NEWSLETTER September 2024

Hello Again, I hope you are all keeping well and enjoying life. Summer has been and gone, and so for the PEEMS Committee it is time to prepare for the AGM. Please come and join in the AGM, have your say, and help the Club to flourish. Constructive criticism is welcome. If you would like to discuss a specific point let us know, and we will list it on the Agenda for all to view before the meeting.

For any Club, Society, Association or group of people, a committee is needed to make sure it runs effectively. When money is involved, a Treasurer is essential to show that every pound received, or spent is accounted for. A Secretary ensures all correspondence is taken care of, nowadays, usually electronically. A Chairman tries to keep everything going forward, but only with the assistance from the other Officers and the Committee. I have been the Chairman for nearly 5 years and enjoyed every minute. Until 5 years ago the idea was for the Chairman to change each year, but with Covid and lack of volunteers since then, I am still here! I have outlasted a few Prime Ministers, but does anyone else want to have a go? The Committee is equally important for members to offer their own ideas and opinions, and last but not least, our award-winning Newsletter editor, who flies the flag for PEEMS.

As I write this, we have still not got a Treasurer, although hopefully, an announcement will be made in the next month, regarding a new member who could take on the role. Also, we are seeking another Secretary asap to allow David time to show them "the ropes". As you can appreciate, the situation at the moment is far from ideal, and help from anyone who is willing and able to commit a few hours a month to the Committee will be welcome. The AGM is on Friday 15th November at 11am, and don't forget there is Pi*e and Peas* for lunch afterwards.

The *Mike Sayers Trophy* night is the next event at the Hungate Centre, on the 2nd October. Do try to support the evening. David sent out a reminder a couple of weeks ago, but in case you have forgotten, it includes a *'Bring 'n Brag'*. Bring something along; the idea is to contribute to the night, the good, the bad and the ugly accepted. All the better if you will talk about your exhibit for a minute or two, and encourage a bit of conversation.

Take care everyone, kind regards, Jonathan.

- **Forthcoming Events.**

- **Tuesday October 1st 2024. A Visit to Leeds Industrial Museum.**
- **Wednesday October 2nd 2024. Mike Sayers Trophy Evening/Autumn *'Bring and Brag'.***
- **Tuesday October 15th 2024. Workshop Morning.**
- **Friday 15th November 2024. Annual General Meeting** (at lunchtime with a *"Pie and Peas"* lunch).
- **Tuesday 19th November 2024. Workshop Morning.**
- **Wednesday 4th December 2024. Pre-Christmas Social and 'Bring and Brag'.**

- ***Black and Decker*** **Bench Bandsaw + Three Replacement Bandsaw Blades.**

  If anyone would like to acquire a Black and Decker bandsaw with three replacement blades, for free, please contact Tony Leeming. Tony's contact details are in the Members' list.

- **Club Evening Wednesday 4th September ~ North Sea Helicopters, A Talk By Ray Smith.**

Jonathan began the meeting by thanking Ray for coming to give PEEMS a talk. There were some announcements before that:

- **Tuesday 1st October. A visit to *Leeds Industrial Museum*.** It is a 54 mile journey from Pickering (1¼ hrs). The museum opens at 10 o'clock, so we will be leaving Pickering around 9 o'clock. William will be providing a lift from Scarborough, and there will be a car share from Pickering. If you want a lift, just ask Jonathan. The museum has a collection of textile machinery, railway equipment, and heavy machinery amongst other things.

  There is no café on site, although there are facilities to "make a brew and sit down". So it's a case of "take your own sandwiches".

- **Wednesday 2nd October. Club Evening**. It's the *Mike Sayers' Trophy* evening. There will also be a 'Bring and Brag' for those members who don't think their models are up to trophy standards.

  Mike: All we ask is that everybody should bring something. This is just so everyone knows what projects the others are working on.

- **Friday 15th November. The AGM** (Annual General Meeting) which will be in the Hungate Centre at lunchtime. This year is extra important because we will hopefully be installing a new Treasurer and Secretary. David and Pam Proctor are relocating down south, so we urgently require a replacement Secretary. As usual there will be a *"Pie and Peas Lunch"* for all attendees.

- **Disposal Of Donated Items To The Club**. At the Committee meeting, we discussed helping members dispose of old equipment. The Club will always help if asked, but any tools or equipment donated to us to liquidate, might mean selling items to members at below market value. As a last resort, physical donations will be taken to a charity shop or to be scrapped. The Club can't afford to store anything.

- **Helicopter Operations Over The North Sea (and a few other places as well!), A Talk By Ray Smith.**

  - **Introduction**.

Ray started by saying he was a member of the Ryedale branch of the RAF Association. He served in the Royal Air Force for many years. He then spent 40 years working in the North Sea Oil and Gas industry on helicopter support. Although the title of the talk was North Sea helicopters, Ray has also worked all over the world, and the talk will cover some of that.

  - **RAF Career.**

Ray joined the RAF in January 1963, which was the wrong time, as it was the "winter of '63". He spent two and a half weeks, clearing snow from the parade square and runway. As an apprentice, Ray trained as a survival equipment technician, dealing with ejection seats, life rafts, parachutes and aircrew flying equipment. This was enjoyable. He did that for the first six years. He was also a member of the RAF sports parachute club. He did a number of jumps, before deciding to stay on the aircraft and become a "despatcher", "shoving the other parachutists out of the aircraft".

From there, Ray became an "Air Load Master". Trained on transport aircraft, the job entailed everything, from being a "despatcher" for paratroops, to learning "how to serve canapes on VIP flights" on fixed wing aircraft.

From there Ray was posted on to helicopters. His first posting was to *RAF Sharjah* which is now in the United Arab Emirates, next door to Dubai. In the previous photo, Ray is seen with a Westland Wessex helicopter.

Ray spent the following year flying in the mountains of Oman, seconded to the Sultan of Oman's Air Force. After that, he was posted onto the Puma helicopter, and spent the next five years being posted backwards and forwards to Northern Ireland in the 1970s when it was "The Troubles".

- **British Airways (BA).**

Ray received a letter from the Helicopter Division of British Airways (BA) at Gatwick. They had a position in their newly formed 'Search and Rescue' service, in Aberdeen Scotland, and asked Ray if he was interested. At this time, BA were operating the Sikorsky S-61N helicopter.

Ray joined BA in Aberdeen in September 1976. The Department of Trade issued a contract to provide a new long-range rescue helicopter service out of Aberdeen. This was when the oil industry was really expanding, and when oil fields were being established further and further north.

The only rescue helicopters available at the time, were the very small *Whirlwind* helicopters, which the RAF operated out of Lossiemouth in Scotland. These were not much use for major incidents on off-shore oil platforms.

BA's long-range rescue contract, ran from September 1976. At the end of 1979, the RAF finally got some larger helicopters.

BA's contract moved almost overnight from Aberdeen to Shetland, where they operated for many years. Ray is a keen angler, so this was an extra bonus.

- **Aberdeen Airport**

This is what Aberdeen Airport looked like in the mid-1970s. There were about three flights a day down to London, one to Glasgow and one to Edinburgh. Most operations were from wartime buildings.

The airport is a bit different now. The photo above is from a few years ago. It's constantly extending. It's now a busy airport with busy flights. The only thing that curtails international flights, is that the runway isn't too long, and there is no way they can extend it as there is a council estate in the way.

One of its 'bragging rights' is that it has more passenger terminals than Heathrow.

There is the main international terminal, a general aviation terminal, where Trump parks his jet when he visits Scotland, then there's Bristow helicopters, CHC Helicopters, NHB Helicopters, and a company called "Offshore Helicopters" which has two terminals.

The second photo shows an aerial view of the airfield. When Ray went there in 1976, the airfield was surrounded by more farmland than it is now.

- **Types Of North Sea Rigs and Barges.**

In the early days of North Sea Operations, rigs were operating off the coast of East Anglia, and off the mouth of the Humber.

These were the original North Sea Gas Fields. The equipment used was fairly primitive.

This is one of the earliest drilling rigs, and was converted from a barge, with legs on it. This is called *Sea Gem*. This operated off the mouth of the Humber. That is from where the first North Sea gas came ashore.

This only has one drill, and compares with modern rigs which have many drills which can move about and drill different wells.

This is a modern "Jack Up" drilling rig. This is on jackable legs.

If rigs like this one are being moved to a new location, the platform will be jacked down to sea level. The legs will then be jacked up until the platform is floating.

The rig can then be towed to a new location. The drill derrick can move around, once it's on location.

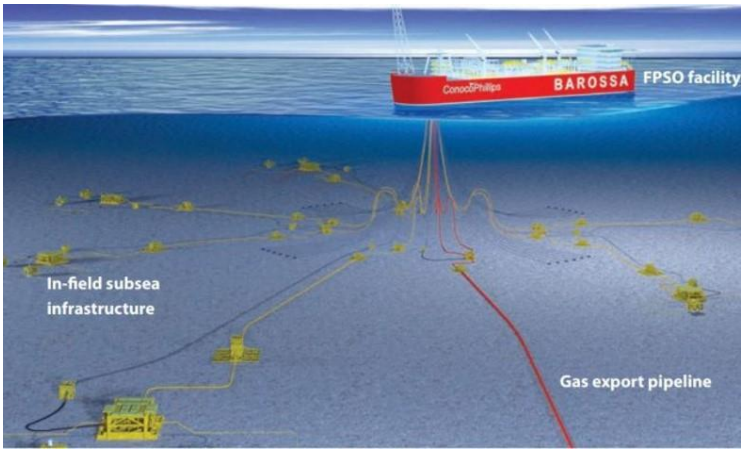
This is a more "state of the art rig". It is a modern semi-submersible drilling rig, with two pontoons located under the water line. It is fully motorised, and it can move itself around the world at great expense.

The *Thistle A* is a fairly old early production platform. These types of rigs have changed a lot as well in recent years.

All the vertical rods seen, are separate drills, which connect to different parts of the oil field.

They do "directional drilling" and include junctions in the drill pipe, so they don't go straight down, but they can curve and go off miles away from the rig location, to suck oil out from the extremities of the oil field.

Floating Production, Storage and Offloading (FPSO)



Because a lot of exploration and production nowadays is in much deeper waters, particularly in the Atlantic west of Shetland, a rig that reaches the sea bed can't be built. A lot of the fields that are being explored are now fairly small ones, with a fairly limited production life. For this reason, in deeper waters, the wells are drilled and capped on the sea bed, and the FPSO holds itself on location using satellite positioning.

The FPSO connects to the various wells on the sea bed. The oil or gas is pumped up to the FPSO. The oil or gas is then processed to stabilise it. It is either then pumped along a pipeline to onshore facilities, or there are specially adapted tankers tied up to the stern of it, which are filled up for the transportation of the oil or gas. This is high tech and very expensive. Suppose this was a small oil field with a production life of only 20 years. At the end of that 20 years, if there was a full sea bed platform on it, it would be very expensive to decommission it. With a FPSO, they may have to do a lot of work on the sea bed, but the FPSO can then move elsewhere in the world.

Crane Barges: In structural installations there have to be some very large crane barges.

Here, the legs of the platform are ready to be craned on board the barge. To give an idea of size, the Heli-deck is 110 feet across the diameter.

Again, very expensive equipment, which is only employed when needed. This barge, the *Saipem*, is one of the largest in the world.

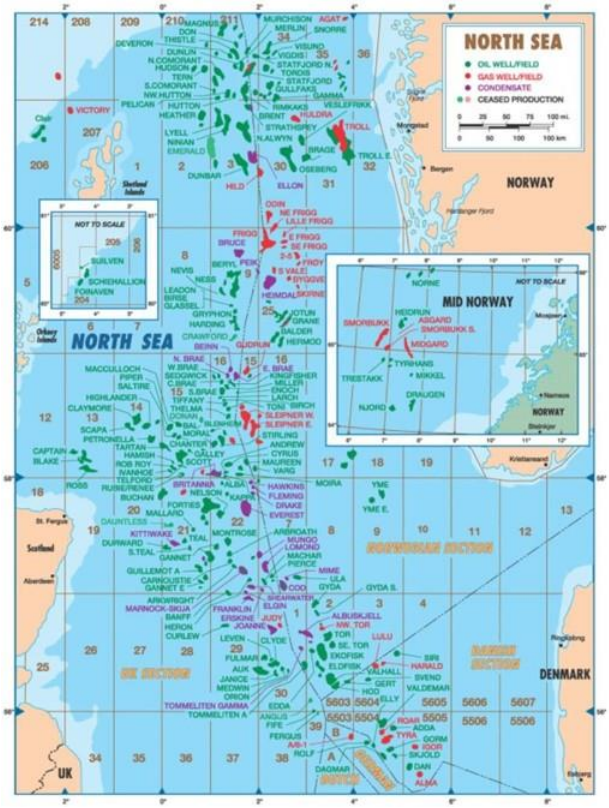
Pipe Laying Barge: Where oil and gas are pumped ashore, there is going to have to be a pipeline.

This is a typical pipe laying barge, lots of sections with drill pipes, and dozens of welders. The Koreans are some of the best welders in offshore oil and gas construction.

- **The Extent Of North Sea Operations.**

You normally only hear about North Sea Oil and Gas in the media, when something goes wrong, but it is one of the biggest industries in the UK. The map of North Sea operations is shown on the following page. All the green items on the map are oil fields and oil wells. The line down the centre of the map is the 'region line'. To the left of the line is the UK sector, and to the right is the Norwegian/Danish sector. The UK sector extends down below the map to the mouth of the Humber and East Anglia.

Up in the East Shetland basin is where the Brent field and the other oil fields are, but most of the operations now are in deeper waters off the west coast of Shetland. It is an industry that involves tens of thousands of people.



Many of the larger platforms can have up to 200 people at a time on board. The number of people working offshore on the rigs has reduced dramatically in recent years, mainly due to advances in satellite communications and microwave links.

This means that they don't need so many people in the control rooms on the platforms now. Most control is back on land in the oil company headquarters, but they must have a skeleton staff in the control room on the platform, in case the microwave link goes down.

It used to be that the standard working shift system was "two weeks on, and two weeks off". 15 years ago, some of the companies wanted to cut back manning levels offshore, when one of the several oil recessions occurred.

What ended up happening was that many of the oil company's own staff, as opposed to contractors, would do "two weeks on and three weeks off". This partly solved the problem staff had about their two weeks off, because sometimes in the winter up north, when the weather was too bad to fly a helicopter, there was no guarantee that you could get a flight on the day you wanted to leave. With three weeks off it was easier to plan holidays for family.

Just out of Aberdeen alone, and between five helicopter companies, there were on average, 50 to 55 return flights per day.

- **North Sea Helicopter Types**

MBB (Messerschmitt) Bolkow 105.

In the early days of the industry, when the gas fields were quite close to shore, off the coast of east Anglia, and off the mouth of the Humber, there weren't many people offshore, and the distances weren't great. The MBB Bolkow105 was one of the first helicopters used offshore. It only carried 3 passengers.

These helicopters were actually housed on some of the platforms, in a field area of three or four platforms, where they were used as a taxi-service.

The Sikorsky S58T.

This is the civilianised version of an American military aircraft into which they managed to install two turbine engines.

The Westland Wessex.

The Westland Wessex was operated by Bristow Helicopters in the UK. This helicopter operated over a short range, and on a cold day in winter, you could only carry ten passengers at the most.

The Bell 212.

The Bell 212 carries a maximum of ten to twelve passengers over a short range.

As the oil fields were reaching further north, there was an urgent requirement for bigger helicopters with greater range.

- **Penzance To Scilly Isles Scheduled Service And The Sikorsky S-61N.**

In Penzance Cornwall, BEA, (now British Airways) were operating Sikorsky S-61N helicopters. These offered a scheduled service between Penzance and the Isles of Scilly. Depending on the temperature and weather conditions, these could carry up to 22 passengers at a time.

Captain 'Jock' Cameron, Managing Director of *British Airways Helicopters* managed to convince the Government at the time, to buy a fleet of S-61N helicopters for use in the North Sea.

They were adapted for this theatre of operations. In the second photo above, a S-61N can be seen with a weather radar on the front, extra flotation equipment on the sponsons, and even safety grab handles on the outside.

At one stage, British Airways were operating 20 of these out of Aberdeen alone, with Bristow helicopters operating a similar number. There were another 8 to 10 operating out of the Shetland Islands. There were also 4 operating out of Norwich in East Anglia. This really was the "workhorse" of the North Sea for many years.

Passengers had to be flown on fixed wing charter aircraft from Aberdeen to the Shetland Island airport of Sumburgh, and then be helicoptered out to the oil fields. The photo shows some of the helicopters waiting for passengers and refuelling.

- **The Boeing Vertol BV234LR (*Chinook*)**

Bigger helicopters with a longer range were being investigated for use in the North Sea. Boeing were very keen to offer the Boeing Vertol BV234LR (*Chinook*) for this role. They took the design for their military *Chinook*, and turned it into a civilian aircraft with uprated engines, and a larger fuel tank, so this machine could fly for 7½ hours without having to refuel.

This gave the aircraft a flying range of 300+ miles from Aberdeen to the most northerly oil field and allowed it to return without having to refuel.

The photo shows the very first Boeing bought for North Sea operations, flying up the Hudson River in New York. It landed on a cargo ship in the New York docks. That was a memorable flight for Ray.

The helicopter was then transported across the Atlantic to Liverpool. That was done with the first two of the six that were bought. After that, they flew directly from America, by way of Greenland, then Iceland to Aberdeen.

The first photo shows the inside of the military *Chinook.* The second photo shows how it was turned into a civilian aircraft with seats, windows and overhead lockers. There were 44 passenger seats complete with headphones and inflight entertainment. There was even a mini galley where passengers got a cup of coffee and biscuits enroute.

In July 1981, BV234LR helicopters began operations for Shell and BP, to northern North Sea platforms.
On average, that would be a 2½ hour flight to the Northern oil fields. The BV234LR was operated very successfully on contract to Shell and BP for many years.

In the photo above, there is a BV234LR on a platform with the passengers disembarking through the cargo ramp at the back. There were panniers where they picked up their baggage. Taking off or arriving at Aberdeen, they would enter and exit through the main door.

- **G-BWFC Accident November 1986.**

On the 6th November 1986, G-BWFC crashed into the sea two miles from the end of the runway at Sumburgh airport in Shetland.

43 passengers and 2 crew perished. The captain and 1 passenger survived. Some of these people were Ray's colleagues.

What had happened was that Boeing had brought out a mandatory modification for the main front and rear rotary gearboxes.

The aim of this modification was to increase the time between major overhauls.

Unfortunately, they did not do enough research. In these big gear boxes, there are tiny capillary holes to prevent the inside of the gearbox from over-pressurising. The testing on the modification had been done in somewhere like Arizona, where the air is dry, certainly not where there is salt and sea air. In the North Sea environment, some of these capillary holes corroded up. So, the inside of the gearbox over-pressurised and the main gearing disintegrated. The front and rear rotor blade interlock got out of synch. The front and rear rotor blades then hit each other.

The fix for it was to go back to the original pre-mod gearboxes, and that is what is flying today.

The captain and passenger who survived, didn't know how they did, as the helicopter just disintegrated around them. There had been discussions with Shell and BP at the time, (due to manpower cutbacks offshore), about reducing the number of flights, or reducing the seating capacity,

What was decided in the end, was to retire the BV234LR and return to the Sikorsky S-61N.

The Boeing *Chinook* helicopter was never grounded, and the aircraft continued in use for a number of tasks, particularly heavy lifting work. It can lift 9 tons using its cargo hook. They were used to build a nuclear power station in the north tip of Sweden, for the National Power Grid. and the *Chinook* was lifting in 8-ton pylons, and planting them for several months all the way up the country. They were also used for cargo work around Europe, and they were used for a lot of VIP flying. For two years running, two *Chinooks* were ferrying into the British Grand Prix in Silverstone, on behalf of *Fosters* lager. The aircrew were on *Diet Coke* during operations, but flew back with a crate of *Fosters*.

In the *Chinook,* 14,000lbs of fuel would give about 7½ hours of endurance. Coming back to Aberdeen in bad weather, the pilot could set up the aircraft on the Instrument Landing System (ILS) and it would fly itself down to 100 feet off the runway, and unless the pilot took over, it would fly itself along the runway, climb away and go back around again.

Lord King, head of British Airways, decided that helicopters didn't fit into his global plan for British Airways and they were sold off.

Unfortunately, the person they sold them to was a member of Lord King's club, none other than Robert Maxwell. Maxwell promised to expand the operation, but it was just a venture to extract money from the company. Because of this, Ray had to work beyond his retirement age for a few years,

The remaining four aircraft were eventually sold to an American company called *Columbia Helicopters* in Oregon, who primarily used them for heavy lifting and other work around the world.

They still look the same from the outside, but the cabin was “gutted out”. They put extra fuel tanks in the cabin.

They also used these aircraft for fire-fighting, and the tanks in the cabin were filled with fire retardant chemicals. They are still going strong with the original gear boxes. Ray was sad to see them go, as he had spent 4,500 hours flying in them.

- **Shetland Air Crash Memorial**.

Because of the big air crash in Shetland in 1986, and several other air crashes in Shetland over the decades, there is a memorial looking out to the scene of the 1986 crash.

It is dedicated to all the aircrew and passengers who have lost their lives on flights in and out of Shetland.

This was designed about 15 years ago, built by public donation, and is maintained by the Shetland Council and Sumburgh Airport.

- **The Piper Alpha Platform Disaster (6th July 1988).**

In July 1988, Ray received a phone call from his company’s operations department to tell him that there had been an explosion and fire on the Piper Alpha platform, to which Ray replied, “I’ll be there in 35 minutes”.

They worked through the night until 9 o’clock the following morning, searching for people in the water. They rescued some, and recovered the bodies of others.

There were 167 fatalities and 59 survivors.

Ray had been on Piper Alpha many times. It was one of the older platforms.

The first photo shows what the rig looked like just before midnight. The second photo is what it looked like the following morning. There was a big investigation. The Cullen Report introduced many changes to the oil and gas industry. Many of these changes were essential.

As can be seen on Piper Alpha, the accommodation section was close to the drilling and production area. Now on modern rigs, the accommodation and Heli-deck are separate, and the drilling and production area is accessed by a bridge.

- **The Introduction Of More Modern Higher Tech Helicopters.**

Newer technology helicopters were starting to be introduced, mainly the Eurocopter (previously Aerospatiale) AS332L2 Super Puma aircraft. This still has the same cabin size as the military version which Ray flew in for a few years, during his service in the Royal Air Force. However for offshore, it has extra “bells and whistles”, such as flotation equipment, extra fuel tanks, and a baggage hold.

These four Super Pumas are shown on the Shetland base.

The Super Puma was upgraded when Eurocopter became Airbus. It became the Airbus EC225 Super Puma. All of these 19-seat aircraft were faster with longer range. The EC225 could fly for about 4½ hours.

The main “workhorse” of the North Sea now is the Sikorsky S-92 helicopter, which replaced the S-61N. This is a very high-tech helicopter.

There are some smaller helicopters too. Those below are the Airbus H175. The yellow helicopter is for use in emergency/medical situations, and was very busy during Covid. The platforms were not closed down during Covid, and the helicopters had to provide protection with screens etc. There was Covid testing and the wearing of masks on the platforms. Mealtimes were restricted with greater spacing between tables. The restrictions worked very successfully, and production was kept running.

There is also the small Augusta/Westland AW139 (below). There are two at Aberdeen. They are paid for by the oil companies to provide inshore range search and rescue systems. They have a double hoist on the outside.

They mostly fly “medivacs” from the platforms. If someone is injured offshore, they can immediately be returned to Aberdeen.

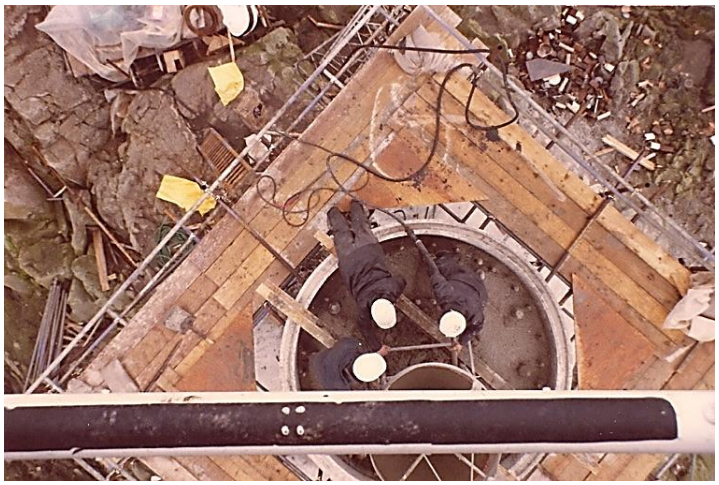
The Wreck of the *FV Elinor Viking*.

The original rescue service moved from Aberdeen up to Shetland, partly because the RAF started flying the larger military “Sea King”.

On the 9th December 1977, fishing vessel *FV Elinor Viking,* ran aground on *Vee Skerries reef* off the North West coast of Shetland in a storm. A “Mayday” call was picked up, but due to the location, a lifeboat could not get anywhere near. ‘Search And Rescue’ helicopters large enough didn’t exist, at that time, North of Aberdeen. However, BA had a volunteer crew in Shetland with minimum refresher training. The wreck was located in poor visibility by following the sight and smell of diesel from the ruptured fuel tanks. All 8 crew were rescued shortly before the vessel finally broke up. In the afternoon there was very little left of the vessel.

The *Vee Skerries reef* now has a lighthouse on it.

Ray was very much involved in the building of that lighthouse. They set up a base on the North West tip of Shetland at a place called *Eshaness* lighthouse. The team shifted components to build the unmanned lighthouse, including tons of concrete. Ray could also fish in the adjacent loch. That unmanned lighthouse is still in existence.



There had been a lot of lobbying by the population of Shetland for Search and Rescue helicopters, before the *FV Elinor Viking* accident, and that tied in with the RAF getting their larger *Sea King* helicopters. Ray thought his company BA would lose their Search and Rescue contract because of this, but it worked out well.

On the 31st December 1978, they shifted from Aberdeen to Shetland, and commenced on contract the next day on the 1st January 1979.

Ray is pleased to say they didn’t get called out on Jan 1st, because most of the local coast guards were in the social club Ray frequented.

The photo shows Ray hanging on as usual.

- **Non North Sea Related Contracts**

i) Penzance To The Isles Of Scilly Scheduled Service.

Ray previously mentioned that British Airways operated the Sikorsky S-61N helicopter in Penzance Cornwall. It operated the longest running scheduled helicopter service in the world. It was Ray's onerous task to go down there every spring, mid-march and train up the temporary cabin crew for the peak summer season. It was a tough job, but someone had to do it!

The S-61N could carry up to 24 passengers if it wasn't too hot, but 20 was about the average.

The flight from Penzance to the Isles of Scilly took about 20 minutes, and there was also one flight per day to the isle of Tresco.

In peak season, the girls working as cabin crew would do an 8-flight rotation on average. That is, 16 sectors in total. So that was 16 life jacket demonstrations, indicating exits etc. The operation was very successful.

However, unlike some of the 'Highland and Island' helicopter services, it was not subsidised by the Government. It was hard work making it pay, and helicopters are expensive to operate. About 8 years ago the service finished.

ii) Other Tasks With The *Chinook*.

Here the *Chinook* is shown putting a light on Rockall in the North Atlantic. The light was designed to fit sideways in the cabin door of the aircraft, and it was winched out and down. Four people from the RAF Kinloss Mountain Rescue Team (MRT) secured themselves to the rock, and then three people from the Northern Lighthouse Board secured it down.

It was quite a long day and the helicopter was operating out of Stornoway in the Western Isles. It's a long flight out to Rockall. There was a second aircraft providing safety cover for them when the first aircraft left. The light is still working.

Q: Is the light solar powered?

Ray: Yes. They have to put a team on it every year to clean and polish the solar panels because the light fades due to sea gull droppings.

iii) NATO and MOD Contracts

For many years, when there were still a lot of military people on St Kilda in the Western Isles, BA had a contract to ferry personnel to and from the island. Royal Artillery and Royal Signals personnel were working on the rocket ranges off the west coast. BA flew them out including their supplies. To get there, they flew North from Aberdeen to Inverness, then they followed the railway line to the Kyle of Lochalsh and from there to St Kilda. When there was a changeover, they flew people back to Benbecula and then back to Aberdeen.

Sikorsky S-61N On St Kilda

- **NATO Naval Support.**

During the Joint Maritime Course (JMC) naval exercises, there are ships from other NATO navies, Germany, Denmark, Italy, Canada, USA and the Netherlands. They play war games off the west coast of Scotland. Ray's company supplied a civil helicopter on contract to support these exercises. Here it is on the deck of an aircraft carrier.

- **Marathon Oil Sakhalin Island Eastern Russia.**

A few years ago, Ray went down to Sakhalin Island on the extreme east coast of Russia. He was asked to go out there by Marathon Oil, to train a team of Russians, who were called "the helicopter crew".

Marathon had a new oil field on the Sea of Okhotsk.

Marathon Oil, a western company, needed a Russian partner with them to operate on the field.

Marathon wanted to operate western helicopters, but the Russians wanted to use their own.

The compromise was that they would operate Russian helicopters, but they would have to have British/American survival equipment on board in terms of life rafts, survival suits etc.

Also, the crew who were manning the Heli-deck, and who were also involved in refuelling, and loading and unloading the baggage, would have to be trained to European standards.

The helicopters they were operating, were the fairly standard Russian Mil Mi-8 with slightly uprated engines.

The Sea of Okhotsk freezes up in winter, so the appropriate platform which was second hand, was previously owned by *Sun Oil* of Canada who operated the platform in the seas of northern Canada.

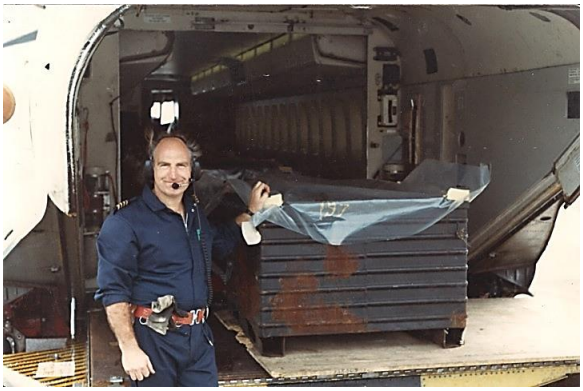
The platform was towed to a *Daewoo* shipyard in South Korea, and had many modifications to it. It was then towed out to the Sea of Okhotsk.

There was going to be a tanker loading buoy alongside the platform. During winter, when the first ice started to form, this would be layed down on the sea bed and production ceased. When the spring came, and the ice melted, it would pop back up again and go back into production.

For Ray, this was the most dangerous place he has worked in, and that includes the military. When Ray started teaching the people who would be manning the Heli-deck, he found there was no rising fire water, so there was no fire extinguishing system on the Heli-deck

- **With The *Chinooks* In Valencia Spain.**

Ray went there twice. There is a large *Ford Motor Company* factory in Valencia. There had been a strike by international truck drivers, who were blocking the highways over the Pyrenees. This blocked component deliveries.



They were using Boeing 707 freighter aircraft to bring in auto components to Valencia airport. There were fuel tanks from France, instrument clusters from Cologne, and gear boxes from South Wales. The *Chinooks* were then flying the pallets from there to the car park at the actual factory.

- **The Falkland Islands.**

Ray's company also supplied two Sikorsky S-61 "Sea Kings" to the Falkland Islands. These were on contract to the MOD, flying six days a week. Every day from 8 o'clock in the morning to 5 o'clock in the evening, the S-61s mainly transferred supplies and personnel to the extremities of West Falklands. Ray and the team got to see more of the West Falklands than the people living there. Ray would travel by RAF Tristar down there for 2½ weeks every two months to train colleagues.

They finally replaced the old Sikorsky S-61 Search and Rescue aircraft with the modern high-tech Sikorsky S-92.

It has a double hoist system; a hydraulic hoist with 300 feet of usable cable, and a second emergency electrical hoist with 150 feet of cable on it.

Inside the S-92, the winch operator had his own station in the front of the cabin. The winch operator controlled the radios, the computer system charts, including ordnance survey maps and multiple charts of the area. The information brought up on the winch operator's screen could be superimposed on one of the screens in the cockpit.

When they started operating the Sikorsky S-92, it had a satellite telephone system and also a global positioning system. The first time they were practicing winch transfers to the lifeboat, they were just hovering over the deck of the vessel, and the Sat-phone went off. There was no way of disabling it. There was no volume control on it either. It was causing so much interference the pilot finally pulled the circuit breaker on it!

The Sat-phone stopped, but what they didn't know was, on the same circuit was the automatic positioning software. The person trying to ring through was the Lerwick coast guard, telling the crew that the helicopter had disappeared off the radar, and the helicopter wasn't answering either. The crew had visions of the Lerwick coast guard ringing up the chief coast guard in London to say they had lost contact with their new £20 million helicopter!

- **The Coastguard Agusta/Westland AW189 and Orkney Search and Rescue AW139**

The coastguard also started operating the slightly smaller AW189 helicopter, which is based on one or two bases around the U.K.

The AW139 below is operated by Bond (now Offshore Helicopters Ltd.) on behalf of the UK Oil and Gas Industry. It is paid for through a general fund.

- **Ray's Last Day On The Job, Contracting With Bond/Babcock Helicopters.**

Questions And Answers.

Q: You said you were operating on Russian helicopters. Are the instruments written in English or Russian?

Ray: All the Mil Mi-8 instruments are written in Russian. There were very few maintenance manuals about. Those helicopters were built to last though. The engines contained solid turbines, not like the turbines in western engines.

All the Russians Ray worked with told him, next time go to St Petersburg. They were all very proud of St Petersburg as a tourist destination. They were nice people to work with.

Ray's Comment: A few of the oil platforms shown in the slides, have now been decommissioned. It doesn't mean the end to North Sea oil, there's lots of oil still there, but some of the major oil companies are not too bothered about the North Sea anymore.

They have sold their platforms to smaller independent companies. There are a lot of other places in the world where they can get oil out of the ground a lot cheaper. The UK is getting more gas from Qatar than from the North Sea and is importing oil from abroad.

There is however, plenty of oil and gas west of Shetland. About 10 years ago, Shell decided to dispose of its former oil field which had a finite life. A UK company *Apache Oil*, were interested in buying it, but it was many years since it had its original seismic survey, to decide the size of its reservoir of oil. *Apache* said they would need to have it resurveyed before they could commit to buying it. Shell wouldn't pay for the seismic survey. *Apache Oil* decided to pay to have it surveyed themselves. However, because of the advances in seismic surveying, they found that there was another reservoir below the original that was even bigger! Because Shell refused to fund the resurvey, all the information belonged to *Apache*.

With regards to decommissioning, on some of the big platforms in the northern North Sea, in the *Brent Field* in the *East Shetland Basin*, some of the legs are 350-400 feet down to the sea bed, with the platform on top. 20-25 years ago, the Thatcher Government said that when a rig was decommissioned, it was decommissioned down to the sea bed. That changed. The rig is now just decommissioned down to the "top side", where all the accommodation and drilling equipment is found. A Norwegian company spent millions of dollars to find a way of doing it, and they've built this giant vessel, with a double hull. The vessel comes under the legs of the platform, clamps itself to it, and then all the legs of the platform are unwelded. The vessel can then lift the accommodation and production equipment onto a barge which then brings it into Hartlepool for dismantling.

Q: So they leave the legs to rot on their own?

Ray: Yes, but they have to place a navigational aid, a marker buoy on top of them.

Q: Do Bristow have the biggest fleet of helicopters?

Ray: Yes, they have so many international contracts.

PEEMS thanks Ray for giving them a very interesting and informative talk.

Contact: If you would like to contribute to the Newsletter, the contact is:
Nevile Foster Tel 01751 474137 or e-mail nevf123@outlook.com