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CHAPTER XVIII

THE MINING FRONTIER

Mining (especially gold mining) had decisive economic and social effects on the development of Queensland, as it had on that of the other Australian colonies. The granting of responsible government to the eastern colonies was hastened by the gold rushes, which were also a decisive factor in the abolition of transportation. The gold discoveries in the colonies also resulted in almost trebling the population in a decade. In the case of Queensland, the population was more than quadrupled; in 1859 it was 23,520; in 1869 it had increased to 109,161. Undoubtedly, the gold field era also gave impetus to land reform, the growth of democratic notions of equality and the breaking-down of class barriers.

Gold caused a tremendous increase in migrant population, but it left many towns practically deserted and also denuded the pastoralists of their labour force. Serious labour problems were created for the Darling Downs and Burnett squatters. Shearers and sheepwashers could not be obtained at any price; they were "legging it" for the diggings.

In their quandary the squatters imported Chinese as shearers. This arrangement worked well for a time until the Chinese themselves caught the "gold fever" and left for the diggings. Serious riots and clashes between white and Chinese miners occurred on many fields in Victoria* and New South Wales, and later on Queensland fields, and resentment at their rapidly growing numbers, low standards, and high disease rate, originated the "White Australia" policy—the safeguard of the nineteenth and the first half of the twentieth centuries.

The influx of Chinese was an early problem on the goldfields. The earliest cause of the white men's bitterness was the uncleanly habits of the Orientals who polluted meagre water supplies, bathing themselves and washing their dungarees in the shallow streams which had been reserved by tacit agreement among the miners for drinking and culinary purposes. They suffered from hookworm, dysentery, tuber-

* In 1852 Chinese to the number of 2,000 had entered Victoria; by 1859 they totalled 42,000; the problem was not acute in New South Wales until 1879 but between that date and 1887 Chinese reached 60,000, which was 15 per cent. of the population of that Colony. Unrest and race rioting were intensified by the economic depression of 1888-1895.
culosis and occasionally leprosy — and established little endemic centres which still linger.

In Queensland, as had occurred earlier in the other colonies, attempts were made by the Legislature to restrict the movements of Chinese on the goldfields. A discriminatory Act, passed in 1878, was designed to prevent Chinese from moving on to a new field for three years after its discovery (unless the discoverer was a Chinese). Nevertheless, by the end of 1877, Chinese miners outnumbered whites on the Palmer field, for instance, by fifty-two to one.\(^{114}\)

The “roaring days” of the gold rushes transformed the silver lining of colonial economy into brash gold plating almost overnight. Rich goldfields are melting pots of races and classes from the ends of the earth. Here, as elsewhere, grog shanties and gambling shops flourished along the “streets” of canvas and calico and lean-to bark huts. Supplies, hauled by bullock teams and drays over deeply rutted tracks, boulder-strewn gorges, and quagmires, were retailed at exorbitant prices. Teamsters and storekeepers made quicker fortunes than the miners. Freight on the Palmer, for example, was as high as £110 a ton in 1873, and flour cost 2/- a pound. Well-watered rum was a shilling a “nobbler” and a bottle was unwillingly sold for 20/-; it was only water slightly diluted with rum.\(^{115}\) An enterprising American made £500 out of a quarter cask of rum. Horse-shoe nails were sold at a shilling each.

Over 100 goldfields are listed in Queensland, the largest being the Etheridge field, 11,558 square miles in area. From the date of separation, 10 December 1859, to the end of 1957, gold production was worth £95,319,703 for a total yield of 22,440,167 ounces.

Many of Queensland’s coastal and inland towns had their beginnings in gold rushes, although several of these had a transient existence. In the colourful days of the late ’seventies and early ’eighties, such centres as Cooktown, Mayfield, Palmerville, and Croydon were typical centres of large population. To-day, they have dwindled to “ghost” towns or disappeared entirely. In its heyday, Cooktown, port and starting point for the fabulous Palmer goldfield, boasted 30,000 people; to-day there are 300 inhabitants.

Maytown, principal centre in the Palmer Valley itself, had 10,000 inhabitants; to-day it has disappeared from the Queensland map. Croydon, a bustling town of 7,000 people in 1887, is a small township of less than 200 people to-day. Others founded on gold have survived and flourished.

Gympie, to-day a solidly prosperous city of 10,000 people, started

\(^{114}\) Mines Department Statistics for 1877. Queensland Votes and Proceedings. 1878 Vol. II.

\(^{115}\) Memoirs of J. V. Mulligan in “Queenslander,” 10 September 1904.
Open cut mining, Mt. Morgan.

PLATE XXXVIII.

(Courtesy State Public Relations Bureau.)
from a rush. Charters Towers, although it has dwindled in economic significance from the days when it was the second city of Queensland, and its proud citizens called it the world, is still a substantial city. Rockhampton had its genesis in the Canoona rush, and Cairns became the outlet for the Hodgkinson field.

Canoona

Queensland's first actual gold rush occurred before Separation at Canoona, on the banks of the Fitzroy River, thirty-five miles northwest of Rockhampton in 1858. (See page 150.) Canoona was no “duffer” but it was limited; 5,000 ounces of gold were obtained in six months in what was really a small, rich pocket; by 1860 the value of the gold obtained was £180,000.

Shortly after Separation Queensland was plunged into a serious economic crisis. Thousands of idle men walked the streets. On 8 January 1867 the Government offered a reward of £3,000 for the discovery of payable goldfields and at a critical hour of the colony's history James Nash discovered, in October 1867, alluvial gold and some small shotty nuggets in a gully on old Widgee Station, not far from the site of the present town hall, at Gympie. “Nash's Gully” became famous as a bonanza equal to any “strike” in California.

Gympie

A rush set in from all parts of Australia, and in the first twelve months more than 84,000 ounces were won. The phenomenally rich Nash's Gully was soon cleaned out, but prospecting revealed even richer hoards of treasure.

The real wealth of the field was discovered by quartz-miners. Quartz-reefs were found of an amazing richness in gold—veritable “jewellery stores.” Lucky owners of claims filled buckets with their specimens and guarded them in their tents, pistol in hand. George Curtis unearthed a monster nugget, a mass of virgin gold weighing more than eighty pounds and worth (then) £3,675.

Many deep mines were soon operating. Of these, the West of Scotland mine, 3,136 feet, was the deepest worked. From alluvial digging alone gold of an estimated value of £1½ million was won. From all sources the output to the end of 1899 had been almost one and a half million ounces of gold. Up to the end of 1956, a total of 3,429,274 ounces of gold had been produced. Gympie's best year was 1903, when 147,622 ounces were produced, and the poorest year was 1943, during World War II, when the output had dwindled to 737 ounces of fine gold. The field declined in production in the years immediately preceding the First World War, also, and by the early 1920's the last of the big mines had closed down.
Gympie has found more enduring prosperity as a closely settled and thriving dairying and agricultural district.

**Charters Towers**

The discovery of the great Charters Towers field in 1872 made it one of the most famous fields in Australian mining history. The discoverers were Hugh Mosman, George E. Clarke, James Fraser, and Jupiter, an aboriginal. Finding quartz richly grained with gold they lodged claims with the gold warden at Ravenswood, W. S. Charters, and the field was named Charters Tors (meaning hills), but was later changed to Charters Towers. The field became a celebrated deep lode producer. By 1878, 72,189 ounces had been produced, but 1885 was a boom year, 135,650 ounces being won.

The outstanding year in Charters Towers’ history was 1898 when 459,849 ounces were produced, valued at £1,157,006. Between 1878 and 1898 a sum of £613,000 was paid in dividends. Fully 100 companies were registered on the field, 5,000 men were employed in the mines, and there was feverish speculation in shares on the Stock Exchange. By 1900, Charters Towers was the second largest city in Queensland with a population of 30,000 out of a total State population of 500,000. By 1906-7 the Charters Towers field began to decline and in 1956 production had diminished to 1,336 ounces.

**The Palmer**

Most romantic and spectacular of all Queensland goldfields is the Palmer. Following William Hann’s expedition in 1872 when Surveyor Warner found small particles of gold on the Palmer River, J. V. Mulligan’s party of experienced prospectors left Georgetown on the Etheridge goldfield, on 5 June 1873, and found “colours” of gold on the Tate River on 21 June. On 29 June they reached the Palmer River at a place which later became the goldmining town of Palmerville. Three weeks’ prospecting produced 102 ounces of gold.

The ensuing rush compelled the Government to provide a port for the Palmer on the Endeavour River, calling it “Cooktown.” Ships laden with diggers from all the Australian colonies and from New Zealand made for the mouth of the Endeavour River, where Cook had careened the “Endeavour” in 1770. Men streamed from California, South Africa and many other parts of the world. Two ships, the “Scotland” and the “Japan,” brought 2,200 Chinese in one voyage in July 1874. Around the “port” Cooktown sprang into existence and within weeks was a city of canvas tents and slab huts, housing 5,000 people. In three years 15,000 whites and 20,000 Chinese passed through the port travelling to the diggings.

The shiploads of Chinese were mostly coolies “imported” by wealthy Chinese; herded into compounds, and then drafted into gangs of “human mules” for the porterage of supplies to the goldfields.

As for the Europeans, the Cooktown correspondent of the *Sydney Morning Herald* described them as the “haggard, yellow-eyed white men on the Palmer, who have drunk deep of the Palmer pestilence and carry with them the seeds that will ripen into disease.” He prophesied that there was “no more chance of Northern Queensland becoming settled with a permanent European population than there is in British India.” (So much for prophets! North Queensland is the most signal example of successful white settlement in the tropics that the pages of history can show.)

The Palmer trail itself was little more than an axe-hewn track through bush and scrub over rugged ground, overshadowed by the constant peril of violent death. The first party of miners who set out from Cooktown were ambushed by blacks at a spot on the range known thereafter as “Battle Camp” because of the grim battle fought there between the Snider rifle and the spear. It was the Chinese, however, who suffered more. Thousands of them were killed and eaten by the ferocious myalls of the Palmer, whose epicurean taste considered them equal to the choicest bandicoot and much better than wallaby. They disliked the flesh of white men; it was too salt in flavour! Usually unarmed, except for an occasional ancient musket or bell-mouthed pistol loaded with bad powder and coarse gravel, their shoulders burdened by long bamboos to the ends of which were slung prodigious 160 lb. loads of supplies and tools, they were an easy prey. Nevertheless locust swarms of them reached the gullies of golden gravel and occupied thousands of claims.

The war waged, also, between whites and blacks was pitiless: the blacks killed every white man they trapped; miners and packers shot every black on sight. The map became studded with such names as Hell’s Gates, Murdering Gully, Revolver Point, Cannibal Creek, Rifle Creek.

**Mud and Malaria**:

The wet season made the trail from Cooktown a back-breaking 150 miles of anguish, and men died by hundreds from starvation or perished from sheer exhaustion, while many were drowned trying to cross flooded rivers. Parts of the trail were periodic quagmires in which many of the horses—the vital element for transport—were bogged until they died of exhaustion. Hordes of mosquitoes followed the soaking rains and epidemics of “Palmer fever” (malaria) took toll of hundreds of white men. When food supplies at astronomical prices gave out, miners killed and ate their horses and dogs—but—gold poured into Cooktown by
ton! Many who won fortunes at Maytown and Palmerville, “where almost every spadeful yielded heavy alluvial gold,” never lived to enjoy their wealth. Many others spent it on riotous sprees in Palmer Kate or French Charley’s grog and gambling dens, losing fortunes at poker or on the throw of the dice.

Riots broke out between white and Chinese miners when Chinese “jumped” claims that had been temporarily abandoned. At Cannibal Creek, Maytown, the Chinese were forcibly ejected. The racial problem was complicated by the fact that the Chinese themselves were divided into bitter factions. The Cantonese and Macao men, for example, had their own antagonistic tongs, and “hatchet-men” carried out private commissions of vengeance. The worst clash was at Lukinville, forty miles below Palmerville, about the middle of 1878, where a little war broke out, which the few police under Warden Sellheim were powerless to stop. The Cantonese and Macao factions never revealed their total casualties, but it was estimated at the time that some forty were killed and hundreds wounded, some of them horribly gashed and mutilated by cleavers, knives and gunshot blasts.

In the first five and a half years gold to the value of £3 million was won on the Palmer. The field reached its peak in 1875, and up to 1885 (when production began to decline) £5,500,000 had been won. The recorded gold produced on the Palmer from 1873 to 1956 amounted to 1,334,000 ounces, of which 94 per cent. was alluvial, 6 per cent. reefing. But many thousands of ounces of gold were won of which there is no record; it was smuggled back by Chinese to their homeland. The Palmer is now almost a non-producer. In 1957 only 15 ounces of gold were obtained.

Mount Morgan

In 1882 Mount Morgan, the famous “Mountain of Gold,” was discovered. Mt. Morgan mine was established as the result of a prospecting trip by Tom and Edward Morgan, and an employee, Sandy Gordon, in July 1882. Fred, Tom and Ned Morgan became possessed of claims taking in the greater part of the mountain top outside Donald Gordon’s selection, the western fence of which crossed the summit of a hill which was then known as “Ironstone Mountain.” Later, after persuading three other Rockhampton men (W. K. D’Arcy, T. S. Hall and William Pattison) to come in with them to form a syndicate, they bought Gordon’s square mile of freehold for £640—the usual £1 per acre. The first assay from the “Mountain of Gold” is reported to have gone 5,700 ounces to the ton!

The syndicate of six continued in existence until 1886. It had to fight nine separate attempts to dispossess it of its holdings. Complicated negotiations were carried out by which the Morgans sold out to the other three members of the syndicate for an amount totaling six figures, and the Mount Morgan Gold Mining Company Ltd., with a capital of £1 million, came into existence. In 1889 one ton of gold a month was being produced and £1 shares jumped to £18 each. This company lasted forty-one years until January 1927. In that period the company had treated 9,307,938 tons of ore, containing 5,345,000 ounces of gold and 140,000 tons of copper. It had supported a town which at its zenith contained a population estimated at 16,000. In June 1929 a new company, Mount Morgan Limited, was floated.

Open-cut methods of mining have been followed. Copper is found in association with gold, and to June 1957 over 17½ million tons of material had been mined for treatment, the gold produced being 1,306,672 ounces and the copper produced 94,380 tons. Copper production in 1957 was 6,000 tons a year, and gold production 45,847 ounces. About 1,200 persons are employed in the mines and the smelters. The “Glory Hole,” at the huge open cut, is of considerable interest to visitors. (116)

Cracow

About 1875 traces of gold had been found in the Cracow area, Upper Burnett, but, in 1931, Charlie Lambert and Billy Reynolds located the Surprise Reefs, and a rush followed. The Cracow gold-field was proclaimed in August 1932, the area of the field being 4½ sq. miles. Between 1932 and 1956, 360,233 ounces had been produced. The field reached the peak of its production in 1935, in which year 32,068 ounces were won. Golden Plateau, the field’s principal producer, was the only mine working in 1957. Gold produced amounted to 16,991 ounces, valued at £72,136, and Golden Plateau maintained its position as the second largest gold producer of the State.

Other notable Queensland mining fields are:

Cape River, 150 miles from Townsville, North Queensland, where

(116) William Knox D’Arcy, son of William Francis D’Arcy, solicitor, was born in England on 11 October 1849, and in 1866 accompanied his father to Rockhampton. D’Arcy was engaged in his father’s office and in September 1862 he acquired a large interest in the syndicate formed to work the Mount Morgan gold mine, and made a large fortune. The mine was floated into a company of one million shares, each of which was paid to 17 and 6 shillings each, of which he held 358,334. In 1889 D’Arcy returned to England. He became interested in oil, and in 1901, with the assistance of the British Government, he obtained a concession over an area of 500,000 square miles in Persia for sixty years. D’Arcy was unsuccessful in his search for oil for some years, but he persevered, refusing various offers of financial help from foreign syndicates. After he had spent £300,000 of his own money, a British syndicate was formed in 1905. A payable belt was found in May 1908. This eventually became a prolific producer, and the Anglo-Persian Oil Company was formed; the British Government paid £2 million for a controlling interest in the field. D’Arcy died at Stanmore, Middlesex, on 1 May 1917.
gold was discovered in September 1867. Cape River was an alluvial field, and in two or three years about 20,000 ounces were won before the gold petered out. Warden W. R. O. Hill described it as the roughest and toughest field in Australia; nearly 3,000 men of all races feverishly worked the alluvial deposits by day, and, by night, held high carnival in drunken revelry, with frequent fist-fights and occasional gun-fights, lighted by guttering candles and slush lamps.

Clermont. Gold was discovered at Peak Downs in 1861, and by 1863 there were more than 1,000 men on the field and Clermont became a flourishing town. Gold to the value of £500,000 has been produced from this field, and gold is still being won there.

Crocôdle Creek, in the Rockhampton district (1865), was the first field from which Chinese were summarily ejected by white diggers. Other fields in the Rockhampton district were Calilopie (1862), Cawarral (1863), Stanwell (1864), Morinish (1866), Rosewood and Raglan (1867).

Cloncurry. Discovered in 1867, alluvial gold totalling 3,000 ounces has been produced; but Cloncurry was pre-eminent as a copper producer.

Croydon. Croydon was described as “Australia’s richest posthole,” for it was while digging postholes on Croydon Station, owned by W. C. Brown, that prospector Tom McEvoy (“Posthole Tom”) saw traces of gold in 1863. Two years later the Aldridge brothers, who became associated with Brown as partners, found payable quartz in a reef which they had passed over every morning for two years going to and from work! This reef was the “Lady Mary.” The population of the field was 7,000 in the nineties when Croydon reached the peak of its prosperity. It boasted fifty hotels, half a dozen banks, and two newspapers. In forty years from 1885 to 1915 Croydon produced 770,000 ounces of gold, and 800,000 ounces of silver, worth £3,336,000. (On present-day values the gold would have realised £11½ million.)

Eidsvold. Gold was discovered here in the Burnett district in 1858 by a shepherd known as “Loddon Bill,” but mining did not begin until 1862. Twenty-five years later there was a “rush” (1887) and the first gold escort left Eidsvold in April 1888, with over 1,100 ounces of gold. Within a year of the “rush,” Eidsvold was a large canvas town with a population of 1,200, with two churches, eight hotels and a dancing saloon. Coaches ran from Gayndah twice a week, from Mt. Perry four times a week, Dalby once a week, and Chinchilla once a week. Total production was over 100,000 ounces of standard gold.

Etheridge. Named after prospector Donald Etheridge, this field was discovered in 1870. In 1871 scores of Chinese and many whites were killed by the blacks. Before the discovery of Charters Towers the gold escorts travelled from Georgetown to the Lynd, thence across the Dalrymple, down to Ravenswood and thence to Townsville. These escorts of ten, carried up to 4,000 ounces of gold. Bushrangers held up and robbed stores, miners and teamsters. To 1956, the Etheridge field produced 670,357 ounces of fine gold. Georgetown is the only sizeable township remaining.

Gilbert River. Opened on 12 May 1869 following Richard Daintree’s discoveries; by 3 July 1869 there were 1,000 men on the field. When the alluvial deposits were cleaned out, work was concentrated on the reefs, and many shafts were sunk and batteries established. Attacks by the blacks hampered mining operations. The field was abandoned after the Palmer rush. Later the Gilbert and the Woolgar (discovered in 1881) were incorporated in the Etheridge field.

Hamilton (Ebagoolah). Discovered in August 1899 at the head of the Lukin River (south of Coen, Cape York Peninsula) by John Dickie, who staked out the Hamilton King, the first reef claim. Some rich finds were made. Nicholls and party discovered on Nuggety Gully a nugget which weighed almost 8 lb. Ebagoolah township, 700 feet above sea level, had a peak population of 400; its peak production was 8,300 ounces in 1900. In thirty years up to 1909 it produced over 40,000 ounces of gold; in 1957 production was only 2 ounces.

Hodgkinson. Discovered in 1875 by J. V. Mulligan, the alluvial deposits on the field, which stretched from south of the Walsh River for more than sixty miles north to the Mitchell, were very rich. In the first two years of the field's existence, 100,000 ounces were produced. During the next five years 39,000 ounces of alluvial gold were won and the field had a population of almost 3,000. Thornborough, Woodville, Wellesley, Stuart Town, Union Town, and Kingsborough townships flourished for a few years and then withered away with the decline in the field. Both Port Douglas and Cairns came into existence as a result of the Hodgkinson "rush." Up to 1908 the Hodgkinson produced 229,706 ounces of gold. Since then all returns have been included in the Chillagoe and Mareeba fields. In 1957 no gold was produced.

Mareeba was discovered in 1893 by Duncan Finlayson. The principal mine was the Queen Constance owned by Alfred Hart. The centre of the goldfield was the township of Dubil, five miles from Mareeba, which was then the railhead of the Cairns-Herberton railway. To 1957 the Mareeba and Chillagoe fields had produced 56,398 ounces of gold.

Mount Coolon. In 1913, Luke Reynolds, a stockman on Yaemunda Station, found gold on the Sutton River in Central Queensland. The first area, however, was granted to Thomas Coolon, and the Mount Coolon goldfield was proclaimed. Coolon refused to allow anyone on the field and guarding his claim with a rifle. In 1918 he shot and killed five prospectors and then committed suicide. Total production of the field from 1915 to 1942 was 178,944 ounces, the highest yield in a single year being 39,276 ounces in 1933.

Nebo. This goldfield, about seventy-five miles from Mackay, was discovered in 1881. Gold nuggets up to 69 ounces were found. In the first twelve months after its opening there were 1,000 miners on the field.

Oaks. This was the last alluvial field of any size in Queensland. It was discovered late in 1907 by two prospectors, Hawkins and Mack, on the right bank of the Copperfield River. In two years 10,000 ounces were produced, almost all of it alluvial. Later the field became a reefing proposition. In 1908 the population was 1,500; the township was named Kidston, after the Premier of the day. Total production between 1907 and 1957 was 30,000 ounces.

Ravenswood was discovered by Buchanan and Jessop in 1868, and an alluvial rush in 1869 was followed by reef mining. Over 200,000 ounces of alluvial metal were won and the output of 1905 was 42,465 ounces, and up to 1954, production totalled 900,841 ounces. From the reef mining operations considerable silver was recovered.

Wenlock. Gold was found on the Batavia River by William Baird in October 1892, but in 1896 Baird and two other miners were fatally speared by blacks. In October 1910 a highly intelligent aboriginal named Pluto found a "slug" of solid gold on the Mein to Bowden (Wolfram field) pack track, near the north bank of the Batavia River.
A rush of Coen and Ebagoolah miners followed. Two miners, Foley and White, found the largest nugget (74 ounces) within ten inches of the surface. About 2,500 ounces had been won by August 1911. Supplies had to be brought by pack horse from Coen, eighty miles away, at a cost of £10 a ton. In January 1915 Kitty Pluto found a speck of gold on the sandy river flat two miles downstream from Plutoville. From this part of the field, known as the "lower camp," thousands of pounds worth of gold were obtained. In 1922 another exceptionally rich patch was located. The recorded production on the Batavia from 1911 to 1947, inclusive, was 43,749 ounces of an approximate value of £167,281. Actual gold production was probably much greater. In 1939 the name of the field (and the river) was changed from Batavia to Wenlock.

COPPER

From 1860 to 1957 a total of 649,423 tons of copper, valued at £94,286,546, has been produced in Queensland.

Peak Downs

Copper was discovered on Peak Downs in 1860 by a prospector named Mollard. The Peak Downs Copper Company was floated in 1863. Cornish miners and Welsh smelters were brought over from England to work the deposits, and furnaces and a refinery were erected at the mine at enormous expense; the firebrick and ironwork had to be imported from England and hauled by bullock waggon over rough bush tracks from Rockhampton, a distance of some 250 miles. The copper ingots had to be hauled to the coast in the same way, up to £60 a ton being charged by the teamsters—but copper was fetching high prices, averaging £100 a ton. From 1860 to 1883 some 47,000 tons of copper were produced in the Peak Downs region and some £250,000 was paid out in dividends. In 1878 there was a severe fall in the price of copper, and the company never recovered, eventually going into liquidation.

Mount Perry

Mt. Perry, in the Burnett district, became a copper producer in 1873, production in the next twenty years reaching an output of 1,000 tons per annum. A railway from Bundaberg was opened in 1880. From 1902 to 1913 the field attained its peak. Operated by the Queensland Copper Company, its production exceeded 10,000 tons per annum and the total production of the field to 1914, when the mine closed down, was 23,000 tons of copper.

Cloncurry and Mount Isa

Ernest Henry, prospector, pastoralist and explorer, found a vast outcrop of copper ore on the Cloncurry River in May 1867; this afterwards became known as the Great Australian Copper Mine, which began production in 1880. Normanton was the nearest port
MOUNT ISA MINES LIMITED
The mill area looking north-east.

PLATE XL.
(By Courtesy of Mimag)

Aerial photograph of the £3,500,000 Copper Refinery at Stuart, Townsville, which will begin production of copper wire bars in September 1959.
The plant was erected by a subsidiary of Mount Isa Mines Ltd. and will manufacture 30,000 tons of wire bars in the first year. Production will increase to 60,000 tons annually when the rod mill, shown in the initial construction stage (right background) is completed, probably by the end of 1960. (Castle Hill in distant background.)

PLATE XLI.
(Courtesy Mount Isa Mines Ltd.)
WEIPA, CAPE YORK PENINSULA.

The huge body of bauxite, so far inspected, roughly estimated at 1,000 million tons, outcrops as a headland on the sea beach.

PLATE XLII.

(By courtesy of COMALCO.)
and Hughenden the nearest railhead, both centres 260 miles distant from Cloncurry.

With the rise in the price of copper after the turn of the century, many companies were floated, notably Mt. Elliott Ltd. During the copper boom of 1905-08 the Cloncurry field of 8,000 square miles was worked extensively by "gougers" who operated on the rich surface deposits. With the completion of the railway to Cloncurry in 1908 and its extension to Dobbyn, Mt. Elliott, and Duchess in 1910-15 (cheapening transport costs), there was a considerable expansion of production. Mt. Elliott Ltd. and Hampden Cloncurry Copper Mines Ltd. were the field's major producers and smelters were established at Kuridala, Selwyn, and Mt. Cuthbert. Production attained a maximum of 9,723 tons in 1915. From 1920 to 1940, Trekelano and Mt. Oxide, both of which railed their ore to Chillagoe for treatment, were the principal producers. Since 1943 Mt. Isa has been the major producer of copper on the Cloncurry field.

In 1956 Queensland's copper yield was 37,167 tons 19 cwt., a record; its value being £16,085,756. Of this output Mt. Isa provided 28,149 tons, Mt. Morgan being second with 7,388 tons. Mt. Morgan has been a major copper producer since 1902, when blast furnaces were erected to treat the lower grade copper-gold ores of the lower levels. From 1886 to January 1927 Mt. Morgan Mine produced 140,000 tons of copper. From June 1929, when a new company, Mt. Morgan Ltd., was floated, 94,380 tons of copper were produced. Copper production in 1957 was 6,090 tons valued at £2,068,630—£339 a ton.

Other copper mines in the Central District have been Great Fitzroy (Mount Chalmers) and Many Peaks.

Chillagoe

The copper and silver lodes of the Chillagoe district of North Queensland were first made known to John Moffat of Irvinebank by William Atherton of Chillagoe cattle station. In 1888, soon after Chillagoe Station was formed, rich copper ore was found there. Moffat set parties of miners to work opening up these great outcrops. Several small reverberatory smelters were erected throughout the district to reduce the ore to matte. All machinery and supplies had to come by waggon 150 miles from Port Douglas, over rough roads.

The Chillagoe Railways and Mines Co. Ltd. was formed, and in 1897 the company was authorised to construct a railway from Mareeba to Chillagoe and Mungana and from Almaden to the Etheridge (Forsayth). The Mungana railway was completed in 1900, and the Chillagoe smelters in the following year. The company brought £600,000 worth of capital into the Chillagoe district; it
built towns and a railway, and with the production of the mines it developed, it created improvements and products worth £8,000,000 during its lifetime. For years until the second World War the old Chillagoe railway throbbed to the roar of the loaded ore trains. It was the main artery of a great mining field. (117)

SILVER AND LEAD

In 1908 production at Mungana was 5,000 tons of lead and 500,000 ounces of silver. Mungana developed into an important railhead township, trucking yards being built there in 1901. The Chillagoe company's operating area comprised 5,324 acres. Their large smelters and mines employed in boom times 1,000 men, being served by ore produced over a radius of 100 miles. Between 1900 and 1910 the Herberton, Chillagoe and Etheridge fields produced up to 5,000 tons of copper a year. Before the establishment of the smelters at Chillagoe ore from the Einasleigh mine (discovered by Richard Daintree in 1867) had to be packed by camel train to Cardwell. Mt. Garnet, Mt. Molloy and the O.K. mine, fifty miles north of Mungana, were also important producers. Smelters were erected at O.K. (named after a brand of jam) and fifty years ago it was a wild, rip-roaring mining town, with fist-fights and gun-fights of frequent occurrence. Strings of camels took the ore to Mungana; Abdul Wade had fully 500 camels in use. From Mungana they packed coke back to the smelters. In 1906 traction engines replaced the camels. O.K.'s existence came to an end with the metal slump in 1910.

The First World War led to the liquidation of the Chillagoe Railways and Mines Co. Ltd., and in 1918 the Queensland State Government purchased the assets of the company and re-opened the smelters. The Chillagoe State smelters operated continuously until 1926, in which year shortage of ore supplies and falling metal prices caused their closure. In 1929 they were re-opened and continued until their final closure in 1943. During this period two-thirds of the copper ore smelted came from the Cloncurry district, 800 miles distant by rail.

Stanthorpe and Herberton:

From Separation to the end of 1957 the value of silver production in Queensland has been £17,608,160, and of lead £63,740,461. These minerals are usually found together. Silver-lead production began in 1880 on two fields, Stanthorpe (South Queensland) and Herberton (North Queensland). Production increased rapidly. In the early 1880's silver-lead mines were worked extensively in the Chillagoe, Walsh and Tinaroo districts of North Queensland. By 1907 sixteen fields were producing silver, the highest were Herberton, 482,933 ounces (£50,716), and Stanthorpe, 157,662 ounces (£19,366). In the same year Herberton produced 4,370 tons of lead, valued at £61,006.

Mount Isa

In 1930-31 Mt. Isa entered into the production of silver lead, and is now the chief producer in the State. In 1957 4,302,649 ounces of silver (£1,737,553) and 50,825 tons of lead (£6,141,499) were produced in Queensland.

The Mt. Isa field was found by accident. In 1923 John Campbell Miles, a wandering prospector, stopped to rest his horses at a water-hole in the ranges. He was attracted by a black outcrop of rocks not far from his camp and he investigated. He had samples assayed and the returns showed high percentages of silver and lead. He pegged out the area and continued to prospect the find which became more valuable as he progressed. A company, Mount Isa Mines Ltd., was formed to develop the field in 1924, and Miles held 15,000 shares. In the first six years of development the various components associated with the venture spent £4,000,000 before the first skip of ore was hoisted in 1931.

The first dividend was declared in 1947. Since that year the company has cleared the whole of its debenture and loan indebtedness; literally “adopted” its original parent company, Mining Trust Ltd.; paid a continuous dividend; and has reached the last year of a triple expansion programme costing £20 million which has been financed from profits.

By June 1961 Mt. Isa Mines Ltd. will have available annually for export 300,000 tons of mineral products. These comprise silver lead bullion, copper, zinc concentrates, copper concentrates and dross.

Mt. Isa, in its brief thirty years of history, has become a robust mining town of more than 9,000 people and at present is the largest single mineral undertaking in Australia.

This mineral wealth is handled through the port of Townsville, 603 miles east by rail, and the Townsville Harbour Board is well advanced in its programme of extra berth and mechanised facilities to handle the increased output.

A subsidiary of Mt. Isa Mines Ltd. is on schedule with the erection of a £3½ million copper refinery at Townsville which will be manufacturing and exporting wire bars by July 1959.

BAUXITE

The projected mining and treatment of the extensive bauxite deposits at Weipa in the isolated Gulf of Carpentaria region will in
all probability be a giant among foreseeable mineral undertakings.

On 16 December 1957 the operating company—Commonwealth Aluminium Corporation Pty. Ltd. (Comalco)—signed an agreement with the State Government by which it has undertaken not to export raw bauxite from Queensland, except such quantities as may be required by the Bell Bay plant in Tasmania. Comalco has undertaken to spend a minimum of £45 million on the development of the bauxite deposits at Weipa (which are possibly the greatest in the world), and perhaps £175 million if it is found, as the scheme develops, that the complete conversion of bauxite to aluminium can be economically carried out in the area. Comalco in the last year has spent more than £1 million in completing its field surveys. A huge building programme, including the erection of a township at Weipa, will be necessary.

The site of the processing plant has not yet been determined, but if it is to be at Weipa a £3 million port—probably at Port Musgrave, on the western tip of Cape York Peninsula—will be required to ship the aluminium overseas.

An alternative site already discussed is at Blair Athol, a Central Queensland coalfield, where ample coal is available for a coal-fired generating plant. At present a subsidiary of Comalco has taken an option of the two Blair Athol open-cut coalfields, and is now engaged in a diamond drilling programme to prove the great extent of coal resources in this area. This investigation will determine the alternative sources of fuel and power available to the company should processing of the raw material be decided upon, either in the form of alumina, or the total production of aluminium in Queensland.

Comalco plans to produce 500,000 tons of aluminium annually for export to overseas smelters. Plans also include aluminium smelting facilities, rising progressively to 250,000 tons annually. A 500,000-ton capacity alumina plant will cost approximately £45 million and will produce £15 million annually in the sale of alumina overseas.

Progressive establishment of aluminium smelting facilities to produce 250,000 tons of metal annually will absorb £200,000,000 or more of capital, depending on the type of associated power plant chosen. The additional export revenue would rise to approximately £60 million.

In the Cape York peninsula, on an area adjoining that held under authority by Comalco, the large Canadian organisation, Aluminium Laboratories of Canada (ALCAN), is systematically prospecting and testing the extent of local bauxite deposits. This indicates that the enormous bauxite resources of the Peninsula region though not yet fully determined, are estimated to exceed 1,000 million tons.

**URANIUM**

The Mary Kathleen uranium deposit was discovered in the Cloncurry district about forty miles from Cloncurry in 1954 by a party of Mt. Isa prospectors, headed by Clem Walton.

Exploration and drilling established a substantial ore reserve of economic grade.

Mary Kathleen Uranium Ltd. has already invested about £20 million in the erection of a town and treatment plant at Mary Kathleen, in broken, previously uninhabited country adjacent to Mt. Isa.

Allied with the Mt. Isa and uranium projects, and particularly with Mt. Isa, is a £30 million railway rehabilitation project which, it is hoped, will be financed from Government loan resources.

Mary Kathleen Uranium Ltd. has begun production of uranium oxide. The company has a contract to supply approximately 500 short tons annually to the Atomic Energy Authority of the United Kingdom. The contract is valued at between £40 and £45 million and will take eight to nine years to complete.

The creation in formations among the oldest on earth, geologically, of a completely modern town, including a water supply from a 3,300 million gallon reservoir which serves the population of about 1,200 and the treatment plant, is one of the wonders of mining development in Australia.

**SEMI-PRECIOUS STONES**

Gems and opals have been mined in Queensland since 1890, and are found in Central and Western Queensland, the principal centres being Anakie, Sapphire and Rubyvale. These fields are still in production, but are declining every year. Total value of gems and opals produced to 1957 was £392,176.

**TIN**

Tin produced in Queensland from Separation to 1957 totals 180,904 tons (£18,413,983). Tin was found at Stanthorpe in 1872, and in the next year production rose to 8,938 tons (then worth £606,184)—a tonnage record never since equalled. Queensland’s 1957 output was 1,154 tons, valued at £622,555 (£540 a ton!).

Tin was discovered at Herberton (eighty-two miles by rail from Cairns, N.Q.) in 1879 by John Atherton. The Great Northern Mine in 1885 crushed 1,400 tons of stone for a production of 514 tons of black tin. The tin-bearing country around Herberton covers 12,000 square miles and 300 mines were at work during the ’eighties and ’nineties. John Moffat, pioneer, speculator and mines proprietor, operated over a large area, including Irvinebank and Stannary Hills.
The greatest producer in 1906 was the Vulcan Mine, Irvinebank, which produced 781 tons of tin at the then record price of £215 a ton.

The Herbert district also gave a livelihood to hundreds of “tin scratchers” who worked stream tin in gullies and creeks.

To-day most of the tin produced is alluvial, the chief source being at Mount Garnet, N.Q.

COAL

Queensland's rich and varied coal resources cover an area of some 73,000 square miles. At least 17,300 square miles include areas which contain vast, useful and workable coal seams. Estimated reserves total at least 2,000 million tons, comprising principally black coals varying from sub-bituminous to semi-anthracite, the greatest proportion being of average to high quality bituminous coal.

The first coal mine to be worked for a commercial profit was opened at Redbank in 1843—sixteen years before Separation, by John Williams, who came to Brisbane in 1839, three years before Moreton Bay became a free settlement.

In 1860 the coal produced in Queensland amounted to 12,327 tons (valued then at £9,244). Output to 1957 was 80,082,374 tons (£93,217,397).

More than ninety coal mines are operating in Queensland, employing a work force of some 3,500 miners. The Bowen coalfield, which has an estimated reserve of eight million tons, has a mechanisation system which cost £500,000 to install.

Ipswich (West Moreton), oldest coal-mining district in the State, is the main coalfield, followed by Clermont, Bowen, Callide, and Maryborough, and small amounts are mined in the Toowoomba, Rockhampton, and other districts. On the Clermont field, at Blair Athol, on the Callide field, and at Scottville, in the Bowen district, coal is obtained by open-cut methods. Large-scale operations on the Callide field commenced late in 1948. The field has been connected with the main railway system, and the railway to the coast has been improved to increase its carrying capacity. Coal is also transported by road to the port of Gladstone.

(The worst disaster in Queensland coal-mining history occurred at Mt. Mulligan colliery in 1921, when seventy-six miners met death by explosion. At the Collinsville State mine on 13 October 1954 seven miners were killed by excess carbon dioxide.)

The Queensland coal industry is governed by a Coal Board, of three members (presently Messrs. E. F. Dunne (Chairman), A. Crowley, and Idris Evans). The Board, which travels extensively throughout the State, has as its policy the provision of means for securing and maintaining adequate supplies of coal throughout Queensland and for the regulation and improvement of the coal industry in Queensland.

MINERAL SANDS

The dredging of zircon, rutile, ilmenite, and monazite concentrates, which occur in sands on the beaches of the South Coast area, began during the Second World War, because of the demand for minerals suitable for the hardening of steel and munition manufacturers. In 1941, 1,000 tons (£7,558) were produced. To 1957, 338,657 tons (£9,694,489) had been produced, when the demand slackened and production fell away accordingly.

NOTE: To assist the mining industry, the State for many years operated a number of batteries and ore treatment plants. At present the State Treatment Works at Irvinebank, which treats mainly tin ore, is the only plant operated by the State.

OIL

For fifty years the search for petroleum has been carried out spasmodically in Queensland, with recurrent bursts of intensive activity in exploration. The first discovery of importance was made in the Roma district in 1900, when a bore yielded a flow of petroliferous gas—it suggested the possibility of finding commercial supplies of natural gas, and possibly petroleum, in this and other areas. As early as 1904-1906 the streets of Roma were lighted with gas for ten days from a flow of gas in a well on Hospital Hill, west of the town. Hundreds of thousands of pounds were spent in the Roma area in 1928. A continuous petroleum gas bore gave 2,500,000 cubic feet of gas a day, and an absorption plant obtained more than 2,500 gallons of highly refined petrol out of a bowser at the side of the bore. Gas was even reticulated for stoves in the town for years until, by some freak of nature, the flow was lost. Surface geological investigations have continued in the Roma district since. In 1955-6 Australian Associated Oil Fields put down eight bores, and Roma again had excellent gas (one million cubic feet in one bore).

Considerable drilling is being undertaken in Queensland at the present time (1958) by Australian and American organisations, which have been granted authorities to prospect. As a result, the search has been widened and intensified considerably in the promising large sedimentary basins, and the work that is being carried out supports the opinions held by experts of the Queensland Department of Mines, namely: that Queensland can, eventually, be an important oil-producing State.

As the finding of commercial petroleum would have a tremendous
impact on the State’s economy, the Government is encouraging the search by granting certain concessions. In the Parliamentary Session of 1958 the Petroleum Acts (1923 to 1955) were amended to remove the limitation that no person could hold more than five prospecting petroleum permits or five petroleum leases in Queensland at the one time. These concessions will be contingent upon actual boring operations being started. The Government is thus providing an incentive to organisations with capital, which are prepared to spend a considerable amount of money in searching for oil.

An important development in 1958 was the agreement between Santos Limited and Delhi-Australian Petroleum Ltd., a subsidiary of Delhi-Taylor Oil Corporation of Dallas, Texas, one of the largest independent oil providers in U.S.A. Under the terms of this agreement the companies will jointly explore the Great Artesian Basin in Queensland’s far south-west and South Australia’s far north-east. With the Government’s approval, the group plans to sink, to 14,000 feet, an exploratory well; and to spend very large sums on prospecting.

Experience in other parts of the world has demonstrated that it is necessary to bore many thousands of feet. However, by boring to 14,000 feet, definite data can be obtained on the nature of the strata in the area. The two companies will employ a chequer-board system, and it is possible that as many as fifty holes will be bored simultaneously.

Canadian interests are also participating in the search. Humber Oils Ltd., of Calgary, Alberta, through their Australian subsidiary, Humber Barrier Reef Oils Pty. Ltd., have applied for authority to prospect over 53,000 square miles of the Great Barrier Reef.

At 30 June 1958 a total of 257,245 square miles was held under oil prospecting title, and applications for an additional 130,000 square miles were under consideration.

The areas under title comprise most of the potential oil-bearing basins of the State—the Great Artesian Basin, the Bowen, the Gulf, and the Maryborough Basins, and the Great Barrier Reef where, as in the Gulf of Mexico or the great Lake Maracaibo in Venezuela, “black gold” may lie in millions of tons below the sea.

It is a far cry, indeed, across the century since the days of the prospector with his muzzle-loader, his pick and his pannikin!
Model of the sister ship of the "Duyfken," first recorded ship to sight the coast of Australia (C. York, Queensland) 1606.
(Courtesy of the Consul-General for the Netherlands.)

The Hunter River Company's "Shamrock" which first entered the Brisbane River in December 1842.
(Oxley Memorial Library.)

R.M.S. "Somerset," one of the packets which maintained a Torres Strait service to Singapore.

PLATE XLIII.
(Royal Historical Society of Queensland.)