Whaling in Shetland – Peter Hurst (U3A Research Group)
An Overview

Introduction

The basic processes involved in whale oil and by-products production are well documented elsewhere. Therefore, this paper will only deal with those matters which are unique to Shetland or where processes were introduced for the first time or developed in Shetland.

The following topics will be considered:

Chronology of whaling in Shetland and stations involved.

Processes and the differing attitudes of the companies involved.

Personnel and degree of local involvement

Conclusion

Chronology of whaling in Shetland and stations involved.

Norwegian legislation of February 1904 banned whale hunting in waters off Nordland, Tromsoe and Finnmark. Under the same act it also became illegal for Norwegian whalers to bring whales hunted outside these areas to be processed in previously used whaling stations. Basically, if Norwegians wanted to continue whaling they would have to do it abroad.

The Shetland whaling stations came into existence as a direct result of the Norwegian banning legislation, hence why they were constructed in 1903 and 1904. The stations were operated on a seasonal basis which according to Andrew Winchester of Upper Urafirth, who was at Ronas Voe in 1913 and 1914, ran from mid May (about the 10th.) until mid September. Other sources quote the season as being April to mid September.

There were four Shetland Whaling Stations, all situated in the north part of Mainland.[1] They were:

1903 - Ronas Voe - Norrona Hvalfangereselskabet

1903 – Ronas Voe – Shetland Hvalffangerselskabet

May 1904 – Olna Whaling Company (Salveson) granted a licence to convert whale carcases at Millburn Brae.

1904 – Collafirth (Saltoo) - Alexandra Whaling Company which became the lone British registered company in 1907.

It is interesting to note that at least one other site, at Grobsness, was considered for a station by a Mr H. Fredricksen but it came to nothing. Also a single mention of a station at Broonies Taing, Sandwick, was found during research, but it can have come to nothing otherwise other references would have been found. Another site considered was Walfirth, Yell.[2] A further two sites on the Busta estate were considered, the west side of Muckle Roe and Wethersta on Olnafirth Voe.[3]

One feature of the industry was its short duration. It only lasted from 1904 till 1929 when the Olna station finally closed. Additionally, there was no activity, on Admiralty orders, during World War I. The stations themselves, though all created closely together in time, had quite different lifespans. Collafirth was the

1 Vamplen: Salveson of Leith
2 Shetland News September 26th. 1903
3 Shetland News November 7th. 1903

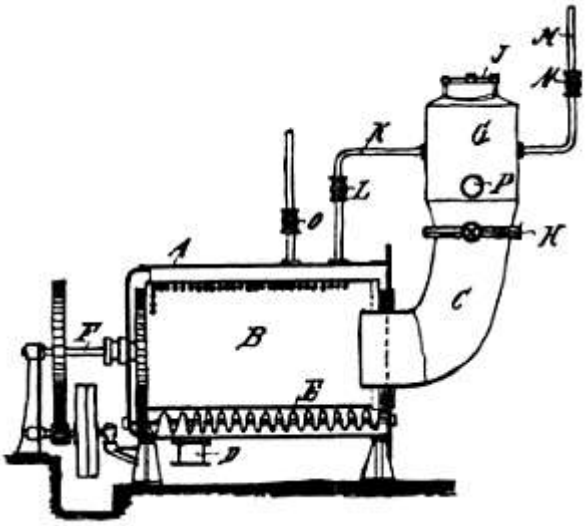
first to finish. Prior to 1916 Salveson became a major shareholder and in 1921 closed Collafirth permanently[4] transferring useful plant and equipment to Olna. Neither of the Ronas Voe stations started up after World War I.[5]

Processing the whales

The primary purpose of the industry was to produce whale oil which had multifarious uses (See appendix I). However, it was in the companies' interests to process all parts of the whale in order to extract the maximum amount of oil and also to reduce the amount of product dumped which could be the cause of smell nuisance and possibly also disease.

The Norwegians were completely self-contained at the stations. They brought all buildings, machinery and supplies, including food, with them from Norway. Certainly at Olna they built a dormitory to house their own personnel and also local people employed during the season.

With regard to technical innovation, the Shetland operations had one claim to fame; the trialling of the Hartmann rotary boiler.[6]



The diagram is of a first rough draft by August Sommermeyer, a German engineer who worked for the Berlin firm, R.A.Hartmann. The company obtained a Norwegian patent for the process on April 4th 1911. The first tests were run on September 5th 1911 and consisted of charging the boiler with 2.5 tons of “grax” which was the residue after processing with existing, conventional apparatus. The results amazed even its inventor as it produced a whole barrel of good No.3 oil. Hitherto the “grax” would have been discarded into the sea.

There were a number of features which made the Hartmann process superior to its predecessors:

1. The screw in the bottom kept the charge moving which lead to superior oil recovery. It was calculated that one Hartmann boiler was the equivalent of 5 pressure boilers. Boiling times were reduced to 60-90 minutes resulting in savings in coal used and water required.
2. It was much more labour efficient as the remaining residues did not have to be dug out. This was a particularly dirty and unpopular job.
3. The machinery had a comparatively small footprint. Though the machinery was trialled on a land based Shetland whaling station it was to prove to be especially useful on the factory ships, due to the small space required.

While the main product was whale oil there were some by-products produced also. It was in the interests of the whaling stations to use as much of the carcase as possible, as this would minimise any possible nuisance the processes might cause. To this end the following by-products were made:

1.Whalemeat Meal:

The dried solid residues after rendering for oil. Whale meal was used as a protein source in animal food.

4 History of Modern Whaling – Whaling in Shetland p.88
5 Martyn Gorman, Aberdeen University, Dept. of Zoology 2002
6 History of Modern Whaling p.257-258

2. Whale Guano: A mixture of 2/3rds. flesh and 1/3rd. bones.

Chemical Analysis was:
8.5% Ammonia
21.0% Phosphates

3. Bone Meal:

Chemical Analysis was:
4.0% Ammonia
50.0% Phosphates

Sometimes the guano was further enriched to produce:
10-12% Ammonia
17-23% Phosphate

The rule of thumb was that the higher the percentage of ammonia the higher the price the meal would fetch.[7]

Any remaining liquid residues, called “glue water”, were collected and periodically released into the sea.

It would appear that the Olna station took more care to ensure that nuisance was kept to a minimum. It also seemed to have the better equipment to achieve this than any of the other three stations. The two Ronas Voe stations, in particular, seemed to only have the basic equipment for recovering the whale oil and making whale guano.

Personnel and degree of local involvement

At the outset of this research the perceived wisdom was that the Norwegians brought everything, including most of the personnel, with them for each season's whaling. Any employment of local people was confined to lowly labouring jobs which were few in number.

This research found that this was an understatement of what actually happened. Boats arriving from Norway in April 1905 brought about 20 Norwegians to work at each of the stations, except for Collafirth which received 13.[8] Certainly at Olna there was some sort of dormitory for local workers as well as the Norwegians. Several workers came by sea to Olna from Muckle Roe and others by bicycle from the Vidlin area.[9] There is also evidence that some local people had responsible jobs. One such was John Hughson[10], Trondravoe, Brae, the wages clerk at Olna, who worked there from 1924-29 and could be making up wages for as many as 150 people at the busiest times. 60 personnel seemed to be a normal complement. Further photographic corroborative evidence[11] shows 27 named local people in 1910, 24 in 1923 and 17 in 1928. More oral evidence is available from an interview between Andrew Winchester and Drew Ratter.[12] Andrew worked at one of the Ronas Voe stations in 1913 and 1914. He could remember at least 14 locals names and where they were from. From the above we can deduce that about half the workforce at Olna were local people. It is reasonable, therefore, to believe a similar proportion of Shetlanders had seasonal employment at the other three stations. Not only that, the men were glad of the work as the only other available employment was the Council Road Scheme according to Andrew Winchester.

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7 Salveson of Leith: Vamplen

8 Shetland Times April 1st and 8th 1905.

9 Anecdotal evidence from Maxie Jamieson, Sandyburn, Vidlin, whose father worked at Olna washing barrels.

10 Reminiscences of Olna Whaling Station- Conversation with Tor Justad (Transcript held at Tangwick Haa Museum)

11 On display at the Cabin Museum, Laxo.

12 Transcript kept at Tangwick Haa Museum, Eshaness.

Conclusion

Duration: Historically speaking whaling in Shetland was a mere blink of the eye. Evidence has been found that whales were pursued at least as far back as 3000BC, with commercial whaling starting about 1600.[13] Three of the stations only operated for about 10 years prior to World War I. Olna, the most enduring, did restart after the Great War but finally closed down in 1929 when it would appear that Salvesen decided to concentrate on their Antarctic operations.[14]

Processes: Though insignificant it terms of duration one very important development was first trialled in Shetland, the Hartmann process.

Employment: Popular belief is that little employment was provided for local people. It rather depends how you define little, as evidence above would indicate at least 50% of the work force were local people. Though this might have only totalled about 100 in total when all four stations were operating, for those lucky enough to have a job at a station, besides crofting and personal fishing, it was the only work available other than the Council Road Scheme.

13 A historical timeline of commercial whaling. C George Muller (On line)

14 The History of Modern Whaling p.314

Appendix I

Uses for Whale Oil

Up to the nineteenth century the principle use of whale oil was for lighting and soap manufacture. The bones, or more correctly, the baleen, were the plastics of the day and were used in a variety of products including umbrellas, fishing rods, corset stays and crinolines.[15]

Latterly whale oil was important in the jute industry and strategically for explosives.

15 Martyn Gorman, Aberdeen University, Dept. of Zoology 2002