JCU ePrints

This file is part of the following reference:

Ryle, Peter Albert (2000) Decline and recovery of a rural coastal town: Cooktown 1873-1999. PhD thesis,

James Cook University.

Access to this file is available from:

http://eprints.jcu.edu.au/19585



Chapter 2

MINING 1880 to 1999.

Cooktown was established as a supply point for the Palmer River gold field, and the town's economy was almost exclusively reliant on this one staple for the first twelve years. Gold was first discovered by Hann's expedition in 1872, although Hann had doubts that the deposit was economic. This belief was shattered when James Venture Mulligan prospected the field more intensively, and by late 1873 the Palmer rush had begun. 83 The Palmer field attracted miners from other Australian mining fields and from other countries, including many from China. At the height of its glory, there were more Chinese than Europeans on the field.84 There was little attempt to exploit the field rationally, and this resulted in the wastage of resources. Corruption was not unknown. This even extended to the mining warden, who was removed following his involvement with a mine partly owned by the Minister for mines. 85 Lower grade ores were not worked, By the early 1880s a lack of organisation in the exploitation of the Palmer field resulted in and the demoralisation of its remaining inhabitants. Reports of the total production of the Palmer vary, but Bolton asserts that at least 28 tons of gold was produced in the first seven years. 86 Gold continued to contribute to the district's economy after 1885, with dredges working the river gravels until after the Second World War. Small operators still

83 Bolton, A Thousand Miles Away, pp. 51-52.

⁸⁴ Ibid., p. 56. Bolton claims that in 1877 there were 17,000 Chinese on the Palmer, compared with only 17,042 Europeans in the whole of North Queensland.

85 <u>Ibid.</u>, p. 115.

86 <u>Ibid.</u>, p. 58.

seek gold on the Palmer, but have only limited success. In the 1970s a very rich copper and gold deposit gave the area a short reprieve, but this soon ran out. By 1890 tin had surpassed gold in importance, and provided employment for a significant number of people. Coal exploration also played an important part in Cooktown's history, but failed to meet the expectations of those who believed it would save the town. Unfortunately, neither tin nor coal proved to be the economic staple that would replace gold.

Tin mining.

Tin never gave the dramatic boost to the economy that gold had, but it provided many jobs in the area for a much longer period. Even while the Palmer continued to produce lucrative returns in gold, some miners chose to mine the more mundane tin.87 The results were significant. For instance, the Cooktown Courier reported in 1878 that forty tons of tin was recovered from Granite Creek, in the Palmer area. 88 As returns from gold decreased, more miners concentrated on tin, and by 1880 over 500 miners were working tin at Cannibal Creek. They produced 760 tons that year, valued at £38,000.89 The Normanby River area. closer to Cooktown, also produced significant quantities of tin in this period. By 1880, about 600 miners were working this field. 90 However. by 1883, poor prices and high transport costs led to a decline in tin mining and the Palmer tin fields were almost deserted.91

⁸⁷ Tin mining commenced at Cannibal Creek and Granite Creek on the Palmer field in 1876-77 J.W. Wright, (c. 1972), Cook Shire Handbook, Queensland Department of Primary Industries, Section 1-3.

⁸⁸ Cooktown Courier, 13 March 1878.

89 Annual Report Of The Under Secretary For Mines, Queensland, 1880, p. 9. Cannibal Creek is in the Palmer River area. In the 1980s a small rich copper mine, which also produced high returns of gold, operated there.

Queenslander, 10 April 1880.
 Annual Report Of The Under Secretary For Mines, Queensland, 1883, p. 11.

Tin clearly could not replace gold as a solid staple, because of market volatility and the lower price. A report in the <u>Australian Handbook</u> of 1884 compared the income from gold and tin from the Cooktown district for the previous year. Gold exports for the year ended 30 June 1883 totalled 29,496 ounces, valued at £117,948. In comparison, 267 tons of tin, worth only £15,287, left the port. ⁹² Tin mining surged in 1885 with the discovery of the Wallaby and Romeo Creek deposits, in the Annan River district. ⁹³ This find coincided with the exodus from the Palmer, and provided work closer to Cooktown. Miners on the Annan field initially concentrated on the alluvial deposits, but lode mining began in some areas of the field in 1887. Many of the lodes were very rich, with some returning assays of twenty percent. However, most lodes were small, and these mines had only a short life span. ⁹⁴

Tin mining never gave as much economic return, or provided work for as many people as the Palmer gold field, but it gave the area a boost at a critical time. By 1888, a survey of the district revealed that 800 miners were employed on the Cooktown tin fields. ⁹⁵ Over 500 of these worked at Mount Hartley, Rossville and Romeo, in the Annan River area. ⁹⁶ The increased population of the tin fields is reflected in the rapid increase in tin production, which rose from 300 tons in 1885 to a peak of 1,051 tons in 1888. ⁹⁷ This provided a welcome boost to Cooktown, as local

92 Australian Handbook, 1884, pp. 514-515.

⁹³ K.G. Lucas and F. de Keyser (compilers), 1965. <u>Explanatory Notes, Cooktown, Qld, Commonwealth of Australia</u>, Bureau of Mineral Resources, Geology and Geophysics, Department of National Dévelopment, Geological Series, Government Printer, Tasmania, p. 6.

⁹⁴ Lucas and de Keyser, Explanatory Notes, p. 24. Queensland Geological Record 1994/13. Mineral Occurrences - Helenvale 1:100000 Sheet Area, Cape York Peninsula, Queensland. T.J. Denaro, L.G. Culpeper, D.A. Morwood & P.E. Burrows, Geological Survey Division, Department of Minerals And Energy, Queensland, p. 10.

Lucas and de Keyser, <u>Explanatory Notes</u>, p. 22.
 Australian Handbook, 1888, pp. 416-417.

Annual Report Of The Under Secretary For Mines, Queensland, 1889, Government Printer, Brisbane, p. 85.

merchants supplied the miners, and acted as agents for the tin they produced.

The rapid increase in tin mining led to community fears that a lack of funding for roads could jeopardise the industry. A public meeting in Cooktown demanded that the Government vote £1,000 to provide better access to the tin fields, and that the construction of the bridge over the Annan River be given a higher priority. Before the bridge was built, all tin produced in the area was carted across the tidal reach of the river, forcing carriers to wait for low tide. The delays added to the cost of cartage. The importance of the bridge was recognised at the official opening when a comment was made that it removed the greatest deterrent to the development of the tin field.

Cooktown residents came to regard all the minerals in the Cook district as theirs, and at times this parochialism led to ridiculous situations. For instance, when tin mining began at Mount Windsor, in the high country behind Port Douglas, a public meeting at Cooktown called for a road to be built to the new field. A track already existed between Mount Windsor and Port Douglas, but this was not acceptable because "the place belongs to Cooktown". The public was asked to subscribe £120 for the work. There is no evidence that the track eventuated, but the event illustrates the determination of Cooktown residents to take advantage of any prospective new source of revenue.

101 Cooktown Courier, 11 January 1889.

^{98 &}lt;u>Cooktown Courier</u>, 17 July 1888. 99 <u>Ibid</u>, 15 February 1889.

¹⁰⁰ The contention that Mount Windsor "belonged" to Cooktown was absurd. It is directly west of Port Douglas.

Cooktown discovered the extent of its dependence on tin when overall production fell dramatically in 1889. 102 Several factors contributed to the decline in yield. Prices had risen steadily since 1885, but after peaking in 1888, declined for the next ten years. Rainfall was also sporadic in 1889, with a lack of water hindering sluicing for the self-employed alluvial miners. (see page 55) However, yields varied between the fields. The Cooktown Courier reported that "Rossville is like a funeral compared to two years ago", but that the Mount Amos lode mines were "very lively". Despite the downturn, and the failure of tin to achieve its expected potential, some people were optimistic. They predicted that Mount Amos would become the leading tin mine in North Queensland. 103 Lack of water forced some alluvial miners in the Annan River area to try underground mining in the surrounding hills. Results were mixed. Many mines produced little tin, but one mine in the Lions Den district reported good values. 104

The Cooktown economy suffered. Most of the more prominent traders and merchants provided supplies to the miners. They also acted as agents for tin producers, and often gave advances on ore deliveries. Some agents, such as Thomas and Madden, also provided finance to equip and sustain miners until they became viable, and were particularly vulnerable. Unfortunately, Thomas and Madden went insolvent in 1889, partly due to the tin recession, as Madden was a significant mining investor. 106

Report by Robert L. Jack on Tin Mines Near Cooktown, 6 December 1890. Q.V.P. 1891. Vol. 4, p. 137.

¹⁰³ Cooktown Courier, 2 August 1889.

^{104 &}lt;u>Ibid</u>, 15 November 1889.

For instance Thomas and Madden, Burns Philp & Co. and B.B. Wiltshire offered liberal advances on tin left on consignment. Cooktown Courier, 1 November 1889.

Cooktown Courier, 6 December 1889. Madden was reported to have brought £500,000 of British capital to Cooktown for mining investment. Cooktown Independent & Northern Sun, 26 August 1938.

Better rainfall in late 1889 allowed a resumption of sluicing, and gave a small boost to Cooktown's economy. Hard rock mining also increased. When Lands Commissioner Millman toured the area he reported that two of the bigger mines were expanding. Mount Leswell mine was ready to install machinery, and Collingwood had a big lode opened up, and was also ready for machinery. The local newspapers were enthusiastic. An editorial in the Cooktown Courier predicted a boom in tin once the new machinery was installed. The locals believed that the new machinery would reverse the trend of falling tin exports, as only 613 tons were exported in 1889, compared to 1,051 tons in 1888.

Despite predictions of a boom, the introduction of machinery met with little success, and tin yields never again reached the high point of 1888. There was no lack of initiative by the miners. For instance, in 1892 some miners used dredges to increase production, but had little success. 111 Another change came in 1905, when the Annan River Company N.L. introduced hydraulic sluicing to the field. Other big operators followed, and large-scale sluicing peaked in 1915. 112 Investment was substantial. In 1914 alone, contracts worth £35,000 were awarded to supply machinery for the Annan River tin field. 113

107 Cooktown Courier, 3 December 1889.

109 Ibid, 7 January 1890.

^{108 &}lt;u>Ibid</u>, 10 December 1889.

¹¹⁰ Ibid. Lucas and de Keyser, Explanatory Notes, p. 22.

Denaro, Culpeper, Morwood & Burrows, Queensland Geological Record, p. 11.

Ibid.

For instance the Annan River Company installed a steam driven pump for the Collingwood race, which supplied 4,000 gallons per minute at a head of 317 foot. The Company also had a gravel pump capable of delivering 80 cubic yards of tailings per hour to the plant. Saint-Smith, Of The Cooktown District Tinfields, pp. 25-26.

Kaintai in points. 100 points = 1 inch of approximately zonnin.

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
1674	2 005	1 555	758	2 409	34	26	197	21	5	240	350	1 505	9 107
1875													8 212
1876	1 478	2 550	1 453	366	571	0	0	0	0	0	30	1 006	7 570
1877													6 315
1878	1 117	573	1 338	525	509	32	99	170	98	83	53	293	4 969
1879	2 232	1 780	1 727	1 588	205	59	146	470	8	109	105	259	8 688
1880	5 076	1 447	1 030	1 369	179	34	81	200	123	132	779	152	10 602
1881	457	2 481	4 220	654	397	165	237	155	0	1	131	169	8 977
1882	1 202	1 486	735	596	550	159	68	43	99	450	288	226	6 003
1883	515	867	647	2 657	119	250	127	185	0	16	96	969	6 448
1884	72	4 659	3 043	331	327	163	86	21	114	110	250	247	9 423
1885	741	713	1 353	739	99	252	143	351	53	60	240	1 525	6 269
1886	932	2 273	2 469	380	132	879	114	44	76	532	760	2 458	11 049
1887	669	590	2 899	1 087	183	41	46	38	0	136	163	1 687	7 539
1888	1 353	896	642	860	215	239	55	7	16	3	5	572	4 863
1889	148	1 108	553	766	457	21	23	115	0	124	1 352	1 003	5 670
1890	2 185	891	1 137	1 086	447	189	13	35	219	36	159	35	6 432
1891	1 021	3 008	850	1 279	334	10	153	137	101	151	31	82	8 957
1892	1 741	593	1 341	373	252	156	109	24	0	273	100	346	5 308
1893	1 304	1 610	1 075	234	107	45	120	184	78	17	383	66	5 232
1894	1 544	2 148	3 171	1 529	115	147	46	190	64	25	1 636	960	11 575
1895	1 022	1 112	797	1 784	268	207	45	29	0	76	48	134	5 522
1896	1 827	1 978	1 205	1 504	321	Ð	13	295	62	0	103	154	7 462
1897	1 016	1 088	485	207	50	512	157	102	64	14	95	620	4 410
1898	1 103	1 528	2 355	757	78	120	17		2	24	90	307	6 730
1899	969	414	2 746	749	174	26	278	65	129	75	10	200	5 835
1900	2 477	106	519	398	183	193	35		26	43	103	178	4 442
1901	854	1 852	1 210	889	667	115	61	158	36	85	229	125	6 292
1902	964	860	467	369	119	453	134		20	19	45	54	3 613
1903	3 968	923	3 344	1 726	352	141	72		53	103	569	987	12 315
1904	403	488	1 510	1 793	258	2	79		201	4	23	961	5 790
1905	1 897	650	459	859	489	390	67		6	3	29	69	5 126
1906	358	1 509	902	225	263	730	88		83	27	1 666	607	6 699
1907	3 090	979	569	210	001	304	45		125	136	237	3 101	3 800
1908	1 564	1 292	2 283	975	159	73	109		85	130	152	115	7 120
1909	1 370	433	1 047	348	33	340	174		13	300	755	1 111	7 052
1910	2 263	1 566	1 297	807	445	207	16		98	179	207	888	8 153
1911	2 649	1 814	2 202	2 679	253	43	73	7075	0	26	107	146	1 045
1912	750	838	2 440	106	245	603	80		19	269	160	168	5 857
1913	2 643	1 867	2 730	685	572	64	104		49	260	Û	1 656	10 633
1914	3 393	1 712		1 329	637	721	90		125	86	281	650	11 312

Rainfall chart, Cooktown district, 1875-1914. (Saint-Smith, Cooktown District Tinfields, p. 168).

Yields rose for awhile, but the big miners had left the field by 1922.¹¹⁴
The coming of the big miners saw an increase in flow-on effects from tin mining. For instance, the Annan River Company built a sawmill to supply timber for its mining operations, and for general use. This created a number of jobs for timber getters and mill hands, and gave a general boost to the local economy. By 1916 the mill had supplied over 200,000 feet of timber.¹¹⁵

Local organisations were vocal in their support for the tin mines, and sometimes promoted development projects with dubious potential. One such proposal was made by the Cooktown Chamber of Commerce, which claimed that a light tramline between Cooktown and the mines would stimulate the industry. It said that the line would give an impetus to the innovative tin producers who had recently introduced hydraulic sluicing. The Government passed the buck to the Council, telling the Chamber that local authorities were authorised to build and operate light railways under the Act. However, the Council was not interested either. Obviously the poor returns from the Cooktown to Laura railway had dampened the enthusiasm for railway construction at both levels of Government.

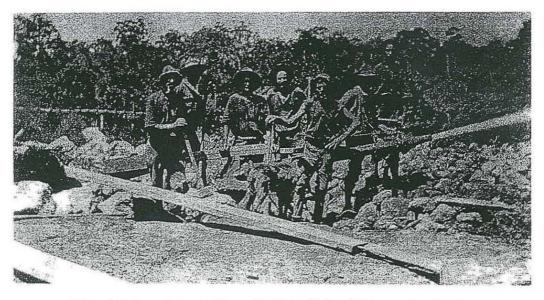
There was no improvement for tin mining after the First World War. In 1922 only 106 tons of tin came from the area, and this dropped to seventy-five tons the following year. The decline reflected the fall in demand for tin, and the consequent lower prices, following the end of

Denaro, Culpeper, Morwood & Burrows, <u>Queensland Geological Record</u>, p. 11.
 <u>Ibid.</u>, p. 28. <u>Q.P.P</u>. 1914. Vol. 3, p. 738.

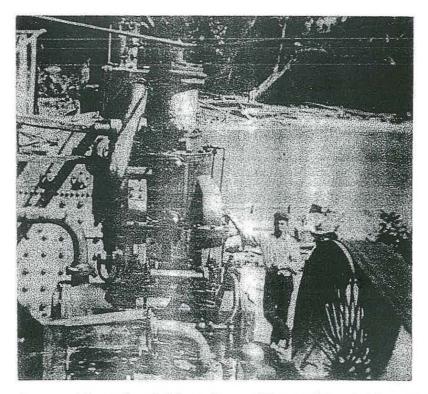
Fred Schmidt, Secretary, Cooktown Chamber of Commerce, Cooktown, to The Under Secretary, Home Secretary's Office, Brisbane, 18 January 1911, COL/021, Queensland State Archives (Q.S.A.).

The Under Secretary, Home Secretary's office, Brisbane, to The Secretary,

The Under Secretary, Home Secretary's office, Brisbane, to The Secretary, Cooktown Chamber of Commerce, Cooktown, 10 February 1911, COL/021, Q.S.A. Mining Industry Journal, Vol. 25, April 1924, p. 123.



Tin sluicing, Annan River field, c 1915. (Queensland Mines Department).



Pumping machinery for sluicing, Annan River mining field, c 1915. (Queensland Mines Department).

the war in 1918. The depression in base metal prices continued into the late 1930s.

Despite falling returns, the area continued to attract interest from some big companies who were willing to undertake investigations. Broken Hill Ptv. Co. Ltd. tested two areas in the Annan River field in 1937. Despite earlier reports of yields of one pound per cubic yard, more intensive testing showed that the area would be lucky to give half that return. 119 The Bureau of Mineral Resources also attempted to locate viable deposits at Kings Plains in 1961, but this proved fruitless. This area, now a cattle run, was once a floodplain along the original course of the Annan River. Speculation that the river had deposited great quantities of tin on the plain before it shifted course proved false. 120

Tin mining had a small boom again in the late 1970s. Several mediumscale operators constructed processing plants to work alluvial deposits. Terrax Resources N.L. operated in the Rossville district, and Serem Australia Pty. Ltd. worked the Lee Creek area, near Mount Amos. Although these two plants produced 250 tonnes in 1981, a fall in tin prices in the mid 1980s made the projects uneconomic. 121 The industry never recovered. While tin could in no way compare favourably with gold in its influence on the area's economy, it provided many jobs, and contributed significantly to Cooktown's survival. Many more people were engaged in mining gold, and in catering to the miners, than in tin mining. However, gold mining lasted for a relatively short period. 122 In contrast, tin mining provided employment for much longer. Even as late as 1914, when production was much lower than before the turn of the

¹¹⁹ Lucas and De Keyser, Explanatory Notes, p. 23.

lbid., pp. 23-24.

Denaro, Culpepper, Morwood & Burrows, Queensland Geological Record, p. 11.

century, the Cooktown field had a population of over six hundred, with almost four hundred actively employed. Total production of tin concentrate from the Cooktown mineral field from 1885 until 1992 was 12,850 tons, including 272 tons of lode tin. Tin contributed over £1,500,000 to the district's economy. Although a significant number of people were employed in tin mining until the 1960s, most of the mining occurred before 1905.

While the tin mining industry was relatively beneficial to the Cooktown area, it suffered from drought and fluctuating prices. Despite this, the area gained much more from the industry than was invested. Although the mining industry is notorious for spawning "shonky" operators who use questionable methods to dupe investors, the tin mining industry in the Cooktown area appears to have been relatively free of such people. In the final analysis, it could reasonably be argued that tin filled the role as a legitimate staple:

Coal exploration.

The first Europeans to explore the lower Cape York Peninsula district found evidence of coal deposits, and during the next hundred years hopes were raised that coal would provide another staple. Over this period, considerable interest was shown in exploiting the coal reserves near Cooktown. The interest was understandable, as a viable coal mine would have provided export trade through the port, and supplied

¹²² The majority of miners had left the Palmer by 1890. However, a few remained on the field until after the Second World War.

¹²³ Saint-Smith, Cooktown District Tinfields, p. 174.

^{124 &}lt;u>Ibid.</u>, p. 10.

Lucas and de Keyser, Explanatory Notes, p. 23.

Year	Tin Tons	Value Pounds
1885	300	3 144
1886	148	7 400
1887	945	58 783
1888	1 051	66 949
1889	690	38 000
1890	578	34 000
1891	472	27 094
1892	421	24 000
1893	347	17 278
1894	438	18 834
1895	419	16 196
1896	257	9 568
1897	146	5 335
1898	145	5 927
1899	166	12 031
1900	159	12 417
1901	158	9 327
1902	105	7 904
1903	177	13 706
1904	147	11 458
1905	142	12 463
1906	165	18 836
1907	181	19 614
1906	235	19 037
1909	248	21 068
1910	298	28 378
1911	196	22 559
1912	272	36 233
1913	293	38 065
1914	223	22 334
Totals	9,520	638,915

Annual yield and estimated value of tin ore from Cooktown district, 1885-1914. (Saint-Smith, Cooktown District Tinfields, p. 173).

fuel for the steam ships that serviced the area. Despite the failure of all attempts to find an economic deposit, coal generated higher expectations of possible benefits to the town, and for a longer period, than any of the base metals.

Coal deposits were identified in the district even before the gold rush began. In 1872 Norman Taylor reported the first signs of coal at what later became known as Fairlight, in the Cooktown district. ¹²⁶ In 1879 Dr. R.L. Jack, the Government Geologist, reported on seams at Oakey Creek, Deep Creek, and the Little River. Jack later inspected a bed of shale four feet thick at North Shore, on the opposite side of the harbour to Cooktown. However, this deposit showed only streaks of coal. ¹²⁷

Soon after the first European settlers arrived in Cooktown, more coal deposits were reported on a selection within twenty miles of the town. A specimen was available at the office of the Cooktown Herald for public inspection, and the Editor urged local investors to provide finance for further investigation. Within a year, a shaft was sunk to nineteen feet, and was reported to have encountered a seven-foot wide seam of "pure, black, bituminous coal, being hard, black, brittle and laminated". The Herald reported that the owners had twelve tons of coal at grass, and that a sample would be sent to Sydney for analysis. 129 If the results of the analysis were favourable, a tramway could be constructed to

¹²⁶ Taylor was a geologist with Hann's expedition of 1882. B. Dunstan, 1913, Queensland Mineral Index and Guide, Queensland Geological Survey, Publication No 241, Government Printer, Brisbane, p. 662.

Peninsula And Some Islands Of The Gulf Of Carpentaria. Also Reports On The Horn Island And Possession Island Gold Fields, And The Recent Prospecting Of The Cretaceous Coals Of The Cook District, Geological Report No. 180, Government Printer, Brisbane, p. 24. The North Shore area also held kerosene shale. Anecdotal evidence suggests that Pastor Schwarz retrieved kerosene from a well near Mount Saunders to use for lighting. However, this could not be verified.

¹²⁸ Cooktown Herald and Palmer River Advertiser, 17 June 1874.
129 Ibid., 3 April 1875.

transport the coal to the port. The result of the analysis is unknown, but people were still trying to exploit the deposit in late 1877.

Interest in the coal deposits was renewed in 1879 when it was used as a bargaining chip in the debate over the construction of the Cooktown to Maytown railway. Supporters used the presence of coal close to the proposed route to justify its construction. The Cooktown Railway League, a pressure group dedicated to the rail project, proved adept at manipulating the truth to achieve its aim. For instance, when John Rilley, an experienced miner, found some small seams, the League told the Government that Rilley had located two seams of coal, each four feet in thickness. 130 Supporters also used a report by J.E. Tenison-Woods to justify the railway, although his investigation of the Normanby area found only thin seams of coal of doubtful quality. 131

The Government decided there was only one way to resolve the matter. It offered to loan the Cooktown Railway League a diamond drill to explore the seams at depth. The League accepted responsibility for all expenses, and guaranteed to return the drill in good working order. It then convinced the Australian Steam Navigation Company (A.S.N. Co.) to carry the drill from Brisbane free of charge. 132 No doubt the shipping company hoped for a cheap source of coal to fuel its ships. By December the main structure of the drill had reached Cooktown, and after it was delivered to the test site the drill operator reported that the signs looked promising. 133 Despite the high expectations of all concerned, by May the drill had reached a depth of 148 feet without

¹³⁰ Cooktown Courier, 27 August 1879.

 ^{131 &}lt;u>Ibid.</u>, 27 August 1879.
 132 <u>Cooktown Courier</u> 25 October 1879.
 133 <u>Ibid.</u>, 20 December 1879.

finding a decent coal seam. 134 Disappointed league supporters lost interest in the project and it was abandoned.

A group of private investors made another attempt to exploit a local coal deposit in 1882. They asked a local blacksmith to test a sample of their coal in a forge while he was making horseshoes, and he reported that it was guite suitable. 135 The results prompted the Editor of the Capricornian, a Rockhampton newspaper, to comment "Go it, Cooktown! Your prosperity is only peeping from the womb of the near future". 136 This type of enthusiastic rhetoric was common at the time, but it was misplaced. The project met with even less success than its predecessor did.

Some proposed coal mines had little to do with coal and everything to do with land speculation. In 1886 the size of leases for coal exploration was greatly enlarged. The first large blocks in the district went to Fritz William Bauer and Harvey Fitzgerald, who each took up prospecting leases of 640 acres. The land was in the vicinity of the forty-mile peg. near Welcome siding; on the Cooktown to Laura railway line. 137 Although many other prospecting leases were taken out during the next few years, no serious mining was attempted. 138 Very little exploration work was carried out, and it is reasonable to suggest that these "coal miners" were more interested in accumulating cheap land than in locating minerals.

Queenslander, 1 May 1880.
 Aleck, J.Ivimey, 1948. Mining And Descriptive Queensland Or Travels Through The Queensland Goldfields, Facsimile edition, National Library of Australia, Canberra, p. 159. The Capricornian, 14 January 1882, p. 8.

Prospecting Licenses, (No. 15 Old Series), 22 November 1886, MWO 13C/T4,

¹³⁸ Between 1886 and 1900 at least fifty-three leases were taken up totalling 27,000 acres. Prospecting Licenses, MWO 13/T4, Q.S.A.

Although there was little action on most of the leases, at least one miner was willing to form a company to test the deposits. Early in 1889 T. Williams commenced exploration work on his lease, and initial reports suggested that he found good indications of a viable coal deposit. 139 Williams bought winding gear and machinery, then floated the North Queensland Coal Prospecting Co. to raise further capital to develop the mine. The project attracted great interest in the press, with forecasts that Cooktown would soon become the "greatest coaling station in Northern Queensland". 140 News that the Company would import a drill to explore the field generated further interest in the project. 141 However, the lack of positive results caused public disquiet, and the Company offered to refund share application fees to restore confidence. 142 This didn't work, and by the end of 1889 Williams admitted that he had failed to attract enough capital. He still had faith in the prospect, and used his own funds to continue drilling. 143 Unfortunately, he failed to locate a commercial coal deposit.

Despite the disappointments, Cooktown residents never lost faith in the local coal deposits. In late 1890, when Logan Jack inspected deposits in the district, the Cooktown Courier said that if his report was favourable "Gold will take second place and the black diamonds will crowd our harbour with shipping and render the inception of manufacturing industries in the north a matter of very little difficulty". 144 It is difficult to decide if the Editors were fools or knaves - whether they honestly believed in the future of coal despite the evidence, or were just trying to generate an atmosphere in favour of investment.

139 Cooktown Courier, 18 January 1889.

¹⁴⁰ Ibid, 9 August 1889.

^{141 &}lt;u>Ibid.</u>, 27 December 1889.

142 Advertisement by the North Queensland Coal Prospecting Coy., <u>Cooktown</u> Courier, 15 November 1889.

Ibid, 27 December 1889. 144 <u>Ibid.</u>, 27 December 1889.

No further work was reported on the Cooktown district coalfield until 1892, when John and Colin Christie put down a shaft near the railway line, approximately thirty-seven miles from Cooktown. This shaft eventually reached 246 feet, and was extended by drilling for another 99 feet. 145 A coal seam was encountered at 120 feet, and another at the water table around 345 feet. However, the seams were thin and useless. 146 Hugh Borland reported that in 1902 the AUSN ship Wodonga burned thirty tons of coal from Christie's mine in a trip to New Guinea, 147 but there is no verification. Several other coal deposits were located close enough to Cooktown to make export through the port possible. The reports on these deposits were encouraging, inducing Melbourne and English capitalists to send P.E. Henderson F.R.S., a "professional geologist and mining expert", to investigate gold and coal deposits in the area. 148 Despite the interest generated by the visit, no account of his report is available. Support also came from other disinterested outsiders. Richard Semon, a German naturalist who spent time in the area, reported that "In different parts of this district coalfields of great prospective value have been found, which will prove of more importance to Cooktown than the deceptive gold". 149 Unfortunately, the coal always proved far more deceptive.

The failure to locate an economic coal deposit did little to dampen enthusiasm. Leases were taken out throughout the 1890s, covering either 640 acres or 320 acres, but some as small as 8 acres. 150 The majority of leases were in the Normanby-Laura-Little River block, but some applications were in unusual areas. These included an

¹⁴⁵ Jackson, Report On A Visit To The West Coast, p. 27.

Jackson, <u>Report Of A visit to The West Coast</u>, p. 27.

146 <u>Geological Survey of Queensland</u>, Publication No. 222. P. 11.

147 <u>Cairns Post</u>, 18 September 1940.

148 <u>Cooktown Courier</u>, 26 November 1889.

¹⁴⁹ Semon, In The Australian Bush, p. 253.

application for a lease of 640 acres covering Indian Head and North Shore, across the harbour from Cooktown. The Head this request it was accused of bias against Cooktown. The Editor of a local newspaper said that the real reason for the refusal was that the Government wanted Townsville to go ahead, and not Cooktown. He raved that if coal was found in quantity near Cooktown, it would become the most important port in the North. It is difficult to understand why Cooktown residents would suggest the Government deliberately obstructed a coal industry that would improve the State's economy just to favour another port. Unfortunately, this type of statement was common, and illustrates the level of inter-city rivalry at the time. It is far more likely that the Government realised the applicant was using the generous provisions of the coal leases to gain title to the land for some other purpose.

The search for coal was not abandoned. In 1895 Logan Jack recommended that a diamond drill be used to test the strata below an outcropping seam in the vicinity of Christie's shaft. The Government agreed to provide the drill, and the operation was carried out by a syndicate including Kortum and Fitzgerald, two Cooktown residents. Although the drill bottomed out on the granite at 600 feet, no worthwhile coal was encountered. This attempt was followed by another publicly funded search near Laura in 1895. Laura residents questioned the dedication of those appointed to undertake the exploration. The prospectors' provisions included one case of canned lobsters, and one of canned oysters. However, they objected most of all to four

150 Prospecting Licenses, 18 September 1893, MWO 13C/T4, Q.S.A.

52 Cooktown Courier, 25 February 1890.

Prospecting Licenses, 17 January 1890, MWO 13C/T4, Q.S.A. Local opinion was that the application would fail as the land applied for was on an Aboriginal Reserve. Cooktown Courier, 18 February 1890.

^{153 &}lt;u>Ibid.</u> p. 24. 154 <u>Ibid.</u> p. 27.



Entrance of mine shaft, 38 mile coal mine, c. 1890. (Queensland Mines Department).



Drilling for coal 38 miles from Cooktown, c. 1890. (James Cook Historical Museum).

hundredweight of corned beef in the provisions. The locals were incensed that a publicly funded party should carry beef to their town when local fresh and salt beef was available at a reasonable price. 155

Between 1895 and 1906, over 9,000 acres were taken up in coal prospecting leases in the Cooktown district. Most attempts to find coal involved amateurs, or small miners with little finance. This changed in 1906, when the St. George Copper and Coal Company sent a team of twenty men to Cooktown to investigate its lease. They started work immediately, and in the first week reported finding good anthracite. These encouraging signs were misleading, and again they failed to find commercial coal.

Another serious attempt to exploit the coal reserves by a locally owned consortium began in 1908. The Mines Department in Brisbane received its first official report on this deposit by telegram, when the Cooktown Warden said he had been confidentially told of a seam of good quality coal four feet thick near the railway line. The Chamber of Commerce, representing prospective investors, asked the Mines Department what subsidies were available to assist the development of the coal seams. No decision could be made without an independent investigation of the deposit, and the Department sent the Inspector of Mines from Herberton. He found little sign of good coal on the surface, but recommended that a shaft be put down to twenty-five feet to find

155 Cooktown Courier, 20 August 1895.

Telegram from Warden, Cooktown, to Mines, Brisbane, 18 April 1908, Cooktown

Coal Prospecting Lease numbers 17 to 37, MWO 13/T4, Q.S.A.

 ¹⁵⁷ Queenslander, 3 February 1906, p. 15.
 158 Queenslander, 10 February 1906, p. 15.

Coal Company N/L. 1889-1916, A/8708, Q.S.A.

160 Fred Schmidt, Cooktown Chamber of Commerce, Cooktown, to The Under Secretary of Mines, C/- The Warden, Cooktown, 23 April 1908, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

out if the coal improved at depth. He also advised the Department to consider deeper testing with a drill.¹⁶¹

Coal fever hit the town again. Despite the ambiguity of the Inspector's report, a large public meeting resulted in the formation of the Cooktown Coal Prospecting Association. The Association hoped to raise £500 locally to hire a diamond drill to explore the field at depth, and the Department agreed to protect the area from other claimants for three months so that it could raise capital. 162 The first sample from the field returned a poor result, 163 but the Association continued to press its case. It complained that the Mines Department still had not sent a geologist to report on the field, or given a decision on how much subsidy would be offered. A commitment by the Government would be seen as a vote of confidence, and would encourage private subscriptions. Despite the lack of Government commitment, by the end of September subscriptions reached £552.164 Eventually the Government promised a subsidy of £1 for £1, with a limit of £1,000. However, the subsidy would be available only if the report by the Government Geologist was favourable. 165

By mid-January 1909, the Association had met all conditions for the drilling program, and the Mines Department had received the

S. Horsley, Inspector of Mines, Herberton, to The Under Secretary for Mines,
 Brisbane, 21 May 1908, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.
 Telegram from A.R. McDonald, Under Secretary for Mines, Brisbane, to The Warden, Cooktown, 20 August 1908, Cooktown Coal Company N/L. 1889-1916,
 A/8707, Q.S.A.

The coal tested for water at 1.2%, volatile hydrocarbons at 21.7%, and fixed carbons at 62.7%. Certificate from J. Brownlee Henderson, Government Chemical Laboratory, Brisbane, to The Government Geologist, Brisbane. Results of sam

geologist's report, which was generally regarded as favourable. The Department agreed that Lionel Ball, the Acting Government Geologist, would direct the drilling process. Eight months after the lease application was registered, the Association was ready to start the first exploratory drill test, which was estimated to cost between £300 and £500. 166

When Ball inspected the drilling site, he made surface observations only. Nevertheless, he gave the Mines Department a favourable "best case scenario", and advised the Department to grant the Association a lease of one square mile to investigate the deposit. Despite his "educated guess", Ball warned that the existence and size of any coal seams could be determined only by drilling. Although no information is available to indicate when and how the change occurred, the Cooktown Coal Prospecting Association at this time became known as the Cooktown Coal Company N/L. There is nothing to indicate if all contributors to the Association became shareholders in the Company.

In July a tender was accepted from the Goldfields Diamond Drilling Company. ¹⁷⁰ The first site chosen for drilling was near the river close to

Q.S.A.

166 Fred A. Schmidt, Secretary, Cooktown Coal Prospecting Association, Cooktown, to The Under Secretary of Mines, Brisbane, 1 May 1909, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

167 Ball estimated that if a coal seam of five feet thickness existed over the area it

Memorandum from Lionel C. Ball, Mackay, to The Under Secretary for Mines. Re Boring for Coal in the Cook District, 9 June 1909, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

A letter was sent to the Under Secretary of Mines from the "Association" on 1 May 1909, but the next correspondence, a telegram sent on 2 July 1909 came from the "Cooktown Coal Company". Cook Shire Council Archives, Cooktown.

The price was 13/6 per foot for a minimum depth of 1,500 feet, and did not include the cost of providing water for the drill. Telegram from Cooktown Coal Company,

¹⁶⁵ The Under Secretary, Mines Department, Brisbane, to H.A.C. Douglas, M.L.A., Brisbane, 20 October 1908, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

Ball estimated that if a coal seam of five feet thickness existed over the area it would yield three million tons of coal. The mine could produce 50,000 tons each year for seventy years.

the Deighton Railway Station, where a good water supply was available. The Drilling commenced in October, and reached a depth of 158 feet in the first week. Signs of coal were evident at all levels, but no viable seams were found. Although the geologist had recommended testing to a depth of 1,500 feet, work stopped when the drill struck water at 1,396 feet. The flow was recorded at 50,000 gallons per day. It is ironic that the drilling site was chosen because there was water available for the drill, and was abandoned because there was too much water to keep drilling.

The failure to produce results did not deter the Company's directors. With only £50 left in the till, they decided to raise more money to test at the Little River site while the drill was available. They asked the Mines Department if the unused portion of the subsidy allocated for the Deighton hole could be used to drill at Little River. The Government gave its assent, but few investors were willing to risk more funds, and the drilling project was dropped. A shaft could be put down for far less cost, and the Department was asked to grant £100 for a shaft on a coal outcrop at Deighton. The Company argued that some concession

Cooktown, to Under Secretary Mines, Parliament House, 7 July 1909, Cooktown Coal Company N/L 1889-1916, A/8708, O.S.A.

Company N/L. 1889-1916, A/8708, Q.S.A.

171 Fred Schmidt, Secretary, Cooktown Coal Company, Cooktown, to The Under Secretary, Mines Department, Brisbane, 14 October 1909, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

N/L. 1889-1916, A/8708, Q.S.A.

The Goldfields Diamond Drilling Co., Ltd. Record of Diamond Drill, Hole 1, 28
October 1909, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

To instance the record of 16 November reported a "fair amount of Carbonaceous"

matter", which was very promising, although the seams were only one-sixteenth of an inch thick. The Goldfields Drilling Co. Ltd. Record of Diamond Drill, Hole 1, 16 November 1909. The Drill Foreman's report at 700 feet said that the drill was still in coal measures. Memorandum from Lionel C. Ball, Assistant Government Geologist, Brisbane, to The Under Secretary of Mines, 20 December 1909, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

174 Urgent Telegram from Warden, Cooktown, to Mines Dept., Brisbane, 18 January

Urgent Telegram from Warden, Cooktown, to Mines Dept., Brisbane, 18 January 1910, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.
 Fred Schmidt, Secretary, Cooktown Coal Company, Cooktown, to The Under

Fred Schmidt, Secretary, Cooktown Coal Company, Cooktown, to The Under Secretary, Department of Mines, Brisbane, 26 January 1910, Cooktown Coal Company N/L. 1889-1916, A/8708, Q.S.A.

should be made because the drill should have been used on the outcrop in the first place. 176 Clearly the Directors were trying to blame the Department for the failure of the drilling programme. When there was no reply by early November, they said they would proceed with the shaft, and asked for £50 if the Department could not afford £100.177 The Department finally granted a subsidy of £2 for each £1 spent by the Company, with a limit of £100. This was in lieu of the subsidy allocated to the Little River drilling project, which had lapsed for want of action. 178 The Government would have been well advised to refuse the subsidy, as the shaft proved no more productive than the drilling programme.

There was little more action on the field until 1915, when a new wave of lease applications was made. The first, by Thomas Stewart, was for 640 acres in an area twenty-five miles "SE" of Cooktown, where he claimed a coal seam two feet thick had been found. 179 Obviously the direction was wrong, as this would put the lease well out to sea. Stewart's application triggered another rush, and within a short time the Mining Warden at Cooktown received another thirty-eight applications. 180 The applicants were mostly speculators, and no development work occurred. No further interest was taken in the Cooktown coal deposits until 1948, when the Mines Department

¹⁷⁶ Fred Schmidt, Honorary Secretary, Cooktown Coal Company, Cooktown, to The Under Secretary, Department of Mines, Brisbane, 17 October 1910, A/8708, Q.S.A. Telegram from Secretary, Cooktown Coal Company, Cooktown, to Under Secretary Mines Department, Brisbane, 2 November 1910, A/8708, Q.S.A.

178 Telegram from Under Secretary, Department of Mines, Brisbane, to Secretary, Cooktown Coal Company, Cooktown, 9 November 1910, A/8708, Q.S.A. Warden, Cooktown, to The Under Secretary, Department of Mines, Brisbane, 12

May 1915. MWO 13C/T4, Q.S.A.

¹⁸⁰ Memorandum from Warden, Cooktown, to Department of Mines, Brisbane, 18 May 1915, MWO 13C/T4, Q.S.A.

reviewed its information. An internal memo decided that the field appeared to have little potential.¹⁸¹

Coal exploration entered a new phase in 1957 when the Cooktown field came under scrutiny by the big exploration companies. The first modern investigation was carried out by Enterprise Exploration Pty Ltd, on Prospecting Areas No. 61 to No. 122.¹⁸² This was the most intensive investigation so far undertaken, but was no more successful than previous searches.¹⁸³

Another major drilling survey was undertaken in 1974 by coal mining giant C.R.A. Exploration Pty Ltd, but although the Laura and Normanby areas were extensively investigated, no worthwhile deposit was found. However, anecdotal evidence speculates that C.R.A. might have found oil in the area. In one instance, drill operators made a hasty trip to Cooktown to purchase a significant amount of bagged cement. They explained that the drill had struck a big underground water stream, and the cement was needed to stop the flow. This was an interim measure until they received a delivery of barite to plug the water. Cooktown residents who had experience in oil drilling claimed that barite was used exclusively for plugging oil flows to allow drilling to proceed, and was not usually employed for water. However, C.R.A.

¹⁸¹ Memorandum from Chief Government Geologist, to The Under Secretary for Mines, Brisbane, 7 September 1948. Transcript in Library, Department of Mines and Energy, Brisbane.

Energy, Brisbane.

182 G.F. Clark, Under Secretary of Mines, Brisbane, to The Secretary, Australian Mining and Smelting Company Limited, Brisbane, 10 December 1957, CPA Cooktown, Box 9, 1-90. [1886-1959], Cooktown No.88, TR1744/3, Q.S.A.

183 T.J. Denaro and C.J. Shield, Cape York Peninsula Land Use Strategy, Project NR 04: Mineral Resource Inventory, Project Report, Coal And Petroleum Exploration, Cape York Peninsula, Queensland Geological Record 1993/15p. 39.

The author was a partner in the company that sold the cement to the drillers, and was present when the statements were made in reference to the barite. The use of barite for plugging oil flows was confirmed by Brian Hammond, who had wide

denied that oil was ever encountered. Mobil Energy Minerals Australia undertook further exploration in 1980, but this exercise had a similar result to previous searches. 186

Although all preliminary investigations of the coal areas near Cooktown were rudimentary, various geologists, including Logan Jack, offered the opinion that the reserves were not promising. Despite this, significant funds were expended in exploration by unqualified people. Some of the funding for coal exploration came from community donations, which were augmented by Government subsidy. Investment capital also came from private sources, some in the form of shares. These schemes all failed, but there is little evidence that deliberate fraud was involved. It is evident that the motivation for the majority of publicly-supported schemes was the desire to promote growth.

Other minerals.

Although other minerals occurred in the district, none was of any significant benefit. Wolfram was mined at Mount Amos, Mount Hartley and the Romeo district, but was never an economic success. Many other minerals were recorded, including arsenic, manganese and mercury, though not in economic quantities. The largest mining venture ever to occur in the Shire was the Weipa bauxite project on the west coast of Cape York Peninsula. Unfortunately, the State Government excised the area from the Shire and Cooktown gained nothing from Weipa. The Shire Council was responsible for maintaining most of the road leading to Weipa but received nothing in return.

experience in drilling for oil in South West Queensland and New Guinea. Hammond confirmed that barite was not used for water flows.

Denaro and Shield, <u>Cape York Peninsula Land Use Study</u>, p. 40.

186 Denaro and Shield, <u>Cape York Peninsula Land Use Study</u>, p. 40.

Silica sand mining.

Apart from gold and tin, the only other viable mining venture in the Cooktown district was the Cape Flattery silica sand mine. The market for Australian silica sand grew during the Vietnam War, when Japan was prevented from sourcing its supplies from North Vietnam. Although some sand is used in the manufacture of glass, it is used mostly for mouldings for casting engine blocks. The sand is bound with resin to form the moulds, which are of such high quality that little finishing work is needed. 188

Small towns often complain that they receive little return from mining projects in their district, especially if the mining company is a large one. Cooktown's experience with the Cape Flattery silica mine reinforces this view. Cape Flattery is situated about sixty kilometres north of Cooktown, and is on Hopevale Community land. Royalty is paid to the Community Council, and Hopevale residents are guaranteed jobs at the mine. Some Cooktown residents also gained employment at Cape Flattery, but the main office was established at Cairns, and most of the mine's resources are supplied through that city.

While the existence of the sand deposit at Cape Flattery was well known for many decades, no attempt was made to exploit the resource until 1967, when Frank Beggs investigated the deposit. Chemical analysis proved encouraging, and a company, Cape Flattery Silica Mines Pty Ltd was formed to export the product. The Company had impressive connections. It was a subsidiary of Sydney Tin Smelters.

187 Lucas and de Keyser, Explanatory Notes, pp. 24-25.

Con Verevis, interviewed at Mossman by Peter Ryle, 18 October 1998. Verevis was overseer of the initial construction and production phase at Cape Flattery.

which in turn was a subsidiary of Patino, an international resource company. 189

Initial operations were very rudimentary, and while this might have made the project marginally profitable, it had a beneficial effect for Cooktown. More locals were employed than would have been on a more technologically based operation. In the absence of deep water close to the shore, the cargo had to be lightered to the ships in stages. This was accomplished by the use of Self-Unloading Barges (SUBs), which carried the sand in twenty-ton loads. The sand was loaded on the barges by conveyor belt, and unloaded to the ship by elevators fitted to each barge. As the ship was loaded, it moved in stages from one mile to three miles from the shore, to gain more depth. The process was time consuming, and was made even more so because the roadstead at Cape Flattery is open to the south-easterly trade winds, which often disrupted loading. 190

Although Cape Flattery Silica Mines Pty Ltd supplied an overseer to coordinate operations at Cape Flattery, the actual mining and loading was performed under contract by S & T Enterprises, a local operator. The principals of this organisation were A. Seagren and B. Turner, both from the Cooktown area. The barges and ancillary loading equipment were manufactured and supplied by N.Q.E.A., a shipbuilding company from Cairns. The use of a local Cairns company to supply loading machinery was critical. The pioneering nature of barge loading necessitated many adjustments and alterations in the developmental stages of the project, and N.Q.E.A. had a representative present to facilitate these changes. 191 An appreciation of the problems faced by

^{189 &}lt;u>Ibid.</u> 190 <u>Ibid.</u> 191 <u>Ibid.</u>

the original workforce is illustrated by the time taken to load the first ship in 1967. Although the ship carried only 7,500 tons of sand, loading took eleven days.¹⁹²

Accommodation for workers and management personnel was also primitive in the developmental stage. Although the site was relatively bare of shade trees, and was open to the elements, housing consisted only of tents. A considerable time passed before reasonable accommodation was provided. 193 Cape Flattery workers now enjoy good quality accommodation, and canteen facilities that provide a very high standard of meals. Unfortunately, Cooktown gained little from the building projects at Flattery, as the contractors usually came from outside the district. The importance of the Cape Flattery silica mine to the area can be gauged by the productive capacity of the deposit, and the employment it offers to the district. At the present rate of production, the mine is expected to remain viable for at least one hundred years, with proven reserves of 200 million tonnes. Although the Company is reticent to divulge current economic details, it produced 1.8 million tonnes of sand in 1992/93, valued at \$21.3 million. 194 Production continued to escalate, with output of 2.2 million tonnes in 1997. Employment opportunities continue to grow as production expands, and the mine now provides work for almost one hundred people in Cape Flattery and Cairns. 195

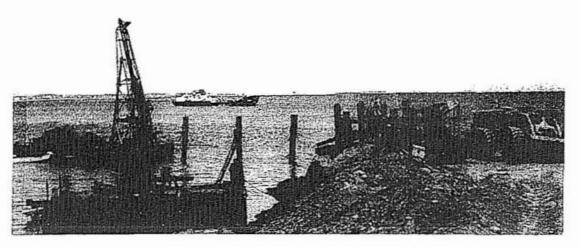
Despite using Cairns as an administrative and supply centre, the Cape Flattery silica mine has nevertheless had a significant impact on the

¹⁹² Ibid

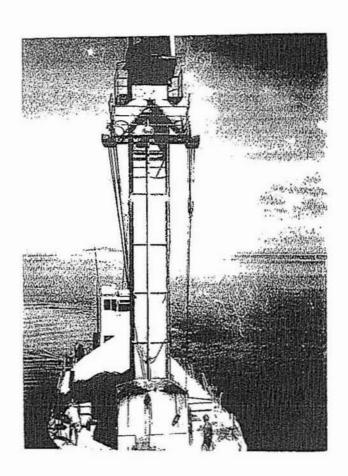
lbid

Denaro and Shield, Cape York Peninsula Land Use Strategy, p. 29.

¹⁹⁵ Bernie Snape, Pers comm, October 1998.



Cape Flattery landing stage, c. 1970s. (Con Verevis).



Self-unloading barge with cargo of silica sand, Cape Flattery, c. 1970s. (Con Verevis).

Cooktown area. Employment opportunities have improved for Cooktown and Hopevale residents, although many Cape Flattery workers come from outside the area. Those who have permanent homes in Cooktown inject a considerable amount of money into the local economy. However, Cooktown's business community has not benefited from the project as fully as could be expected. Unfortunately, Cooktown's small economic base, and the restricted buying power of its commercial operators, prevents it from taking full advantage of developments within its sphere.

However, an important impact on Cooktown has been through the increased buying power of the residents of Hopevale Community. The mine employs a significant number of Hopevale residents, and their wages give a considerable economic boost to the local communities. As the major commercial centre in the area, Cooktown businesses benefit. Royalty payments are used to improve the community infrastructure at Hopevale, and Cooktown businesses provide much of the materials and expertise. Given the proximity of Cape Flattery, Cooktown's commercial community should have gained more than the indirect benefits from Hopevale and the few employees based in Cooktown. Nevertheless, these benefits have been significant.

Although it has a much more recent history than other forms of mining, the silica sand venture at Cape Flattery is an obvious success. In contrast to the efforts to exploit most other minerals in the area, the project has, as far as possible, been built on an economic determined basis. This industry has a proven reserve, a guaranteed market, and is relatively free from market fluctuations.

Conclusion.

With few exceptions, the mining history of the Cooktown area has been one of unrealistically high expectations, and less than encouraging results. Although Cooktown never profited as much from the Cape Flattery silica mine it would have wished, the town did benefit from the venture. Unlike other mining projects in the area, the resource was properly researched and the mining project well planned. This has ensured a long and profitable life for the mine.

The Palmer River gold field was undoubtedly one of the success stories of Queensland mining history. It provided the reason for Cooktown's existence, but also set the stage for its eventual decline. Ironically, the infrastructure provided to take advantage of the Palmer gold field, the port facilities and the railway, left a legacy of debt that the town could not overcome.

In addition to the debt incurred by the local authority, the area suffered from a reluctance by Government to provide further significant assistance to the area. The failure of the railway to benefit from the gold field undoubtedly prejudiced successive Governments against the Cooktown area. It is ironic that the railway failed not because there was insufficient gold, but because the Government did not fully investigate the prospects of the Maytown area before the decision was made to construct the line. The gold did not fail, rather the system failed to determine whether there was sufficient gold to justify the project. While gold provided Cooktown with a brilliant start, and the promise of a rosy future, its legacy was a bleak decline for many decades.

Most of the theoretical models consulted in this thesis can be applied to Cooktown's mining history. Without doubt Cooktown was the central place in Far North Queensland while the Palmer River produced payable gold. However, as the economy declined, it was replaced by

Cairns. The reality of this was illustrated when the Cape Flattery sand mine chose Cairns as a supply and administration centre, even though Cooktown was much closer.

Staple Theory is also relevant. Cooktown went into decline when gold, the primary staple, failed. Although other minerals like tin and silica sand helped minimise the rate of decline, none was capable of reversing the trend. The secondary staples, including the lesser minerals, agricultural and marine products, and timber could not generate enough funds or jobs to replace those lost when gold declined. McCarthy's contention, that backward and forward linkages would come from developments such as railway and wharf construction, did occur, but in fact did not contribute to economic growth in the long turn.

The mining experience also served to illustrate Myrdal's theory that the decline of a town or area can only be halted or reversed by another investment, or outside intervention of sufficient magnitude to effect change. It is apparent that no such investment or intervention occurred in the Cooktown mining district before the Cape Flattery venture, and even this had limited effect.