



Jim Young, Derry Pit, courtesy of James Donaghy, 1970.

THE STORY OF COAL MINING IN COALISLAND & DISTRICT



Comhairle Ceantair
Lár Uladh
Mid Ulster
District Council



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WHAT IS COAL?

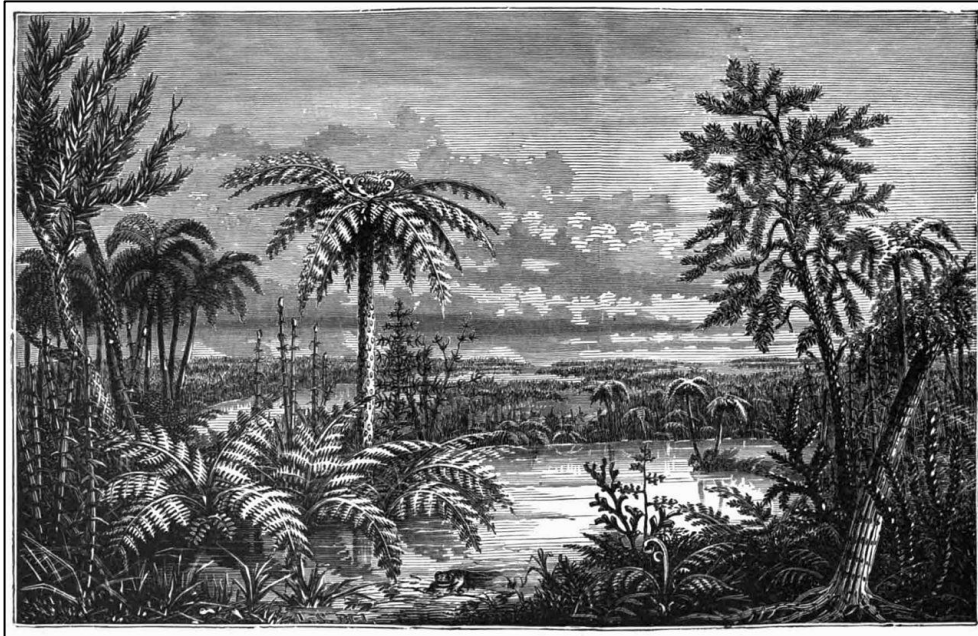


Illustration from James Dwight Dana, *Manual of Geology* (1874)

Millions of years ago, during the Carboniferous Period, even before there were dinosaurs, East Tyrone had a tropical climate. The area was a huge swamp where primitive fish and land animals lived. A tropical climate is very warm throughout the year, although it will have both wet and dry seasons. For example, rainforests grow in tropical climates.

All kinds of different vegetation grew here. When these trees and plants died, the warm and wet climate created special conditions which meant they decayed and rotted very slowly. Over millions of years, the remains of the vegetation from all the tropical swamps was eventually compressed into layers of hard black rock beneath the ground. This is what we call COAL.

Geologists estimate that underneath County Tyrone there is a coal field that measures approximately 34km². The town of Coalisland is on top of this coal field and there is also a smaller seam to the north of Stewartstown.

Did you know?

Coal is called a 'fossil' fuel because of how it was formed. Sometimes, the fossilised remains of plants can be found in coal. Peat, or turf, is also a fossil fuel. Under certain environmental conditions, if peat was left in the ground for a few more million years, it could become coal.





HOW DO WE USE COAL?

We use coal as a fuel. It is burned to create heat and this means that it has been used for a variety of purposes throughout history. Here are a few examples.

Keeping warm

The first large coal mines in the British Isles were opened in the seventeenth century. After that, it was easier for wealthy people to buy coal to heat their homes and most rooms in large houses would have had a fireplace. Here in Ireland, coal was expensive and, in rural areas, wood and peat were often burned to heat homes. In the homes of poor families, the fire was also used to cook meals.

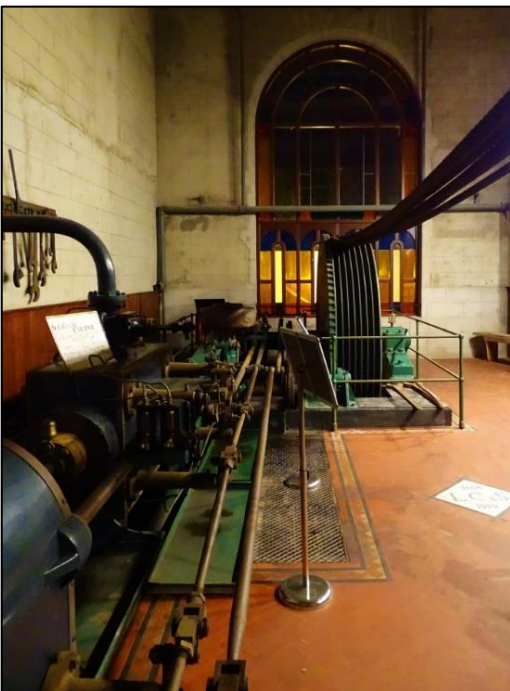
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Manufacturing

Some materials need to be heated to a very high temperature when they are being manufactured and this requires tonnes of coal to create an intense heat. These materials include, for example:

- Glass
- Pottery, bricks and pipes
- Iron

The first glass factory in Ireland was built in Drumreagh, Newmills, in 1771; the location was selected because coal could be supplied from the nearby mines. Pottery, bricks and pipes were also made here because there was an abundant supply of clay and, most importantly, there was also coal to burn in the kilns to bake the clay.



Steam engines

Coal can be used to heat water and create steam. Engineers discovered that steam could power engines which would then be used in many different ways, for example:

- Machinery in factories and mills
- Locomotive trains
- Steam ships

This steam engine (left) generated enough power to run hundreds of looms in the Coalisland Weaving Factory.



THE INDUSTRIAL REVOLUTION

The Industrial Revolution began in the eighteenth century with the invention of the steam engine. This meant that coal became extremely important because it was needed as fuel to power the steam engines.

In factories and mills, steam engines drove the machines that made cloth or metal. By using steam engines, the factories could manufacture more goods and employ more people than ever before.

Steam engines also made it possible for coal mines to get bigger. The pits could reach deeper underground and the engines were used to pump water out of the mines before they could flood. In addition, the engines operated winches which carried the miners up and down the deep shafts.

Coal was also essential for the pottery, brick and pipe industries because they needed it as fuel for their huge kilns.

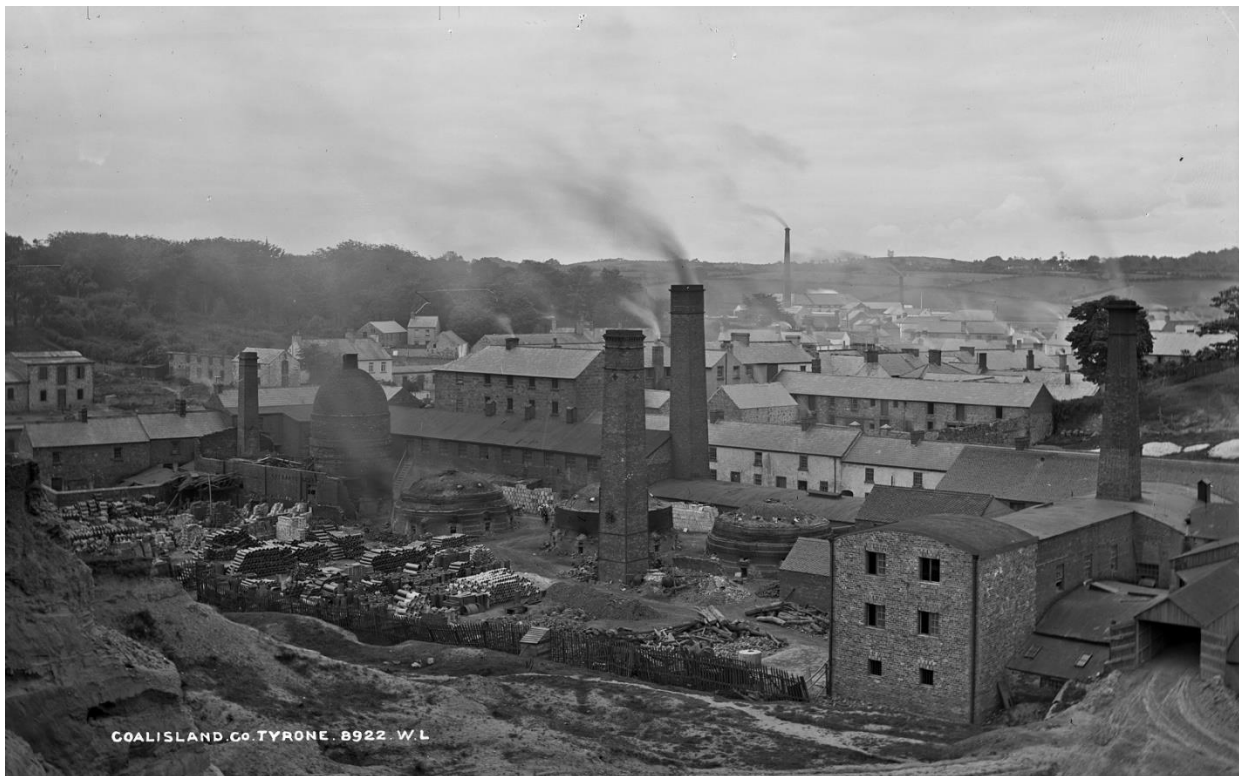


Image courtesy of National Library of Ireland.

A view of the industrialised town of Coalisland, c.1900.



CANALS

Without the coal mines, the town of Coalisland would not exist. The town takes its name from two parts of its historic past:

- “COAL” is linked to the mines.
- “ISLAND” is linked to the canal and the harbour which was built in the centre of the town.

THE COALISLAND CANAL also known as the TYRONE NAVIGATION

Digging coal out of the ground was expensive. Bringing the coal from the mine to the customer added more cost. Originally, coal was transported using a horse and cart and this sometimes doubled the price.

As mines became larger, a new method was needed to transport the coal. A better option was to use a boat and, in 1732, work began on what was to become the first canal system in the British Isles.

The idea was to bring coal by boat from the mines at Drumglass, near Dungannon, through Coalisland and into Lough Neagh. From there, the boat would join another canal that would take it to Newry and then into the Irish Sea.

By 1742, they were making good progress and the part of the canal between Newry and Lough Neagh had been completed. However, work was very slow on the Tyrone Navigation from Coalisland to Lough Neagh and it was not finished until 1787.



Coal was transported on the canals using boats called lighters (sometimes known as barges).



DUKART'S CANAL

The most challenging section of the canal was to connect Coalisland to the coal fields at Drumglass. The first suggestion, to build a tunnel for the canal, was abandoned as it would be too expensive. Instead, an Italian engineer called Davis Dukart was employed and he planned a new route for the canal through the countryside.

Dukart's Canal included an aqueduct at Newmills which would carry the lighters over the River Torrent. The canal was split into sections which were joined by sloping platforms. These were called "Dry Hurries" and were used to move the cargo up and down hillsides. The "Dry Hurries" did not work as planned and Dukart's Canal was abandoned after it was finished in 1777.

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Dukart's aqueduct, Newmills.



THE BASIN

With the failure of Dukart's Canal, there was no waterway to link the mines to Coalisland. The only option was to use a horse and cart.

When the carts reached the town, the coal could be loaded onto lighters at a harbour and taken down the canal towards Lough Neagh. The harbour was called the "Basin" and it can be seen in this old picture.



Image courtesy of National Library of Ireland.

Lighters became less common when the railway network was established in the middle of the nineteenth century. Steam locomotives made it cheaper and quicker to move people and freight long distances. Even so, the Coalisland Canal stayed in use until it closed in 1944 and transported all kinds of freight, including pottery and farming supplies. In 1956, the Basin was emptied of water and filled in.



EAST TYRONE COAL MINES

The first mention of small scale coal mining in East Tyrone was in 1654. Since then, major coal mining operations have taken place at different locations in the region. This brief list also includes examples of the names of some of the pits:

- ANNAGHER - Upper Annagher Engine Pit, Primate's Pit, Bartley Pits, Richard Griffith's Pits and Newtownkelly Pits
- ANNAGHONE - Crately Pit
- CONGO - Emerald Pit
- CREENAGH
- DERRAGHADOAN - Lewin Pit
- DERRY - Derry Engine Pit and Rectory Shaft
- DRUMGLASS - Queen's Pit, Old Engine Pit, Prince of Wales Pit and Duke of York Pit
- LURGABOY

WORKING CONDITIONS

Please read the leaflets "Jobs in the 19th century mines" and "The 1842 Royal Commission" which have been published by the National Coal Mining Museum.

<https://www.ncm.org.uk/learning/learning-resources/mining-factsheets>

Working conditions down the coal mines changed in 1842 following the Royal Commission of Inquiry into Children's Employment. The inquiry reported that:

"...To the honour of Ireland it must be stated that no young children appear to be employed in underground work, **except some in the small collieries of Drumglass and Coal Island, in the county of Tyrone.**"

The inquiry shocked the country and it became illegal to employ females down a coal mine or boys under the age of 10 years old.

Watch these videos to find out more about young people working down coal mines.

["What is a mine trapper \(Jobs from The Past\)"](#)

["Around Victorian mines \(Jobs from The Past\)"](#)

COMPETITIVE MARKET

Like most coalfields, not all the coal from East Tyrone was good quality. In the late 18th century, selling it became even more difficult when James Stewart of Killymoon, the Member of Parliament (MP) for this region, made an unwise joke claiming Dungannon coal did not burn very well: "If your house took fire, this coal would serve to extinguish it!"



THE CONGO MINING DISASTER

Congo is a townland west of Coalisland and north of Dungannon. Coal had been mined at Congo throughout the nineteenth century, including a large pit which had closed in 1888 because it kept flooding with water and was too dangerous.

Then, in 1891, a syndicate from Manchester, calling themselves the Dungannon Colliery Company, decided to open a new mine which they called the Emerald Pit. Tragically, at 1.10am on 10 December 1895, six men were killed when the pit catastrophically flooded. Their names were:

- William Bretland and his nephew, David Bretland, from Ashton-under-Lyne, England
- Frederick Mitchell from Manchester, England
- John Cooper from Ashton-under-Lyne, England
- John McMullen from Killybrackey, Dungannon
- Edward Rafferty from Rossbeg, Dungannon

A shaft had been sunk to a depth of 550m. While they were digging, some miners breached another shaft from the earlier mining operation and huge volumes of water flooded the narrow coal seam in which they were working.

One of the six casualties, Frederick Mitchell, was a 21 year old clerk at the company and it was his youthful curiosity about the workings of the mine that had taken him down the shaft that night. Two miners, Thomas Ward and Edward McMahan, had a miraculous escape. They managed to reach the cage and get winched to the surface as the water gathered around their waist.

The deaths of the six miners shocked the community. Members of a local wealthy family, Lord and Lady Ranfurly, were immediately moved by the tragedy and led a relief fund for the grieving families. Money collected at concerts, variety shows, church services and a banquet eventually raised £940 which was shared among the relatives.

Sadly, at least one more fatality occurred down the Congo mine when Peter Hart was crushed by a boulder in November 1899. The pit was eventually closed c.1900.



THE ANNAGHER HEROES

In August 1898, coal started to be mined from a new pit at Annagher, near Coalisland. It was opened by two industrialists from East Tyrone called James Corr and John McNally. To begin with, all seemed to be going well and the miners had no concerns about their safety. Everything changed on Thursday, 29 September 1898.

Shortly after 1pm, workers on the surface heard a large explosion and immediately feared the worst. Sixty metres beneath them, a pocket of fire-damp gas had been exposed in a seam of coal and, with no chance of escape, four miners had been engulfed in a large fireball.

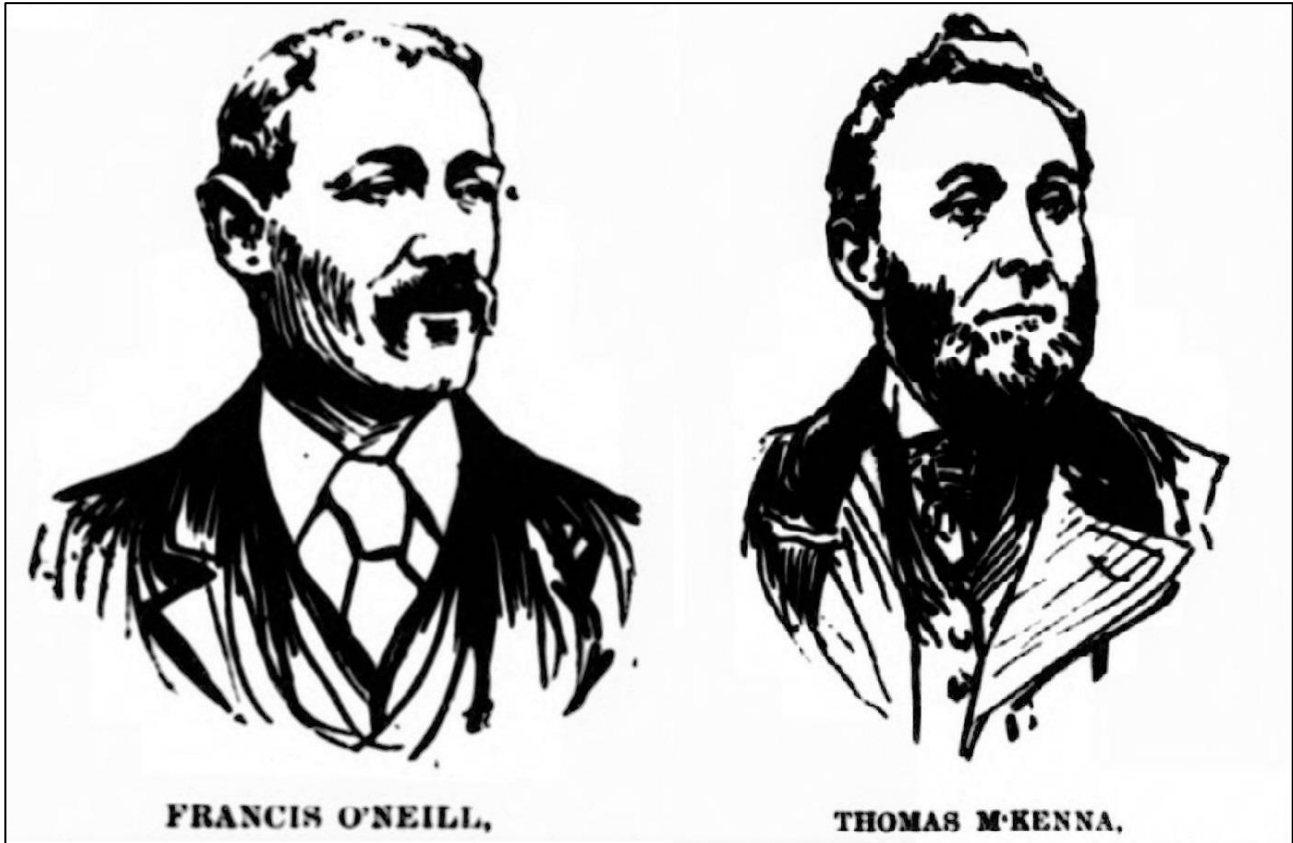
As everyone rushed to the pit head, the cage arrived at the surface carrying two of the men, Daniel Girvan, of Lisnastrane, and his son Francis. Both men were conscious but badly burned and, without waiting for medical attention, they went home and sent for the local doctor.

Francis O'Neill, of Annagher, had been above ground at the time of the explosion. He tried three times to get down the pit to rescue the remaining two men but he was forced back by the gas. On his fourth attempt, he reached the bottom of the shaft. He immediately found John Hughes and was able to bring him to the surface. Hughes was unconscious and quickly taken by carriage to the Dungannon Infirmary.

Francis O'Neill courageously made another descent into the shaft before, yet again, the fumes almost overcame him. The rescue operation had to be abandoned until it was safe. The last casualty, Bryan Murphy (60), was finally brought to the surface by O'Neill at 4pm, with the help of Thomas McKenna of Brackaville. Sadly, they discovered that Murphy had been killed instantly.

Francis Girvan and John Hughes, both 27 years old, never recovered and both died the next day. Daniel Girvan recovered and testified at the inquest for his son and his two friends. The inquest found that no-one was culpable for the deaths of the three men. Francis O'Neill and Thomas McKenna were singled out for their heroism by the coroner. In contrast, the medical profession was strongly condemned. Four doctors were asked to help but it was hours before Francis Girvan, in terrible pain, received any form of medical attention. He was eventually taken to the infirmary where he later died.

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In recognition of their bravery, Thomas McKenna was awarded a Bronze Medal by the Royal Humane Society. Francis O'Neill received the "Stanhope Gold Medal", presented by the Society to the greatest act of gallantry that year.



SAMUEL KELLY'S ANNAGHER COLLIERY



© National Museums NI Collection Ulster Museum

In 1924, a new colliery opened at Annagher. It was an ambitious enterprise. The mine owner, Sir Samuel Kelly, was very optimistic about its success. He promised 1,000 jobs, with 100 new homes built at Gortgonis for the mine workers and the area was re-named Newtownkelly in his honour. By July 1924, 200 miners and their families had arrived from Scotland and Cumberland looking for work. Sir Samuel expected to bring 100,000 tonnes of coal to the surface each year for the next 40 years and the mine was busy 24 hours a day, with three shifts of men working eight hours each.

Newspapers reported on the grand opening ceremony with large banner headlines such as “The Miracle of Coalisland!” and “The Romance of Newtownkelly”. They told their readers about “technical marvels” and “immeasurable resources” and devoted pages of print to the story of this wonderful coal mine.

However, the Newtownkelly Colliery proved to be a massive failure. Within three years it had closed. Unfortunately, the coal at Annagher had proved much too difficult to reach and there was considerably less of it than expected. All the men lost their jobs and the largest coal mining operation ever attempted in Ulster was abandoned in April 1927.



FIRECLAY

What is fireclay?

Fireclay is found underground, beneath seams of coal. In the past, it was regarded as an important by-product of mining.

In contrast to coal, which burned at high temperatures, fireclay was so valuable because it could withstand intense heat. It was traditionally used as the lining for flue pipes and furnaces or to make crucibles or firebricks for stoves. Today it has been replaced in the construction industry by modern and more efficient materials.

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Ulster Fireclay Works, Coalisland

Ulster Fireclay Works Limited was established by Sir Samuel Kelly at Annagher when he took over a small fireclay mine in 1920. The mine was nearby to the site which later became the short lived Newtownkelly Colliery.

Kelly extended the fireclay mine and increased the company's manufacturing capacity until it was the only supplier of pipes, firebricks, chimney pots and other products in Ireland. During the Second World War, the Ulster Fireclay Works made two million metres of pipe and three million firebricks. By then, the company was owned by the Stewart family and was the largest employer in the area. Many items had to be moulded by skilled workers and learning how to stack a kiln also required years of experience to avoid the clay cracking or becoming brittle.

In later years, new fireclay pits were opened at Gortnaskea (see "The Derry Pit") and Ballynakelly.

Ballynakelly Pit Disaster

On 20 May 1943, William Williamson, aged 45 years old, of Drumkee, Coalisland, and James Templeton, aged 60, of Newtownkelly, were killed at the Ballynakelly fireclay pit. That morning, the pit had flooded and the miners were unable to go down the shaft. Water pumps were used to clear the mine and then Templeton, the Foreman, and Williamson descended the shaft to check if was safe. Tragically, fire-damp gas had gathered in the mine and they were killed when it ignited and caused an explosion.

The well known Coalisland historian Sammy McKay was a young boy at school on the day of the tragedy and in this video he gives a personal account of the terrible accident.



["Sammy McKay Part 1"](#)



THE CRATLEY COLLIERY

John McNally's Cratley Pit, 1913

The Annaghone coalfield is separate to the Coalisland coalfield and situated to the north of Stewartstown. It was mined in the early 1820s but the coal was reported to be low grade and there had been explosions caused by fire-damp.

The coalfield remained largely undisturbed for a century until January 1913 when John McNally began looking for coal in the townland of Cratley. McNally was an experienced industrialist who had previously owned a mine at Annagher and he was confident he would find enough coal at Cratley to open a new pit.

By May 1913, McNally's intuition had proved correct. A bore hole had found a seam of coal which was 2.5 metres thick, at a depth of 70 metres. Immediately, work began to dig out the coal and newspapers optimistically reported that up to 100 men might be employed. In reality, the coal was such low quality, and the running costs for the pit were so high, that it had to close in 1915. Essentially, it was still cheaper for people to buy coal imported from Britain.

Cratley Coal Company, 1934

Past failures did not discourage other 'coal prospectors'. In the early 1930s, Peter McParland became convinced he could find good quality coal at Annaghone and he persuaded Alfred K. Stott, of Portglenone, to invest in a new mining operation. Peter McParland had experience opening minor coal pits; he would pay landowners a small fee, sink a pit to extract some coal and, before long, begin prospecting again somewhere else.

In May 1934, after three years of searching, McParland and his team discovered a 2.5 metres thick seam of coal at a depth of 32 metres. Two more seams were found as they dug deeper. The coal was beneath a wet meadow and it was difficult to dig the opening of the shaft through the gravel and clay on the surface. They also had to lay hundreds of railway sleepers on the waterlogged ground to make a temporary road.

The newly established mine was in the townland of Lislea but it took the name of the Cratley Coal Company. By July, it was raising coal and selling it locally. Each day, 60 tonnes of coal was being brought to the surface, with ambitions to increase that to 600 tonnes a day. Three teams of miners, each consisting of four men, were working three shifts around the clock down two mine shafts: 8am - 4pm, 4pm - 12am and 12am - 8 am. The miners earned a flat rate of 7 shillings for each shift and worked six days each week.

"It might have been a heartbreak going down the mine on a fine summer evening but on a winter's day it was certainly better than snedding turnips."

In the years since the previous pit had been abandoned at Cratley, there had been the disappointment of the aborted mine at Newtownkelly. Such recent misfortune led to caution in the newspapers about the future:

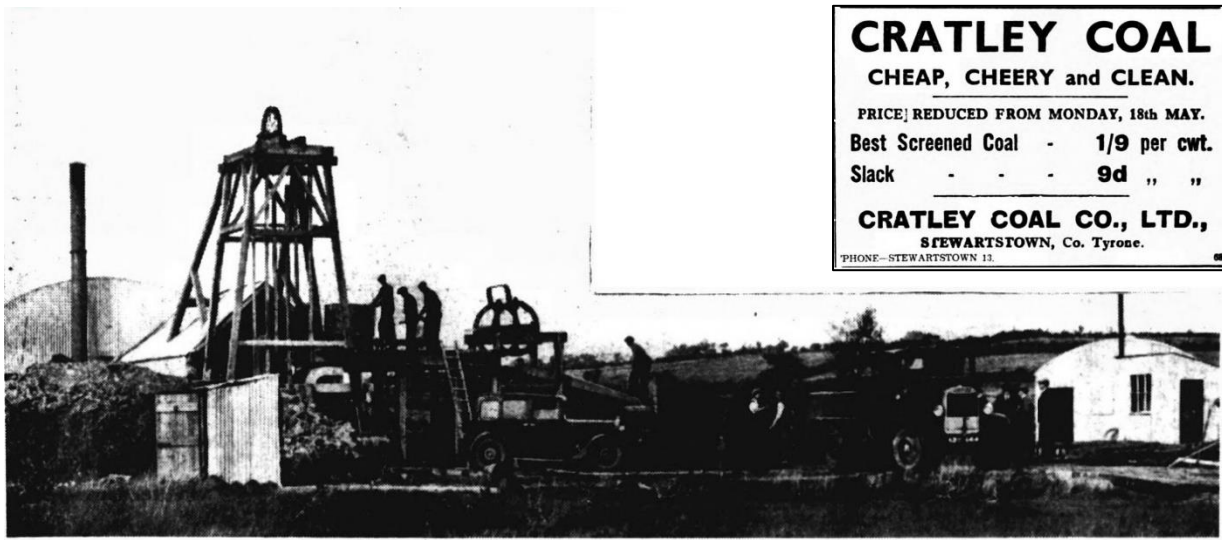
"Naturally there is much speculation locally as to whether or not the venture will be a success. Past failures in Tyrone make most people doubtful but time alone will reveal the truth."

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At this stage, the Cratley Pit was the only coal mine operating in Northern Ireland. Rich seams of fireclay were also being mined and the company supplied the Ulster Fireclay Works in Coalisland. The quality of the clay meant that they were able to make teapots which were used to create a promotional display in a shop window in Stewartstown. Even so, mining these seams of clay had disadvantages too as the clay would swell on contact with air, causing the shafts to close over.

By 1936, coal production had dropped to 25 tonnes a day and in March 1937 the mine closed. Later that year, a large auction sold off the machinery at Cratley and today almost nothing remains to be seen of the old coal pit.



CRATLEY COAL
CHEAP, CHEERY and CLEAN.
 PRICE REDUCED FROM MONDAY, 18th MAY.
 Best Screened Coal - 1/9 per cwt.
 Slack - - - 9d " "
CRATLEY COAL CO., LTD.,
 STEWARTSTOWN, Co. Tyrone.
 PHONE - STEWARTSTOWN 13.

GENERAL VIEW OF PITHEAD AT CRATLEY, NEAR STEWARTSTOWN, COUNTY TYRONE.—THE CRATLEY COAL CO. LTD., INTEND SINKING ANOTHER LARGER SHAFT, WITH MACHINERY CAPABLE OF WINDING 600 TONS PER DAY.

See also A. Laverty, "Cratley Coalpits", *The Bell*, Journal of the Stewartstown & District Local History Society, No.2, 1987-1988, pp.12-20.

THE DERRY PIT

The last mine In Ulster

In the 1950s, over 150 men worked at the Ulster Fireclay Works at Gortnaskea, making it one of the biggest employers in Coalisland. The skilled workforce mined beds of fireclay which were over 60 metres underground and then used it to manufacture sewer pipes, firebricks, chimney pots and other products.

In 1956, a seam of coal was discovered as they sunk a deep shaft looking for fireclay. The narrow bed of coal was identified by geologists as the “Derry seam” and this gave the new pit its name, although it was also sometimes called the Rectory Pit because it was close to the Church of Ireland Rectory.

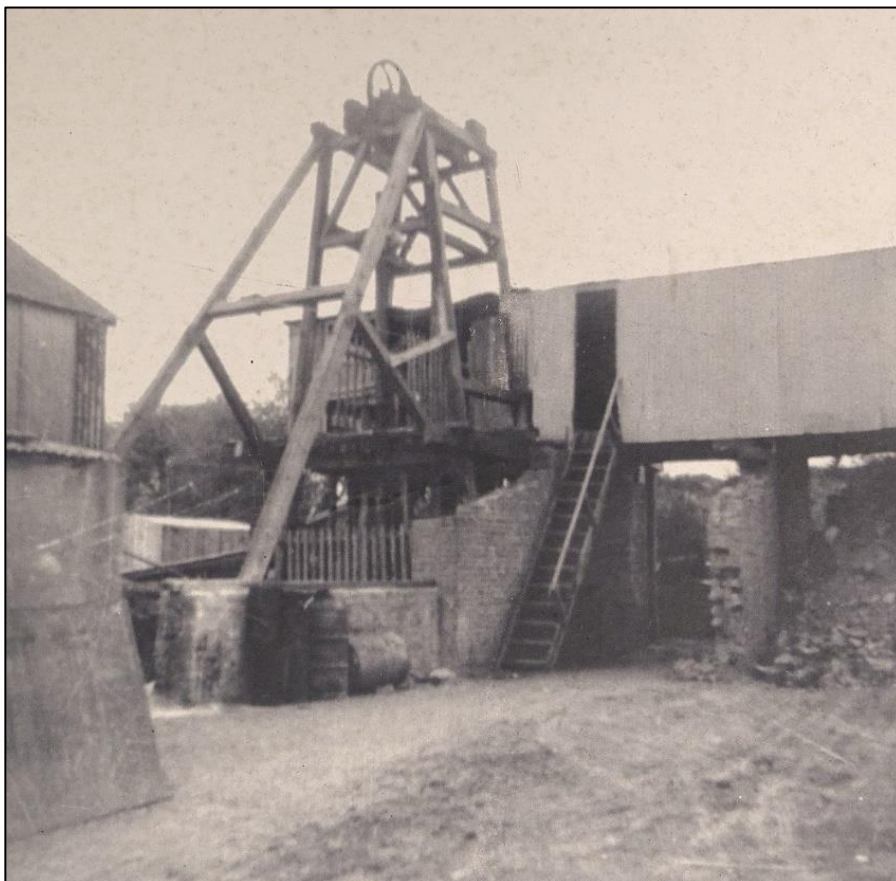
The Derry Pit regularly produced 80-90 tonnes of coal a week. Local customers could visit the pit to buy coal for £10 per tonne and the rest was supplied to factories in the East Tyrone area.

By 1970, factories were using oil, rather than coal, and the Derry Pit was forced out of business, although the fireclay mining continued for several years.

For more information on the Derry Pit, click on these links to visit these websites:

RTE Radio 1 [“There’s still coal in Coalisland”](#)

BBC [Scene Around Six](#), 16 November 1970



Courtesy of James Donaghy, 1970.