

Namaqualand

Annexure B

A CHRONOLOGY

.....Some date after August 2004.....

Second Edition
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NAMAQUALAND: A CHRONOLOGY

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The chronology lists data obtained from various sources. The emphasis is on the history of transportation and the related economic growth in Namaqualand.

In this Section items relating to any year are grouped in the following sequence:

- **general transportation topics, or items referring to more than one mode**
- **water transportation,**
- **rail transportation,**
- **road transportation,**
- **air transportation,**
- **other modes (pipelines, power lines),**
- **mining (copper, diamonds, other),**
- **towns (in alphabetical sequence) and**
- **other items (local authorities, economic events, and general items).**

Within a group items are arranged alphabetically by author or source.

For further details of the reference/s in parenthesis after any entry see the Bibliography in Appendix A.

600-595 BC: Herodotus, the Greek historian, records (II:158; IV:42) that several ships manned by Phoenicians sailed east to west around Africa, returning via the "Pillars of Hercules" (Straits of Gibraltar). (De Kock, {1953}:14; Walker, 1928:1,2)

"It is known definitely that the Phoenicians circumnavigated the southern coast of Africa and followed the western coast line", which would include the Namaqualand coast. (Van Onselen, 1961:87)

According to the ancient geographer, Strabo, the Phoenicians sailed (east to west) around the shores of Africa between the years 170 and 117 BC. (Wilmot, 1883:1)

700-1200 AD: "The name Namaqualand is taken from the plural of `Nama' which name originates from the large Hottentot tribes - a nomadic people of the area - who had lived there many years before white men had settled in South Africa." (Burke, 1995:7,8)

Namaquas were one of four groups of the Hottentot people. (Dowdle, 1955:ii)

"The name `Namaqualand' is said to derive from the Namaquas, a branch of the Khoikhoi, or Hottentot people who crossed the ~Groot Rivier" (later renamed the Orange) some time in the eighth century and moved into the dry, western areas of South Africa which are particularly suited to sheep farming. They were semi-nomadic pastoralists, moving with their sheep and cattle. The Khoikhoi (together with the hunter-gatherer, nomadic San, or

Bushmen, with whom they shared a common origin and are today collectively known as Khoisan), were the indigenous people of Namaqualand. As they headed with their flocks and herds, or followed the game, through the valleys and kloofs of Namaqualand to the watering spots, they made paths which would be used by future groups of people entering the area." (Phyllis Jowell, 1994:16)

Namaqualand inhabited by the San and the Khoi-Khoi.
(Mostert & Crewe-Brown, 1992:12)

Namaqualand means "the land of the karos or skin wearer / die land van die karos of veldraer" in the Nama language.
(Piet van Heerde archival papers, as quoted by Phyllis Jowell, 1994:28)

Between 1000 and 1200 AD Hottentots entered South West Africa across the Kunene River and filtered down into the Cape Province. (White, 1969:200)

Bushmen and Hottentots fought one another continuously and mercilessly. The Hottentots were nomadic cattle drovers. The Bushmen, being hunter-gatherers, shot both them and their cattle impartially with poisoned arrows in an attempt to ensure the survival of the wild animals on which they themselves depended. (White, 1969:191)

945: Did the Chinese arrive on the Namaqualand coast at this time?
(Green, 1935:18-21; 1966:163, 164)

1402: Chinese map of 1402 AD shows the Orange River in its correct position, and it is accepted that the Chinese rounded the Cape, east to west, long before the Portuguese did so, west to east. (Willcox, 1986:13)

1487: Bartholomeus Dias remained at Angra das Voltas, six miles south of Alexander Bay, for five days because of bad weather. He set ashore one of his four negroes from the Guinea coast, who was supposed to make discoveries or new contacts ashore.
(Cornelissen, 1965:7,8)

The archivist De Kock ({1953}:16) says Bartholomew Dias sailed from Lisbon in 1487 (obvious translocation of digits) anchored "in the bay which he called Angra das Voltas the present Luderitzbucht". He remained there for five days.

"Cape Voltas, just to the south of the Orange River, was the point where Diaz met strong head-winds and had to tack out to sea. Voltas means "tacks". (Green, 1958:15)

Bartholomew Dias left Portugal. He landed at Angra das Voltas (Cape Voltas) six miles south of Alexander Bay. (Letcher, 1932)

Bartholomew Dias de Novaes set out from Portugal in August 1487; landed at Algoa Bay (St Croix) in 1488. (Rosenthal, 1970:155,527)

Theal (1907:8) says Dias sailed from Portugal in 1486.

Walker (1928:14) says Diaz "clung to the coast as far as Angra dos Voltas, presumably the mouth of the Orange River..."

Wilmot (1883:2) says he arrived in Algoa Bay on 14 September 1486.

1497: Vasco da Gama's fleet, prepared and one of the four ships captained by Bartholomew Dias, left Lisbon on 8 July 1497. He landed at St Helena Bay in the beginning of November, and rounded the Cape on 22 November. (De Kock, {1953}:20-22)

Vasco da Gama rounded the Cape. (Rosenthal, 1970:527)

Da Gama doubled the Cape, reached Calicut on 16 May 1498, and was back in Lisbon early in 1499. (Walker, 1928:15,16)

1512 & 1513: Antonio Fernandes travelled inland from Sofala, south of Beira, and saw a basketful of alluvial gold extracted in one day in the kingdom of the Emperor Monomotapa. This was near Umtali (now Mutare in Zimbabwe). (Cornelissen, 1965:2)

Note: much further away than Van Riebeeck and others imagined when they sent expeditions into Namaqualand from Table Bay, in search of the rich empire of Monomotapa!

Da Silveira and Fernandez were Jesuit fathers, who worked inland from Sofala. In 1560 De Silveira baptised "the complacent Monomotapa and many of his followers." The Emperor Monomotapa's realm stretched from the Zambezi to the Fish River, his capitals being on the south bank of the Zambezi. (Despite rumours of great wealth in his kingdom) such gold as was forthcoming was dust, and there was little enough of it. (Walker, 1928:18,19)

1601: At the end of the sixteenth century 47 per cent of the ships leaving Lisbon for the voyage around Africa never returned. (De Kock, {1953}:33)

First fleet of the English East India Company called at Table Bay in 1601. (Rosenthal, 1970:527)

1652: Johan Antony van Riebeeck landed at the Cape on 6 April. He governed the settlement until 9 May 1662 (Wilmot, 1883:97) on behalf of the Verenigde Oos-Indiese Companjie (V.O.C.), or Dutch East India Company.

1653: 26 May: a two-wheeled carpenter's cart constructed at the Cape, followed on 4 June by a wagon, and road transportation, construction and maintenance in South Africa commenced. (Burman, 1988:15)

1655: Jan Wintervogel's expedition, from 15 March to 3 April 1655 reached the Malmesbury district. (Becker, 1985:32)

Jan Wintervogel led the first exploring party of seven volunteers 50 (Dutch) miles inland. (Botha, 1962:21)

Note: 1 Dutch mile = 4.75 English (statute) miles (Cornelissen, 1965:11) = 7,64 km.

1655: Willem Muller's exploration, from 7 September to 5 November, failed due to discord with the Hottentot guides. (Becker, 1985:35,36)

Corporal Willem Muller led the next party east to Cape Hangklip. (Botha, 1962:21)

1657: Abraham Gabbema, the settlement's sheriff, left the fort on 19 October. On 4 November, having had no luck with his trading, he decided to return (no arrival date). (Becker, 1985:37-39)

Fiscal Abraham Gabbemma, Surveyor Pieter Potter, thirteen Europeans and four Hottentots got as far as the Berg River at Paarl. (Botha, 1962:21)

1658: Referred to as Captain Jan van Harwarden, a member of the Council of Policy: trip from 26 February to 20 March. Two men died of dysentery. They managed to trade for some cattle and sheep. They had also succeeded in discovering a pass through "the Mountains of Africa". (Becker, 1985:9-41)

Sergeant Jan van Harwarden, Surveyor Pieter Potter, fourteen Europeans and two Hottentots found the Roodezand Pass to the Tulbagh basin. (Botha, 1962:22)

See also: Nellmapius, 1997.

1659: Christiaan Janssen, the Company's foremost huntsman, thatcher and carpenter, led the expedition: 3 February to 7 March. (Becker, 1985:44,45)

Seven burgher volunteers with "two of the best pack oxen", specifically going north in search of the Namaquas, reached the mouth of the Berg River. (Botha, 1962:22)

1660: Jan Danckaert, a cadet with a good knowledge of engineering and geometry, led his twelve soldiers including Pieter Meerhof, a Dane stationed at the fort as a military surgeon, from 12 November 1660 until 20 January 1661. The party turned back because of mutinous behaviour. (Becker, 1985:46-49)

Jan Danckert, Pieter van Meerhof and George Frederick Wreede with nine others set out on 12 November 1660 and scaled the mountains, probably near Picqueniens Kloof. They saw a herd of 200 to 300 elephants near what they then called the Olifants River. Danckert and six comrades pushed north along the river to about Clanwilliam before returning. (Botha, 1962:23)

Jan Danckaert led a party consisting of Pieter van Meerhoff, Jan Baptist, Theunis Kagh, George Frederick Wreede, Christiaan de Soete, Pieter Roman, Pieter Hanssen, Pieter Harthoven, Pelagius Weckerlijn, Coenrad Schatman and Johannes Dorhagen. They left with three pack oxen on 12 November 1660. Burman gives great detail of the trials and tribulations which beset the party, apparently to some extent due to Danckaert's poor leadership. They got as far as Clanwilliam, arriving back on 20 January 1661. (Burman, 1969:19-23)

Jan Danckaert's expedition consisted entirely of men on foot and only reached the Cedarberg Mountains near the present Clanwilliam. (Burman, 1988:21)

W.Steenkamp (1975:33) says they left on 20 November 1660 and turned back on 23 December 1660.

Note: Mostert & Crewe-Brown say 20 November 1661.

1661: Jan Danckaert left Cape Town on 20 November 1661, and saw 200 to 300 elephants at the Olifants River. (Mostert & Crewe-Brown, 1992:13)

Note: Becker, Botha and Burman say 12 November 1660;
W.Steenkamp says 20 November 1660.

1661: Corporal Pieter Cruijthoff, Meerhoff, ten soldiers, a farmer and some Hottentot guides made up the expedition, which was away from 30 January until 11 March 1661. They proceeded for five days past the most northerly point attained by Danckaert, reaching "the vast plain overlooked by the most westerly toe of the Cedarberg range" (somewhere north of Klaver?), where the first contact was made between the European settlers and the Namaquas under their chief Akembe on 20 February. They apparently got on very well together. (Becker, 1985:49-51)

Pieter Gruythoff, Pieter van Meerhof (second in command) and others left within a fortnight of Danckert's return and seem to have covered pretty much the same ground. (Botha, 1962:23)

On 30 January 1661 Corporal Pieter Cruijthoff led an exploration party from the Castle. Pieter van Meerhof was second in command, with Johannes Dorhagen, Jan Baptist, Pelagius Weckerlijn, Barend Waender (agriculturist), Herman Ernst (orchard maker), Jan van Asse, Matthys Huybrechtssen, Frans Martenson, Jan Janssen, Cornelis Janssen, Christian van Kerkhoven and two Hottentot interpreters. On 20 February he succeeded in making contact with the Namaquas under their king Akembie at his kraal of 73 huts north of Clanwilliam. They arrived back at the Fort on 10 March 1661. (Burman, 1969:23-25 gives great detail on this trip)

Pieter Cruijthoff learnt about the "copper mountains" in the north from the aged Namaqua chief Akembie, whom he met near Graafwater on 18 February. (Mostert & Crewe-Brown, 1992:14)

Smalberger (1975:11) says Pieter van Meerhof was the leader.

Cruijthoff foresook the Olifants and trekked due west to somewhere south of Graafwater (which puts his "furthest north" at about Clanwilliam) where he came up with about 700 Namaquas under an aged chief named Akembie. They owned thousands of cattle, and the Dutch were looking to make contact in order that they might trade for the cattle which they needed to victual their ships. Van Meerhoff (Cruijthoff's second in command on this expedition) was the first white man to actually make contact with the Namaquas. (W.Steenkamp, 1975:33-34)

1661: Pieter Meerhoff led an expedition later in March to trade with Akembe, but Akembe had trekked far to the north because of drought and so they did not meet. (Becker, 1985:51)

Pieter van Meerhof, who had been second-in-command of Cruijthoff's expedition, led the follow-up expedition which left only eleven days after their return, on 21 March 1661. He had six members of the previous party: Johannes Dorhagen, Jan van Asse, Frans Martenson, Christian van Kerkhoven, Jan Janssen and Pelagius Weckerlijn, as also two newcomers Bartholomeus Rudolphssen and Lourens Janssen. His main purpose was to take three envoys from the local Hottentot chief Oedosoa to make peace with the

Namaquas so that the Namaquas could visit the Cape. Although he could not meet Akembie and his Namaquas (as they had gone north because of the drought), he did find the Namaquas' allies, the Grigriquas, who were actually the ones who were at outs with the Hottentots, and arranged a peace. This opened the way for the Namaquas to come to the fort. (Unfortunately they did not do so.) Van Meerhoff returned to the Fort on 23 April, after taking only 33 days for the entire trip, a truly praiseworthy effort. (Burman, 1969:25-27)

Van Meerhoff's expedition left on 21 March 1661 and finally linked up with Akembie again. Van Meerhoff forged a treaty between the Bushmen, the Namaqua and the two other antagonistic Hottentot tribes in the vicinity. (W.Steenkamp, 1975:34)

Pieter van Meerhoff's expedition in search of mineral deposits. (Suid-Afrika, 1980:4)

Note: Becker says van Meerhoff found Akembie gone away to the north so that they did not meet on this occasion; Burman says Akembie had gone north and the treaty was forged between Akembie's Grigriqua allies and the Hottentot envoys.

1661: Corporal Pieter Everaert took another party to barter with Akembe in November but likewise with no success. However, on 22 December he reached the Olifants River mouth. (Becker, 1985:51)

As the Namaquas had not come to the Cape as promised to van Meerhoff in April Sergeant Pieter Everaerts, a member of the Council of Policy, led a party to meet Akembie, leaving on 14 November 1661. Pieter van Meerhoff was his 2ic, and of the party of 13 six other members had previous experience: Jan Dorhagen, Jan Baptist, Pelagius Weckerlijn, Lourens Janssen, Bartholomeus Rudolphssen and Pieter Roman. They found rivers in flood, Roman was killed by an elephant, members of the party were plagued by illnesses, and when they did finally reach the Grigriqua camp (where they stayed 15 days) they found that Akembie was still far in the interior and could not be reached. They did follow the Olifants River to its mouth, but accomplished nothing else, arriving back at the Fort on 12 February 1662. (Burman, 1969:27,28)

Everaert's expedition left Cape Town on 14 November 1661 but failed to meet Akembie and suffered great hardship in the Knersvlakte. (W.Steenkamp, 1975:34)

1662: Jan van Riebeeck succeeded as Commander by Zacharias Wagenaar on 9 May 1662. Wagenaar governed until 24 October 1666. (Wilmot, 1883:97)

1662: Another barter expedition in September, under Cruijthoff and Meerhoff, to Koekenaap. (Becker, 1985:53)

On 21 October 1662 Corporal Pieter Cruijthoff with Pieter van Meerhoff as 2ic again led a party of 14 men "to explore further the continent of Africa". Jan Dorhagen and Pelagius Weckerlijn had been on every expedition, while Bartholomeus Rudolphssen and Hendrik Hagens had previous experience. This was the first expedition to take a wagon, but after dismantling it to carry it over Piekeniers Kloof they found it such a nuisance along the banks of the Olifants River that they buried it and proceeded using the oxen to carry packs. They made contact with Namaquas north of Koekenaap, but dissension ending in an arrow attack on their camp at night forced them to turn back, arriving at the Fort on 1 February 1663.

(Burman, 1969:30-32 gives considerable detail of this unfortunate expedition)

Pieter Cruythoff's expedition, the first to use a wagon to carry supplies, left the Fort on 20 October 1662. They had so much difficulty with the wagon in the trackless country that they buried it alongside the Oliphants River on 11 November and loaded the supplies on to the (only six) oxen. After being attacked one night and suffering two men seriously wounded they turned for home and arrived back on 1 February 1663 without even stopping to pick up the wagon. (Burman, 1988:21,22.)

Peter Cruythoff and (Pieter) van Meerhoff came as far as Nuwerust. (Cornelissen, 1965:8)

The party left Cape Town on 21 October and turned back on 24 December 1662. Cruijthoff was the first white man to hear of the great river to the north which we now call the Orange. (W.Steenkamp, 1975:34,35)

1663: Sergeant de la Guerre, with Pieter van Meerhoff again as second in command, led the sixth expedition from the Cape on 11 October 1663. It consisted of 17 men: of the original group only Jan Dorhagen was left. North of the Olifants River the drought defeated them, and they now believed the Namaquas who told them that the way to the north was impossible except in the rainy season. On their way back they found that their wagon, which they had buried, had been burned and the spare supplies of food stolen. They limped into the Fort on 22 January 1664. (Burman, 1969:33)

Sergeant De la Guerre set out with seventeen men, a wagon and only six oxen on 11 October 1663. They followed Pieter Cruythoff's route, and likewise found his wagon such a nuisance he also buried it alongside the Oliphants River. The drought defeated them when they struck north into the waterless Bushmanland. They found that the Khoi-khoi had unearthed their wagon, burnt it for the sake of the iron parts, and stolen their supplies. The party limped disconsolately into the Fort on January 22nd 1664. (Burman, 1988:22.)

Sergeant Jonas de la Guerre and thirteen men "trekked far into the land of the Namaqua before hardship and thirst forced him to turn back". (W.Steenkamp, 1975:35,36)

This was the last of this series of explorations.

1669: The western coastline charted as far as Angra Pequena (Luderitz) by the "Grundel", in a voyage of three months. (Becker, 1985:54)

1679: Simon (more correctly Symon) van der Stel was in 1679 made Commander at the Cape. He was promoted to the rank of Governor in 1691. (Rosenthal, 1970:602)

On 12 October 1679 Simon van der Stell sailed into Table Bay in the "Vrije Zee", to replace Governor Bax, who had died in June 1677. Bax's second-in-command Hendrik Crudax had acted in the interim. (Wilmot, 1883:11)

Note: in his appendix on page 97 Wilmot says that Simon van der Stell governed the Cape from 14 October 1678 until 11 February 1699.

1681: Towards the end of May a party of Namas arrived with, amongst other wares, several bright green stones. (Becker, 1985:57)

Namaquas visited the Cape with samples of rich copper ore.
(Botha, 1962:23; Dickason, 1978:29; Smalberger, 1975:11; Suid-Afrika, 1980:4)

In 1681 a party of Nama people visited Cape Town Castle to trade. With them they brought pure copper and Governor Simon van der Stel saw in this proof of the tales, which had been carried to the Dutch by Hottentot tribes. (Reader's Digest, 1978:164)

1682: Ensign Olaff Bergh, a Swedish settler, two sergeants and three mariners travelled through Piketberg, Koekenaap, and west of Bitterfontein to the Groen River near Garies, "presenting them with their first sight of verdure since leaving Koekenaap". They saw small hope of finding water in the "drab, arid country ahead" and decided to return to the Castle. They had penetrated further into Nama territory than anyone before them: they were in fact the first European explorers to reach Namaqualand overland.
(Becker, 1985:57,58)

Ensign Olof Bergh's party left in October 1682. "In the present Van Rhyne's Dorp district he touched at Meerhofs Kasteel, and came to the Doorn Bosch River." (Botha, 1962:24)

Ensign Olof Bergh with thirty one men, a cart, six wagons and 111 oxen left on 30 October 1682. They penetrated deep into the waterless region north of the Oliphants River, turned back on 28 November and reached the Cape on 19 December 1682. (Burman, 1988:23)

Note: Burman (1969:63) also says Bergh was back in the Castle on 29 November.

Olof Bergh, of an aristocratic Swedish house, founder of a South African family which for two and a half centuries has given honourable service to the State"... will for ever rank as one of South Africa's early pathfinders."

First journey: left Cape Town on 30 October 1682 with 31 whites, 6 wagons, one cart, 111 head of oxen. Returned on 19 December 1682.

Second journey: left on 27 August 1683 with 42 Europeans, 10 Africans, 7 carts, 3 wagons, 162 oxen and 5 horses. Returned on 24 October 1683.

(Mossop, 1931)

1682 and 1683: Oloff Bergh brought ore from the north. (Muller, 1981)

Note: this is NOT borne out by other chroniclers. In fact Smalberger (1975:11) specifically states "...in search of the source of the copper ore - although both expeditions failed in their purpose".

Olof Bergh, a 39 year old Swede, had six supply wagons, a cart and 111 oxen and was accompanied by 30 soldiers. He did not follow the older routes, but travelled up through the Sandveld. He is thought to be the first to stop at the Heerenlogement, which he called Dassen Berghs Fonteijn. He stopped at the "spring containing brack water" at Bitterfontein before going on to Garies, where he turned back because of the hostility which he experienced from the then-warring Namaqua. (W.Steenkamp, 1975:37,39)

Note: Olof Berghspas, marked on the 1/500 000 Topographic maps just south of Redelinghuys, is consistent with him having skirted Piketberg (the mountain) to the west, and also the foothills of the Olifantsrivierberge. (gldr).

1683: Bergh's 1683 expedition got "no more than a day's march" further north "onto the

southern end of the boulder-heaped Kamiesberg range" when they gave up. "In his reckoning the Copper Mountains, cloistered deep within a heartless wilderness, would never be found." (Becker, 1985:58)

Ensign Olof Bergh again led a party, including draughtsmen, miners and journalists. They reached latitude 30 degrees 12 minutes south (about the latitude of Kamieskroon!- gldr). (Botha, 1962:24)

Bergh left on 27 August 1683 with a party of 42 white men and 10 Hottentots. The country was in the grip of a drought, and the party returned to the Cape on 24 October. (Burman, 1969:64)

In August 1683 Bergh set out again with 52 men, seven carts, three wagons and 162 oxen. From the start the carts gave trouble, two cart axles breaking and having to be replaced. On 5 September he sent six men, 16 oxen and two wagons back to the Cape, having transferred the wagon loads to pack oxen. He turned back on 30 September having progressed only one day's journey further than his last trip due to the excessive drought and the height of the mountains ahead.

They reached the Cape on 19 December 1683. (Burman, 1988:23)

Bergh reached Garies. (Cornelissen, 1965:8)

On 27 August 1683 Bergh left again with 42 whites and 10 Hottentots, taking with him among other things two boats. Included in his company were cartographers prospectors and diarists. "Again the tough Swede failed, defeated by Namaqualand's ancient weapon, a crippling lack of water." (W.Steenkamp, 1975:39)

1684: Sergeant Schrijver set off in February 1684 with a party of 15 soldiers and three miners. He was more successful than Bergh and returned with copper samples. He had not, however, found the copper mountains nor had he searched for a route down to the sea. (Burman, 1969:64)

"The reliable Isaacq Schrijver" left the Castle on 23 February 1684 with 15 men. We know little of his trip. The Journal records that five soldiers arrived on foot on 8 May sent by Schrijver to say that he was on his way back, but that his provisions were exhausted. Van der Stel sent a wagon off with supplies to meet them, and they arrived back at the Castle on 20 May, bringing several Namaqua chiefs and samples of copper ore. (Burman, 1988:23,24)

Schryver penetrated to the present Leliefontein, where he traded some ore from the Hottentots and took it to Cape Town on pack oxen. (Cornelissen, 1965:8)

Sergeant Isaac Schryver travelled past the Heerenlogement on his way to the Kamiesberg. (Green, 1967a:123)

In February 1684 a second party of Namaquas visited the Cape. When they returned to their homeland Sergeant Isaac Schrijver with 15 soldiers and three miners were sent with them. The sergeant penetrated somewhat further into Namaqualand than Bergh and collected a number of pieces of copper ore from the people he visited there. These he brought back on a pack ox. The ore was melted in a crucible and the pure metal was sent

as a specimen to the directors. In the resolutions of the Council of Policy in 1684 mention is made that the copper mountains lay not far from the sea, where there was alleged to be a good harbour for small vessels. It was intended to send a small vessel to explore the coast, to survey the harbour and to examine the intervening country to the copper mountains. Presumably this was not done, as one of the objects of Simon van der Stel's expedition was to find a suitable harbour. (Smalberger, 1975:11,12)

Sergeant Schrijver left four months after Bergh's return from his second trip with only fifteen soldiers and three miners. He reached his destination and returned in May 1684 with samples of ore which he had dug from the copper mountain.
(W.Steenkamp, 1975:39)

Note: It appears doubtful that he reached as far north as the "Koper Bergen". For one thing, he could not show Van der Stel the way there in 1685. - gldr

The last of the long series of explorations seeking the copper source had succeeded! It is most noticeable how little space is given to this successful expedition, compared to its predecessors, in the various historical accounts. Possibly this is due to the fact that Sergeant Schrijver had no diarist (public relations officer?) in his small party – gldr

1685: Note: Waterhouse is the definitive text as far as the Dag Register and what actually happened on any particular day of Simon van der Stel's expedition is concerned.

In describing Simon van der Stel's epic expedition to the Copper Mountain Becker borrows heavily from Waterhouse. Mention is made of the fact that a small party of miners had been specially brought out from Holland, and that Hendrik Claudius, an apothecary and qualified naturalist who could "paint animals and plants to perfection" was appointed to accompany the expedition. He in fact executed a collection of seventy two sketches and paintings of animals, reptiles, birds and plants during the trip, which proved of great value. The procession is described as "being headed by a horse-drawn carriage... eight pack donkeys, fourteen riding horses, eight carts, two field pieces and seven wagons ... and a boat... some three hundred oxen, a body of well-armed infantrymen and six mounted settlers." Becker gives a version of the meetings with Bushmen and Namas near Garies which differs from those of other chroniclers, but the important thing is that Van der Stel succeeded in obtaining the services of guides to lead him through the Kamiesberg to Springbok. Regarding the quality of the copper ore, Becker says: "on 2 November Van der Stel called the miners together... the ore... was of such inferior quality that he intended suspending operations and leading the expedition back to the Cape." Becker also mentions that during the return journey they followed the Groen River to the sea. A party of a sergeant and ten soldiers went north from here as far as the mouth of the Buffalo River. Because none of the parties scouting to the south found water they went back upstream until they rejoined their outward track, which they followed, using the water sources plotted previously, until they arrived back at the Cape on Saturday 26 January 1686.
(Becker, 1985:58-67)

"The train, which set out on 25 August 1685, consisted of a calash or open carriage drawn by six horses, seven wagons each drawn by eight oxen, light carts, horses and eight mules, a boat for crossing the Berg and Oliphants Rivers and two small cannon to impress the natives with respect for the white man"! "Three days were occupied in getting to the other side of the Oliphants River... By 30 October Keer Weder was reached. This place had

received its name because former travellers had been obliged to turn back on account of the mountain which could not be crossed... A ten days' march from here brought them to... the Copper Mountain... during the next fortnight prospecting for minerals was in full swing... At the same time Van der Stel had the surrounding country explored. The camp was struck on 5 November and the party set out to examine the country between the mountains and the sea. On 12 December the homeward journey was begun, and the Castle was reached on 26 January 1686." (Botha, 1962:25)

In August the expedition left Cape Town. It consisted of 15 wagons, a boat, 2 small cannon, 56 Europeans and "a great camp following of Hottentots and slaves". On 21 October Van der Stel "reached the fabled Koperberg and three shallow prospect shafts were sunk, yielding quantities of ore of impressive richness". (Bulpin, 1986:177)

The expedition left at 10 o'clock on the morning of Saturday 25 August 1685. There were 15 wagons and eight carts, with 289 oxen, including pack-oxen. The Commander travelled in a coach drawn by six horses, the first time that such an elegant vehicle had ventured into the wilderness. The party consisted of 57 whites, three black slaves, together with 46 drivers and leaders for the oxen, as well as a number of Hottentot interpreters. The exiled prince of Macassar Dain Mangale, with his servant Reba, was a guest of honour. The personnel included the chief miner, Frederick Matthias van Werlinghof, a chemist Hendrik Claudius, the Governor's brother Frans, and Sergeant Isaac Schrijver. Six of the free burghers, including Jan Mostert and Hendrik Sneewint, brought their own wagons and were engaged to travel as far as the Olifants River. Burman gives very detailed descriptions, dates and place names. He mentions that the Namaquas in the Kamiesberg said that the rains which made the veld so green, and the water courses and waterholes full of water, were the first for four years. Van der Stel was truly fortunate! On 21 October, after journeying for 57 days, they reached the copper mountains. Burman gives great detail of the mining explorations, and of the journey back to Cape Town, which commenced on 5 November. During the return van der Stel deviated to the coast, and searched under the most difficult circumstances in a number of places for a harbour, but did not find anything north of Lamberts Bay. As Burman says: "...copper was useless to the Company unless it could be traded..." Transportation was and will always be the key without which economic development is not possible.

On 26 January 1686 at midday Simon van der Stel and a small escort rode into the Castle, at the end of a truly remarkable journey. (Burman, 1969:62-81)

Simon van der Stel's expedition left on 25 August 1685 "and as befitted the rank of its leader was an imposing affair." Van der Stel was accompanied by 56 Company servants and had as guests the exiled Prince Dain Bengale, his son and three slaves. Van der Stel travelled in a coach drawn by six horses; the main transportation was provided by eight carts and seven wagons for which there were 289 draught oxen. They also had eight asses and a saddle horse, and were accompanied by the wagons of six free burghers each drawn by eight oxen: these latter only travelled as far as the Oliphants River. After various breakages they crossed the Berg River at a place they called Misverstand, for there had been a misunderstanding as to the correct crossing place. Not far beyond the Berg a rhino charged the Commander's coach. Van der Stel's gun "misfired, leaving him defenceless. Fortunately the hunters were able to distract the rhino by firing at it, and it galloped off into the veld." Isaacq Schrijver was with the party and knew the route past Verloren Vlei and the Heerenlogement cave, across the Oliphants, past Bakkelyplaats (Van Rhynsdorp) and the present Bitterfontein to the Kamiesberg where Bergh had retired defeated. On 21

October he reached the Copper Mountain. His miners sank experimental shafts and established the presence of payable copper. "The return trip was a roundabout one as Van der Stel wished to establish whether there were any possible harbours near the copper. (Burman, 1988:24,25)

Cornelissen gives a day-by-day account of the two weeks spent working at the Copper Mountains. Further he says: "It is of interest to note that Williams, Letcher and others tend to believe that Van der Stel ascertained the richness and abundance of copper ore, but that it is due to the situation that no further attention was paid to it. This belief is incorrect: in the mining world assay values and tonnage are factors of prime importance and at the two known Van der Stel pits the rock runs only about one percent metal and a small tonnage." Cornelissen considers that according to his journal Simon van der Stel only inspected the Koperberg-Carolusberg zone (see also Van Heerde), while a party went (probably) to O'okiep. He opines that had Van der Stel explored the site of the Springbok mine, where Andrew Geddes Bain (an honoured geologist amongst other things) mentions rock at 75 per cent copper picked up on the surface, the Springbok samples would have given say 20-30 per cent metal on assay, "values which would not simply have faded into antiquity." (Cornelissen, 1965:10-15)

Simon van der Stel had a wheel of his coach carried off on the horn of the rhino!! (John Blades Currey, 1986)

In 1685 Commissioner General Hendrik Adriaan van Rhede tot Drakenstein gave Commander Simon van der Stel permission to lead an expedition himself in search of the elusive copper mountains. The party left the Castle at Table Bay on 25 August 1685 travelling with its numerous carts; fifteen wagons each drawn by eight oxen; a coach; 200 spare oxen and a number of horses. The party even had two small cannons which would no doubt impress any unfriendly tribesmen and they also took a boat to carry them across rivers in their path. The pace of travelling was slow, as can well be imagined. After moving northwards for two months and having covered a distance of 365 miles, the party succeeded in reaching the copper mountains on 21 October. They pitched camp very near to the present town of Springbok. Van der Stel's mining expert and his miners who had been specially sent out from Holland prospected there for two weeks and actually found and smelted copper ore. They sank three small shafts. But the samples collected, on being sent to Holland for testing, proved to be disappointingly low in copper content. It appears that the party unwittingly passed within a stone's throw of some of Namaqualand's richest outcrops of copper. Had their path led them a mile or so to the southwest, on the same hillside, perhaps history would have been quite different. In any event the distance from Table Bay added another drawback, for they had not been able to find a suitable harbour on their journey back down the coast. Lack of capital resources and mining expertise successfully precluded any further exploration and reluctantly it was decided that the discovery would have to be abandoned for future generations to develop. (Dickason, 1978:29)

The party consisted of "a coach drawn by six horses, riding horses, field-guns, eight carts (one carrying a boat), nearly three hundred draught and pack oxen, six burghers in their own wagons, and more than fifty other white men". (Green, 1967a:123)

Simon van der Stel's trip to the "Copper Mountain", in search of the "Land of Monomotapa" and its fabled riches. The party consisted of 15 wagons, 8 carts, his coach, a

boat and a large entourage. They reached the Copper Mountains on 21 October and stayed a fortnight. He wanted to reach the Orange River (not borne out in his journal - gl dr), but water was a problem and his oxen were too weak. He arrived back in Cape Town in January 1686. (Mostert & Crewe-Brown, 1992:14)

Map showing Simon van der Stel's route to Namaqualand.
(Rosenthal, 1970:map between pages 64/65)

In Van Riebeeck's Dagboek: "Wy vonden eene koopere gang ofte ader die zeer ryk aan de metaal bevond werd," and later: "maar wy konden geen bekwaamheid zien door de bergen naar de zee te komen." (As quoted by Scholtz, 1947:3)

Lack of transportation scuppered the idea of working the copper deposits! – gl dr.

Smalberger gives details of Simon van der Stel's expedition as in Waterhouse. He gives considerable detail of the favourable mineralogical report by Frederich Mathias van Werlinckhof, as in Rogers. Unfortunately, testing and analysis of samples sent to Holland did not support these findings. Considering the distance from markets the deposits were unlikely to prove payable. (Smalberger, 1975:12,13)

Van der Stel set out on 25 August 1685. In his train he took a Prince of Macassar, Dain Mangale, a political prisoner from Batavia. The main body was commanded by Captain Jeronymous Cruse. The Europeans numbered upwards of sixty, and six armed burghers were to convoy the Commander as far as the Oliphants River. Upwards of fifty Hottentots and coloured drivers, interpreters and voorloopers, three slaves attending the Commander, and one Macassan in attendance upon the Prince, brought the total to over one hundred people. There were fifteen wagons, one carrying a boat and another loaded with two small cannon, eight carts and eight asses to serve for lighter and more rapid transport. The Commander's coach and six horses and fourteen riding horses completed the cavalcade... It took them two days to cross the Berg River... On 15 September they reached the Oliphants River - the six burghers left here... On 30 September they reached the Kamiesberg and found it too high and dangerous for them to cross: they were very near where Bergh had been obliged to turn back... Van der Stel succeeded in obtaining two Namaqua headmen as guides, and on 14 October they pressed on, arriving at the Copper Mountain on the 21st. After prospecting, sampling and a little smelting the expedition turned for home on 5 November. The return journey was harder, for it had become hotter and drier. Draught oxen died of exhaustion and of drinking brackish water. However the whole party, without the loss of a single human life, arrived back at the Castle on 26 January 1686. (Spilhaus, 1973:122-127)

Carolusberg, one of the largest open-cast copper mines in South Africa is a stone's throw from the spot where Van der Stel sank a prospecting shaft. In this brochure it is noted that the Copper Mountains were visited again by expeditions of J Jacobus (Coetsee) Jantz in 1760; Hendrik Hop in 1761/62; Paterson in 1778; Paterson & Gordon in 1779; Le Vaillant in 1781; Barrows in 1796 and Thompson in 1827.
(Springbok Municipality, 1984)

Simon van der Stel's expedition was the largest yet mounted and consisted of fifty six whites and forty six servants, a number of slaves and interpreters, fifteen wagons, eight carts, two hundred extra oxen, thirteen horses and eight mules, and the Governor's personal coach. On reaching Springbok he dug three shafts, did some exploring, and returned to

Cape Town, leaving his three shafts to gape uselessly at the elements for more than a century and a half. "To us children of a machine age that laughs at natural obstacles (not always so easy!!- gldr) it seems incredible that vast deposits of copper ore could have been allowed to lie practically untouched for more than 150 years simply because no one could devise an effective and economic way of transporting it across the two natural barriers, a range of mountains and a belt of deep sand, that lay between it and the sea only 40 or 50 miles away." (W.Steenkamp, 1975:40)

Note: Transportation always has been, and always will be, the key to economic and social progress!!! – gldr

Geologist Van Werlinckhof accompanied the expedition and prepared a very favourable report on the mineral prospects. (Suid-Afrika, 1980:4)

Note: see A.W.Rogers (1917) for this report.

Simon van der Stel's Koperbergen were about three miles east of Springbokfontein. (Van Heerde et al., 1952:7)

Map showing van der Stel's route to Namaqualand. (Walker, 1922:map 7)

Waterhouse includes reproductions of every page in the Trinity College copy of the "Dagh Register", a transcription also in Dutch, and a translation by Professor R.H.Pheiffer in the 1970 edition. Any discrepancies of fact between the various authorities quoted above may be resolved by consulting Waterhouse. Strangely, despite the lavish production, there is no map in the 1970 edition, but one will be found on page 159 of the more plebeian 1932 edition. "On 25 August 1685 at 10 o'clock in the morning... we marched from the fort of Good Hope with our baggage, being in number 57 whites as can be seen from the accompanying list" (Waterhouse says that unfortunately all traces of the list have disappeared) "apart from a certain Dain Mangale, a Prince of Macassar, with his servant; and furthermore three black servants belonging to the Hon Commander. Our transport consisted of one carriage with six horses, and eight asses, fourteen riding horses, two field guns, eight carts, seven wagons, one of which was loaded with a boat, two hundred and eighty nine draught and pack oxen; and in convoy with us were also the wagons of six freemen, each drawn by eight oxen, who will take leave of us at the Elephants River." On 4 September they crossed the Berg River at "the ford called Misverstant", and the following day, near Piekiet Bergh " a rhinoceros of unbelievable size appeared which headed straight for the middle of our procession with great fury and anger; he ran along it to the rear where the Hon Commander was with his carriage, on whom it bore down. The Hon Commander barely had time to leave the carriage, but jumped down from it all the same with a blunderbuss in his hand and aimed at the beast which was scarcely six yards from him, intending to shoot; but the blunderbuss misfired, the rear catch striking the front one. And the furious animal which we otherwise were sure would have devoured the Hon Commander in our presence, by great fortune ran past him brushing against his body. We believe that it took fright as a result of a shot which one of the hunters fired at it. It ran forth at great speed, away from us. Several others, who were on horseback, were also unable to avoid it, and quit their horses in great consternation, injuring themselves in various places." (A delightful story, delightfully told! - gldr)

After calling at the Heerenlogement they arrived at the Eliphants River on 15 September, only to be held up for three days by strong flows in the river, resulting from heavy rains. When the six freemen left the expedition here they requested the permission of the Commander to hunt on their way home! On 3 October they reached the place "which we

named Keer Weder as previous travellers turned back from here because the mountains which we saw in front of us were inaccessible, and also because the route was unknown to them, as this tribe refused to give directions." This was the kernel of the matter, and Simon van der Stel took until the 15th to sort matters out. He contacted the local tribes of Amacquas, where Joncker, the son of the Captain, Nonce, annoyed him so much by lacking respect for his father and by being generally obstreperous that the Commander had him arrested. He then sent a sergeant with twenty men, who captured all the weapons at Joncker's kraal, and "persuaded" the tribe to break camp and move their kraal to the Commander's camping place. Captain Nonce sent out messengers, who returned with five other Captains, with whom he got on famously. After consultation with them Joncker was informed that he was demoted to soldier, and when he promised to behave Van der Stel released him. The Commander entertained the Amacquas "with food, strong drink and tobacco", after which "one could clearly notice that they became more resolute in answering to what was asked of them." The Commander then gathered various Captains together and got them to agree to live henceforth in peace amongst themselves. And on 15 October he got two Captains, Oedesson and Habij, to agree to "go with us to give information about everything." It is worth noting that the Amacquas said that the past rainy season was the only one which had wet that region in four years - this, and the Commander's fortitude, made the success of the expedition possible.

Note: the translator records that the expedition's navigator climbed a hill and saw the sea an estimated 12 to 13 miles to the west. He does not mention in the English text that these would be Dutch miles (confirmed in the original Dutch script) and that the sea would accordingly have been estimated to be 57 to 62 statute miles or 90 to 100 kilometres away - gldr)

Half way to the Koperberg they "were compelled to camp because we had to repair several of our carts and wagons which had received cracks the previous day and broke down on the rocks." (As one who has built roads through this country I sympathise with them!) They reached the Koper Bergen on 21 October 1685. Here they worked, prospecting, and digging and blasting trial mines, for the next fortnight. A party visited O'okiep and collected samples there. The Commander spent the whole of the 26th building the assay and smelting ovens, but decided on the 31st that "as the circumstances did not allow of such, it was postponed until the return to the Cape of Good Hope." They departed from the Koper Bergen on 5 November, following their north-bound track, and "found that several streamlets which had then contained water had now entirely dried up..." After trouble with their (now unwilling) Amacqua guides they swung away from their north-bound route on 15 November and travelled southwest to near the sea. After a scouting party of Hottentots had worked south and another under a sergeant north along the coast, the whole trek went north by west on 20 November. They were troubled by sand, lack of water, lack of firewood and lack of grazing for the oxen. Van der Stel again sent a sergeant's party off seventeen days later, with instructions to scout north to Agoas dos Foltas where Dias had landed in 1487 (actually 200 kilometres away). The sergeant got just north of the Sant (Buffels/Touse/Koussie) River, in fact to the latitude of the Koper Bergen, and having found no grass or water along the route turned back. On receiving this report Van der Stel decided to turn back south and left on 12 December. They reached the Doorn Bosch (Groen?) River a week later and trekked up its reaches in great heat until they found Lieutenant Bergh's tracks crossing the Klein Doornbosch River. They followed these tracks until they rejoined their own northbound track at Meerhof's Casteel on 27 December. The great lack of water and grass continued until they reached the Eliphants River on 29 December 1685. On their way south a party went down the Buffels to its mouth, the whole expedition swung southwest to near the mouth of the Jakhals River, to

which they sent a wagon with a boat in order that they might sound around an island in the bay (Lamberts Bay), and from which exploring parties went south and north as far as the Eliphants River mouth again. Leaving their camp on 4 January they marched up the river valley, rejoined their outbound route, crossed the Bergh River, and reached the Fort of Good Hope on 26 January 1686.

(Gilbert Waterhouse, 1979:"Simon van der Stel's journey to Namaqualand in 1685")

This was truly an epic journey which has never been, and will never be equalled in the annals of Namaqualand.

1691: Commander Simon van der Stel given the title of Governor, together with an increased salary, in recognition of his services to The Company. He was the first Governor of the Cape of Good Hope. (Rosenthal, 1970:602)

1700 (or earlier): Loan Place tenure - allowing farmers to 'leggen en wijden' - is the oldest form of land grant in the Cape, made in return for an annual rental of 24 riks-dollars ('recognite geld'). As the grants were renewable annually upon payment of rent, they amounted to perpetual leasehold. (Barrow, 1806:375)

A loan place, which is obtained from the government and is not yet surveyed, is half an hour's walk in every direction from the house or centre. (Backhouse, 1844:585)

Note: hence those triangular public outspans: the bits of land left over between the circular loan places.

1699: Simon handed over Governorship to his son Wilhelm Adriaen van der Stel. (Rosenthal, 1970:527,602)

1713: First smallpox epidemic. (Van Onselen, 1961:110; Theal, 1917:507)
See also: below; 1724 and 1755.

1715: Smallpox epidemic at the Cape. The Namaqua tribe, who lived in the vicinity of Clanwilliam at that time, trekked away to north of the Orange River, hoping to get away from infection. (Burman, 1988:43)

"While he (the Khoikhoi) stayed in position it was difficult for the cattle farmer to enter the area, as it was forbidden by Company policy to oust the Khoikhoi. This situation changed drastically when smallpox hit the Khoikhoi about 1715... the smallpox epidemic forced the Khoikhoi to withdraw (northwards) or drastically reduced their numbers. In either case the way was open for the cattle farmer, whose importance to the Company as a cattle breeder was increased as the Khoikhoi withdrew." (Burman, 1988:34,35)

See also: above, 1724 and 1755.

1723: The authorities at the Cape received a report that an unofficial, illegal hunting expedition of Picquetbergen farmers had reached "the so-called Great River". (Willcox, 1986:18)

1724: Ensign Johannes Rhenius, son-in-law of Olaff Bergh, led an expedition of forty six persons with eight wagons (later increased to twelve to reduce the individual loads) to the Groen River near Garies to trade. However the locals were extremely impoverished and,

in addition, large numbers were being wiped out by a smallpox epidemic. They accordingly returned home, losing one wagon driver to smallpox on the way. (Becker, 1985:70-72)

Johannes Tobias Rhenius left the Cape on 15 September 1724 with 47 men, four wagons each provided with twenty one draught oxen on a trading mission to Garies, returning on 11 November 1724. An unsuccessful mission. (Mossop, 1947: includes a translation of the journal.)

This terrible smallpox epidemic killed nearly a quarter of the Europeans at the Cape, wiped out whole tribes of Hottentots and even raged north of the Orange River. (Willcox, 1986:19)

See also: 1713, 1715 and 1755.

1750: Travellers noted that there were five trekboers/stock farmers in Namaqualand (20 by 1771). (Phyllis Jowell, 1994:17)

1751: 30 March to 12 August 1771: Ryk Tulbagh Governor of the colony. He granted the first Leliefontein farm to the Namaquas. (Wilmot, 1883:97)
See also: 1816.

1751: Adam Kok the First granted grazing rights to a second farm, Stinkfontein, in the Piquetberg area. In this area he came into contact with the remnants of the Grigriqua or Charigriqua, a Khoikhoi clan that wandered about in that territory, who had been without a hereditary chief since the time of Van Riebeeck. A few years later, under pressure from white colonial farmers, he abandoned his grazing rights and trekked with his family and Grigriqua retainers into the Khamiesberg (to Leliefontein). His success as a flockmaster continued to attract both dispossessed Bastards and Grigriqua to him - among them was Klaas Barends who had explored the lower reaches of the Gariiep or Great River with Hendrik Jacob Wikar. Adam Kok was the only man in Namaqualand to own a wagon. At that time no Dutch farmer lived north of the Olifants River, the country being inhabited by Namaqua Khoikhoi and Bushmen, who were continually at war with one another. (Wannenburgh, 1980:40)

1752: Trekboers reported to have entered Little Namaqualand. (Becker, 1985:72)

1754: Census taken showing 5 510 Europeans and 6 279 slaves. (Rosenthal, 1970:528)

1755: Second smallpox epidemic. (Theal, 1917:508)

Smallpox epidemic introduced at the beginning of winter by a homeward bound fleet from Ceylon. In Cape Town hardly a single adult who was attacked recovered - in July over 1100 persons perished. From the beginning of May to the end of October 963 Europeans and 1109 blacks died in Cape Town. Cape Town at that time contained six or seven thousand inhabitants, rather more than half of whom were slaves. In the country the white people kept secluded on their farms and did not suffer very severely. With the Hottentot tribes that had escaped on the former occasion the disease created fearful havoc. Not one was left unscathed, except the Korana along the Orange and its branches. On the coast northward to Walvis Bay, and eastward until the Bantu were reached, the tribes as such

were utterly destroyed. The individuals that remained were thereafter blended together under the general name of Hottentots, and their old distinguishing titles became lost even among themselves..." (Theal, 1917:80,81,83)

The Hottentot had no resistance to this disease. His ranks were thinned by the first epidemic and the second practically decimated the entire Hottentot race... The disease took such a toll that as a nation the Hottentot ceased to exist. (Von Enselen, 1961:110)

See also: 1713 and 1715 for first epidemic, and 1724.

1760: Jacobus Coetsee left Piketberg on 14 July 1760 with two wagons and went via Koekenaap (then the accepted route north) to Springbok. It took them twelve days from here across the unexplored thirstland to the Orange River, which he crossed at Ramanskraal, near Gudaus (Goodhouse). He proceeded northwards, but on the fiftieth day, not having found a single elephant, he turned for home. (Becker, 1985:73-75,105)

Jacobus Coetsee, living at Piquetberg... set out with a wagon and 12 Hottentots and, travelling north, passed the Copper Mountain, arriving at... Orange River. It had never been forded before by white men. Coetsee and his followers crossed over to the other side, and followed a river... to what is now Warmbad." (Botha, 1962:25)

Jacobus Coetsee left his farm at the southern end of the Picquet Berg on 14 July 1760 with two wagons and twelve Hottentots of the Grigriqua tribe to hunt elephant. He crossed the Orange River, being the first white man to do so, travelled far into Namibia, and returned, trouble-free, to his farm. He also shot giraffe, until then unknown to the Europeans. (Burman, 1969:144-148 gives considerable detail of this trip.)

Jacobus Coetsee, who held grazing rights on two farms near Piquetberg, with permission from Ryk Tulbagh left on 14 July 1760 with two wagons and 12 retainers of the Grigriqua tribe on an elephant hunt. He had only shot two by the time he reached the Copper Mountain, so pushed on to cross the Orange River 12 days later. The Orange had until then formed the northern limit of white exploration. North of the river he entered the territory of the Namaquas, who had lived in the neighbourhood of Clanwilliam in Van Riebeeck's time, and had trekked away during the smallpox epidemic of 1715. In due course he turned south, and shot a giraffe, the first of this species reported. His return journey was trouble-free. (Burman, 1988:42,43)

Jacobus Coetzee of Piketberg in 1760 was the first European descended man to cross the Gariiep (Orange River). (Dickason, 1978:30)

First European crossed the Orange River. (Lucas, 1913:82)

Den burger Jacobus Coetsee Jansz (the burger Jacobus Coetsee (Jan's son)), being illiterate, narrated the story of his trip to the Political Secretariat at the Castle after his return, on 18 November 1760. He had left his farm, with permission, on 14 July 1760 with two wagons and accompanied by twelve Hottentots of the Gerigriquas nation. He went north into Namibia, returning four months later. (Mossop, 1935)

Jacobus Coetsee, a farmer from Klipfontein, near Piketberg, organised an elephant hunting trip across the Orange. (Mostert & Crewe-Brown, 1992:14)

Crossing of the Orange River by hunter Jacobus Coetsee. (Rosenthal, 1970:528)

"Goodhouse" is a corruption of the Namaqua Gu-daos, meaning "Sheep path".
(Willcox, 1986:18)

1761: Hendrik Hop, aged forty five, "appointed Carel Brink, a surveyor, to compile a map... Johan Auge, Director of Botanical Gardens in Cape Town... Carl Rykvoet, surgeon and mineralogist... Pieter Marais, a farmer fluent in Hottentot dialect... Jacobus Coetsee, the elephant hunter, its guide, and Tielman Roos, a prominent agriculturist and amateur ethnographer, Hop's deputy." A further ten men and sixty eight half-breed Hottentots with fifteen wagons made up the party. They left on 16 July 1760 (August 1761 according to Burman; 1761 according to Smalberger. Probably Becker has confused the departure date of Coetsee's previous trip) in the rainy season, and reached the Orange River somewhere east of Vioolsdrift on 18 September. Being unable to find a suitable crossing place in the gorges to the west, they moved upstream until on the 29th they were able to cross at Ramansdrift close to Goodhouse. They battled north looking for reported cattle herds, but the weather got hotter and drier and finally on 6 December they decided to head for home with their beat-up wagons and weak oxen. The return took almost five months to complete, and they arrived on 27 April 1762, having trekked further north than had any European at that time. (Becker, 1985:75-78)

Hendrik Hop, Captain of the Stellenbosch Burgher Cavalry, a farmer living in the Paarl district, with Surveyor Carel Fredrik Brink, botanist Jan Andries Augue and Surgeon Carel Christoffel Rykvoet a mineralogist, with thirteen volunteer colonists, fifteen wagons each drawn by a span of ten oxen, and sixty eight half-breeds set out to explore the country in the direction of the Orange River crossed by Coetsee. The main body reached latitude 26 degrees 18 minutes south (north of Keetmanshoop- gldr) and from here returned, reaching Cape Town on 27 April 1762. (Botha, 1962:25)

Hendrik Hop led a semi-official party north from Koekenaap on 16 August 1761 to explore north of the Orange River. He was assisted by Carel Frederik Brink (a land surveyor who kept the journal), Johan Andries Auge (the Company's gardener who was to study flora), Dr Carel Rykvoet (burgher surgeon). There were 12 burghers, the most important of whom was Jacobus Coetse, on whom the bulk of the exploration was to fall. The party also included 68 Hottentots and 15 wagons (3 belonging to the Company). On 18 September they reached the Orange River, which they crossed on the 29th. They travelled in Namibia, getting 100 miles beyond the point reached by Coetse previously. The expedition reached the Cape again on 27 April 1762.
(Burman, 1969:148-152)

Hendrik Hop, a well-to-do young farmer who was a captain in the Burgher Militia, and under whom Coetse had served, led what was practically a private party (though with Company backing) which assembled at Koekenaap on the Oliphants River on 16 August 1761. "Assisting Hop were Carel Frederik Brink, a land surveyor who also kept the journal, the Company's gardener Johan Andries Auge, and Dr Carel Rykvoet, a burgher surgeon. They were accompanied by 12 free burghers, the most important being Jacobus Coetse on whom the bulk of the exploration fell. They had 68 retainers and 15 wagons, each drawn by 10 oxen." They reached the Orange on 18 September (there is some confusion in Burman's text: he also mentions 24 August, only six days after leaving the

Oliphants, which seems extremely unlikely.) On 23 November they reached their furthest north, about 750 kilometres from Cape Town near present-day Keetmanshoop. The country was in the grip of a severe drought, and on 2 December they started back south. After resting at the Orange, the first party crossed the river on 10 February 1762. Because of the poor state of their oxen and also because the river then came down in flood the second party with Coetse only crossed on 28 February. They finally reached the Cape on 27 April 1762 having been away for nine months. (Burman, 1988:43-46)

Captain Hendrik Hop, Hendrik Kruger and J.A.Auge travelled through Namaqualand to cross the Orange River on their way north. (Green, 1967a:125)

Mossop gives the full journal, kept by Carl Frederik Brink, surveyor.

Hop left on 16 July 1761, joined up with the rest of their company at Koekenaap, crossed the Orange River on 29 September, reached about fifty miles east of Keetmanshoop on 22 November, struggled back suffering greatly from lack of water and grazing, reaching the Cape again on 27 April 1762. (Mossop, 1947)

Hendrik Hop's party included a burgher surgeon Dr Carel Christoff Rykvoet who was to report on the mineralogy of the territory traversed. His report stated that he considered van der Stel's Koperberg poor. Nevertheless, at a place very close by he found rich deposits "and deemed that a mine could have been worked there had a sufficient supply of wood and water been available." His highest praise was for certain deposits, said to contain more than one third copper, close to the Orange River in the Richtersveld. However he did not consider the working of these deposits an economic proposition because of the hardness of the surrounding rock, a lack of fuel for smelting, and difficulties of transport. Ox wagon transport would, he thought, prove prohibitive, while the Orange was not suitable for navigation because of its many reefs and shoals. (Smalberger, 1975:13)

Governor Tulbagh despatched an expedition to the northward in 1761, and caused a report to be prepared on the copper mountains of Namaqualand. (Wilmot's *History of the Cape Colony*, 1883:19)

1762: Captain Hendrik Hop's expedition. (Dickason, 1978:30)

Note: It appears he actually left in July 1761, returning in April 1762 - see Mossop above.

1771: On 5 October 1771 Hermanus Engelbrecht was granted the right to a "leenplaas" for grazing for one year "bij de Lelij Fonteijn gelegen op die Gammiesberg" by the VOC. This was where the Leliefontein mission station was later situated. (Anon, {1990})

Note: this is presumably the same Hermanus Engelbrecht of the farm Ellenboogfontein, south west of Kamieskroon, where Gordon and Paterson and others called on their journeys north: see 1779 et al.

Travellers reported that by 1771 there were twenty stock farmers in Namaqualand. Most trekboers settled in the Kamiesberge or 'grass mountains' which were relatively cool in summer, with permanent springs. In winter, when cold weather arrived, they would move down into the coastal area of the Sandveld, returning to the mountains only at the onset of summer. (Phyllis Jowell, 1994:17)

1775-1779: Hendrik Jacob Wikar, a Swede in the service of the Company as a medical clerk, fled the Cape in April 1775, to escape his gambling and other debts. He joined a friendly band of Nama stockmen beyond the Kamiesberg, and in their company finally reached the Orange River. He wrote a report commencing on 4 September 1778 describing how he, in the company of eight half-caste pedlars, walked for five hundred kilometres along the Orange River from west of Goodhouse to Koegas. On sending this report to Governor van Plettenberg he was granted a pardon and returned to the Cape (in August 1779). On the way he met Captain Robert Gordon and William Paterson in the Kamiesberg. (Becker, 1985:85-88)

We know nothing of Wikar's adventures between April 1775 and September 1778, when his detailed story of events commences, at Gu-daos (Hottentot for "sheep path"). His journal is totally unlike the cryptic notations sometimes entered in their journals by some of the expedition navigators: Wikar had been employed as a "schrijven" by the DEIC. (Mossop, 1935)

Hendrik Jacob Wikar, a man of considerable intelligence and fair education, worked as a clerk and school teacher in the Cape. Within two years he was in debt to the amount of 100 Rix Dollars, equal to his total pay for almost four years. He deserted with horse and gun. In September 1778 he fell in with a party of Hottentots led by Klaas Barends, who had been one of Coetse's party before settling on the Orange. Wikar was the first European to see the Augrabies Falls. His journal includes many valuable descriptions of life in the tribes along the river. Wikar describes the Hottentot way of crossing rivers simply by swimming grasping a log, or by a raft propelled by several swimmers. Moffat records that these swimming logs were about six feet long, four to six inches in diameter and made of dry willow. When used to transport a load, several were tied together with strips from the inner bark of the mimosa to form a temporary raft. Denys Reitz says that the swimming logs were handed down for generations and that a European who ignorantly tried to chop one up for firewood was "half murdered" before he was rescued! (Willcox, 1986:20-24,66,98)

"It may be necessary to explain that a river-horse is neither horse nor hippopotamus, but a long dry log of willowwood, into one end of which a peg is firmly driven. Grasping the peg with one hand, the swimmer, with lusty sinews buffeting the flood, crosses in safety. If a traveller wishes to be ferried over, he is placed in the water between two of these logs, and thus propelled by a couple of men, who exact a heavy toll, and at times leave him barely a rag to cover him."

(In the A.M.Lewin Robinson collection, 1978:33,34; Revd Richard Ridgill - see also: 1855.)

1777: Robert Gordon gave the Orange River its name in honour of the Prince of Orange in 1777 near Bethulie (Forbes & Rourke, 1980:105); a little below Bethulie on 23 December 1777 (Willcox, 1986:25).

See also August 1779, when Gordon re-named it the Orange when he reached the mouth with Paterson.

Note: The Orange River, originally known as the Eyn or Eijn to the Hottentots of Van der Stel's day, when the Dutch were referring to it as the Rio de Infante on which lay the fabled city of Vigit Magna (Waterhouse, 1979) was later known as the Charie or Garieb or Gariép (Willcox, 1986), meaning "the river of the wilderness" (Burke, 1995:7) or the Groot Rivier, the Great River (Wannenburgh, 1980:40,46).

"Gordon was now 34 years old, tall and well built and remarkably accomplished. He was a naturalist, cartographer, meteorologist, musician and a competent artist. He spoke Dutch, English, French and some Gaelic, as well as Hottentot, and to this he soon added knowledge of 'Caffre', probably Xhosa. And he was withal a boon companion, genial and entertaining." (Willcox, 1986:25)

1778: Lieutenant William Paterson, British army officer and botanist, later to be Governor of Tasmania, undertook his second journey from 22 May to 20 November 1778. He travelled with Sebastian Valeynten van Reenen. After visiting the Gouritz River mouth and Calvinia they passed near Garies and were fortunate enough to furnish themselves with fresh oxen from a European farmer on the banks of the Cousie or Sand (Buffels) River on 29 August. They were at the Copper Mountain on 3 September and reached the banks of the Orange three days later. Leaving to return south on 24 September they suffered great tribulation from lack of water until they reached the Copper Berg. On 10 October they left Green River to return to the Cape via Nieuwoudtville, Van Rhynsdorp and Leipoldtville, arriving on 20 November 1778. (Forbes & Rourke, 1980)

William Paterson the son of a Scottish gardener, was sent to South Africa at the age of twenty one to collect plants for the Countess of Strathmore. On his return home he was given a commission in the army (1780?), not easily obtained by a man of humble birth and little formal education. Later in life he became Lieutenant-Governor of New South Wales and a Fellow of the Royal Society. (Willcox, 1986:32)

1779: A short and not entirely accurate description of Gordon's trip, from the Kamiesberg to "the confluence of the Vaal and Orange Rivers" is given by Becker in "*The Pathfinders*", (1985:88-91).

Note: Gordon did not get east of Prieska. In fact, on page 144 Becker states that William Burchell was the first European to visit the confluence of the Vaal and Orange Rivers, in October 1811.

Burman states that the farm (Ellenboogfontein) south west of Kamieskroon, on the slopes of the Kamiesberg, was owned by Hermanus Engelbrecht. (Burman, 1969:153-157)

Note: Burman says that when Gordon, Paterson and Pienaar left the Orange River mouth "Pienaar wished to follow the river." This agrees with other accounts. However, he says that when Gordon and Paterson returned to Hermanus Engelbrecht's farm "Pienaar appears to have rejoined them" there. He also says that Gordon set out northwards from the farm "almost certainly in company with Pieter Pienaar". Other authorities seem to agree that Pienaar did follow the Orange upstream, and met up with Gordon again only at his (Pienaar's) cattle post Sandfontein, which was near Pella.- glldr.

Captain Gordon left Cape Town on 27 June 1779 on his fourth Journey with two wagons, one of which carried his boat. He was accompanied by his young servant Koerikei and by the artist Schoemaker. At Van Zyl's (Lutzville) on the Olifants River, where he stayed from 8 to 12 July, he was joined by prior arrangement by the well-known hunter, trader and farmer Pieter Pienaar, who was to be his travelling companion. Here he also rendezvoused with the botanist William Paterson, who with one Van Reenen was also on his way to the Orange River mouth, although via the Bokke Veld. On 25 July 1779 Gordon arrived at Hermanus Engelbrecht's farm "Ellenboogfontein", situated about six

kilometres WSW of Kamieskroon. Paterson had rejoined him two days out, on 23 July. Ellenboogfontein was a well-known haven for travellers of that time. While at Ellenboogfontein Gordon and Paterson met Hendrik Jacob Wikar, who had spent the previous four and a half years along the Orange River and was on his way back to Cape Town. Gordon sent one wagon north towards Springbok along the known road, and with the other set out on 30 July north west through the Sandveld. Paterson and he joined forces again on 6 August near Grootmis/Kleinzee. The Orange River mouth was reached on 17 August 1779. They spent twelve days along the river before retracing their tracks to Ellenboogfontein with the wagons, while Pienaar and his hunters rode off upstream. After Ellenboogfontein Gordon and Paterson again travelled separately. Gordon left on 18 September after spending a week there, and passed through Springbok on his way to Sandfontein, Pienaar's cattle post near Pella, arriving on 27 September. Pienaar was awaiting him, having taken twenty one days to ride up river from the mouth. Gordon's second wagon was also there. From here, on 29 September, Gordon with Pienaar, Schoemaker, support Africans and one wagon (the boat was left behind) worked their way up river. On 23 October they left the wagon near Kakamas, and with four pack oxen crossed to the right (north) bank. They got as far upstream as De Beers Kloof (about fifty kilometres short of Prieska) before turning back on 7 November 1779. After pausing at Sandfontein, Gordon swung north across the Orange River to Warmbad before turning south again to cross the river at Compagnies Drift on 15 December. From Springbok their outward bound route was followed to Ellenboogfontein, after which they visited Groen River mouth, and then on to Lutzville ("using a well-travelled road") and the Heerenlogement, reaching Cape Town about 20 January 1780. (Cullinan, 1992:71-129) (This was a truly remarkable seven months' trip - .gldr)

Lieutenant William Paterson, with his travelling companion Sebastian van Reenen, left Cape Town on 18 June 1779. They joined Robert Gordon on 22 July at Green River. Three days later, at Hermanus Engelbregt's farm Ellenboogfontein, they met Hendrik Wikar who was returning to Cape Town after spending seven years (most authorities say four and a half years - gldr) in the wilderness, mainly along the Orange River. Paterson and Gordon reached the Orange River mouth on 17 August and were back at Ellenboogfontein on 12 September. (For details see notes above under Cullinan - gldr) Paterson parted company with Gordon here, and Hermanus Engelbregt joined him when he left on 22 September. They reached the Orange River on October 1st, but being unable to cross where they were moved eastward until they managed to get over at Ramansdrif, then called Compagnies Wagendrift, thirteen days later, leaving the wagon on the south bank. After visiting Verloorkoppe in Namibia he recrossed on the 21st, as storm clouds upstream had made him worried about being cut off. After saying good bye to Engelbregt on 4 November they retraced their steps via Nieuwoudtville to Cape Town, arriving there on 21 December 1779. (Forbes & Rourke, 1980)

Note: Robert Jacob Gordon, a Dutchman of Scottish descent, served in the elite Scots Brigade and later with the DEIC, rising to the rank of Colonel commanding the Cape garrison from 1780 to 1795. Soldier, scientist, explorer and cartographer, he travelled further and undertook more journeys than any other eighteenth century explorer in southern Africa. William Paterson, an English botanist and army officer, son of a gardener, rose to commissioned rank in the British army (no mean feat for one of lowly birth) and travelled widely in southern Africa. He was Lieutenant Governor of New South Wales, Australia for nine months during 1794 and 1795, and

again in 1809, when he took over from Governor William Bligh of HMS "Bounty" ill-fame after his (Bligh's) deposition and arraignment.

1779: Robert Gordon named the Port Nolloth area Syferfontein, and McDougall's Bay was known as Gawaap. (Port Nolloth Munisipaliteit, 1991)
See also: 1855

1780: By 1780 European farmers were already settled in the Kamiesberg, attracted there by permanent supplies of water and a suitable climate. One of the oldest farms is Eselfontein. (Dickason, 1978:30)

1783: Francois le Vaillant passed by the Heerenlogement in the middle of 1783. His accounts abound with inconsistencies and uncertainties, and it appears that his powers of imagination verge on fiction in many instances. It appears definite that he got as far as the farm of the Widow van der Westhuizen in the Kamiesberg. Some say this was his furthest north. Some say he got no further than the Orange River, others that he crossed and visited Warmbad, while yet others think that he got as far north as 22 south, well into the tropics! Le Vaillant himself had said that it was his intention to travel up Africa, through Tunisia, to Europe. Whatever, "In an age when travel was very often dangerous and always slow he made at his own expense very considerable journeys by sea and by land, actuated by the love of learning and the desire for adventure." (Forbes, 1975)

"Le Vaillant was a poor swimmer (Willcox says he could not swim) and he declared that he was nearly drowned at the Olifants mouth. His servants found a suitable "swimming log" and hauled him across the stream by this well-known Hottentot method... In midstream the flood was so strong that the whole party was almost swept out to sea. Fortunately the wind helped them to reach the far bank and there La Vaillant revived his men with a calabash of brandy." (Green, 1967a:115)

La Vaillant, the most vivid of the eighteenth century travellers, carved his name in the wall of the Heerenlogement in July 1783. "In spite of all his braggadocio and exaggerated claims, Le Vaillant was a man of great achievements." (Green, 1967a:126-128)

Le Vaillant's second journey commenced on 15 June 1783. He claims that it lasted sixteen months, but from various evidence it appears probable that he returned to the Cape by late 1783 or early 1784. He called at the Heerenlogement, leaving his name (spelt with one "L") there (Note: I have a photograph - gldr), crossed the Olifants River at Vredendal, and went down the right bank to Koekenaap. From here he made a side trip on foot down to the mouth, where he crossed to the south bank to hunt elephants. This is the well-known crossing of the flooded stream astride a tree trunk, pulled by his Hottentots (who swam), described in his journal in six pages of lively and even at times emotional prose, telling how they almost lost their lives. It is also dramatically illustrated in his painting of the incident, beautifully reproduced in colour in the book.

Note: for more on the Hottentot swimming logs see Willcox under Wikar, 1775-1779.

On their return to the wagon train they marched upstream to a point where they could recross the stream with little difficulty. His map of this journey shows him as having progressed to 23.50 south, within the tropics near Windhoek, with many side trips along the way. This is now generally accepted as being entirely inaccurate, and his accounts of many of his excursions must be regarded as romanticisms. However, be this as it may, Le

Vaillant deserves praise as a devoted traveller, courageous and imbued with a spirit of adventure. (Quinton & Robinson, 1973)

Le Vaillant was born Vaillant (he added the `Le' himself). It was long doubted, by his contemporaries and later scholars, whether he did as he claimed reach the Orange River. Recently it has been accepted by some that he did in fact do so, by reason of the view point of one of his pictures having been identified as being at Raman's Drift a few miles above Goodhouse. Willcox says Le Vaillant could not swim. (See under Wikar 1775-1779 for more on swimming logs) He returned to the Cape in mid 1784 and arrived back in Europe at the end of the year. (Willcox, 1986:42-49)

1791: Willem van Reenen, of Rondebosch, Cape Town and Seekoeivlei near Clanwilliam, led a trek to hunt and do some exploring and gentle prospecting, leaving Cape Town on 17 September 1791. They moved north along the usual route, crossing the Orange River at Goodhouse. North of the river they suffered from lack of water and rough going, and turned for home on 14 February 1792, after reaching some point south of Windhoek. Having been fortunate enough to replace their oxen, they returned to Seekoeivlei on 20 July 1792. One hundred and forty oxen had died or were abandoned along the route. (Becker, 1985:104-108)

Willem van Reenen's expedition was away from 17 September 1791 to 20 June 1792. Their furthest north, near Rheboth in Namibia, was reached on 22 January 1792. They suffered greatly from lack of water and fodder and had to borrow oxen and stock for food to get back to Cape Town. (Mossop, 1935)

1795: Government by the Dutch East India Company ceased. The Cape surrendered to the English. (Rosenthal, 1970:528; Theal, 1917:508)

1798: Cape northern boundary near O'okiep. (Rosenthal, 1970:map between pages 64 & 65)
See also: 1805, 1847, 1890.

1798: Sir John Barrow on his second journey in April and May of 1798 went via Saldanha and Nieuwoudtville northwestward into the Khamiesberg at Fleuris Fonteyn, and then back to Nieuwoudtville and Cape Town. (Forbes, 1965)

1798: Soebatsfontein is suggested to be a corruption of Sievertfontein, after a frontier farmer named Sievert who was killed here in the 18th century. (AASA, 1987:68)

Hendrik Stievert, an ex-soldier of the DEIC, fell into the hands of Bushmen at Soebatsfontein in 1798. He implored them to spare his life (hence Soebat-) but they showed no mercy. (Green, 1955:234)

A goatherd, Henderik Stievert was killed at this fountain by Bushmen under Barend Goeieman, despite his pleas for mercy. (Namaqualand RSC, {1993}:18)

Soebatsfontein: Hendrik Stievert pleaded for mercy from his Bushmen murderers - to no avail. (W.Steenkamp, 1975:106)

Note: Stievert?? Stuart?? Stewart?? Remember that Holland was home for many people of Scottish descent at this time. When Colonel Robert Gordon (whose family

of Scottish descent had been in Holland for over a hundred years) joined the country's Scots Brigade in 1753 the Brigade had been in existence for two hundred years (Cullinan: 19).

1801: Namaqua marauders raided farmers of the North and Northwest under Chief Afrikaner. Also raided Bastard Hottentots/ Basters/ later Griquas under Adam Kok on their Government Reserve in the Kamiesberg. The Basters trekked to Klaarwater, renamed Griquatown when the Basters, at the suggestion of London Missionary Society's John Campbell, changed their name to Griquas, the name of a person from whom the majority were descended. (Lucas, 1913:99)

1803: The Bastards and Griquas were either holding on with Adam Kok at Pella or following his son, Cornelis, from the Khamiesberg to the middle Orange valley; the Namaquas were drifting northwards into what is now Namibia. The Orange River valley to the north of the Colony thus swarmed with half-breeds, Hottentots, runaway slaves and outlaws, a menace to the border farmers. Notable among them was the Namaqua, Afrikaner, who raided Europeans and Griquas impartially from his impregnable island in the middle of the great river. (Walker, 1928:97)
See also: 1910 (Cornell, 1920:106; Green, 1955:238)

1803: Cape restored to Holland under the 1801 Peace of Amiens.
(Rosenthal, 1970:528; Theal, 1917:508)

1805: Christian Albrecht travelled from Cape Town to Namaqualand and back: January to August 1805. Abraham and Christian Albrecht and J.Seidenfaden journeyed from Cape Town to start a mission in Great Namaqualand (Namibia): August to November.
(Mathews, Wainwright and Pearson, n.d.; Green, 1967a:128)

They were members of the London Missionary Society. (W.Steenkamp, 1975:108)
See also: 1814.

1805: Buffelsrivier or Buffalo River previously known as the Koussie River.
(Cornelissen, 1965:101)
Also previously known by Simon van der Stel et altera as the Sant or Sand River.
(Waterhouse, 1979)

The northern boundary of the Cape Colony extended to the Kousie River. The Kousie reaches the sea approximately midway between Hondeklip Bay and Port Nolloth.
(Smalberger, 1975:24, note 19 on p 31, note 4 on p 63)
See also: 1798, 1847, 1890.

1805: A Christian mission was established north of the Kamiesberg. (Willcox, 1986:49)

1806: Second surrender of the Cape Colony to the English. (Theal, 1917:508)
Note: Rosenthal (1970:528) gives 1805 for the date the Cape again came under British rule, but his next entry states that General Baird conquered the Cape in 1806.

1812: Voor 1812 was Pella bekend as Commas Fonteyn. Christian Albrecht van die Londense Sendinggenootskap het in 1812 die plek na die ou stad in Macedonie vernoem.
(Anon - Pella RC centenary, 1975)

The Albrechts laboured happily among the people of Warmbad, north of the Orange River from 1805 until 1811, but after the death of the tubercular Abraham Albrecht and the sacking of the village by Jager Afrikander, fled southwards to Kamas, where they established a mission which they named Pella. (Becker, 1985:160,161)

Pella, originally called Commas Fonteyn, or Kamas, had been granted to Jacobus Bierman as a cattle station. (Cornelissen, 1965:101)

Pella Mission founded by the London Missionary Society in 1814 and named after the village which provided refuge for Christians in Macedonia in biblical times. It was taken over by the Roman Catholic Church in 1878. (Namaqualand RSC, {1993}:25; 1995:13)

Pella was named after a town in ancient Judaea to which early Christians retreated in AD 70 when the Romans put Jerusalem to the sword. (W.Steenkamp, 1975:107,108)

"Pella was originally founded in 1814 by Christian Hottentots driven out of Warmbad in SWA by the activities of the notorious Jager Afrikaner. The London Missionary Society named the place after the ancient town in Palestine which became a refuge for persecuted Christians." (Thunemann, 1996:3)

See also: 1805, 1813, 1869. 1875, 1881, 1882, 1991.

1812: The Governor of the Cape, Sir John Cradock, after holding an enquiry, decided to appoint four itinerant schoolmasters for the Northwest. (W.Steenkamp, 1975:150)

1813: Revd John Campbell, returning from a trip Graaff-Reinet – Kuruman - Upington passed through Pella, where he stayed at the mission with Christiaan Albrecht, Henry Helm, John Ebner and Heinrich Schmelen. From there he travelled south via Silberfontein, a Griqua settlement where a German missionary Christopher Sass had recently opened a mission, to the Olifants River, suffering greatly from lack of water on the way. He arrived in Cape Town on 31 October 1813. (Becker, 1985:160,161)

1815: Revd J.H.Schmelen established Bethanien mission station in Namaqualand. (Rosenthal, 1970:537)

1816: The Revd Barnabas Shaw established a Wesleyan mission at Leliefontein in 1816. He served there until 1826. (Anon, {1990})

In 1816 the first Wesleyan Mission was established at Leliefontein. (Dickason, 1978:30)

In September (1813?) the Reverend Barnabas Shaw camped at the Heerenlogement on his way to the Kamiesberg to set up the Leliefontein mission. (Green, 1967a:128) Reverend Barnabas Shaw took six weeks to get to Leliefontein in 1816, travelling by wagon. (Green, 1967b:97-111)

Leliefontein Wesleyan Mission station established on a farm given to the Namaquas by Governor Ryk Tulbagh. The church was completed in 1855, while the parsonage is much older. These were both declared National Monuments in 1978. (Mostert & Crewe-Brown, 1992:44)

Note: According to Wilmot (1883:97) Ryk Tulbagh was Governor from 30 March 1751 to 12 August 1771.

Leliefontein mission was started here, the oldest village in Namaqualand, by Revd Barnabas Shaw in 1816. (Additional) land was given to the coloured people in 1854 by Lord Cathcart. The mission now belongs to the Methodist Church. (Namaqualand RSC, 1993:19)
See also: 1854.

Revd Barnabas Shaw, an iron-spirited Wesleyan, while en route to the Orange River to set up a mission, met a Nama chief on his way to Cape Town in search of a missionary for his people. Shaw changed his plans and settled at Leliefontein in October 1816, built a thatched mud walled church and preached there for ten years. (W.Steenkamp, 1975:116)

See also: Schaefer, 2008:193 et altera.

1818: Steinkopf: Revd Johan Heinrich Schmelen, a German by birth, founded a mission station for the London Mission Society at Steinkopf. The community at Steinkopf was established about 1812, when the place was known as Bijzonderheit, which was altered in the spoken word to Bijzondermeid. The place was also known as Kookfontein. The name arises from the traditional water spring, "waar die water uitkook". This was regarded as "iets besonders". Revd Brecher gave the village the name Steinkopf in 1846 in honour of Dr F.K.A.Steinkopf, minister of the Rhenish Mission Society in London and head of the mission in South Africa. (No indication of how or when the change over in mission societies happened - see 1840 & 1842 - gldr) Revd Brecher served at Steinkopf for about 52 years from 1844. (Anon, {1990})

Steinkopf founded by Rhenish Mission Society in 1818.
(Namaqualand RSC, 1993:15; 1995:11)

Steinkopf established early in the 19th century by the London Mission Society under the name Kookfontein. It was given its new name in 1842, when it became a German Lutheran mission under Dr Steinkopf. (Rosenthal, 1970:547)

Steinkopf was founded by Reverend Heinrich Schmelen (a man of tremendous courage and energy who later became one of Southern Africa's most famous missionaries) of the London Missionary Society at a spot known as Tarrakois ("Bijzondermeid" or "Exceptional Maiden"). Dr Karl Friedrich Steinkopf was minister to London's sizeable community of German expatriates and arranged a considerable donation to the struggling settlement, where his name was adopted in recognition of the gift. Steinkopf was taken over from the LMS in later years (note: Dickason says 1840; Rosenthal says 1842) by the Rhenish Mission Society, who also relinquished it eventually to the Dutch Reformed Church. (W.Steenkamp, 1975:108,109)

See also: 1827, 1829, 1840, 1842.

1825: "Cape Colony extended to Orange River". (Rosenthal, 1970:528)

Note: this was far upstream from Namaqualand. Only in 1847 did Sir Harry Smith extend the boundary in Namaqualand from the Buffels to the Orange River.

1827(July) to June 1828: J.H.Schmelen travelled in Namaqualand.

(Matthews, Wainwright & Pearson, n.d.)

Note: W.Steenkamp (1975:108) says he founded Steinkopf (Kookfontein): see 1818.

1827- 1897: Patrick (also called Peter, the two names being interchangeable at that time in Scotland) Fletcher was born on 9 April 1827, on the Island of Jura. A qualified Civil Engineer and Geologist, he found when he landed in Cape Town circa 1850 that there was practically no opening in a young colony for men of his profession, and so he passed his survey examinations and was admitted to practise as a Land Surveyor. He married Agnes Eaglesine circa 1864, and they had nine children. He went to Namaqualand for a copper syndicate in 1853, and left the area in about 1875. He died in 1897.
(Hugh Fletcher, 1994)

In 1858 Patrick Fletcher, the Colonial Surveyor, mooted a (water) tunnel through the Twelve Apostles range from a dam on the top of Table Mountain.

(D.Hodson; Hallmark 34: The Woodhead Reservoir, Cape Town; *Civil Engineer in South Africa*; November 1980:349)

Patrick Fletcher was appointed Inspector of Mines at the fledgling Millwood gold mining area, near Knysna, when the area was proclaimed open in terms of the Mining Act on 6 January 1887. (Winifred Tapson, 1973. *Timber & tides*. Juta & Co Ltd: Page 90)

1828: In June (Sir) Andrew Smith passed by the Heerenlogement on his way north across the Orange River. (Green, 1967a:128)

Note: Kirby in VRS 20 & 21 records Dr Smith's expeditions of 1834-36, but these did not go into Namaqualand.

1829: Wesleyan Mission established at Komaggas. (Dickason, 1978:30)

Jasper Cloete pleaded with the missionary Schmelen to settle at Komaggas. He did so in 1829, and through his influence a surveyor was sent to Komaggas and a reserve of nearly 70 000 morgen was set aside there for the Bastards and Hottentots. (Green, 1955:237)

1834: Rich copper mine in the Richtersveld discovered by a Bastard named William Josephs.

1836: Monthly postal route instituted in two stages: Clanwilliam to Vredendal, 20 hours and Vredendal to Kamiesberg, taking 48 hours. Prior to this the mail was dumped weekly at Clanwilliam, from whence it had to be fetched by the field-cornet at Vredendal. He held it until such time as the hinterlanders or their emissaries came to pick it up.
(W.Steenkamp, 1975:114)

1836: Sir James Alexander left Cape Town on 10 September 1836 and travelled via Olifants River mouth, Groen River, Lily Fountain, Komakas to the Orange River mouth, back to Lily Fountain, and then on to the Copper Berg, crossed the Orange River on 24 November at "the Ford of the Karakas" on his way to Walvisch Bay, arriving there on 19 April, 1837. He returned by more or less the same route, reaching Cape Town on 21 September 1837.
(James Alexander, 1967)

Sir James Alexander formed a company in London to promote a copper mining venture. The ore was carried by ox wagon to the Orange River, floated down on barges to Alexander Bay, from where it was shipped to Swansea in Wales for treatment. (Bulpin, 1986:177)

Sir James Edward Alexander, under the auspices of the British Government and the Royal Geographical Society, explored the lands adjoining the southern bank of the Orange River for some 200 miles from the mouth. He was shown many rich deposits of copper by the natives, and so struck was he that a year or two later, in London, he formed a company to exploit this new source of mineral wealth. His scheme included the utilisation of the Orange river during the flood season for the floating down of ore, in flat-bottomed barges, to a wharf near the mouth of the river, and thence by waggon transport to one of the small bays near for shipment overseas; or the alternative of smelting furnaces near the river, fuel being obtainable from the thick, luxuriant belt of timber on either bank. "Definite information as to the operations carried out some seventy-odd years ago are hard to obtain, but some attempt was certainly made to carry out the scheme, ore being actually floated down the river and shipped from Alexander Bay, Peacock Bay, and Homewood Harbour..." "Some years later development work was started in several places by various syndicates, with excellent results, and a certain amount of ore was again shipped from Alexander Bay..." (Fred Cornell, 1920:92,93)

After visiting Lang Cobus Cloete and his European wife Cathrina van Jaarsveld at Springbokfontein James Edward Alexander was shown a mass of copper ore in the Richtersveld by a bastard William Joseph. One of Joseph's sons had discovered it two years previously and had taken some to cast bullets. In 1837 selected samples were assayed at 65 per cent copper by Sir John Herschel in Cape Town. "In 1839 Alexander formed a company in London... and in 1840 mining commenced. The ore was transported by ox wagon to the Gariep (Orange) and floated down on barges to about three miles from the mouth, and then transported again by wagon to the present Alexander Bay area, from where it was shipped to Swansea. (Fred Cornell states that this ore was shipped from Alexander Bay, Peacock Bay and Homewood Harbour.)... The historically important point is however that James Alexander provoked the interest and was the first man to export minable ore from Namaqualand." (Cornelissen, 1965:18)

Note: Smalberger found no evidence whatsoever to support the idea that Alexander formed a company, or worked a mine, or transported ore down the Orange. Williams and Willcox also say he did not - see below.

"Although Alexander seems to have known about the rich copper to be found near Springbokfontein he was more enthusiastic about mining his own discoveries situated further to the north in that bleak, waterless region, the Richtersveld. This was due to the fact that these deposits lay close to the river and he imagined that it would be possible to build rafts from the trees growing on the banks. The ore could then be loaded onto these rafts and simply floated down to the river mouth. From there ships would be able to take the ore overseas to a smelter. In those days there was not one in South Africa. Alexander said that the copper near Springbokfontein would be too costly to work because of the near impossibility of transporting it out. The river scheme on the other hand had extra advantages, the rafts too could be shipped to Cape Town where they could be sold as firewood. His plan did a lot to reawaken interest in the copper deposits of Namaqualand. An attempt was made to form a company but when it was learnt that the company intended

to combine missionary work along with its mining activities enthusiasm waned and the idea was dropped for lack of support." (Dickason, 1978:30)

"Sir James Alexander, who worked copper mines up the river a century ago, built a hut to trade with the Hottentots on top of a "pocket" of diamonds worth millions."
(L.G.Green, 1933:131)

Note: L.G.G. is undoubtedly confusing the Alexander who, with his partner Peacock, ran a trade store near the river mouth, with the Sir James who led a Royal Geographical Society exploring expedition through the area - glldr.

Green tells of Alexander having mined 40 miles upstream from the mouth of the Orange River. "The ruins of Alexander's buildings, the barge slipways and other signs of this enterprise still remain on the south bank of the Orange River near the mouth. For years the position of Alexander's mine remained a mystery, but it was rediscovered in 1928 by Ernest Heyes... A Bushman led him to the spot, under a mountain shaped like an eagle's head. The tracks of Alexander's wagons were still there, and carved on a rock he found the inscription 'J A 1838'. Near the river bank lay an old ship's mast. Fragments of English crockery littered the stone houses where Alexander's hundred Cornish miners lived. The copper was sent down to the river mouth on rafts and in barges, and then carried overland in wagons to be loaded into schooners at Alexander Bay. Alexander was knighted for the discoveries he made along this coast..." (Green, 1967b:118,119)

Notes: (i): As proved by Willcox and Smalberger, Alexander did not mine in the Richtersveld and was back in England in 1838. The ruins and tracks would no doubt have been left there by the South African Mining Company who worked the Kodas mine at a later date: see 1854.

(ii): See also 1928 for Ernest Heyes.

Small vessels such as the Port Elizabeth based schooner Jessie Smith were engaged in the copper trade along the Namaqualand coast and also for ores mined in the Richtersveld where, in 1852, Sir James Alexander attempted mining and actually transported ores down the Orange River to its mouth. The bay was subsequently called Alexander Bay. (Ingpen, 2003:13)

Sir James Alexander commenced mining at Numees and Kodas. Ore was carted by ox wagon to the Orange, then floated down on barges to the store three miles from the mouth. Mules were apparently used to pull the rafts where the current was not strong enough. (Letcher, 1932)

Alexander made an unsuccessful attempt to work the copper deposits at Kodas and Numees, close to the Orange River. (Mostert & Crewe-Brown, 1992:15)

Alexander Bay is founded on the spot where Sir James Alexander first discovered diamonds in 1836. (Namaqualand RSC, [1993]:16)

Note: Not supported by any recorded facts discovered during this research - glldr.

Alexander discovered copper in the Richtersveld, formed a company in London, and mining commenced in 1840. Ore was transported by ox wagon to the Orange, floated down to Alexander Bay, and shipped to Swansea. (O'okiep Copper Company, 1952)

James Alexander het in 1838 op die ryk koper in die Richtersveld sy myn begin ontwikkel en op vlotte het hy sy kopererts op die Oranje laat afdryf tot naby die huidige Alexanderbaai. (Port Nolloth Munisipaliteit, 1991)

Note: This is incorrect according to Willcox and Smalberger. See below.

"The Scottish explorer James (later Sir James) Alexander was the first to investigate Van der Stel's discovery. In 1852 (sic!!) he re-tested the old prospecting shafts, found several other copper outcrops and started mining. Fortune hunters rushed to the area. Many newly formed mining companies collapsed when they confronted the transport difficulties..." (Reader's Digest, 1978:164)

"In 1836 James Alexander re-examined van der Stel's old diggings in the Richtersveld, and formed a London-based company to exploit the riches... Ox-wagons had to haul the heavy ore to the banks of the Orange River, where rafts carried it down to Alexander Bay. There it was transhipped (sic) for processing in Wales." (Reynolds, 1981:314)

Note: David Reynolds was misinformed. Van der Stel did not get as far north as the Richtersveld, nor did Alexander form a London-based company.

Sir James Alexander explored Namaqualand and SWA. (Rosenthal, 1970:537)

Captain, later Sir James E. Alexander was employed by the Royal Geographical Society to lead an expedition to the eastern parts of southern Africa but, on finding that he had been forestalled by Andrew Smith in this intention he decided upon an exploration of the western parts. One Willem Joseph led him to deposits of copper near the Orange River. On assay samples yielded nearly 28 per cent and 65 per cent pure copper. The formation of a company was discussed, but nothing more seems to have been done in the matter. Smalberger's opinion is that the "popular belief" that Alexander actually did commence mining is due to "the vivid picture... drawn by Fred Cornell in his *'The Glamour of Prospecting'*. Despite his own admission that information on operations carried out some 70 odd years before were extremely difficult to find, Cornell went into some detail concerning these mining activities." (Smalberger, 1975:14,19)

"Kodas Mine: between 1836 and 1837, 350 tons of high-grade copper was mined. The old mining buildings are in ruins but the mine shafts can be viewed." (Van der Reis, 2000:83)

Note: popular but incorrect dates!

Captain James Alexander, knighted in 1838, who ended his career with the rank of General, explored in 1836 for the Royal Geographical Society. From Lily Fountain he travelled to the Orange River mouth with two Wesleyan missionaries in their light horse wagon. (They were looking for a site for a new mission station.) They reached the river at Aris, 32 kilometres up from the mouth. Here he relates that he now made the William Joseph copper discovery, 60 miles ESE of Aris. Looking at the dates, Willcox doubts that he had time to visit the spot himself. His map also shows his tracks as being nowhere closer than 45 kilometres to the marked position of the 'Rich Copper Mine'. Willcox shows that on his journey north from Lily Fountain and on his return southwards there was no deviation to the mine, and no time to do this. He concludes that Alexander obtained his samples from William Joseph. "Alexander's Mine", rediscovered in 1928 according to Lawrence Green (1967b:118) had "J A 1838" carved on a rock. However, Willcox says that Alexander was back in England by the end of 1837: he never returned to South Africa as far as Willcox

could discover, and his time in South Africa is fully accounted for. From this evidence it appears pretty definite that Alexander did not do any mining in the Richtersveld. (Willcox, 1986:69-72)

Captain James Alexander was the first white person to cross the Orange River within 400 miles of the mouth. Alexander did not mine in the Richtersveld as a company could not be formed in England to work the deposit which Willem Josephs had shown him. (Williams, 1948:22-34)

Note: All other authorities say that Jacobus Coetsee (Janz) of Piquetberg was the first European to cross the Orange River in Namaqualand, in 1760.

1839: Alexander and Peacock established a great store and cattle kraal at Alexander Bay. (Cowie, 1929)

Homewood Harbour is found at the foot of the hills known as The Twins (marked on today's topographical maps as Boegoeberg-Noord and Boegoeberg-Suid) about 20 kilometres south of Alexander Bay village. The bay is named after Captain William Homewood, who owned various ships trading along the west coast. He lived for some years on the farm De Riet near Hondeklip Bay, and was amongst the first Justices of the Peace appointed in the new magistracy of Namaqualand. (Green, 1967a:54,55)

Willcox shows that Alexander Bay was named after the trader who came later, and not after Sir James. (Willcox, 1986:71)

1839: Dutch Reformed congregation formed in Springbok, previously part of the Clanwilliam congregation. (Dickason, 1978:30)

1840: Revd James Backhouse travelled to the Eastern Province, thence across the Karoo and the Bokkeveld to Lily Fountain, Komaggas, Robben Baai (later Port Nolloth), Steinkoff, across the Orange River to Warm Springs and Nisbeth Bath, recrossing on 19 February to Springbok, Lily Fountain, Clanwilliam and back to Cape Town. In his chronicle he records that "a Loan Place, which is a Place obtained from the Government that has not yet been surveyed, is half an hour's walk in every direction from the house or centre" - see page 585. (Backhouse, 1844)

Reverend James Backhouse, Wesleyan missionary, travelled to the mission at Leliefontein. (Green, 1967a:131))

1840: "In 1840 the first load of copper ore was taken by oxwagon from the Richtersveld to the Groot (Orange) River and transported to the sea by means of rafts." (Joe Jowell, 1962:1)

James Backhouse considered that there was insufficient fuel to enable the rich copper deposits in Namaqualand to be worked. (Smalberger, 1975:14,15)

1840: In 1840 the Rhenish Mission Society established themselves at Steinkopf from where they sent out missionaries into the Richtersveld and to the Komaggas and Concordia reserves. (Dickason, 1978:30)
See also: 1818 and 1842.

1842: Steinkopf was founded by the Rhenish Mission Society, but is now run by the Dutch

Reformed Church. (Bulpin, 1986:179)

Note 1: RSC says 1818.

Note 2: Most authorities say the London Mission Society originally (1818) founded the mission station, and that it was later taken over by the Rhenish Mission Society, and yet later by the DRC - gl dr.

Steinkopf the new name for Kookfontein when taken over from the London Missionary Society in 1842 to become a German Lutheran mission under Dr Steinkopf.

(Rosenthal, 1970:547)

Note: W.Steenkamp et altera say Dr Steinkopf, although titular "head of the mission in South Africa", was not at the mission, but was minister of the Rhenish Mission Society in London. Thus, Rosenthal's "under Dr Steinkopf" should not be taken to mean that Dr Steinkopf was running the mission station in situ.

See also: 1818, 1840.

1843: Establishment of a Central Road Board and of Divisional Road Boards (abolished 1858). Previously, from the 18th century until 1827, the Burgher Senate was responsible for the Cape district, and the Board of Landrost and Heemraden for the country districts.

(Botha, 1962:257-263)

See also: 1855, Divisional Councils; 1858 CRB abolished.

Central Board of Road Commissioners Ordinance. (Lucas, 1913:227)

"The keen activity (in the forties and early fifties of the nineteenth century) in the matter of road construction was due to the institution of the Central Road Board with Mr John Montagu, the Colonial Secretary, as its dominating personality. The Road Board was first founded in 1843, and in ten years was responsible for constructing a magnificent series of roads over the mountain passes, which today are known throughout the length and breadth of South Africa." (Snape, 1923:24)

1843: The Cape of Good Hope West Coast Trading and Mining Company had, as two of its projects, The Orange River Copper Company and the establishment of a port, probably at Rode-Wall. These did not enjoy sufficient support, but led to the formation of The South African Mining Company in 1846. (Smalberger, 1975:16)

Cape of Good Hope West Coast Trading and Mining Company formed - later to become the South African Mining Company. (Suid-Afrika, 1980:5)

1844/1845: "The 24 miles of hardened surface across the Cape Flats was completed in 1845 at a cost of R80 000. Montagu... estimated that the saving in time, wear-and-tear and in trek-oxen for the 50 to 60 thousand wagons that would use the road annually would be R40 000 per annum and that this therefore justified the capital expenditure."

(R.A.F.Smith, 1973)

"One of the earliest difficulties to the development of the hinterland behind the Cape Peninsula was that connected with providing a hard road across the Cape Flats... a good hard road was provided in 1844 at a cost of 40 000 pounds and its sound construction by Colonel Michell, then Colonial Civil Engineer, shows that money well spent initially is

always repaid by the permanence of the work and the considerably lessened charges for its maintenance." (Snape, 1923:24)

1845: "Garies is a species of grass from which the Hottentots made beds; though the name may have been chosen because of the gardens in the river bed; while a third explanation is that the name means "full of milk". (Green, 1955:233)

Garies is the Khoi-Khoi name for a species of grass used for making beds.
(Mostert & Crewe-Brown, 1992:45)

Th'aries is the Hottentot name for a species of grass found locally.
(Namaqualand RSC, {1993}:20; 1995b:9)

"Rugged granite mountains frame the odd, lonely little village of Garies, with its one straggling street lined with trading stations, two hotels and a few houses. The name derives from the Hottentot word tharies, the name of a grass which grows in the valley."
(Reader's Digest, 1978:166)

Garies founded in 1845. (L.M.Steenkamp, 1952:7)

"Garies het sy naam ontvang van John X.Merriman wat as Eerste Minister op 'n reis by die dorpie aangedoen het en op hierdie naam besluit het - soos hy die Hottentotwoord vir 'Kweekrivier' vertaal het." (L.M.Steenkamp, 1952:2)

See also: 1911 (Village Management Board); 1961 (Municipality).

1846: A group of Cape Town merchants sent Thomas Fannin to Namaqualand as Mine Manager. He travelled by ox wagon and took with him two Welsh miners and a cartload of gunpowder for blasting. The miners soon decamped leaving Fannin alone in the wilderness with his two sons to help him carry on mining. His first testing of some ore proved to be between fifty and seventy percent pure copper. In the summer of 1846, a time of unbearable heat in the Richtersveld, Fannin made his way down the river in order to inspect the route it was envisaged the copper ore would take. Having done so, he felt that he could never again endure such intense heat, thirst and hunger, and this caused Fannin to send optimistic reports to shareholders' meetings in Cape Town. (I do not quite follow the logic here!! - gladr) J.B.Harrison publicly warned against investing in the area, basing his warnings on the report of the Cornish mining agent Captain John Davies, who did not think that ten tons of copper could be obtained in the whole area. Fannin grew increasingly disenchanted with the prospect of ever getting the ore out, sold his share of the venture and left for Natal. (Dickason, 1978:31)

Thomas Fannin, who had been appointed Manager of The South African Mining Company shortly after his arrival in the "Conway Castle" in 1845, took two Welsh miners and a cart load of gunpowder with him in 1846 when he went overland to open up the copper deposits. He took his family with him but apparently decided to leave them, except for his two eldest sons, at the Khamiesberg Mission Station. At the mine some work was done and rich ore opened up, but the two miners soon grew discontented and when a vessel from the Cape touched at the mouth of the Orange River they returned by her. Thomas and his two sons carried on the work, despite having trouble with the coloured labourers who found the work unpleasantly hard, and loaded up a quantity of ore which was taken by ox wagon and

boat to Cape Town. Thomas Fannin sold out his interest in the company, and left Cape Town in September 1847 for Natal, where he bought a farm. (Fannin, 1928)

S.A.Mining Company was formed and the manager, Thomas Fannin, was sent to commence activities in the Richtersveld ... he loaded a quantity of ore on the ox-wagon and returned to Cape Town. (O'okiep Copper Company, 1952)

The South African Mining Company formed: the first undertaking to commence mining in Namaqualand. Captain John Davies, a mining agent from Cornwall, was landed at Peacock's Bay early in 1846, with a wagon and all implements necessary for mineralogical exploration. He covered an area stretching about 20 to 25 miles south of the Orange River mouth and some 60 miles eastward, only finding one small copper deposit. (Smalberger, 1975:16,20,note 4 on p 30)

20 January: Thomas Fannin returned to Cape Town from his two months trip to survey the proposed mine for the embryo South African Mining Company. His report was possibly over-optimistic. 6 June 1846: Fannin, accompanied by an engineer, a miner and the necessary staff, left Cape Town to commence trial mining. Lack of willing labour and (as we can expect!) transport difficulties dogged his efforts. The company appears to have simply faded out of existence by 1848. However, it recommenced operations in 1854. (Smalberger, 1975:24-29)

James Fannin was lucky enough to meet Abraham Joseph, the son of William, who took him to the source of the rich copper samples. His report led to the floating of the South African Mining Company. Mining operations started in September 1845. Transport was intended to be by wagon to the river mouth or on the river itself. Neither proved practicable and the larger samples had to be sent overland to Cape Town. Confidence waned and the company became dormant. (Willcox, 1986:70)

1846: Mr Grace opened the first shop at Hondeklip Bay in October. (P.Fletcher, 1866b)

1847: 17 December: Namaqualand annexed by Sir Harry Smith. The Kousie or Koussie River, also known as the Sant or Sand, and now as the Buffels or Buffalo, which enters the sea approximately midway between Hondeklip Bay and Port Nolloth, had been the official northern boundary of the Cape Colony since 1805. The Orange River now marked this northern boundary. (Smalberger, 1975:24,26,53,note 4 on p 63; Dickason, 1978:27)
See also: 1798, 1805, 1890.

1849: The Cape Colony exported its first copper ore. For a somewhat poor colony this was indeed an event and it speaks well for the press of the day that the event was widely made known. (Dickason, 1978:31)

Note: it is generally accepted that the first export of eleven tons of copper ore from Namaqualand was from Hondeklip Bay in SS "Bosphorus" on 31 August 1852. Unfortunately Dickason does not give his reference here.

1850: "In the early 1850's... the price of copper rose dramatically and the Springbok area became a Mecca for fortune-seekers." (Burman, 1984:41)

On 16 March Phillips & King acquired about eleven morgen of Springbok Fonteyn, which formed part of the farm Melkboschkuil, alias Koperberg, from the Cloete family for 50

pounds - but the Cloetes were then not yet the owners of the land! (Transfer came through shortly afterwards.) (Cornelissen, 1965:23)

Albert von Schlich, a German chemist and mineralogist, discovered a rich outcrop of copper ore at Springbokfontein. He failed to get support in Cape Town and left the country for eighteen months. His friend H.D.Jencken and John Wild, backed by Messrs Phillips and King, confirmed the find and started mining quietly, as no one knew how the Government would react. Von Schlich returned, and tried to buy the farm from the owner, a man of mixed European and Khoikhoi descent named Cloete. Wild and Jencken, returning late that night, concluded a deal with Cloete for the mineral rights and ten morgen of land for fifty pounds, while Von Schlich slept. (Dickason, 1978:31,32)

Springbokfontein was one of the first quitrent farms in the area to be allotted to its occupiers by the Cape Government. The Cape Town firm of Phillips & King obtained the mineral rights to the farm on 16 March 1850 and the mine was named "King's Mine". (Phyllis Jowell, 1994:19)

The first copper mine was brought into operation in 1852 by Philips & King and was purchased for 750 pounds from the Cloete family (the farm Melkboschkuil). (Namaqualand RSC, 1993:8)

21 January 1850: title to the farm Springbokfontein granted in equal portions to the seven Cloete brothers. Quitrent on the 21 410 morgen was 4 pounds per year. No mineral rights were reserved by the Government.

16 March: H.D.Jencken and John Wild, acting on behalf of Phillips & King, obtained the mineral rights to the farm Springbokfontein, alias Melkboschuil, alias Koperberg, plus ownership of about 10 morgen of ground, for the sum of 50 pounds. Subsequently the remainder of the farm was acquired by Phillips & King for 2 344 pounds 10 shillings. Von Schlicht (who had told Jencken of the deposit on Springbokfontein) with J.W.Stoll and representatives of the firms of Thomas, Watson & Co and Prince, Collison & Co, discovered other rich deposits on neighbouring Crown land and obtained leases to work them. In 1853 they became the Namaqua Mining Company. (Smalberger, 1975:33-35,49)

Note: Smalberger on page 96 says that The Namaqua Mining Company was formed in 1853 to work on Kookfontein (Steinkopf).

Rich copper deposits discovered at Springbokfontein. (Suid-Afrika, 1980:4)

1852: The first eleven tons of copper shipped from Hondeklip Bay. (Burman, 1984:41)

Copper ore was shipped from Hondeklip Bay: on

| | |
|--------------------|------------------------|
| 31 August 1852 | 11 tons in Bosphorus |
| 9 October | 9 tons in Propontis |
| 5 November | 11 tons in Lavinia |
| 30 December | 9 tons in Fayaway |
| Total for 1852: | 40 tons |
| on 21 January 1853 | 15 tons in Prins Oscar |
| 5 March | 15 tons in William Ash |
| 15 April | 20 tons in Trafalgar |
| 23 September | 10 tons in Malabar |
| 24 November | 25 tons in Bromleys |

| | |
|-----------------|--------------------------------|
| 7 December | 65 tons in Roxburgh Castle |
| 16 December | 11 tons in Investigator |
| 21 December | 32 tons in Jenny Lind |
| Total for 1853: | 193 tons |
| 1854: | 1085 tons (by Phillips & King) |
| 1855: | 1864 tons (by Phillips & King) |
| 1856: | 2607 tons (by Phillips & King) |

(Cornelissen, 1965:)

Nota: Let daarop dat daar geen koper tussen 15 April en 23 September 1853 verskeep is nie alhoewel dit in die ryseisoen was. Die rede is waarskynlik die baie onstuimige see wat gedurende hierdie maande langs die weskus gevind word. (G.J.Kotze, 1996:1)

Phillips & King sent eleven tons of copper ore to Wales. (Cowie, 1929)

Copper appeared for the first time in the List of Exports. (Lucas, 1913:245)

Note: see Dickason under 1849.

31 August 1852: First eleven tons of copper ore shipped by Phillips & King from their Springbok mine. Shipped from Hondeklip Bay in the steamer "Bosphorous". Land transport costs to Hondeklip Bay varied between 7 pounds and 10 pounds per ton, plus 3 pounds (per ton) for the return journey. (Moffatt, 1972)

Note: see 1855-Smalberger for later prices.

31 August 1852: The first eleven tons of ore were exported by Phillips & King aboard the steamer "Bosphorous". The mining companies engaged in fierce competition for the limited amount of transport available, sending costs up to ridiculous levels. (Smalberger, 1975:65)

1852: A number of copper companies began operations in Namaqualand. (Rosenthal, 1970:127)

The first producing copper mine in Namaqualand opened at Springbokfontein (Suid-Afrika, 1980:5) by Phillips and King of Cape Town (Letcher, 1932; The Mining & Industrial Magazine, 1927) on portion of the farm Melkboschkuil, acquired from the Cloete brothers. (W.Steenkamp, 1975:40). This first mine is now known as the Blue Mine. (Mostert & Crewe-Brown, 1992:36,38; W.Steenkamp, 1975:40)

1852: Hondeklip Bay: the famous "dog stone" stands on a rise above the fishing village, a large boulder which resembled a sitting dog until a lightning flash struck off the head many years ago. In the early days of the settlement wild dogs prowled around the "dog stone" and destroyed sheep. Hondeklip Bay certainly has an appropriate name. (Green, 1955:235,236)

Hondeklip Bay was indicated as Olhambro dos Piedras on the earliest maps. The name Hondeklip Bay arises from the huge rock next to the police station. Some claim that the rock resembles a dog and that the "head" was struck off long ago by lightning. There is, in all probability, truth in the legend that a large pack of marauding dogs was destroyed in the vicinity of the rock, and that this event prompted hunters to give the bay its present name. (Namaqualand RSC, {1993}:19)

Note: According to the very helpful Portugese Consulate-General in Cape Town the ought-to-be spelling of Olhambro dos Piedras is Alhambra dos Piedras. The translation then is "Bay of Rocks". Sounds right to me!!

Hondeklip Bay prior to the commencement of copper ore shipping had one trading station owned by a Mr Grace. Within three years the number of trading establishments had grown to four. (Smalberger, 1975:78,79)

Note: Patrick Fletcher (1866b) says Mr Grace opened his shop in October 1846.

See also: J.B.Currey, 1986: chapter 4, for a description of Hondeklip Bay in 1855.

1852: The farm Lelykepad, alias Nababeep, purchased jointly by Phillips & King and John Wild for 1000 pounds. (Smalberger, 1975:94)

1852: O'okiep is die Hottentotwoord vir "die plek waar brak water is". (Anon, {1990})

O'okiep, depending on pronunciation, may mean either the place of the big tree, or the little fountain. (*S.A.Mining and Engineering Journal*, 1963; Smalberger, 1975:104)

O'okiep in the Nama language, depending on pronunciation, means the water place near the trees. (Cornelissen, 1965:99; Dickason, 1978:37)

O'Kiep means "a brackish place" to the Khoi-Khoi (Hottentots). (Mostert & Crewe-Brown, 1992:39; Potgieter, Du Plessis & Hiemstra, 1970 to 1976:312)

Okiep gained its name from the Nama or Hottentot word U-gieb, meaning "the great brackish spring". (Namaqualand RSC, 1995:10)

Okiep: the spring known to the Nama people as U-gieb, or "the great brackish fountain". (Reader's Digest, 1978:167)

O'okiep founded. (Rosenthal, 1970:406)

Okiep, pronounced "U-Gieb", means the great brackish fountain, which leads one to assume that the site had its own limited water supply. It is situated 29 degrees 36 minutes South and 17 degrees 52 minutes east, at 930 metres above sea level, and has an average annual rainfall of about 162 millimetres. (Von Zeil, 1989a:41,43)

1852: Springbokfontein consisted of one mud hut and a few mat huts when mining started. (Smalberger, 1975:70)

1853-1863: Baillie's Pass, on the road from Kamieskroon northeast towards Gamoep, was built by the Revd John A.Baillie, who served at Leliefontein 1853-1856 and 1858-1863, to facilitate contact with members of his congregation in Rooifontein. (Anon, [1990])

Revd Bailie, who supervised the 400 mile northern postal route from Clanwilliam to Kamiesberg for payment of 34 pounds per annum, built the road to link Leliefontein to his satellite mission at Rooifontein. Look down as you near the top of the present workmanlike pass and you will see the snailtrack which Bailie built. Boulders along this "remskoen se pad" are still scarred by his wagon wheels. (W.Steenkamp, 1975:114,115)

Note: the pass is marked as Bailey's Pass on the present day topographic maps; e.g. 2916 1:500 000.

1853: 13 September 1853: the government promulgated the terms under which they would be disposed to grant leases for mining purposes in lands not auriferous. Albert van Schlich was granted leases which became the famous mines the Concordia and later the Wheal Julia. (Dickason, 1978:32)

Start of the copper boom years in Namaqualand. During the following two years 35 companies were formed and by 1854 over 100 land licences had been granted by the Surveyor General, and applications exceeded 200. (Moffatt, 1972)

13 September: proclamation relative to the issue of leases for the mining of non-auriferous metals. This was the commencement of the copper boom which lasted until early in 1855. 9 November: The Namaqua Mining Company entered into an agreement with the Office Bearers and Members of the Institution at Steinkopf granting them exclusive mineral rights to the mission lands for ten years. 100 pounds per annum. Lease renewable after ten years. An agreement about the pasturing of cattle was entered into on 30 January 1854. (Smalberger, 1975:35,46,57,58, note 20 on p 63, note 27 on p 64)

Mining of copper begun at Spektakel. (Suid-Afrika, 1980:5)
Note: Smalberger says 1854.

1853: Patrick Fletcher, qualified civil engineer, geologist and land surveyor, went to Namaqualand for a Cape Town syndicate in 1853. He did most of the original survey work in Little Namaqualand and, of course, built the Messelpad - see 1868 et seq. Born on 9 April 1827 on the Island of Jura in Scotland, he left Namaqualand about 1875 and died in 1897 in Rhodesia. (Hugh Fletcher, 1994)

John Montagu retired from his post as Colonial Secretary and dominating personality on the Central Roads Board. Internal dissensions then caused the Board to become moribund. (Snape, 1923:25)

1854: Andrew Geddes Bain in his report to the Government said: "Water is almost every where to be obtained, of good quality, by digging to a small depth... Let the farms be cultivated and the mines opened and it will be found that Namaqualand contains more real wealth than the whole Colony put together..." But: "Without some grand improvements in the roads, the Mining Companies never can advance. Hundreds of tons of ore are now lying at the different mines, which the proprietors cannot get conveyed to the coast, at any price." He recommended "a tramway from Hondeklip Bay to Kamaggas, which might, in time, be extended to Spektakel, from where a good road can be made up the mountain to Springbok or along the Schaap River towards Concordia. When these improvements are effected, the transport would not amount to one third of its present price." (Bain, 1854; Cape of Good Hope, 1854)

Andrew Geddes Bain reported in June 1854 that "without some grand improvement in the roads the mining companies can never advance. Hundreds of tons of ore are at the mines which the proprietors cannot get conveyed to the coast at any price..." He recommended a tramway for traction by horses from the coast to the mountains. Charles Bell, the Surveyor-General, also made an inspection and reported that he thought Hondeklip Bay

too far south for a direct connection to the copper mines, and did not like Bain's suggestion of animal drawn trams. He recommended a railway from Port Nolloth to Oograbies with branches from that point: the central extension would have led east to Klipveiberg - almost identical to the route finally adopted. (Burman, 1984:42)

First geological report dealing with the copper mines written by Andrew Geddes Bain and presented to both Houses of Parliament. (Cornelissen, 1965:66)

Thomas Bain (note: this is incorrect. It was his father, Andrew Geddes Bain - glldr) put forward a proposal for a 60 kilometre tramway from Hondeklip Bay along the Swart Lintjes River to Kommagas. He was supported by government surveyor Charles Bell and government geologist Andrew Wiley. After Commander Nolloth favoured Robbe Bay over Hondeklip Bay as a harbour Bell changed his recommendation to a railway from Port Nolloth. (Hopkins, 1980:2)

Mr Bain reported on 19 June 1854 that "without some grand improvements in the roads the mining companies can never advance... A tramway for horse traction could be constructed (from Hondeklip Bay) to Komaggas and might be extended to Spektakel"
A Government Select Committee recommended that assistance be given to the building of a railway in Namaqualand. Mr Charles Bell, Surveyor General, subsequently put forward several suggested routes. (Moffatt, 1972)

"The high cost of transport was stated almost to equal that of the cost of mining. Government Surveyor Charles Bell in 1854 had high hopes that the Orange River would one day prove a major means for ore transport from the immediate vicinity... "In the same year Thomas Bain, the road engineer, (note: DC is in error here: it was Thomas' father Andrew Geddes - glldr) suggested a 60 kilometre railway from Hondeklip Bay across the sandy plain along the Swart Lintjes River to Kommagas. From here road transport over the escarpment was recommended. This project was also favoured by the Government Geologist Andrew Wiley and Charles Bell." (D.C.Robertson, 1978:327)

1854: Commander M.S.Nolloth in HMS Frolic surveyed the Namaqualand coast. The twelve editions of Part II of the Africa Pilots from 1868 until the S.A.Navy published their first edition in 1975 quoted his descriptions and sailing directions verbatim. The text provides most detailed descriptions of the coastline, bays and landing places as the early Namaqualanders found them. This was a most comprehensive work of inestimable assistance to all who sailed and do sail this coast.

See also: 1677, 1979. See 1669 for previous three month survey in "Grundel". Gill (1958: 25, 26), while acknowledging that "records vary", says that locally it is accepted that Commander Nolloth was port captain for the copper company, first at Hondeklip Bay, and when the emphasis shifted, at Port Nolloth. Arne Schaefer however said (2008: 30) that Admiralty records show that Nolloth retired from the Royal Navy with the rank of Vice (Rear?) Admiral, and died in England in 1882. Which, I must say, sounds much more likely!

1854: Over 1000 tons of copper passing through Hondeklip Bay and Port Nolloth annually. (Burman, 1984:41)

Depending on pasturage for oxen, the Concordia ore was transported either to Robbe Bay (Port Nolloth) or to Hondeklip Bay. (Cornelissen, 1965:38)

Export of copper passed the 1000 ton mark. (Moffatt, 1972)

Copper ore was fetching between 30 and 40 pounds per ton in England; the cost to get it there was only about 13 pounds per ton. (Smalberger, 1965:65)

1854: Patrick Fletcher "...with a man and a boy took down the Orange River the first copper load in a boat when they were nearly capsized by a hippopotimus (sic) they surprised ..." He was "...now first to lay down the proper course of the Orange River for about 120 miles from its mouth and which forms the colonial boundary. His beacons are found on the most inaccessible and conspicuous mountain tops extending for 10, 15 and 20 (miles) to the Southeast along the course of the River and built by his own hand acknowledged and publicly thanked by the Surveyor General of the Colony." "...he receives the name Berghlooper (Mountain climber) from the natives." (Patrick Fletcher, 1855)
See also: 1875.

The South African Mining Company brought 13 bags of copper ore, which had been mined in the northern portion of the Richtersveld, down the Orange River in their boat "Enterprise". A petition was received by the Government to construct a tramway from Homewood Harbour (near Alexander Bay) across the desert to the Kodas mining area in the Richtersveld. (Moffatt, 1972)

Kodas Mine - the only mine that was really successful in the Richtersveld copper belt - is about 10 kilometres from Sendelingsdrift on the Alexander Bay road. The mine was opened in 1854 and operated on and off until the 1920's. The 40 metre deep shaft was once the deepest in Namaqualand. Ore was transported by ox wagon 12 kilometres to a rock jetty, and during the seasonal floods it was sent downstream by barge, off-loaded some 3 kilometres from the river mouth, and transported overland to Alexander Bay for export by sailing ship. (Namaqualand RSC, {1993}:16)

Note: I like the "seasonal floods" bit. This makes sense: I have never quite believed that the miners were able to transport ore as a regular thing by water down the Orange. - gldr

Mining started at Kodas, about 16 kilometres south of Sendelingsdrift, by the South African Mining Company. Sir James Alexander's idea of using the river for transport was tried, the ore being taken by barge or lighter to near the mouth, and transported to Alexander Bay. It was found that Alexander's idea that a schooner could cross the bar and enter the river was not feasible. (Willcox, 1986:71)

See also: 1855 (Green, Willcox), 1875 (Noble), 1882 (Green), 1910 (Cornell), 1950 (Graham Ross), 1979 (S.A.Navy)

1854: Namaqualand Railroad and Tramway Company formed with a capital of 400 000 pounds. The purpose was to construct a railway about 100 kilometres long from the copper mines to the sea. The project never got off the ground owing to a lack of capital.
(Hopkins, 1980)

Note: Moffatt says 200 000 pounds - see below.

The "Namaqualand Railroad and Tramway Company" formed with a capital of 200 000 pounds. Company subsequently collapsed due to lack of funds. (Moffatt, 1972)

Note: Hopkins says 400 000 pounds - see above.

September 1854: Prospectus issued for the formation of the Namaqualand Railroad or Tramway Company. Nothing came of this early effort. (M.A.Robinson, 1980)

September: A prospectus relative to the formation of a Namaqualand Railway or Tramway was issued, but did not receive sufficient support and so nothing came of it. (Smalberger, 1975:65, note 3 on p 113)

The Namaqua Mining Company, operating in Concordia, proposed that 37 500 pounds of a total to be raised of 100 000 pounds was "to be used exclusively to improve the means of transport, either by taking shares in the proposed Tramway Company, or by doing whatever seemed most beneficial to the interests of the company." Also: If reliance had to be placed on ox-wagon transport, it was considered by the proprietors that "... the copper mines would... become of little or no value." (Smalberger, 1975:42,44)

1854: Lord Cathcart gave large tracts of crown land to the coloured community. For example, at Leliefontein, Steinkopf and other places. (Anon, {1990})

Note: this would have been Sir George Cathcart, the son of the first Earl of Cathcart, who (according to Rosenthal (1970:102) was Commander-in-Chief in South Africa and Cape Governor from 1852. Wilmot (1883:98) gives Cathcart's governorship as extending from 31 March 1852 to 5 December 1854.

Leliefontein mission land given to the people by Lord Cathcart.

(Namaqualand RSC, {1993}:19)

See also: 1816.

1854: Surveyor Von Ludwig, who had been sent to investigate the harbour area in 1851, dated his survey map 1854. No one was living at Port Nolloth at this time. (Port Nolloth Munisipaliteit, 1991)

1854: Postal service frequency increased to fortnightly. (W.Steenkamp, 1975:116)

1854/1855: The copper mining mania; South Africa's first speculative boom in stocks and shares. Many people were firmly convinced that Namaqualand was just one great mineral bed. Copper was just the prelude to gold and it lay everywhere on the surface just waiting to be picked up. One must say that to a certain extent this was quite true, but it needed money, capital and mining expertise to make it a reality. One so-called prospector came across the well known dog-stone, a large boulder that resembled a dog in shape and after which the little harbour of Hondeklip Bay takes its name. Thinking that he had come upon a rich strike of copper he chopped off the ear of the dog-stone and forwarded it to Cape Town, resulting in the forming of the "Dog's Ear Company". What had happened was that a passing traveller had some years previously painted the dog-stone a bright red for idle amusement. The weather had worn the paint off, except in crevices where it was still visible. It was these traces of red paint which the "prospector" had taken to be signs of the presence of copper. (Dickason, 1978:32,33)

"The mines yet discovered are from 30 to 60 miles from these ports and tramways and River portage are both practicable."... The Richtersveld copper veins averaged from 35 to 75 percent... "expect to find nothing but rock and metal in this wild land, water and food

can be had, the latter sparsely except along the banks of the River but vegetation and inhabitants are few and utterly useless. All supplies must be imported even forage for draught and other cattle. These however can always be furnished in abundance in the Southern and more fertile districts of the Colony and where every necessary (sic) except Capital, labour and energy are to be found. "At this time the Colonial Govt. is leasing their mineral lands for terms of 15 years at the rate of one pound Str. for every 2 acres applied for." (Patrick Fletcher, 1854)

Dr Robert Moffat in November 1854 entered into an engagement with "the Directors of a copper mining company" to proceed to Little Namaqualand as their managing agent and surveyor for a period of two years. He left Colesberg on 6 December 1854 and proceeded through Gamiep to Springbok Fontein, arriving there on 17 February 1855. From there he travelled widely through Namaqualand, visiting Pella (through which his missionary father had passed 37 years previously), passing Black Mountain on his way to Henkries "far famed at that time for prospective copper mines", to Steinkopf, Komaggas, Hondeklip Bay, Steinkopf again, Gudous (Goodhouse), and back to Steinkopf on 4 July.

(Robert Moffat, 1854)

(His second paper tells of his further journeys eastward along the Orange River - glldr.)

Theal said many Copper Companies had no intention of sinking a shaft, for "it was generally believed that there was sufficient ore on the surface of the ground to occupy the entire labouring power of the Colony for many years". (O'okiep Copper Company, 1952)

The height of the copper share boom/mania. (Rosenthal, 1953:20-28)

The South African Mining Company, dormant since 1848, recommenced operations. Andrew Geddes Bain reported favourably on the copper mines in, and the general prospects of the area between the Oliphant's and Orange Rivers. The copper boom was at its height in late 1854. Phillips & King commenced work at Spectakel, having obtained a lease in 1853. (Smalberger, 1975:32,35,36,39,91)

1855: John Owen Smith, owner of the Jessie Smith mine at Kudas in the Richtersveld, had a small but seaworthy steamer built, to proceed to "the Orange River from England under her own power, and slip into the river during the flood season when the mouth was open, steam up to a point on the south bank near the Kudas mine, take on her cargo of copper ore and deliver it in Table Bay." This was reported in the Eastern Province Herald in 1854 (no closer date given by Green). "Only after it had been launched (in U.K.) did he learn that nothing larger than a rowing boat could venture across the bar into the Orange River." (This scheme inspired Jules Verne to write his book 'Meridiana'.) (Green, 1969:54-56)

In 1855 a small steamship was in fact built in England to navigate the lower reaches of the river. Only after its completion had been advertised in the Cape Mercantile Gazette was it realised that it could not get through the bar! (Willcox, 1986:71)

See also: 1854 (Willcox), 1875 (Noble), 1882 (Green), 1910 (Cornell), 1950 (Graham Ross), 1979 (S.A.Navy)

1855: Dr Wylie, geologist, reported to the Government that the costs of copper mining and transport are prohibitive. (Cowie, 1929)

Petitioners for the construction of a railway claimed that the total cost of carriage alone per ton of ore from the mines to the smelting works in Swansea was about 16 pounds. Charges from the mines to the coast were 7 pounds 10 shillings and 3 pounds for back carriage, with or without goods; freight from there to Cape Town was 1 pound 10 shillings; Cape Town to London 2 to 3 pounds; London to Swansea 10 to 15 shillings per ton. The cost of carriage to the coast was in fact almost equal to the overall costs of mining.

Note: the Civil Commissioner as reported by Moffatt said from the mines to their final destination, not only to the coast; Dickason agrees with this - see annotations under 1856.

The main problem was of course the Sandveld: the average cost per ton mile through this sandy belt was three to four times as much as that on the rest of the road.

(Smalberger, 1975:68)

Copper companies petitioned the Cape Government for financial help in improving the roads or in building some sort of railway or tramway to transport their products.

(W.Steenkamp, 1975:42)

1855: Creation of Divisional Councils to control Divisional Roads - maintenance of Main Roads also from 1864. (Botha, 1962:257-263)

"Poor communications hampered developments at the Cape for much of the nineteenth century. In the interior main roads and passes such as the Bain's Kloof and Michell's Pass were only properly cared for after the institution of the Divisional Councils in 1855.

Weekly postal and passenger services were operating by the forties, but the ox-wagon was for a long time to remain the most important trading vehicle in the interior".

(Muller, 1981:204)

In 1855 there were three classes of road in the Cape Colony: main roads, proclaimed and constructed by the Government, but kept in repair by the Divisional Councils; divisional roads, proclaimed, constructed and kept in repair by the DCs; and other public roads, which were sometimes repaired by the DCs, but they were not legally responsible for them.

Note: probably similar to the situation in my time, when DCs "shall" construct and repair divisional roads, but "may" do such work on public/minor roads. In other words, they had a responsibility for divisional roads, but no legal responsibility for minor roads, although the ordinance gave them the right to work on them "with such funds as may be available" - or words to that effect - glldr

Since the Government did not proclaim any main roads and Namaqualand only got a Divisional Council in 1861, roads in Namaqualand fell into the "other public roads" category.

Note: this statement seems optimistic to me. It appears rather as if no public authority had any responsibility at all, even an optional responsibility, for our roads - glldr)

Phillips & King, in their private capacity and at their own expense, employed labourers to keep the roads in some sort of repair.

(Smalberger, 1975:67)

Divisional Councils first formed in 1855. (Snape, 1923:25)

1855: Revd Richard Ridgill led a two wagon trek from Somerset West to Warmbad, from

5 October to 20 November 1855. He found that Revd William Moister "of whom we had taken leave in Cape Town a few weeks before, was awaiting our arrival at Leliefontein... Going by sea to Hondeklip Bay, and thence on horseback, he had accomplished the distance in as many days as we had taken weeks." He experienced difficulties in crossing a flooded Orange River, caulking the Warmbad boat with a mixture of chewed sheep suet and cow dung. "...in ferrying over the upper part of each wagon, which, as the tent could not be detached, was heavy and cumbrous, and had to be nicely balanced across the centre of our tiny boat (eleven feet). Two men swam on either side to aid in preserving the equilibrium, while the two rowers, putting forth their utmost strength, could only propel the boat in a very oblique direction. The slightest puff of wind would have upset the whole concern." (A.M.Lewin Robinson, 1978:20-37)
See also: 1775-1779.

1855: John Blades Currey, manager of The Namaqua Copper Mining Company, arranged with the cantankerous Mr Agenbag for grazing rights on the farm Kookfontein, Phillips & King having bought up all the other farms along the Hondeklip Bay road for grazing for his company's oxen only. (Currey, 1986)

By 1855 Phillips & King had systematically bought up almost all the farms on the route to Hondeklip Bay, in an attempt to "starve out" their only serious rival, The Namaqua Mining Company. John Blades Currey, appointed as manager of NMC in 1855 specifically to try and organise the transport of their ore to the coast, obtained outspan rights on Jan Agenbag's farm Kookfontein to counter this manoeuvre. (Smalberger, 1975:68,69)

1855: Over 35 mining companies had been formed and 100 mining licences issued. (Burman, 1984:41)

Mining activities started at Nababeep. (Cornelissen, 1965:96)

The end of the copper boom was early in 1855. (Smalberger, 1975:46)

1855: Hondeklip Bay jetty was first built by Messrs Phillips and King in 1855. It was 400 feet long, 20 feet wide, with seven feet of water at the end at LWOST. Because of silting, it had to be extended in 1861. (R.T.Hall, 1866:21,22)

Law and order in Hondeklip Bay at this time was maintained by a Mr Pillans, Justice of the Peace and Collector of Customs. (Smalberger, 1975:79, note 4 on p 116)

Elias and Aaron de Pass opened a trading store in Hondeklip Bay. (W.Steenkamp, 1975:45)

1855: Port Nolloth established on a roadstead previously known as Robbe Bay. Named after Commander M.S.Nolloth, who surveyed the coast in HMS "Frolic" in 1854. (Bulpin, 1986:180; Mostert & Crewe-Brown, 1992:40; Rosenthal, 1970:436; Smalberger, 1975:87, note 1 on p 117; W.Steenkamp, 1975:41)

In March 1855 "Sir George Grey, Governor of the Cape Colony at that time, honoured the conscientious commander by bestowing the name of 'Port Nolloth' on... Robbe Baai."
"...the records vary but it seems that he became Port Captain of Hondeklip Bay for the old

Cape Copper Company... (later) it transferred to Port Nolloth where Commander Nolloth was re-installed as port captain.) (Gill, 1958:25,26)

Port Nolloth, previously Robbe Bay, was known to the Hottentots as Aukwotawa, the place where the water took away the old man.

(Cornelissen, 1965:102) & (South African Tourism Board, [1990])

"Captain Nolloth left the Navy and became the first harbourmaster (at Port Nolloth) in the employ of the copper company". (Green, 1967a:56)

Port Nolloth known originally as Aukwatowa (Aukwatwas), "waar die water die ou man weggevat het". This altered to Robbebaai about 1840. In March 1855 Sir Harry Smith re-named the town Port Nolloth, in honour of Captain Nolloth. In 1779 Robert Gordon had named the present town area Syferfontein, and McDougall's Bay was known as Gawaap. McDougall's Bay was surveyed by Surveyor Von Ludwig in 1855. (Port Nolloth Munisipaliteit, 1991)

"In 1855 Commander Nolloth, R.N., was commissioned to examine possible harbours on the west coast. He recommended Port Nolloth as the most suitable though not nearest the central copper mining area. Charles Bell then submitted a further (to his 1854) report favouring Port Nolloth as the sea terminal, and located a railway line from the coast to O'okiep with branches south towards Spektakel and north towards the Richtersveld. His central route became the final location of the railway some fifteen years later." (D.C.Robertson, 1978:327)

Previously the Namaqua received an income from the sale of seal skins, and seal meat supported about 300 persons. Unlike Hondeklip Bay Port Nolloth had an inner anchorage sheltered in all weathers. (Smalberger, 1975:87)

See also: Reynolds, 1981:313-319 for a review of the maritime history of Port Nolloth.

1855: Springbokfontein chosen as the seat of magistracy: Josiah Rivers appointed Resident Magistrate and Civil Commissioner for Namaqualand. (Smalberger, 1975:71,79)

Note: Mostert & Crewe-Brown say 1856; Springbok Municipality says 1856 and 1860; Van Heerde says 1856 and 1860. But: Jos Rivers is recorded as stating to Select Commission 8 of 1865 that he had been Civil Commissioner of Namaqualand from 1855 to 1858, therefore 1855 can be accepted as correct - gldr.

Transportation once again was the deciding factor here. It was only the offer by Phillips & King to provide all supplies which made the stationing of a magistrate in Springbok feasible. (As it was a private township they also provided accommodation.) (Smalberger, 1975:71)

1856: Joseph Rivers, Civil Commissioner, in a report to the Government dated 8 April 1856 at Springbokfontein recommended assistance, submitting "...as the bad state of the roads leading from this neighbourhood to Port Nolloth and Hondeklip Bay must seriously impede the carriage of copper during the next riding season... A moderate grant will be of great benefit to the district..." "In a country where there are no tradesmen, the breakage of a wagon becomes a most serious matter, particularly with the natives, who are the great carriers. They can only use their oxen during the grass season, and any detention during

that time cannot be made up during the remainder of the year. An accident to a wagon frequently debars a man from all occupation throughout the season."
(Cape of Good Hope, 1856a)

"Hauling the copper down to the coast by ox wagon was proving too slow and too expensive. The normal load for a wagon was 3 000 pounds, but due to the hazards of the journey something like 2 000 pounds would arrive at Hondeklip Bay - the wagoners were of course also astute, even if something was lost by tilting on the way. Transport costs were enormous, more than all the other costs of mining combined, including shipment to Britain. Simon van der Stel had been the first to realise that transport was the key to the problem, not so much the distance from world markets. He was not the last. The historian Theal comments "the frightful ravines, the wastes of sand, the harbourless coast... all were physical difficulties too great to overcome" - for meagre capital resources. "Many and various were the suggestions for possible ways of transporting the ore. The use of camels and even giraffes as pack animals was seriously considered. One delightful missionary, James Backhouse, thought that the only solution would be to persuade, by friendly means one hopes, the local Khoikhoi to carry the stuff down to the coast in sacks. It might have been done in China, but for the record the Cape entrepreneurs, to their everlasting credit, recoiled from the idea. In 1854 the Namaqualand Railroad and Tramway Company was formed with a capital of 200 000 pounds. It subsequently collapsed in the face of the enormity of its task." (Dickason, 1978:35,36)

In 1856, toe meer as 2000 ton koper uitgevoer is, was die pad (na Hondeklipbaai) reeds byna onrybaar. (G.J.Kotze, 1996:1)

The Civil Commissioner for the District, in a report dated 8 April 1856, stated that the high transport rate from the mines to their final destination nearly equalled the actual cost of mining on the site. (Moffatt, 1972)

Note: Smalberger (see annotation under 1855) says the transport cost from the mines to the coast, not to their final destination in Swansea.

Export of copper reached the 2000 ton mark. However, wagons which left Springbokfontein with 3000 lb copper ore would arrive at Hondeklip Bay with only 2000 lb. (Moffatt, 1972)

J.S.Rivers, the Civil Commissioner for Namaqualand, submitted a report to the Government concerning the appalling state of the Hondeklip Bay and Port Nolloth roads. (Smalberger, 1975:67)

1856: Copper boom ended. Now the way was open for the bigger companies to establish themselves firmly. (Burman, 1984:41)

O'okiep mine workings commenced (Smalberger, 1975:104) by Phillips & King. (Cornelissen, 1965:100)

By 1856 the wonderful copper bubble burst, leaving in its wake the flotsam of the inevitable despondency of bankruptcies. It was a lesson for all, seldom heeded in South Africa. Of the more than forty companies which were floated on the copper dreams of wealth only three survived and even these were up against the biggest problem of all -

transporting the copper ore out of Namaqualand to a point where it could be shipped to Europe. (Dickason, 1978:34,35)

End of 1855/beginning of 1856 the copper bubble burst. (O'okiep Copper Company, 1952)

The copper boom ended and eventually only the two main companies continued to operate on any scale. (Moffatt, 1972)

Almost all the companies went into liquidation, until by 1857 only three of them survived: the two private companies Phillips & King and The Namaqua Mining Company, and one public company The South African Mining Company (although the latter also disappeared within a short space of time.) (Smalberger, 1975:47)

1856: Port Nolloth had three white residents in 1856. (Port Nolloth Munisipaliteit, 1991)

Port Nolloth had only two or three residents. (Smalberger, 1975:87)

1856: June: Namaqualand became an independent magisterial district (Van Heerde et al., 1952:17) having previously been part of the Clanwilliam district. (Mostert & Crewe-Brown, 1992:11). Namaqualand proclaimed a Fiscal Division in 1856; first Civil Commissioner appointed in 1860. (Springbok Municipality, 1963)

Note: 1856 is incorrect - see 1855.

1856: Postal service frequency increased to weekly. (W.Steenkamp, 1975:116)

1857: Geologist Andrew Wylie in June presented the Cape Government Parliament with his masterly report on "*The Mineralogical and Geological Structure of South Namaqualand and the Adjoining Mineral Districts*". (*The Mining & Industrial Magazine*, 1927)

Andrew Wiley, the geological surveyor, advised the use of a railway from Hondeklip Bay, with two small locomotives. (Burman, 1984)

In addition to the Hondeklip Bay road, Wyley mentions "the roads from Kamaggas to Missionary Drift by Oograbies, Doorn Poort, and Kodas; from Kookfontein to Henkries, Vuurdood, and Owcaap Drift; the road from Nabas to Kodas, etc. across the Mountains, by Gonnakuriep, Witteoog, and Hell Kloof; the road from Springbokfontein and Concordia, to Pella, in Bushmanland, by "Aip Mountain", the road from Stinkfontein to Kai Chabeeses and Kookfontein, and many others." (Cape of Good Hope, 1857)

Wyley reported to the Government, recommending expenditure on road maintenance to Hondeklip Bay and a tramway across the soft sand from Riethuis for the last 10 or 11 miles. He also suggested the use of camels, saying "three camels would carry a ton weight from the mines to Hondeklip Bay or to Robbe Bay (Port Nolloth) in three days - a task now requiring ten mules." (Cornelissen, 1965:39,40)

Commander Nolloth, who had examined possible ports of export along the coast, favoured Port Nolloth even if it was further from the copper fields, as Hondeklip Bay was shallow and offered inadequate shelter to the small ships. Charles Bell lent his support to Nolloth, and located a line for a railway from Port Nolloth to O'Kiep with branches to Spektakel and north towards the Richtersveld. (Hopkins, 1980:2)

Mr Wiley, Government Geologist, in his report in June 1857 said "ores from Kodas (a mine in the north-western section of the Richtersveld, near the Orange River) carried down by waggons and carts nine miles to the Orange River below Jackalsberg and then put in flat bottom boats, taken down the Orange River and then taken across by road for shipment at Alexander Bay." Ships operating from Cape Town to Alexander Bay at this time included the schooners "Shrimp", "Maria", "Prince of Wales" and "Glenoor". (Moffatt, 1972)

The Government Geologist, Mr Wiley, suggested the construction of a road down the mountain from Springbok and the construction of a tramway across the plain to Hondeklip Bay. (Moffatt, 1972)

Andrew Wyley submitted his "Geological Report of 1857". He was not the first to suggest the use of camels: Commissioner de Mist had also done so in his Memorandum on the Cape in 1802. (Smalberger, 1975:45,68)

1857: Phillips & King had in five years shipped 5000 tons of copper ore. (Cowie, 1929)

Mine at Springbokfontein reached its peak with a production of 2 100 tons in 1857 (but only mined 437 tons in 1861.) (Springbok Municipality, 1963)

1857: Nababeep is blykbaar die Namawoord vir "vlamkameel" of kameelperd (giraf). (Anon, {1990})

Nababeep in the Nama language means the one red (brown) hill - they have no name for brown - thus referring to the original Bruinkop which topped the present glory hole. (Cornelissen, 1965:96)

Nababeep is the Hottentot word for giraffe. A new suburb of Nababeep, built by OCC, is known as "White City", the only American name in Namaqualand. (Green, 1955:234)

Nababeep is now the headquarters of the O'Kiep Copper Company and has an excellent mining museum. (Mostert & Crewe-Brown, 1992:40)

Nababeep means "the water behind the little hill" or "the place where the giraffe drinks water" to the Nama people, after the spring at which the town was established. (Namaqualand RSC, 1973:14; 1995:10)

Nababeep is derived from two Nama words, "Naba" meaning an animal's neck or hump, and "bib" meaning a small spring. (Potgieter, Du Plessis & Hiemstra, 1970 to 1976:Vol 8:21)

Mining of copper begun on the farm Lelykepad, later to become Nababeep (Suid-Afrika, 1980:5), by the Cape Copper Company. (Rosenthal, 1970:388)

Nababeep, depending on pronunciation, may have one of three meanings: where the giraffe drinks; the water behind the little hill, or where the rock is carried. (Smalberger, 1975:94; *The S.A. Mining & Engineering Journal*, 1963)

Nababeep is on the farm previously names Lelykepad. (W.Steenkamp, 1975:74)

1857: "Springbokfontein had become a large mining station with substantial buildings such as officers' and workmen's houses, mess rooms, stores, wagon-makers' and blacksmiths' shops, stables, forage stores; and scattered about were to be found all that amenities necessary for an extensive mine. There was also a post office, a small church and a prison." (Smalberger, 1975:70)

"The presence of a magistrate, and a prison near at hand, act as a salutary check upon the more riotously disposed." (Andrew Wyley, as quoted by Smalberger, 1975:71)

1858: Central Road Board and Divisional Road Boards abolished (they had been created in 1843). The Central Government accepted responsibility for Main Roads (until 1864). (Divisional Councils had been responsible for Divisional Roads since 1855.) At the time of its abolition the CRB had 1650 miles of main roads under its charge and was responsible for the mountain passes. It had constructed 15 bridges on the Cape Town- Grahamstown line, and between the metropolis and Beaufort West there were nine bridges and three pontoons. (Botha, 1962:257-263)

Note: Snape says 1859.

1858: Port Nolloth had five wooden houses and apparently also F.W.Dreyer's shop. (Port Nolloth Munisipaliteit, 1991)

1859: Arguing that the Divisional Councils (formed in 1855) "should take over the work of road construction and maintenance, the Government abolished the Central Road Board in 1859 and took little interest in roads after that date, except to make grants for the maintenance of mountain passes, and left the DC's very much to themselves until 1917.

It was in 1859 that the first sod of the Cape Town-Wellington railway was cut and, thereafter, the question of railway construction became predominant and the roads were left to the local bodies who, no doubt, did their best but were faced with the difficulties of doing their work at the minimum of cost and with little expert supervision and with little technical advice. (Snape, 1923:25)

Note: Botha says 1858.

1859: Hondeklip Bay: in 1859 water for domestic use was brought from Cape Town by ship and cost a shilling for two gallons (one cent per litre) (Smalberger, 1975:note 9 on p 116)

1859: Construction commenced of first railway from Cape Town to Wellington. (Rosenthal, 1970:528)

1860: Three coastal steamers served Port Nolloth from 1860 to 1889. All three were named 'Namaqua'. (Reynolds, 1981:315)
See also: 1890.

1860: "From 1860 copper ore was carried by oxwagon both to Hondeklip Bay and to Port Nolloth along roads built by convicts." (Joe Jowell, 1962:1)

Copper had become the Cape Colony's second most important export. (W.Steenkamp, 1975:42; Smalberger, 1975:69)

1860: Josias Rivers appointed first civil commissioner. (Springbok Municipality, 1963; Van Heerde et al., 1952:17)

Note: This date is incorrect. Smalberger says 1855. A report by Rivers to the Government dated 8 April 1856 is on record. Also, Rivers is recorded in SC 8 as stating that he had been Civil Commissioner of Namaqualand from 1855 to 1858. See also notes under 1855.

Also, Mr Judge took over from Mr Anthing as Civil Commissioner in 1861, according to the original letter of appointment in the E.A.Judge Collection at UCT – gldr.

1860's: Mules began to replace cattle on the copper riding wagons, as drought and lung sickness took their toll. (Burman, 1969:230)

1861: Divisional Council of Namaqualand established. First meeting held on 19 February 1861. (Cornelissen, 1965:41; Smalberger, 1975:82) First motion proposed by the chairman at the first meeting was "that the Council take into consideration what is to be done in the matter of roads"; the roads needing attention at that time being those from Komaggas 'towards' Cape Town, from Springbokfontein to Hondeklip Bay, and from Concordia to Port Nolloth. The area under its control was about 18 000 square miles. (Phyllis Jowell, 1994:151)

There were two coloured councillors. First divisional road proclaimed - to Hondeklip Bay. First road party appointed in February 1861. The area of the Namaqualand Division was 17 500 square miles. (Van Heerde et al., 1952:18,19)

1861: Phillips & King sold out their entire interests in Namaqualand to The Cape of Good Hope Copper Mining Company, later to be known as the Cape Copper Mining Company. (Dickason, 1978:36)

Note: It appears probable that this actually happened a year or so later.

Spectakel producing more ore than O'okiep. (Smalberger, 1975:91)

Springbokfontein mine produced only 437 tons compared with 2100 tons at its peak in 1857. (Springbok Municipality, 1963)

1861: Hondeklip Bay consisted of about twelve wooden houses and a few 'native' huts scattered around. (Smalberger, 1975:80)

Hondeklip Bay jetty was extended 42 feet to regain seven feet of water at LWOST, because silting had occurred since 1855 when the original 400 feet jetty was built. (R.T.Hall, 1866:22)

1861: Springbok's Anglican church completed, the second oldest church in Namaqualand - the oldest is at Leliefontein. (Cultural Historical Society of Namaqualand, n.d.)

Springbok consisted of a small hotel, two shops, no church; about 20 separate buildings altogether; the inhabitants did not number more than 100. The village was private, belonging to Phillips & King. (Smalberger, 1975:72)

1861: Edward Arthur Judge took over from Mr Anthing as Civil Commissioner and Resident Magistrate at Springbokfontein, with a salary of 500 pounds per annum. (E.A.Judge, B3)

1862: John Taylor & Sons, a British firm of consulting engineers, applied on behalf of Cape of Good Hope Copper Mining Company for authority to build a 2 foot 6 inch gauge railway line from Hondeklip Bay for 25 kilometres to Riethaus. Permission was given in 1865, but the line was never built. (Burman, 1984:42)

John Taylor & Sons, London, applied on behalf of the Cape Copper Mining Company for Government authority to construct a railroad or tramway from Hondeklip Bay to Riethaus. (Moffatt, 1972)

1862: Only two copper companies left: the Cape of Good Hope Copper Mining Company and the Namaqualand Copper Company. (Burman, 1984:42)

Cape Copper Company floated. O'okiep Mine came into being for an uninterrupted activity period of more than fifty years. (Cowie, 1929)

Cape Copper Company formed with a capital of 20 000 shares of 10 pounds each, of which 8 pounds was paid up. (Letcher, 1932)

The Cape of Good Hope Copper Mining Company took over the mines from Phillips & King. Later known as the Cape Copper Mining Company. (Moffatt, 1972)

Note: Cornelissen and Muller and O'okiep Copper Company (1968) say 1863 for takeover; Jowell says 1865.

Formation of the Cape Copper Mining Company out of various other mining companies and interests. (M.A.Robinson, 1980)

The Cape of Good Hope Copper Mining Company, Limited took over the mines owned by Phillips & King when the death of two of the firm's partners compelled the disposal of their property in Namaqualand. A large interest was retained by individual members of the house. In the prospectus of the CoGHCMCo, formed by John Taylor & Sons of London in 1862: "The transport of the ores to the coast has been a difficulty of no small magnitude especially in the commencement of operations. Bad roads, a tract of flat deep sand, rude wagons, a want of trained oxen and of pasturage, have all tended to render the carriage both tedious and costly... "Again, to remedy the difficulties, and to lessen the cost of transport of the ores to the coast, the state of the roads must be improved, and instead of employing oxen and mules to drag the loaded wagons a distance of 15 miles over the deep sandy flat... we have recommended that a tramway, to be worked by horses over this portion of the road, shall be laid down. "We estimate that 18 000 pounds will pay the whole cost of the rails, spikes and sleepers, and of sending them out from this country, also of forming and laying the road, as well as of wagons suitable for the carriage of ore and coals..." (Smalberger, 1975:69,70)

The name of The Cape of Good Hope Copper Mining Company, Limited, generally known as The Cape Copper Mining Company, Limited, was changed to The Cape Copper Company Limited in 1888. (Smalberger, 1975: note 26 on p 114)

Deposits of copper richer than those at Springbokfontein were found at Okiep, and the focus of mining altered accordingly. (W.Steenkamp, 1975:43)

1862: Hondeklip Bay made a separate magisterial district on 26 November 1862, with A.R.Orpen as the first Resident Magistrate and Sub-Collector of Customs. Hondeklip Bay ceased to be a separate magisterial district on 1 June 1877. (Smalberger, 1975:81,87)

A.R.Orpen appointed magistrate at Hondeklip Bay. (L.M.Steenkamp, 1952:7)

Hondeklip Bay declared a magisterial district. (Suid-Afrika, 1980:6)

Note: W.Steenkamp says declared in 1868.

1862: Springbokfontein created a public village by Phillips & King when they realised that the mine was being worked out. (Phyllis Jowell, 1994:37)

Springbok previously known as Guchas, "where the springbok drink". (Port Nolloth Municipality, 1991)

Springbok founded. Known as Springbokfontein until 1911. (Rosenthal, 1970:543)

Springbokfontein laid out by Surveyor Patrick Fletcher. (Mostert & Crewe-Brown, 1992:36; Namaqualand RSC,{1993}:8).

An auction of plots was held on 28 October 1862, and plots to the value of 6 260 pounds were sold. (Smalberger, 1975:73)

"In 1862 Phillips & King arranged for a survey of Springbokfontein by Surveyor P.Fletcher, and the general plan of the town was approved on 4 September of the following year. (Surely in 1862, not 1863 - gladr) "A sale of plots on 28 October 1862, produced 6 269 pounds. It has been contended that Phillips & King foresaw a collapse of their mining activities and chose this manner of getting rid of their ground." (Springbok Municipality, 1963)

See also: (i) Gert Kotze, 1999: Addendum G, for photograph of Springbokfontein "aan die einde van die 19de eeu".

(ii) 1911.

1863: Railway line from Cape Town to Wellington opened over complete length. Actual cost 670 000 pounds. Maximum grade 1:60; maximum radius 20 chains; 70 lb/yard rails; gauge four feet eight and a half inches (reduced to 3'6" in the late 1870's.) (Murray, 1928:6,13,39)

1863: Afdelingsraad van Namakwaland het die Kaapse Parlement versoek om die pad tussen Springbok en Hondeklip Baai as afdelingspad te proklameer. (G.J.Kotze, 1994)

The various classes of copper riders were paid carriage of

| | |
|------------------|---------|
| mine proprietors | £977 |
| contractors | £2 217 |
| farmers | £10 315 |
| natives | £7 472 |

Total carriage paid in 1863: £20 981

"As many as 86 wagons entered Hondeklip Bay in a single day.

"Had 15 000 or 20 000 pounds been expended (on the roads) ten years ago, the stock of the district, instead of being worth 194 000 pounds would now be worth double that amount."
(P.Fletcher, 1866)

1863: Cape Copper Mining Company purchased Phillips & King group rights at Springbok, O'okiep, NababEEP and Spektakel mines for 11 286 pounds. (Cornelissen p 36)

Note: Cowie, Letcher, Moffatt, Robinson and Smalberger say 1862;
Jowell says 1865.

Cape Copper Company floated. (Muller, 1981:104)

Cape Copper Mining Company operated from 1863 to 1888.
(O'okiep Copper Company, {1968})

1863: Spectakel the largest village in Namaqualand. (Smalberger, 1975:91)

1863: Concordia became a separate mission in 1863 and the church was completed in 1875.
(Arne Schaefer, 2008: 159 footnote.)

1864: Divisional Councils took over the responsibility for the maintenance and repair of Main Roads - Central Government retained responsibility for the construction of Main Roads.
(Botha, 1962)

See also: 1858 et al.

1864: The Cape Copper Mining Company engineer Mr J.F.Davis arrived to set up the works necessary for smelting the ore at Springbokfontein, which was then sent to Britain as regulus. This plant was superseded by the O'okiep Reduction Works in 1870, when the emphasis of mining had shifted away from Springbokfontein mine. (Smalberger, 1975:73)

1864: Bowesdorp started out in life as Wilgenhouts kloof. When the first Dutch Reformed Church was built there in 1864 it was renamed Bowe's Ville, after the popular Dr Henry Bowe, the district surgeon. Dr Bowe took part in the ceremony, and broke a bottle of whisky on a rock. Bowe's Ville gave way to Bowesdorp. There was not much water in the narrow kloof and the ministers disliked the place. In 1924 the inhabitants (with one stubborn exception) broke up their homes and the church and rebuilt the village at Kamieskroon a few miles away. (Green, 1955:235)

Bowesdorp church was inaugurated on the farm Wilgehouts kloof, later Bowesville and later still Bowesdorp. The first minister was ordained there in 1870. The seat of the Namaqualand Dutch Reformed congregation moved to Kamieskroon when the new church was inaugurated there on 27 July 1924. (Mostert & Crewe-Brown, 1992:44)

Bowesdorp sited in Wilgenhouts kloof. (Namaqualand RSC, 1995:9)

The first church in Namaqualand was built in Bowesdorp, and a hamlet grew up around it. In 1924 the church, school, police station, traders and residents were all moved from Bowesdorp to the new town of Kamieskroon. (Reader's Digest, 1978:164,166)

See also:1924 (Kamieskroon).

1864: Port Nolloth consisted only of four or five wooden houses. (Smalberger, 1975:87)

1865: Permission granted for the construction of the 25 kilometre John Taylor railway line from Hondeklip Bay, as requested in 1862. Never built. Instead, R. Thomas Hall, engineer in charge of a British railway to which John Taylor were also consulting engineers, was briefed by the Cape of Good Hope Copper Mining Company to investigate the transport problem. Hall advised against proceeding with the Hondeklip Bay line and recommended instead that a line be built from Port Nolloth across the sands to Muishondfontein (Anenous) at the foot of the mountains. The necessary Act of Parliament approving the construction of this line was only passed in 1869. (Burman, 1984:42)
See also: Burman, 1969b:230.

20 July 1865: Select Committee 8 recommended that:

- (i) the construction of a line of road from Clanwilliam to Springbok is not of such pressing importance at present as to justify a large expenditure upon it.
- (ii) the construction of a line of road between Hondeklip Bay and Springbok is a work which is highly desirable, and should be undertaken as soon as possible.
- (iii) the Government should authorize the construction of a tramway or railway between Hondeklip Bay and Riethaus. (Cape of Good Hope, 1865c)

The yield of the whole district was 47 076 bushels of wheat, 2 476 bushels of barley, 11 267 bushels of rye and 3 620 bushels of oats. The trains of ox and mule wagons absorbed all the agricultural produce of the district: Cape Copper Mining Company's ox wagon mine train alone consumed 5 837 bushels of oats, rye and barley, and 19 000 lb of oat-sheaves and chaff every month. Large additional supplies had to be obtained from Malmesbury, and large quantities of Bushmanland grass were brought to Concordia by native wagons. (Cornelissen, 1965:39)

Note: Green (1967:66) says each mule consumed "fifteen pounds of oats, rye and bran a day."

In 1865 the Cape Copper Company employed the services of Richard Thomas Hall, born in Falmouth in 1823. He had been appointed in 1849 as Superintendent of the Redruth to Chacewater Railway, which connected the small port of Devoran with copper and tin mines in the Redruth area, then operated by horse traction. He was appointed in 1853 to help convert it to steam traction. Hall reported in 1865 in favour of a 2'6" gauge railway from Port Nolloth to Okiep. He then went back to Cornwall, returning in 1869 as Engineer in charge of construction of the railway from Port Nolloth. (Dickason, 1978:36)

Richard Thomas Hall arrived in the country in June 1865, having been sent out by John Taylor & Sons to report on the roads and systems of transport from the Cape Copper Company's mines to the coast. He and Patrick Fletcher teamed up and Hall's investigations in Namaqualand were largely done together with Fletcher, Hall expressing himself as greatly indebted to him for his readiness at all times to help, and for his assistance as interpreter. Hall's thirty three page report is a masterly document, and his investigations were extremely thorough, definitely the most complete of any done up to that time. He travelled over about 1200 miles of country, 700 of which were on the Hondeklip Bay route, 400 on the Port Nolloth route, and about 100 miles about Ookiep and Spectakel. In addition to this he levelled over and measured 76 miles, for sections of present and proposed roads, 60 of which were towards Hondeklip Bay, and the remainder between Muishondfontein and Ookiep, on the Port Nolloth route.

When the Cape Copper Mining Company started operations cattle were plentiful in the district. Then came some drought years, and this setback was compounded by lung sickness, from which hundreds of trek oxen died. Mules had proved more suitable than oxen, particularly over the mountain sections, and a span of mules numbered eight while a span of oxen varied between twelve and sixteen. An ox wagon would take six days from Okiep to Hondeklip Bay and four days on the return journey: a mule wagon would take eight days. Water along the riding routes was scarce and brack. Hall says the farmers simply attend at the mine when they may feel inclined to do so, and their oxen are fit, ask for a load, or as many as they have wagons to take it... No previous intimation of their intention to carry is made... There are some farmers who ride regularly all through the season, and on whom the Company can depend; but many of them merely ride a load or two of ore when they may require something at the Bay for their personal use." Then, in the middle 1860's the copper company gave out a contract for the transportation of their ore, and this limited the number of people involved.

Strangely enough, Hall did not see the sandveld section on the Hondeklip Bay road as presenting any great difficulty, at least not when compared with the mountain sections. He concurred with Fletcher that the existing road near Kekokies traversed such rugged and steep terrain that no meaningful improvement was possible, and that a deviation to a new route via Tiger Kloof gave the most promise. His estimate of 20 000 pounds meant the work would have to be carried out by the Government, as the cost was too great for any company to bear.

Hall, after covering the whole country around, was firmly of the opinion that the overland route to Port Nolloth was to be preferred to that to Hondeklip Bay, as the mountains in the north were easier to traverse and the cost of improving the Port Nolloth road would be about one third of the amount required for the other road. Again, although the sand inland of Port Nolloth was heavier than that to Riethuis the flatter gradient and lack of false rise made it a preferable route for a tramway, which he considered desirable for Port Nolloth but unnecessary for Hondeklip Bay. Water was also more plentiful (or less scarce?) along the northern route. When added to this he found the sea-side facilities at Port Nolloth so superior to the rather limited capacity at Hondeklip Bay he had no hesitation in recommending that the mines should make Port Nolloth their loading port, even though this meant having to sell the land which they had acquired on the southern route. Should the Government commence immediately and at their cost to improve the Hondeklip Bay road this might give cause for the Company to consider whether it might not be advantageous to retain the Hondeklip Bay route, but Hall's recommendation remained to shift to Port Nolloth.

When Hall returned to Cape Town after completing his survey Fletcher accompanied him "to assist in urging the Government to do something at once with the Namaqualand roads." The Colonial Secretary and the Chief Inspector of Roads entertained the proposition most favourably, but the Governor, whom they saw subsequently, although wishing he could do something, "positively refused to move in the matter, on the ground that Parliament had not granted the money for this purpose." (R.T.Hall, 1866)

R.T.Hall, CE, sent to Namaqualand by the directors of the Cape Copper Company to inquire into means of transport, as drought and lung sickness had swept off hundreds of trek oxen. The difficulties were the frightful state of the road over the mountain and the long and tiresome drag over sand from the mountain to the sea at Hondeklip Bay. As he found that much greater facilities were afforded for making a railway or tramway to Port Nolloth, and the superior advantages of the port over Hondeklip Bay were so manifest, Hall recommended that the directors abandon the Hondeklip Bay route and carry a 2 foot 6

inch railway from Port Nolloth to Muishonde, forty miles inland. His proposals were approved in principle, but because they had in the meantime become committed to the Government road to Hondeklip, the directors did not implement them until 1868. (R.T.Hall, 1871; Smalberger, 1975:82)

The Cape Government favoured Bain's and Wiley's proposals and in 1865 approved a 25 kilometre railway line from Hondeklip Bay to Riethaus. This project came to nought, and another four years elapsed before serious droughts and animal sickness wrought havoc among the transport riders and forced the Government into action. Charles Bell's route from Port Nolloth across the sand belt was chosen. (Hopkins, 1980:2)

Act 15 of 1865 (Namaqualand Tramway or Railway Act) passed by the Government authorising the Cape Copper Mining Company to construct a line from Hondeklip Bay 16 miles to Riethaus. (Moffatt, 1972)

Mr Thomas Hall, CE, sent out by the Cape Copper Mining Company to investigate its transport problem. He recommended the adoption of the Port Nolloth-O'okiep route. (Moffatt, 1972)

Parliament passed the Namaqualand Tramway or Railway Act giving CCMC authority to construct a 17 mile line from Hondeklip Bay to Riethuis which would eliminate the road transport over the coastal belt of deep sand which was proving the real problem of getting ore from the mines to the port. However, while the CCMC was awaiting the passing of the Act they brought Mr R.T.Hall, a Roads Engineer, out from England who, upon close examination of the various possible routes, suggested that both from the point of view of railway construction and harbour facilities Port Nolloth was superior in every way. (M.A.Robinson, 1980)

A memorial addressed to the Government from certain miners, agriculturists and others of the Division of Namaqualand suggesting that exports would have been much greater were it not for the poor state of the roads between Springbokfontein and the coast. The construction of a line of main road to Hondeklip Bay was earnestly requested. The appointed Select Committee of the House of Assembly urged the necessity of constructing the road to Hondeklip Bay. They also recommended approval for The Cape Copper Company to construct a tramway from Hondeklip Bay across the sandy belt for 16 miles to Riethaus. However, the Committee did not consider the construction of a road from Clanwilliam to Springbokfontein (which they had also been asked to look at) to be important enough to warrant the necessary expenditure.

Patrick Fletcher (the surveyor who inter alia laid out Springbok - gldr) at the request of the Inspector of Roads reported to the Select Committee on the rival merits of the roads to Hondeklip Bay and Port Nolloth. He favoured the Hondeklip Bay route, although the 58 miles to Riethaus 17 miles from Hondeklip Bay was estimated to cost 20 000 pounds, while the 67 miles to Oograbis 16 miles from Port Nolloth was estimated at 10 000 pounds. (A tramway or railway was considered desirable for the final sandy sections of both routes.) Fletcher, who apparently had ambitions to represent Namaqualand in the House of Assembly, based his recommendation on the social benefits which would accrue to the larger population (voters?) who lived along the Hondeklip Bay route, and not on technical or economic grounds. (Note: Jopie Kotze of the Springbok Cafe said that the fact that Fletcher owned the farm Keerom might also have influenced his decision.)

The Divisional Council of Namaqualand objected to the construction of the Hondeklip Bay

road as, from their experience of steadily deteriorating conditions on this route in the four years of their existence, they would be unable to afford its maintenance and repair if it were constructed at the cost of the Government. (This argument appears illogical somehow, speaking as a padmaker myself! - gl.dr.) Apparently ratepayers in other areas were objecting to their tax payments being used on a route which did not benefit them. (This one I seem to have heard before somewhere! - gl.dr.)

The Cape Copper Mining Company owned considerable valuable property on the line of the Hondeklip Bay road. The Company undertook to provide transport and accommodation for the convicts to be used on the construction of the Messelpad. In addition they undertook to pay two annual instalments of 800 pounds each to cover additional establishment costs (in fact, following a petition in 1868, the Company was released from payment of the 1 600 pounds). By 1869 some 10 000 pounds had been expended on the Messelpad. (Cape of Good Hope, 1865a, 1865d, 1866; Jopie Kotze, 1994:oral; Smalberger, 1975:81-85)

Although a Bill was passed in 1865 authorising the construction of a railway from Hondeklip Bay to Riethaus this line was not constructed, mainly as a result of R.T.Hall's recommendations, but possibly also because the traders at Hondeklip Bay did not want to see the terminus of the copper-riding (with its potential customers) moved to a private farm 16 miles away. However, in the late sixties the copper company gave out a contract for ore transportation, which limited those involved to only 30 or 40 men, and they were now paid in O'okiep and supplied from the contractor's own store. (Smalberger, 1975:86)

1865: Daar was 'n tol by Hondeklipbaai wat op 'n kommissiebasis deur privaat persone bedryf is. In 1864 is deur die afdelingsraad besluit om vanaf 1 Januarie 1865 ook 'n tol in die Buffelsrivierdrif te bedryf. Die fondamente van die tolhuis is vandag nog aan die suidwestekant van die drif te sien. (G.J.Kotze, 1994)

1865: Act 12 : Lease of mineral rights.

Phillips & King's interests taken over by the Cape Copper Company.
(Phyllis Jowell, 1994:32)

Note: Cowie, Letcher, Moffatt, Robinson and Smalberger say 1862;
Cornelissen and Muller and O'okiep Copper Company, (1968) say 1863.
It would appear that Mrs Jowell has the incorrect date here.

1865: There were 9 or 10 traders at Hondeklip Bay. (Smalberger, 1975:81)

1865: Springbokfontein's population 2093. Namaqualand's population 10 071: 1 882 white and 8 180 coloured. (Van Heerde et al., 1952:30,31)

1866: Divisional Council minutes of 16 January "regrets being compelled to record the fact that owing to the ruggedness of the interior and the sandy character of the coastline of this Division, the cost of really useful improvement of any existing highway to any existing seaport or other locality is altogether beyond the means afforded by the collection of road rates and tolls." (Cornelissen, 1965:41) This followed drawn-out correspondence from 1855 to 1865 with the Government, requesting assistance in the transportation of ore, by constructing roads and/or by building a tramway. (Cornelissen, 1965:40)

Patrick Fletcher advised the Colonial Government to prefer the Hondeklip Bay route to the Port Nolloth route, for copper riding. (P.Fletcher, 1866)

Civil Commissioner Edward Judge submitted a lengthy letter to the Colonial Secretary putting the case for Port Nolloth as opposed to Fletcher's preference for Hondeklip Bay. (Judge, BC500:B5)

1866: The Cape Copper Mining Company assisted the Government in its road construction programme on the mountain section known as the "Messelpad" between Springbok and the Coast. (Moffatt, 1972)

"Laat in die agtiende (seker 19de) eeu is begin met die maak van 'n hardepad tussen Wallekraal en Hondeklipbaai. Die gruis vir die pad moes op plekke ver vandaan gehaal word, en die pad is dus nie so breed gemaak dat twee voertuie by mekaar kon verbygaan nie... Die pad is deur blankes met pik en graaf gemaak, en dat daar hard gewerk is, is nie altemit nie.... Dit was altyd 'n hele aardigheid om die ou geslag oor hulle padwerkdae te hoor gesels." (Mulder, 1970:119)

1866: Copper smelting furnace built at Springbok by the Cape Copper Company for the reduction of the heaps of low grade ore at the old mines. This, the oldest smelter in Southern Africa, was declared an historical monument in 1959. (Mostert & Crewe-Brown, 1992:15,36; W.Steenkamp, 1975:43)

1866: Captain Ray Grinstead's (see 1971) maternal great-grandfather, Reverend Morris, became very ill while in passage from Britain to India. He and his wife were put ashore at Port Nolloth, and when recovered they walked to O'okiep. According to E.A.Judge (Smalberger, 1975:71,73) they arrived in Springbok in 1866, and built the Anglican Church. Revd Morris then went to Wellington, and later Piquetberg. (Grinstead, 1994)

Springbokfontein acquired its first clergyman, Revd Morris. (Smalberger, 1975:73)

1866: Horse race meeting for the "Springbok Cup", valued at thirty pounds, held at Springbokfontein in October. (Horse racing on the Witwatersrand only began at Turffontein in 1887.) (Rosenthal, 1953:45,46)

1867: Construction of the Hondeklip Bay road commenced. The Cape Copper Mining Company, having spent 1835 pounds on providing transport and accommodation for 200 convicts, in 1867 petitioned to be relieved of the payment of 800 pounds per year for two years, over and above this, as had initially been agreed. (This petition was acceded to, although Cornelissen says on page 45 that the Company paid 800 pounds for two years.) The number of convicts employed on the Messelpad was said to increase from 200 to 600 at times. (Cornelissen, 1965:40-45)

Year 1867: Patrick Fletcher was appointed Inspector of Roads from 1 January 1867, in charge of the construction of the Springbok - Hondeklip Bay road. He operated under the Chief Inspector of Roads, Mr M.R.Robinson, and the work was funded by the Cape Colonial Government. During the year 284 convicts, under Superintendent Pitt, were received on the job. The convict station was in a bend of the Buffels River, below the present roadway. The first six months were occupied in building the station, although the first building, a portable galvanized barracks 60 x 15 (feet), was completed by 4 February.

Transport and everything required for the completion of the barracks, with the exception of stone, clay and labour, was furnished by the Cape Copper Mining Company. In the mean time Fletcher surveyed and staked out the line of road. The work tackled opened up a route to vehicles from near the station to the top of Tiger Kloof to the south. This combined with a natural track in the bed of the Buffels River eastward to the toll house to provide a 7,5 mile length of roadway with flat gradients (1 in 50 and 1 in 75) which enabled traffic to avoid the old route over the mountain tops between these two points. Fletcher's contour plan shows this clearly, and it must have been a most welcome improvement. Fletcher states "a good road without drink-water for cattle is comparatively useless." He accordingly concentrated considerable effort towards building dams and digging wells, apparently with some success. His report gives detail of the types of construction used. (Apparently this section of road was on his farm "Keerom", and he was able to include the rainfall figures for the previous five years, which averaged out at 8 inches per annum.) He includes in his report a passionate appeal for the prohibition of the use of remshoes, which obviously caused considerable damage to his road surface. He wanted to see "this rude and destructive appliance" replaced by the common brake, and suggested that wagons which fitted brakes be allowed to pass toll-free for twelve months, for the encouragement of the others. (As a padmaker, who has had on occasions to cope with animal-drawn sleds, he has my full sympathy! - gl.dr.) Fletcher concluded by asking politely that the Chief Inspector should try to avoid sending him "totally inexperienced road overseers" in future. Expenditure for the year was 607 pounds in Namaqualand plus 480 pounds on tools and shipping and freight, a total of 1087 pounds. The monthly average number of convicts on the road was 124. (Patrick Fletcher, 1868:23 January)

Teen die einde van 1867 was die pad reeds rybaar vanaf die bopunt van Tierkloof tot by die hoofstasie. Die eerste kar het op 28 Oktober vanaf Tierkloof na die hoofstasie beweeg. (G.J.Kotze, 1994)

"In 1867 was daar 198 prisoniers langs die pad werkzaam en dit word beweer dat daar by tye tot 600 werkzaam was. Die ruines van die bandietstasies kan vandag nog vanaf die indrukwekkende Messelpad gesien word." (Van Heerde et al., 1952:18)

See also: (i) 1827 for Patrick Fletcher's curriculum vitae.
(ii) 1868, 1869, 1870 & 1871, 1991.

1867: Discovery of diamonds near Vaal River. (Rosenthal, 1970:528)

1868: R.T.Hall was sent by the directors of Cape Copper Mining Company, in the latter part of 1868, to make the necessary surveys from Port Nolloth, as since his proposal of 1865 the position of transport by ox wagon had steadily deteriorated. (R.T.Hall)

Richard Thomas Hall returned to South Africa in 1888 (should be 1868) with his whole family. (Hopkins, 1980:2)

"Thomas Hall returned to South Africa in 1868 bringing his whole family with him... He settled his family in Cape Town, sending his sons to Diocesan College while he worked in Namaqualand. The children would go by sea to Port Nolloth for the long school holidays and there were often adventurous voyages by schooner." (D.C.Robertson, 1978:328)

1868: Year 1868: During 1868 work on the Messelpad was confined to the section between Wildepaarde Hoek and the ascent on the north side of the Buffels River. An average of 223 convicts were employed on the road during the year, with the maximum at any one time being 238. Fletcher recorded difficulties arising from the shortage of water at Tiger Kloof. Fletcher also surveyed and reported on the materials along the five sections of road between Hondeklip Bay and Springbok, a total distance of 70,5 miles, and included a survey plan with his report. Patrick Fletcher, 1868:1869.04.27)

Year 1868: Inspector of Roads Fletcher blasted out to a minimum width of 10 feet the 4,74 miles from the top of Tiger Kloof to near the convict station which had been opened up in 1867. Total expenditure was £1219. (Patrick Fletcher, 1968:1870.01.15)

See also: 1867, 1869, 1870 & 1871, 1991.

1868: At Hondeklip Bay "ore is shipped from a wooden jetty 150 yards long and exposed to a considerable swell. A rail is laid down the whole length of the jetty, and the ore is run down on trucks and stacked convenient for the boats. At the time of shipping a slide is then laid over the jetty, suspended at the upper end to give it a sufficient slope, and 8 or 10 men load 7 or 8 tons of ore in a very short time. The larger vessels lie out one and a half or two miles in the open sea." (Cornelissen, 1965: quoting he says from the Cape Monthly Magazine of 7 November 1868, but I was unable to find the article.)

See also: 1855, 1861.

Hondeklip Bay acquired its own magistrate. (W.Steenkamp, 1975:44)

Note: Dept Fisiese Beplanning (Suid-Afrika, 1980), Smalberger and L.M.Steenkamp say Hondeklip Bay was declared a magisterial district in 1862.

See notes under 1862.

A printing press was brought ashore and installed at Hondeklip Bay in 1868.

(W.Steenkamp, 1975:45)

1868-1873: Imports and exports by sea in long tons (1 long ton = 2240 lb. {pounds} = 1000 kg):

| | <u>Via Port Nolloth</u> | | <u>Via Hondeklip Bay</u> | |
|-------|-------------------------|-------------|--------------------------|-------------|
| | <u>Up</u> | <u>Down</u> | <u>Up</u> | <u>Down</u> |
| 1868: | 316 | 367 | 222 | 1829 |
| 1869: | 831 | 1484 | 500 | 2891 |
| 1870: | 1364 | 2478 | 915 | 3172 |
| 1871: | 1088 | 7461 | 286 | 1567 |
| 1872: | 1794 | 7611 | 157 | 1163 |
| 1873: | 3402 | 10424 | nil | 1183 |

(Cornelissen, 1965:48)

1869: The steam tug `Nolloth', referred to by Lawrence Green (1967:60), was presumably owned by the copper companies, but could be described as little more than a wooden-hulled steam launch with one mast and a funnel mounted amidships... The `Nolloth' was used to tow passenger and ore lighters to vessels anchored in the roadstead." H.R.Moffatt says she was put in service about 1869. She is mentioned in the Harbour Master's reports of 1890 and 1891. A picture is on page 315 of Reynolds' book.

"A slightly larger version of the `Nolloth' was put into service by the copper companies sometime later, and was known as the `Cape'." A picture on page 318.

(Reynolds, 1981: 315,317,318)

See also: 1887.

1869: R.Thomas Hall returned when the necessary Act of Parliament was passed, as engineer. The speed of construction was a triumph. For the first nine miles it traversed a loose sandy plain, with ridges of blowing sand. At the 15 mile mark the line passed through the first range of mountains at Oograbies Poort. Here the line entered a valley varying in width from two to eight miles, which it followed all the way to Anenous, or Muishondfontein as it was then called. The works on the line were trifling, even rivers costing little to cross. The Kama River, 300 feet wide, was crossed on the sandy river bottom. Mr Hall's reasoning was that it would be cheaper to restore a small portion of the tramway in the event of a washaway than to build a long and expensive bridge. As a result the whole 48 miles cost about R100 000. (Burman, 1969b:230)

R.T.Hall returned to Namaqualand as Engineer in charge of the construction of the railway from Port Nolloth to Okiep. It was built in three sections. The first rail was laid on 4 September 1869 and the 91,5 mile line was completed to Okiep on 1 January 1876. (Dickason, 1978:36)

4 September 1869: first rail laid. 23 December 1870: last rail laid (to Muishondfontein). Hall's article gives much engineering detail of the first 46 mile section to Muishondfontein. (Hall, 1871)
See also: 1870.

The first line (rail) was laid on 4 September 1869, fifteen years after the formation of the company, and the route followed Bell's proposal for most of the distance. (Hopkins, 1980:2)

Act 4 of 1869 authorised the Cape Copper Mining Company to abandon the Hondeklip Bay route and to construct and work a railway from Port Nolloth to Nonems (near Anenous; 48 miles). R.Thomas Hall returned to South Africa to survey and construct the railway from Port Nolloth inland. Actual construction started 4 September 1869. (Moffatt, 1972)

"...the dry and sandy nature of the country... rendered it extremely difficult to get the ore conveyed by ox wagon excepting at rates at which only the best quality could pay. The charges by ox wagon were seven pounds ten shillings to eight pounds ten shillings per ton, a rate at which only ore containing 20 per cent of copper could be carried, whereas the average ore contained 12 to 18 per cent and was therefore outside the zone of payability... But the Government decided that the guarantee principle would only be applicable to lines which would afterwards become main lines to the interior, and on the extension of the leases of the mines, the copper companies constructed a light line from Port Nolloth to Nomans and a jetty at Port Nolloth in 1869. The Government retained the right of purchase after ten years and tried to ensure that preferential treatment would not be meted out to any parties." (Murray, 1928:3,4)

The first rail was laid on 4 September 1869. (D.C.Robertson, 1978:328)

4 September 1869: The Port Nolloth Tramway or Railway and Jetty Act passed. This Act gave the CCMC permission to carry out the construction of a line from Port Nolloth some 40 miles to Nonamus as per the suggestions of Mr Hall. Included in the Act were clauses

forcing the CCMC to carry goods and the ore of the other mines at controlled tariffs. Construction of the line started in 1869. (M.A.Robinson, 1980)

Railway built for 160 km inland from Port Nolloth to O'okiep. (Rosenthal, 1970:436) (For "built" read "construction commenced" - glldr.) Map showing - very small scale - rail route. (Rosenthal, 1970:between pp 336 & 337)

"The Port Nolloth Tramway or Railway and Jetty Act of 1869" promulgated. Summarised in text. An excellent overview of the subsequent legal, construction and operational phases is given, as also of the ongoing tariff arguments between The Cape Copper Company and, especially, The Namaqua Copper Company operating the Concordia mine. (Smalberger, 1975:98-103)

Nonems also known as Muishondfontein (Smalberger, 1975:88) and Anenous (glldr). Cape Government passed the "Port Nolloth Tramway or Railway and Jetty Act". (W.Steenkamp, 1975:45)

1869: Year 1869: Inspector of Roads Fletcher still worked on the tricky 4,75 mile section from the top of Tiger Kloof to the convict station, widening the roadway now to 18 feet, so that the section between Tiger Kloof and the Buffels River drift, a distance of 9 miles, was all but completed. The number of convicts had decreased from an average of 238 during June 1868 to 109 in December 1869, with a resultant decrease in annual expenditure to 662 pounds. Total expenditure to the end of 1869 was 2969 pounds. The original estimate for the whole 17,25 mile section between Wildepaarde Hoek and Jakhals Water was 5000 pounds. However, as the Cape Copper Mining Company had decided in mid 1868 upon directing the mine traffic to Port Nolloth instead of Hondeklip Bay as originally intended, Fletcher proposed reducing standards over various sections of the project, which would enable all the hills on the south side of the Buffels to be avoided, turning the portion already constructed to best advantage, and would also remove the principal barriers on the north side of the river. (Patrick Fletcher, 1868:1870.01.15)

In 1869 the Government, after considering a railway or tramway to the coast, opted rather for improving the Hondeklip Bay road, and so the famous copper road or Messelpad, as it came to be called, was built using convict labour. (Phyllis Jowell, 1994:31)

Note: Mrs Jowell has the incorrect date here. The railway was approved in 1865, and the Messelpad was under construction by Patrick Fletcher from January 1867 to March 1871.

Messelpad Pass was partially complete in 1869, but the completion of the railway from O'Kiep to Port Nolloth (on 1 January 1876 - glldr) made the road superfluous for its main purpose, at that time, of carrying wagons transporting ore to Hondeklip Bay for shipment. Six hundred convicts were employed on the construction, which is of course famous (not too strong a word!- glldr) for its neat dry stone masonry retaining walls. (Mostert & Crewe-Brown, 1992:42)

Cape Government belatedly spent 10 000 pounds improving the Messelpad. (W.Steenkamp, 1975:45; Smalberger, 1975:85)

See page 80 for photographs of the pass and convict station.

See also: 1867, 1868, 1870 & 1871, 1991.

1869: Mr W.Morshead, Resident Engineer of the Copper Company, carried out experiments in March/April in the O'okiep - Springbok area with an 8 HP traction engine for possible road transport. Traction engine "The Pioneer" supplied by Aveling & Porter of Rochester, England. The driving wheels were 5'6" in diameter and 14" wide. Speed was 3 to 5 miles per hour. After certain tests the unit was apparently used as a portable power unit and was never employed on normal transport work. On hard sections of road the unit hauled 10-12 tons with ease, but when sandy patches were of any length the unit had to pull the load out with its winding drum. This was reported in the *Cape Mercantile Advertiser* of 5 April 1869. Morshead also had a letter published in "*Engineering*", a British publication. (Moffatt, 1972)

Mr Morshead, the resident engineer to the mining company, experimented with the use of a 6 kW steam traction engine for road haulage. **This is probably the first time that mechanical traction was used on roads in South Africa.** Morshead's experiments were satisfactory on good hard roads but sand defeated him. It is noteworthy that in 1872 the Cape Chamber of Commerce recommended steam traction on the road to the diamond fields on account of the slow rate of construction of the railways. (D.C.Robertson, 1978:328)

1869: Okiep... had become the most important of the Cape Copper Company's many properties. At one time it was widely regarded as being the richest copper mine in the world. (Dickason, 1978:37)

O'okiep mine had become The Cape Copper Mining Company's most important mine. It was described as "the richest copper mine in the world". (Smalberger, 1975:105)

1869: Pella mission abandoned by the London Missionary Society, and taken over by the Rhenish Mission Society. (W.Steenkamp, 1975:108)
See also: (i) Edward John Dunn, in A.M.L.Robinson (1978:61) for a description of the deserted mission.
(ii) 1812, 1875, 1881, 1882, 1991.

1869: Port Nolloth, consisting at that time only of the trading store of Mr F.W.Dreyer, began to grow apace. The Cape Copper Mining Company undertook to pay 200 pounds a year as salary and to provide quarters for a customs officer. (Smalberger, 1975:88)
Note: Smalberger says 100 pounds per annum in note 8 on p 117.

1869: Spectakel population 600. Mission school established. (Smalberger, 1975:91)

1870: Construction of Port Nolloth railway line reached Muishondfontein (Anenous), 77 kilometres away, on 23 December 1870. A "train" consisted of ten units of trucks in pairs, each pulled by four mules in tandem. (Burman, 1984:44)

23 December: last rail laid at Muishondfontein, the end of the 46 mile first section. Construction working time twelve months (15 calendar months); cost about 1000 pounds per mile - about the same as for a good wagon road! The narrow gauge railway was constructed for about one tenth the cost and in one fifth the time required for ordinary railways. The first engine "John King" landed at Port Nolloth in January 1870, and commenced its work on 1 February.

Note: it appears as if Hall has used the incorrect date here. He says that the track stood up so well to the freight wagons that he suggested the use of steam traction. As the first 22 miles - to Abbevlaack - were only completed in June 1870 it seems much more likely that the engine was only landed in December 1870 or January 1871, as stated by others, including Moffatt and Hopkins - see below.

"The upper and lower portions (of the first section) are of different character. The lower portions, as far as 22 miles, are very curved, there being but five miles in the aggregate of straight in the length, and the surface in many places undulating, arising from the character of the ground and the frequent occurrence of sandhills. From the 22nd mile to its terminus (at 46 miles at Muishondfontein) the direction is more decided, having runs of perfectly straight line from two to six miles in length." (Hall, 1871)

Anenous, 77 kilometres away, was reached on 23 December 1870. The rails weighing 10 kg/metre were made of iron, and were laid on longitudinal timber sleepers to allow mules, which were used initially as traction, easy access between the tracks. During January 1870 (1871??) the ship "Ocean Queen" delivered the "John King", the first steam locomotive, to Port Nolloth, and it hauled a train the following month. It was followed a few months later by a second locomotive "The Miner". (Hopkins, 1980:2)

March/April? Mr Woodfield, Superintendent of the Company, opened the first section of 22 miles to Abbevlaack.

Note: Smalberger says 30 June 1870.

23 December: Rails laid to Muishondfontein (46 miles) which became the temporary terminus.

December: Small locomotive, the "John King", landed at Port Nolloth ex "Ocean King". (Moffatt, 1972)

Note: Hall and Hopkins say "John King" landed January 1870.

"...the first wagons being hauled by donkeys, mules and horses. Donkeys were by far the most efficient." (Reynolds, 1981:314)

Note: no other mention has been found of donkeys being used on the tramway.

Anenous was reached by the end of 1870 and became the railhead for road transport across the mountains. Sand over the line was a worry and a suggestion was made to run the track on piles above the ground level. The first rails were 10 kg/m laid on longitudinal timbers but later most of the line was relaid with 28 kg/m rails on sleepers and ballasted with hard material. (D.C.Robertson, 1978:328)

30 June 1870: first 22,5 miles of track opened to Abberlaack. The mule powered "trains" usually consisted of 30 separate teams of four mules each hauling two wagons and each in the care of two "drivers". For passenger operations three mules were considered sufficient for each "coach".

23 December 1870: Completion and opening of the full 46 miles to Muishondfontein. The CCMC in fact broke two clauses of the Act in (i) extending the line beyond the authorised terminus point at Nonamus, and (ii) in using steam locomotives, steam not being provided for in the Act.

Note: The continual harping on this point by various writers seems to me to be rather petty. Although undoubtedly a technical "breaking" of a lack of an authorising clause, I cannot see that anyone was detrimentally affected by the more efficient operation of the railroad by the use of steam traction - glldr)

The locomotives "John King" and "Miner" took over from the mules used over the rest of the line at Abberlaack, although they sometimes ventured up the line as far as 35 mile halt. They were shedded at Port Nolloth. (M.A.Robinson, 1980)

The first 22,5 miles from Port Nolloth to Abberlaack was opened on 30 June 1870. (Smalberger, 1975:100)

1870 & 1871: Inspector of Roads Patrick Fletcher continued his work on the Messelpad, but to the reduced standards agreed to, seeing that copper was more and more being exported through Port Nolloth. As was to be expected this depressed Fletcher, who obviously had pride in his work. He managed to make Tiger Kloof passable but had to use inferior material which the ore wagons ploughed up: his completion report pleads for an additional allocation of funds to enable the surface to be improved. In addition he finished the other sections which had been included in the abbreviated programme. There was an average of 77 convicts during 1870 but they were all removed at the year end. A gang of 20 "free labourers, natives from Kamaggus", who "upon the whole gave satisfaction", was recruited in June 1870, and worked through until the project closed down in March 1871. Expenditure in 1870 was 1055 pounds, bringing the total to the end of 1870 to 4025 pounds. (There is no figure for the three months in 1871.) The new Namaqualand Divisional Council took responsibility for the road, and took over his tools for a (nominal) 50 pounds, in March 1871. (Patrick Fletcher, 1868:May 1871)

See also: 1867, 1868, 1869, 1991.

1870: O'okiep a scene of bustling activity. "...There are stores, and offices and stables, and workshops, and large deposits of machinery, and a steam engine and all its gear in full working, and a church (used also as a school and reading-room), and a contractor's store, and an infirmary for the sick, and residences for the mechanics and miners; and in the rocks around the valley are pretty little cottages for the officers; and around the southern and western slopes are the different locations of natives, dwelling in houses of gunny bags... All these, between 800 and 900 souls, and some at Springbok and at greater distances, find direct support from the O'okiep mines." ("J.S.H.", 1870)

12 000 tons of high grade ore being extracted annually. (Jeppe, 1976)

O'Okiep Reduction Works came into operation, replacing Engineer J.F.Davis' 1864 Springbokfontein Reduction (smelting) Works. (Smalberger, 1975:73)

O'okiep population 850. (Von Zeil, 1989a:38)

1870: Port Nolloth's population about 200, exceeding that of Hondeklip Bay. (Smalberger, 1975:88)

1870's: "After 1870 the agriculture and stock-breeding, and, in fact, the entire economy of the Cape, entered a new phase as a result of the new markets opened up in the interior by the mines. The economic development of the Cape after 1870 was further affected by its increasing integration with developments in the Republic, as was that of the very competitive British coastal colony Natal. This integration, which caused South Africa to develop into an agricultural and mining country, was the most important economic trend of the last quarter of the nineteenth century..."

"The seventies in the Cape Colony are marked chiefly by an extraordinary prosperity. The economic boom particularly stimulated the export of agricultural products such as wool, hides and feathers. By 1878 the period of reckless over-speculation, easy credit and optimistic industrial investment reached its zenith. Exports and the banks' total discounts had practically doubled in a few years. The glittering financial edifice which had been constructed on diamonds and trade with the interior began to collapse in 1881... This, the worst economic depression of the nineteenth century at the Cape, showed to what extent the Cape had already been integrated into the capitalist system."
(Muller, 1981:205) See also: 1872.

1871: First light steam locomotive "John King" arrived in January (note: Hall et al. say January 1870) and was capable of doing the work of 500 mules. Soon joined by a second engine "The Miner". They did the 32 kilometre run from Port Nolloth to Abbevlaack. A further Act of Parliament permitted the extension of the line 19 kilometres to Kookfontein (near Steinkopf). This section included the 420 metres climb up Anenous Pass, at gradients of 1 in 19. (No completion date given by Burman.) "From the summit it was possible to couple the trucks together and run them down the mountain and all the way to Port Nolloth by force of gravity, although this involved brakemen working lever brakes on each truck."
(Burman, 1984:44,45)

Note: Burman is incorrect in saying the trucks ran by gravity all the way to the coast. See Note 1 under 1876.

First section of 50(?) miles of 2'6" railway line built from Port Nolloth to Anenous at a cost of 52 205 pounds. (Cornelissen, 1965:48)

"John King" and "The Miner" began working the section from Port Nolloth to Abbevlaack, about 30 kilometres, during February 1871. Mule traction continued to be used between Abbevlaack and Anenous. Average gradient of the line to Anenous was 1/141 with a maximum of 1/50 over short sections. Earthworks were very light, the deepest cut being two metres. Curve radii varied between 1000 and 180 feet. Rivers were crossed on the dry beds, Hall's reasoning being that it would be cheaper to replace short sections of line in the event of floods than to lay out the high initial cost of building bridges. Loads for the locomotives ultimately were 20 tons up and 35 tons down, including the tare weight of the trucks. During 1871 the Government approved the construction of a further 20 kilometres of line over the Klipfontein mountains to Steinkopf. This proved a very difficult section to build with a rise of 1330 feet in only 7,5 miles. Several sections were laid to gradients of 1/19 and the average grade over the mountains was 1/29,8. The sharpest curve, at Nixon's cutting, had a radius of only 130 feet, subsequently eased to 180 feet.
(Hopkins, 1980:2)

1 January 1871: Track completed to Anenous, approximately 48 miles. Official opening at Muishondfontein on 18 February. Two small locomotives, the "John King" and "The Miner", introduced initially on the section from Port Nolloth to Abbevlaack. Act 3 of 1871, Port Nolloth Tramway or Railway Extension Act, authorised the Company to extend the line over the mountains to Kookfontein (Steinkopf). These 12 miles were completed in 1873. (Moffatt, 1972)

In 1871 the Cape Government authorised a further 20 kilometres over the mountain to Steinkopf. This was a most difficult section to build and had 1 in 19 gradients. No doubt

the 762 mm gauge proved an advantage in negotiating the mountain pass. Unfortunately there is no record of the radius of the sharpest curve.

Note: Hopkins - above - mentions a sharpest radius of 130 feet at Nixon's Cutting, "subsequently eased to 180 feet". Also: "H.H." {1875b}, reporting H.Thwaites, gives a sharpest radius of 150 feet in 1876.)

The section from Anenous to Steinkopf took between two and three years to build.

(D.C.Robertson, 1978:328)

Note: Hopkins and D.C.Robertson (above) both mention "Nixon's Cutting".

Lieutenant A.Meynick, in an undated despatch to Lieutenant Moffatt at Anenous (reproduced in "The siege of O'okiep" in Box 1 of "The Moffatt Papers", MSB 356) refers to "Tom Nixon's cutting".

However Dickason (1978:39) mentions "Dick's Cutting, named after Richard Hall".

I would like to think that the cutting might originally have been named "Dickon's Cutting", Dickon (or Dicken) being, I understand, commonly used as an abbreviation for Richard at that time.

Smalberger (page 99) mentions "one curve of 130 feet, on which there was a gradient of 1 in 19, known as Nixon's cutting", and refers in his ever efficient manner to N.E.Moffatt's 'Report of the Traffic Manager', an authority with whom it is difficult to argue, so that it must be accepted that, whatever the original name, the cutting came to be known as Nixon's Cutting.

1871: Post carts introduced to replace carriers on horseback, as the weight of the mail had increased. (W.Steenkamp, 1975:116) See also: 1874.

1872: Hondeklip Bay's population about 200. (Smalberger, 1975:86)

1872: "The aspect of Port Nolloth is not inviting." A jetty was under construction. The miniature railway ran down the jetty, so that copper ore would be able to be discharged directly into boats or small vessels lying alongside. At that time ore was still railed in bags of one hundredweight (50 kilograms) each, and stacked on the foreshore. When loading, one gang carried the bags from the stack to the water's edge, while another waded out with them from there to the boat. "As soon as the luggage boat has its complement, sail is set, and after crossing the `bar' the boat runs alongside the ship, into which the copper is discharged." ("E.J.D.", 1872)

Port Nolloth's population 300. (Smalberger, 1975:89)

1872: "By 1872 the Colony was entering a new era. General prosperity ruled throughout the agricultural districts, the diamond discoveries had been made, and the financial credit of the Colony overseas improved considerably, with the result that loans could be raised more cheaply than hitherto. (Murray, 1928:25)

See also: 1870's.

1873: Authority (Act of Parliament) for the last 52 kilometres of the railway, from Kookfontein to O'okiep, received. This section was officially opened on 1 January 1876. (Burman, 1984:45)

Second section over the mountains from Anenous to Steinkopf completed in 1873 at a total cost of 100 000 pounds. (Cornelissen, 1965:48)

In 1873 the construction of the last 55 kilometres was authorised and O'Kiep was reached on 1 January 1876. (Hopkins, 1980:2)

"In 1873 a narrow-gauge railway was built by the Cape Copper Mining Company between O'okiep and Port Nolloth over which copper, mining requirements and all other goods were carried. The tariff over the 90 mile long line was about one pound per ton."

(Joe Jowell, 1962:1)

Act 24 authorised the completion of the line through to O'okiep (92 miles), the centre of the mines. The line to be worked by mules. (Moffatt, 1972)

The train was initially drawn by 60 mules along the 146 kilometre railway line. Steam locomotion was instituted in 1886. (Mostert & Crewe-Brown, 1992:15)

Die huidige telefoonsentrale is gebou op die plek waar die muilstalle was. (Port Nolloth Munisipaliteit, 1991)

In 1873 the company was authorized to build the last 55 km of line to O'okiep which was reached on 1 January 1876. Mr Hall had left Namaqualand the previous year.

(D.C.Robertson, 1978:328)

Completion of the 12 mile extension to Steinkopf which proved to be a major feat of engineering with much cutting and bridge building necessary, and a rise of 1330 feet in some 7,5 miles to overcome. Act passed granting permission for the extension of the line to CCMC's main mine at O'okiep. (M.A.Robinson, 1980)

First trainload of copper ore set off from Okiep for Port Nolloth on 1 January 1873.

Note: Departement Fisiese Beplanning {Suid-Afrika, 1980:135} says 1869 and {1980:61} 1871. Bulpin and Burman and Cornelissen and Hall – who should know - and Smalberger say 1876 - much more likely as the Act authorising the construction of the last 92 miles was only passed in 1873.

The Government(?) and the mines spent the staggering sum of 200 000 pounds on the copper railway.

Note: Burman - incorrectly - says 250 000 pounds for the first 77 kilometres.

Cornelissen says 164 209 pounds for the whole line to Okiep plus 5 000 pounds for the Port Nolloth jetty, authorised by the same Act - near enough 200 000 pounds!

For the first thirteen years it took 40 to 60 mules to draw the average train. Steam locomotion came for the first 35 kilometres from Port Nolloth in 1886.

Note: Burman says this was the second time, the first with light engines in 1871.

By 1893 the whole trip was done by steam.

(W.Steenkamp, 1975 - a good description of travel on the train in the early days is given on pp 45 to 48.)

See also: Cornell (1920:95,96) for a 1910 description.

1873: The Colonial Government took over the (3'6") railways in 1873 and a branch line from Kraaifontein, near Cape Town, to Malmesbury was promptly authorised. The rail reached Malmesbury on 12 November, 1877. (Burman, 1981:9)

Note: See 1927 for further dates on the Cape Town - Bitterfontein line.

1873: O'okiep's population about 1500. The mine employed 872. (Smalberger, 1975:107)

1873: Port Nolloth was visited by Governor Sir Henry Barkly in 1873 in SS "Namaqua".

"A salute of seventeen guns was fired as he stepped on shore. The police force of two men saluted. Sir Henry was shown the wooden church, the residence of the copper company's manager, the hotel with billiard room, wholesale and retail stores, butchery, bakery, forge and carpenter's shop. Railway lines had been laid to the end of the jetty, and the copper ore was tipped into lighters... Brack water was brought by railway tank cars from the station called Jules Hoogte, five miles from the port... When southerly gales were raging the sand could not be kept out of the houses..." (Green, 1967a:56,57)

1874: "The modes of travelling and the means of locomotion throughout the country have of late undergone a marked improvement. Instead of a solitary journey on horseback with an attendant Achterryder on a sumpter horse... or by the primitive ox-wagon... one may now proceed from one end of the Colony to the other, and even as far north as the utmost limits of the Transvaal, in comfortable public conveyances at the regular pace of six or seven miles an hour.

"This is one of many beneficial results which have followed the discovery of the Diamond and Gold fields... the formation of transport companies... what were formerly remote towns and districts are at the present day as easily accessible as those which were nearest to the old centres of population a few years ago. "The vehicles employed are generally of colonial manufacture - large, roomy spring wagons, with tent covers, accommodating eleven or twelve passengers, and drawn by teams of eight or ten horses or mules...

American coaches (Abbot-Downing)... made famous in Australia and New Zealand... American "spiders" (a light dog cart) of extra strength in springs and fittings are much liked... and our Governors have repeatedly driven in them... to the border...

"But the ordinary travelling vehicle is the Cape cart, a tented dog-cart capable of seating three persons comfortably besides the driver, and drawn by two or four horses. With one of these we have travelled with ease from Cape Town to Bloemfontein in sixteen days, without any change of cattle on the road...

"For rapid transit, however, the "post cart", by which the mails are carried to and from the metropolis, is the best if not the only means... (The post cart) is a rough, strong, dog cart, the body of which forms a "well" where the letter-bags are stowed, and over these a few passengers may be seated back to back along with the driver; and in this manner it is not unusual to make a journey of 500 or 600 miles at a stretch with only occasional halts to change horses. The rate of travelling, including stoppages, is about ten miles an hour. On it goes, at a jerking gallop, which is seldom altered to any other pace, hour after hour, through daylight and dark..." (See also: 1871.) A six verse "poem" by Advocate Alfred Whaley Cole, MLA and judge, describes travelling in the post cart.

"Notwithstanding all the modern improvements in the mode of transit, the good old Conservative bullock-wagon still contrives to be the characteristic type of South African travelling... two or three and a half miles an hour, drawn by eighteen or twenty oxen, and sometimes laden with as much as 8 000 or 10 000 lb weight of produce or merchandise. It is a big clumsy looking conveyance, but extremely strong, and wonderfully adapted to twist and turn and recover itself through roads and river-beds, which would be thought utterly impassable. The carrying trade of the country is chiefly done by its means, and thousands of men, wagons, and oxen with their attendant drivers and "voorlopers", are engaged in this as a regular industry... In some of the Midland and Western districts, however, mules are employed, and with great success. But (this) mode of transport, although largely increased of late, has proved quite unequal to the requirements of the

advancing production and traffic of the Colony. For months together, whenever there is any absence of rain, and the pasturage fall off along the main routes, commerce is crippled by the inability to transmit supplies which are in demand, or to get out the produce which is lying idle in the heart of the country...

"In these respects, nothing short of extended railway lines will meet the wants of the country. By their means alone can ample provision be made for the prompt delivery of any amount of freight which may be offered, at fixed and reasonable rates of charge - the certainty which would stimulate the cultivation and development of its resources immensely." (Anon; in A.M.Lewin Robinson, 1978:224-226)

1874: Cape Copper Mining Company output 10 000 tons of copper ore. (Trollope, 1973:449)

1874: Port Nolloth: "Water was die grootste probleem vir die inwoners. Drinkwater is per boot van die Kaap af gebring of per rolvat getrek deur muile van Julie-se-hoogte aangesleep. Later is water in treintrokke deur muile getrek aangebring."
(Port Nolloth Munisipaliteit, 1991)
Sien ook 1949.

1874: Port Nolloth created a separate magisterial district. (Smalberger, 1975:89)
The Jetty at Port Nolloth ran out 300 feet, carried to a depth of eleven feet at low water. There was wharfage accommodation and stores. Moorings had been laid, and navigational beacons and lights provided. Once a fortnight a small steamer brought goods and passengers from Cape Town. (Smalberger, 1975:89)

Note(i): Gill (1958:25,30) says Ovenstones built the three hundred foot wood and concrete jetty, "which is one of the finest jetties on the West Coast."

Note (ii): L.G.Green (1967:59) says that the father of the prolific and much-admired marine artist George Pilkington was in charge of shipping the copper from Port Nolloth.

Port Nolloth obtained its water from Jules Hoogte, about five miles away. Water was distributed by rol-vaatjie. (Smalberger, 1975:89)

See also: (i) Smalberger (1975:Fig 14) for photograph of a rol-vaatjie.

(ii) Sunday Times, Business Times:1, August 20, 2000 for photograph of 90 litre plastic Hippo Water Roller, patented in 1992!

(iii) 1927, Jack Carstens.

1874: Steinkopf: a "Ticket of Occupation" issued on 9 December, 27 years after the extension of the Colony's boundary to the Orange River. Clause VII reserved to the Government or its agents all mineral rights. (Smalberger, 1975:58, note 28 on p 64)

Note: This applied to all these types of farms in the Cape. The reserves were not singled out for the application of this restriction - see below. (gldr)

"When these farms were parcelled out (under the Land Settlement Act) the Government retained all mineral rights on or under any holding. Where the ground was found to contain valuable minerals and gems the occupier was forbidden to work or exploit these. If the Government took over to work mineral deposits, the farmer was compensated accordingly." (Van Onselen, 1961:137)

1875: "Mr P.Fletcher who surveyed it in 1854 says: `The Orange (River) has a... spit at the north

side of its mouth; but in summer another spit forms from the south side, and towards the end of the dry season, sometimes overtakes the retreating northern one thus closing the mouth entirely up, and remains in this state until the first river-flood. The salt water seldom goes further up the river than four miles. This bar was reckoned (by parties resident on the spot for some years) to be passable about twelve days in the year, or one month at an average (? sic). The mouth (of the river) has a slate formation.'

"A more recent survey was made in 1872 by the Admiralty surveyor, Lieut. Archdeacon, but the result only confirmed previous conclusions as to the spasmodic nature of the limited navigation this great river affords."

(Noble, 1875:88-105: *The North-West districts and Orange River*)

See also: 1854 (Willcox), 1855 (Green, Willcox), 1882 (Green), 1910 (Cornell), 1950 (Graham Ross), 1979 (S.A.Navy)

1875: "H.H." took 40 hours on the steamer "Namaqua", Captain Clarke, from Cape Town to Port Nolloth, where there were two or three vessels anchored outside "awaiting their cargoes of copper ore from the mines. Inside, craft of 150 tons may safely moor to the jetty."

"The town or seat of magistracy consists of several rather large and important stores, the different buildings belonging to the Cape Copper Company, a very excellent hotel, a custom house, court house, etc. They are principally of corrugated iron, lined inside with varnished boarding, and affording some very commodious dwellings..."

"I found the hotel at Port Nolloth exceedingly comfortable, an excellent table kept, and plenty of fruit and vegetables, in spite of the barren aspect of the country; and the beds clean and comfortable, with a total lack of mosquitoes..."

"H.H." describes the CCC mule-drawn tramway, "ballasted with tufaceous limestone".

At the time of his visit the line was expected to be finished "at the end of the present year"; only four miles left to complete. (Note: this makes his visit in 1875.) The wagons, carrying about three tons each, had very low centres of gravity. "Mules pull in single file at about seven miles per hour, in relays of about 28 miles each span, and do not seem the least distressed; the mortality rate amongst them seems very small."

"...seated in a most comfortable passenger truck, with every necessity or even luxury of life packed in it for use, we got along in a most jolly manner..." Overnights at Klipfontein as guest of the engineer, Mr Thwaites, although "a house of accommodation exists at Klipfontein". The Company was running regular passenger trains three times a week.

"H.H." describes O'okiep as an oasis and details the excellent work done by the mine under the leadership of Mr Carson, the manager. "...not only looking after the working operation of the mine, but provides for many hundreds of workmen and sub-officials, their shelter, their medical, and even their educational and spiritual wants..."

"Everything goes on as smoothly as possible without a single jar or hitch, all his subordinates work together with a will..."

"...intense drought for the last two years... the Company has come nobly to the fore and distributed food among the natives, besides employing hundreds... sorting the ore... Indeed if it were not for the relief so provided the whole of the native population would have perished during the last four months."

"The Company make no attempt in keeping up any monopoly... several large private stores exist in O'okiep." After a visit of a week he returned to Cape Town, not finding the run down from Klipfontein by gravity at all as fearsome as he had feared it might be! ("H.H.", 1875a)

1875: Burman says H.Thwaites took over as engineer on R.T.Hall's death, and says that when

he took over "the most difficult portion of the line, indeed, remained to be done - the section between Anenous and Kookfontein (Steinkopf)". (Burman, 1969b:231)

Note: This would mean that Hall died somewhere between 1871 (when he had a paper on the O'okiep railway published in "*The Cape Monthly Magazine*") and 1873, when the rail reached Steinkopf. Burman's data (which does not agree with that of others) would indicate that although Hall conceived the idea, and constructed the first half of the line, it was in fact Thwaites who constructed the more difficult sections of the line where major gradients, earthworks and bridging had to be executed. (Edward Hodge took over as engineer, presumably from Thwaites, only at the beginning of 1878, long after 1 January 1876 when the line was completed to O'okiep.)

Hugh Lanion Hall, Thomas Hall's son, after mentioning that two of his sisters married in Namaqualand, says (1940:32): "When the railway was finished, the rest of us left for Cape Town... Father was employed by the Cape Railways to make a flying survey for a railway to the diamond diggings... I think he was about six months on that job." Thomas then did a flying survey from Pretoria to Lorenzo Marques for President Burgers, which he had finished by the time Hugh and his mother arrived in Pretoria by ox wagon from Durban. Unfortunately no dates are given. He mentions (1940:76) spending two weeks with his father and mother in Port Elizabeth "after the Zulu War", and on page 118 states: "My father had been traffic manager of the Cape Railways at Port Elizabeth, and was pensioned at the age of sixty. He was offered the managership of Thomas' Mine (near Avoca) and came up to take charge." (This would have been about 1883.) And on page 125: "Thomas' Mine did not prove a great success. My father left, having been offered an appointment as General Manager of the Free State Railways... He reached Johannesburg in August 1889... My poor father had caught a chill and died a few days later away from all of us." (Hugh Lanion Hall, 1940)

From this account it appears certain that Richard Thomas Hall did not die in Namaqualand.

"Thomas Hall left Namaqualand in 1875, and went to work on the Maputo-Pretoria railway line. He died in Pretoria in 1889 aged 66 years. A Mr Thwaites (sic) then Resident engineer of the Cape Town harbour works, took over from Mr Hall when he left, and he saw the completion of the line to O'Kiep." (Hopkins, 1980:2)

Note: The railway reached Steinkopf in 1873 and O'Kiep on 1 January 1876, and so location and construction would have been essentially completed by 1875 when Hopkins says Hall left.

A curriculum vitae of R.T.Hall prepared by H.R.Moffatt, and included in Box 2 of "*The Moffatt Papers*" MSB 356, states: "Early in 1872 at the request of the Cape Town Chamber of Commerce Mr Hall investigated the extension of the railway from Wellington. For six months investigation and survey Hall received 100 pounds!!" (Moffatt)

Note: J.H.Stassen, *Touwsrivier - Daos ab*, 1977:22 says Hall's report to the Chief Inspector of Public Works was dated April 26th 1872.

"Thomas Hall had a very great influence over South African railway matters. He advised the Colonial Select Committee in 1872 to adopt the 1 067 mm gauge which has since become the standard gauge in Africa south of the Sahara, and carried out surveys for the Cape Government for the extension of the line northward through the mountain range

towards Kimberley. "When he left Namaqualand in 1875 he went to the Transvaal to work for President Burgers on the location of a railway from Maputo to Pretoria... In 1889 he was appointed by President Brand to manage the Free State railways but he died in Pretoria while on his way to take up the post. He was aged 66 years... Richard Thomas Hall has certainly left his mark for the good of South Africa." (D.C.Robertson, 1978:327)

Note: This seems pretty conclusive evidence that Thomas Hall did not die in Namaqualand, especially as "DC" goes on to tell of the doings of Thomas's son H.L.Hall on his "vast agricultural estates in the Eastern Transvaal... died in 1940 at the age of 82", which would appear to indicate personal contact with Thomas Hall's descendants.

In another authoritative publication "Head of Steel" it is mentioned that the Cape Chamber of Commerce "hired an engineer, one R.Thomas Hall, to find a route over the mountains from Wellington to Worcester. Thomas Hall had been the engineer in charge of the construction of the narrow-gauge line from the O'okiep copper mines to Port Nolloth... Thomas Hall was an elderly gentleman, but a man dedicated to his job. He emerged from the valleys with their wanton profusion of rocks and bracken with the news that he had discovered a (2'6") route... The Government called in the eminent engineer W.G.Brounger... By the time the Committee published its findings the year 1873 had dawned."

(Lennox van Onselen. 1962. "Head of Steel". Cape Town: Howard Timmins: 33)

Note 1: Lennox gives no date for Hall's recce, but 1871, and probably 1872, look likely years. William Brounger had been engineer of the Cape Town Railway and Dock Company, established in 1853, which built the Woodstock – Stellenbosch - Wellington line between 1859 and 1864 (John Bond. 1956. "They were South Africans". Cape Town: Oxford University Press: 174), but ran foul of the 1860's depression. Eventually in July 1872 the Cape Government bought the Wellington railway line and started the Cape Government Railways. In July of 1873 a Railway Department was formed under Brounger with many young engineers emigrating from England to bolster this fledgling department. (Jose Burman, 1984:32). As Brounger was "called in" this must have been before July 1873.

Note 2: Burman (1984:54,55) says that in April 1872 the Cape Town Chamber of Commerce "approached Thomas Hall, the engineer of the tramway operated by the Cape of Good Hope Copper Mining Company in Namaqualand, to survey a route" east from Worcester into the Little Karoo. (He gives considerable detail of the routes investigated.)

It does therefore appear as if Hall was alive (even if elderly!) in 1872.

1875: Copper ore exported valued at a quarter of a million pounds sterling. (Lucas, 1913:245)

Copper ore exported annually in the ten years to December 1871:

minimum in 1868: 2900 tons, value £60985;

maximum in 1871: 7351 tons, value £160956.

Exported in 1872: 18240 tons, value £328458.

1873: 11570 tons, value £312221

1874: 13646 tons, value £321434.

(Noble, 1875)

Cape Copper Mining Company output 1 000 tons per month. (Trollope, 1973:449)

1875: Namaqualand census: population 5703 urban, 6648 rural. 3507 horses; 799 mules and

asses; 5539 draught oxen; 8323 other cattle; 4546 woolled sheep; 111458 other sheep; 956 Angora goats; 81210 ordinary goats; 73 ostriches. (Noble, 1875)

1875: In August 1875 the only activity in Concordia was the construction of a large new church, while the existing one was already too large for the congregation using it. ("H.H.", 1875a)

Concordia's church was completed in 1875. (Schaefer, 2008: 159 footnote.)

Concordia population 961: 10 houses plus 219 huts and tents. The census was held on 7 March 1875. (Smalberger, 1975:97)

See also: 1863.

1875: Hondeklip Bay's population had dwindled to 103; 12 houses and 11 huts. (Smalberger, 1975:86)

1875: O'okiep's population 1752; 73 houses and 367 huts and tents. (Smalberger, 1975:108)

1875: Pella Mission taken over by the Catholic Church in 1878. Originally established by London Missionary Society in 1814. The "encyclopaedia church", recently (1995) consecrated as a cathedral, was declared a national monument (Namaqualand RSC, {1993}:25; 1995:13) on 1991-08-30 (National Monuments Commission, 1995).

Pella taken over in 1874 by the Roman Catholic missionaries from the Rhenish Mission Society, who had been there for five years. (W.Steenkamp, 1975:108)

"In 1975 the day was celebrated when the first triumvirate had left their footprints in the sands of Pella one hundred years before."

(Introduction by Father R.Bientz to "*Thirstland epic*" {Thunemann, 1996})

See also: 1812, 1869, 1881, 1882, 1991.

1875: Pofadder mission was founded by Reverend Christian Schroder of the Rhenish Mission Society. The town was named after the local Korana (Hottentot) chief, Captain Klaas Pofadder. (Mostert & Crewe-Brown, 1992:33; Namaqualand RSC, {1993}:25; 1995:14; W.Steenkamp, 1975:107)

1875: Port Nolloth's population 448. (Smalberger, 1975:89)

1875: Spectakel population 471: 13 houses and 67 huts and tents. (Smalberger, 1975:92)

1875: Springbokfontein's population 244; 25 houses and 20 huts and tents. (Smalberger, 1975:73)

1876: SS "Namaqua" of the Union line wrecked near Port Nolloth. This was the second "Namaqua" of that period, the first having been a German ship. The third was owned by William Berry, was able to cross the bar and moor at the wharf, and was also lost on this fog-bound coast in 1889. (Green, 1967a:58,59)

1876: With the completion of the railway to Okiep "by far the easiest and quickest route to Namaqualand was (by ship) to Port Nolloth and then by train to Okiep. But landing at Port Nolloth was quite an adventure. The jetty was considerably higher than the deck of the

little steamships that managed to cross the sand (sic) bar and so the traveller was faced with either having to climb up a vertical ladder in the manner of a skilled gymnast, or submit to the indignity of being unceremoniously whisked upwards in a wicker basket which whirled around in the air in an alarming fashion." (Dickason, 1978:36)

"...travellers passed through Port Nolloth, for the sea voyage to Cape Town was much quicker and more comfortable than the overland journey by Cape cart or wagon".
(Green, 1967a:57)

1876: 1 January: Railway opened from Port Nolloth to Okiep. The mules and horses used at first gave way to steam locomotives. The railway operated for 68 years.
(Bulpin, 1986:180)

Note: Departement Fisiese Beplanning {Suid-Afrika, 1980:135} says 1869 and {1980:6} 1871 - both obviously incorrect;
W. Steenkamp says 1 January 1873 - also incorrect;
Burman, Cornelissen, D.C.Robertson and Robinson agree on 1876.

Richard Thomas Hall was the Superintendent of the Chasewater & Redruth railway in Cornwall during 1849... On 4 September 1869 the first rail was laid at Port Nolloth. On 1 July 1876 the railway was completed and ready for regular operations.

Note: Burke has the wrong date here: should be 1 January 1876 - gldr)

"Hall had carefully studied the difference in the terrain from the seaport inland across the sandy desert where the coastal area gradually (sic!!) became a granite plateau of rugged countryside climbing to the highest point of the Klipfontein Mountain (3 104 feet). Once on the summit the valley southwards fell away towards the mining centre at Okiep (note: Okiep's elevation is 3 050 feet - gldr)... allowing the trucks and the few passenger wagons to run downwards by gravitation to the Okiep mining community and the terminal of the line. "The Copper Company had sixty mules to pull their train. These were divided up into groups of six to pull two mineral trucks and three mules to handle the passenger coaches... Departing at 6am they arrived at Anenous around 1pm... stayed the night at Klipfontein Hotel situated at the top of the pass, departing next morning at 8am to... Okiep."

"The Cape Copper Company Railway was, thanks to Hall, a great success and was followed in the 1890's by the use of steam locomotives which were put into service on the line and by 1893 steam working was complete through to Okiep."
(Burke, 1995:Appendix B, page 206)

1 January 1876: official opening of the third construction section of the Port Nolloth railway, the 52 kilometres from Kookfontein (near Steinkopf) to O'okiep. From 1876 the whole line was once again operated by animal-drawn traffic. "From the summit it was possible to couple the trucks together and run them down the mountain and all the way to Port Nolloth by force of gravity, although this involved brakemen working lever brakes on each truck." (Burman, 1984:44-46)

Note: Burman is incorrect here: the trucks ran by gravity only down the pass.
See Note 1 below.

Third section from Steinkopf to O'okiep opened on 1 January 1876.
(Cornelissen, 1965:48)

A platelayer named Woodcock had made a name for himself by finding a succulent, the senecio or soap plant, which bound the loose sand on embankments perfectly. (Green, 1967a:66)

O'Kiep was reached on 1 January 1876. The first two steam locomotives were withdrawn in 1876, after only six years of service, having proved inadequate for the tasks they were called upon to perform. The boiler tubes also started to give trouble. The whole line was turned over to mule traction for the next ten years. During the years of animal traction on the line loaded trucks descended the mountain by gravity with only brakemen in attendance. Animal haulage on the easier gradients of the coastal plains was not too onerous, provided the rails had not been covered by sand. (Hopkins, 1980:2)

Some statistics of the railway: 2'6" gauge; rails 18 to 28 lb per lineal yard. Abevlaack 22 miles from Port Nolloth; Annenous 48.5 miles, 1759 feet elevation; Klipfontein 55.64 miles, 3103 feet; Steinkoff 62.5 miles, O'oboop 64 miles; O'nemas 75 miles; Ratel Poort 78 miles, 2570 feet; Steyerkraal 82.5 miles, 2240 feet; O'okiep 92.5 miles, elevation 3050 feet above the sea.

Heaviest gradient: 1 in 20.

Sharpest curve: 150 feet radius.

Extensive works are required for the supply of water.

("H.H." {1875b} as supplied by railway engineer H.Thwaites)

The two small locomotives, "John King" and "Miner", taken off main line duties; animal traction reintroduced over the whole length of the line. 1 January: line completed to O'okiep for mule traction. (Moffatt, 1972)

"'n Interessante gebruik tydens die muiltrein-era was om windkrag oor die laaste skof van 24 kilometres na Port Nolloth in te span. Die skof was redelik afdraend en wanneer die landbries die dag redelik sterk gewaai het, is die muile uitgespan en in die trokke gejaag (?) terwyl 'n aantal seile gehys is wat die trein dan soos 'n groot seilskip na Port Nolloth laat beweeg het." (E.F.C.Muller, as quoted by Dirk Uys, 1977)

In the year the Namaqualand line was completed the main railway line ran from Cape Town via Stellenbosch, terminating at Wellington. (D.C.Robertson, 1978:327)
See also: Rosenthal below.

In 1876 the steam locomotives operating on the coastal plain were withdrawn because of boiler trouble and the whole line was worked by mules for the next ten years. Trucks descended the mountain pass by gravity with only brakemen in attendance on each truck. On the coastal plain the average grade was 1 in 141 which made animal haulage not too onerous provided the track had not been covered by sand. (D.C.Robertson, 1978:328)

1 January 1876: Opening of complete 93 miles of line from Port Nolloth to O'okiep. Locomotives scrapped and line entirely mule powered. (M.A.Robinson, 1980)

For comparison: 1859, construction commenced of first railway from Cape Town to Wellington; 1862, the second railway in the Cape, Salt River to Wynberg, built; 1885, railway to Kimberley opened. (Rosenthal, 1970:528,529,643)
See also: D.C.Robertson above.

Nadat die muile hul trek voor die trolliewaens voltooi het, het hulle vanself na hulle stalle terug gestap. (Van Heerde et al., 1952:19)

Note 1: Re the descent from Klipfontein by gravity: Burman (1984:44-46) says the trucks ran "down the mountain and all the way to Port Nolloth by force of gravity," D.C.Robertson (1978:328) says "Trucks descended the mountain pass by gravity with only brakemen in attendance on each truck. On the coastal plain the average grade was 1 in 141 which made animal haulage not too onerous provided the track had not been covered by sand."

Hopkins (1980:2), who apparently owed much to DC, says "loaded trucks descended the mountain by gravity with only brakemen in attendance. Animal haulage on the easier gradients of the coastal plains was not too onerous, provided the rails had not been covered by sand."

Originally I took DC's remarks about 1/141 making animal haulage not too onerous referred to haulage eastwards, and that the trucks ran westwards right through to the Port by gravity. However, when Muller's statement about the train arriving in Port Nolloth like a sailing ship came to my attention, a second look at the elevations from Annenous - below the Pass - to the Port indicated that it would not in fact be possible for trains to get all the way to Port Nolloth by gravity. They probably only ran as far as Annenous station. (However, having seen the little trucks that were in use, I take leave to doubt Muller's statement that the mules were loaded into the trucks!)

Note 2: Burke (1995:206) says: "Once on the summit (of Klipfontein Mountain) the valley southwards fell away towards the mining centre at Okiep... allowing the trucks and the few passenger wagons to run downwards by gravitation to the Okiep mining community and the terminal of the line." This is utter balderdash. Klipfontein is 3104 and Okiep 3050 feet elevation. Steyerkraal, in between, is 2240 feet. There were actually some very steep climbs on this portion of the line.

1876: Cape Copper Mining Company output 10 765 tons. (Trollope, 1973:451)

1876: A portable gallows was erected at Hondeklip Bay. (Jones, 1987)

1877: Edward Hodge sailed in May 1877 in the Walmer Castle from UK to Cape Town, and thence "in a wretched little steam tub of about 200 tons, capable of doing six knots under the most favourable conditions", to Port Nolloth... "Then the weary mountain journey of ninety four miles, taking fourteen hours (note: Bishop Simon says nineteen hours, spread over two days - see 1882), in a railway coach drawn by mules, from Port Nolloth to the Mines at O'okiep." He had accepted an offer "of the appointment of Chief Mining and Railway Engineer under the Cape Copper Company of Namaqualand, of which Messrs Taylor were the Managing Directors." He described: "the late Messrs Richard and John Taylor, eminent mine proprietors of European reputation, who shunned all sharp practices pertaining (to) company promoting and confined themselves strictly to legitimate mining." (Hodge, {1908}:38)

1877: Select Committee 23 considered a submission from the Namaqualand DC for assistance with road works. Noted that: no main road has at any time been constructed between Clanwilliam and Springbok; the DC has continually levied a rate of one penny in the pound for the purpose of keeping the existing track between these places in a passable state; but as they were unable to trace the previous correspondence on the subject, to which the DC referred in their submission, they were unable to recommend any definite action.

(Cape of Good Hope, 1877)

1877: Hondeklip Bay ceased to be regarded as a separate magisterial district on 1 June 1877, and from this date also ceased to be regarded as a port. (The Magistrate was also Sub-Collector of Customs) There was only one shopkeeper left by this time. (Smalberger, 1975:87)

1877: O'okiep: "Almost every nation finds its representatives there, English, French, German, Italian, Portugese, the Colonial Dutch, and `Afrikanders', and as for the numerous Native races, I would scarcely like to say what African race was not there. Here you see men from the far interior, West and East coast of Africa, Lascars, Indians, Kafirs, Fingoes, Hottentots, Bushmen, and the various Damara nations, and all the wonderful crosses produced by marriage amongst such a mixed population." (Cape Monthly Magazine, October 1880:210)

O'okiep: "...no better proof of a desire for industry can possibly be given than that of the great distances the various tribes come to look for employment." ("J.S.H.", 1870:94)

O'okiep had detached officials' residences, "well built and roomy, with garden ground abundantly provided with water. We had an Anglican and a Wesleyan Church, an excellent Officials' Club, with a library and billiard table, a Cricket Club and Band, and last but not least a Canteen which always wore an air of prosperity irrespective of the state of the copper market. The employees had the privelege (sic) of skilled medical attendance, and well-laid out hospitals for both white and coloured... I have observed 100 degrees exceeded on several days during each Summer. The rainfall during a period of twenty years averaged two inches at the coast, and seven and a quarter inches at the Mines, with a maximum of eleven inches at the latter, at an elevation of 3010 feet. A fair wheat crop can be realised with a fall of seven inches, and an additional inch or two will ensure a prolific crop, thanks to the fertility of the soil." (Hodge, {1908}:39)

1877: Port Nolloth is "destitute of all good things. Sailing vessels came from Swansea for the ore, and about once a fortnight a little steamer came from Cape Town bringing the necessaries (sic) of life to its inhabitants and such comforts as money can give in a place so desolate and hideous." (Anthony Trollope, 1973:449; Dickason, 1978:36)

1877: Springbokfontein virtually deserted as a result of the removal of the headquarters of The Cape Copper Mining Company to O'okiep. (Smalberger, 1975:73)

1877-1878: Port Nolloth channel "greatly improved... by submarine operations". (Anon, 1896)
See also: 1885.

1878: Edward Hodge took over as engineer and began replacing the light rails, which had so ably opened up the railway, with heavier 14,5 kilogram rails laid on cross sleepers to accommodate more powerful locomotives. (Anon, 1896; Burman, 1984)
"It is but natural that this line should, in the first instance, have been constructed economically, with a two foot six inch gauge, and iron rails of eighteen and twenty eight pounds per yard, as the whole enterprise had been carried out by the Mining Company, unaided by the Government, or the public. A remarkable instance of foresight and courage."

"Early in my appointment a commencement was made to prepare the tramway for the use of locomotives, a work that involved not only the substitution of "at first 37 pound and latterly 50 pound steel rails in place of the light iron rails, but also the regrading of many of the sections, and the flattening of quite a number of abnormally sharp curves..." This work "was commenced leisurely, but afterwards carried on with energy, and finally completed. I may state here that by flattening all the sharper curves, and by making occasional detours, the line was shortened to the extent of two miles" to ninety one and a half miles. (Hodge, {1908}:38,40)

1880: Phillips and King sold out to the Cape Copper Company. (Bulpin, 1986:177)

1880: Proposal put forward for the government to take over the railway. Proposal turned down. (Moffatt, 1972)

1880 - 1881 (22 March): First Anglo Boer War - Die Eerste Vryheids Oorlog.

1881: Springbokfontein mine reopened as a reduction in shipping costs had made it once again viable. (Note: Here once more we see the over-ruling effect which transportation has on the economy of an enterprise or of a region.) Smalberger was unable to determine just when workings were discontinued finally: he found reports of workings in 1883, and in 1889 "the workings... had increased". (Smalberger, 1975:74)

1881-1888: John Richard Williams Mine Secretary for the Cape Copper Company at O'okiep. (Rosenthal, 1953:155)

1881: Property in Namaqualand valued at 154 307 pounds for Divisional Council purposes. (Noble, 1886:323)

1881: Pella Roman Catholic missionaries obtained a "ticket of occupation", making it one of five inalienable coloured areas. (W.Steenkamp, 1975:108)
See also: 1812, 1869, 1875, 1882, 1991.

1882: A company was formed in Port Elizabeth in 1882 to open up the navigation of the Orange River. A small steamship was built in England for this purpose, and the enterprise was widely advertised. Only then did the company promoters learn the disconcerting news that there was no channel into the river for anything larger than a dinghy! (Green, 1967b:120)

Note: it appears as if LGG has the wrong date here. See 1855.
See also: 1854 (Willcox), 1855 (Green, Willcox), 1875 (Noble), 1910 (Cornell), 1950 (Graham Ross), 1979 (S.A.Navy)

1882: "Bishop Simon, a French Roman Catholic missionary, travelled to Port Nolloth in the SS "Namaqua"... He remarked that he had seen ships five times her size on the Rhone. The run lasted three days. The ship's company spent their time catching snoek, which they sold in Port Nolloth." (Green, 1967a:58)

1882: Bishop Simon recorded that the narrow gauge copper trains left Port Nolloth at 0700, reached Annenous at 1300 and Klipfontein hotel at 1700. Klipfontein was left at 0800 the following morning and O'okiep reached at 1700. (Cornelissen, 1965:49)

Note: Hodge says a 14 hour travel time: see 1877.

"Passengers were seated in open carriages, in reality only the flimsiest of wooden boxes on wheels, and these were pulled along by mules - three mules to each carriage, harnessed in single file, trotting away between the lines. Improvisation was the order of the day, and instead of a whistle the conductor was armed with a long whip. All was fine on the relatively smooth coastal lands, but once the mountains were encountered where there were steep drops of a thousand feet or more, and in places only a hairsbreadth separated the narrow track from the edge of the precipice, nerves had to be strong. Many fortified themselves for this eventuality before leaving Port Nolloth. Going up was bad enough, all had to get out and help (?), but the downhill sections were truly nerve-racking. As the carriages gathered speed the passengers had to place all their faith - and their prayers for safety - in the efficiency of the brakes and the alertness of the brakeman, a special job also assigned to the conductor." (Dickason, 1978:37)

Jean Marie Simon arrived in Port Nolloth and travelled by "special" to O'okiep before proceeding further east to his mission. His "*African Memories*" reflect a lively personality in an amusing, well written account. (Simon, 1959:7-20)

Bishop Simon also gives an amusing description of the train trip to O'okiep. (Smalberger, 1975:108,109)

1882: O'okiep's population about 2000. Trade flourished: there were eight stores. Substantial houses, of brick or stone with galvanised iron roofs. Two churches, two schools and a hospital. Twice weekly mail. Telephones and telegraph. (Smalberger, 1975:108)

1882: Pella: Father (later Bishop) Simon arrived in Pella on 4 September 1882; Father Gaudeul and Brother George left on 25 September 1882 after doing so much good for seven years. (Thunemann, 1996:1,2) See also: 1812, 1869, 1875, 1881, 1991.

1882: Port Nolloth's population about 2000. (Simon, 1959:11)

Port Nolloth described by Revd J.M.Simon, later Bishop for the Hottentots, as "simply a mining camp in the midst of quicksands - an agglomeration of shacks, not houses... Homes, hotels and even the courthouse were constructed in the same style." Passengers were landed on the jetty by basket and donkey engine. (Simon, 1959:7-20)
See also: Smalberger (1975: Fig 15) for photo of basket.

Note: This use of a large basket was not unique to Port Nolloth. It was also used in the early days in East London - see picture on page 64 of "*'n Eeu van vervoer*", Unie van Suid-Afrika, 1960.

1883: Thomas Bain, the famous road builder, completed the trans- Knersvlakte route from Vanrhynsdorp to Garies. (W.Steenkamp, 1975:116)

Note: "the Van Rhy'n's Pass and its approaches; the high road from Clan William to Namaqualand embracing a series of small mountain passes" were included in Thomas Bain's curriculum vitae dated 10 May 1893.

1884/85: First mention of possibility of finding diamonds in Namaqualand: H.Pohle, leading an expedition organised by Adolf Luderitz (after whom Luderitzbucht was named), unsuccessfully sank a 3,43 metre shaft prospecting for diamonds at Arris Drift, about 30 kilometres upstream from Alexander Bay. (Oppenheimer & Son, 1955:1)

See also: 1886.

1885: Ship channel at Port Nolloth, leading southward to the pier and anchorage, was opened by blasting and dredging to a depth of nine feet (2,7 m). The depths in the inner anchorage are from 11 to 13 feet (3,3 to 4,0 m) and in the outer anchorage 23 fathoms (42 m) (Great Britain, 1868 et seq.: 1939:251)

See also: 1877-1878, Anon; 1886, Scully; 1958, Gill.

1885: A diamond bore was employed by Charles Rowe for (copper) prospecting for the first time. (This needed 64 tons of water per 12 hours.) Until then all explorations had been carried out by the sinking of small shafts, referred to as "trial mines", on the best looking outcrops: this method was apparently still continued until about 1890. (Cornelissen, 1965:73,74)

1885: First school built in Garies. (L.M.Steenkamp, 1952:6)

Note: Steenkamp gives a detailed history of schooling, and of course also of the church's progress, in his paper, complete with dates and names.

1885: Matjieskloof, near Springbok, 365 acres with a six roomed stone house, acquired by the Oblate Sisters of St Francis de Sales in December 1885. (Simon, 1959:63)

1886: Adolf Luderitz, prospected down the last 50 miles from Nabas Drift to the mouth of the Orange River to check on the work of Pohle (see 1884/1885) in two collapsible canvas boats made in Germany. At Arries Drift, 20 miles from the mouth, two miners left to return overland, while Luderitz continued with a sailor, Steingrover. Despite being warned by one Reynier Coetzee, on 23 October 1886 they left to sail back to Luderitz (Angra Pequena) in one of the boats, the trunk of a small tree for a mast, a linen sheet for a sail. They were never seen again, but in 1925 surveyor Klinghardt found fragments of the boat about 25 miles north of the mouth. (L.G.Green, 1948:205; William Dicey, 2004:265)

Adolf Luderitz, German coloniser, while coasting in a small vessel near the mouth of the Orange River was carried out to sea and never heard of again. (Eric Rosenthal, 1961:329)

Adolf Luderitz (of Luderitzbucht) drowned while exploring the Orange River in a twelve foot canvas boat. (White, 1969:133.

See also: 1884/1885.

1886: First special condensing steam engine introduced on the (strengthened) 35 kilometre section of the railway from Port Nolloth to Abbevlaack station on 1 August 1886. (Anon, 1896; Burman, 1969:231; 1984:46)

"On the 21 August 1886 the first of these (four wheel sixteen ton Kitson) engines was placed on duty between Port Nolloth and Abbevlaacte, a distance of 22 miles." (Hodge, {1908}:40)

1 August: Two steam condensing engines put into service on the section from Port Nolloth to Abbevlaack. (Moffatt, 1972)

In 1886 the first condensing s to be used on the African continent were introduced, but mainly on the coastal section. To keep the sand out the side motion was covered on both sides and the first two locomotives gave good service until 1890. (D.C.Robertson, 1978:329)

CCMC re-introduced (illegally) steam 0-4-0 condensing engines for the lower section of the line to Abbevlaack. (M.A.Robinson, 1980)

A description of the condensing apparatus. (Smalberger, 1975:109,110)

1886: Port Nolloth had three successive newspapers. The first was "*The Busy Bee*", which was of such a nature that the mine management forbade its circulation. Then came "*The Port Nolloth Times*", circulated privately, but so critical of the mine management that it was also stopped. The last was "*The North Western Province Courier*", which enjoyed a wide circulation. (Port Nolloth Munisipaliteit, 1991)

"*The Port Nolloth Times*" was printed for private circulation. The local cricket club was named "Hope Cricket Club". "Many good and kindly inhabitants... who entertained most hospitably." (Smalberger, 1975:90)

Port Nolloth described by Scully: "Port Nolloth is a dreary and God-forgotten looking spot. Nautically, it is an open roadstead, with a narrow channel blasted through a reef of rocks, admitting small vessels in calm weather to a sort of pond." (See also: 1885.) And again: "The settlement consisted of a single row of tin shanties on a sand hill. Another sandhill, tired of the monotony of its situation, had begun to travel southward, and was slowly obliterating one end of the town." (Smalberger, 1975:90)

1886: Phillips & King sold all their possessions in Namaqualand to the Cape Copper Mining Company. These included the unsold plots, streets, open spaces and commonage in Springbokfontein, which was to cause difficulties to the municipality later. (Springbok Municipality, 1963)

1886: Scully records that "no necessity of existence could be obtained except by the special grace of... the Company's Superintendent." The virtual monopoly which The Cape Copper Company held over transportation put them in a very strong position locally. (Scully, 1913:222-225)

W.C.Scully took up his position as Relieving Resident Magistrate at Springbokfontein, then with 200 inhabitants. Scully employed convicts on the repair and maintenance of the streets and roads of the village... They also kept the village supplied with fresh water at the rate of 6 pence (5 cents) per barrel (size unspecified). (Smalberger, 1975:74,75)

1887: Steam tug 'Gnu', which had been Table Bay's second tug, was purchased by the Cape Copper Mining Company on 16 August 1887. She operated out of Port Nolloth. "Late in her career, particularly after the arrival of the railway to service the copper mines in Namaqualand, the 'Gnu' was employed as a fishing vessel around the (Cape) Peninsula. On 16 August 1916 she was wrecked while engaged in fishing in the vicinity of Kalk Bay, while still under the official ownership of Cape Copper." (A coincidence in dates here! A picture is on page 76 of Reynolds' book.)

"From the available records it appears that five tugs were based for some time at Port Nolloth. The `Nolloth', referred to by Lawrence Green (1967:60) was presumably owned by the copper companies, but could be described as little more than a wooden-hulled steam launch with one mast and a funnel mounted amidships... The `Nolloth' was used to tow passenger and ore lighters to vessels anchored in the roadstead." H.R.Moffatt says she was put in service about 1869. She is mentioned in the Harbour Master's reports of 1890 and 1891.

"A slightly larger version of the `Nolloth' was put into service by the copper companies sometime later, and was known as the `Cape'"

`Princess May' was operated by the Cape Copper Company from 17 February 1905 until at least 1932.

`Sleuthhound' was used by the CCC in Port Nolloth from May 1908 until May 1913. (Reynolds, 1981: 74-78,313-319)

See also: 1869, 1905, 1908.

1887: Steam service introduced on 1 June to Anenous, 47,5 miles from Port Nolloth, 1774 feet altitude, mean gradient 1 in 141, with a maximum of 1 in 50. (Anon, 1896)

Steam traction extended to Anenous from Port Nolloth on 1 June. (Burman, 1969b:231; 1984:46; Moffatt, 1972; Smalberger, 1975:109)

1 January 1887: Steam service extended from Abbevlaacte (reached on 21 August 1886) to Anenous. (Hodge, {1908}:40)

The steam service was extended to Anenous on 1 June 1887, during which year the second condensing locomotive was introduced. The third and last one was introduced in 1889. (Hopkins, 1980:3)

1 June 1887: Steam operations extended as far as Steinkopf. (M.A.Robinson, 1980)
Note: this date is incorrect: see 1890.

1888: Cape Copper Mining Company changed its name to The Cape Copper Company. (Cornelissen, 1965:36; Moffatt, 1972; Smalberger, 1975:note 26 on p 114)

Namaqua Copper Company acquired the rights of the Namaqualand Mining Company operating at Concordia. (Cornelissen, 1965:36)

Cape Copper Mining Company operated from 1863 to 1888. The Cape Copper Company Limited operated from 1888 to 1922. (O'okiep Copper Company {1968})

1888: O'okiep population 2000. (Von Zeil, 1989a:38)

1889: The third SS "Namaqua" lost, wrecked on this fog-bound coast. (Green, 1967a:59)
See also: 1876.

1889: Namaqualand Copper Company built a railway line from Concordia to link with the Cape of Good Hope Copper Mining Company's O'okiep line at Brakput. (Burman, 1984:46)

Connecting siding between Garrakoop/Braakpits Junction and Concordia (15 km/8 miles) constructed by the Namaqua Copper Company. (Hopkins, 1980:3; Moffatt, 1972)

Third condensing engine placed in service. (Hopkins, 1980:3; Moffatt, 1972)

"The locomotives which ran almost continuously ran up an average of 63 933 km each and hauled 415 trains each during the four years that they operated... They sometimes ran special through trains to O'Kiep... record of 4 hours 13 minutes on the up run and 3 hours 15 minutes on the down run to O'Kiep with a passenger special in May 1894." (Hopkins, 1980:3)

Construction by Namaqua Copper Company of a 7 mile branch from their Concordia Mine to CCMC's O'okiep Mine. (M.A.Robinson, 1980)

The Namaqua Copper Company in 1889 constructed a line of rail from their mines at Concordia, a distance of seven miles, to join The Cape Copper Company's line a mile and a half from O'okiep. (Smalberger, 1975:101)

1889: "During 1889 the companies started refining the copper by smelting at the mines. This necessitated the haulage of large tonnages of coke inland to the mines, resulting in a change in the traffic pattern on the line." (Hopkins, 1980:3)

The old chimney in O'Kiep built. (Mostert & Crewe-Brown, 1992:39)

"In 1889 the Company commenced to refine copper by smelting. This resulted in a change in the traffic pattern as large tonnages of coke had now to be hauled from the coast. This fact no doubt contributed to the cessation of mule traction, and also brought into use the heavier class engines weighing 42 tons, ten of which were placed in service over the years. They were made by Kitson & Son of Leeds and were the most powerful locomotives for that gauge." (D.C.Robertson, 1978:329)

1889: First whites settled in Pofadder. (W.Steenkamp, 1975:107)

1890: Coaster 'Nautilus' ran between Cape Town, Port Nolloth and SWA ports from 1890 until 1917. (Reynolds, 1981:316)
See also: 1860.

1890: 2 October: First steam train from Anenous to Klipfontein, 55 miles from Port Nolloth, altitude 3104 feet. The ascent, with a rise of 1330 feet in 7,5 miles, gives a mean gradient of 1 in 29,8, with several sections of 1 in 19. (Anon, 1896)

Note: M.A.Robinson (1980) says that steam traction was first extended as far as Steinkopf with the existing 0-4-0 locomotives on 1 June 1887. The Kitson 0-4-2 locomotives arrived in 1890.

Steam traction extended from Anenous to Paddagat with the arrival of specially built mountain engines. (Burman, 1984:46)
See "Note" at the foot of this date entry.

2 October 1890: Edward Hodge took the first of the more powerful six wheel coupled type engine, with trailing bogie, weighing with tender 40 tons, up the Klipfontein mountains "with some little anxiety, owing to the difficulty of the ascent... I question if the

Klipfontein gradient of 1 in 19 is anywhere exceeded, if equalled, where traction is effected solely by adhesion." (Hodge, {1908}:40)

Note: Theunis Uys (1995:oral) who lived in Port Nolloth in his early years, recalls that when going to High School in Springbok by train (in the 1920's) a man was seated between the front buffers of the loco going up Anenous Pass. He had a short handled dish-like scoop, with which he scooped sand from between the lines to dribble on the rails to increase adhesion/lessen wheel spin. (A similar principle to the sand boxes on latter-day locomotives.)

Ten more powerful locomotives were delivered between 1890 and 1907. Engineer Hodge, with a Mr Cook, was at the controls when the first ascended the Anenous Pass for the first time on 2 October 1890. This locomotive initially handled all the traffic as far as Ootoop, 104 miles from the coast; at the end of October the service was extended to Paddagat; and on 15 March 1893, through to O'Kiep. (Hopkins, 1980:3)

The first Kitson type locomotive, "Clara", placed in service between Anenous and Paddagat. (Note: Now a historical monument at the Nababeep Mine Museum.)
2 October: the first engine ascended the mountain. (Moffatt, 1972)

First rather powerful little mountain type Kitson engines introduced. (Smalberger, 1975:110)

Note: L.R.Dickson (1998) says these should also be described as 0-6-2 engines, as the term "mountain" is used throughout the world to describe the 4-8-2 engines, which are the most common on the 3'6" lines of South Africa. (These funny numbers apparently describe the wheel arrangement on the locomotives.)

1890: Unlike what is the case in most other instances where a river forms an international boundary, the border between South Africa and Namibia is the high water level on the right or northern bank of the Orange River. (Oberholzer, n.d.:12)

It is interesting to note that the Right Bank or North Bank became the boundary as a result of the agreement between the British and German Governments in Berlin 1 July 1890. (Surveyor-General: Cape, 1994)
See also: 1798, 1805, 1847.

1890: W.C.Scully took up post of Magistrate in Springbok until late 1892, a post which he had held for a period as Relieving Magistrate in 1886. He held the additional appointment of Special Magistrate for the Northern Border. There was also a Resident Magistrate in Port Nolloth, of whom Scully spoke - as usual!- denigratingly. (Scully, 1913:216,225,234)

1892: Mining at Springbokfontein mine finally came to an end. (Springbok Municipality, 1963)

1892: Port Nolloth's population 300 whites. (Jack Carstens, 1962:10)

1892: Winter: W.C.Scully described to LGG the masses of springbok running into the sea, drinking sea water, and dying in "countless thousands". (Green, 1946:146)
Scully gives a description of the trek (but not of the sea water incident). He "had to issue a hundred rifles and many thousands of cartridges from the government store to the farmers to enable them to protect their crops." (Scully, 1913:233)

1893: 15 March: Steam service introduced through to Okiep, 91,5 miles from Port Nolloth and

3009 feet above the sea. (Anon, 1896)

Steam service extended to Okiep on 15 March 1893. Each morning a train would leave Port Nolloth and another would leave Okiep. The trains crossed at Klipfontein station and arrived at their destinations about 4.30 pm. The record trip was a down journey of 3 hours 55 minutes, but the average trip took eight hours. The up-train used to divide into two sections during the Klipfontein ascent and the down-train adopted the same procedure at Vrieskloof. (Burman, 1969b:232)

Steam traction extended over the whole length of the railway from Port Nolloth to O'okiep. (Burman, 1984:46)

On 15 March 1893 the first... mountain engine entered O'okiep, and from 4 April 1893 the steam service was conducted between the Mines and the Port. "Before the introduction of locomotives mule trains occupied three (?) days, both on the up and down journey. Since then there has been a daily through service, which often required three trains both up and down each day. On one occasion, with my railway coach attached to one lighter 16 ton engine, I made the journey from O'okiep to the Port in three hours fifty-six minutes." (Hodge, {1908}:40)

Note: Compare with 1896, Moffatt.

15 March 1893: Steam service extended through to O'Kiep. Mule traction on the line was finally withdrawn. "At Anenous the train was split in two, and operated as two separate trains through to O'Kiep. The two trains were again halved for the ascent of the mountain pass and hauled through to Vriesfontein, where the two halves were joined for the remainder of the journey." (Hopkins, 1980:3)

Branch line from Garracoup Junction to Nababeep completed.

Note: Hodge says 1899 - see 1897, 1899.

15 March 1893: steam traction introduced to O'okiep for general traffic. (Only introduced for passenger traffic in 1896.) (Moffatt, 1972)

15 March 1893: Start of steam operations for goods traffic along the full length of the line, though mules still used for passenger traffic. (M.A.Robinson, 1980)

Mules were retained for passenger traffic until 1896. (Smalberger, 1975:110)

1894: Devastating drought in Namaqualand 1894-1897. When the rains came in 1897 a plague of locusts followed, and devoured the "tender green growth, leaving the grey, bare desert of yesteryear in their wake." (Thunemann, 1996:8)

Extremely severe drought in Namaqualand in 1895. (Smalberger, 1975:76)

1895: 152 000 pounds sterling of copper was exported. (Shields, 1971)

1895: Pella's "Encyclopaedia Cathedral" inaugurated on 15 August 1895. (Thunemann, 1996:8)

1896: Daily rail service left Port Nolloth and O'okiep each morning, crossing at Klipfontein and arriving at their destinations at about 1630. Cost of maintenance was 85 pounds per mile per annum and of improvements 10 pounds per mile per year. (Anon, 1896)

Under animal traction one or two trains had been run per day. The journey took two days, with passengers spending the night at the hotel at Klipfontein. (Moffatt, 1972)

Note: Compare with 1893, Hodge.

Last mule powered passenger "train". (M.A.Robinson, 1980)

Steam traction for passenger traffic introduced. (This had been introduced for general traffic in 1893.) (Smalberger, 1975:110)

1896: Road from Springbokfontein to Spektakel almost complete - "One of the best roads in the Colony, and one which compares favourably with those masterpieces of engineering, Bain's Kloof and Mitchell's (sic) Pass." (Anon, 1896)

1896: "O'okiep presented a picturesque appearance with its numerous trees, the planting of which first required the blasting of a hole in the rock by means of dynamite, and its many excellently arranged gardens." (Smalberger, 1975:111)

1896: Port Nolloth was being improved: a proper sanitary system established, and the cemetery cleared of the sand which had nearly obliterated it. (Smalberger, 1975:90)

1896: W.C.Scully, then special magistrate for the northern border, issued government rifles to the drought-stricken farmers from around Springbokfontein so that they could harvest the last mass migration of the springbok "trekbokke". (W.Steenkamp, 1975:92)

Note: Others say it was so that the farmers could try to keep the springbok from devastating their farms.

1896/1897: "**Die Groot Rinderpes**". In South Africa 4 500 000 head of cattle died; thanks to inoculations the Cape lost only 575 864 cattle out of 1 639 435. This was the end of the ox-drawn wagon: the transport riders switched to mules. (Burman, 1988:144,145; Rosenthal, 1970:470,471)

1897: Hodge commenced the survey and design of the branch railway from mile 87 to Nababiep in October 1897. The country was so mountainous that an eight mile line was required to cover a distance of only four miles as the crow flies, and a gradient of 1 in 22, fortunately in favour of the copper, had to be accepted. The line opened in 1899. (Hodge, {1908}:41)

1897: The first motor car, a 1,5 horse power two-seater Benz Velo, arrived in South Africa from Germany on 4 January 1897. (Cape Times, 3 January 1997:1)

1898: Spectakel conveyed ore (1400 tons per annum) by ox wagon to Annenous Station, 60 miles distant, at about 40 shillings per ton. (Smalberger, 1975:93)

1898: Nuwerus school opened with eleven students. (W.Steenkamp, 1975:145)

1899: Branch line from mile 87 to Nababiep opened on 10 February. (See details under 1897.) (Hodge, {1908}:41)

Note: Moffatt says 1893.

1899: Small smelter erected at Nababiep, which treated 60 000 to 90 000 tons of 5-8 per cent

ore per annum, and produced a regulus of 40-50 per cent copper. (Cornelissen, 1965:60)

1899: 11 October 1899 - 31 May 1902: **Anglo-Boer War / Second War of Independence / South African War / Tweede Vryheids Oorlog** . (Burke, 1995; Theal, 1917:510)

"Darter's Grave", 14 kilometres south of Kamieskroon on the eastern side of the N7, the grave of Lieutenant Charles James Darter, is the smallest piece of separately registered land in the Republic (128 square metres). (Cultural Historical Society, n.d.)

1900: Act of Parliament authorised the Namaqualand Copper Company to construct a railway line avoiding the upper section of the Cape of Good Hope Copper Mining Company's line (because of the "exorbitant price" charged for use). However this was never built. (Burman, 1984:48)

Act 7 (Namaqua Copper Company's Bill) passed authorising the construction of a line from Concordia to Steinkopf. Work not proceeded with. (Moffatt, 1972)

Namaqua Copper Company applied for and got permission to construct a line alongside the CCMC line as far as Steinkopf as CCMC were charging exorbitant tariffs over the upper, non-tariff protected section of the line. However, the two companies reached a compromise and this line was never built. (M.A.Robinson, 1980)

1900: 100 trees planted in Springbokfontein. Further planting in 1902. (Smalberger, 1975:77)

1901: The steamer "Nautilus" called at Port Nolloth each month. The German vessel "Gertrude Woermann" also used the Port. During this time of war HMS "Magpie" also called regularly to pick up (and deliver?) messages from Colonel Shelton of Okiep. (Burke, 1995:12,16)

1901: On the Port Nolloth-Okiep railway the CCC was running "eight locomotives and special passenger carriages including a brake van which was essential when descending from the high ground. Various other rolling stock included 57 buck wagons which were all in use to the mining area carrying 4 000 pounds in weight in each wagon." There were 66 mules on the railway. (Burke, 1995:15)

1901: Post cart from Okiep took 72 hours to join the railway at Piketberg Road. Burke, 1995:16)

1901: Concordia "population 2 200 including 100 whites (this also accounts for natives living in the vicinity)." (Burke, 1995:17)

1901: Nababeep population 100 whites and 1 400 coloured. (Burke, 1995:17)

1901: O'Okiep population 2 000 of whom 450 are white. Rainfall over previous 12 years averaged 7,076 inches, with the most in one month being 1,29 inches. (Burke, 1995:12,15)

Major/Honorary Lieutenant Colonel W.S.Shelton arrived in Okiep on 20 January. (Burke, 1995:6,7)

1901: Port Nolloth population 350 whites and about 1 000 coloured. Water is brought in tanks

by rail from a pumping station five miles away on the Okiep railway. The distance by sea to Cape Town is 285 miles. The Port is an extremely hazardous one for landing owing to a dangerous bar off the Port. This can delay the landing of passengers for as many as five or six days. The chief trade at the Port is the shipment of copper ore by the two mining companies, Cape Copper Company and Namaqua Copper Company.
Resident Magistrate G.E.Syme Esq. (Burke, 1995:17)

1901: Springbokfontein was the headquarters of the Resident Magistrate (J.B(H?).van Renen Esq.) and had a jail. There was a mine there, but not working, also a telegraph office, population 170 including 70 whites. (Burke, 1995:16,17,19)

1902: 4 April 1902: last train arrived in Okiep from Port Nolloth. (Burke, 1995:110)
Note: that is, the last during the siege of Okiep.

1902: NababEEP the second most important producing mine of The Cape Copper Company. (Smalberger, 1975:94)

1902: O'okiep's population about 1000, of whom some 300 were white: four stores, works, etc, three churches and some well-built stone houses. (Smalberger, 1975:111)

1902: Springbokfontein: 100 trees planted in 1900. Further planting in 1902. (Smalberger, 1975:77)

1902: 4 April to 4 May: Siege of Okiep by General J.C.Smuts.
See: "The siege of O'okiep - guerrilla campaign in the Anglo-Boer war" by Peter Burke.
1 April, 4.10am: Springbokfontein surrendered after being under attack since the previous day by General Smuts with 300 men using dynamite grenades, and sharp shooting by Deneys Reitz. (Burke, 1995:100)
4 April, 4.45pm: Concordia surrendered, without firing a single shot, to General Smuts, now with 500 men. (Burke, 1995:105)
31 May 1902: Peace of Vereeniging signed after discussions which began on 15 May; end of the Anglo Boer War/Tweede Vryheids Oorlog, which began on 11 October 1899. (Burke, 1995:193-195)

Using dynamite captured at Concordia Mine, the Boers more or less wrecked the railway from mile 36 to O'okiep. "No less than forty five bridges and culverts were blown up, six watering stations were destroyed, and in many places the permanent line was thrown out, especially in Garracoop Valley, where a continuous length of one and a quarter miles was cast into the river bed." On 5 May 1902 "I commenced the arduous task of restoring the railway and, assisted by a few men of the Royal Engineers, pushed the work on with such energy that we were able to get a train through on the 21 May." (Hodge, {1908}:44,45)

"...General Smuts and his troops besieged O'Kiep. General Van Deventer moved down the line, destroying what he could until stopped at Anenous. "On 26 April 1902 General Smuts travelled down the line and breakfasted at Anenous with H.R.Moffatt, then General Manager of the Namaqualand Railway, on his way to Cape Town and ultimately Vereeniging for the historic peace conference." (Hopkins, 1980:5)

Note: Jannie Smuts in fact broke his fast with N.E.Moffatt (the father of H.R.Moffatt) who was Traffic Manager of the railway from 1874 to 1925.
See D.C.Robertson below.

H.R.Moffatt was only six years old when General Smuts passed through Klipfontein. (Foreword by C.Willman to "The siege of O'okiep" in Box 1 of the Moffatt Papers, MSB 356 at the South African Library.)

General Van Deventer damaged the railway line west from O'okiep. Train service was stopped from 2 April to 21 May 1902. The repairs were carried out by a section of the Royal Engineers under Lieutenant Frith. (Moffatt, 1972)

General S.G.(Manie) Maritz and General Jan Christian Smuts occupied Springbokfontein in 1902. In April they were besieging O'okiep when the first reports of peace negotiations reached them. (Muller, 1981:358)

"In the closing stages of the Anglo Boer War General Smuts with his commandos moved into the northwest and besieged O'okiep. General Vandeventer moved down the line destroying what he could until brought to a halt at Anenous. On 26 April 1902 General Smuts travelled down the line as a passenger and breakfasted with Mr N.E.Moffatt, father of our Past President (H.R.Moffatt), at Anenous. General Smuts was on his way to Cape Town and thence to Vereeniging for the historic Peace Conference which ended hostilities." (D.C.Robertson, 1978:329)

Springbokfontein attacked and taken after seventeen hours of fighting. (Smalberger, 1975:77)

O'okiep besieged from 3 April to 3 May 1902. (Smalberger, 1975:111)

General Van Deventer sabotaged the railway line between Okiep and Anenous, causing the line to be closed for two months - April and May 1902. (W.Steenkamp, 1975:48)

See also: Gert Kotze's excellent "Die Anglo-Boereoorlog in Namakwaland" (47 pages).

1903: "Gertrude Woerman" wrecked near Port Nolloth. The Woerman Line ran a coasting service from Cape Town to South West Africa. (Rosenthal, 1970:506)

1904: O'okiep population 2106, which was 10,5 per cent of the total Namaqualand population. (Von Zeil, 1989a:53)

1905: Steam tug 'Princess May' was operated by the Cape Copper Company from 17 February 1905 until at least 1932. (Reynolds, 1981: 318-319)
See also: 1887.

1905: The tenth and last of the Mountain type locomotives, "India", placed in service. Government Commission recommended that the acquisition of the Port Nolloth - O'okiep railway line was justified. This resolution was not accepted by the Government in the following year. (Moffatt, 1972)

1905: Edward Hodge left the employ of the Cape Copper Company in September 1905, after twenty eight years service in Namaqualand. (Hodge, {1908}:45)

1905-1947: Solomon Rabinowitz active in Namaqualand, mainly from his base at his store in Steinkopf. (Green, 1967b:81-88)

1906: Springbokfontein's population 67 whites and 44 blacks. (Smalberger, 1975:77)

1907: Arising from a recent meeting in the (Cape Town) City Hall, a deputation supported by several members of the Cape Parliament waited on Dr Jameson and Dr Smartt to urge the taking over of the Namaqualand Railway. The Premier and the Commissioner expressed themselves (diplomatically?!) regarding the general principle of opening up Namaqualand by means of better railway facilities. (South Africa, 1907; see also 1912)

1907 to 1913: O'okiep mine electrified, also some street lighting and in the houses of senior staff. (Von Zeil, 1989a:55)

1907: Springbokfontein's population 67 persons. (Smalberger, 1975:77)

1908: Steam tug `Sleuthhound' was used by the CCC in Port Nolloth from May 1908 until May 1913. (Reynolds, 1981: 319)
See also: 1887.

1908: The Namaqua Copper Company (mainly Concordia) employed 669 persons: 58 whites and 611 blacks. (Smalberger, 1975:103)

1908: Nababeep's black population at least 2000. About a quarter of these were employed on the mine, with 54 whites. (Smalberger, 1975:95)

1908: First State-supported schools in Namaqualand started by Revd A.D.Luckhoff who came from Wellington with a small group of teachers. The schools extended from Mesklip to Namies. (W.Steenkamp, 1975:153)

1909: Springbokfontein Public Library finally established, after an abortive attempt in 1904. (Smalberger, 1975:77)

1909: Seven small diamonds found in the vicinity of Alexander Bay by Ernst Martin, a hotel keeper of Aus. He was doubtful of the payability of his discovery, and eventually decided against working his discovery. (Oppenheimer, 1955:2)

1909: The Mission Stations and Communal Reserves Act, No 29 of 1909, "...prohibited the `natives' of the territory from any legal claim to mineral rights on the land which was reserved for them."

Note (i): Clause VII of the "Ticket of Occupation" issued for Steinkopf on 9 December 1874, had reserved to the Government or its agents all mineral rights. (Smalberger, 1975:58,59,note 28 on p 64)

Note (ii): the Government retains the mineral rights for all non-freehold (that is quitrent, or virtually all) rural properties, whoever may be the owner or occupant, as far as my recollection goes from my days in the field - GLDR.

1910: Cornell arrived in Port Nolloth in August 1910 in the s.s.`Hollopes' in thick fog; "by midday the sun had got the better of it, and we were slung overside in a big basket, dumped into a waiting lighter and towed ashore... "A long row of low shanties, mostly of corrugated iron, almost level with and facing the sea, on a narrow path won from the desert of white powdery sand stretching behind it; not a tree, bush or sign of vegetation except the

bright hues of the cherished pot plants adorning the tiny stoeps of some of the dwellings on the `front', whose owners doubtless liked to remind themselves that there are other things on earth beside sand and sea and the Cape Copper Company.

"A fog almost every morning, mournful surroundings made more mournful by the incessant tolling of the bell-buoy rocking on the dangerous bar, the muffled crash of surf on a sandy shore and the periodic boom of the detonator from the signal station. Then, when Father Sol has vanquished mist and fog, an hour or two of intense heat, and the glare from white sand and burnished sea and sky sufficient to blind one; this again followed by the uprising of the prevailing wind, which, if kind, may for a time make life tolerable, but which usually means a change infinitely for the worse, a change to sand, whirling and driving in all directions, penetrating every house, every room, every orifice, choking and blinding one and making the `bathless' hotel absolutely unendurable."
(Cornell, 1920:94,95)

"Passengers to Port Nolloth in 1910 travelled by the SS "Hollopes", and they were slung over the side in a basket and landed by harbour tug. Pot plants on the stoeps of Port Nolloth were the only signs of vegetation. There was a bandstand in the middle of the main street along the waterfront, with the jetty at one end and the makeshift lighthouse at the other; just an oil lamp on a tripod of rails." (Green, 1967a:64)

See also: Smalberger (1975: figure 15): photo of basket.

Note: baskets were also used in East London and, I think, in Mossel Bay.

1910: "The mouth of the Orange River is simply a wide expanse of mud flats, interspersed with low islands, and here and there long, lagoon-like stretches of water. Most of these latter are stagnant and isolated, and it is only after tedious wading knee-deep in mud and water that a channel is reached which still moves almost imperceptibly towards the long sand-bar closing the actual mouth from bank to bank, and through (or under) which the river, in the dry season, percolates into the sea. Upon this bar the white Atlantic rollers were breaking, at high tide sending the salt water surging up the river several miles..."

A description of the river upstream of the mouth follows. (Cornell, 1920:109)

See also: 1854 (Willcox), 1855 (Green, Willcox), 875 (Noble), 1882 (Green), 1950 (Graham Ross), 1979 (S.A.Navy).

1910: Namaqualand Divisional Council discontinued the levying of tolls on roads.

At various times tolls had been levied at the following places: two at Hondeklip Bay, one at Springbokfontein, one at the outspan on the Buffels River, one at Augrabies on the road to Port Nolloth, one at Port Nolloth as also one at Oudaas near Concordia, and one each at Bowesdorp, Njaikoois and Garies. (Van Heerde et al., 1952)

Note: according to Etienne de Villiers toll fees were generally abolished as from 31 December 1918.

1910: Richtersveld inhabitants: "...tall, thin, spare yellow men with rudimentary noses, high cheek bones, oblique eyes, and the Tartar appearance of the true Hottentot; sardonic-looking Bastards with aquiline noses and faces of a pronounced Jewish type; here a blubber-lipped, grinning Christy Minstrel, black as ebony, and all rolling eyeballs and gleaming teeth; there a big nondescript with red hair and a skin all piebald with huge freckles; by his side... the puckered physiognomy, all tattoo marks and wrinkles, of a pigmy Bushman.

"This extraordinary race-mixture to be found among the so-called 'Hottentots' of Richtersveldt is to be accounted for by the fact that the lower reaches of the Orange River bordering their territory was at one time, and to a minor degree is still to-day, a sanctuary for refugees from every tribe in South Africa. Flying from justice or persecution, they sought this remote spot, intermarried with the Hottentots, and have helped produce a tribe, or community, as heterogeneous as it is possible to conceive." (Cornell, 1920:106)

"Indolent, shiftless, and hopelessly degenerate, these Richtersveld Hottentots, nominally Christians, have all the failings of their savage forefathers, and of the white man whose 'faith' they have adopted, without the good qualities of either... A mass of superstition, a race of cadging, whining beggars, the only qualities they ever possessed - hardihood, courage, endurance - have been emasculated by their newly acquired 'religion', and they are the least likeable of any natives I have ever had to suffer." (Cornell, 1920:157,158)

Richtersveld, named after an old missionary, is the hot country in the last great loop of the Orange River before it reaches the sea. It is the home of the last pure Hottentots south of the river, the very last primitive, Nama-speaking people in the Union. They are still there, living on the milk of their tiny herds of cows and goats. In the old days some of them contrived to grow a little wheat on the granite Mountain-tops where rain sometimes fell. Such brave efforts are too strenuous for the present generation. They dig out the edible roots like the Bushmen of old, and collect gum from the thorn trees along the river. Kuboos is the "capital" of the Richtersveld Hottentots, just a stone church and mission house and a few mat-huts which these nomads carry around with them when they trek in search of grazing, (Green, 1955:238)

See also: 1803 (Walker, 1928:97)

1910: **Union of South Africa.** On 31 May the Act of Union came into force in terms of the South Africa Act passed by the British Parliament in 1909. (Rosenthal, 1970:529)

1911: Garies, originally founded in 1845, became a Village Management Board. (L.M.Steenkamp, 1952:7)

1911: O'okiep's population 2439, which was 10,5 per cent of the total Namaqualand population. (Von Zeil, 1989a:53)

1911: Springbokfontein's name changed to Springbok. (Phyllis Jowell, 1994:69; Mostert & Crewe-Brown, 1992:35; Rosenthal, 1970:543; Springbok Municipality, 1963; W.Steenkamp, 1975:41; Suid-Afrika, 1980:7)

Springbokfontein was previously known as Guchas, meaning "waar die springbok drink". (Port Nolloth Municipaliteit, 1991)

A school and boarding school established at Springbok on five plots granted for this purpose by The Cape Copper Company. (Smalberger, 1975:77)

See also: (i) Gert Kotze, 1999, Addendum G, for photograph of Springbokfontein at end of 19th century, and for aerial photograph of Springbok in 1979
(ii) 1862.

1912: A.D.Lewis, an irrigation official, explored the Orange River from Pella to the mouth. (Green, 1967b:81-88)

1912: A deputation of residents of Namaqualand and several members of the Cape Town Chamber of Commerce waited on Minister (of Railways and harbours) Sauer to ask for the (Union) Government to take over the CCC's Namaqualand railway. Mr Jagger quoted figures to prove it would be a paying proposition for the Government. (Just why he considered it justified for the Government to take this nest egg from its owners is not recorded!!) Mr Sauer said the matter would be considered with the next Railway Bill (standard answer to deputations!!) (South Africa, 1912; see also 1907)

1912: More mining being done in Nababeep than in O'okiep. O'okiep was the headquarters of the CCC. (Smalberger, 1975:95)

The Namaqua Copper Company (mainly Concordia) employed 562 persons: 52 whites, 463 black men and 47 black women. (Smalberger, 1975:104)

1913: Carl Weidner, 'n kwatserige Duitser, was die pontbaas te Goodhouse. Een staaltjie: nadat die Katolieke Biskop se motor in die middel van die vol rivier van die pont afgeval het was Herr Weidner se lakonieke kommentaar: "My Lord, nou kan u maar net die helfde van die pontfooie betaal!" (Schumann, 1987)

Carl Weidner settled at Goodhouse, initially as manager for an English company but later on his own account. Within a few years he had 86 irrigated hectares of tropical fruits. He constructed and ran the pontoon ferry, and it is said of him that when, in the early days, it sank in midstream with one's car on board he charged only half price. (Willcox, 1986:97)

1914-1918: **World War 1 : The First World War : "The Great War"**.

Port Nolloth was provided with a wireless station, placed there in case the war reached the South African coast. "A submarine was reported by a farmer... An old soldier... claimed to be the only man who had ever been sent out on horseback to look for a submarine." (Green, 1967a:64)

1914: First registration of drivers' certificates. 13 persons owned cars in Namaqualand, of whom ten were resident in Springbok. (Smalberger, 1975:78)

1914: Rebellion. Maritz fought in Namaqualand against Smuts; two old allies of the 1899 war. (W.Steenkamp, 1975:177)

1915: Die skeepvaardienste op Port Nolloth, wat voorheen meestal deur Duitse skepe voorsien is, is deur Thesen's oorgeneem. (Verburgh, 1966b:130)

1915: South African Railways: Graafwater to Klaver: The continuation northward from Graafwater was commenced in July 1911 and reached Klaver on 15 November 1915, having been held up firstly by drought and then by having partially completed bridges washed away. (Burman, 1981:10)

South African Railway line extended from Graafwater to Klaver. (Cornelissen, 1965:53)

Note: see 1925 and 1927 for more detailed chronology of rail construction on this line.

1915: Railway to Namaqualand: a deputation from Namaqualand, including the O'Okiep mines, waited on Minister of Railways Burton. They asked for the line not to be stopped at Klawer. Sympathetically received; further route surveyed. But the drop in copper price after WW1, and the consequent closing of the mines, resulted in no action until 1925. (Scholtz, 1947:1)
See also: 1925, 1933, 1937, 1945, 1947.

1917: Cape **Divisional Council and Roads Ordinance** promulgated. The chief provision was that one half the expenditure on roads would be from Provincial funds, the control of the roads still being under the DC's, subject to certain conditions. In addition, Province could out of its own funds build roads, which would thereafter be maintained by the DC at their expense. A lack of finance proved to be the main snag.

1917: Cape Copper Company het besluit om sy werksaamhede te staak. (Springbok Municipality, 1963; Van Heerde et al., 1952:20)
See note under 1919.

1917: Pofadder: First plots surveyed. (W.Steenkamp, 1975:107)

1918: H.M.Kingsbury, a graduate of Harvard University, regarded as "the father of mining geology in Namaqualand", submitted his first report on 18 July 1918. (Cornelissen, 1965:76)

Mining operations were stopped in 1918. (Joe Jowell, 1962:2)

1918: Commencement of the worst depression in Namaqualand's history, from 1918 to 1927. Exacerbated by periods of drought, one lasting for four years. Cape Copper Company, the last copper company to survive, closed down. (Cowie, 1929)
Note: Cornell says 1919; Dept Fisiese Beplanning (Suid-Afrika, 1980) says 1920, for depression.

"Copper mining operations were forced to a halt at the close of the First World War as a result of the South African Government's decision to stop all exports of copper ore to Britain, so that the cargo-carrying capacity of ships could be employed for the conveyance to Britain of foodstuffs and articles of greater importance than copper." (Smalberger, 1975:104)

Following the stoppage of shipments to Britain, The Namaqua Copper Company judiciously suspended its chief operations in May 1918, and disposed of all its metal to Japan at an excellent price.

Note: all operations were stopped on 17 June 1931.

The Cape Copper Company, on the other hand, struggled on and persisted with operations until the end of April 1919, when they stopped all operations by cabled notice. (Smalberger, 1975:112)

See note under 1919.

1918: "Andrew Ovenstone... took a boat up to the little fishing centre that was then better known as a flourishing copper port. He was impressed... and on 18 November 1918, the 10 500 pound capital of... John Ovenstone Limited was increased to 35 000 pounds in order to... develop a rock lobster factory at Port Nolloth... out of (sic) the sand dunes."

(Gill, 1958:19)

"Andrew Ovenstone, travelling two hundred miles by horse and cart to O'okiep from the main railway line, and thence a further seventy-five miles on the copper mining railway to Port Nolloth,... built a factory from the sand dunes at the southern end of the bay."

(Gill, 1958:26)

Note 1: However he may have travelled, he got there, and when the copper mines closed down the next year Ovenstones' factory was providing much-needed employment in the town.

Note 2: John Ovenstone revisited Scotland around 1916 and died there in 1919

(Gill, 1958:19).

John Ovenstone opened his fish factory in Port Nolloth. (Andre van Graan, 1994:oral)

1919: Cape Copper Company closed their mines. (Burman, 1969b:232)

June 1919: Cape Copper Company ceased operations : their mines closed.

(Cornell, 1920:95-footnote)

April 1919: Cape Copper Company shut down its mines in Namaqualand.

(Phyllis Jowell, 1994:69,90)

Cape Copper Company terminated operations at the end of April 1919.

(Marais, 1987:3; Smalberger, 1975:112)

Note: Springbok Municipality, Van Heerde say 1917 for CCC closing down;

Cowie says 1918;

Burman, Cornell, Phyllis Jowell, Marais and Smalberger say 1919;

Cornelissen, Dept. Fisiese Beplanning (Suid-Afrika, 1980) say 1920;

Moffatt says "early in the 1920's".

1920's: "Onseepkans, remote though it is, ranks as an official 'port of entry' from South-West Africa into the Union. You can have your car taken across the river in a rusty iron boat, a precarious voyage at the best of times. The people want a bridge, and they even talk hopefully of a railway line that will cross the river at Onseepkans and bring Windhoek nearly 400 miles closer to Cape Town." (Green, 1948:110)

Ferry at Onseepkans run by Niklaas van Rensburg and his younger brothers, who farmed the southern bank. Apparently quite a large boat which they had obtained somewhere (not home built) and which they rowed across the river even when it was flowing pretty full - it was not a pont: there was no wire across the river. They carried up to 50 sheep or goats (cattle swam alongside the boat) when they wanted to make use of the grazing on the north bank. Wagons were carried in the boat, with their wheels removed. They fitted a frame over the boat when they carried cars or lorries - the lorries were so wide that their wheels were outside the boat's side. Small (3 ton or so?) lorries. Large stones were used to ballast the boat when using the frame for vehicles. Mrs Vlotman proudly says that, unlike Herr

Weidner at Vioolsdrift, they never lost a vehicle overboard! (See 1913). (Schumann, 1995:oral; Vlotman, 1995:oral)

1920s: The slump which hit the world markets after World War I brought hard times to Namaqualand and the railway sometimes carried no more than 10 to 15 tons. But even when the mines closed in 1919 the railway was still earning enough to pay its way and the company allowed it to continue functioning. Twice a week John Meadows, station master at Okiep, would take the train down to Port Nolloth. Though he did not do the actual driving he was the conductor, book-keeper and station master; in addition he would supervise the off-loading of the train, and the loading at Port Nolloth, where they slept over that night. Next day the train would start the return journey to Okiep. (Burman, 1969b:232)

"After 1920, when a post-World War 1 slump in the price of copper hit the market, a skeleton service was run twice a week, one train in either direction per day (??), until 1937 when the various mining companies were taken over by the O'Okiep Copper Company. Two 180kW diesel locomotives took over from the indomitable steam locomotives for the final five years of operation until 1942." (Hopkins, 1980:5)

"Early in the 1920's", when the Cape Copper Company closed its mines, normal service on the railway was replaced by a skeleton service, until 1937 when the O'okiep Copper Company took over the property. (Moffatt, 1972)

Note: see above for various dates of closing of CCC.

Jack Meadows was the man who practically single-handed kept the railway operating. (Rabinowitz, 1994:oral; Smalberger, 1975:113)

"The line had its heyday until 1920 when the falling price of copper reduced production considerably if not stopping it completely. A skeleton service was run from 1920 until 1937 when the O'okiep Copper Company took over the old mining companies. (D.C.Robertson, 1978:329)

"During the period from 1919 to 1937 the railway continued to operate, run by a single individual, one J Meadows." (M.A.Robinson, 1980)

1920: Cape Copper Company closed down their mines. (Cornelissen, 1965:36)

All copper mines closed due to a shortage of capital. (Suid-Afrika, 1980:5)

See note under 1919.

1920: Port Nolloth's only source of revenue was the crayfish factories. (Port Nolloth Munisipaliteit, 1991)

1920: The Stone N.G.Church in Springbok completed: built of blue granite. (Springbok Municipality, 1984.)
Estimated cost 18 000 pounds. (Cultural Historical Society, n.d.)

Springbok's church built. (Van Heerde et al., 1952:36)

1921: O'okiep's population 1025. (Von Zeil, 1989a:61)

1921: 16 June: Springbok became a Village Management Board. This lasted until 1933.
(Van Heerde et al., 1952:19)

Note: Anon (1990), Phyllis Jowell, Springbok Municipaliteit say 1922 for VMB.

1922: The Cape Copper Company, Limited operated from 1888 to 1922.
(O'okiep Copper Company, {1968})

1922: Pofadder: Dutch Reformed Church built. (Namaqualand RSC, 1995:14)

1922: Eerste dorpsbestuur op Springbok gekies. (Anon, {1990})

"Oom John" Hunter Roux was the chairman of the first Springbok village management board when it was established in 1922. (Phyllis Jowell, 1994:79)

The Springbok Jewish community acquired the old D.R. church as a synagogue, as the new Klipkerk was now in use. This was used until 1929 when a new synagogue was built. (Only one condition was attached to the sale of the old church: the building could not be resold to the Catholics) (Phyllis Jowell, 1994:71)

Springbok Dorpsbestuur op 27 Junie 1922 gestig. (Springbok Munisipaliteit, 1963)

Note: Van Heerde says 1921 for VMB.

1923: Kamieskroon church foundation stone laid by Wed. C.A. van der Westhuizen. A most suitable inscription in this village surrounded by mountains:
"Ik hef myne oogen op naar de bergen van waar myne hulp komen zal".
(Foundation stone in Kamieskroon)

1924: Kamiesberg: afkomstig van die Namawoord Kameeras. Ras beteken berg, en Kameeras beteken bondelberg. (Die Burger, 1981)

Surveyor Power laid out Kamieskroon. (Engelbrecht, 1994)

Kamiesberg: "grass mountains". (Phyllis Jowell, 1994:17)

Kamieskroon came into being when the village of Bowesdorp 8 kilometres to the north moved there due to a lack of water. The name is of Khoi-Khoi origin and probably means "grass veld mountain". (Mostert & Crewe-Brown, 1992:43)

Julie 27, 1924 word die nuwe kerk op Kamieskroon ingewy.
(Mostert & Crewe-Brown, 1992:44; Oberholzer, {1993}:53)

"In 1924 the church, school, police station, traders and residents were all moved from Bowesdorp to the new town of Kamieskroon. "A huge complex of granite mountains, known to the Nama Hottentots as the Thamies, meaning "a jumble", surrounds the little village of Kamieskroon. It is overlooked by a peak with a cleft in its summit known as the "crown"" (Reader's Digest, 1978:166)

See also: 1864 (Bowesdorp)

1925: Further deputation (see 1915) from Namaqualand, led by Koos Mostert MP, to Minister of Railways. Told the line would not be economic, but finally grudging approval was given for an extension of 80 miles to Bitterfontein, but only as relief works. (Scholtz, 1947:1)

Enabling Act for the construction of the line from Klaver to Bitterfontein passed by Parliament. Previous enabling legislation for other sections of the line were passed in:

1874: Kraaifontein to Malmesbury

1898: Malmesbury to Eendekuil

1906: Eendekuil to Graafwater

1911: Graafwater to Klaver

(Wynand Nortje, 1994:oral)

Standard gauge (3'6") railway line from Cape Town reached Bitterfontein.

(W.Steenkamp, 1975:48)

Note: Steenkamp has the incorrect date here: the enabling Act was only passed in 1925; the line reached Bitterfontein in 1927.

See also: (i) 1915, 1933, 1937, 1945, 1947.

(ii) annotations re this railway line under 1927.

1925: Government Roads and Bridge Committee reported on the provision of blacktop on rural roads. (R.A.F.Smith, 1973:253)

1925: July: Jurie Kotze of Springbok drove the first car (a Nash) through to Port Nolloth with four passengers, of whom Jack Carstens was one, by deflating his tyres for the last 15 miles of soft sand. (Jack Carstens, 1962:45,46)

Note: On page 72 Carstens says it was in 1924 (?)

1925: Jack Carstens, with his schoolboy cousin Percy Hughes, discovered the first registered diamond in Namaqualand at a site in an old river bed, a tributary of the Kama River, quite near the north-west boundary of the farm O'beep, about six miles to the south of Port Nolloth, from where a coloured man, Van Reenen by name, had brought his father diamondiferous gravel before the War. (Jack Carstens, 1962:55,56)

"The first discovery of diamonds along the Namaqualand coast in August 1925 was made by Jack Carstens... on the farm Oubeep. (De Beers, {1994})

"Among the very early residents of Port Nolloth was Captain R.Carstens, a master mariner who was port and shipping manager of the Cape Copper Company. His son William opened a store there, and in 1913 he prospected for diamonds, sent various gravels to Cape Town, and was told that they were "without doubt diamondiferous"... William's son, Jack, served on various fronts during the war... He found the first diamond in Namaqualand on 15 August 1925. It was a half-carat stone, covered with three feet of earth at a spot six miles south of Port Nolloth. This was not a rich deposit, but it did pave the way for the great discovery further up the coast". (Green, 1967a:64)

The gravel samples from a river bed on the farm Oubeep, six or seven miles from Port Nolloth, were brought to William Carstens in 1913 by a farmer. (Lehman, {1955}:94)

On 15 August, 1925 an ex-soldier Jack Carstens discovered diamonds at Oubeep near Port Nolloth. (Namaqualand RSC, {1993}:17; 1995:27)

In 1925 het Jack Carstens 'n diamant-ontdekking naby Port Nolloth gemaak. (Oberholzer, {1993}:21)

"Ene Jack Carstens het hom in Indie bevind waar 'n fortuinverteller hom vertel het dat hy na 'n ver land sou reis waar hy met blink klippies sou werk. Kort hierna het Jack siek geword en na Port Nolloth, waar sy pa 'n handelsaak gehad het, teruggekeer om te herstel. Diamante is in Namibie ontdek en Jack se pa het geweet van gruis by Oubeep se pan. Met sy ma se twee meelsiwwe, 'n paar arbeiders en 'n pakdonkie is hulle na Oubeep. Daar het hy van die gruis gewas en dit sommer op 'n stuk koerantpapier op die sand gesorteer. Op 25 Augustus 1925 het Jack se eerste diamant tussen die gruisklippies geskitter. Hierdie steentjie het die hele Namakwaland in rep en roer gebring. Fortuinsoekers, delwers en opsiesmense het die kus oorstroom." (Port Nolloth Munisipaliteit, 1991)

Kleinzee alluvial diamond diggings discovered in 1925, taken over by the Cape Coast Exploration Company, and afterwards exploited on a restricted scale by De Beers Consolidated Mines. (Rosenthal, 1970:294)

Percy Hughes, in an interview in 1989, says that he and his brother Richard were scratching around in the claim while Carstens and Frank Miles were packing up the camp, and that he then found the first diamond, which they took to Jack Carstens over at the camp. They then abandoned their plans to strike camp, but in the next week no further stones were found. (Von Zeil, 1989b)

In August 1925 Captain J.E.Carstens found the first diamonds in Namaqualand. (Willcox, 1986:87)

See note under 1926.

1925: Alexander Bay founded. (Rosenthal, 1970:14)

1925: Hondeklip Bay canning factory opened by Namaqua Canning Company/Oceana Fishing Group. (Schreuder, 1994)

1926: In June 1926 Captain Jack Carstens found the first diamonds in the marine terraces 10 kilometres south of Port Nolloth with his cousin Percy Hughes. (Bulpin, 1986:181)

In 1926 F.C.Carstens found the first diamonds six miles from Port Nolloth. (Cowie, 1929)

"And then in June 1926 Jack Carstens found a diamond. It was not the first to be picked up in Namaqualand." Earlier prospectors...: Fred Cornell; Ernest Martins; "Champagne Charlie" Steenkamp; Martin Heyes and William Carstens. (Lehmann, {1955}:57,58)

In 1926 diamonds were found on the beach at Port Nolloth. (Mostert & Crewe-Brown, 1992:41)

The "huge deposit of alluvial diamonds... was discovered in June 1926 by Captain Jack Carstens, an officer in the Indian Army who was spending his leave visiting his father, a trader in Port Nolloth". (Reader's Digest, 1978:169)

Note (i): Carstens, De Beers, Green, Namaqualand RSC, Oberholzer, Port Nolloth Municipaliteit, Von Zeil, Willcox say 1925 for Jack Carstens' first find; Bulpin, Cowie, Dept Fisiese Beplanning (Suid-Afrika, 1980:6), Lehmann, Mostert & Crewe-Brown, Reader's Digest (1978:169) say 1926.

Note (ii): Jack Carstens is very definite about 15 August 1925 for his first find near Port Nolloth, and says Alberts discovered the first stone at Kleinzee Annexe (no date, but either late 1925 or early 1926).

1926: In early 1926 Jack Carstens moved from O'bees to Kleinzee (on which they had an option) to prospect, having heard that Alberts had discovered diamonds on Grootmist. He found that "a syndicate from Springbok was working... on Kleinzee Annexe and not, as reported, on Grootmist." (Jack Carstens, 1962:72-77)

"Jack Carstens, with the help and encouragement of the owner Jan Kotze, prospected for and found diamonds on the south-west corner of Kleinzee farm in 1926. And so the story of Kleinzee Mine began." Kleinzee operations reported to Department of Mines as having commenced, prospecting and digging, in December 1926. (De Beers, 1976:3)

Mr de Villiers had farmed at Kleinzee for sixteen years, and was building a school. He walked in the veld with the mason, Alberts, looking for lime with which to whitewash the walls. Kicking the ground to see if there were traces of lime, he kicked out a diamond. A syndicate was formed in Springbok and within sixteen days De Villiers had found ten more diamonds, and a week later they registered 600 carats, and sold them for 6 000 pounds. Then "a large company" bought the claims for 35 000 pounds. A week later the famous Kleinzee crater was opened, and the first haul was valued at 120 000 pounds. (Green, 1967b:97-111)

Diamonds were found at Kleinzee early in 1926 by a building contractor named Alberts, and at Alexander Bay in November 1926 by a syndicate of attorneys and shop keepers under the leadership of I.Gordon. (Namaqualand RSC, {1993}, 17; 1995:27)

Robert Kennedy, Misdall and White discovered diamonds at the Cliffs, 11 miles north of Port Nolloth in January 1926. In August 1926 attorneys Israel Gordon and J.Scholtz and P.H.de Villiers, the school master of Grootmist, held options around Kleinzee, at the mouth of the Buffels River 32 miles south of Port Nolloth. "One day, by sheer luck, in the course of building a new school a diamond was picked up on the farm Kleinzee. Within a month they had recovered no less than 500 carats, whereupon the magistrate stopped further prospecting as a payable deposit had certainly been proved."

"Solomon Rabinowitz dug deep pits at Buchuberg, 40 miles north of Port Nolloth.

By 9 November 1926 he had declared 334 diamonds weighing 74,5 carats, and the vicinity of Buchuberg had been pegged, although nobody except Rabinowitz did any work there.

"Around Alexander Bay, most of the area was also now pegged, by a Luderitzbucht Syndicate and the Gelb brothers, and by diverse people along the southern bank of the Orange River to Loubser's claims at Sendlings Drift."

The elevated gravels two miles to the east of Alexander Bay were pegged in the first week of November 1926 by a syndicate consisting of the Caplan and Gordon brothers and Loubser, all either from Steinkopf or Springbok. (Oppenheimer & Son, 1955:5-8)

Note: Rosenthal (1970:294) says 1925 for the diamond discovery at Kleinzee;

1926: "...Dr Hans Merensky, whose geological discoveries rank amongst the most important in the world, started digging in the area. He was looking for a big, horn-shaped, fossilised oyster shell as he believed that if he came across such shells there would be diamonds near at hand. He followed his 'oyster line', paid 17 500 pounds for the Alexander Bay claim towards the end of 1926 and, on 14 January 1927, he proved his 'oyster theory' by finding his first diamonds, the largest stone of which was 16,6 carats. "Three years later the Government took over his enterprise and Hans Merensky sold his share for 1 250 000 pounds, a transaction which put him in the ranks of the South African mining magnates." (Gill, 1958:29)

Dr Hans Merensky's party: Dr Reuning of the University of Giessen (Germany), Dr Celliers (geologist), a Mr Mare (a prospector) and General Manie Maritz (who knew practically every farmer in Namaqualand and was the PRO) left Johannesburg at the beginning of December 1926. When they arrived in Namaqualand they found that about a thousand other people were also option-hunting, and some of the areas had already changed hands several times.

Note: so much for the theory, popular with some, that Merensky discovered the diamond fields!

Merensky joined his party in mid December. On 1 January 1927 Reuning commenced pegging claims near Alexander Bay. They also bought twenty three adjacent claims for 17 500 pounds. Merensky returned to Johannesburg, and Reuning continued working the claims along the oyster line, finally striking diamonds on 14 January 1927. Shortly afterwards they made the famous discovery: when a large, flat stone in a trench was lifted it revealed a cluster of 487 diamonds. Merensky left for Cape Town and persuaded Prime Minister Hertzog to take control of the field to prevent "a national catastrophe". This led to the proclamation of 22 February 1927 which prohibited all prospecting for diamonds until further notice. (Lehmann, {1955}:53-70)

See also: 1927.

"The renowned geologist Hans Merensky picked up 487 diamonds from under one flat stone and recovered 2 762 diamonds in the single month of September 1926 in the Alexander Bay area." (Reader's Digest, 1978:169)

Dr Hans Merensky, the German geologist, returned to the Union when he heard that diamonds had been discovered in SWA. He set out for Namaqualand and in a very short space of time he had uncovered the richest diamond deposits in the world at Alexander Bay and Port Nolloth (note: compare with Olga Lehmann above.) He was flabbergasted at the enormous amount of diamonds he had discovered. He hastened to Cape Town immediately and informed General Hertzog of his momentous discovery.

The Government realised that should these deposits be worked indiscriminately the value of diamonds would be severely reduced. They, therefore, sent buyers into Namaqualand and instructed them to buy up coastal properties. The Trekboer was told that the Government had decided to establish a merino sheep research station in the area. They were elated when offers of five shillings a morgen were made to them for farms they had

purchased for four pence per morgen. Their elation turned to doubt when the Government started fencing the coastal land so purchased with barbed wire. Police were introduced to patrol these fences. Then the great news was made public: diamonds had been discovered... The trekboer and the Namaqualand farmer squirmed under the injustice of it all... The Namaqualander never received any compensation, nor their promised irrigation dam. The State retained all the disputed land and the Trekboer returned into his journey into nowhere... If democracy has any meaning portion of the diggings should be thrown open to private diggers, all diamonds found should be bought by the State, that the wealth of this land could find its way into the pockets of the people. (Van Onselen, 1961:90-95)

Oppenheimer & Son (1955:9-22) cover the Merensky involvement around Alexander Bay and elsewhere, in considerable detail. The following pages (23-49) cover the consequent history of the Namaqualand diamond fields to 1928, and 49-53 the subsequent history from 1928 to 1955. Here it is mentioned (page 53) that "operations at Kleinzee (were) scheduled to cease at the end of 1956."

"...the South African government played a despicable trick on the trekboer community who had settled down to the life of small farmers at Alexander Bay... After the war the government sold the land to the trekboers at 4d a plot. Then diamonds were found there, and the authorities humbugged these simple folk into selling the land back at 5s a plot. The farmers were delighted. Their delight vanished when the government sealed off Alexander Bay with barbed wire and began to bring out diamonds by the cartload..." (White, 1969:147)

"Merensky... like many scientists, did the right thing for the wrong reasons... He hit the jackpot. He had scarcely begun to dig his trial boreholes (??) when he uncovered a tremendous clutch of large diamonds, some of them so big they would not pass through the neck of his water bottle. He had to return to base to fetch a wide-necked Eno's Fruit Salts bottle. Even that would not take the number of diamonds which he and his party, in a state of euphoria, began to pick up from the beach. He had to make a hurried dash for the nearest general store (Port Nolloth??) to buy a square sweet tin of large capacity." (White, 1969:268) Really!!

1926: At Kleinzee there was a lagoon at the river mouth when Carstens went there in 1926. That is how it got its name. (Jack Carstens, 1962:159)

1926: Springbok: Pieter van Heerde appointed as head of the Secondary School, with a staff of nine. Under his leadership it became a high school in 1927 with an eventual staff of forty at his retirement in 1952. (Phyllis Jowell, 1994:74)

1927: April: the rail from Cape Town reached Bitterfontein. In 1873 the Government took over the railways and promptly authorised a branch line from Kraaifontein to Malmesbury, which was reached on 12 November 1877.

Note: Wynand Nortje (1994:oral) says enabling Act was in 1874 - undoubtedly correct.

In 1898 the decision was taken to extend the line, and it reached Moorreesburg on 9 September 1901 and Eendekuil (128 miles from Cape Town) on 15 November 1902. In August 1909 work re-commenced, reaching Graafwater in May 1911. The continuation northward was tackled immediately (July 1911) and reached Klawer on

15 November 1915, having been held up firstly by drought and then by having partially completed bridges washed away. Having been delayed by war, depression, the Rand disturbances and the subsequent gradual recovery, further work started in December 1924 as a relief measure for unemployment, with the line reaching Bitterfontein (289 miles from Cape Town) in April 1927. Bitterfontein "was chosen because of the likelihood of obtaining water there by boring." (Burman, 1981:10)
See also: Wynand Nortje, 1925.

27 April 1927: Official introduction of rail service to Bitterfontein.
(Eric Conradie, 1994:oral)

The railway from Cape Town reached Bitterfontein in 1927. (Joe Jowell, 1962:2)

The railway line had been extended from Klaver (the railhead since 1915) to Bitterfontein in 1927. The line was only constructed to provide work for the "poor whites" as was the policy of the government of the day following the recommendations of the Carnegie Commission.

Note: One might as well say that the Du Toit's Kloof Pass and Outeniqua Pass were only constructed to give the Italian prisoners-of-war something to do, and not because the passes were needed! Also, the fact that the Carnegie Commission apparently only tabled its findings in 1932 (P.Jowell, 1994:220, notes 18 and 20) does not support Mrs Jowell's argument.

For two years the SAR Road Motor Service served the area, but ran at a loss of 6 000 pounds a year. The Great Depression set in, and they decided to pull out on 30 June 1930. (Phyllis Jowell, 1994:23,287)

28 April: Bitterfontein railway station officially opened by Minister of Railways and Harbours C.W.Malan. This marked the completion of the last stretch of 82 miles of rail at a cost of 380 000 pounds. (*The Mining & Industrial Magazine*, 1927)

"The railway from Cape Town to Namaqualand comes to a sudden and rather disconcerting end at a bleak little railhead called Bitterfontein, from the taste of the water in a fountain here." (Reader's Digest, 1978:163,164)

Note: W.Steenkamp says the rail reached Bitterfontein in 1925;
The Mining & Industrial Magazine (1927) says the rail reached Bitterfontein on 28 April, 1927; Burman (1981) says April 1927; Conradie (Transnet) says 27 April 1927; Phyllis Jowell says 1927; Van Heerde says 1927;
Wynand Nortje, of SpoorNet (1994:oral) says it appears that construction was still being carried out in 1927;
Bitterfontein Municipality says 1928;
Cornelissen says 1929; L.M.Steenkamp also says 1929;
Joe Rabinowitz (1994:oral) went to school at SACS for the first time in 1927, and thinks he boarded the train at Klaver for about two years after that, which would make it 1929 also - he says that in 1927 the train definitely did not carry passengers beyond Klaver (as Klaver was spelt then) – they boarded the post car there.

1927: "Relief works increased to deal with the neglected highways". (Cowie, 1929)

The Railway Administration inaugurated a road motor service for goods and passengers between Bitterfontein and Springbok, a distance of about 100 miles. This service was withdrawn in 1930 on the grounds that it was unremunerative. (Joe Jowell, 1962:2)

Contract let for the first rural bitumen surfacing job, between Cape Town and Bellville. (R.A.F.Smith, 1973:253)

1927: An American group known as South African Copper Co Ltd bought the Namaqualand (copper mining) holdings for 1 000 000 pounds and mined the area for about ten years. (*S.A. Mining & Engineering Journal*, 1963)

American Metal Corporation commenced prospecting on Cape Copper Company property on option. (Cornelissen, 1965:36)

In 1927 the South African Copper Company Limited, an American group, took options and re-opened some of the old mines. Sold to O'okiep Copper Company (same shareholders) in 1937. (O'okiep Copper Company, {1968})

See also: Marais; Smalberger under 1928.

1927: Dr Reuning, prospecting at Alexander Bay, recovered no less than 500 diamonds on 26 January. (*S.A. Mining & Engineering Journal*, 1927)

November 1927: Jack Carstens and his team took 30 000 carats of diamonds with a market value of more than 400 000 pounds from Kleinzee farm. (Jack Carstens, 1962:79-87)

Note: Kleinzee was a freehold property, and so the prohibition by the Government on 22 February 1927 of diamond mining on State ground (see entry below) did not apply to workings here.

Also November 1927: Cape Coast Exploration Company Limited bought out Kleinzee and all options to Hondeklip Bay and O'Bees from Carstens' crooked partner for 30 000 pounds. (Jack Carstens, 1962:81,87,88)

Note: De Beers says Cape Coast Exploration was incorporated only on 12 January 1928 - see under.

Dr Merensky discovered the "oyster terrace" diamond deposits. (Cowie, 1929)
See notes under 1926 above ex Olga Lehmann ({1955}).

"At Kleinzee a single pothole yielded 30 000 carats valued at R80 000 whilst at Alexander Bay, where Merensky had purchased the Gordon syndicate's rights, a total of 6 890 diamonds (12 549 carats) were recovered during the period 4 January to 22 February 1927." (Namaqualand RSC, 1995:27)

“Dr Reuning het binne ses weke met behulp van eenvoudige toerusting... 12 500 karaat uitgehaal.” (Oberholzer, {1993}:21)

1927: 22 February: Government prohibited all further diamond prospecting along the Namaqualand coast. (Bulpin, 1986:182)

The government proclamation of 22 February 1927 "totally prohibiting all prospecting for diamonds until further notice." The prohibition applied to all Crown land and farms on which the mineral rights were reserved to the Crown, in Namaqualand. The ban therefore affected the whole of Namaqualand with the sole exception of the farm Kleinzee, the title to which was issued before the reservation of minerals to the Crown." (Oppenheimer & Son, 1955:22)

"On 22 February 1927, only a few months after the first discovery, the government was forced to step in. They secured vast areas where the public is forbidden and mining operations are controlled so as not to flood the market." (Reader's Digest, 1978:169)

In February 1927 the Union Government stopped all prospecting on Crown land. The Precious Stones Act of 1927 declared the area around Alexander Bay as State Diggings. Most of the claims and prospects were on Crown land and thus both local residents and diggers lost their prospects. Tension ran high with the diggers threatening to march on Alexander Bay... Some years later the large diamond mining companies purchased the rights to sections of land in the region. Many of the farmers were unaware of the potential wealth that lay on their farms, which they sold to these companies. The local Namaqualanders were also bitter that the rights and concessions were given to outsiders... Even today neither Port Nolloth nor the Namaqualand region reflects any of the great wealth which has been found along the coast. (Von Zeil, 1989b)

1927: Discovery of diamonds heralded the end of the depression.

(Cowie, 1929; Springbok Municipality, 1963)

1927: First hospital in the region built at Garies. (Suid-Afrika, 1980:7; L.M.Steenkamp, 1952:8)

1927: Port Nolloth water cost 2s 9d a cask. The cask was fitted with an axle and was pulled by a mule over the sand to our back door, and then emptied by paraffin tin into a tank in the yard. This water was very brack, but we soon got used to it.

(Jack Carstens, 1962:151,152)

See also: (i) Smalberger (1975: Fig 14) for a photograph of a rolvaatjie.

(ii) 1874.

"Port Nolloth's two hotels at that time were called the 'I.D.B.' and 'C.I.D.' The 'C.I.D.', a shanty, later went out of business and the 'I.D.B.' matured respectably into the 'Port Nolloth Hotel', purchased in recent years by the Ovenstones." (Gill, 1958:26)

1927: Twenty police patrolled 17 500 square miles of the Great Thirst efficiently and well. (S.A. Mining & Engineering Journal, 1927:260)

1928: Spoorlyn tot op Bitterfontein in 1928 voltooi. (Bitterfontein Munisipaliteit, 1992)
Sien ook notas onder 1927.

1928 (probably): Carstens built the first hard road over the three miles of sand dunes from Kleinzee, to get the heavy mining plant in. He placed four feet of limestone on top of the sand, followed it with two feet of red clay, and rolled it down with the wheels of the lorry, at a cost of 3 000 pounds. (Jack Carstens, 1962:94)

1928: Air travel: Vroeg in 1928 is diamante reeds per vliegtuig van Alaxanderbaai af Kaapstad

toe vervoer. Die aanvanklike vliegtuig was die ou tweesitplek seil- en houtvliegtuig van Lt. Cas Brutus wat weekliks Baai toe gevlieg het. (Pieter Coetzer, 1997:102)

Air travel mentioned: in early 1928 Colonel Daniel arrived in Port Nolloth "to select a suitable site for an airport".

"Eventually (1928? 1929?) the parcels of stones were flown from Port Nolloth to Cape Town in army planes."

Early in January 1929 "a special correspondent... who had just flown up to Port Nolloth..." (Olga Lehmann, {1955}:76,77,92)

1928: South African Copper Mining Company was formed to acquire the assets of the Cape Copper Company for R318 480. A one third interest held by each of Newmont Corporation, American Metal Company and United Verde Extension. (Marais, 1987)

The affairs of The Cape Copper Company were put in the hands of an Official Receiver (in 1920?). For some time the Company's property was under option to the General Mining and Finance Corporation, but when they failed to take this up an American consortium, consisting of United Verde Extension, The American Metals Co Ltd, and Newmont Mining Corporation purchased the property of The Cape Copper Company for \$750 000. They formed a company known as The South African Copper Company Limited which did work mainly of an exploratory nature. (Smalberger, 1975:113)

Note: Smalberger gives no date here. Either 1927 or 1928.

See also: (I) O'okiep Copper Company under 1927.

(ii) 1937.

1928: Diamond workings resumed along the "Diamond Coast". (Bulpin, 1986:182)

"Kleinzee offered to the Government for... 200 pounds. This offer was turned down and the Cape Coast Exploration Company purchased the property. During the following year the Company was incorporated under the chairmanship of Sir Ernest Oppenheimer. (De Beers, {1994})

12 January 1928: Cape Coast Exploration Limited incorporated with Sir Ernest Oppenheimer as Chairman (see 1941). The company acquired a number of farms along the coast, but as prospecting had been prohibited on coastal farms no work was done on most of these properties. Kleinzee however, being freehold, was exempt from this prohibition. (De Beers, 1976:3)

Note: Jack Carstens (1962:102) quotes Sir Ernest Oppenheimer's 1957 annual report to the board of DBCM Ltd: "It should be remembered that the farm Kleinzee was exempt from the provisions of the Precious Stones Act of 1927 because diamonds had been discovered thereon before the promulgation of the 1927 Act, so that the Government was not entitled to a lease share of the profits... However, Annex Kleinzee is affected... and the State will be entitled to receive... lease consideration..." Carstens comments: "Because my discovery on Kleinzee was made two years earlier De Beers saved many thousand, nay, millions of pounds." This does not agree with his statement on pages 72, 74, 76 & 77 that Kleinzee Annex was being worked early in 1926.

Edward (Ernest?) Heyes active in Namaqualand; "rediscovered Alexander's claim" in the Richtersveld. (Green, 1967b:118)

Note (i) See more details under 1836 write-up of Alexander.

(ii) T.J.Couzens, in the introduction to the 1986 edition of Fred Cornell's *"The glamour of prospecting"*, page xx, refers to "Ernest Heyes, a frequent companion on prospecting trips..."

(iii) Lehmann ({1955}:58) mentions as prospectors Ernest Martins and Martin Heyes - was this one person, Ernest Martin Heyes??

"Die Regering proklameer in April 1928 ongeveer 2 500 morg as 'n Staats Alluviale Delwery. Die gebied word later vergroot tot by Port Nolloth. Tans strek dit 100 km suidwaarts langs die kus, tot by die De Beers myn in Kleinzee." (Oberholzer, {1993}:21)

1928: Bitterfontein village founded "on the farm of Mr J.D.Coetzee's father" at about the same time the railway construction was completed. (Bitterfontein Municipality, 1992)

1928: Springbok's school upgraded to high school status.
(W.Steenkamp, 1975:153; Van Heerde et al., 1952:32)

1929: South African Railway line extended from Klawer to Bitterfontein.
(Cornelissen, 1965:53; L.M.Steenkamp, 1952:2)
See note under 1927 for other dates.

1929: February: Joe Jowell arrived in Namaqualand and went into partnership with Oom Jaap du Plessis.
10 September: Joe Jowell and Bessie Berelowitz of Calvinia were married.
Petrie Malherbe returned to Namaqualand and opened a petrol and repairs garage in Garies.
(Phyllis Jowell, 1994:20,23,70)

1929: Springbok's population stood at 2 000. It had become the capital of Namaqualand in all fields: religious, educational, medical, social welfare and commercial.
(Phyllis Jowell, 1994:69)

September 1929: Springbok's new synagogue consecrated.
(Phyllis Jowell, 1994:72; Namaqualand RSC, {1993}:9)
Note: Van Heerde says 1930.

1930: Port Nolloth-O'okiep narrow gauge railway line fare nearly 19 shillings one way. First class coaches are provided for passengers... These coaches do not hold more than four passengers comfortably. Passengers are asked to be at their stations more or less on time, so that the train is not kept waiting longer than necessary. When O'okiep is left at eight o'clock in the morning Port Nolloth is generally reached at about 4 o'clock that afternoon. A long wait, to enable passengers to lunch, is made at Steinkopf. During the two hour halt at Steinkopf the engine of the down train is uncoupled and fixed to the up train from Port Nolloth, which waits for it about twelve miles away. The gradient at this point is so steep that a train cannot be hauled up it comfortably by one of these little engines. A train, with an engine before and after, eventually arrives. One of the engines is uncoupled while, with a snort and a whistle, the train from Port Nolloth hurries on to O'okiep. The engine with the down train carries on for a few more miles, when it is again

uncoupled, and away it steams. At the bottom of this long and steep gradient it shoots out of sight, while the native who patrols the footboards releases the brakes of the train with a twist of a wheel. Creaking and groaning the 14 or 15 trucks and coaches speed down the hill under their own momentum, a thrilling downward dash, controlled by the wheel in the hands of the native. (Speight, 1930)

1930: SAR road motor service between Bitterfontein and Springbok withdrawn on the grounds that it was unremunerative. "In order to solve this transport crisis, the late Jaap du Plessis and myself, who had just started a garage business, quickly constructed a motor truck from a Buick motor car and parts of a one and a half ton Chevrolet lorry and started a transport service." (Joe Jowell, 1962:2)

30 June: South African Railways summarily terminated its Road Motor Service to Springbok, with only 24 hours notice to the Springbok public of this action. Goods piled up at Bitterfontein station and passengers had to find their own means of conveyance between Bitterfontein and Springbok, 120 miles away. The shopkeepers approached Du Plessis and Jowell for help. Oom Jaap made a lorrietjie "Plaatjie" of parts from an old Buick car which had been in an accident and parts from a 1,5 ton Chevrolet truck, in less than three days. With Joe as the truck driver and Bessie as "lorry boy" they made the first round trip in twelve hours, safely bringing back some 9 000 pounds of food and other necessities, with no damage bar a few punctures. This was the beginning. There was never a plan to start a transport service. It happened purely by chance and, as Joe said, it grew with Namaqualand. (Phyllis Jowell, 1994:23-25)

"It was generally felt that the potential of Namaqualand could only be tapped when an efficient transport service became an accomplished fact. The 'long-looked-for Railway' never materialised and it would be Joe Jowell who would provide the transport service that would make some of the hopes for Namaqualand a reality in the next 30 years. 'The train of the north-west' his transport system would be called." (Phyllis Jowell, 1994:84,85)

Malherbe's Garage in Garies awarded the Padvervoerraad contract to convey goods from Bitterfontein to Garies, Hondeklip Bay and to De Beers in Koingnaas. This service was once a week, on Fridays, returning from the coast on Saturdays. Mr Malherbe bought an old truck from Steinkopf, which Joe Jowell had told him of, to carry out this service when the Railways suddenly stopped their road carrier business, apparently with little or no warning, and it is thought because they were losing money on it. At the same time J.D. du Plessis & Co (Joe Jowell, partner) of Springbok took over the goods transport to Springbok and points north, and Gerhard Roussouw (Roussouw's Garage in Springbok) provided the post and passenger service. Mr Malherbe cannot recall the date when he discontinued his service to Hondeklip Bay. (Oom Petrie Malherbe, 1994:oral)

Note: L.M. Steenkamp {1952:2} says that by 1952 the transport to Hondeklip Bay had been taken over by Jowells.)

SAR Road Motor Services discontinued their operation north from Bitterfontein to Springbok. J.D. du Plessis & Co took over. In 1941 Jaap du Plessis retired and Joe Jowell carried on, now under the banner of Jowells Garage & Transport. (Oberholzer, {1993}:37-41)

See also: P. van Heerde & J. Jowell et al brochure, under 1952.

1930: Act 39 of 1930, the Motor Transport Act of 1930, to regulate road transport contractors. (Suid-Afrika, 1980:136)

1930: Kleinsee: first houses and first hospital built. (Second hospital in 1961.) (De Beers, 1976:18)

Kleinsee: first recovery plant built. (De Beers, {1994})

1930: Port Nolloth became a village management board. (Bulpin, 1986:180)

1930: Springbok's synagogue built. (Now a museum) (Van Heerde et al., 1952: 30)
Note: Jowell says 1929; NRSC says 1929

Early 1930's: The effects of the Great Depression, precipitated by the Wall Street crash of October 1929, began to be felt in Namaqualand. Farmers, who had sold wool for 14d a pound in 1929 received only 4d in 1932. Mielies dropped from 15s 4d a bag to 9s 4d. To make matters worse, one of the longest and severest droughts experienced yet this century began during the early 1930's. And of course the copper mines were still closed. (Phyllis Jowell, 1994:78)

1931: Act 43 of 1931, section 9, says: "The Railways and Harbours Administration is hereby empowered to enter into an agreement with the owners of the jetty and railways constructed in terms of Act No. 4 of 1869, No. 3 of 1871 and No. 24 of 1878, of the Cape of Good Hope, whereby the said Administration may contract to refrain, during a period not exceeding twenty years, from exercising the right to purchase the said jetty and railways conferred upon the Government of the Cape of Good Hope by section nineteen of the said Act No. 4 of 1869 and section five of the said Act No. 3 of 1871 and section five of the said Act No. 24 of 1878." (South Africa, 1931:section 9)

1931: Namaqua Copper Company ceased operations. (Cornelissen, 1965:36)

The Namaqua Copper Company, which had suspended its chief operations in May 1918, was compelled to halt all operations in June 1931. (Smalberger, 1975:104)
All operations ceased at Concordia mine (The Namaqua Copper Company) on 17 June 1931. (Smalberger, 1975:119)

1931: Diamonds of 10 000 carats stolen from the post office on Bitterfontein station, "a tin shanty with a lock that a school girl could have removed". Two men were eventually arrested with about 3 000 carats of diamonds. Harry Morris KC brilliantly defended the couple, who were found not guilty and discharged. The balance of 7 000 carats was never recovered. (Jack Carstens, 1962:115)

Diamonds from Kleinsee, valued at 80 000 pounds, in a registered packet, stolen from the wood-and-iron post office at Bitterfontein. Diamonds from Alexander Bay were flown out safely. (Green, 1967b:97-111)

In 1931 Bitterfontein was the scene of one of the world's great diamond robberies, when diamonds valued at 80 000 pounds vanished without trace from a mailbag. (Reader's Digest, 1978:164; SA Tourism Board, {1990})

1931: Concordia became "a place of slumbering silence, peopled by only one or two workmen who, like Irish keeners at a wake, watch the corpse of the mine they once saw alive. An old shopkeeper sits behind his counter, mourning lost trade. Uncurtained windows, like blind eyes, shine dully in uninhabited houses." (Birkby, {1936}:153)
(Rolling, descriptive prose indeed! -gldr)

1931: Springbok: A reservoir of 60 000 gallons had been built above the town, and from 1931 Springbok had been served with piped water. In the late 1800's water was obtained from two springs and two public wells and was carried by prisoners in a drum on wheels and sold to the inhabitants of the town for a shilling per sixty gallons. The original fountain, after which the town was named, was still the chief water supply in 1929, and when it did not yield enough water for the village a strong borehole belonging to Jan Scholtz, the attorney, supplemented the village supply. (Phyllis Jowell, 1994:82)

1931: Carnegie Commission into Poor White Question tabled findings; report published in 1932. (Phyllis Jowell, 1994:23,78,306)

An enquiry was held by the Dutch Reformed Church in collaboration with the Carnegie Corporation as to the best methods of helping the "poor whites". These numbered about 150 000 in 1930, and found themselves in this parlous condition mainly as a result of the poverty caused in rural districts by the Rinderpest. Among the most successful efforts was the founding of irrigation and forestry settlements and the employment of Whites in semi-skilled work on railways, roads and elsewhere. (Rosenthal, 1970:434)

1932: Kleinzee mine closed down for five years as the bottom had fallen out of the diamond market in 1931. (Jack Carstens, 1962:136)

Every diamond mine in Africa closed down. (Pifer, 1994:117)

1932: During a period of severe drought and depression a syndicate of Vioolsdrift farmers made a desperate attempt to build a furrow to irrigate their lands from the Orange River. They possessed no resources. The then-Minister of Irrigation, Colonel Deney's Reitz, came to their rescue, instituting a government scheme to irrigate 1376 acres on the south bank with the prospect of including a further 741 acres. (Phyllis Jowell, 1994:87)

Vioolsdrift farmers helped by Deney's (sic) Reitz, Minister for Irrigation by the construction departmentally of a weir and a canal to lead water to the lands. (Willcox, 1986:99)

See also: 1934 (Joe Jowell).

1932: Dr W.Beetz, geologist, found (fossilised?) fragments of bones of the rat sized "South African kangaroo" at Kleinzee. (Green, 1982:131)

1933: A further deputation asking for the rail to be extended from Bitterfontein through Namaqualand. (Scholtz, 1947:2)
See also: 1915, 1925, 1937, 1945, 1947.

1933: J.D.du Plessis and Co "operated a three-weekly service with three lorries between Springbok and Bitterfontein, meeting the three-weekly goods train between Cape Town and Bitterfontein. The traffic from Bitterfontein... was about 85 tons per month..."

(Joe Jowell, 1962:2)

1933: 4 February: Springbok Hospital opened.
(Phyllis Jowell, 1994:75; Van Heerde et al., 1952:29)

Springbok/Springbokfontein previously known as Guchas "where the springbok drink".
(Port Nolloth Municipality, 1991)

Springbok became a municipality in 1933. (Rosenthal, 1970:543)
There had been a village management board in the late 1800s but it had become defunct.
(Smalberger, 1975:note 35 on p 115)

Note 1: Anon (1990), Phyllis Jowell say VMB in 1922, municipality in 1933;
Springbok Municipality (1963) says Springbok had been a VMB since 27 June 1922,
and became a municipality on 26 June 1933;
Van Heerde et al. (1952:19) say that Springbok had been a VMB from 1921 until it
became a Municipality in 1933.

Note 2: Most probable history of Springbokfontein, originally known as Guchas:
1850: On 21 January quitrent title to Melkboschkuil, alias Koperberg, granted to the
seven Cloete brothers. On 16 March Phillips & King acquired the mineral rights to
the farm Springbokfonteyn, portion of the farm Melkboschkuil, plus ownership of
about eleven morgen of ground.
1862: Springbokfontein surveyed by Patrick Fletcher, and created a public village by
Phillips & King; plots sold by auction on 28 October 1862.
1911: Name changed from Springbokfontein to Springbok.
1922: Springbok became a Village Management Board on 27 June.
1933: Springbok became a municipality on 26 June.

Springbok's white population 450. (Springbok Municipality, 1963)

1934: Traffic from Bitterfontein had increased to 350 tons per month. (Joe Jowell, 1962:3)

"In 1934 a certain Mr Niewoudt concluded a contract with the Department of Irrigation for
the transport of materials from Bitterfontein to Vioolsdrift where a canal was being built"
(see 1932 above). "He could not carry on, however, and we took over the contract at the
rate of one penny per 100 lbs., owners' risk, using twenty 3-ton Chevrolet motor-lorries."
(Joe Jowell, 1962:2,3)

J.D.du Plessis & Co got their first big contract, to carry cement to the Vioolsdrift irrigation
scheme. (P.Jowell, 1994:87)

1934: Steinkopf's mines taken over by the O'okiep Copper Company.
(W.Steenkamp, 1975:109)

Note: Bulpin, Macleod, Moffatt, O'okiep Copper Company all say OCC only
incorporated in 1937.

1934: Springbok Hospital taken over by Cape Province. (Van Heerde et al., 1952:29)

1935: National Road Act 42 of 1935 established the National Road Board.
(Floor, 1985:4 et seq.)

1935: First hotel in Garies. (Second a year later) (L.M.Steenkamp, 1952:3)

1935-1992: Anna Priem (nee Genis) worked with Jowells from the age of 24 to the age of 80, with a break from 1937 to 1946 when her children were young - and then she was doing Jowells work at home. (Phyllis Jowell, 1994:96-98)

1936: First National Road scheme took the road from Cape Town only 195 miles to Van Rhynsdorp. (Floor, 1985)

1936: Telephone line built from O'okiep to Nababeep by B.H.(Dick) Mitchell and Wally Purchase of GPO. (Mitchell, 1994:oral)

1936: Newmont Corporation bought United Verde Extension's one third share in S.A.Copper Mining Co. for a mere 30 000 American dollars. (Marais, 1987)

1936: Second hotel in Garies. (First a year previously.) (L.M.Steenkamp, 1952:3)

1936: O'okiep population down to 390. (Von Zeil, 1989a:61)

1936: Pofadder proclaimed a township. (W.Steenkamp, 1975:107)

1936: Springbok: Electricity laid on by the Municipality, but the price was high and the machinery was old and often broke down. Later, an arrangement was made with the OCC for power. (Phyllis Jowell, 1994:83)

1937: Port Nolloth railway: "Just before World War II the copper mines reopened. One would have expected this to mean a boom time for the Namaqualand railway, but time had passed the railway by: it was no longer capable of dealing with the increased tempo of mining - in fact two modern lorries could carry the entire load of the train more efficiently, and at smaller cost." (Burman, 1969b:232)

"Two 180 kW diesel locomotives took over from the indomitable steam locomotives for the final five years of operation until 1942." (Hopkins, 1980:5)

O'okiep Copper Company took over Cape Copper Company property and "more or less full service" was again in operation on the railway to Port Nolloth. (It had been running a skeleton service since the Cape Copper Company closed its mines "in the early 1920's") (Moffatt, 1972)

"Two 180 kW diesel locomotives operated the line for the next five years until 1942." (D.C.Robertson, 1978:329)

Note: see 1920s: Jack Meadows was the man who practically single-handed kept the skeleton service running from the early 1920s to 1937. (Smalberger, 1975:119 et al.)

1937: A further deputation asking for the rail to be extended from Bitterfontein through

Namaqualand. Supported by the newly-arrived American mining company. First meeting at Klawer, then with Minister Pirow in Cape Town. Promised the world - only, after the election!! Got nothing. (Scholtz, 1947:2)

See also: 1915, 1925, 1933, 1945, 1947.

1937: Okiep Copper Company formed by the merger of the Cape Copper Company and the Concordia Company. (Bulpin, 1986:178)

O'okiep Copper Company purchased all the rights of the Cape Copper Company. (Cornelissen, 1965:36)

O'okiep Copper Company reopened the Namaqualand copper mines. OCC owned mineral holdings of 105 000 acres and mineral rights to a further 50 000 acres in Namaqualand, as well as the railway to Port Nolloth and the jetty at the port.

J.D.du Plessis did all the mines' transport from Bitterfontein. (Phyllis Jowell, 1994:90)

25 May: O'okiep Copper Company incorporated and acquired the South African Copper Company. (Macleod & Wiid, 1954)

Newmont had acquired 73 per cent of the holdings in S.A.Copper Mining Co. by successive stock purchases. Finally on 25 May O'okiep Copper Company was incorporated with an authorised capital of R33 200 000. By special Act of Parliament the company was relieved from the payment of any income tax until such time as capital expenditure by OCC and its immediate predecessor had been recovered out of operating profits. (Marais, 1987:3)

O'okiep Copper Company formed. (O'okiep Copper Company, 1952)

O'okiep Copper Company, Limited, "whose shareholders were identical with those of its predecessor", incorporated on 25 May 1937, and acquired by purchase all assets and liabilities of The South African Copper Company. (O'okiep Copper Company, {1968})

29 May 1937: The O'okiep Copper Company incorporated with a capital of 1 600 000 pounds. The Newmont Mining Corporation held nearly 67 per cent of the shares. (Smalberger, 1975:123)

OCC owned largely by Newmont Mining Corporation. (*South African Mining & Engineering Journal*, 1963)

The old mine at NababEEP reopened. (W.Steenkamp, 1975:49)

1937: Except for geological records, all the documents of The Cape Copper Company, containing the written-up history of NababEEP, were destroyed in the time between The South African Copper Company stopping operations and The O'okiep Copper Company taking over. (Smalberger, 1975:96)

“...all the Cape Copper Company records were destroyed when the ship carrying them to England was torpedoed.” (Jowell & Folb: 2005: caption to photograph on page 74)

1937: June: Kleinzee diamond mine reopened after being closed for five years during the

depression. (Jack Carstens, 1962:139)

Mr Pifer, an American, appointed to Kleinzee as manager. He re-opened the mine on 2 October 1937. His son, Drury, describes Kleinzee of that time: "Kleinzee was set in a slightly rolling flatland of broken rock and shifting sand that tilted down into a cold sea. The desert, with its high dunes, is narrow - only 50 to 100 miles (sic) across as it follows the coast north, paralleling a cold Antarctic current. Behind it stretch badlands, drylands, a tumbled landscape that strikes travel guides as magnificent, and prospectors as interminable hell." He also harped on the "90 mile per hour winds", which came up "every afternoon at 2 p.m." (Drury Pifer, 1994:93-140)

1938: Ovenstones entered the coasting trade with "Durness" and "Dalness", with "refrigerated chambers for bring down the frozen lobster tails... O'okiep Copper Company were in the process of re-opening their mines... there seemed to be a good opportunity... to carry stores and cargo for the copper company as well. Unfortunately, this transport business was later carried out by railway trailers... in 1941... sold to Thesen's Steamship Company Limited." (Gill, 1958:20,21)

1938: "In 1938 when the copper mines started producing again, the Railway Administration obtained a permit to operate road motor services which would carry all the traffic of the O'okiep Copper Company Ltd." They did not start the service before 1941. (Joe Jowell, 1962:3)

Note: see 1940, the popular date for the mines starting production.

1939: O'okiep Copper Company purchased Namaqua Copper Company rights. (Cornelissen, 1965:36)

OCC purchased the mineral leases held by the Namaqua Copper Company, and so the OCC came to own not only all the mines in Namaqualand but also the more important prospecting sites in the region. (Phyllis Jowell, 1994:90)

O'okiep Copper Company purchased leases covering the ground operated by the Namaqua Copper Company (Macleod & Wiid, 1954) for their water supplies contained in the flooded mines of Wheal Julia, Homeep East and Homeep West, for R4 250. (Marais, 1987:4)

The assets of the Namaqua Copper Company (at Concordia) purchased by O'okiep Copper Company. (O'okiep Copper Company, {1968})

In August 1939 The O'okiep Copper Company was able to purchase the mineral leases held by The Namaqua Copper Company for 2 125 pounds. They thus came to own not only all the actual mines in Namaqualand, but also the more important prospects in the division. (Smalberger, 1975:124)

1939: Kleinzee closed down for two years due to the war. (Jack Carstens, 1962:143)

1939-1945: **World War II.**

1940: SAR RMT handled the OCC's copper/coal transport from Bitterfontein from the start of

mining production (in 1940: see below) until OCC took it over themselves in 1946. Jowells became the carriers in 1947. Du Plessis & Co/Jowells transported all the mines' general goods from 1940. (Phyllis Jowell, 1994:90,130-133,239,287)

Note: Joe Jowell (1962:3) says the railways started their service in 1941.

1940: OCC started production in 1940.

(Marcus Banghart as quoted by Phyllis Jowell, 1994:131)

Note: on page 90 Mrs Jowell says production started in 1941.

Joe Jowell (1962:3) says "In 1938, when the copper mines started producing again.

Marcus D.Banghart was manager of OCC from 1940 to 1954. He was an important influence on Namaqualand during his fourteen years there, especially with his fresh angles on local problems. The Banghart-era proved to be one of phenomenal growth for the mines. (Phyllis Jowell, 1994:115,117)

NababEEP South mine, mill and smelter started production in 1940. Rehabilitation work had been in hand since 1937. (O'okiep Copper Company, {1968})

OCC commenced milling operations early in 1940 and smelting in August 1940. (Smalberger, 1975:124)

Modern smelter and concentrator built at NababEEP with money provided by the government of the USA. (W.Steenkamp, 1975:49)

Note: Compare with Smalberger p 124, above, and 1942.

1940's: Jowells Transport was paying white and coloured drivers equal salaries, overtime, they got the same holidays, wat ookal, from the very beginning. When it came to the new lorries, they were equal in being assessed for who was deserving of a new vehicle. (Theunis Uys as quoted by Phyllis Jowell, 1994:289)

1940's: Port Nolloth wharf rebuilt and extended by OCC in 1940's. (Alison Corbett, 1989:28)

1941: "It is told that for the last full journey the train left Port Nolloth on the 23rd of December 1941." (Cornelissen, 1965: footnote on page 53)

The Port Nolloth-Okiep railway line was scrapped in 1941 when the little engines completed their last runs. Over the years it had steadily proved more uneconomic to run, and during the last World War the unprotected harbour at Port Nolloth was no longer a safe shipping port. (Dickason, 1978:38)

1941: The Railways started their road motor service, but restricted themselves to the carrying of copper to Bitterfontein and coal back to the mines. (Joe Jowell, 1962:3)

Note: Phyllis Jowell says the Railways started in 1940.

A Government pre-requisite to the closing of the railway was a proper and efficient transportation system being maintained between O'okiep, NababEEP, Steinkopf and Port Nolloth. At the request of OCC the Namaqualand Transport Company, partners Jaap du Plessis, Joe Jowell and Thys Louw, was formed to fulfil this requirement. The purpose as stated in the partnership agreement was for "carrying on a motor transportation service between Port Nolloth, on the one hand, and NababEEP, O'okiep and

Springbok or places en route, on the other hand." Amongst other things this involved providing seven diesel fuel tankers to handle the fuel from the port to the mines. (Phyllis Jowell, 1994:90,91)

In 1941 Jaap du Plessis, aged 51, retired from J.D. du Plessis & Co because of ill health. The company "soon started trading as Jowells Garage & Transport". (Phyllis Jowell, 1994:93,95)
See also: 1930 and 1952.

Jowells Garage & Transport took over the transport from Bitterfontein from J.D. du Plessis & Co on the retirement of Jaap du Plessis. (Oberholzer, {1993}:37-41)

1941: The road from Bitterfontein through Springbok to the mines in Nababeep and O'okiep surveyed and constructed with a selected gravel surface to controlled vertical and horizontal geometric standards, with adequate drainage structures, by the Provincial Roads Construction Unit under the control of C.J. Loftus. This work was a major benefit to transportation in Namaqualand. (Oom Petrie Malherbe, 1994:oral; GLDR; L.M. Steenkamp, 1952:2)

1941: June: Kleinzee mine reopened after being closed for two years. (Jack Carstens, 1962:143)

15 December: Cape Coast Exploration Limited (see 1928) went into voluntary liquidation and De Beers Consolidated Mines took over in Kleinzee. (De Beers, 1976:4)
Note: De Beers (1994) says 1942.

1942: Port Nolloth railway was in use until 1942 when the O'okiep Copper Company decided on motor transport over the 122 miles from Nababeep to Bitterfontein, and the rails from the Port Nolloth line were used for general mining purposes, especially as poles for power lines. "It is told that for the last full journey the train left Port Nolloth on the 23rd of December 1941." (Cornelissen, 1965:53)
Smalberger (1975:113) quotes Cornelissen.
Note: see 1940 for alternate dates for commencement of road transportation.

Rail operations suspended. (M.A. Robinson, 1980)

"The O'okiep Copper Company continued initially to use the narrow gauge railway to Port Nolloth, which they attempted to improve. The railway proved too expensive to run and road transport to Port Nolloth from the mines was substituted, but this, too, was soon abandoned. Port Nolloth was abandoned as a shipping port because of the inadequate facilities, and possibly because of the unprotected nature of the port during a time when enemy submarine action along our coasts was feared... The blister copper... is presently transported by road to Bitterfontein (the railhead) from whence it is carried by rail to Cape Town for shipment overseas where it undergoes the final electrolytic refining process." (Smalberger, 1975:125)

1942: US Government advanced \$1 400 000 to OCC to increase war-time supplies. This loan repaid by 1947. (Smalberger, 1975:124)

1942: De Beers Consolidated Mines acquired the Cape Coast Exploration Company.

(De Beers, (1994))

Note: De Beers (1976:4) says 1941.

1942: Springbok Municipality purchased the municipal area from the mining company which owned it up to then. (W.Steenkamp, 1975:49; Suid-Afrika, 1980:7) for 750 pounds (Anon {1990}; Van Heerde et al., 1952:24) on 21 February 1942, having been granted authority by the Administrator of the Cape on 19 August 1940 to raise a loan of 2 500 pounds for the purchase and survey of the commonage. (Springbok Municipality, 1952)

1943: Main section of the railway line to Port Nolloth closed and the track uplifted as, with the improvements in modern road transportation, it was more economical to handle the mines' traffic by road to and from the South African Railways terminal at Bitterfontein than to operate the railway from O'okiep to Port Nolloth. (Moffatt, 1952)

"In the meantime the South African Railways had extended their railhead to Bitterfontein 170 kilometres to the south. Road traffic became more attractive from Bitterfontein and by 1943 the line (to Port Nolloth) was closed altogether, and dismantled in subsequent years." (D.C.Robertson, 1978:329)

1943: Springbok's white population 600. (Springbok Municipality, 1963)

1943: Theunis Uys worked for Jowells for 43 years (Phyllis Jowell, 1994:100-103,109) for 50 years of unbroken service, retiring in 1992 (Phyllis Jowell, 1994:302) for 50 years, from 1943 to 1993 (Theunis Uys, 1994:oral).

1944: "In 1944 the Copper company sold most of its railway line, retaining only the section from Okiep to Nababeep (where smelting takes place) and the five miles outside Port Nolloth which was used to carry vital water supplies from the wells. The rest of the track was lifted. "Today if you travel along this route you will see ruined stations, with empty water tanks, and miles of deserted railway embankments - a silent tribute to man's endurance and resourcefulness in the search for precious metals." (Burman, 1969b:232)

"In 1944 the O'Okiep Copper Company sold most of the line, retaining only the section from O'Kiep to Nababeep where smelting is done, and about 8 km of the line out of Port Nolloth for the carriage of vital water supplies. The rest of the line was lifted... "Today a good road runs from Bitterfontein to Springbok and beyond, serving the copper mines. Relics of the old line in the form of old abandoned station buildings, water towers and earthworks can still be seen. Much of the old railway forms the foundation of a road from O'Kiep to Port Nolloth, with minor roads running to Hondeklip Bay which one hundred years ago flourished as a copper export port." (Hopkins, 1980:5)

Note: see comments on D.C.Robertson's amazingly similar item below, written two years previously!!

By 1944 the disused railway was broken up and the scrap from it was used to erect overhead power lines. (Phyllis Jowell, 1994:93)

"Today you will find a good road running from Bitterfontein to Springbok and beyond, feeding the various mines. To the north and west are the remains of the old railway line to Port Nolloth, much of which forms the foundation of the new road to that port.

(Oh, come now!!! Roads are just not built that way - or that narrow!! : glodr)

Minor roads still run to Hondeklip Bay which over a hundred years ago blossomed as a copper port." (D.C.Robertson, 1978:329)

Rails lifted and all equipment put up for sale, except for two sections which survived for a while longer: the short section from Nababeep to O'okiep and about 5,5 miles at Port Nolloth. Both sections succumbed in subsequent years. (M.A.Robinson, 1980)

Port Nolloth railway scrapped and sold. (Smalberger, 1975:119)

All but a few miles of the Port Nolloth railway were torn up, and another chapter of Namaqualand history ended. (W.Steenkamp, 1975:48)

1944: July: Springbok TB Hospital for coloureds opened. (Van Heerde et al., 1952:29)

1945: Most of the rails from the Port Nolloth - O'okiep railway line sold as scrap. (Burman, 1984:48)

1945: Traffic from Bitterfontein had grown to about 700 tons per month. (Joe Jowell, 1962:2)

Commission of Inquiry into Road Motor Transportation in South Africa. The Member of Parliament for Namaqualand, Col. W.A.Booyesen, petitioned for an extension of the railway line from Bitterfontein through Namaqualand to Karasberg in South West Africa. J.D.du Plessis & Co (Joe Jowell, owner) and an organisation known as the Namaqualand Transport Operators' Association (Joe Jowell, spokesman) argued against a railway. Mrs Jowell says they were "supported by the farming community", but the letter she quotes to prove this says inter alia: "The farming community of Namaqualand, whom I represent, do not believe that Namaqualand's resources can be developed, nor that the future life of the mines can be assured without a direct and efficient railway, because road transport and fuel costs are prohibitive..."

The railway was not extended. (Phyllis Jowell, 1994:136-139,202)

Bitterfontein rail traffic during 1945: 58.000 tons of goods; 150.000 sheep; 1.500 cattle; 6.032 passengers. (Scholtz, 1947:8)

SAR extension northwards from Bitterfontein: A deputation (Bertus Roux, Louis Rood and Dantjie Scholtz) waited on the Minister in Pretoria. The Minister said it would cost two million pounds; not enough freight to make it an economic proposition; other lines had priority; come again in ten years' time. (Scholtz, 1947:2)

See also: 1915, 1925, 1933, 1937, 1947.

1945: April: East O'okiep Mine came into operation. (Macleod & Wiid, 1954; Smalberger, 1975:124)

Mine, mill and power plant completed at O'okiep. (O'okiep Copper Company, {1968})

1945: Port Nolloth became a municipality. (Bulpin, 1986:180)

Note: Dept Fisiese Beplanning (Suid-Afrika, 1980:7) and Mostert & Crewe-Brown (1992:40) say 1847(sic)!

Port Nolloth Municipality's records show 16 September 1957.

1946: In 1946 Consolidated Diamond Mines of Oranjemond contracted with Jowells to handle all their road transport work. CDM contracted to do "all in its power" to ensure that the road between Port Nolloth and Oranjemond was maintained in good condition. (Phyllis Jowell, 1994:130,133,136)

Jowells undertook the "miscellaneous transport" from Bitterfontein to Nababeep (with the exception of coal and copper) from 1 October 1946. (P.Jowell, 1994:133)

In 1946 Jowells bought out Van den Heever's Transport, considered to be the main opposition on the Bitterfontein route. (Phyllis Jowell, 1994:140)

1946: Joe Jowell bought his first aircraft, a Stinson Voyager 150 in 1946. He replaced the Stinson with another when it was damaged by high winds one night at Beaufort West. Later, he bought a Cessna 195 and in 1956 a Beechcraft Bonanza. Jowell's first pilot was Bob Brinton and by 1953 Clarence "Mac" McCulloch was flying for him. Mac was a wartime aviator and instructor with 7 000 hours to his credit. When he was not piloting the aircraft he managed the Parts Division of Jowells Garage. (Phyllis Jowell, 1994:170)

1946 or 1947: Joe Jowell's first aircraft was a Stinson 108 ZS-BHN (or BHJ). This was followed by a Cessna 195 which was damaged in a landing accident at Baragwanath and replaced by the Beechcraft Bonanza ZS-DOB. At this time his pilot was Mac McCullough. (Eddie Renton, 1994:oral)

1946 or 1947: Joe Jowell got his first aircraft, a Stinson 108. His first pilot was Major Bob Brinton, ex SAAF. Possibly he was succeeded by Dennis Judd - not sure. Mac McCullough came after that, at any rate, and stayed on with Namakwa Lugdiens until the 1970's, when he left to join Air Cape (?) in Cape Town. (Theunis Uys, 1994:oral)

Joe Jowell used a private airplane to facilitate keeping contact with his far flung interests. His pilot used to land on flat bits of ground all over the region. His private aircraft in 1960 was a Beechcraft Bonanza ZS-DOB. (Dale Woodcock, 1994:oral)

1946: "After the war the farmers started making money. The price of meat was up and wool fetched a good price. They fenced in their farms... As a consequence the building industry also developed... New shops sprang up all over Namaqualand..." (Phyllis Jowell, 1994:126)

1947: Daantjie Scholtz, M.P.C. for Namaqualand, produced a manifesto "Die verlenging van die spoorweg deur Namakwaland", dated 10 December 1947. It was an eleven page, well printed and illustrated brochure containing historical data, statistics of 1947 rail and sea traffic, and showing the great benefits which would arise as a result of extending the Bitterfontein rail via Springbok and Goodhouse to link with the SWA line at Karasburg. Scholtz points out that of the two pounds four shilling cost for a ton of coal at the copper mines, one pound sixteen shillings was spent on transport - this with the special SAR RMT rate of sixteen shillings and eight pence per ton from Bitterfontein, compared with the private freighter's rate of two pounds per ton. The mines used 22.000 tons per year. The mines were producing 900.000 tons of ore per year, giving 20.000 tons of copper with a value of 2.600.000; wages were 430.000 pounds per year: this could double or treble with a rail connection. At this time Namaqualand was providing 60 percent of the sheep on the

Cape market. Five percent of the flocks died on the trek to Bitterfontein; the remainder lost seven pounds in weight. (Scholtz, 1947; P.Jowell, 1994:198-200)

See also: 1915, 1925, 1933, 1937, 1945.

1947: Water for mining and to supply Springbok obtained from a four square mile alluvial basin in the Buffels River, 15 miles from Nababeep. A system of seven 22 inch steel casing well points, sunk about 30 feet to bedrock with deep well pumps, feed a main pumping station on the river bank. From here it is pumped with two lifts through two 8 inch pipelines against a total head of 2 500 feet to Nababeep at 500 US gallons per minute. 150 gpm is pumped a further seven miles against a head of 550 feet to O'okiep. (Macleod & Wiid, 1954)

"The Company requires some 1 000 000 gallons of water per day for the concentration process. At present some recycling does take place, but continued drought causes concern to the extent that it has been decided (publication date 1975) to construct a pipeline to the Orange River." (Smalberger, 1975:125)

Note: See 1973 when the first raw water was received in O'okiep via the Department of Water Affairs pipeline from Henkries.

See also: 1976, 1982.

1947: O'okiep's population 1017. (Von Zeil, 1989a:69)

1948: Transport (Co-ordination) Act 44 of 1948 (Wet op die Koördinerings van Vervoer) replaced the National Road Board with the National Transport Commission. (Floor, 1985:37 et seq.)

1948: "After about five years the Railways again withdrew their (road motor) service upon which the copper company decided to carry all its copper to Bitterfontein and carry an equal tonnage of coal on the return trip. The balance of the mine traffic, which was only one-way traffic, was entrusted to us" (Jowells), who were operating about forty five 5-ton Chevrolet motor vehicles. (Joe Jowell, 1962:3)

Note: the RMT had started operating in 1941.

In 1941 the SAR RMS withdrew from the road transport of copper/coal between Bitterfontein and O'okiep. The O'okiep Copper Company handled the transport themselves until 1967. (Phyllis Jowell, 1994:287)

Note: 1941 is an incorrect date: see her pages 130 to 133, and notes below.

In 1946 the O'okiep Copper Company formed its own transport department to handle the copper/coal traffic to Bitterfontein, which had been carried by the SAR RMS service at a loss since production started in 1940. Jowells Transport carried the excess coal and continued to carry OCC's general goods from the railhead. (Phyllis Jowell, 1994:130-133)

"n Verder interessante verwikkeling in die padvervoeraangeleentheid vanaf Bitterfontein is dat die Spoorwee tou opgooi. Vanaf Januarie 1948 ry die Amerikaners self hul transport vanaf Bitterfontein. Die Spoorwee kan dit nie meer behartig teen die genoemde tariewe nie." Scholtz said he had been told that the RMT loss was 7.000 pounds per year. (Scholtz, 1947:4)

Note 1: Although many of the dates which he gives in his brochure are questionable, Scholtz was writing this in December 1947, only a month before he said the OCC was going to start using their own transport. It is unlikely that he would have written this if the OC had started their own transport in 1946.

A March 1948 article in Leyland Journal said: "Hippos of the South African Railways are encountered with comparative frequency, transporting coal inwards and bringing back copper ingots." (P.Jowell, 1994:129) This would appear to indicate that the RMT was probably still operating in 1947.

In July 1946 OCC GM Banghart "recommended that the company should consider the establishment of a trucking department to take over and operate all the truck transport required by the company in Namaqualand" (P.Jowell, 1994:131). This was just after the end of the war: even assuming that his recommendation was approved and implemented at once, it is not possible that the organisation of a department, building and fitting out the necessary workshop, ordering and delivery of the selected trucks could have been organised before the end of 1946.

Joe Jowell, speaking in 1962, said "after about five years..." This is probably the statement on which Phyllis based her finding that OCC took over in 1946. The RMT started transporting the mines goods in 1941 (Joe Jowell, 1962:3). To my mind, Joe's "about" indicates that he had not checked this date and, speaking 15 years later he could easily have been a year out.

It is suggested that it can be taken that the SAR RMT operated until December 1947 and OCC took over in January 1948.

Note 2: The SAR RMS did not operate in Namaqualand from 1948 until 18 October 1993 when they returned as Autonet, operating from Klawer to the PX depot in Springbok.

1948: Garies main street, which was the high road to Springbok, the mines and the North, sealed with prime, blinded with sand from the Groen River, by H.J.M.(John) Williamson, then District Roads Engineer, Ceres. He used a bitumen distributor from the Ceres Experimental Road Unit, and the "base" was the existing gravel road, merely swept clean.

Note: I should imagine that at that time he would have used gas prime produced in Cape Town, not tar prime from Iscor, but I have no definite information on this point.

This treatment was carried out as an experiment, the question of dust prevention on gravel village streets being then very topical. Even though the surface in time needed patching it succeeded in its purpose for the following decade until the street was reconstructed by the National Roads Unit. This was the first "tarred" urban street in Namaqualand. (Oom Petrie Malherbe, 1994:oral; GLDR; L.M.Steenkamp, 1952)

1949: "In October 1949 Joe Jowell declared himself eligible for election to the Namaqualand Divisional Council... The Divisional Council administered all the roads in Namaqualand except the Bitterfontein-Nababeep Provincial road (subsidised because of the abnormally heavy traffic it carried) and the Port Nolloth-Alexander Bay divisional road... the condition of the roads was of major importance to Joe Jowell's budding transport empire."

"Since the early days of copper mining at Springbokfontein, the roads had improved considerably, bringing Namaqualand closer to civilisation. New roads had been built, more and more of the existing roads were being upgraded to main roads or proclaimed divisional roads, and the main feeder roads between the towns of Springbok, Nababeep, O'okiep and Concordia had been tarred." (Phyllis Jowell, 1994:150)

Note: Mrs Jowell is in error here: in October 1949 we had only just made a start on the road from Nababeep to Okiep and definitely had not reached the surfacing stage; all the other roads followed later. In fact, on page 152 she refers to "the building and tarring of the road from O'okiep to Concordia in 1953".

1949: Port Nolloth secured its own water supply from bore-holes. Previously the Okiep Copper Company railed water in from some fresh water springs 8 kilometres from the town, at one penny per 18 litres. (Bulpin, 1986:181)

Note: 18 litres (four gallons) is the size of the tin in which the universal fuel paraffin was commonly sold in those days, and 40 pounds weight [18 kilograms], probably the most which can be carried by one person "comfortably"! - gldr.

See also: 1874.

1949-1950: Construction and bitumen premix surfacing of the 15 km Nababeep to O'okiep road: the first permanently surfaced rural road in Namaqualand.

O'Okiep Copper Company wanted to run abnormal (ie over-size and over-axle weight) 30 ton side-tipper semi-trailers from the processor in O'okiep to the smelter at Nababeep to replace the old narrow-gauge rail connection. The bodies of these trucks were tipped by an external crane at the smelter. OCC needed special exemption to run these abnormal vehicles on a public road, and a "deal" was apparently struck between CPA and OCC whereby exemption was granted, while the mines contributed towards the cost of Province constructing a blacktop road to replace the existing gravel road between the two towns.

A Cape Provincial Roads unit was "cobbled together" with a foreman, Mr Steyn, from the Kimberley airport construction, bitumen foreman Groenewald and operator/handlanger Bosch from the Ceres Experimental Road, the essential "grondkoker" (materials control laboratory technician) Brand from Ceres DRE's office, a local mechanic "twee-vrou" Kotze (aptly named, poor chap!), local farmers Huysamen, Van Wyk, Coetsee, Stone as plant operators, a local school-leaver to try to run the store, and some African labourers recruited locally. Shortly after the unit was assembled Graham Ross was transferred from the Kraaifontein Unit, where he was thought to have gained sufficient experience, to the office of the DRE, Ceres (Charlie Bennett), who sent him to take charge of the unit, 350 miles away, as Resident Engineer, surveyor, unit clerk and typist (I had my own portable, luckily - there was no typewriter on the unit!), and stores superintendent.

The office was a 10'x10' wood and iron with sods on the roof for insulation. It had a desk. Had I not had four years experience, commissioned in the SA Naval Forces during the war, inter alia in charge of a hairy armed bunch of ex-trawlermen on the deck of a minesweeper, both at sea and after return from liberty in a happy state, my transfer to this job would undoubtedly have been a calamity for all concerned!! But luckily it worked out well, I learned fast, and was, I believe, soon able to contribute as well as control.

The base course was constructed using an evenly graded red sand, of which there was lots lying around, which compacted into a very dense mass. The same sand was used with Trinidad Asphalt Cement to form a 1,5 inch hot premix surface, spread with a heavy wooden drag towed behind a tip truck and compacted using a rubber tyred roller.

We worked roughly one day on bringing gravel to the road, and one day on spreading and compacting it. The truck drivers of yesterday were the water tanker and roller operators of today. The Allis Chalmers HD5 front end loader operator

drove a grader. Groenewald and Bosch squirrelled away fitting the premix plant together and building drags, now and then dashing out to spray prime on completed sections of base course, or to bear a hand where things were showing strain. At odd times odd bods did things with wheeled tractors and a drawn smooth roller, and Mr Steyn and I were hopping in and out of plant cabs like spring-hares - by the time I left the unit I could operate every item of plant: I had even had my base course finishing off approved by the very critical final level grader operator! Naturally I got into trouble with Head Office for not doing things by the book - I knew no better than to do my best on the ground; I had no experience at all of the various forms and returns, most of which I had never seen before - and unfortunately our stores books became an absolute shambles, necessitating weeks of work by two very senior and very experienced stores inspectors to sort things out. But a wonderful feeling of camaraderie developed, and I like to think it showed in the final product.

I was over the road again in April 1999. There were only about eight places in the rural section where small patches have been necessary, but the Okiep to Nababeep side of the road, where the loaded 30 tonners ride (returning empty on the other side) was beginning to show slight signs of deformation. Unfortunately a section in Nababeep village has not been looked after properly and here the premix was beginning to break up. Looking back, fifty years later, I do believe that it was a bold but well-justified decision to use the local well-graded sand in both base and TAC premix, and that the construction of this project can without doubt be judged to be a success. (gldr)

1950: The remaining section of the narrow gauge railway, from Nababeep to Garracoup Junction (and Okiep), de-commissioned and the track uplifted. (Moffatt, 1952)

Note: This final section of the railway line, between Okiep and Nababeep, was de-commissioned when we had completed the construction of the road between these centres, and the good road was available for all transport. See my photograph of the loco and three trucks, stopped for motor traffic to pass at the level crossing near our camp, in 1950, in the Collection.

1950: The new road route for Anenous Pass located by John Williamson and Graham Ross. (Ross, 1993a)

1950: O'okiep Provincial Roads Department Construction Unit's grader, operated by Dirk Huysamen, worked for about six hours and doubled the length of the Springbok airstrip runway! Joe Jowell's private pilot took Operator Dirk Huysamen, his grader "boy" John, and Resident Engineer Graham Ross for a short flip when the work was finished. It was a first flight for all three. (gldr)

1950: Construction and permanent surfacing of the main streets of Nababeep and O'okiep by the Provincial Roads Department construction unit. (gldr)

1950: "Thirty five years ago Joe Jowell enrolled the firm of Jowells Garage and Transport (Pty) Ltd, Springbok, as a member of the South African Road Federation... we were also proud to have him as President of SARF from 1962 to 1965, during which time he guided the Federation and represented it at International Road Federation conferences in many parts of the world..." (Kate Gregg, 1986)

"Jowells Garage and Transport of Springbok first joined the South African Road Federation in 1951, just six months after its inception at the end of 1950. Your late Father was from the beginning an active and enthusiastic supporter, and as you know became our President in 1962; during his four year term of office he represented the South African Road Federation (as it was then called) at a number of International Road Federation and other overseas conferences..." (Kate Gregg, 1991: from a letter to Joe's sons.)

The first branch of the South African Road Federation established in Cape Town in 1951. Joe Jowell was its first chairman. He was President from 1962-1972. (Phyllis Jowell, 1994:266-269)

Note: Mrs Jowell is in error here. The SARF was established in 1950, not 1951, and Joe Jowell was President from 1962 to 1965, not 1962 to 1972.

1950: Graham Ross, then Resident Engineer on the Provincial Roads Construction Unit at Nababeep, during a visit to advise the State Alluvial Diggings people about the treatment of their road to Alexander Bay, opened up a way across the sandbar at the mouth for the first trickle of water, allowing the flooding Orange River to break through to the sea. The river water had dammed up to well above sea level. (The majority of the sand bar had first been dozed away by SAD's massive bulldozers, which also then moved in to widen the flood channel. SAD allowed the flood waters to rise to a predetermined level to flood their lands and thus dilute the salt content of the soil, before breaking the sand barrier and allowing the flood waters to run away into the ocean.)

Lawrence Green (1967b:119,120) tells how Hendrik Louw of Grootderm once tried to cut through the sand bar when the river water was flooding the islands where he was grazing his cattle, but without success as the seas soon closed his gap. He states that "in recent times dynamite has been used for the same purpose, but without effect". (Blasting would have very little effect in a loose material like sand - probably only cause a slight shudder! - glldr.) He goes on to say "the river finds its way to the sea in its own time, and the natural process cannot be hastened." We hastened it!

See also: 1854 (Willcox), 1855 (Green, Willcox), 1875 (Noble), 1882 (Green), 1910 (Cornell), 1979 (S.A.Navy)

1951: Ernest Oppenheimerbrug: onder bespreking sedert 1948; einde van 1949 begin gemaak met die 3000-voet laagwaterbrug; elf maande geneem om te bou; ontwerp dat dit 'n wal water van vier voet hoog oor die blad sal kan weerstaan; tot 1953 nooit oorstrom nie. (Bezuidenhout, 1953)

Ernest Oppenheimer Bridge constructed over the Orange River near its mouth in 1951. (Jack Carstens, 1962:102)

Ernest Oppenheimer Bridge: 1000 metres long; 1948: discussions started; 1949: construction commenced; construction period 11 months; opened 7 February 1951. (Coetzer, 1997:71,100,161)

Ernest Oppenheimer Bridge opened by Colonel Hoogenhout in February 1951. Low level; 3000 feet long; 10'8" roadway. Longest privately owned bridge in the southern hemisphere. Previously the river had been crossed several times a day by a barge with a crew to push it off/over sandbanks; occasionally crossed by mule cart when the water was

low; in the late 1940's CDM bought war surplus DUKW's (amphibious landing craft) to transport cargo across the river. (Alison Corbett, 1989:15,17,19)

See also: (i) Oberholzer, {1993}:19; W.Steenkamp, 1975:49; Willcox, 1986:83.
(ii) 1958/59, 1961(circa), 1965.

1951: Wheal Julia Mine came into production in the second half of 1951.
(Macleod & Wiid, 1954; O'okiep Copper Company, {1968}; Smalberger, 1975:124)

1951: Namaqualand's population 32 635 (8 500 white; 21 018 coloured; 2 asiatic;
3 115 bantu). (Verburgh, 1966b: 16)

Springbok's population 1500. (Phyllis Jowell, 1994:161)

1951-1952: Construction and permanent surfacing (split seal) of the O'okiep to Springbok rural road and of Springbok's main street. (gldr)

1951-1953: O'okiep to Concordia: construction and permanent surfacing by Provincial construction unit. (gldr)
See: 1953, 1961.

1952: DC: At this time the Namaqualand Divisional Council had 234 miles of main roads, 1028 miles of divisional roads and hundreds of miles of public roads. In 1952 there was 17 000 pounds on the estimates for main roads and 14 500 pounds for divisional roads. The DC had moved into their new offices in 1951. (Van Heerde et al., 1952:21)

1952: By 1952 the transport to Hondeklip Bay had been taken over (from Malherbes Garage) by Jowells. (L.M.Steenkamp, 1952:2)

Vandag word die pos- en passassiersdiens vanaf Bitterfontein beheer deur mnr Gerhard Rossouw en W.Howe. Onder hulle beskik hulle oor sewe busse wat 'n kapasiteit van oor die 200 passassiers het.

Goods and passenger transport was initially handled by the SAR RMT when the rail had reached Bitterfontein. This ran at a loss and was discontinued in 1930, the responsibility for the then 90 tons of goods per month being taken over by J.D.du Plessis & Co, directors J.D.du Plessis and J.Jowell. This transport service was later taken over by Jowells Garage & Transport (Pty) Ltd, and today (1952) handles about 5 000 tons of goods traffic per month.

When the copper mines at O'okiep began producing again the SAR introduced a service of twelve 15 ton trucks to transport coal to the mines. This service was later taken over by the mines.

Some 1952 figures relating to the transport of goods:

OCC had twelve 20 ton truck-and-trailer units, transporting between 2 000 and 2 500 tons of copper to Bitterfontein and the same amount of coal from Bitterfontein, per month.

Jowells Transport had thirty 15 ton trucks and ten 3 and 5 ton lorries on the road. These transported 5 000 tons from Bitterfontein and 500 tons to the station per month. In the season up to 3 000 sheep were transported per month, and in addition 15 000 bags of corn were carried.

There was a regular air passenger service between Springbok and Cape Town and Luderitsbucht. (Van Heerde et al., 1952:33,34)

1952: Centenary of the opening of the first copper mine in Springbok, incidentally also the first mine in South Africa. (Phyllis Jowell, 1994:248)

1952: Garies had 46 white families. Water for the school and two boarding houses was obtained by storing the rain water run-off from the large, flat rock above those buildings. (L.M.Steenkamp, 1952:1)

1952: Okiep: Smokestack next to the Cornish beam pump declared a national monument. It had been in use from 1880 until 1929. The beam pump was declared a national monument in 1978. (Namaqualand RSC, 1995:10)

1952: Springbok's population 1 811: 897 white, 884 coloured and 30 natives. (Van Heerde et al., 1952:37)

1952: Namaqualand's population 32 613: 8 477 white, 2 Indians, 2 Malays, 20 981 coloured and 3 151 natives. (Van Heerde et al., 1952:37)

| | | |
|----------------------------------|------------------|-------|
| Namakwaland voertuigstatistieke: | Motorkarre: | 979 |
| | Handelsvoertuie: | 656 |
| | Busse: | 16 |
| | Totaal: | 1 651 |

(Verburgh, 1966b:121)

1953: 10 July: Official opening by Minister of Transport Paul Sauer of the new Anenous Pass (estimated to have cost 62 000 pounds) and the newly constructed "tarred" road from O'okiep to Concordia. (Phyllis Jowell, 1994:152)
See also: 1950, 1951-1953, 1961.

1953: Springbok's white population 900. (Springbok Municipality, 1963)

1954/55: Namakwaland bruto-regionale produk: R24 043 000.

Produksie van vernaamste landbougewasse: Koring (200 lb) 31 589;
Lusern (ton): 1 853; Hawer (150 lb): 3 082; Gars (150 lb): 1 302; Mielies (200 lb): 128;
Aartappels (37,5 lb): 8 990; Katoen (ton): 33.
(Vergelyk met 1962/63: Lewende hawe: 11 593 beeste; 187 616 bokke; 444 639 skape.)
(Verburgh, 1966b:34,45,47)

1955: "...Jowells Garage & Transport provided practically all the transportation requirements throughout the magisterial district of Namaqualand. They conveyed a vast assortment of loads, comprising people, livestock, mining material, farm produce, fencing, building material, base minerals, coal and explosives. The major part of the transportation, though, was under contract with the copper mines at Nababeep and the diamond mines at the Orange River mouth." (Phyllis Jowell, 1994:185)

The Jowell Transport and Motor Company Limited, a public company, incorporated on 28 September. It is said that Joe Jowell "loved Namaqualand and wished to share the profits with as many Namaqualanders as possible."

Also: "Part of the motivation was... to be able to proceed with the business without the constant battle to defend their licenses from objectors and applicants to the Road Transportation Board."

"The Namaqualanders, on a whole, did not buy many shares in the new company, despite Joe Jowell's efforts to sell to them... the people believed that the Jowells and others, particularly the Jewish shopkeepers, were instrumental in keeping the railway out of Namaqualand... that this move was just another ploy by Jowells to stop the railway line at Bitterfontein." (Phyllis Jowell, 1994:187,188,191)

1955: Diamantproduksie: 167 842 karaat; R6 393 274; aarbeid 17 466.
Sillimaniet produksie 2 908 ton; arbeid 193.
Kalksteen produksie: 5 000 ton.
Koper 31 207 ton;
ysterpiriet 10 134 ton.
(Verburgh, 1966b:59,65, tabel 2.34)

1955/56: Namakwaland bruto-regionale produk: R28 179 000.
Wolproduksie: 1 907 064 lb; R489 888.
(Verburgh, 1966b:34,46)

1955-1960: Dit is teen groot koste gepoog om die water diepte van die ingangskanaal en die draaikom te Port Nolloth te vergroot tot omstreeks 11 voet. (Verburgh, 1966b:130)

1956: "Farmers had petitioned for the bridge to be built at Goodhouse (then the main route to SWA - gldr)... Eventually, however, the bridge was built at Vioolsdrift, and was named after Sir Ernest Oppenheimer." (Phyllis Jowell, 1994:152)
Note: Mrs Jowell is in error here (and on pp 135 and 136). She appears to confuse the 1951 Ernest Oppenheimer Bridge, just upstream from the mouth, (which served CDM at Oranjemund) and the 1956 D.F.Malan Bridge at Vioolsdrift on the new main route to South West Africa.

D.F.Malan bridge over the Orange River at Vioolsdrift replaced the Vioolsdrift ferry.
(Willcox, 1986:83)

1956: O.C.C. produseer 32 327 kort ton blasies koper.
Diamantproduksie: 172 242 karaat; R6 422 176; aarbeid 18 108.
Sillimaniet produksie 7 809 ton; arbeid 507.
Kalksteen produksie: 3 040 ton.
(Verburgh, 1966b:58,59,65)

1956: Springbok's population 2200. (Phyllis Jowell, 1994:160)

1956/57: Namakwaland bruto-regionale produk: R25 634 000.
Wolproduksie: 1 878 581 lb; R626 744.
(Verburgh, 1966b:34,46)

1957: Nababep West mine came into production. (O'okiep Copper Company, {1968})

O.C.C. produced 31 311 short tons of blister copper.
Diamantproduksie: 148 519 karaat; R6 581 372; aarbeid 20 194.

Sillimaniet produksie 19 344 ton; arbeid 1 183.
Kalksteen produksie: 4 350 ton.
(Verburgh, 1966b:58,59,65)

1957: Port Nolloth became a municipality on 16 September 1957. (Data in Port Nolloth Municipality's records: Van Graan, 1994:oral; Port Nolloth Munisipaliteit, 1991)
Note: Bulpin (1986:180) says 1945; Departement Fisiese Beplanning (Suid-Afrika, 1980:7) and Mostert & Crewe-Brown (1992:40) say 1857!

1957: Springbok: copper smelting chimney declared a national monument on 1957-08-30.
(National Monuments Council, 1995)

1957/58: Namakwaland bruto-regionale produk: R23 174 000.
Wolproduksie: 1 803 672 lb; R413 648.
(Verburgh, 1966b:34,46)

1958: DC: Summary of the work of the Namaqualand Divisional Council to 1958, prepared by the Chairman, Joe Jowell:

Bitterfontein-Nababeep road maintained by Province.

Port Nolloth-Alexander Bay road maintained by State Alluvial Diggings.

Council had 74 miles of Trunk Roads (90 per cent subsidy), 150 miles of Main Roads (85 per cent subsidy), 1 066 miles of Divisional Roads (65 per cent subsidy), and about 5 000 miles of minor roads.

The 1958 estimates were 38 700 pounds for trunk and main roads and 28 622 pounds for divisional roads, for construction and maintenance. Council's road plant, which included eleven graders, was worth 110 000 pounds.

In 1951 the DC raised their first loan of 42 000 pounds from the O'okiep Copper Company, at 1 per cent (one percent) interest. Of this 15 000 pounds went to the Concordia- O'okiep tarred road and 27 000 pounds to the Annenous road. The annual interest and redemption is 4 200 pounds: after subsidy the DC's share amounted to 210 pounds per annum. Had the roads not been built the maintenance would have cost 7 000 pounds per annum, of which the DC's share would have amounted to 1 050 pounds.

The D.F.Malan bridge over the Orange River at Vioolsdrift, built by the Public Works Department for 150 000 pounds in 1956, resulted in the Springbok-Vioolsdrift road being proclaimed a trunk road and the Springbok-Goodhouse road being down-graded from main to divisional road status.

At the request of the CPA the DC decided to raise a loan for the surfacing of the O'okiep-Steinkopf road and the construction of a gravel trunk road from Steinkopf to Vioolsdrift. The following voluntary contributions to road maintenance and construction had been received:

Namaqua Canning Company, Hondeklip Bay: 1 000 pounds for the Garies-Hondeklip Bay road,

De Beers Consolidated Diamond Mines Ltd, Oranjemund: an annual contribution of 1 000 pounds (from 1956) towards the maintenance costs of the Springbok-Port Nolloth road,

R.G.Niemoller: 3 000 pounds towards the construction of the Pella-Wolftoon road.

The Road Inspector reported:

During 1958 19 miles of the Steinkopf-Vioolsdrift road were nearly finished. On the Springbok-Port Nolloth and the Springbok-Namies main roads 48 miles were built and

gravelled. Bore holes were being put down to overcome the shortage of water for road construction. On Divisional Roads 60 miles were built and 10 miles deviated.
(J.Jowell, {1958})

1958: O.C.C. produced 34 859 short tons of blister copper.
Diamantproduksie: 239 274 karaat; R10 136 038; aarbeid 30 474.
Sillimaniet produksie 11 013 ton; arbeid 1 024.
Kalksteen produksie: 2 250 ton.
(Verburgh, 1966b:58,59,65)

1958: Port Nolloth's climate "is temperate and bracing, the landscape drear and sandy – transformed miraculously into a glory of flowers when winter brings its rare rainfall. A very strong current running from south to north through the harbour and reef channel acts as a natural dredger, but it also constitutes a deadly menace to the crews of the fishing fleet. About a mile offshore there is a bar or break in the reef one hundred and fifty yards wide. When there are no breakers across the bar, the boats enter here cautiously, then swerve sharply off towards the Ovenstone jetty at the southern end of the port. Directly opposite the bar on the shore a signal in the shape of a basket, raised or lowered on a gallows, tells the skipper whether it is safe for him to enter the harbour." (Gill. 1958:29)
See also: 1885.

1958: Drought years were 1948, 1949 and 1958.

Annual rainfalls: 1948- 4,81 inches;
1949- 3,85 inches;
1950- 9,23 inches;
1951-10,11 inches;
1952- 8,88 inches;
1953-11,24 inches;
1954- 9,64 inches;
1955-11,10 inches;
1956- 7,47 inches;
1957-11,79 inches;
1958- 4,80 inches.

(Phyllis Jowell, 1994:160)

1958/59: Ernest Oppenheimer Bridge at mouth of Orange River partially washed away:
Oranjemund completely cut off. (Cloete, 1999; Corbett, 1989:38)
See also: (i) Coetzer:1997:204 for photo of temporary Bailey Bridge.
(ii) 1951, 1961(circa), 1965.

1958/59: Namakwaland bruto-regionale produk: R23 507 000.
Wolproduksie: 1 583 645 lb; R300 484.
(Verburgh, 1966b:34,46)

1959: Jowells bought out Hein's Transport, of Philippi. The first move outside Namaqualand.
(P.Jowell, 1994:221,223)

1959: O.C.C. produseer 38 090 kort ton blasies koper.
Diamantproduksie: 237 034 karaat; R8 454 700; aarbeid 35 433.
Sillimaniet produksie 30 688 ton; arbeid 1 509.

Kalksteen produksie: 5 923 ton.
(Verburgh, 1966b:58,59,65)

1959: Springbok streets were being widened, with kerbing; parking regulations, street lighting and properly allocated parking spaces were being planned. (Phyllis Jowell, 1994:157)

Springbok: Van der Stel's copper "mine", three miles south of Carolusberg, declared a national monument on 1959-02-20.
(Cultural Historical Society, n.d.; National Monuments Council, 1995)

1959: Namakwaland Streeksontwikkelingsvereniging (Namaqualand Regional Development Association) established. (Phyllis Jowell, 1994:256)

1959/60: Namakwaland bruto-regionale produk: R25 895 000.
Wolproduksie: 1 742 340 lb; R391 550.
Lewende hawe: 11 365 beeste; 104 074 bokke; 400 687 skape.
Ondernemings in fabriekswese: visfabrieke 3; boekbindery en drukpers 1;
graanmeulens 2, bakkerye 1; skoenreparasies 1; kleremakery volgens maat 2.
(Verburgh, 1966b:34,46,47,76)

1960: Thesens het 'n spesiaal ontwerpte kusvaarder, die motorskip Zulu Coast op Port Nolloth in diens gestel. Hierdie skip van 813 brt. is breed gebou en het as gevolg slegs 'n diepgang van 10,5 voet wanneer volgelaai. ('n Susterskip, Swazi Coast, is in 1964 aan die diens toegevoeg.)
(Verburgh, 1966b:130)

1960: Namaqualand DC new workshops and stores opened by Administrator J.H.O. du Plessis in February 1960. (Phyllis Jowell, 1994:163)

Trekpaths abolished in Namaqualand, while Joe Jowell was chairman of the DC. "It had taken Joe Jowell almost a decade to achieve". (Phyllis Jowell, 1994:154).
All stock would now have to be transported by road vehicle.

1960: Namakwaland Lugdiens initiated weekly flights from Young's Field. (Die Burger, 1981)
Note: Phyllis Jowell and Springbok Museum say 1961.

November: Namakwaland Lugdiens inaugurated, with the necessary permit from the Director of Civil Aviation. The first service was a once-weekly flight between Young's Field and Springbok in a five seater Piper Aztec ZS-COU piloted by Captain C."Mac" McCulloch (now deceased). (Marguerite van der Merwe, 1985)

1960: O.C.C. produseer 39 457 kort ton blasies koper.
Diamantproduksie: 296 352 karaat; R8 502 422; aarbeid 35 698.
Sillimaniet produksie 38 660 ton; arbeid 2 344.
Kalksteen produksie: 5 157 ton.
Koper 38 710 ton (?);
ysterpiriet 8 954 ton.
(Verburgh, 1966b:58,59,65,tabel 2.34)

1960: Namaqualand: 18 518 square miles; population 43 825 (10 773 white; 27 888 coloured;

1 asiatic; 5 163 bantu); 2.4 people per square mile. (Verburgh, 1966b:15,16)

Total rateable valuation (rural and urban): R14,8 million. (Verburgh, 1966b:80)

Municipal populations:

Alexanderbaai: 2 073 (1 312 whites; 346 coloured; 415 bantu)

Garies: 1 103 (566 whites; 449 coloureds; 88 bantu)

Hondeklipbaai: 785 (80 whites; 613 coloureds; 92 bantu)

Kamieskroon: 869 (317 whites; 523 coloureds; 29 bantu)

Kleinsee: 544 (236 whites; 308 coloureds)

Nababeep: 6 437 (2 033 whites; 2 785 coloured; 1 619 bantu)

O'okiep: 2 973 (828 whites; 1 453 coloureds; 692 bantu)

Port Nolloth: 2 624 (480 whites; 1 857 coloured; 287 bantu)

Springbok: 3 116 (1 452 whites; 1 435 coloureds; 229 bantu)

Steinkopf: 1 705 (coloureds).

Vioolsdrift: 815 (320 whites; 481 coloureds; 14 bantu)

(Verburgh, 1966:81 - ex 1960 census)

1960: Kamieskroon het op 10 September 1960 Dorpsbestuurstatus gekry. (Anon, {1990})

Kamieskroon, wat tot toe deur die kerk bestuur is, oorgedra aan 'n dorpsbestuur.
(Oberholzer, {1993}:53)

1960: O'okiep's population 2 973: 6,78 per cent of the total Namaqualand population.
(Von Zeil, 1989a:69)

1960: Port Nolloth: water consumption: 3 900 000 gallons.
Electricity consumption: 204 000 units.
(Verburgh, 1966b:84)

1960: Springbok: Until 1959, it was only the proclaimed and existing (??) main roads that had permanent surfaces - a mere three miles in Springbok; but during 1960 a start was made on tarring of another approximately six-and-a-half miles, completed in 1962 at a cost of R55 000 (pounds?: see below) and by 1962 there was only one mile of gravel road left to tar in Springbok. Work had also begun on kerb-stones and pavements.
(Phyllis Jowell, 1994:250)

Tot in 1959 was dit slegs die 3,5 myl geproklameerde en gewese hoofpaaie in Springbok wat van permanente oppervlaktes voorsien was. Gedurende 1960 is 'n begin gemaak met die teer van nog 6,5 myl strate, wat gedurende 1962 voltooi is teen 'n koste van 55 000 pond. (Springbok Munisipaliteit, 1963)

1960/61: Namakwaland wolproduksie: 1 280 548 lb; R270 856. (Verburgh, 1966b:46)

1960-1963 (Note: should be 1960-1966): NR 7/8: Construction and permanent surfacing of Trunk Road 11 Section 8 (National Route 7 Section 8) from Springbok via Steinkopf to Vioolsdrift on the Orange River. Savage & Lovemore were the contractors on O'okiep to Steinkopf- 1960-1963. (Barnes, 1994:oral)

Note: See 1964-1965 for Steinkopf to Vioolsdrift.

See 1965-1966 for Springbok to Okiep.

NR 7/8: The section from O'okiep to Steinkopf had been completed at a cost of nearly R1 million. (Phyllis Jowell, 1994:255)

NR 7/8: Construction and surfacing of N7 O'okiep to Steinkopf, believed to be one of the first major road contracts that the contractors Savage & Lovemore undertook for the CP Roads Department. It was also Mike Andrew's (now MD of J&G) first rural road supervision assignment. The length of the section was approximately 50 km and on one section it had a crusher run base course that was constructed from rock which came from an O'okiep mine dump. The pyrites in the mined rock caused blistering of the surface (and of course a bad smell of rotten eggs!) (Frank Steele, 1994)

Note: Etienne de Villiers of Provincial Roads (1994:oral) said that they sealed the road with a bitumen-rubber spray, which had proved efficacious in the case of the salt water bubbles on the Port Nolloth-Alexander Bay road, and that this sorted the problem out.- gldr

NR 7/8: About 1961: Construction and permanent surfacing of O'okiep to Steinkopf road for CPA by Savage & Lovemore. (Ed Sunde, 1993)

David Lovemore lived on site as supervising director and site agent. Jaap Reynolds supervised the job from Cape Town for J&G and Mike Andrews was the RE. We had good rains, so had no difficulty in getting water from the boreholes we drilled. The brack water from the old railway wells was used for earthworks. The pyrites problem only came to light at a later date. The mine surveyor indicated the wrong dump to us and after we had crushed the stone they realised they had given us a dump which still contained a useable amount of copper in the ore. They eventually left it as it would have cost them too much to pay us to crush the other stone. The only material problem at the time of construction was surfacing aggregate, as there was only one granite source that passed the Treton test, and even that was marginal. Surfacing was done using a pneumatic roller and only one final pass of the steel wheel roller. Savage & Lovemore handed over the work in 1962. (Ed Sunde, 1996)

1960-1970: NR 7/7: Reconstruction and permanent surfacing of National Route 7 Section 7 from the railhead at Bitterfontein to Kraairivier. The Provincial Roads construction unit stationed at Garies did the section from Bitterfontein to mile 67,5. The Resident Engineer was Peter M. Thomson, supported at various times by Pokkels van der Ryst, Ron Strybis and Steve Fanner. (Barnes/Fanner, 1994:oral)

NR 7/7: Construction and surfacing of Bitterfontein to Kraairivier (about 12 kilometres north of Kamieskroon) section by the National Roads Construction Unit at Garies.

Note: This unit was manned and controlled by the Cape Provincial Roads Department, as the National Roads Department did not do their own construction. Fanner recalls that "Daddy" Starke, a well-respected senior RE then in charge of (he thinks) the Malmesbury Unit, actually did the early preparatory work in connection with the establishment of the camp at Garies for Thomson's unit. Peter Thomson was RE from 1960 to 1964; he was followed by "Pokkels" van der Ryst from November 1964 to May 1966, when Ron Strybis took over until he resigned in April 1967. Steve Fanner then ran the unit until the job was finished in May 1970. Albert Myburgh was Assistant RE for some of the construction period. Because of the general shortage of water in the district it

was necessary for the unit to provide boreholes along the construction. They drilled many dry holes. The delivery was never very large from any hole.

Regarding the supply of water to the camp he remembers that in his time they only used a water tanker to bring water from the construction boreholes to the camp reservoir when the well which was built in the sandy bed of the Groen River to the north of town ran dry. The water pumped from this well was piped along the main street through town to the reservoir (Eaton tank) above the camp to the south of the town. The municipality subsequently built their own reticulation system, also pumping from a well in the river bed initially, but their water was treated!!

The unit was initially only supposed to build up to Kamieskroon, but it suited for them then to extend their activities to Kraairivier. This section they built to the plans which Jeffares & Green had prepared for contract construction. Fanner recalls that these complete plans greatly reduced the design input required of the RE.

"As a sort of going-away present" the unit reconstructed and surfaced the main street through Garies, which had held up so well with John Williamson's 1948 prime and sand treatment.

In 1967 the Garies construction unit was spending R1,1m annually, and was by far the largest of the Provincial units (Kraaifontein unit spent in the order of R850 000 per year). At the end of the job Fanner went as Resident Engineer to the Prieska unit. With him went about six of his Garies staff, others being spread amongst other units where the need existed.

(Steve Fanner, 1994:oral)

(It is always sad when a highly trained, experienced and integrated team has to be broken up. A road construction unit is a good example of a case where the whole is greater than the sum of the parts - gldr)

NR 7/7: Ron Strybis was RE on the Garies Unit from May 1966 to April 1967. When he got there, although Van Rhynsdorp-Bitterfontein was still gravel, the unit had completed construction and surfacing from Bitterfontein to Garies, and in his time they worked north towards Kamieskroon. This section includes the main gain in elevation along the road, with two particular climbs/passes in Garieshoogte just north of the town and in Brakdam se Hoogte (also known locally as Garies Tweedehoogte) just south of Kharkams. As a result the work consisted very largely of drill-blast-doze to fill, with rock cuttings up to sixty feet in depth. Rock fill is placed without the need of water for compaction, so that during his time on the Unit Ron really needed water basically only for the controlled (or upper) layers. It was a particularly dry period, with construction bore holes drying up and a practically continuous boring programme on the go in an attempt to find more water sources. They ran three 3 800 gallon water tankers each with an 800 gallon trailer continuously from a strong but brak borehole near Bitterfontein to the construction north of Garies. These haulage tankers, which delivered to tanks alongside the road wherever construction was in progress, were able to average only three trips per day. In the camp itself families were rationed to 2 000 gallons per month through the meter: this was the brak water pumped from the borehole in the river bed into the camp tank every Friday. Drinking water was obtained from roof water, stored in individual tanks. This "fresh" water was very precious, and Ron can remember accusations on occasions that roof water had been stolen. When finally a "strep" of rain fell in the headwaters above the town a padmaker roared into the camp in his bakkie (and in a cloud of dust!) shouting "Dit het green!!" This rain was caught in the dams they had contrived using the road embankments, and all the camp children disported themselves in the very muddy water, having a great time. Even when the embankments began showing signs of distress they

preferred to hold the water and repair the road fill rather than loose that wonderful construction water. Ron's other main memories are of crayfish being so plentiful from weekend expeditions to Groen River mouth that they refused more, and of the whole town turning out to watch a showing of his slides of their trip to Europe - there was no bioscope in Garies! (Ron Strybis, 1994:oral)

NR 7/7: The National Roads Camp was moved (complete with trees) from Hope Town to Garies by the Resident Engineer Peter M.Thomson, who stayed in charge of the unit until 1964, when he was relieved by Steve Fanner (and joined me in the Geometric Design Section in Cape Town!- gldr). Fanner in turn handed over to Ron Strybis. (See Fanner above: he has a different sequence of RE's) Work commenced from the Bitterfontein end, and the Provincial unit built to north of Kamieskroon. Mary recalls that they laid out a reticulation system for the supply of water to the unit houses, from a reservoir which was filled by a water tanker. She thinks that this gave the municipality the idea that they might also lay on such a system. (Mary Thomson, 1994:oral)

Peter Thomson started the unit in Garies in 1960. It was made up of the units from Hope Town (where Peter had been RE) and - he thinks - Mount Frere. They moved in 60 families and 300 labourers. He had a battle initially to get the camp laid out as he wanted, as Head Office had told Stan Etherington to do the laying out for him. Etherington and "Daddy" Starke oversaw the initial camp construction work, including the grading of the benches for the houses and roads. Houses were prefabs, either of masonite or metal framed with asbestos infill panels. All toilets were outdoor on the bucket system.

For the first few months water for the camp was carted by a water tanker from a pit in the river bed, in addition to collecting rain water from roofs. Then Thomson designed and built a two kilometre pipeline and reticulation system. They obtained their own water supply, pumping from a caisson (about 6 metres diameter and 10 metres deep) which they sank in the river bed at a point chosen after extensive prospecting for the most favourable water trap - sub-surface rock ridge - and storage basin. (By Murphy's Law, this was of course at the opposite end of town!! - gldr.) At the source a small electric pump and a chlorinator were housed inside the caisson on a specially built platform. The caisson was roofed. There was a full-time operator and he had a bicycle for moving between the source and the distribution system in the camp itself to check on the rate of pumping required. The distribution system was from two 15 000 gallon Eaton tanks to a series of 1 000 gallon break-pressure galvanised tanks, with feed into the tanks controlled by ball valves. These tanks each supplied a row of houses. The offices and workshop area were linked directly to the reservoir. Power was generated for residential use in the early mornings, over lunch time, and in the evenings through to about 22 00.

Water for construction was obtained from holes drilled, many without success, along the road, and from dams where the infrequent rainfall was trapped. (What did the farmers downstream say to this? - gldr)

Some of the staff on the project: Works Foreman Johan Groenewald (who had previously been with me on the Nababeep unit as Bitumen Foreman); Assistant Works Foreman Pretorius; Chief Blaster Gouws; Chief Mechanic variously Burger, Scriven and Viljoen; Chief Clerk Eden Steyn; Storeman Wheeler; Surveyor Burgers; Chief Lab Assistant Hough and then Van Dalen; Assistant RE Albert Myburgh; Resident Engineers Peter Thomson and then Pokkels van der Ryst, Ron Strybis and Steve Fanner.

The major feature of the job was the large amount of blasting. (See Peter Thomson's paper in bibliography.) Although they were blasting for many kilometres alongside the main Cape Town - Namibia telephone line they had only two breaks, thanks to precise drilling

and loading control. The base course quarries also required a lot of blasting. When the construction got up to opposite the town the blasting became a major display and attraction!! In the pass sections (Garies Hoogte and Kamieskroon) they used wagon drills - the first time these had been used on CPA construction. The unit was an early user of Cat D9's, of which they had two because of the heavy earthworks. They nearly lost one of these expensive items when the rain came as they were hurrying to finish a dam - it bogged down in the dam basin and was only saved when they thought to use the dozer's hydraulic blade and ripper as jacks!! On one occasion a flood took out the road (not common in Namaqualand!) which made for some excitement until the unit got it open again. Logistical supply in general was a problem. Supplies came by rail to Bitterfontein. Road haulage from there was awarded by tender: Petrie Malherbe did the major general haulage while Jowells did the diesel cartage. But the special large explosives cartridges which were made up for the job by AECI, Somerset West, were brought from the railhead by the unit's special Dynamite Truck.

The main items of social life which are remembered are variety concerts in the Hall, particularly Christmas concerts. In those days the RE was expected to do much which today is done for him elsewhere. Thus it is no great surprise to learn that a good deal of the location and all the grading between Bitterfontein and the top of Garies Hoogte were done by Peter Thomson himself. When they came to Garies in 1960 there were many miles of gravel to the south. By 1964, when Peter and Mary left, only two miles of gravel remained.

(Peter M. Thomson: two pages of cryptic notes dated 18 July 1994. Luckily I had worked with him for many years, and so could read almost everything he had written!! Also his November 1994 write-up on the Garies camp. Also 1993 & 1994:oral.)

Note: There were a number of deep rock cuts where this unit did exceptionally outstanding work. [See Peter Thomson's paper on "Deep Drilling & Blasting Techniques" - 1964]. The whole construction was carried out to the high standards to be expected from a Provincial unit - travel it today and see how the road snugs into the countryside, and also how the road shows minimum signs of deformation after more than thirty years. Truly they had made a very real contribution to transportation in Namaqualand – gldr.

1960-1970: "Generally, in South Africa, the sixties were "boom years": its growth rate over the period 1960-1970 averaged nearly six percent a year; imports rose by 109 percent between 1958 and 1962; while exports (excluding gold) rose 135 percent. Foreign investment, which had been valued at R3 billion in 1963, had risen to R7 billion by 1972 - an increase of about 230 percent. This was the fuel that fired the boom, accounting for more than two thirds of the country's economic growth, and bringing with it a vital injection of new technology."

(Phyllis Jowell, 1994:258: quoted from "Readers Digest Illustrated History of South Africa":421)

1960's: From a report by the Chairman of the Namaqualand Divisional Council:

Namaqualand is 18 000 square miles in area; the national road from Cape Town through Springbok to the new bridge at Vioolsdrift will hopefully be tarred by the end of 1967; the Division has 134 miles of trunk roads, 216 miles of main roads, 944 miles of divisional roads and 4000 miles of minor roads. Jowell also describes a number of roads, details rail, road and air goods and passenger services, and mentions telephone and radio communications. (Joe Jowell, 1960's:1-3):

1960: Namakwaland Afdelingsraad inkomste: Belasting en heffings: R65 384
Padsubsidies: R97 733. (Verburgh, 1966b:115)

1961: MR 748: O'okiep to Concordia: Private mine road: Construction and permanent surfacing of for O'okiep Copper Company by Savage & Lovemore. (Ed Sunde, 1993)

O'Kiep to Concordia: private OCC road by Savage & Lovemore. Design was done by Shell and involved a penetration of a layer of two and a half inch single sized stone, which was choked with a three quarter inch stone and then had a double seal of half inch and quarter inch stone. Needless to say we were buying our bitumen from Shell. The spray on the two and a half inch stone was so heavy that we had to tow the distributor with a D4 because the rate of travel was too slow for the truck, and the bitumen had to be applied in one application. (Ed Sunde, 1996)

Note: this was a private mine road. The road constructed in 1950-1953 was the proclaimed Main Road.

1961: Bulk fuel depot facilities established at Bitterfontein. Truck tankers now replaced the previous system of petrol distribution by drums. (Phyllis Jowell, 1994:236,237)

1961: "In January 1961 we started with a scheduled service between Springbok and Cape Town (twice a week), while we also introduced charter flights." (Joe Jowell, 1962:16)

"Namakwaland Lugdiens (Edms) Bpk was started in 1961..." "Namakwaland Lugdiens was formed as a subsidiary company to provide a scheduled air service between Springbok and Cape Town as well as a charter air service based at Springbok.

The service started in January 1961 with twice-weekly flights between Springbok and Cape Town, the fleet comprising a twin engine six seater Piper Aztec as well as a single engine four seater Beechcraft Bonanza that was already in use."

This pioneering service ran at a loss for the first few years.

Jowells was in charge of the municipal airfield and performed services there for the municipality free of charge. The company did, however, charge a nominal landing fee of five shillings for the use of its facilities. (Phyllis Jowell, 1994:234)

Namakwaland Lugdiens gestig. (Springbok Museum)

Note: Marguerite van der Merwe (1985) says the company was inaugurated and obtained their DoT permit in 1960. Die Burger (1961) says flights initiated in 1960.

1961: O.C.C. produseer 38 909 kort ton blasies koper.
Diamantproduksie: 280 537 karaat; R9 024 294; arbeid 35 111.
Sillimaniet produksie 78 493 ton; arbeid 3 196.
Kalksteen produksie: 3 269 ton.
(Verburgh, 1966b:58,59,65)

1961: Namakwaland: 531 blanke hoewes; 4 016 111 morg oppervlakte; waarde R12 428 035.
1 586 gereelde werkers in die landbou (29 blankes; 1 451 kleurlinge; 106 bantoes).
(Verburgh, 1966b:36,37)

1961: Garies became a municipality (VMB since 1911). (Suid-Afrika, 1980:7)

1961: "Mighty Midge" (see below) crossed the Berg River easily at Wildebosdrift, but bogged down in a small stream near Redelinghuis. (Argus, 1961)

Kleinzee - De Beers - ordered a 42 ton Michigan 380 rubber tyred dozer with a 14 foot blade. Only when it landed at Cape Town did they find it was too big to transport by rail or by road. "Mighty Midge" walked up the beaches and through the Sandveld, taking 11 days to cover 483 miles. (De Beers, 1976:33)

Kleinzee second hospital built (first in 1930). (De Beers, 1976:18)

1961: Port Nolloth harbour lease, and immovable jetties, sheds, etc, sold by O'okiep Copper Company to Consolidated Diamond Mines, who operated it until 1986 when they shifted their assets, control, etc, into Namibia. (Captain Donald Bridge, 1994:oral)

1961: Springbok Municipality concluded an agreement with OCC for 24 million gallons of water per year ex the Buffels River pumping scheme to bolster the previous supply of 39 million gallons a year ex boreholes and springs.
(Phyllis Jowell, 1994:250; Springbok Municipality, 1963)

The tarring of all but one mile of Springbok's streets completed.
(Springbok Municipality, 1963)

There was only one mile of gravel road left to tar in Springbok. Work had also begun on kerb-stones and pavements. (Phyllis Jowell, 1994:250)

1961: 31 May: **Republic of South Africa.**

1961 (circa): Orange River bridge at mouth: Single span with greater freeboard constructed on left bank; roadway kinked down to the left onto lower old bridge.
(Jennifer Cloete, 1999-07-21)
See also: 1951, 1968/59, 1965.

1962: Namakwaland wolproduksie 1961/62: 1 863 927 lb; R405 913. (Verburgh, 1966b:46)

1962: Spoorwegverkeer te Bitterfontein:

Afgestuurde verkeer: 64 620 ton waarvan koper ongeveer 46 000 ton uitmaak.

Ontvange verkeer: 167 172 ton waarvan steenkool 130 740 ton uitmaak.

Afgestuurde vee 18 684 ekwivalente eenhede

Ontvange vee 1 488 ekwivalente eenhede

(Kleinvee maak die heel grootste gedeelte van die vee verkeer uit.

(Verburgh, 1966b:152,154)

1962: Jowells Transport had 45 Leyland diesel vehicles at this time. "Together with trailers, the carrying capacity of our fleet is 700 tons, with which we move nearly 12,000 ton per month. The vehicles run 190,000 miles or 1.5 million ton-miles per month."
"Each of our vehicles drives on average 4,300 miles a month or 170 miles a day." Between Bitterfontein and Springbok they climb 22,000 feet and go down 19,000 feet. About two thirds of the traffic originates from the copper and diamond mines while three or four big commercial concerns are responsible for half the remaining third. Traffic is largely in one

direction only: not more than 10 per cent of the vehicles' carrying capacity is on average utilised from Springbok to Bitterfontein. (Joe Jowell, 1962:4,13)

1962: O.C.C. produseer 39 654 kort ton blasies koper.
Diamantproduksie: 350 341 karaat; R8 999 670; aarbeid 24 421.
Sillimaniet produksie 33 207 ton; arbeid 4 348.
Kalksteen produksie: 4 814 ton.
(Verburgh, 1966b:58,59,65)

1962: Namakwaland voertuigstatistieke:

| | |
|------------------|-------|
| Motorkarre: | 1 855 |
| Handelsvoertuie: | 1 299 |
| Busse: | 19 |
| Totaal: | 3 173 |

(Verburgh, 1966b:121)

1962/63: Produksie van vernaamste landbougewasse:

| | |
|----------------------|--------|
| Koring (200 lb) | 36 305 |
| Lusern (ton) | 3 017 |
| Hawer (150 lb) | 12 424 |
| Gars (150 lb) | 2 912 |
| Mielies (200 lb) | 198 |
| Aartappels (37,5 lb) | 160 |
| Katoen (ton) | 64 |

(Vergelyk met 1954/55: Wolproduksie: 1 720 218 lb; R421 897.
Lewende hawe: 10 716 beeste; 130 338 bokke; 448 465 skape.)
(Verburgh, 1966b:45,46,47)

1963: Ondersese pyplyn, deur Consolidated Diamond Mines te Oranjemund laat bou, in werking. Jaarliks word ruim 20 000 ton olieprodukte daardeur gepomp.
(Verburgh, 1966b:190,191)

1963: The tarring of the national road between Bitterfontein and Garies was proceeding. In fact, by 1967 the entire road from Cape Town to Vioolsdrift (430 miles) was expected to be tarred.

Note: Springbok-Vioolsdrift was finished in 1965, but Bitterfontein-Springbok only in 1970.

"The extensive road development was a major reason for the economic improvement in the area in the 1960s."

"Joe Jowell was a powerful advocate of road improvements in the interests of encouraging tourism to the area by making access easier."

(Phyllis Jowell p 255)

DC: Tarred roads at this time: Springbok - Okiep - Nababeep - Concordia - Steinkopf and Springbok - Carolusberg. Steinkopf - Vioolsdrift was under construction and it was anticipated that the whole road to Cape Town would be tarred by 1967 (this only happened in 1970 - gladr)

(Springbok Municipality, 1963)

1963: The Norval Commission appointed in August 1962 by the National Transport Commission

to investigate road transport in Namaqualand held hearings in the magistrate's court in Springbok on 24 and 25 February 1963, and continued in Cape Town on 14 March 1963. The Commission's findings were published in July 1963, concluding that the sole rights under which Jowells' service operated were indeed in the interest of the Namaqualand public, and that no charges against or dissatisfaction with the service as such was brought to the attention of the Commission... charges were concerned specifically with tariffs, but the Commission found no evidence of discrimination of tariffs...
(Phyllis Jowell pp 201-217 and references)

1963: O'okiep Copper Company had a fleet of 100 petrol driven vehicles and 36 diesel trucks. Three 30 ton semi-trailers brought 40 000 tons of ore a month from Nababeep West to Nababeep. About 240 tons of concentrate was carried daily by 30 ton semi-trailers from O'okiep and Carolusberg mines to the Nababeep smelter. Eight units, consisting of 10 ton trucks and 10 ton trailers carried 3 300 tons of blister copper a month to the Bitterfontein railhead, a distance of 123 miles. On the return trip they brought 3 700 tons of coal a month to Nababeep for the smelter and steam generating plant.
(*South African Mining & Engineering Journal*, 1963:864)

Springbok's private road transport operators had 50 vehicles and 30 trailers (total capacity 750 tons) which annually transported 250 000 tons of goods to and from Bitterfontein; and 7 buses which can carry 200 passengers.
(Springbok Municipality, 1963)

1963: OCC produced well over half the copper mined in South Africa. It had seven mines operating in an area about 20 miles square. (*South African Mining & Engineering Journal*, 1963:863-866)

Carolusberg mine and mill came into production.
(O'okiep Copper Company, {1968}; {1992}:6)

Okiep Copper Company opened a rich new mine at Carolusberg.
(W.Steenkamp, 1975:48)

1963: O.C.C. produseer 40 776 kort ton blasies koper.
Diamantproduksie: 321 862 karaat; R7 888 224; aarbeid 35 419.
Sillimaniet produksie 30 237 ton; arbeid 2 185.
Kalksteen produksie: 2 412 ton.
(Verburgh, 1966b:58,59,65)

1963: Visvangste uit Port Nolloth: 3 456 ton; R597 472. Daar was 311 werknemers op Port Nolloth in diens van die visbedryf: drie geregistreerde maatskappye en een privaat blanke persoon. (Verburgh, 1966b:54)

1963: In Springbok R400 000 was to be spent on rebuilding and retarring the two main roads, Van der Stel Street and Voortrekker Road. (Phyllis Jowell, 1994:255)

Springbok celebrated its 100th year of existence. Springbok's white population 1700. Namaqualand covers 18 500 square miles and has a population of 14 000 whites, 35 000 coloureds and 6 000 Bantu. (Springbok Municipality, 1963)

1963/64: Namakwaland wolproduksie: 2 101 789 lb; R672 065. (Verburgh, 1966b:46)

1964: Thesens brought the second specially designed ship, "Swazi Coast", into the three times weekly service between Port Nolloth and Cape Town, touching also at Lamberts Bay and St Helena.. (Verburgh, 1966b:130)
See also 1960

1964: O.C.C. produseer 45 953 kort ton blasies koper.
Diamantproduksie: 279 938 karaat; R9 826 510; aarbeid 35 178.
Sillimanite produksie: 35 350 ton; arbeid 1 643.
Kalksteen produksie: 3 988 ton.
Government Metallurgical Laboratory report on visit to Namaqualand: "The visit has helped to dispel any concepts that may have existed that the N.W. Cape is an area of vast untapped mineral resources. The major mineral industries are diamonds and copper, and will probably remain so for many years to come."
(Verburgh, 1966b:58,59,65,67-74)

1964: Garies population 501 whites (includes the 216 school boarders), 345 coloureds and 2 blacks. In the Garies district there were 2 500 whites, 1 500 coloureds, 6 Asians and 80 natives. (L.M.Steenkamp, 1952:1)
Note: Ds Steenkamp appears to have the wrong date here - his paper was written twelve years earlier, in 1952!

1964: O'okiep Copper Company donated 6627 hectares to the CPA as a nature conservation area. Initially named the Hester Malan Nature Reserve after the wife of the Administrator who finalised the donation, it was later renamed Goegab.
Average rainfall for the region is 127 mm per annum, and temperatures vary between minus 1 and 48 degrees Centigrade.
(Cape Provincial Administration, Nature & Environmental Conservation, n.d.)

Situated 15 kilometres south west of Springbok, the Goegap Nature Reserve includes the Hester Malan Wild Flower Garden with an exhibition of succulents and a rock garden.
(Namaqualand RSC, 1995:24)

1964-1965: NR 7/8: Murray & Stewart were contractors for Steinkopf to Vioolsdrift.
(Barnes, 1994:oral)

NR 7/8: There were a couple of bad washaways in the poort section, probably in about 1961 and 1974. (Barnes, 1994:oral; Fanner, 1994:oral)

NR 7/8: The contract for the building and tarring of the Steinkopf-Vioolsdrift main road (the link with South West Africa) had been given to Murray & Stewart contractors and was expected to cost R2 million. (Phyllis Jowell, 1994:255)

Note: Max Pike (1995:oral) says the final cost was more than R2 million.

NR 7/8: 1965: Murray & Stewart constructed Springbok [should read Steinkopf] to Vioolsdrift; Contracts Manager Dougie Hutton. (Geoff Lunn, 1994:oral)

Note: Max Pike (1995:oral) says Hutton was in charge of pipe work.
Site agents were Dudley Couderoy and Tom de Bruin.

NR 7/8: Steinkopf-Vioolsdrift: Murray & Stewart (Roads & Earthworks) had their camp at Jakkalswater, about 25 kilometres north of Steinkopf, where they also built a landing strip. They used water from the Orange River, which they pumped along the road in 4 inch snap-coupling Perrot piping for about 15 kilometres. When the water could not be pumped any further they made a dam, and pumped from there. Max's particular memory is of the intense cold at 0300 mornings, when crushing material. They had a flash flood in which they lost a Land Rover down a "dry" river bed. Jerold Poole was the visiting director from J&G. (Max Pike, 1994:oral)

NR 7/8: Construction and surfacing of portion of National Route 7 Section 8, Steinkopf to Vioolsdrif, approximately 70 kilometres, including a winding alignment through the gorge to the Namibian [then SWA] border at Vioolsdrif. Temperatures in the gorge during the summer months became so high that certain types of work on construction had to be curtailed. Large Armco culverts and vehicle underpasses were another feature on this road. The contractor was Murray & Stewart, Resident Engineer George Baikoff (note: also Weaving - see below) (Frank Steele, 1994)

NR 7/8: The contract from Steinkopf to Vioolsdrift was completed towards the end of 1965, when Murray & Stewart shifted their unit to the Kleinzee-Port Nolloth job. (Weaving/Fanner, 1994:oral)

Commenced early 1964 {Weaving RE from February 1965} and finished September 1965. (Neville Weaving, 1994:oral)

Note: Max Pike (1995:oral) says the unit moved from Jakkalswater to the Springbok-Okiep job, and from there to Gembokvlei-Port Nolloth.

1964/65: Namakwaland wolproduksie: 1 700 636 lb; R415 774. (Verburch, 1966b:46)

1965: Orange River: new Oppenheimer Bridge, Oranjemund: Single higher span which had been erected in 1961 (q.v.) was now extended across the river. Portion of old lower level bridge remains on downstream side. (Cloete, 1999)

Orange River: high level bridge at mouth opened in 1964. (Corbett, 11989:41)

New Oppenheimer Bridge across the Orange river opened "without ceremony" on 3rd February 1965. Designed and built by Christiani & Nielsen; "distinctly resembles a graceful Roman colonnade." Construction time 15 months. Spans 3.000 feet across the river, supported on 23 piers; "one of the longest in Southern Africa. The high section of the old low-level bridge had to be raised five feet to meet the new section" 42 feet above sea level. (*Oranjemund Newsletter*, March 1965)

Note: the cover of the Newsletter has a reproduction of a very good drawing of the two bridges.

See also: (i) Coetzer, 1997:203 for photograph of bridge during 1974 flood.
(ii) 1951, 1958/59, 1961(circa).

1965: Seevrag: Port Nolloth:

Gelande goedere: 54 000 ton, waarvan olie, petrol ens 15 178 ton uitmaak en sement 5 221 ton,
en waarvan ongeveer 24 000 ton na CDM, 7 000 ton na SAD, 6 000 ton na OCC,
6 000 ton na Kleinzee, 1 500 ton na Vioolsdrif, 2 500 ton na Springbok.

Verskepte goedere, 10 000 ton, waarvan bevrore vis 3 203 ton uitmaak en
lee dromme 4 583 ton
Ondersese pyplyn (Oranjemund): 20 000 ton olieprodukte.
(Verburgh, 1966b:189-191)

1965: Spoorwegverkeer te Bitterfontein:

Afgestuurde verkeer: 72 840 ton, waarvan koper ongeveer 53 000 ton uitmaak.
Ontvange verkeer: 211 860 ton, waarvan steenkool 131 340 ton uitmaak.
Afgestuurde vee: 20 016 ekwivalente eenhede.
Ontvange vee: 168 ekwivalente eenhede.
(Kleinvee maak die heel grootste gedeelte van die vee verkeer uit.)

Afgestuur: ramings van samestelling:

Minerale: 53 000 ton, waarvan koper 46 000 ton uitmaak.
Landbouprodukte: 17 000 ton.
Ander goedere: 3 000 ton.

Ontvang: ramings van samestelling:

Steenkool: 125 000 ton.
Olie produkte: 13 000 ton.
Sement: 10 000 ton.
Plofstowwe: 2 000 ton.
Ander goedere: 50 000 ton.

(Verburgh, 1966b:152,154,165,183,189)

1965: Survey of the operations of four major transport concerns in Namaqualand gave the following annual statistics:

236 vehicles
219 general staff
82 tradesmen
5 312 000 miles covered
198 000 tons mining goods carried
247 000 tons general goods carried
190 000 sheep and cattle transported
17 560 passengers conveyed.

(Die Burger, 1981)

"Die uitbouing van die mynwyse word gekortwiek deur afstande en 'n gebrek aan toereikende vervoerverbindings."

Ook so "die landbou: dit is karakoel en skaapwereld by uitstek, die koringbrengs het reeds die 50 000 sak kerf oorskry, terwyl dadels, ertjies, lensies en katoen ook in groot skaal in sekere distrikte verbou word."

(Niemoller, {1965}))

1965: 30 September: All South African Airways DC 4 Skymasters withdrawn from scheduled services. Viscounts introduced on service to SWA, with DC 3's operating a connecting service from Cape Town to Oranjemund landing at Alexander Bay.
(George Surman, 1994:oral)

1 November 1965: SAA: A bi-weekly service in DC 3's introduced Kimberley-Upington-Keetmanshoop-Cape Town- Alexander Bay. (Note: seems a strange sequence, but checked by Mr Surman.)

(George Surman; 1994:oral)

1965: O.C.C. produseer 46 077 kort ton blasies koper.

Diamantproduksie: 308 541 karaat; R11 830 047; aarbeid 38 572.

Sillimanite produksie 40 200 ton; arbeid 1 323.

Kwartziet: 3 024 ton (in Richtersveld); 4 090 ton totaal.

Blesberg myn (noord van Steinkopf: 836 ton mika; 455 ton felspar; 7,7 ton beril;

26 ton spodumene; 2,5 ton tantaliet en 274 lb bismuth ontgin.

Kalksteen produksie: 4 000 ton.

Ysterpiriet: 3 678 ton,

Beriet 1 183 ton.

Nika 1 038 ton.

Veldspaat 485 ton.

(Verburgh, 1966b:58,59,62,65, tabel 2.3)

1965: Port Nolloth handled about 100 000 twenty pound boxes of kreef yearly, plus white fish for local market. Regular bus service to Bitterfontein. Three coasters call weekly on the way to Walvis Bay. (Die Burger, 1981)

Port Nolloth: Rateable valuation R883 790.

Electricity consumption: 240 000 units @ 5 cents per unit.

Water consumption: 5 760 000 gallons @ R1,25 per 1 000 gal.

(Verburgh, 1966b:83,84,85)

1965: Namakwaland Afdelingsraad waardasies:

Landelike waardasie: R11 841 450

Stedelike waardasie: R2 649 930

Namakwaland Afdelingsraad inkomste:

Belastings en heffings: R110 952

Padsubsidies: R271 058

(Verburgh, 1966b:115,117)

1965: Populations:

Alexander Bay 700 white, 400 coloured, 650 Bantu

Hondeklip Bay 30 white, 170 coloured, 100 Bantu

Kamieskroon 1000, including 35 non-white

Nababeep 2033 white, 4404 non-white

Okiep 828 white, 2145 non-white

Port Nolloth n/a

Springbok 1452 white, 1664 non-white.

(Die Burger, 1981)

1965-1966: NR 7/8: Murray & Stewart (Roads & Earthworks) built the Springbok-O'okiep road. (Max Pike, 1994:oral)

NR 7/8: 1968 (note: 1968 is incorrect- see above and below): Construction and surfacing of a portion of National Route 7 Section 8, Springbok to O'okiep, a short section of 16 kilometres to replace the existing road which was narrow and in a very poor state.

Contractor was Murray & Stewart and Resident Engineers were Robin Green and Richard Coke. (note: these names are incorrect according to Weaving - see below.)

The approximate cost was R6m which included two interchanges and their related roads at Moordenaarskop and O'kiep. (Frank Steele, 1994)

NR 7/8: Construction and permanent surfacing of Springbok- Okiep section by Murray & Stewart from October 1965 to September 1966. Weaving was RE.
(Neville Weaving, 1994:oral)

1966: Port Nolloth: twee skepe onderhou reelmatige dienste tussen Kaapstad en Port Nolloth (gemiddeld 3 x per week in albei rigtings). Omstreeks 70 000 ton vrag per jaar word deur die twee skepe in Port Nolloth afgelaai of ingeneem. Die ondersese pyplyn by Oranjemund waardeur geankerde tenkskepe jaarliks omstreeks 20 000 ton brandstof aan land pomp vir gebruik deur CDM en die Staatsalluviale Delwerye.
(Verburgh, 1966b:129)

Construction of an ore port near Port Nolloth is recommended. (Verburgh, 1966 a & b)
See also: 1993, 1994, 1997.

1966: Rail passenger service:

Mondays , Wednesdays and Fridays: 13,00 ex Bitterfontein, arrive Cape Town 06,03 the following day.

Tuesdays, Thursdays and Sundays: 17,50 ex Cape Town, arrive Bitterfontein 11,36 the following day.

289 miles; averaging 17 miles per hour!!
(Verburgh, 1966b:96)

1966: SAR Road Motor Passenger Service:

Fridays 19,45 ex Cape Town; Saturdays 02,50 at Bitterfontein, 05,35 at Springbok, 10,30 at Karasburg.

Sundays 17,00 ex Karasburg; Monday 07,40 at Cape Town.
536 miles; averaging 35 miles per hour.

(Verburgh, 1966b:99)

Paaie in Namakwaland (1966):

| | | |
|----------------------|-----------|--------------|
| Nasionale paaie: | 167 myl | |
| Groot paaie: | 65 myl | 90% subsidie |
| Hoofpaaie: | 316 myl | 85% subsidie |
| Afdelings paaie: | 1 273 myl | 65% subsidie |
| Ondergeskikte paaie: | 3 500 myl | |
| Totaal: | 4 992 myl | |

(Verburgh, 1966b:107, tabel 3.4; 110)

Persentasie swaar voertuie in die totaal verkeer (1966):

| | |
|-------------------------|------------|
| Springbok-Pofadder | 40 persent |
| Port Nolloth- Steinkopf | 46 persent |
| Bitterfontein-Springbok | 30 persent |
| Steinkopf-Vioolsdrif | 35 persent |

(Verburgh, 1966b:193)

In 1966 Jowells Transport possessed 55 vehicles, of which eight were truck-tractors ("horses") pulling 20 ton semi-trailers. There were also 46 trailers.

During 1965 the vehicles covered 2 674 281 miles, of which the majority were on the Springbok-Bitterfontein route. 35 lorries departed from Bitterfontein to Springbok, O'okiep and Nababeep each day.

A total of 200 000 tons was transported in 1965.

Jowells serves the copper and diamond mines, the fishing industry and the farming community, as well as the general public in a number of villages of which Springbok, Port Nolloth, Steinkopf and Vioolsdrift are the most important.

Jowells Transport is a "protected operator" in terms of section 13(3) of Act 39/1930.

Malherbe's Garage operated seven vehicles, transporting mainly on the routes to Garies and Hondeklip Bay.

Pofadder Transport had a fleet of 27 vehicles and 21 trailers. In 1965 they transported 40 000 tons between Pofadder and Kakamas (the half Sillimanite), and wool to Bitterfontein with fuel and general merchandise on the return northwards.

The O'okiep Copper Company, using 11 trucks and trailers with a combined load capacity of 20 tons, transported 50 000 tons of copper to Bitterfontein, and brought back an equal weight of coal.

Niemoller's sillimanite mine near Pella used eight 20 ton vehicles to transport 20 000 tons of Sillimanite 110 miles to the rail at Kakamas.

(Verburgh, 1966b:125-128,192)

1966: 3 January: Alexander Bay Airport opened for Viscount aircraft. The DC 3 connecting service ex Cape Town withdrawn (presumably as the Viscounts on the Cape Town-SWA run now stopped at Alexander Bay).

(Surman, 1994:oral)

Alexander Bay: SAA flights in both directions on Mondays, Wednesdays and Fridays.

Springbok: Namakwaland Lugdiens flights to and from Cape Town daily, Mondays to Fridays. Operated a Beechcraft Baron and a Piper Aztec and a Beechcraft Bonanza.

(Verburgh, 1966b:131,132)

1966: Gemiddelde waarde per morg vir plase in Namakwaland: R5,47. teenoor R33,10 in die Republiek as geheel.

Henkries-dadelprojek: 2 400 dadelbome waarvan slegs 25 persent reeds dra. Die produksie staan reeds op 28 000 lb per jaar. Dit word bereken dat 'n plantasie van 10 000 bome in die Republiek se behoeftes aan dadels sal kan voorsien.

Diamond delwerye leeftye:

CDM (Oranjemund) 25 jaar

SAD (Alexander Bay) 20 jaar

De Beers (Kleinsee) 30 jaar

Ander kleiner velde 20-30 jaar

(Verburgh, 1966b:35,51,58)

1966-1967: MR 746: The new gravel road from Kleinsee to Port Nolloth was opened to the public on 8 February 1967. (*Cape Coast Chronicle*, according to Jennifer Cloete, 1995)

MR 746: During 1966 a contract was awarded for the construction of approximately 26 miles of new (gravel) road between Kleinzee and a point about 10 miles from Port Nolloth, to link up with the Port Nolloth-Steinkopf road. This project cost the Company over 500 000 pounds. (A short article by J.D.Crafford in De Beers booklet.)
1967: New road to Port Nolloth opened. (De Beers, 1976:43,15)

TR 82/1 & MR 746: Murray & Stewart had been negotiating to be appointed by CDM to construct and surface the Oranjemund-Port Nolloth road when they finished Steinkopf-Vioolsdrift. Danie Ackermann and Dave Bateman of Provincial Roads had flown up and held discussions with CDM.

However, this did not eventuate and as compensation they were given the construction and surfacing of TR 82/1 from Gembokvlei for about thirteen kilometres to Port Nolloth. Here they used water from the town supply spring at "Mile 8" for compaction. This was followed up with the gravel construction of MR 746 from Kleinzee to Gembokvlei. This was of mechanically stabilised gravel, using sea water for compaction. Max says that the mine security people were watchful wherever they cut through the diamond area to the sea.

Jeffares & Green were consultants for these two jobs.
(Max Pike, 1994:oral)

TR 82/1 & MR 746: About 1965-1967 (amended to 1966-1967: see below):
Construction of gravel road (MR 746) from Kleinzee to the Port Nolloth/Steinkopf road at Gembokvlei, and construction and bitumen surfacing under a negotiated contract of about 13 kilometres (of TR 82/1) from this junction to Port Nolloth. Contractor Murray & Stewart; consulting engineers Jeffares and Green, gravel design done in Springbok by Neville Weaving who also oversaw the bitumen part of the job. Louis Adendorff was RE on the gravel section. (Weaving/Fanner, 1994:oral)

Note: Neville Weaving consulted his wife about dates ("little Willy was six months old when we went there, so it was June 1967" etc.) and came back on 29 June with firm dates: see below.

TR 82/1 & MR 746: Neville Weaving was RE on bitumen construction by M&S from September 1966 to June 1967. Design by Weaving in Springbok of the gravel section started in June 1967, at the same time as construction by M&S with Adendorff as RE. Gravel job took about six months, say to the end of 1967. (Neville Weaving, 1994:oral)

1966-1969: NR 7/6: Construction and surfacing of Trunk Road 11 Section 6, Van Rhynsdorp to Bitterfontein, by the Klawer Provincial Roads unit under Jack Bester. (Barnes, 1993)

1967: May: Jowells Transport took over the transport of copper to Bitterfontein and coal to O'okiep. This had been carried by OCC themselves since 1941. One of the conditions to the contract was that Jowells took over OCC's transport fleet of old Buffalo trucks.
(Phyllis Jowell, 1994:239,287)

By 1967 Jowells had diversified substantially into engineering and manufacturing and the name was changed from Jowell Transport and Motor Company Limited to Transport & Engineering Investment Corporation Limited. In 1974 the name was formally changed to Trencor Limited. (Phyllis Jowell, 1994:227)

See also: 1974, 1997, 1998.

1967-1970: NR 7/7: Contractor Edmund Lafrenz constructed National Route 7 Section 7 from Kraairivier north of Kamieskroon to Springbok. This section was designed by Jeffares and Green. (Barnes/Fanner, 1994:oral)

NR 7/7: Construction and surfacing of N7 from Bowesdorp to Springbok, approximately 59 kilometres of Class 1 rural two-lane two-way roadway with surfaced shoulders. Contractors were Le Frenz/LTA Consortium, and the Resident Engineer was Neville Weaving, who remained in Namaqualand when construction was finished and went diamond mining. When last heard of he was flying his private aircraft all over the territory. The cost was somewhere in the region of R5m which included one interchange on the northern side of Springbok at the intersection of the airport road. This section of the N7 had a cement treated base (ctb) which gave some problems due to expansion and contraction of the material. In 1986 sections of the base were milled out and replaced with untreated material when the road was resealed with bitumen-rubber under a separate contract, the contractor being Savage & Lovemore and the RE Shaheen Nackerdien. (Frank Steele, 1994)

NR 7/7: The contract construction of National Route 7 Section 7 was finished in 1970. The contract extended to beyond the crossing over the Pofadder road to the north of Springbok. (Neville Weaving & Steve Fanner, 1994:oral)

NR 7/7: Contract started June 1967, completed August 1970. Weaving was RE to le Frenz. (Neville Weaving, 1994:oral)

1968: Rail still in use to carry water from Mile 5 to Port Nolloth. (Jux)

1968: Kleinzee acquired its own aeroplane - a Beaver. This was replaced just over a year later by a larger twin-engined plane, a Baron. (De Beers, 1976:5,15)

"The first plane to land at Kleinzee on the emergency airstrip was a CDM Navion which was forced down with engine trouble: it remained a few days awaiting spares from CDM. This caused quite a stir and it was a case of down tools, with everyone, men, women and children, streaming up to the landing strip to see this unusual sight."

Short article by D.W.Norris in De Beers booklet. (De Beers, 1976:44)

Note: No date is given.

See 1973 for second Kleinzee airfield at Sandkop.

1968: O'okiep Copper Company milled 3 210 200 tons of ore; produced 41 441 tons of blister copper; employed 1 020 europeans, 1 570 non-europeans, 2 210 bantu, a total of 4 800 employees; monthly payroll was R519 000. (O'okiep Copper Company, {1968})

1969: Namakwaland Lugdiens bought a new eight seater Piper Navajo for R100 000, boosting the number of aircraft owned by Jowells to four. More and more geologists and mine managers were finding that it saved time to commute between mines in light aircraft rather than to travel by motor car on the poor roads. At the same time the Cape Town operation moved from Youngsfield to D.F.Malan Airport. Springbok Municipality "investigated the

feasibility of tarring the 5 000 foot long landing strip. The municipality had of necessity to improve the surface of the landing strip, still gravel at that stage. The airport housed eleven aircraft, four for Jowells and seven others as the mines had their own aircraft as well - there was even a local flying club, with a paid instructor..."
(Phyllis Jowell, 1994:240)

1970: Kleinzee new water laid on. (De Beers, 1976:15) See also: 1982.

1970: Okiep's population 4983. (Von Zeil, 1989a:79)

1970: Namakwaland: 21 390 uit 'n totale bevolking van 56 007 was ekonomies bedrywig. Hiervan was 9 370 persone in die mynbosektor werksaam, oftewel 43,8 per cent. (Vir die Republiek as geheel was die ooreenstemmende syfer 8,4 per cent.) Vergoeding van werknemers in die mynbosektor het R13,7 miljoen bedra, wat 66,0 per cent van die totale vergoeding in die streek verteenwoordig het. Waarde van koper produksie was R30,8 m, effens hoer as diamantproduksie van R30,0m. (Suid-Afrika, 1980:170,171)

1971: National Road Act of 1935 replaced by the National Road Act 54 of 1971. The Amending Act on the Co-ordination of Transport 59 of 1971 amended the 1948 Act. The National Transport Commission became independently responsible for the construction and maintenance of National Roads, a function previously exercised on their behalf by the Provincial Roads Departments. The network of National Roads was reduced to include only existing and proposed freeways, the other ex-National Roads being "given" to the Provinces to be responsible for. Provinces were given the National Road plant, and (acrimoniously?) agreed sums of money with which to bring the ex-National Roads up to a desirable standard. (Floor, 1985:62 et seq.)

Map of National Roads of 1971 shows National Route 7 extended through Namaqualand to the Orange River. Date of this extension from Van Rhynsdorp - terminal in 1936 - is not recorded by Floor (1985:45).

1971: Captain Ray L. Grinstead joined Namakwaland Lugdiens, taking over from Bertie Beuster as Chief Pilot of nine pilots, and was with them until 1988.
(Grinstead, 1994:oral; Shapley, 1978:26)
See also: 1991, 1996.

1972: Kleinzee: first road tarred. (De Beers, 1976:15)

1973: Joe Jowell had poor eyesight as a result of trachoma. When he was two years old he had already lost most of the sight in his right eye and only had 40 per cent vision in his left eye. His weakened eyes took much strain during his years of study and the intensive reading required in legal practice was difficult to cope with. In February 1947 he had his first blackout, an Adams Stokes attack due to a heart block of unknown origin. His second was in June of the same year. In 1949 he visited specialists in USA, UK and Europe. Doctors gave him six months to live, but he survived a further 26 years at an incredible pace. By 1961 his condition had settled down with successful treatment (taking a pill) when symptoms indicated the necessity. His pulse was normally only 24 beats per minute. Joe Jowell died suddenly (in bed, in mid-sentence) in Springbok, on the morning of

16 January 1973. There had been warning signs such as the phlebitis in his right leg and an erratic heart beat. The doctors had recommended a pacemaker but he had put this off because he was too busy. He was 67 years old when he died.

(Phyllis Jowell, 1994: 279; 47, 279, 61; 142-149; 279, 280)

Joe Jowell died in January 1973. Born in Riebeeck West in 1905, he was married to Bessie in 1929 and they had two sons, Neil (born 1933) and Cecil (born 1935). Bessie died in July 1987.

Joe Jowell served on the Springbok Municipal Council for 34 years, holding the office of mayor for 27 of them. He was elected a Divisional Councillor in 1949, and by 1953 he was Chairman. In addition he was a member of and served on the Executives of the United Municipal Executive and the Association of Divisional Councils. He was involved in the SA Motor Industry Federation (President 1967-1972) and the SA Motor Transport Federation. President of the SA Motor Traders Association from 1958 to 1962, he was also Vice President of the International Organisation of Motor Traders and Repairmen. Joe Jowell was active in the affairs of the South African Road Federation, of which he was President from 1962 to 1965. He attended the 4th International Road Federation Meeting in Madrid in 1962 and the Tokyo Convention of the IRF in April 1964.

Joe Jowell came to Namaqualand in 1929 as a qualified lawyer to join Jaap du Plessis, a blacksmith, in a motor venture. In 1930, when the S.A. Railways summarily withdrew their road transport service from Bitterfontein, Jaap converted an old Buick car into a small lorry which Joe drove to Bitterfontein. A historical trip and the beginning of a long and successful journey into the future. In 1941 Jaap du Plessis retired, and the name of the business was changed to "Jowells Garage and Transport". This Joe built up to provide a comprehensive variety of services over the length and breadth of Namaqualand.

In 1961 he founded Namakwaland Lugdiens. In 1955 the business became a public company and is now known as Trecor (from Transport and Engineering Investment Corporation).

His two sons, both also lawyers, joined him in 1958. The business has now expanded into other related fields. (Springbok Museum)

Joe Jowell, known in certain circles as "Mister Transport", contributed his efforts unreservedly to the growth of transport - especially road transport - in Namaqualand and in our country generally. At the same time he was taking an extremely active lead in the community affairs of Namaqualand, and also contributing in these fields both nationally and internationally. (GLDR)

1973: Kleinzee: "A new airfield has been built at Sandkop, an adjacent farm, which is out of the mist belt and which allows for more and bigger planes to land here."

(De Beers, 1976:6,15)

OCC had a Cessna 210 and then a Beechcraft Baron based at Nababeep. The pilot was Ian Robinson. (Captain Ray Grinstead, 1994:oral)

O'okiep Copper Company's new airfield, five minutes drive north of Nababeep, 2 950 feet x 45 feet hard packed earth E-W runway. (O'okiep Copper Company, 1973)

1973: October: First raw water from the Department of Water Affairs pump station at and water pipeline from Henkries received at O'okiep reservoir. This source replaced the depleted source in the Buffels River near Spektakel. (Marais, 1987:38)

Details: Elevation of pumping site at river - 198 m; pumping main to Eenrietberg reservoir at 1036 m; gravity main to O'okiep reservoir at 995 m; Springbok reservoir at 980; Concordia reservoir at 1088 m. (O'okiep Copper Company, 1973)

Die Henkries "water pyplyn wat aan die Springbok Waterraad behoort en as gevolg van 'n onderlinge reeling deur die O'okiep Copper Company onderhou word, strek oor 'n afstand van ongeveer 107 kilometres, vanaf Henkries aan die Oranjerivier na die hoof toevoerreservoir by Okiep. Water word vanaf hierdie reservoir gelewer aan Springbok, Okiep, Nababeep, Concordia en Kleinsee.

"Water word uit die rivier gepomp en gelewer deur middel van 'n 457 mm diameter pyplyn en 'n oop kanaal, gesamentlik ongeveer 10 km lank, aan die suiweringswerk by Henkries vanwaar dit, nadat dit gesuiwer is, deur 'n 419 mm diameter pyplyn ongeveer 20 km lank gepomp word na 'n aanjaerpompstasie by Doringwater. Hiervandaan word dit verder gepomp deur 'n pyplyn van dieselfde deursnit en lengte na 'n opgaarreservoir op Eenrietberg. Vanaf hierdie reservoir graviteer die water na die Okiep reservoir deur 'n 520 mm diameter pyplyn ongeveer 65 km lank, en vanaf Okiep na Springbok deur 'n 250 mm dia V/S pyplyn.

"Die skema was gebou vir Departement Waterwese wat self die ontwerp van die pyplyn, suiweringswerke, reservoirs en pompstasies gedoen het. Die pypslote was uitgegrawe deur Murray & Stewart, pype was gele deur Pelicon Pipelines en die mortel in die pype was aangewend deur Tate. Die Departement Waterwese het die pompstasies, suiweringswerke en reservoirs departementeel opgerig.

"Die pyplyne bestaan uit beton uitgevoerde staal pype (mortar lined steel). Die mortel kom nou los op sommige pype op die stygleiding tussen Henkries en Doringwater, tot so 'n mate dat alreeds 2,5 km van die pyplyn ongeveer drie jaar gelede (1992) vervang was. Die stukke mortel wat loskom veroorsaak groot probleme as gevolg van verstoppings by buigstukke en verloopstukke voor pompe, hoe slytasie en beskadiging van kleppe, pompe en verwante toerusting. Die gevolg is dat hoe goed 'n mortel uitgevoerde pyplyn ook al mag wees is dit 'n baie seer punt by mense en instansies in Namakwaland wat met hierdie pyplyn iets te doen het.

"Die eerste ongesuiwerde water was in 1973 aan die Okiep reservoir gelewer en die eerste gesuiwerde water gedurende 1982."
(Lebeau van Zyl, 1995b)

See also: 1947, 1976, 1982.

1973: 30 October: largest diamond found on Kleinsee: 115,10 carats. (De Beers, {1994})

1973: Okiep's population 4377. (Von Zeil, 1989a:88)

1974: In a subsequent season a T-shaped slipway was constructed by Namaqua Canning Company staff at Hondeklip Bay. (Susan Jones, 1987)

1974: In Springbok the two main streets were being rebuilt, and the road to the Hester Malan Nature Reserve was being tarred. (Phyllis Jowell, 1994:286)
The reserve was later renamed Goegap Nature Reserve. (Phyllis Jowell, 1994:258)

1974: The name of Transport & Engineering Investment Corporation Limited, previously Jowell Transport and Motor Company Limited, formally changed to Trenchor Limited.

(Phyllis Jowell, 1994:227)
See also: 1967, 1997, 1998.

1974: In terms of Ordinance 20/1974 Village Management Boards were abolished and all vmb's became Municipalities in 1975

1975: July: Kleinsee a scheduled stop for Namaqualand Air Services from this date.
(De Beers, 1976:6)

Suidwes Lugdiens, later Namib Air, took over the Cape Town- Alexander Bay-Luderitz-Walvis Bay-Windhoek route from South African Airways. They operated DC 3, DC 4 Skymaster, FH 227 and Convair CV 580 aircraft. (Air Cape took over the Convairs when they acquired the route license in 1982.)
(Ingo Kiesewetter, 1994:oral)

Namakwaland Lugdiens, in its 15th year of operation, offered scheduled services which included flights twice a day between D.F.Malan Airport and Springbok, as well as regular flights connecting towns such as Kleinsee, Aggeneys, Van Rhynsdorp, Karasburg, Pofadder and Kenhardt to SAA flights at D.F.Malan or Upington.
(Namakwaland Lugdiens, {1975}).

Note: the route map on the "Welcome aboard" brochure also shows flights to Kimberley, Prieska, Copperton, Granaatboskolk {Loop 10}, Loeriesfontein, Port Nolloth and Alexander Bay.

1 February: South African Airways flights 751 and 752, on the Cape Town-Alexander Bay-Windhoek route withdrawn, and replaced by services provided by Suidwes Lugdiens.
(Surman, 1994:oral)

1975: The O'okiep Copper Company employed 1036 whites, 1996 coloureds and 2080 Africans. These provide a most important market for the Namaqualand farmers.
(Smalberger, 1975:125)

1975: Kamieskroon became a municipality in terms of Ordinance 20/1974 - see above.
(Town Clerk Engelbrecht, 1994; Oberholzer, {1993}:53)

1975-1978: TR 82/1: Survey memories: "Anenous Pass where the broken bottles made continuous glittering ribbons along the road shoulders, and where we came across a dump of crayfish shells whose stench was noticeable from 100 metres away and where we saw the largest flies ever. Jannie van der Westhuizen, then Roads Inspector, remarked that they were so large that "hulle sit "n half kroon sommer toe".
(Baartman, 1998)

TR 82/1: Construction and surfacing from Steinkopf to a point approximately ten kilometres from Port Nolloth, 60 kilometres of two-lane two-way roadway, was put out for tender in two sections and awarded to Murray & Stewart and Limber Construction. The latter went into liquidation during the construction period. After a number of months had elapsed to sort out the change-over Savage and Lovemore were appointed to complete the construction. Neville Weaving and Colin Harris were the Resident Engineers. (Steele, 1994)

Note: Murray & Stewart did not do this job. (Max Pike, 1995:oral)

Neville Weaving was not on this job: he left J&G in 1970. (Weaving, 1994:oral)

TR 82/1: 1978: Anenous Pass reconstructed and permanent surfaced by Savage & Lovemore. Design by Jeffares and Green.

"The reconstruction followed the existing alignment fairly closely and involved the widening of all the rock cuts and two or three large new cuttings to improve the horizontal alignment. The rock was predominantly granite with a tendency to break into large blocks when blasted.

"Due to the terrain, there was no possibility of the traffic being able to bypass the construction except on the short sections of new alignment. The traffic count is fortunately low on this section so, by limiting the size of the blasts and restricting them to a fixed time each day, it was possible to carry out the work under traffic although in some cases the riding surface was very rough. The steep grades and the nature of the material made it virtually impossible to move the material uphill so the work was planned in such a way that nearly all the shot rock material could be moved downhill using Cat 35 ton dump trucks and a Komatsu 355 45 ton dozer to spread and place the rockfill.

"There is of course no surface water in this area and underground water is difficult to locate but one reasonably strong borehole was drilled approximately five kilometres from the top of the pass and this was pumped to a temporary storage dam at the top of the pass. A gravity pipe line was utilised down the pass to the lower plateau but it was necessary to construct a break pressure dam halfway down to prevent the pressure from bursting the pipe. The salts in this water made it unfit for human consumption but, owing to the heat, new employees invariably disregarded the warnings and found, to their cost, that the water was more efficient than any Epsom Salts they could purchase.

"The old O'Kiep to Port Nolloth railway line which was built in approximately 1860 by the Cornish miners is still clearly visible and one must admire the skill of those early stone masons when you see the stone arch culverts and stone tank supports which are still standing. The early trains were pulled up the pass by donkeys before the first steam loco was imported and the grade line of the railway embankment up the pass is a significant feat of engineering." (Sunde, 1993)

TR 82/1: Steinkopf to Port Nolloth (actually 13 kilometres short of the Port, at Gembokvlei, where the Kleinzee road takes off. See Pike in 1966/67 above - glldr)

"Kimber Construction had been awarded this contract but when they went into liquidation the CPA called for new tenders and the work was awarded to Savage & Lovemore.

"I supervised the contract and our site agent was John Otto in the initial stages and then Reuben Bester for the last section. I think Mike Andrews and Brian Marquis were the J&G staff on this contract but I might be wrong as we had several contracts for the CPA and J&G at this time and they might have been the team on one of the others.

"The water in the old railway wells was too brack to be used, as by this time everybody was aware of the salt problem.

"There were a few, very thin, layers of igneous rock, other than granite, in the pass, but their quantities were too small to be of any specific use.

"Unfortunately we did not come across any diamonds and there were no suggestions that any of our quarries were in diamond bearing material.

"There were no problems with drifting sand but Kimber had done a short section of the earthworks at the Port Nolloth end before they stopped work. We had no problems with the layer work in that area, so I don't think sand can have been a problem."

(Edward Sunde, 1996)

1976: Port Nolloth exported 3.126 tons; imported 71.045 tons. Of 42.353 tons of dry cargo (ie, excluding diesel) 25.569 tons went to Oranjemund. (D.Uys, 1977:71,72)

1976: Sishen-Saldanha rail line: first "short" train of iron ore travelled over the line in May 1976. The "inauguration" of the whole project is taken as 27 September 1976, when the first ore-carrier sailed from the new ore jetty in Saldanha Bay with her holds full of iron ore delivered by 200 truck block trains. (Pretorius, 1994:oral)

"The reason that Sishen iron ore exports are profitable is because we have a very efficient rail link down those 800-odd kilometres to Saldanha Bay. We load block trains very quickly and in this way fully utilise both the trains and the railway line... the 200-truck block trains come in and out on a scheduled basis. It's a very efficient system." (Kevin Robertson, M.D. of Iscor Steel, 1996:24)

1976: Since 1976 a pipeline of about 48 cm in diameter has been conducting water to Springbok and the surrounding villages from Henkries on the Orange River. (Springbok Municipality, 1984)
See also: 1947, 1973, 1982.

1976: Namaqualand: waarde van koper produksie R45,6m (3 581 werkers); van diamante R74,1m (4 206 werkers). (Suid-Afrika, 1980:171)

1976: State Alluvial Diggings commenced under-sea diamond operations. Initially from the shore: first "Seedelwer" boat in operation in 1980. (Oberholzer, {1993}:23,24)

1976: "Not only are there diamonds and copper in this treasure chest called Namaqualand. There is rock phosphate and molybdenum in the Richtersveld, gypsum is mined in the Knersvlakte, coloured slate stone is quarried at Vioolsdrift... Ilemite is mined in the south near the coast and in the north near O'okiep... At Aggeneis in the Gamsberg rich deposits of copper, zinc, lead, silver and barite are to be mined. Sillimanite, used in the steel industry, is mined near Pella. Two types of mica are mined, the one near Kamieskroon, the other in the north. Other minerals found in the Namaqualand treasure chest are manganese, asbestos, salt, beryl, kaolin, monazite, thorium, bismuth, wolfram, lithium and others. There are gemstones galore: these are amazonite, rose quartz, smoky quartz, agates, tourmaline, jasper and amethyst.." (Jeppe, 1976:23)

Mica was mined near Kamieskroon. (Jeppe, 1976:23)

Note: this was a small operation, barely recollected locally in 1994.
(Engelbrecht, 1994:oral)

"Apart from copper and diamonds, minerals associated with tungsten, beryl, mica, lithium, bismuth, titanium, zirconium and rare earths are being mined by small-time operators from the hundreds of pegmatite outcrops north of Steinkopf." (Namaqualand RSC, 1995:27)

1977: Jowells Transport besit ongeveer 150 vragmotors met 'n gesamentlike tonnemaat van nagenoeg 2600 ton wat jaarliks gemiddeld 6,2 miljoen kilometer afle. (D.Uys, 1977:66)

1977: March: 400 kV Eskom power line to Nama Substation outside Springbok completed and commissioned. Power is distributed to the OCC, Springbok and the West Coast. For the previous 40 years of its existence the OCC generated its own electricity by means of steam

driven generators and diesel driven alternators installed in four power stations on the company's property. The generating capacity was 28 MW. In the Company's internal network all mines are ring-fed with a 66kV overhead line. There is a diesel stand-by with 8 MW generating capacity. (Marais, 1987:34)

Note: Hugo of Eskom says March 1978 for connection to the grid.

1978: Kleinzee-Koingnaas "white road" constructed with limestone by Naf Versfeld about this date. This was the road improved and surfaced by Keeve Steyn/LTA in 1980. (Owen Smith, 1995:oral)

1978: Namaqualand Lugdiens network linked up all the important mines and mining centres in Namaqualand, involving more than a dozen stopovers which were serviced daily. The return flight from Cape Town to Springbok was a twice- daily affair. The current fleet consisted of ten twin-engined planes with full instrumentation, including the Piper Navajo, Aztec and Commanche; Beechcraft Baron and a Cessna. The particular skill of the instrument-rated pilots lay in making use of those small landing strips secreted away in far-flung corners of the Republic. It was said that the airline had as many ports of call on its network as South African Airways domestic service. Destinations in 1978 included Springbok, Aggeneys, Upington, Alexander Bay, Port Nolloth and little inland hamlets like Pofadder. (Shapley, 1978)

1978: Dates of connection to Eskom's transmission grid:

| | |
|--|---------------|
| O'okiep Copper Company | March 1978 |
| De Beers Kleinzee | March 1978 |
| De Beers Tweepad Mine | March 1978 |
| Consolidated Diamond Mines, Oranjemund | April 1978 |
| State Alluvial Diggings, Alexander Bay | June 1978 |
| Black Mountain Mine, Aggeneis | June 1978 |
| Sishen-Saldanha Traction | July 1978 |
| Rosh Pinah Mine, Namibia | November 1978 |

(Hugo, 1994)

1978: Aggeneys: Black Mountain Mineral Development Company (Pty) Ltd, shareholders Goldfields S.A. and Phelps Dodge, commenced mining operations at Aggeneys. (Howard, 1994)

See also: 1980, 1987, 1994

Aggeneys: the name means "the place of water".
(Namaqualand RSC, {1993}:24; 1995:13)

In 1978, when location and design started on Trunk Road 84, the development at the mine consisted of a few sheds with drilled cores racked out. By December 1979 a whole Aggeneys village and its accessories, mine infrastructure and supporting works had been built, and the mine was ready to start exporting their products over the completed road in January 1980. Power was supplied by Eskom. (Larry Taylor, 1994:oral)

1978: Leliefontein: Methodist church and parsonage declared National Monuments.
(Mostert & Crewe-Brown, 1992:44; National Monuments Council, 1995)

1978: Okiep: Cornish beam pump complex, erected in 1882 to pump water from the mine, and

restored in 1965, declared a national monument in 1978 (Namaqualand RSC, 1995:10) on 4 August (National Monuments Council, 1995).

1978: Springbok's population 8 500. (Springbok Municipality, 1984:second page)

1978-1979: TR 84/1: Design and construction to gravel standards of Trunk Road 84 from near Black Mountain at Aggeneys to Loop 10, 140 kilometres to the south east. LTA Director-in-Charge Alan Bailey; Contracts Manager Dave Thompson; Site Agent Rudi Botha initially. Towards the end of a difficult job Dave Thompson and Chris Kleynhans of VKE sat on the job full time to meet the deadline. Very few drainage structures, apart from side drains past koppies. Bulk earthworks mainly by scrapers. Layer work done in five months. All below the wearing course was compacted dry, using grid rollers to break down the rather coarse, hard, shaley material. Water for the compaction of the wearing course was ridden up to 56 kilometres in tanker trucks. A job in an area where staff did not volunteer to go, an experimental dry compaction method, and an extremely short construction period to meet the mine's production programme necessitated 16 hour shifts on occasions. The only good points were probably that there was only construction traffic on the road during the construction period, and that some dedicated enthusiasts were involved in the project. (Alan Bailey; 1994:oral)

TR 84/1: Construction of 160 kilometre gravel road from Black Mountain at Aggeneys south east to Loop 10 (Lus tien) on the Sishen-Saldanha railway line. According to the mine records design by District Roads Engineer, Ceres and construction by Namaqualand Divisional Council. (Howard, 1994)

Note: this record appears to be incorrect.

Black Mountain Mining Company, Aggeneys, run their product about 200 miles south east on a gravel road (designed by Van Niekerk, Kleyn & Edwards, Consulting Engineers in 1970) to load onto the trains on the Sishen-Saldanha rail line. Product consists mainly of copper, zinc and lead. (Pretorius, 1994:oral)

TR 84/1: Construction of 141 kilometre gravel Trunk Road 84 from Loop 10 northwest to Aggeneys. Contract period 29 June 1978 to 31 December 1979, (24 months from 29 June 1978 but with liquidated damages of R500 per day from 1 January 1980 until road opened to traffic.) Contract value R4,56 million.

Design by Van Niekerk, Kleyn & Edwards: W.Larry Taylor. Width 9.8m plus 2x 0,6m roundings. Reserve widened from 32m to 60m for roadside borrow pits for scraper operation. Flat terrain, elevation 966m at Loop 10; 1077m at km 89; 870m at Bloemhoek, near Aggeneys. Grades limited to 3 per cent to accommodate heavy truck transport from mine to rail. Materials design 3x150mm layers. Bottom two layers dry compacted with eight passes of pneumatic, vibrating or grid rollers, or a combination. Wearing course compacted 93 per cent modified AASHO, part of the contract being the requirement that the contractor drill boreholes along the route to provide water for this purpose.

Contractor: LTA Construction. Contracts Manager: Dave Thompson; Site Agent initially Rudi Botha then later Dave Thompson. VKE Contract Engineer: Chris Kleynhans; Resident Engineer: Jan Potgieter; Assistant RE: Wouter Schreuder; (Taylor & Schreuder, 1994)

Drilling for water was done by a sub-contractor controlled by VKE. Approximately 60 holes bored, of which only four delivered more than 8 000 litres per hour, and the contractor only made use of two or three. The unsuitable bore holes were given to the

farmers for their own use. The contractor also had a pipeline from the Aggeneys water supply to the beginning of the contract (which was not actually in Aggeneys but at a junction with the Springbok-Pofadder trunk road about 16 kilometres east of Aggeneys). Drainage was nominal: two fairly large 3x3 m structures plus nominal 600 mm culverts. At one place where sheet flow occurred 600 mm culverts were installed at 50 m centres over a road length of about 1,2 kilometres.

(Taylor & Schreuder, 1994: Wouter Schreuder's "Additional notes")

Larry Taylor, who led the VKE design team, tells of the occasion when their surveyor left a farm boundary gate open. An extremely irate farmer came to tell them that a lusty and well-endowed, but definitely common and low class, ram from his neighbour's farm had taken advantage of the open gate to visit a flock of his very highly pedigreed and extremely valuable karakul sheep. Apparently the ram became very popular with a large number of the lady karakuls before being summarily ejected back to the neighbourhood where he belonged. The farmer could not regard this visit, however exciting it might have been for his lady karakuls, as beneficial to the value of his flock.

(Telecon Larry Taylor: April 1994)

Trunk Road 84 located largely along watersheds (largely by Wells, Kleynhans and Taylor) so minimum drainage required. Mine manager was David Blair-Hook. Site Agent was Alan G. Bailey (note: actually the Director-in-Charge - see Bailey above.) Route traverses Namaqualand, Kenhardt and Calvinia Divisions: maintenance done by one - DFW thinks Calvinia - at Province's expense as it was proclaimed as a Trunk Road.

(Derek Wells, ex DRE Ceres, 1994:oral)

1978/79/80: (actually it appears construction extended to 1982: see Withers below):

TR26/1: Construction and permanent surfacing of Trunk Road 26 Section 1, two contracts: Springbok-Aggeneys and Aggeneys- Pofadder. Concor Construction won both contracts and set up camp about twenty miles out of Springbok. Contracts Director was Willie van Zyl, ex VKE, assisted by Peter Corbin initially. Site Agent was Sam Scriven. Consulting engineers (design and supervision) were Hawkins, Hawkins & Osborn (HHO), Director-in-Charge Gerry van Alphen. Resident Engineers in succession Andre Botes, Tom Kennedy (they joined forces to form a local construction company) and a bloke of German-extraction in his 50's, a most interesting expert on the caves and Strandlopers in the South-Western Cape. The contractor was experiencing some awkwardness with a local karakul farmer until they "needed a super ganger" on the job and obtained his services for this purpose. (Brian Alexander, 1994:oral)

TR 26/1: 1980-1982: (Note: it appears probable that construction commenced in 1978: see Brian Alexander and Withers.) Construction and permanent surfacing of Trunk Road 26 Section 1 from Springbok to Pofadder: Contract M 232/1976: Springbok to Aggeneys. Contract M 236/1976: Aggeneys to Pofadder. (Barnes, 1993)

TR 26 Springbok-Aggeneys-Pofadder was constructed by Concor Construction; Director Willie van Zyl, ex VKE. (Geoff Lunn, 1994)

TR 26/1: In the second half of 1980 Mike Withers was sent by HHO to run the job temporarily, on a commuting basis, as both the RE and the ARE had resigned. This he did for nine months and 60 odd flights on ZS-KKN of Namakwaland Lugdiens.

HHO were appointed in October 1973. Survey, done between January and April 1974, cost R236 per kilometre. Both contracts were awarded to Concor Construction at an estimated cost of R18 million (R110 000/km). The road was opened sequentially during 1981 and 1982. The contract expressly denied the contractor the right to obtain any water for construction purposes by tapping underground water sources. He had to purchase water from two mines along the route, and pipe it, by stage pumping, to where he needed it. An interesting situation arose when the mine/s decided that their need for water was greater than that of the contractor and literally cut off his water. (Withers, 1994) Mike Withers joined HHO mid 1980 and was sent to Springbok shortly thereafter. He reckons the job had probably been going for about two years by then, i.e. since 1978. It was well on its way by mid 1980. The name of the RE to whom he handed over in 1981 was Joachim Papenhagen. (Withers, 1995:oral)

1979: The Orange River mouth has a sandbank about seven cables long which, during dry periods, closes the mouth completely, but when the river flows strongly it may force a narrow channel through the sandbank at any point along its length. Inside the entrance shallow channels wind tortuously through sandbanks and reedy islets for a considerable distance upstream. (S.A.Navy, 1979:70)

See also: 1854 (Willcox), 1855 (Green, Willcox), 1875 (Noble), 1882 (Green), 1910 (Cornell, 1950 (Graham Ross).

1979: Dates of connection to Eskom's transmission grid:

| | |
|---------------------------|---------------|
| Alexkor, Muisvlakte | February 1979 |
| Steinkopf Municipality | April 1979 |
| Pella Refractories | May 1979 |
| Pofadder Municipality | May 1979 |
| Port Nolloth Municipality | May 1979 |
| Pella Waterboard | July 1979 |

(Hugo, 1994)

1979: "Port Nolloth... 43 miles SExS of the Orange River mouth, is generally shallow and suitable only for light-draft coasters. The port was developed before the 1914-18 war, when it was connected by rail to the copper mines at Okiep, some 146 km inland. In 1919, when the price of copper fell, the railway ceased to operate and has not been in use since. In 1937 the Okiep (sic) Copper Company re-opened the old mines, and since then Port Nolloth has been the scene of fluctuating prosperity. At the present time (1979) all copper ore and machinery is transported by road to and from the railhead at Bitterfontein, but the port still serves the State Alluvial Diggings at Alexander Bay and the De Beer's diamond mine at Kleinsee, 72 km to the southward.

"Rock lobster fishing was once a flourishing industry at Port Nolloth, but of recent years catches have declined. In 1979, of the three former canning factories only one is still in operation, one is derelict and the third has been converted to other uses."

(S.A.Navy, 1979:76)

1979-1980: Kleinsee-Komaggas private road (42 kilometres) built to gravel standards by Pit Superintendent Phil Viljoen of De Beers Namaqualand Mines, using initially 7 tonne tip trucks and then two 32 tonne Nissan tippers. (Owen Smith, 1995:oral)

1979-1980: Murray & Roberts built the intake, filtration plant and pump station on the

Orange River bank near Pella, and the pipeline to Aggeneys. Water was pumped up for the first 25 kilometres through a 400 mm steel pipe to the Horseshoe Reservoir, and thence by gravity in a 400 mm ferro-cement pipeline a further 25 km to a holding reservoir above Aggeneys. They fortuitously finished the 12 month contract four months early, bringing much needed water to the village and mine. The Horseshoe Reservoir was so named because the consulting engineers' (Campbell, Bernstein & Irving) surveyors had found a horseshoe there. On completion of the contract Murray & Roberts had the horseshoe chromed and mounted on a board, and presented it to Mr Van Rooyen, of Goldfields, whose comment was that if they had the time and money to waste on that sort of thing they had obviously made an excessive profit on the contract. Civil engineering works (roads and drainage) and housing in Aggeneys was done by Concor Construction. In 1980 M&R also built at Loop 10 the railway siding and all earthworks, roads and services, and storage facilities for the ore products from Black Mountain. (Lunn, 1994)

Black Mountain Mine built a water pipeline from the Orange River to supply the mine and village. (Wells, 1994:oral)

Pelladrif na Aggeneys: raadgewende ingenieurs Campbell, Bernstein & Irving (CBI). "Sover ek weet was Concor die hoof kontrakteur - Murray & Stewart (dink ek) het die stygleiding gele." Pyplyn 33 kilometers lank; lewer water aan 'n 600 Ml reservoir; aanjaag pompstasie op die lyn; aftappunt vanaf die pyplyn is 15,5 km vanaf Pelladrif. Lengte van stygleiding vanaf Pelladrif na Aggeneys is ongeveer 23 km; oor hierdie afstand styg die pyplyn vanaf omtrent 200 m bokant seevlak tot omtrent 640 m. Vanaf die einde van die stygleiding graviteer die water deur 'n beton pyplyn na Aggeneys. Totale lengte is omtrent 58 kilometers. Die water word by Pelladrif gesuiwer. (Lebeau van Zyl, 1995a & b)

1980: Koingnaas-Kleinsee permanently surfaced road constructed for Anglo-American/De Beers by LTA, consulting engineers Keeve Steyn. Length 65 kilometres; cost R30 000 per kilometre; construction January to mid-May, 1981 (15 weeks). LTA worked 22 days continuous, then 6 days off. Turned out about a kilometre per day. Existing calcrete road was shaped by eye and compacted, then covered with 100-250 mm hard calcrete layers depending on original road material. Sea water was used for compaction. Sand displacement density control. Contractor's finishing grader operator had to be top class, as also consultant's laboratory technician to decide on layer thickness. Sub base had to be covered within two weeks, base course surfaced within one week, because of nature of the material and the use of salt water for compaction. No prime coat, emulsion tack coat plus "left over chips" from mine (half/three quarter stone was used by the mine for concrete, and so not available for surfacing!) The design followed on a trial section done the previous year. Maintenance treatment recommended was a fog spray after three years, a reseal after six years and every six years thereafter. A "First" in many ways. A most successful demonstration of the application of practical ingenuity, fitting the solution to (i) the needs,(ii) the restrictions and (iii) the readily available materials and expertise. (Brian Spottiswoode, 1994:oral)

"A minimum stopping sight distance of 115 metres, for a design speed of 80 kph, was specified. This was checked by dragging a 150 mm wooden beam on the end of a 115 metre long wire attached to a vehicle." (Spottiswoode and Graham, 1982:16)

"COMMENT: LOW COST PRINCIPLES: It was possible in 1980 to re-construct and surface, to an acceptable standard, a poor quality gravel road in a remote area for about R30 000 per km. There are many gravel roads in this country which, although their geometry might not match the desired modern standards, would nevertheless be quite acceptable from a safety aspect, provided that the surface was in a good condition. Most unsafe curves will long ago have been improved, whilst the remainder are well signposted and, in any event, are well known to probably the vast majority of the users. Similarly, most drainage problems will have been solved and almost all stability and settlement defects will have been remedied. In short, many millions of Rands have already been invested in many thousands of kilometres of existing gravel roads that are generally quite acceptable to the user, except that they do not have a bituminous surface. Should all this vast investment be thrown away in the realignment of minor roads, when the cost of such realignment may well be five times as high as the surfacing of the existing road formation? The answer to this question (is) provided by Britain and the European countries and by the older areas of the Cape Province, where minor roads have been developed along these principles and most users are quite happy with the old geometry, as long as the road is 'tarred'." (Spottiswoode and Graham, 1982:24,25)

1980: September: Namakwaland Lugdiens service improved by the taking into service of a nine passenger Piper Chieftain to assist in coping with the increase in demand for seats on the routes. Flights between Upington and Kleinzee, with request stops at Springbok and Aggeneys, were increased in frequency from three to five flights per week. For passengers from Johannesburg wishing to fly to Alexander Bay the Aggeneys-Alexander Bay flights were reintroduced on Mondays, Wednesdays and Fridays.
(S.A.Conference & Executive Travel, 1985)

1980: Dates of connection to Eskom's transmission grid:

| | |
|--------------------------------|----------------|
| Ochta Diamonds | February 1980 |
| Reuning Mine | February 1980 |
| Springbok Municipality | February 1980 |
| SABS Gamsberg | May 1980 |
| Baken Diamante | June 1980 |
| Pella Estates | September 1980 |
| Springbok Waterboard, Henkries | September 1980 |

(Hugo, 1994)

1980: Black Mountain base metal mine situated near Aggeneys started up operations in 1980.
(Gold Fields of S.A., 1987)
See also: 1978, 1987, 1994.

1980: Garies: rock formation and regimental crests, etc, known as "Letterklip", declared a national monument on 1980-03-14.
(Mostert & Crewe-Brown, 1992:45; National Monuments Council, 1995)

1980: Hondeklipbaai: een industriële onderneming. (Suid-Afrika, 1980:174)

1980: Nababeep: Steam locomotive "Clara" at the Nababeep Museum declared a National Monument. It was in use from 1890 to 1941.
(Cultural Historical Society, n.d.; National Monuments Council, 1995)

Nababeep: twee industriële ondernemings. (Suid-Afrika, 1980:174)

1980: Okiep: een industriële onderneming. (Suid-Afrika, 1980:174)

1980: Port Nolloth: drie industriële ondernemings. (Suid-Afrika, 1980:174)

1980: Springbok: Dutch Reformed Church declared a national monument on 1980-01-04.
(National Monuments Council, 1995)

Springbok: industrie: 1 graanmeul, 1 meubelvervaardiger, 5 swaaringenieurs- en staalverwerkingsnywerhede, 4 ligte ingenieurswerke, 2 rubberverwerkingsnywerhede, 2 elektriese kontrakteurswerke, 2 saamgepersde lug- en toerustingsnywerhede, 1 steenmakery, 1 druk- en bindwerknywerheid, 1 droogskoonmakery en wassery, en 2 water- en mineraalboorkontrakteurs. (Suid-Afrika, 1980:173,174)

1981: Spektakel Pass had been re-built by the Divisional Council for R1 million.
(Die Burger, 1981)

"The biggest job ever done by a DC in the Cape". (Wells, 1994:oral)

1981: Namakwaland Lugdiens had 11 aircraft; 2 flights daily between Cape Town and Springbok; about 12 regular landing places to serve the towns, villages and mineral fields of Namaqualand. (Die Burger, 1981)

1981: Dates of connection to Eskom's transmission grid:

| | |
|-------------------------------------|---------------|
| Consolidated Diamond Mines, Daberas | February 1981 |
| Alexkor, Rietfontein | April 1981 |
| State Alluvial Diggings, Brandkaros | July 1981 |
| Kamieskroon Municipality | December 1981 |

(Hugo, 1994)

1981: Concordia: Orbicule Koppie declared a national monument 1981-02-20.
(National Monuments Council, 1995)

1981: Namakwaland het 'n arbeidssurplus van 1 094 blankes en 6 983 kleurlinge.
(Suid-Afrika, 1980:192)

1981-1982: TR 26/2: Construction and permanent surfacing of Trunk Road 26 Section 2 from Pofadder to Kakamas: Contract M 231/ (Barnes, 1993)

1982: Air Cape took over from Namib Air the license for the Cape Town-Alexander Bay-Luderitz-Walvis Bay-Windhoek air service. Luderitz was later dropped from the schedule because of difficulties with drifting sand in the afternoons. (Namib Air then served Luderitz direct from Windhoek, the shorter run enabling them to be in Luderitz between 1200 and 1400, before the daily wind came up.) Air Cape was using Convair aircraft which they had taken over from Namib Air, and Hawker Siddleys. They operated the route until 1991 when the name of the company was altered to Flitestar after various share dealings. (Ingo Kiesewetter, 1994:oral; Koos van Zyl, 1994:oral)

1982: Dates of connection to Eskom's transmission grid:

Garies Municipality
SWAWEK, Namibia
(Hugo, 1994)

May 1982
December 1982

1982: February: water purification plant at Henkries commissioned. Capable of purifying 164 litres per second. About 55 per cent of the water is used by the O'okiep Copper Company Limited, with Springbok and the Kleinzee mine also supplied with domestic water from this scheme. (Marais, 1987:38)
See also: 1947, 1973, 1976.

Bogronde pyplyding vanaf Okiep na Kleinzee: "Hierdie pyplyn was blykbaar ontwerp en gele deur De Beers. Dit was oorspronklik groot genoeg ontwerp om ook Port Nolloth van water te voorsien", maar as 'n gevolg van die le van die Alexanderbaai-Port Nolloth pyplyn (sien 1990) was die pyp verbinding tussen Kleinzee en die Port nooit daargestel nie. (Lebeau van Zyl, 1995a)
Sien ook: 1970, 1990 (Alexbaai-PN).

1983: Springbok: Old Dutch Reformed Church and Jewish Synagogue, Synagogue Street, declared a National Monument on 1983-06-10.
(Cultural Historical Society, n.d.; National Monuments Council, 1995))

1984: Goldfields took over the management of the O'okiep Copper Company from Newmont Mining. The mine is the largest single employer in Namaqualand with an estimated 40 000 people dependant for their existence on the mine and the 2 000 workers it employs. The region offers no other work for those employees should the mine be forced to close. Coal, essential in the smelting process to produce the blister copper end product, costs R20/ton at the pit-head in the eastern Transvaal, but R120/ton delivered at the smelter, after including road and rail transport costs. (Gold Fields of S.A., 1987)

Ever falling copper prices caused O'okiep Copper Company to run into serious financial difficulties. The Government discharged the Company's debts (repaid by 1986) and the Gold Fields Group became the major shareholders with 41 per cent of the equity as against Newmont's 40 per cent. Gold Fields of South Africa (GFSA) was appointed administrative and technical advisers and secretaries to the Company from 1 October 1984. (Marais, 1987:10)

November: Okiep Copper Company taken over by the Goldfields Group.
(Von Zeil, 1989a:87)

1984: Quotes from Patterson's "Namaqualand: Garden of the Gods":

He landed in Springbok and got into his hired car to "drive away to photograph the wild flowers. Three hours later I had covered half a kilometre!" (page 11)

"Namaqualand offers flowers as symbols of hope and courage. We are able to believe that, like flowers buffeted, beaten, and scarred by external forces, we can still attain moments of excellence and great beauty. The flowers of Namaqualand suggest that the quality of time is more significant than its quantity... The flowers of Namaqualand are tangible evidence that our dreams are neither impossible nor foolish." (dustcover, pages 29 and 82)

"The indigenous people of Namaqualand - the Bushmen who were nomadic hunters and collectors, and Nama Hottentots, nomadic herders - lived in such close harmony with

nature that they did not distinguish between its physical and spiritual dimensions." (page 31)

"In this age-old land of granite koppies and drifting sand, the face of the earth and the needs of the people are constantly changing, yet forever remaining the same." (page 31)

"Namaqualand touches the human spirit profoundly because it confronts us at a fundamental level, through its immutability in a world of change." (page 47)

"... enjoy all aspects of the landscape. You will undoubtedly see some flowers, but if you witness the floral spectacle of a good year, consider it a special bonus." (page 49)

"... a golden scatter-rug" of flowers. (page 89)

"However far one reaches into the imagination, Namaqualand eludes comparison. It is, quite simply, unique." (dustcover)

(Freeman Patterson, 1993)

1985: Divisional Council data for 1 July 1984 to 30 June 1985:

| | |
|-------------------------------------|--------------|
| Area of division: | 48 321 sq km |
| Main roads: bitumen | 23 km |
| special gravel | 118 km |
| other | 504 km |
| Divisional roads: bitumen | 2 km |
| other | 1 492 km |
| Minor roads: bitumen | 3 km |
| other | 5 839 km |
| Expenditure: main & divisional: | R1 771 751 |
| Interest & redemption: | R584 448 |
| Minor roads: | R164 873 |
| Subsidy: Main & divisional roads: | R2 180 290 |
| Capital account: roads expenditure: | R480 000 |
| Outstanding loans: roads: | R1 433 733 |
| Plant | R1 212 150 |
| Roads staff: europeans | 21 |
| non-europeans | 99 |

(Namaqualand DC, {1985})

1985: Namakwaland Lugdiens network linked up all the important towns and mining centres in Namaqualand, involving more than a dozen stopovers which were serviced daily.

A second Piper Chieftain had been introduced and both three seater Piper Commanches sold, with the Piper Navajo and Aztec, and a Beechcraft Baron making up the rest of the fleet. (S.A. Conference & Executive Travel, 1985)

Namakwaland Lugdiens 25th Anniversary. The growth pattern of the company had been extremely stable. Schedules had altered with time and the fortunes of the region's base metals and diamond mines. Some routes such as those to Ai Ais and Karasburg, Loeriesfontein and Calvinia, Kimberley and Prieska no longer featured on the airline's timetable.

In 1985 scheduled flights operated daily from D.F.Malan Airport (Cape Town) to Springbok, Aggeneys, Alexander Bay and Kleinsee. Charter flights throughout the Republic and beyond formed a major part of the airline's business. The fleet consisted of five, seven and nine seater twin engined aircraft - Piper Chieftains, Navajos and Aztecs. (Marguerite van der Merwe, 1985)

1985: Bloeddrift Mine connected to Eskom's transmission grid in March 1985. (Hugo, 1994)

1985: Official census figures:

| | |
|----------------------|-------|
| Alexander Bay | 2640 |
| Aggeneys | 3039 |
| Carolusberg | 1085 |
| Concordia | 3439 |
| Eksteen/Lekkersing | 930 |
| Garies | 1164 |
| Hondeklip Bay | 360 |
| Kamieskroon | 555 |
| Kleinzee | 2384 |
| Koiingnaas | 829 |
| Komaggas (total) | 3129 |
| Kuboes | 281 |
| Lepelfontein (total) | 687 |
| Leliefontein (total) | 4389 |
| Nababeep | 5760 |
| Okiep | 4764 |
| Pella (total) | 1509 |
| Port Nolloth | 2842 |
| Richtersveld | 968 |
| Sendelingsdrift | 281 |
| Spektakelberg | 139 |
| Springbok | 8586 |
| Steinkopf (total) | 4659 |
| Vioolsdrif | 448 |
| Namaqualand (rural) | 6952 |
| NAMAQUALAND (TOTAL) | 59417 |

See also: 1991 census.

1985: Okiep: smoke stack monument declared a national monument on 1985-03-15.
(National Monuments Council, 1995)

1986: Goodhouse: nuwe pont in werking. Eiemassa 32 tonne en ontwerpvrugvermoe 50 tonne, waarskynlik die grootste in Suid-Afrika en moontlik in Afrika. Ontwerp deur Ninham Shand; vervaardig deur Dorbyl Marine; per pad vervoer op 'n sleepwa met 64 wiele wat almal kan stuur - 5km vanaf Goodhouse in die Richtersveld in die sand vasgesteek; koste van R240 000 sal binne twee jaar verhaal word deur die ompad van 150 km oor Vioolsdrif uit te skakel. (Schumann, 1987)

1986: 1 February: National Airlines (NAL) formed, a joint venture between Namakwaland Lugdiens and National Airlines (Pty) Ltd (NAC). NAC was based on Lanseria Airport, Johannesburg, and had aircraft flying regularly to various destinations in the North-Western Cape, specifically to Aggeneys and Alexander Bay. It was anticipated that the merger would make Namaqualand accessible from both the major business areas of the country - the Cape and the Reef. (Note: flights to Namaqualand ex the Reef were discontinued in September 1993 because of lack of support - gldr) Aircraft were to be rationalised, with some of Namakwaland Lugdiens' older planes being sold off and NAC's larger, more sophisticated aircraft being used on the Namaqualand routes.

(Marguerite van der Merwe, 1986)

Note: National Airlines flight schedules (1986) show return flights: Cape Town-Springbok-Kleinzee-Alexander Bay (Mon-Fri); Lanseria-Sishen-Upington-Aggeneyns-Springbok-Kleinzee- Alexander Bay (Mon-Fri); Lanseria-Sishen-Upington (Tues & Wed); Lanseria-Springbok-Alexander Bay-Kleinzee (Sundays).

1986: Port Nolloth harbour lease, immovable jetties, sheds, etc, sold to Marine West by Consolidated Diamond Mines on 1 March 1986. (The harbour itself is owned by Portnet.) General cargo service discontinued. (Captain Don Bridge, 1994:oral)

1987: SWAWEK Noordoewer, Vioolsdrift connected to Eskom's transmission grid in March (Hugo, 1994)

1987: Transportation underground: "Visitors find it a novel experience to visit the Carolusberg Deep Ore section, where the modern miner moves around in diesel-powered vanned trucks, and ore is transported by large scooptrams, where roads have to be maintained by graders, and traffic lights control the safe movement of vehicles. This is a far cry from the wheelbarrows and hand pushed trucks used at the start of the Company."
(Marais, 1987:25)

1987: Black Mountain: a survey in the Financial Mail, 6 February:

Black Mountain ore body is diverse, containing on average 3,93 per cent zinc, 8,19 per cent lead, 0,55 per cent copper and 99 g/t silver. While copper mineralisation had been known to occur in the area since about 1928 it was only in 1971 that the Black Mountain deposit was located by Dr Pat Ryan, exploration manager for US mining group Phelps Dodge. In 1977 Gold Fields bought 51 per cent of the company (upped later to 56 per cent) and took over management.

Operations started in 1980, and in the first two or three years of its life Black Mountain was saved largely by its production of silver which kept the operation going when the price of its main commodity, lead, was totally bombed out. In 1987 the mine produced 94 000 tonnes of ore a month, milled. It is Black Mountain's long term plan to smelt its own concentrate. One major advantage would be a substantial saving on freight charges because, instead of exporting 130 000 tonnes of lead concentrate a year, the company would be exporting about 90 000 tonnes of lead metal. Black Mountain might also play a part in the development of nearby Gamsberg, South Africa's largest and richest zinc deposit, containing an estimated 10,6 Mt of zinc at a grade of 7,41 per cent zinc. However, a feasibility study shows exploitation not to be economical under present conditions.

(Gold Fields of S.A., 1987)

See also: 1978, 1980, 1994

1987: Hondeklip Bay obtained brak water from a 520 foot deep borehole 15 kilometres from the village, the water being brought in by lorry. This is suitable only for washing: rainwater from roofs is used for drinking. Namaqua Canning gave employment to 28 permanent and 35 seasonal staff. The Company also entered the sea diamond mining field to provide more work for the community, but this dwindled as the diamonds became scarcer, and the number of diving days was limited due to weather conditions. Houses not required for Namaqua Canning staff were hired out to mineworkers. Any excess from rents was ploughed back into the community on improvement projects. The clinic was used by the visiting doctor and district nurse. (Susan Jones, 1987)

1987: O'okiep Copper Company community facilities include an eighty bed hospital, built in 1942, extensively altered in 1969, and again modernised in 1986. Since 1977 this hospital has attracted a Government subsidy. In 1970 an Apprentice Training School was established, which led to the establishment of the Namaqualand Technical Training Institute in Okiep in 1981, now subsidised by the State. Since 1937 the OCC has erected a number of school buildings in the towns of Okiep, Nababeep and Carolusberg, and three coloured school buildings and the land they were situated on were donated to the Department of Education in 1985. Various bursaries have been awarded and a liberal donation made towards the establishment of a Chair in Geophysics at the University of Stellenbosch. Four recreation clubs and all sports fields and facilities, which include rugby, soccer, cricket, bowls, badminton, squash, tennis and billiards at various localities, are maintained by the Company, and a number of buildings are occupied at no charge by deserving social organisations. (Marais, 1987:41)
See also: "O'okiep Copper Company, Nababeep & Okiep today" under 1994.

1988: A working paper, published by the Southern Africa Labour and Development Research Unit, University of Cape Town, discussing Namaqualand's lack of growth, proposes as theories to explain this:

- Missionaries are blamed for creating a dependent population, providing the needed labour for the mines,
- the White traders impoverished Namaqualand through the process of "primitive accumulation of capital",
- the development (improvement?) of unsatisfactory communication links with other areas is frustrated because of Jowells' virtual monopoly over transport facilities in Namaqualand. {Note: Mrs Jowell goes on to refute these assertions as they affect Jowells.}

(Phyllis Jowell, 1994:287)

1989: Concordia Bestuursraad connected to Eskom's transmission grid in May 1989.
(Hugo, 1994)

1989: Alexkor (Alexander Bay Development Corporation) took over from the State Alluvial Diggings in terms of Act 46 of 1989. (See 1992.) The mine henceforth operated on business principles entirely and the profits were to be used "to undertake, encourage and promote... mining, agriculture, commerce, industrial settlement, town development as well as any other form of economic and socio-economic development..." etc, in the area. (South Africa, Act 46/1989)

Note: Apparently the Minister becomes the person who will decide where and to whom this largess shall be doled out. It is not clear whether he will consult the already-established responsible local authorities before authorising that works be carried out. A possible example might be the surfacing of the Divisional Road to McDougall's Bay, which according to the RSC CEO was apparently given out to tender without the knowledge of the controlling authority, the Divisional Council.

1990: Namaqualand Regional Services Council / Namakwaland Streekdiensteraad commenced operations, following on a founding meeting on 6 December 1989. The RSC covers an area of 47 700 square kilometres, the greater part of which is semi desert, with an average rainfall of between 75 and 250 millimetres. Population of the area was 66 330. A coat of arms was designed, with the motto "VINCAMUS STUDIO", Conquer by Devotion and Diligence, Oorwin deur Toewyding en Ywer.

Die paaie afdeling van die SDR is 'n agentskapsfunksie namens die Kaapse Provinsiale Administrasie. 'n Totaal van 8013 km word deur die Raad in stand gehou:

| | |
|---------------------|----------------------------------|
| Hoofpaaie | 616 km waarvan 50 km geteer is |
| Afdelingspaaie | 1480 km waarvan 6 km geteer is |
| Ondergeskikte paaie | 5917 km waarvan 10 km geteer is. |

Roads staff number 126.

(Namaqualand RSC, Annual Report 1990/1991:6,8,17,32)

1990: Dates of connection to Eskom's transmission grid:

| | |
|--------------|--------------|
| Kharkams | October 1990 |
| O'okiep Town | October 1990 |

(Hugo, 1994)

1990, November: Pyplyn vanaf Alexanderbaai na Port Nolloth: Raadgewende Ingenieurs Scott & De Waal; pyplyn gele deur Alexkor, voltooi omtrent 1989. Lengte ongeveer 85 km. Daar was geen water beskikbaar vir die teerpad konstruksie vanaf Alexanderbaai na Port Nolloth, en ook het sommige van die aanlegte van Alexkor, vernameklik die een by Muisvlakte, waterprobleme ondervind. Aangesien Alexanderbaai baie graag die teerverbinding wou bewerkstellig het hulle besluit om die pyplyn te lê, water vir konstruksie van die pad sowel as Muisvlakte te verskaf, en die oorblywende hoeveelheid aan Port Nolloth te verskaf. Huidiglik ondervind Port Nolloth water-tekorte as gevolg van die ontoereikendheid van hierdie pyplyn. Dit was teweeggebring deur die ongekende toevloei van plakkers gedeurende die afgelope twee tot drie jaar sowel as uitbreidings in Port Nolloth en McDougallsbaai. Die pyplyn bestaan uit 'n 200 mm dia vesement pyplyn vanaf Alexanderbaai tot by 'n 1000 kl reservoir by Muisvlakte ongeveer 8 km vanaf Port Nolloth. Vanaf hierdie reservoir graviteer die water deur 'n 250 mm vesement pyplyn na Port Nolloth. (Lebeau van Zyl, 1995a & b)

1990: OCC employees numbered 1 933. (O'okiep Copper Company, 1994:21)

1990: Bitterfontein: Reverse osmosis water supply scheme in operation providing desalinated drinking water to Bitterfontein and Nuwerus: the first in the Republic. Previously the inhabitants were dependent on water imported by rail tanker for drinking purposes as the ground water in the area is heavily mineralised. (South Africa, 1990)

1990: Springbok: All Saints Anglican Church, Namaqua Street, declared a national monument on 1990-06-22. (National Monuments Council, 1995)

1990/91: Namaqualand Regional Services Council allocated R40 000 to Bergsig and R60 000 to Kamieskroon for the permanent surfacing of streets. (RSC Annual Report 1990/91)

1990-1992: Main Road 731: Port Nolloth to Alexander Bay: This work funded by Department of Transport (Minister of Transport Eli Louw), controlled by Cape Provincial Roads Department, designed by Scott & De Waal and constructed by Haw & Inglis. (Fanner, 1994:oral)

MR 731: Contract administered by CPA for DoT. Construction by Haw & Inglis: Construction Manager Kevin Konkol, Site Agent Hennie Schoeman; Consulting Engineers Stewart Scott: Supervising (director?) Theo le Grange; Resident Engineer Jan Verduyn.

87 kilometres; R30 172 000 (total cost R31,8 million). First payment certificate December 1990; first 11 kilometres opened to traffic within seven months; construction finished August 1992; handed over 30 September 1992; final certificate November 1992; programmed completion date June 1993. A very quick job indeed.

Water for construction was obtained from the 200 mm Orange River-Port Nolloth pipeline, drawn off at night into dams along the job. The contractor paid a fixed amount, quarterly, irrespective of the amount of water used, to a total of R900 000. In fact, they had to continue payments until June 1993 although the work was long finished.

Earthworks consisted mainly of sand. Base course was of two sorts: crushed dolomite (schists), and arkose ("a coarse grained, highly felspathic sandstone grit, formed by the rapid disintegration of granite or gneiss" - according to G.W.Humus "A Dictionary of Geology", 1954). Salt was present in these and the sub base layers, so that the compacted layers had to be covered by the next layer or prime within 21 days to prevent the salt migrating upwards. In only two places did they have slight blistering (caused by salt) on the sides of the prime.

One quarry was known as "The Jam Pan": after only 10-15 mm of rain the top 150 mm of the road resembled apricot jam. Fred Cornell in "*The Glamour of Prospecting*" (1920:222) tells how their wagon "got hopelessly stuck in the Holgat River, and delayed us so that we missed the only decent boat at that time running, had to kick our heels for an interminable week in Port Nolloth.." Rick Haw says that this and other places were still giving trouble in 1990. The existing gravel road was very slippery after rain, when an unconstructed "sand pad" alongside was used.

Jan Vermeulen, in charge at Alexander Bay, told Rick that the surfacing of the road to Port Nolloth had made a tremendous difference to the inhabitants. Previously, before essaying a trip to the Port they would carefully look at the weather to be expected - "now they travel any time".

The planned location of the road had to be altered at two places. The first was south of Alexander Bay where about two hectare was fenced off to protect an area of unique lichen. There are about 28 different types, and this is the densest patch and the one with the greatest variety on the whole west coast, in fact in RSA and Namibia. It is now proclaimed a Natural Heritage site by Environmental Affairs in Pretoria. R1 million was earmarked for rehabilitation in the contract, for the planting of succulents etc, but apparently the botanists and other environmental bodies could not agree what would be best to be done, so nothing was done at all. The second place where the location was altered was on the leg to the airport, where they opened up diamond bearing gravel. When they were erecting a fence around the RE's house they found a diamond in the first fence post hole they dug. This was the only reported find. Apparently Ovambos from South West Africa, who came down to Port Nolloth and points south in their 4x4's, were suspected of IDB, especially after one of them rolled his vehicle, the doors burst open and notes to the value of R30 000 scattered around.

After the Alexander Bay-Port Nolloth road in 1992 Haw & Inglis did an extension of the contract to McDougall's Bay for R1,2 million; the streets of Port Nolloth for R1,7 million (1991 to 1993); and the streets of Alexander Bay for R8 million (in 1993).

(*Civil Engineering*, 1993; mainly Rick Haw, 1994:oral; Annelise le Roux, 1994:oral; Francois Odendaal, 1994:oral; Janine Visagie, 1994b:oral)

Contract for the construction and surfacing of the Port Nolloth-Alexander Bay road awarded to Haw & Inglis on 25 October 1990. Site occupied at beginning of December 1990, completion date June 1993. (Namaqualand RSC, Annual Report 1990/1991:7)

Note: Barnes says 1992-1993.

1991: October: Flitestar took over the license to operate between Cape Town-Alexander Bay-Walvis Bay from Air Cape. They provided a return service until April 1994 (Vermaak, 1994:oral), operating three times a week: Wednesdays, Fridays and Sundays (time table at Alexander Bay Airport; March 1994). This was a company name-change following various share dealings. A TR 72 turboprop aircraft were added to the fleet. (Koos van Zyl, 1994:oral)

1991: Haw & Inglis, civil engineering contractors, bought their own Beechcraft Baron after hiring previously. Their first pilot was Ray Grinstead and the next Anton Schipps. (Rick Haw, 1994:oral)
See also: 1971, 1996.

1991: 31 August: Spektakel mine closed down. (O'okiep Copper Company, 1992:6)

OCC employees numbered 2187. (O'okiep Copper Company, 1994:21)

"Verskeie mynbedrywighede waarvan koper en diamante die belangrikste minerale is wat ontgin word, kom in die streek voor. Sowat R800 miljoen (die hoogste in die Kaapprovinsie) aan buitelandse valuta word uit die mynbou verdien. Ander bronne van inkomste waaruit die inwoners van die streek 'n bestaan maak uit boerdery, die visbedryf, toerisme asook 'n groot aantal sake-ondernemings".
(Namaqualand RSC, Jaarverslag: 1 Jan 1990 - 30 June 1991)

1991: Kelp processing factory opened at Garies because of the favourable climate for this operation. Kelp, rough chopped on the beaches from Cape Town to Papendorp, is ground to three gradings plus a powder, and then returned to Cape Town for export or sale. (Garies kelp factory, 1994:oral)

1991: Hondeklip Bay allocated R50 000 by RSC to have a Structure Plan prepared. (NRSC Jaarverslag 1990/1991:15)

1991-1996: Karkams 15 kilometre pipeline for water supply, pumphouses and 60 cubic metre steel water tank, designed by Hemingway, Isaacs & Coetzee, under departmental construction from 1991 to 1996. (Jeffnews, 1994)

1991: Kleinzee white and coloured schools amalgamated - a year before the rest of the country. The two school complexes now used as Junior Primary and Senior Primary schools. (Jennifer Cloete, 1995)

1991: Okiep: RSC took over responsibility for the provision and maintenance of services. The town had been declared a Local Area on 2 October 1989, but various contracts entered into by the Council of Representatives had to be concluded. Proclamation to a Local Board is being considered. (NRSC Jaarverslag 1990/1991:7,20)

1991: Pella: building complex of the Pella Roman Catholic Mission Station declared a national monument on 1991-08-30 (National Monuments Council, 1995). This includes the "encyclopaedia church" which took seven years to complete, and was recently (?) consecrated as a cathedral (Namaqualand RSC, 1995: 13,14). The solemn blessing was by

Co-adjuter Bishop of the Cape, Bishop Rooney, on 15 August 1895. On 30 September 1995 the centenary of the inauguration of the cathedral was celebrated.

(Thunemann, 1996:8)

See also: 1812, 1869, 1875, 1882.

1991: Port Nolloth obtained water by pipeline from the Orange River.

(Van Schalkwyk, 1994:oral)

1991: Springbok Museum opened on 15 August 1991 in the old Synagogue.

(Mostert & Crewe-Brown, 1992:38)

1991: Official census figures:

| | |
|---------------------|-------|
| Alexander Bay | 2500 |
| Aggeneys | 2679 |
| Carolusberg | 1266 |
| Concordia | 3555 |
| Eksteenfontein | 400 |
| Garies | 1125 |
| Hondeklip Bay | 582 |
| Kamieskroon | 834 |
| Kleinzee | 2848 |
| Koiingnaas | 841 |
| Komaggas | 2879 |
| Leliefontein | 4753 |
| Nababeep | 5778 |
| Okiep | 4828 |
| Pella | 1591 |
| Port Nolloth | 3608 |
| Richtersveld | 1164 |
| Springbok | 8682 |
| Steinkopf | 6527 |
| Namaqualand (rural) | 5815 |
| NAMAQUALAND (TOTAL) | 62536 |

Note: Alexander Bay 3200 - Janine Visagie (April 1994)

Port Nolloth 5000 - Municipal brochure (1991:11)

See also: 1985 census.

1991: Die Messelpad is in 1991 tot nasionale gedenkwaardigheid verklaar en die ruines van die hoofstasie is in dieselfde jaar tot bewaaringsgebied verklaar. (G.J.Kotze, 1994)

Old Messelpad Pass, Divisional Road 2952, declared a National Monument on 1991-03-22. (National Monuments Council, 1995; South Africa, 1991)

See also: 1867, 1868, 1869, 1870 & 1871.

1991: Ooreenkoms, wat die Richtersveld Nasionale Park 'n werklikheid maak, is op Julie 22 1991 onderteken. Nagenoeg 30 per cent van die wereld se vetplantspesies kom slegs in hierdie gebied voor. (Namaqualand RSC Jaarverslag 1990/1991:9)

The northern portion of the Richtersveld - 162 445 hectares - was declared a National (contractual) Park in August 1991. Some 30 per cent of all South African succulents grow here. The Richtersveld is named after the German missionary Dr H.Richter. (Namaqualand RSC, 1995:25)

Richtersveld National Park declared on 16 August 1991. (Mr Nel of National Parks Board, 1994:oral)

Op 20 Junie 1991 is die 162 000 ha as die Nasionale Richtersveldpark verklaar. (Port Nolloth Munisipaliteit, 1991)

1991/92: Namaqualand Regional Services Council allocated R80 000 to Bergsig for the permanent surfacing of Tempelstraat and the access road to Matjieskloof, and R72 000 to Garies for the interest on a loan of R400 000 at 18 per cent for the surfacing of streets. (RSC Annual Report 1990/91:13,14; 1991/92:9)

1991-1993: Streets of Port Nolloth constructed and surfaced by Haw & Inglis for R1,7 million. (See Haw, under 1990)

1992: Kleinzee mine replaced their King Air BE90 aircraft with a Citation V on 15 May. (Owen Smith, 1995:oral)

1992: Gemsberg Zinc connected to Eskom's transmission grid in December 1992. (Hugo, 1994)

1992: Alexkor, created in 1989, became a Company, Alexkor Limited, in November 1992. (Visagie, 1994a:oral)

1992: OCC employees totalled 1771. (O'okiep Copper Company, 1994:21).

1992: Bitterfontein inwonerstal omtrent 'n duisand siele. (Bitterfontein Municipality, 1992)

1992: Garies: Census carried out by Mrs Nieuwoudt and District Nurse, independently, agree on 475 whites and 960 non-whites. (Mrs S.Nieuwoudt, 1994:oral)

1992: Kamieskroon's Main Street permanently surfaced by Namaqualand Regional Services Council. (RSC annual report, 1991/1992:15)

1992: Kleinzee: Items from UCT socio-economic impact assessment reports:

"From 1972 to 1984 the contribution of the mining sector to Namaqualand's gross geographic product ranged from 72,6 per cent to 88,1 per cent. The largest proportion of this comes from diamond mines. De Beers Namaqualand Mines (DBNM) is one of the major diamond mining operations, contributing 77 per cent of the region's diamonds in 1985." (Beaumont, 1992:xiii)

"Retrenchment is likely to affect in the region of 2 500 employees. This could result in a minimum increase of 5 per cent in the unemployment rate." (Beaumont, 1992:xv)

"The total number affected would be about 4 400 (in Namaqualand) plus 1 400 (in Transkei) plus 760 (in the DBNM mining group). (Beaumont, 1992:xix)

Mining forms the regions economic base, employing 41 per cent of the economically active population. (Gosling, 1992:xiii)

3 000 DBNM employees would be retrenched in 2002, 33 per cent of the total employees in Namaqualand's mining industry; 13 per cent of the region's economically active population. Secondary impacts in other regional sectors would increase the total retrenchments to 15 per cent. A total of 6 219 dependants of DBNM employees would lose their only source of financial support with the mine closure. A further 2 556 people, who are partially dependent on DBNM employees, would have their financial support substantially reduced. (Gosling, 1992:xiv)

"DBNM is the single biggest business activity in Namaqualand, constituting 33 per cent of the region's turnover. As a result 93 per cent of businesses in Namaqualand would be negatively affected by the mine closure.

"In Springbok the loss of revenue from the loss of DBNM's direct purchasing would be approximately R55,9 million; and the loss of DBNM's employees' spending approximately R19,3 million. This represents 15,7 per cent of Springbok's turnover.

"The sectors in Springbok which would be most severely affected by the loss of DBNM's direct purchasing are mining sector (R31,5m p.a.); construction sector (R5,1m p.a.); transport industry (R6,8m p.a.) and general supplies (R1,4m p.a.). The sectors in Springbok which would be most severely affected by the loss of DBNM's employees' spending are general supplies (R6,6m p.a.); clothing and furniture suppliers (R5,2m p.a.); transport industry (R5,1m p.a.) and the construction sector (R1,4m p.a.).

"Namaqualand's Regional Services Council would lose 30 per cent of its total fees with closure of DBNM, which contributes approximately R735 000." (Gosling, 1992:xv)

Recommended mitigatory measures include: that DBNM attempts to find alternative employment for retrenched employees, particularly (i) in any commercial enterprise undertaken by DBNM in Namaqualand in the future and (ii) by transfers to sister companies. (Gosling, 1992)

"According to De Beers, the source of viable diamond ore is finite and unless technological advances, or market fluctuations make the reserves economically viable, the mine has no option but to shut down its operations... major social and economic impacts on the region and De Beers Namaqualand Mines (DBNM)." (Greeff, 1992:ES1)

"The study is to be repeated closer to the anticipated closure, as the socio-economic context in ten years' time is expected to have changed to a large extent." (Greeff, 1992:ES1)

A map on page ES2 shows that DBNM owns vast areas of land, from north of Port Nolloth to just north of the Olifants River, including inland areas to the north, west and south of Kommaggas rural coloured area. There is a proposed National Park stretching along the coast from Mitchell's Bay at the mouth of the Spoeg River to Island Point south of the Groen River. (Greeff, 1992:ES2)

In 1991 DBNM contributed R735 673 to the Regional Services Council, 29,6 per cent of the contributions by various sectors of R2 486 504; 6 per cent of the total RSC budget of R12 million. Alexkor contributes R212 552 to the RSC. There will be a ripple effect, as other businesses are likely to be affected by the mine closures, and their contributions to the RSC will then also decrease. (Greeff, 1992:41)

DBNM is the single largest employer in Namaqualand, providing 35 per cent of the employment in the mining sector and 14 per cent of all employment sectors. (Greeff, 1992:51)

In considering possible mitigations of the adverse effects of closing the mine, one suggestion was "investigate extending the railway from Bitterfontein to Springbok,

140 kilometres, to reduce the high costs associated with road transportation..." (Greeff, 1992:61)

Other activities in area: -Eskom has identified nine potential sites for a future nuclear power station (letter from Mr H.F.Rohm). Three prime sites have been investigated by the UCT Environmental Evaluation Unit (EVU) at Tweepad (halfway from Port Nolloth to Kleinzee), Brazil (15 km south of Kleinzee) and Skulpfontein (two thirds of the way from Kleinzee to Hondeklip Bay).

-De Beers West Coast Farming Company.

-Benguella Mining are considering the construction of a small harbour at Jakkalsbaai 10 km south of Kleinzee, on the State-owned farm, to facilitate access to their concession areas. This is likely to attract other interest groups and provide significant capital input to the region, and influence future development (Boonzaaijer, EEU, February 1991).

-Anglo American Heavy Mineral Sands, currently working at Brand se Baai, have prospected along the coastline for viable mineral sand deposits.

-Western Kelp hold (1992) the sole concession to collect washed-up kelp between the Olifants and Orange Rivers. They use the State site at Jakkalsbaai to collect the kelp and to accommodate about 25 kelp collectors (EEU, 1991). (Greeff, 1992:Appendix 1)

DBNM is located along a narrow 400 kilometre strip of coastline (Mackenzie, 1992:iv). Springbok houses 35 per cent of the region's population.

"... recently the establishment of a black settlement at Port Nolloth has borne the wrath and resentment of both coloured and white communities in Namaqualand. Blacks in Namaqualand have been regarded as migrants and are found mainly in the mine hostels. (Mackenzie, 1992:v). DBNM's business transactions comprise 17 per cent of the turnover of Namaqualand and the company has links with over 75 per cent of the businesses in the region. However, "less than 5 per cent predict they will have to close" if DBNM close. (Mackenzie, 1992:vii)

"Copper and diamond mining provided 58 per cent of the region's geographic product in 1991. The agricultural and fishing industries are marginal, and expected to remain that way." (Dunne, 1988 as quoted in McCulloch, 1992:i)

DBNM's closure may directly affect 17 per cent of the region's turnover. (McCulloch, 1992:iii)

DBNM's property covers approximately 7 per cent of Namaqualand. (McCulloch, 1992:iv)

1992: Roodeklipheuwel: old horse mill on the farm Riethuis declared a national monument on 1992-09-04. (National Monuments Council, 1995)

1992/93: "Paaie: Toegangsroetes en goeie toestand van paaie is belangrike fasette van infrastruktuur. Slege enkele deelnemende liggame het Streekdiensteraadfondse vir projekte in hierdie verband gebruik. Die teer van strate het die hoogste prioriteit geniet." (RSC annual report, 1992/93:11)

1992-1993: MR 731: Construction and permanent surfacing of Main Road 731 from Port Nolloth to Alexander Bay. Contract C 388. Consulting engineers Scott & De Waal. Contractor Haw & Inglis. (Barnes, 1993)

Note: Apparently incorrect date.

See 1990.

1993: 2 April 1993: Potential mineral export harbour on the Namaqualand coast: An inception meeting organised by Emslie Niehaus of Ninham Shand held at Kelvin Grove, Cape Town and attended by forty three representatives of most of the organisations and departments interested in the development of Namaqualand. (Niehaus, 1993)
See also: 1966, 1994, 1997.

1993: Bitterfontein railway station closed on 15 November 1993. Only full truck loads accepted, basically copper and "Bushmanland Green" granite blocks southbound, and coal and petrol and diesel fuel northbound. (Danie Rossouw, 1994:oral; Josef Jovies, 1994:oral)

1993: Construction and surfacing of Alexander Bay's streets by Haw & Inglis for R8 million. (See Haw, under 1990)

1993: The PX Depot opened in Springbok on 18 October 1993 to handle the sorting and distribution of parcels, etc, delivered by Autonet from the TX Depot at Klawer. Distribution south is done by returning Autonet vehicles, and over the rest of the area, from Alexander Bay to Pofadder and of course locally, by the depots own three lorries. (Depot Manager Allen, 1994:oral)

Other freight for Namaqualand is now containerised and transferred from rail to Autonet 2x15 ton interlink double semi-trailers at Klawer TX yard. In March 1994 Autonet was running about thirty trips a month to the PX Depot in Springbok. They also transfer the granite from the quarry, about ten kilometres north of Bitterfontein, to Bitterfontein station, and have been asked to quote for other bulk road transport contracts. (Klawer Autonet, 1994:oral)

1993: For some years National Airlines had a contract with Black Mountain to keep a plane stationed at Aggeneys. This made regular (three times weekly?) flights to Cape Town. (Ray Grinstead, 1994:oral)

Aggeneys/Black Mountain landing strip was a fully fledged registered landing strip with daily flights ex National Airways. This was stopped in 1993 due to the economic recession, high prices and low volumes. There are two runways, one tarred and one gravel, and the landing strip is the only one in the area capable of handling big jet airliners. This strip was used extensively during the "Paris Sirte le Cap" trans-Africa Rally in 1992. (Howard, 1994)

September: National Airlines dropped flights from Lanseria to Namaqualand, retaining only a return flight to Sishen on Tuesdays and Wednesdays. Return flights Cape Town-Springbok-Kleinsee-Alexander Bay, Monday to Friday, remain as well supported as ever. (National Airlines, 1993)

1993: Eskom electrified Steinkopf Township. (Hugo, 1994)

1993: OCC employees numbered 1 771. (O'okiep Copper Company, 1994:21)

1993: Port Nolloth's population 7620 according to a local census. (Andre van Graan, 1994:oral)

1993: Steinkopf: old Rhenish Mission Church declared a national monument on 1993-08-27. (National Monuments Council, 1995)

1994: April: With the introduction of the new Provinces Namaqualand no longer fell under the old Cape Province with control from Cape Town and more locally by the District Roads Engineer at Ceres, but now fell under the new Northern Cape Province, and was controlled from Kimberley.

1994: Northern Cape Premier supported the proposed ore port near Port Nolloth.
(Cape Times, 1994)
See also: 1966, 1993, 1997.

1994: Kleinsee: Johann du Plessis took over from John Coleshill as company pilot.
(Jennifer Cloete, 1995)

24 April: Flitestar operated their last return flight through Alexander Bay between Cape Town and Walvis Bay. (Dave Vermaak, 1994:oral)

31 July: New amalgamation of airlines called "SA Express" (SAX) initiated flights between Cape Town, Alexander Bay and Walvis Bay. (Don Wallace, 1994:oral)

1994: NAMAQUALAND'S AIRPORT: Alexander Bay has a registered airport, the only "Airport" in Namaqualand, with air traffic control, customs, immigration etc. It has a surfaced runway, two gravel runways, and is run by Alexkor. (CDM has an black-top airstrip north of the river, which is used by Air Namibia and accepts the Oppenheimer jet.) (Dale Woodcock, 1994:oral; Ray Grinstead, 1994:oral)

OTHER AIRFIELDS AND PLACES WHERE LANDINGS ARE MADE REGULARLY:

The original strip at Aggeneys was between the koppies, and had very awkward approaches, At night they used to show lights up the edges of the two Vees of the koppies on each side. Captain Grinstead finally refused to land there at night, except for urgent mercy flights. The new airstrip was built near the Trunk Road and the Eskom HV distribution yard, on the flat, and has a "tarmaced" (black top) strip, with very good ground facilities. (Ray Grinstead, 1994:oral)

Aggeneys/Black Mountain initially had a short gravel strip up between the mountains, but as the aircraft using it got bigger it was necessary to build a new airfield, on the flats near the Eskom sub-station. This has lights, and superior landside facilities. National Airlines ran a scheduled service in there, but since this has been discontinued the DoT license has been allowed to lapse. There were many aircraft using the airfield during the 1992 Paris Sirte le Cap Trans-Africa Rally, including quite a few Russian aircraft. The airfield can take a Hercules. (Dale Woodcock, 1994:oral) See also: Howard under 1993.

Bloeddrif, Bosluispan, Buffelsbank, Goodhouse. Granaatboskolk/Loop 10: an Eskom strip. Hondeklip Bay: a private strip owned by Buffelsbank Mines. Klein Pella: surfaced strip, takes jets. (Ray Grinstead, 1994:oral)

Kleinsee has a registered airfield, with a published let down. National Airlines runs a daily service into Kleinsee. (Dale Woodcock, 1994:oral)

Koingnaas: de-licensed strip - big "X" on runway. (Ray Grinstead, 1994:oral) Koingnaas no longer registered. X on runway. Used as a second landing strip if cannot get into Kleinsee. (Dale Woodcock, 1994:oral)

Nababeep: OCC strip (see 1973) Octa/Sendelingsdrif: a surfaced strip, takes jets. Port Nolloth: on the salt pan. (Ray Grinstead, 1994:oral)

Port Nolloth is not registered, but there is good landing on the salt pan if it is not wet. Fifteen miles east of Port Nolloth there is a private company strip. (Dale Woodcock, 1994:oral)

Sanddrif (Ray Grinstead, 1994:oral)

Springbok airfield is on land belonging to OCC, rented by the Municipality, airport maintenance done by Municipality, who get paid landing fees. (Maureen Auret, 1994:oral; Dale Woodcock, 1994:oral)

Springbok takes small jets. (Ray Grinstead, 1994:oral)

Springbok's registered airfield has fuel, 8 hangers, waiting room, etc. One runway bitumen surfaced. (gldr)

Springbokvlakte Vaalputs (uranium mine) (Captain Ray Grinstead, 1994:oral)

1994: Eskom electrified Karkams, Kommaggas, Kuboes, Pella and Sizamele Townships. (Hugo, 1994)

Note: Thunemann (1996:21) says Pella got Eskom power in 1995. However, Andre Hugo is/was the Eskom Manager for the Region, and has the records!

See also 1979 (Pella Refractories and Pella Water Board) and 1980 (Pella Estates).

1994: Black Mountain mine produced about 200 000 tons of lead, zinc and copper concentrates per annum. This is transported by Jowells Transport in 60 ton road trains, which consist of Mercedes Benz 2638 horses which pull 3 axle semi-trailers and a "calf", 140 kilometres south east to Loop 10. There the concentrates are loaded onto trains on the Sishen - Saldanha line for export from the Republic. The transport of stores, bulk chemicals, cement and equipment is done under contract by Jowells or their sister company Stuart's Transport. Some of the companies which supply equipment also do their own transport: this is on a very limited scale. (Howard, 1994)

See also: 1978, 1980, 1987

O'okiep Copper Company: The decline in profitability since 1989 was turned around in 1994 by an increase in production, higher copper in blister sales, lower refining charges and a higher copper price. World refined consumption increased by 6 per cent, while the 1994 copper price averaged R8 200 per ton compared with R6 200 in 1993.

| (Tons) | <u>Ore milled</u> | <u>Concentrates</u> | <u>Blister</u> | <u>Reserves</u> |
|--------|-------------------|---------------------|----------------|-----------------|
| 1990: | 1 982 000 | 24 406 | 25 495 | 17 850 000 |
| 1991: | 1 872 000 | 28 569 | 22 957 | 16 350 000 |
| 1992: | 1 718 000 | 26 623 | 24 668 | 13 811 000 |
| 1993: | 1 787 000 | 24 509 | 22 452 | 13 237 000 |
| 1994: | 1 855 000 | 24 321 | 25 228 | 10 888 000 |

Ore milled at Carolusberg was projected to decrease to about 82 500 ton per month in 1995. Three ball mills will be moved from Carolusberg to Nigramoep, where production will increase to 80 000 tons per month in the second half of 1995. Exploration activity is to be increased to procure the timeous discovery of viable replacement ore bodies.

The Company was considering selling its 27,5 per cent interest in Gamsberg Zinc Corporation Limited. The average number of employees in 1994 was 1 707 compared to 1 967 in 1993 (page 7: on page 21 the figures are given as 1 697 and 1 771.).

(O'okiep Copper Company, 1994)

See also: Gold Fields SA, 1995, 1996, 1997, 1998.

1994: AGGENEYS TODAY: Before the Black Mountain Mineral Development Company commenced operations in 1978 Aggeneys was a farm and store. During 1978 and 1979 the mine developed a town as well as the mine. Today there is a population of about 2,500, of

whom about 1,100 are employed on the mine. Attractive residential houses and single quarters are available for staff members. Facilities include a 48 bed hospital, two pre-primary schools with about 40 pupils each, two primary schools with 143 and 480 pupils respectively (high school students go either to Pofadder or to Springbok), three general dealers, a chemist, a garage, a cafe, a butcher and a church (which is used by all denominations). Electricity is provided from the Eskom grid. Recreational and sporting facilities are very good. Golf, cricket, squash, net ball, rugby, soccer, tennis and darts are all played. There are stables available for the use of those who keep horses, and a drama society is active. The mine has an extensive fleet of buses and provides transport for staff members. This transport includes transport of employees during weekends within a radius of approximately 150 kilometres. The Mine provides transport for the scholars to Pofadder and Springbok on a weekly basis and a scholar transport system to schools in Cape Town, the intervals being determined by school holidays, etc. For sports clubs which are affiliated to the Recreation Clubs a transport system is offered by the Mine which requires the clubs to pay a nominal amount. There is a local transport company, Van Wyk's Luxury Coaches, which does a lot of bus transport in the area. Then, of course, there are always the taxis which ply the routes, and a few "unofficial" kombi or bakkie lift services. (C.P.Howard, 1994)

1994: ALEXANDER BAY TODAY: the village and diamond mining operations are run by Alexkor (see 1989), and the only people living there who are not working for the mine are from the Winkelsentrum, Post Office, Telkom, Eskom, S.A.Police and the Department of Education. The mine employs 1700, and the 1991 census showed 3200 residents. The mine runs buses to Kuboes, Lekkersing, Eksteensfontein, Springbok, Onseepkans and Bitterfontein for general staff at months' ends. There are a nursery school, kindergarten, primary school (360 scholars), a high school (from 1994, covering Standards 6, 7 and 8, which will include Standard 9 in 1995, and 10 in 1996: currently 160 scholars). All schools became "mixed" in 1994. The mine provides transport to and from Cape schools for Standards 9 and 10 scholars. The sixty bed hospital has three permanent doctors and a total staff of 48. A mine bus runs to Cape Town on Mondays, returning on Wednesdays, carrying patients who need special treatment or operations. The mine operates five irrigated farms spaced over thirty five kilometres along the Orange River, which provide dairy products, pork and a limited supply of beef (no mutton), lucerne, oats and barley, and citrus fruits. Ostrich farming and dates have been started recently. The production of stock feed pills is being developed. Vegetable farming was found to be uneconomic and vegetables are now imported ex Vredendal. The farms have their own vehicles, and transport for example their lucerne to the markets in the south, bringing back any needed supplies.

An oyster farm has also recently been started, using seed ex Chile. The oysters reach eatable size after nine to twelve months, and are exported to Cape Town in a refrigerated road truck. Diesel supplies come by sea to Port Nolloth, from where the fuel is transported to Alexander Bay by Jowells. Jowells and their subsidiary Crosscape cater for virtually all the other transport needs of Alexander Bay. On the sea, sixteen "Seedelwer" diamond recovery boats operate from Alexander Bay (the inlet) and Port Nolloth. Weather conditions along the coast are such that the divers only manage to average about 140 days operating per year. Alexander Bay is not used for landing cargoes, and neither is Homewood Harbour. Special transportation occasions would include the arrival off Alexander Bay of a cruise ship, whose passengers were transported ashore by rubber duck to visit the mine development. Scheduled flights operate out of Alexander Bay airport. Professors le Roux and Coetzer of the University of the Orange Free State have been commissioned to prepare a book "The History of Alexander Bay : 1929 - 1989", which is scheduled for publication in 1996. (Actually titled *Baai van diamante* - glldr)

Surveys undertaken at various times, attempting to determine the anticipated life of the diamond mining operations, have each tended to come up with a figure of "another eight years". In view of the certainty that at some time diamond mining will cease to be the mainstay for the local population Alexkor has expanded into oyster, ostrich and date farming, the manufacturing of stock feed pills, and has increased farm production generally to produce surplus products for export. (Janine Visagie, 1994a:oral)

1994: BITTERFONTEIN TODAY: the main purpose for the town's existence has always been the rail terminal and related modal transfer activities. This has now largely stopped (November 1993), and the future of the town and of its inhabitants appears uncertain. (Danie Rossouw et al, 1994:oral)

1994: GARIES TODAY: the town received a tremendous boost when the National Roads Construction Unit was stationed at the southern end of town in the mid sixties, with new businesses opening up to serve the considerable increase in population. When the Unit left the town did not lose all its momentum, and is still growing, slowly but very surely. New residential areas are being opened up. The town is essentially a service centre, with virtually no industry, but, because of its pleasant climate, surroundings and inhabitants, appears to be attracting farmers retiring from farms which are being taken over by the next generation, pensioners from Alexander Bay, etc, and therefore also attracts those needed to service this increasing demand. There are six shops, three cafes, two furniture stores, a butchery, hotel, garage, a nice caravan park - and no ramshackle looking houses. The town has a high school, two large school boarding hostels, a Provincial hospital, public library, four doctors (two married to the other two), etc. As there is only a limited number of existing houses coming on the market the new inhabitants are building new houses for themselves, which keeps the town looking up to date. The general impression which one gets is of an active town, populated by pleasant people. (Oom Petrie Malherbe, 1994:oral; Mrs S.Nieuwoudt, 1994:oral; gl dr)

1994: HONDEKLIP BAY TODAY: with a population of six to seven hundred, is a small village with a canning factory which was opened in 1925. This used to be the mainstay of the local community, processing both cray and white fish. However, the grounds appear to be rather fished out, with 1994 the first season when there are "no" crayfish, and the factory had been moth-balled, any catches being sent by road to the Port Nolloth factory. The two remaining boats based here were fishing out of Port Nolloth. The Namaqua Canning Company appears to have a very high sense of social responsibility towards the inhabitants. Most of the houses in the village belong to this Company, and many of them are now occupied by some of the approximately one hundred people working on the Buffelsbank diamond mine (this company has also provided single quarters and a hostel for their staff) and the twenty on the newly-opened Surf Zone diamond mine, both of which are just east of town. A few workers from the major De Beers undertaking, spreading out from Koingnaas about twenty kilometres north of town, and some of the diamond boat crews also occupy houses. These diamond workings were essentially the only providers of employment in the area in 1994. The small harbour provides shelter from the prevailing south easterly winds for the fishing fleet when at home, and for the few small diamond recovery boats which are based there. There is one shop in the village, and a post office. Although brack water for other purposes is on tap, obtained from a source fifteen kilometres away, drinking water is collected in butts from any roof run-off and as can be imagined is in short supply. Buffelsbank has a private landing strip. A twice weekly public post and package truck runs from Garies, but there is no public passenger

service. Other than the post truck the locals have to use their own or company transport to fetch needed spares from Springbok via the Messelpad, or provisions from Garies. Buffelsbank runs a bus to Garies for their staff (see also details under "1995: Kleinzee today"). I am sure that De Beers have excellent facilities at Koingnaas, from what I could see through the fence, but it is difficult to get access to this high-security area or replies to postal enquiries.

Note: I finally succeeded in getting into the De Beers area in August 1995, and had a most interesting visit – gldr.

(J.C.Kotze, 1994:oral; Mr & Mrs Hein Schreuder, 1994:oral)

1994: KAMIESKROON TODAY: A most pleasant little town, also expanding as retirees return to their birthplace and as the coloured community grows. Present population about 1200. There are two primary schools, one of which was run by the Roman Catholic Church for coloured scholars; and two boarding establishments, one for the school and a big one run by the Council of Representatives for children in need from all over the country. Besides the usual convenience and service establishments, Kamieskroon is the centre from which A.J.Roux supplies the whole of Namaqualand with building materials: stone crushed in Springbok, sand from the Buffels River, cement ex Piquetberg, bricks ex Koelenhof by road. Transportation is entirely by road transport. Autonet, operating from the Klawer TX depot and through the Springbok PX depot, provides a daily service for normal freight. Jowells from Springbok and Thiart from Kraaifontein offer a daily express service. Namakwaland Busdiens carries passengers between Springbok and Cape Town, stopping at Kamieskroon, daily from Mondays to Fridays. In addition, three or four kombi taxis have been giving long distance passenger transport from early 1993. As I said before, Kamieskroon feels like a very pleasant town, and certainly has most pleasant inhabitants.

(Town Clerk Engelbrecht et al, 1994:oral; gldr)

1994: O'OKIEP COPPER COMPANY: NABABEEP and OKIEP TODAY:

In 1989 OCC donated half of Okiep to the Regional Services Council. The RSC in 1994 was developing residential sites on 2751 hectare here. Other than this, the Company owns and runs both villages. The O'okiep Copper Company follows a racially integrated wage policy and employs a mixed work force. The maximum number of employees was in 1973 with 5112. In 1991 the number was 1886, and in 1994 1701 with the total number of mining staff and their dependants being 4728. For the housing of their staff OCC provided 941 residences in NababEEP, 677 in Okiep, 532 in Carolusberg, 52 in Wheel Julia and 165 in Concordia. About R4,9 million has been spent on upgrading accommodation. Power and water reticulation and all ancillary township services are provided by the Company. Apart from the substantial housing schemes the Company has also built all schools, clinics, libraries, recreational clubs, roads, public buildings, a hospital and an airfield as required to satisfy the civic and social needs of the various communities within its area of influence. The Company was trying to deal with about 6000 squatters in NababEEP and Okiep. OCC has thirteen schools on the property, with 313 white and 2612 coloured students. The Company exports about 27 500 tons of blister copper per annum, and imports about 4 000 tons of stores, etc and 30 000 tons of coal per year (this was 12 000 tons of coal per month when the thermal power station was in use, before power was supplied by Eskom in 1977/78).

Since about the 1970's (note: actually since 1967) - OCC transported the copper and coal in their own vehicles from 1941 until 1967 {Phyllis Jowell, 1994:287} - Jowells has handled all transport to and from the railhead at Bitterfontein. OCC transports the copper concentrate between Okiep and NababEEP in eight 30 ton semi trailer tippers, and has ten

other tippers for road maintenance, etc, as also water trucks, buses, etc. The engineering workshop, which also services mining equipment, handles major mechanical work. The mine museum in Nababeep is well known, and contains inter alia memorabilia from the narrow gauge railway line.

(Gielie de Waal, 1994:oral; Wally Jordaan, 1994:oral; Des Munro, 1994:oral; O'okiep Copper Company, 1992)

See also: 1987.

1994: PORT NOLLOTH TODAY: The town has only one fish factory left, John Ovenstone's (which amalgamated with Hickson's Canning Company about 1991). Port Nolloth Fisheries, which operated from North Point, has closed down and the buildings have been demolished. The crayfish quota issued is barely enough to keep the one factory and the many trawlers operating for a short while each season: only crays are processed, either cooked whole or frozen. They are exported by road. The harbour is owned by Portnet, who provide the Harbour Master. In 1961 CDM bought the lease and immovable jetties, sheds, etc from O'okiep Copper Company. They in turn sold to Marine West (Pty) Ltd, a company recovering diamonds from the sea bottom, on 1 March 1986. Marine West now operates the harbour. A (varying) number of diamond recovery boats work out of the port. "Oranjemund" is the only ship operating a service to the port: she runs bulk diesel in as required twice or three times a month. Prior to early 1986 a general cargo service was also offered, but road transport has taken over this field. There is no licensed airstrip but planes occasionally land on the salt pan outside town. Port Nolloth owns the diamond mining concession from high water mark to 31 metres below low water mark within the commonage, which has a 5,5 kilometre sea frontage. There are plans to open a diamond mine on the commonage in April, 1994. The major streets in the town have all been provided with a bitumen permanent surface. The areas previously designated for coloured and black occupation, where the greatest need existed, have water borne sewage systems. This has still to be extended to the main section of town, where conservancy and septic tanks are still in use. The town is steadily growing. In 1993 there were about 58 applications for new buildings and 39 for alterations - it is obvious to the observer that many building operations are on the go. The commercial sector of the town has doubled in size in the last three years. The throughput of the 1991 water pipeline, designed to meet the town's needs for the next fifteen years, is already having to be supplemented by pumping from boreholes.

(Captain Donald Bridge, 1994:oral; Grazia de Beer, 1994:oral; Accountant Van Graan, 1994:oral; Town Planner Van Schalkwyk, 1994:oral)

1994: Rain: 20 April, Wednesday: Port Nolloth had a thirty minute cloudburst producing 24mm of rain, a third more than the annual average of 18mm. "Pumps were used to clear the streets of water". Springbok received 21mm; Garies 28mm.
(Argus newspaper, Cape Town, 1994-04-22)

1995: Kleinzee-Koingnaas low-cost bitumen road locally patched, and resealed by Haw & Inglis (Site Agent Riaan Landman) using latex modified emulsion and 13 mm chip for the first 21 kilometres south of Kleinzee and 19 mm chip on the southern section.
(Owen Smith, 1995:oral)

1995: Eskom's 1995 planning included the electrification of Buffelsrivier, Concordia, Leonardsville, O'Kiep, Onseepkans, Spoegrivier and some other smaller towns.
(Hugo, 1994)

1995: Production in 1995 (in tonnes, except silver):

| | | Qtr to 12/31 | Qtr to 09/30 | Year ended 12/31 |
|-----------------|----------------|--------------|--------------|------------------|
| Black Mountain: | Ore milled | 383 000 | 385 000 | 1 514 000 |
| | Concentrates | 30 571 | 31 308 | 59 412 |
| | Silver (kg) | 27 000 | 27 000 | 104 000 |
| O'okiep Copper: | Ore milled | 456 000 | 409 000 | 1 675 000 |
| | Concentrates | 6 190 | 6 628 | 26 322 |
| | Blister copper | 7 699 | 5 240 | 26 940 |

(Gold Fields Group, 1996)

See also: OCC, 1994; GFSA 1996, 1997, 1998

Gamsberg Zinc (near Aggeneys) did not meet Anglo's hurdle rate, but might do so in time as a result of advances in technology, changes in prices and costs, or if it received investment incentives.

(Tommev, 1995)

1995: KLEINZEE TODAY: A private village, built and run by the Namaqualand Mines Division of De Beers Consolidated Mines Limited. A smaller satellite township is Koingnaas, 65 kilometres to the south. The mine also employs people from outlying villages such as Buffelsrivier, Steinkopf, Kommaggas and Hondeklip Bay. 1707 people are employed at Kleinzee and 605 at Koingnaas. The population of Kleinzee is 2097 and of Koingnaas 800, accommodated in 491 housing units, while 125 are quartered in single accommodation and 1073 in hostels. Accommodation is of a high standard, and the hostels particularly are impressively well fitted out. Electric power is supplied by Eskom. Water at Kleinzee is obtained from the Henkries-Okiep pipeline supplemented by an underground source developed in the Buffels River, and at Koingnaas from an aquifer. The mine's sewage treatment works at Kleinzee is considered by the CSIR to be one of the best run small treatment plants in the country, and one can see why!

40 000 sheep, game and ostriches are farmed in the area. Previously there was also a dairy, but now milk is obtained from Alexander Bay. General facilities within the area include shopping centres, bank, building society, post office, churches, libraries, bottle store, an abattoir, and a private garage, printing works and other services (bakery, video store, etc.). The hospital is of a high standard, with two operating theatres, 19 beds in general wards plus a maternity ward and a high care unit, dental, X-ray and physiotherapy units, and out-patients facilities. Staff includes three permanent doctors, a dentist, radiologist, physiotherapist, laboratory technician, social worker and nurses. On demand specialists are flown in by the Company from Cape Town or elsewhere, and it is proudly stated that the hospital is equipped for open heart surgery among other major operations. The company aeroplane (currently a Citation V) operates from the surfaced runway on Kleinzee airfield, and this airfield is also used by National Airlines for their scheduled service. Until 1993 a Squirrel helicopter was used for security patrols and inspections, but this aircraft has now been transferred to Oranjemund. There are four recreation clubs, an indoor sports complex, an angling club (with a club house on the beach), a gun club, a yacht club (utilising a road water storage reservoir), a riding club, a nine hole golf course (irrigated with treated effluent, and boasting "manicured" greens), three squash courts, swimming pools, and facilities for cricket, football, rugby, tennis, bowls, roller skating and skate boarding, and pottery, darts, snooker, badminton, arts and crafts, an amateur dramatic society, and so on. Add to this that Namaqualand Mines had the first privately-owned television satellite station in the country. Pre-school facilities, and a junior primary and a

senior primary schools are on site. For senior schooling the Company transports pupils at term beginnings and ends to Springbok, Bergsig and Kimberley, while Chilwans have a contract to bus pupils to Cape Town, Paarl, Worcester, Malmesbury and Stellenbosch. Apprentices are also transported to Kimberley for training, or are provided with a vehicle from the pool. The mine has a vehicle fleet of 526, which includes an impressive range of 15, 29, 44, 60 and 88 seater buses. These, besides transporting scholars, are mainly used to commute workers between their dwelling units (whether within the mining area or in one of the outside villages such as Kommaggas, Hondeklip Bay, etc.) and their workplaces. Buses used to commute to work must be duplicated, as separate units are used within and without the inner security area. The buses are also used for the transport of sporting and other activity groups, and for carrying the steadily decreasing number of migrant workers. The annual number of passenger trips is estimated to be about 950 000. Fuel is distributed within the mining area by the mine, and in the case of a breakdown the mine may fetch the needed spares themselves, but this is probably only about 1 per cent of the total. Jowells Transport has contracts to carry diesel for Kleinzee from Port Nolloth and diesel for Koingnaas and petrol for both centres from Bitterfontein. Jowells brings spares from Cape Town, and, in association with Stuarts Transport, from the Reef. They also transport food supplies from Cape Town and fresh produce from Vredendal. Kleinzee impresses as a self-sufficient, well run and very pleasant village, populated by contented people who are happy in their work. (De Beers, {1994}; Owen Smith, 1995:oral)

1995: Tourism: visitors to Namaqualand in flower-time:

| | <u>1994</u> | <u>1995</u> |
|---------------------|-------------|-------------|
| Goegap | 8 770 | 9 921 |
| Kamieskroon Hotel | 2 400 | 1 855 |
| Springbok Hotel | 2 179 | 3 540 |
| Okiep Country Hotel | 1 277 | 1 500 |
| Nababeep Hotel | 703 | 751 |
| Garies Inligting | 14 350 | 16 935 |
| Skilpad | 12 135 | 20 000 |
| Toerisme-kantoor | 4 354 | 3 912 |

(Namaqualand RSC: Tourism Division, 1995b)

1996: World Bank estimates that high-income countries have paved roads in the ratio of about 10 000 km per million inhabitants. (World Highways/Routes du Monde, 1996)

Note: Namaqualand, with a population of about 67 000 has very roughly 700 km of blacktop (including Kleinzee - Koingnaas): 10 500 km per million.

"A good transport system is a prerequisite for economic growth..." - Olaus van Zyl.

"...recognise the significance of roads and the need to spend money on them... from an economic point of view they are fundamental." - Paul Norton.

(Olaus van Zyl, 1996)

1996: Captain Ray Grinstead, ex Chief Pilot of Namakwaland Lugdiens and pilot for Haw & Inglis, died tragically on 13 December 1996. (Cape Times 1996d)

See also: 1971, 1991.

1996: Production in 1996 (in tonnes, except silver):

Qtr to 12/31 Qtr to 09/30 Year ended 12/31

| | | | | |
|-----------------|----------------|---------|---------|-----------|
| Black Mountain: | Ore milled | 367 000 | 379 000 | 1 504 000 |
| | Concentrates | 29 399 | 29 625 | 119 176 |
| | Silver (kg) | 14 291 | 26 380 | 102 386 |
| O'okiep Copper: | Ore milled | 434 000 | 432 000 | 1 691 000 |
| | Concentrates | 4 889 | 6 231 | 20 106 |
| | Blister copper | 8 595 | 7 494 | 27 963 |

(Gold Fields Group, 1997)

See also: OCC, 1994; GFSA 1995, 1997, 1998.

1997: The "proposed development (of an ore port) at Port Nolloth" mentioned in discussion as to the necessity for a port at Coega. (Cape Times, 1997b)

See also: 1966; 1996; 1994.

1997: Jowells Transport, Stuarts Transport, Crosscape Express, Skynet Worldwide Express and Jowells Garage: that is, the transport interests of Trencor, disposed of to management, black empowerment group Malesela Holdings and First Corp Capital Investors for R148 million. Trencor chairman Neil Jowell says the transport industry had limited growth potential in the 1950's and 1960's because of road transportation permit restrictions. "We diversified... containers now constitute over 90 percent of earnings, while transport is below 10 percent." Deon Blignaut, who has managed the transport division for 20 years and becomes director and chief executive says the company will have an initial annual turnover of more than R500 million.

(Sunday Times Business Times, 9 November 1997:3;

Cape Times Business Report, 10 November 1997:21)

See also: 1967, 1974, 1998.

1997: Production (in tonnes, except silver):

| | | Qtr to 09/30 | Qtr to 06/30 | 9mth ended 09/30 |
|-----------------|----------------|--------------|--------------|------------------|
| Black Mountain: | Ore milled | 391 000 | 386 000 | 1 167 000 |
| | Concentrates | 28 616 | 27 867 | 86 003 |
| | Silver (kg) | 22 355 | 22 701 | 67 845 |
| O'okiep Copper: | Ore milled | 428 000 | 427 000 | 1 251 000 |
| | Concentrates | 4 945 | 5 610 | 15 656 |
| | Blister copper | 7 105 | 7 799 | 21 283 |

(Gold Fields Group, September 1997)

See also: OCC, 1994; GFSA 1995, 1996, 1998.

1997: Abnormal rains in Namaqualand between the end of May and in June. Helicopters flew in supplies end May and 1 July. 250 mm already this year compared with normal average of 180 mm. Buffels, Spoeg and Groen Rivers all in flood. Kleinsee bridge, Kommaggas bridge washed away. Hondeklip Bay, Kleinsee, Kommaggas, etc cut off. Heaviest rain since 1925 (Kleinsee), 1950 (Kommaggas), 1946 (Khys). Garies caravan park under 1,5 to 2 metres of water. (Gosling, 1997)

1997: Tourism in South Africa grew by 15 percent compound over the past ten years, accounting for 4,9 percent of GDP in 1997, rising to 5,2 percent by 2000.

Worldwide 8 percent of GDP is generated by tourism, which now employs one in nine of the world's workforce, and was "the world's number one export earner, surpassing oil, petroleum products, motor vehicles and electrical equipment".

(Cape Times, 10 September 1997:23)

1998: Trencor Transport now called Crossroads Distribution (Pty) Ltd. Divisions will continue to trade as Jowells Transport, Stuarts Transport and Jowells Garage.
(Fleetwatch, June 1998:9)
See also: 1967, 1974, 1997.

1998: Copper: Although O'okiep managed to turn the R6,3 million loss of the previous quarter into a R1,4 million after-tax profit this quarter, the plunging price of copper combined with prolonged strike and unrest at Tsumeb resulting in the mine having to be closed for "maintenance related to the industrial action" (!), resulted in GFSA planning to sell these two copper mining operations. (Cape Times, 1998a)

Production (in tonnes, except silver):

| | | <u>Qtr to 03/31</u> | <u>Qtr to 12/97</u> | <u>15mth ended 03/31</u> |
|-----------------|----------------|---------------------|---------------------|--------------------------|
| Black Mountain: | Ore milled | 394 000 | 389 000 | 1 950 000 |
| | Concentrates | 27 547 | 29 074 | 142 623 |
| | Silver (kg) | 23 060 | 24 597 | 115 502 |
| O'okiep Copper: | Ore milled | 320 114 | 394 000 | |
| | Concentrates | 5 230 | 5 657 | |
| | Blister copper | 7 743 | 8 119 | |

Carolusberg: all economic ore has been mined and as a result the mine was closed at the end of March 1998. Nigramoep is the only operating mine and smelter capacity will be maintained with custom and toll concentrates.

Sale of assets: The possible sale of various assets is being examined as the company moves towards closure.

(Gold Fields Group, March 1998)

See also: OCC, 1994; GFSA 1995, 1996, 1997.

Introducing the quarterly reports, GFSA Executive Director Peter Janisch says scale of operations is not profitable at present copper prices. Options being looked at may include the disposal of assets, or the actual sale of their O'okiep company. (Cape Times, 1998c)

O'okiep Copper Company was sold to Metorex in September 1998. Metorex has about 4000 employees in various mines, of which OCC accounts for about 780.
(OCC Financial Manager Hein Bredenkamp, 1999-04-23: oral)

In November copper prices on Comex were the lowest since June 1987, due to over-supply/drop in demand, to 71,05 cents (US) per pound.

(New York report in Cape Times, 1998f)

Note, however, that at the current exchange rate of R5,60 per US dollar this gave an RSA price of R8780 per ton: compare with prices (under 1994 entry above) of R8 200 in 1994 and R6 200 per ton in 1993.

1998: Diamonds: Benco (Benguela Concessions) reported that the company's mining vessel Moonstar, working off the Namaqualand coast, had recovered a 12 carat gem worth about R200 000. (Cape Times, 1998b)

Benco reported that technical innovations, coupled with a more thorough understanding of the geology of the area, have led to greater diamond recovery levels. "Moonstar" was at

that time bound for Devil's Hole, a diamondiferous feature on the Namaqualand coast. (Cape Times, 1998d)

Alexcor invited bids for a management contract to manage the mine for about two years to allow for a turn-around to profitability, and detailed valuations ahead of privatisation. Last year Alexcor had a loss of R27,8 million cf a loss of R9,9 million the previous year. Labour problems and theft of between 20% and 40% of all diamonds mined!! (Cape Times, 1998h)

1998: Eskom discussed with the people of Kommagas the proposed "pocket nuke" sites at Brazil and Schulpfontein. (Melanie Gosling, 1998)

Note: Kommagas measures 40 kilometres east of Brazil and 42 kilometres north east of Schulpfontein! Kleinzee is about 15 km north (downwind) of Brazil!

1999: Copper prices hit 12 year bottom - dropped 30 % in last 18 months - as stockpiles reach record high. (Cape Times Business Times, 2 February 1999)

1999: Trans Hex states that exploration along the Orange River adjacent to Baken and Reuning, and in the Atlantic marine concessions (Trans Hex recently acquired 33,6% of Ocean Diamond Mining) are comfortably predicted to ensure ongoing diamond mining activity for more than the next 20 years. Biggest production gains expected at Hondeklip Baai. Carat output is expected to increase. (Cape Times, 1999b)

1999: 47.500 hectare added to the 1.500ha Skilpad Nature Reserve to form the Namaqua National Park. (Melanie Gosling, Cape Times, 6 August 1999)

2000: Port Nolloth Sea Farms (Dan Harvey & Dan Singh) abalone ranching along a 60 kilometre strip of coast concession. Brooding tanks; settlement tanks for 3 months; weaning tanks for 9 months; into sea when 20 mm across during last two years; 20% survival rate; sold when about 5 years old and weigh more than 300 grams, R250 per kilogram. (Cape Times, 14 April 2000:9)

Port Nolloth: a lengthy succession of strong NW winds has caused the harbour to silt up quite badly. "Oranjemund" can no longer enter the harbour, and some of the larger boats are touching bottom on their moorings. The extensive dredging required is not economically feasible. "Moonstar", the mining ship operating a few miles offshore may be withdrawn as Benguella Concessions is experiencing financial difficulties and is involved in a merger. This would mean the end of the steady flow of launches and supply boats from Port Nolloth, and the impact on Port Nolloth will be severe as a large proportion of "Moonstar's" crew are drawn from the town, and Benguella concessions is also a source of income for local businesses and shore staff. Because of this there is a growing interest in catering for tourists to Richtersveld and Orange River, and in B&B establishments. Port Nolloth seems set to follow Port Alfred, Port St Johns and Swakopmund into commercial oblivion. (SATS General Botha OBA February 2000 Newsletter: 10,11)

2005: "Trucks piled high with mining equipment leave Metorex's O'Okiep (sic) copper mine next week to snake northwards to the Democratic Republic of the Congo, where the middle-tier mining company is ratcheting up development on its Ruashi Etoile copper and cobalt project." (Cape Times Business Report, 2005-09-08*)

2006: Heavy rains washed away the Holgat River Bridge on the road between Port Nolloth and Alexander Bay, as well as telephone lines. A local said no-one had seen the Holgat River flowing in the last 30 years. (Cape Times, 2006-05-24:3)
