voyage and no point in doing so as CENTAUR was going to take on ballast at the STS point. Discharge of the ballast would tend to affect the vessel's trim and Mr Pantouvakis would have noticed it. Thus, a discharge of the ballast water does not fit in with the rest of the survey. The probabilities are that the report showing the ballast as amounting to 70 mts is wrong and the oil could have remained there. If the trim were affected, then the ullages recorded by Mr Pantouvakis would tend to over-record the amount of oil in the tanks before STS and a discrepancy between the amount loaded on CENTAUR and transferred to DEVON would emerge. There are few documents relating to the CENTAUR: no ballast records are available and if she had retained oil on board it would not be revealed in the records which are available. Thus, the missing oil could not have been on the DEVON otherwise it would have been found; Mr Dann has no explanation to offer for where it went and it might have been missed had it been on the CENTAUR.
- (7) It is Petco's case that the water was not detected by the sampling procedures because the samples were not representative of the cargo. 1,500 mts of water if at the bottom of the tanks and evenly distributed over them would take up only 40 cms of the bottom of a tank twice the height of the courtroom and twice its width. The circumstances in which Mr Pantouvakis was working were not ideal. "It may be that he was doing the best job he could in difficult circumstances." But sampling is inherently fraught with difficulties. Mr Severn says that you cannot get a representative sample, with the best will in the world with this type of cargo. Mr Pantouvakis is not to be criticised for taking a running sample but he should have kept the individual samples even if he made one composite for analysis. The cargo was colder at Singapore than it had been, despite the use of cargo heaters. The colder the cargo the more viscous, and the more time it would take for the water to separate out.
- (8) Apart from the two missing manifold samples, the evidence shows that there were two other samples in existence: a manifold sample and a sample from CENTAUR's ballast tanks. These two samples were not sealed and therefore were probably not prepared by Mr Pantouvakis, or else they had been sealed but then opened (perhaps for testing). They were apparently sent to Fal Oil yet their operations department seemed to know nothing about them.
- (9) According to Mr Severn, the detection of free water in heavy dense oil is "a very difficult, imprecise and subjective exercise".
- (10) The fact that DEVON's heating coils were leaking cannot account for the seawater which was found. The quantity of sea water was quite a way in excess of the 1% limit. The suggestion that there was oily water in the ballast tanks should be rejected. Captain Singh said there was no oily water in DEVON's ballast tanks; there must have been a discharge of ballast water during the voyage, yet no pollution was caused. There may have been residues of lumps of sticky patches adhering to the superstructure within the tanks but that is different from the vessel having free flowing oil there. Had there been a leak between cargo and ballast tank then as the vessel was loaded at the STS point so the oil would have flowed from cargo to ballast and then out into the sea as the vessel was deballasted. When the DEVON left the STS point there was more cargo in the 4 centre cargo tank than there was water in the 4 port and starboard ballast tanks. Thus there would have been a flow of oil into water rather than the other way about. If oil had leaked into the ballast water, that would have been detected at Singapore/Malaysia. In order for the oil to be moved deliberately from ballast to cargo, the spool piece would need to be used; but the evidence shows that the spool piece had not been used for a long time and that the blanks in the pump room had been painted into position. If the water was already there in DEVON's cargo tanks at the STS site then CENTAUR would have to be implicated because 1500 mts of oil would not have been pumped into the DEVON. The water would tend to come to the upper regions of the tanks as the oil was pumped in and this was not found by Mr Pantouvakis. DEVON's sea valves were tested and showed only the possibility of a leak from the vessel to the sea but not vice versa. If

the sea water came into the DEVON at Singapore during unloading then there would be a huge discrepancy in the ship to shore figures, of the order of 12%. Therefore none of the theories advanced by Mr Dann as to the cause of the ingress of seawater bore analysis.

- (11) The probabilities are that the 1500 mts of oil remained on the CENTAUR and that that quantity of sea water, by way of replacement, was pumped into DEVON. The missing oil would have been more likely to have been missed by Mr Pantouvakis than the teams of surveyors on board the DEVON.

DECISION ON THE CONTAMINATION ISSUE

20. I start with the burden of proof and how it may be discharged. As I see it, it is common ground that Petco must persuade me on a balance of probabilities that the cargo when pumped into DEVON contained a quantity of water in excess of the permitted proportion. In reaching my conclusion I must, obviously, have regard to the fact that the contamination either occurred before the STS or after it. If I can exclude the possibility that the contamination occurred after the STS then I would conclude that the contamination occurred before the STS, even if there were circumstances surrounding the pre transfer about which I felt unsure. But if I cannot exclude the possibility that the substitution of water for oil occurred whilst the cargo was on board DEVON then I might conclude that the substitution probably occurred before the STS or after the STS. On the other hand, I might, simply, be unable to say whether one result was more probable than another, and in that event the Claimants would succeed.
21. I am very grateful to both experts for their assistance. Mr Severn approached the case with considerable care and skill. He is well qualified to assist the court, as is Mr Dann, who took perhaps a less academic and more hands-on approach to the issues than did Mr Severn. Each has contributed a great deal to this decision.
22. I start with what I shall call the hard facts; that is, the facts about which I feel confident.
- (1) On Mr Severn's figures, 1500mts of sea water was substituted for 1500mts of oil at some stage prior to or during discharge at Singapore. No-one knows how this was done nor is there hard evidence as to where the oil went. It is a mystery. But I can be sure that the oil was never pumped into the sea, accidentally or otherwise, else there would have been a severe pollution problem.
- (2) The measurements and sampling at Yanbu and Caltex may be relied on. The oil in the tanks at the refinery at Yanbu were not contaminated by sea water and the percentage of water in it was 0.2%. The Caltex measurements may also be relied upon and these show that on out-turn of the cargo it was contaminated with sea water beyond the acceptable limit. By the time it reached the Caltex sampling point, the substitution had occurred.
- (3) It is difficult to detect water in this type of fuel oil by carrying out running samples, but sampling at the manifold and sampling off the shore-lines is more likely to be reliable. Taking a sample in a ship's cargo tank involves judgment and experience and a cargo inspector, acting competently, may not detect water that is there. This type of fuel oil makes it difficult to detect water using standard industry approved equipment. Mr Pantouvakis has considerable experience as a cargo examiner and was properly appointed by Saybolt.
- (4) On the basis of the evidence, which excludes, in my view, possible sources of what might be called accidental cargo contamination which would in any event not account for the missing oil, the substitution of water for oil must have been done knowingly. If the substitution occurred on the CENTAUR before or during the STS, then, if the oil were on board, either the soundings which showed that her cargo tanks were empty were false or some fuel had been moved to a ballast space in order to hide it from Mr Pantouvakis; or if not on board, it had been transferred to a third party before the STS. It was not on board the CENTAUR when she returned to Yanbu to fulfil her next commitment. If it occurred on the DEVON, then the crew must have off-loaded 1500 tons of fuel to a third party en route to Singapore and topped up her cargo tanks with an equivalent amount of sea-water.
23. Not surprisingly, Petco urge me to look with great care at what Mr Pantouvakis did during the STS. There are a number of odd features about the reason for the STS and the way it was carried out. The CENTAUR was not acceptable to Caltex, which was one of the possible ports which Petco might choose. Why, then was she nominated? Mr Babrawalla explained that if there had been any problem with this vessel, he would have found another suitable alternative. Caltex might not be the final choice and she could then have fulfilled the contract with Petco. A suspicious mind might think that CENTAUR was chosen so that an STS situation could be engineered and this might give Fal Oil the best chance of cheating on the quantity of oil sold to Petco. But that is not the position, I think. Shortly after CENTAUR was nominated there was another contract for which she was a suitable vessel and she could fulfil the new contract, provided that there was an efficient and speedy STS operation in the Red Sea. Second, the samples which Petco requested were not collected and retained. Their telefax of 13 February was intended to require both the taking of samples from each tank on DEVON, as was done, and the retention of them as separate samples. I think both Ms Lim and Mr Babrawalla understood that the words "as usual" were apt to lead to that result. I have already indicated that I do not criticise Mr Pantouvakis for making a composite sample, but I recognise that it was not quite what the commercial people in both companies had anticipated. There is no evidence to suggest that had four separate tank samples been kept the results would have been different from the result obtained from the composite sample. Then there is the curiosity of the quality certificate prepared by Mr Pantouvakis which was essentially a repetition of information derived from the shore based tanks, but with an alteration as to specific gravity. This was on any view a rather odd document. But it was not misleading if read correctly. It was unfortunate that Mr Pantouvakis relied upon the Saybolt survey done very

shortly before the STS rather than carrying out his own sampling of CENTAUR's cargo tanks. But this document makes clear to the careful reader that he was not certifying the cargo 'afresh'. A sailing certificate was required and there was no time to have samples analysed in good time and this was the compromise decision he came to. At the end of the day, although I was initially suspicious about it, I have reached the conclusion that nothing adverse to Mr Pantouvakis can be based upon this document.

24. It was not suggested that Mr Pantouvakis acted in bad faith; if it had been, I would have rejected it. If at the time of the STS there was some kind of scam or fraud going on, then he was not implicated in it. What he did during the STS operation, which is carefully and fully recorded, negatives any involvement on his part in any fraud. Thus, his sampling at the manifold was inconsistent with a desire to overlook a fraud. Had these samples been tested, then a fraud would have been revealed, since those samples would not suffer from the defects which running samples possess. If he was turning a blind eye to a fraud, why write a letter of protest? He clearly found some water in the cargo, measured it and fired a warning shot over the bows of both vessels and advised his employers about it. None of that is consistent with water in the cargo being deliberately overlooked. There is also the odd feature of a small collision between the two vessels as they came together for the STS. Little is known about what exactly happened at this time. There is no suggestion that any serious or relevant damage was done. It occurred to me possible that in order to bring the vessels together in an acceptable way, the CENTAUR discharged some ballast at that time, but that is speculation.
25. Could it be that Mr Pantouvakis was deceived? I regard that as a possibility but a very unlikely one. He takes considerable pride in his work and how he has developed his career. He is obviously a hard worker. The picture I have of him is taking control of the vessel's crew to get them to assist him as much as possible; by opening hatches in advance and so on. I also have a picture of a man who has seen all sorts of attempts to pull the wool over his eyes. He has seen it all. Of course, it is possible that he did not look in the forepeak ballast tank on the CENTAUR, into which, it is speculated, the 1500 tons of cargo had been pumped, but I would be surprised. He might also not have checked the cargo sounding rod which satisfied him that, after the STS, CENTAUR's cargo tanks were empty, but I doubt it. He kept good records of what he did and when he did it. I think it unlikely that he missed 1500 tons of oil in the CENTAUR after the STS, although I cannot rule it out as a possibility.
26. Is there a possibility that the switch of water for oil occurred on the DEVON? If, as I have said, the switch was not accidental then the answer is 'yes'. How and when that occurred is as much of a mystery as with the CENTAUR. There could have been a deliberate switching on either vessel. In other words, Mr Severn, in particular, but also Mr Dann, have persuaded me that
 - (1) Yanbu's records are reliable and the CENTAUR was loaded with the amount of cargo recorded. At that time the water content was not more than 0.2%. A similar quantity of liquid was transferred from CENTAUR to DEVON at the STS. If the switch had occurred at this time then where were the 1500 tons of oil not pumped into DEVON? The answer must either be that 1500 tons remained on board and Mr Pantouvakis was deceived into thinking the vessel was empty or that CENTAUR had off-loaded 1500 tons of oil to a third party before she arrived at the STS site. Both are possibilities.
 - (2) When Mr Pantouvakis took his running samples on the DEVON they did not show any enormous quantity of water, and certainly not enough to be worrying from the specification point of view. It is possible that the water had already been substituted and that Mr Pantouvakis failed to notice it. But this is relatively unlikely. By the time the vessel arrived in Singapore, the switch had been made and I can rely on the Caltex records. The running samples in Singapore which showed no water can only be accounted for on the basis that by this stage the water had sunk to the bottom and was not picked up by the sampler. This would be possible and might account for the high readings on Caltex equipment. Mr Dann's theories as to how sea water might have come into the DEVON during the offloading at Singapore are all improbable, for the reasons already referred to by Mr Akka. None of the theories is, in any event, satisfactory since none of them accounts for the missing 1500 mts of oil. DEVON may have been defective in a number of respects, but nothing that was found by teams of professionals could account for the switch. As to the ballast tanks, Mr Akka is right, I think, to say that the evidence tends to show that the tanks had not been used for carrying oil but rather that they had not been properly cleaned after they became segregated. The photographs strongly support this conclusion.
27. I return, therefore, to where I started. There was probably a deliberate switch of sea water for cargo oil. That switch probably occurred either on the CENTAUR or the DEVON, and occurred before, on or after the STS. Each is a possibility. I cannot exclude the possibility that the switch occurred before or after the STS. I am left in the (unsatisfactory) position that I cannot say whether CENTAUR probably discharged a contaminated cargo into DEVON or whether the contamination probably occurred after transfer. Either is possible, but that is not sufficient. Petco have not made out their contentions.

Demurrage

28. The claim for demurrage is for just over one-half million US\$. The claim is put on the basis that Petco "*wrongfully and in breach of the sale contract failed to discharge the Vessel [DEVON] within the permitted laydays*" alternatively "*wrongfully and in breach of the implied terms of the Sale Contract [Petco] failed to take all necessary steps to enable the Vessel to discharge ... without delay and/or wrongfully prevented the Vessel and/or caused the Vessel to be prevented from discharging the cargo at Singapore and/or Malaysia without delay.*"

29. The issue is a very short one. The contractual provisions are as follows:

"10. Laytime

Laytime allowed shall be a total of 36 hours SHINC to commence 6 hours after Notice of Readiness is tendered or upon berthing whichever is earlier and time shall cease counting at disconnection of hoses.

11. Demurrage. As per Charter party per day pro rata."

The Charter party referred to in the contract provided demurrage per day of US\$18,000 PDPR.

30. The question is whether by reason of these contractual provisions, demurrage can be claimed for even where no demurrage is due from the seller as shipper under the charter party. Since the demurrage clause identifies the amount of demurrage by reference to the charter party I would construe the demurrage obligation in this c & f contract, which imposes no obligation on the buyer to discharge the vessel in any particular time, as in the nature of an indemnity rather than an independent obligation. This conclusion is consistent with authority and reflects the commercial reality of this transaction: see *Ets Soules v Intradex* [1991] 1 Lloyd's Reports 378; *Mallozzi v Carapelli* [1975] 1 Lloyd's reports 229.

31. I shall invite the parties to draw up an order to reflect the contents of this judgment.

Mr R. Millett QC (instructed by Ince & Co) for the Claimant

Mr L. Akka (instructed by Holman Fenwick & Willan) for the Defendant