CHAPTER I.

INTRODUCTORY.

It would be a difficult task now to find out when attention was first directed to South Africa as a gold-bearing region; but it must have been long ages ago. From the earliest times the natives, doubtless, used gold for ornaments, it being a metal easily worked and probably, at that time, found plentifully upon the surface of the ground, in some parts of this region. The Portuguese pioneers and settlers mined for gold here some hundreds of years ago, as shown not only by records, but by old mines and workings, in and near which coins of that country have been discovered.

However interesting it might be, and would be, to trace out, as far as possible, the earliest history of the South African Gold-fields, such enquiry would be somewhat foreign to the purposes of this Guide. But it may be of advantage to follow their progress during the last fifteen years—a period that covers their latest re-discovery, growth and development. In this we may find indications that shall lead to further discoveries; it will help us to estimate, possibly, the minimum extent of the gold-bearing region, and it may show that even experienced diggers and miners may have something to learn, something to forget, in exploring a new country. Natural laws are unchanging; their ac ion and their force have been the

same through all ages; but under varying conditions of climate and of time they produce varying results—a truism which is well exemplified by a comparison of the older gold-fields with those of South Africa.

In 1868 rumours reached England that the eminent German explorer, Herr Carl Mauch, had announced the discovery of a rich and extensive gold-field in the northern districts of the Transvaal, more especially mentioning the districts of Lydenburg, of Marabastadt and the country to the north of the Transvaal, belonging to Lo Bengulu, King of the Matabele.

Towards the middle of 1869, Mr. Edward Button, of Natal, accompanied by Mr. Sutherland, a Californian miner, and by Mr. Parsons, arrived at the town of Lydenburg, the only place of any importance in the district bearing the same name. They were successful in finding gold in every direction, here a "colour," there a "good prospect," but no mention is made of any attempt to continue working, except upon a reef which had been discovered at Marabastadt.

In 1870 Messrs. Button and Sutherland again started from Lydenburg and descending the "berg," passed through a country, consisting chiefly of "Lower Devonian" rocks. It was a district likely to contain auriferous veins, and they found gold here also in several creeks; but continued their journey until they arrived at two long lines of hills, about 500 or

600 feet in height, running parallel from W.S.W to E.N.E., and which were afterwards named the Murchison Range and the Sutherland Hills. Here they found more gold, and this time in defined reefs and leaders of auriferous quartz. They brought out some specimens, which were sent to Natal.

These discoveries were followed by others, which led to an announcement by the President, published in the Staatscourant of 14th March, 1871, that the reward for the discovery of gold at Spitzkop, in the district of Lydenburg, was claimed by Thomas M'Lachlan, James Sutherland and Edward Button. This announcement created some excitement in Pretoria, the cap tal of the young Republic, and on March 27th, of the same year, the "Lydenburg Gold Prospecting Company" was formed, with a capital of £250, in 50 shares of £5 each. Its object may be best expressed by a few extracts from the Staatscourant of that date:—

"Through reports received from several competent persons, it is confidently expected that large and payable gold-fields will be found in the districts of Lydenburg and Zoutpansberg, in the Transvaal Territory; it is therefore decided to secure the services of an experienced man, or two men, and send him, or them, to explore the country for the space of three or four months. This Company has nothing whatever to do with a Gold Mining Company, which may eventually be started; it is simply a pioneer company, got up in order to prove the existence or non-existence of a payable gold-field, and will be dissolved or wound up as soon as such proof is obtained."

While Mr. Button and others continued their efforts to develop the Marabastadt gold-fields, more work had been done at the Spitzkop with varied success. The discovery had not proved thus far sufficiently large to secure for M'Lachlan and his companions the reward claimed by them from the Government. The nature of the work, too, was at the first difficult; owing, therefore, to these causes and a deficiency of food, Spitzkop was for the time abandoned and McMc became the centre of the "New Caledonia Gold Fields." It may be mentioned that McMc, at first called "New Bendigo," is situated on the farms "Geelhoutboom" and "Graskop," about 45 miles E.N.E. from Lydenburg, was thus named by the late President Burgers, on account of the number of Scotchmen he met there upon his first visit to the gold-fields.

CHAPTER II.

THE LYDENBURG GOLD FIELDS.

The first Gold Laws were published in the Stants-courant on August 6th, 1872; a few translations from which may throw some light upon the after history of the Lydenburg Gold Fields.

- Art. 1. "The mining rights upon all grounds wherein precious stones or metals occur, belong to the State, with the exception of rights already granted to private persons, companies or owners of such grounds.
- Art. 15. "Where precious stones or metals shall be found on private ground, the Government shall be empowered to undertake the control and direction of the diggings thereon, and shall pay over to the owner one half of the licence monies received, unless he shall be willing to make over his property to the Government.
- Art. 19. "The discoverer of precious stones or metals upon grounds in the South African Republic, shall receive from the Government a reward of £500, which shall be paid to him within twelve months from the time the field shall have been declared open, providing that 3,000 licences shall have been given out in that time. No reward can be claimed for a new discovery, unless such gold field shall be 60 English miles distant."

With regard to Art. 1, quoted above, it is hardly necessary to point out that the principle laid down therein is not maintained upon Australian and Caledonian Gold Fields, where the rights to mine for gold are vested in the owner of the soil; nor, to quote an instance nearer home, does the Government of the Cape Colony assert a right to lease or concede privi-

leges to mine for diamonds on private property. With regard to Art. 15, it is well known to all old diggers in the Lydenburg Gold Fields, that prior rights to water which T. van Niekerk possessed upon his own farm "Spitzkop" for agricultural and milling purposes, were taken from him by miners under the provisions of this law. Also, that while he was aware that many thousands of ounces of gold were being taken from his farm by the 20 or 30 diggers who usurped his water, he received at no time more than £3 per month for the half share of licences due to him under this act. Further, that J. B. Shires, the owner of two farms adjoining "Spitzkop," received the small sum of 7s. 6d. per month as his share of licences due to him from the licence holders, whose claims. adjoining "Spitzkop," are admitted to have yielded gold during the year 1882, to the amount of £6,500. It was in ignorance of the unexpected repeal of the Gold Law, on the 11th November, 1881, that the owner, finding his own property of little value to him, sold the two farms, "Hendriksdal" and "Elandsdrift," for the small price of 8s. per acre, or £4,200. And, with regard to Art. 19, no further remark need be made than that the early discoverers of gold in this country have never yet received the reward due to them under this Act.

A few extracts from an interesting communication by Mr. J. M. Hower, to the *Volksstem* of August 15, 1873, will express the views of that time held by experienced diggers.

"The smaller finds are about half a mile up the creek from the new town, or two miles above M'Lachlan's house, and near the head of the gulch. This ground, about a

thousand yards in extent up and down the creek, is occupied principally by Australian diggers, and they are finding generally from two to five pennyweights per day to the man, working without Kaffirs. One party of three men took out twenty-eight ounces of gold (which I saw), the result of six weeks washing, about one third of it being beautiful nuggetty gold, the lumps weighing from half a pennyweight to two and a half pennyweights, while the rest was mostly fine. But it must be borne in mind that claims where such finds as I have named are made, are very few, and that while a few parties are thus making good wages, nine out of ten are barely paying 'tucker,' and many more are taking out comparatively nothing." "Thus it is in the case of the Lydenburg Gold Fields or 'New Bendigo Diggings," as they are called. And while Australian and Californian diggers there agree in saying that, had it been in some gold districts they would have supposed, on seeing the gold and the manner in which it lies in the ground, that there was a rich deposit there, they have decidedly changed their minds in regard to it now, after the gulch has been developed, and that their former ideas and experiences are at fault in New Bendigo. But certain it is, though, that they generally agree in the opinion that this particular gulch cannot now prove a payable field; but, notwithstanding the impression that people at a distance seem to have gained to the contrary, the whole gulch has been thoroughly prospected and well tested by actual digging throughout its whole length; and while it is possible that one, two, or three claims may turn out something better than has as yet been found, still this would not make it a payable field, for what diggers understand by the general term a 'payable field' is one in which the value of the gold taken out exceeds the total amount of capital expended by actual diggers in obtaining it."

Towards the close of 1873 the creek at Pilgrim's Rest was rushed and many of the miners left McMc.

Another correspondent to the *Volksstem*, dated 7th November of that year, writ s:—

"Why miners should leave these particular diggings

is more than I can fathom. Miners, and not in one, two or three instances alone, have cleared their thousand pounds in less than three months. But the distance as the crow flies is only 5 miles. I am certain that when we receive an addition to our population, unless Pilgrim's Rest is vastly rich in gold, some of the old miners will return. Gold is now selling at £3 7s. 6d. per ounce, for cash, but cash is scarce."

By this time there were about 500 white men in the two creeks at McMc and Pilgrim's Rest, which were now known by their distinctive names, and by February in the following year there were about 300 or 400 men at Pilgrim's Rest, the claims taken up being scattered over 5 to 6 miles of country up the creek. Gold, at a high level, was now found on the farm Graskop, which is between the two places; indications both of alluvial and quartz being found upon the west side of the mountain. Graskop was shortly afterwards bought by the Government (28th February 1874) with the intention to locate a township eastwards of the camp; purchase deposits were actually made on some few erven, but the Government took no further steps to establish the township, which the growth of Pilgrim's Rest and its subsequent history rendered unnecessary.

The large amount of heavy labour expended in the creek at Pilgrim's Rest was not without result, for though many toiled without much gain, still some met with success, while the newspapers of the day occasionally chronicled a good 'find,' amongst which the following were placed on record:—

On the 3rd December 1873 a certificate was granted by the Gold Commissioner of New Caledonia

that Messrs. Osborne, Barrington and Farley had found 4 large nuggets with a number of smaller ones, collectively weighing 13 lbs. 8 oz.

On the 13th April 1874 a "Natal digger" writes to the Volksstem "that a digger had in 100 days averaged 1½ ounce per day, and, that another digger had gone to England with 50 lbs. of gold found by himself."

On the 30th May 1874 the Volksstem states:— "Mr. Forster took out of Barrington's claim a nugget weighing upwards of 87 ounces; Mr. Dickson found a little over 60 ounces last Friday; altogether for the week ending Friday, 90 ounces."

Towards the end of the same year, the Goldfields Mercury announced the following finds:—

Sept. 11. Stibbs & Ross, nugget 48 ounces. Dec. 18. Chatterton & Hodgson, do. 69 ,, and again, but names unknown:—

Jan. 8, 1875. Head of creek Pilgrim's Rest 8 pounds.

,, 27, ,, do. do. 57 ounces.

These are followed by the finds announced in the Vollsstem of July 1875, naming the following successful diggers:—

G. Russell, Lilley & Co., nugget 213 oz. W. A. B. Cameron, 69 " do. Holland & Co., do. 29 ,, 11 dwts. McKennie & Co., do. 57, Name unknown, do. 47 ,,

The Mercury of March 29th 1875 writes, concerning another find:—"The 123 oz. nugget was found

in a 'terrace claim,' Upper Creek, about 30 feet below the surface; not a speck or colour near or about it;" and it gives expression to the question which many thoughtful men were already asking but to which none had, as yet, found a satisfactory answer. The Mercury continues:—"There is a great deal that is remarkable about this find, a great deal that gives promise for these fields. It was found high up in the terrace; the question now is: Where will the gold be found next, and how high up?"

CHAPTER III.

THE LYDENBURG GOLD FIELDS.

(Continued.)

It must be borne in mind that Australian and Californian diggers, although, many of them, men of great experience, came to this country with preconceived notions. Most of them sought for alluvial gold in the water-worn creek gravels, and the lower contiguous terraces. Little attention could have been paid to the general character of this country, which presents evidences of denudation upon a very extensive scale, or their efforts would have been directed as well to the upper terraces and old river-beds at a higher level.

Where no signs of what is called 'made ground,' existed, scarcely a pick was put in or a sod turned. Wherever attention was drawn to the rich deposits of doubtful origin, but now locally known as "Rotten reef," it was declared that the reef was "calcined" and the gold was "burnt out." Sufficient evidence of the fact that the experience of other goldfields has been at fault here is shewn by the number of shafts that have been sunk, and afterwards abandoned, through soils that are now proved of the richest quality. Instances of this may be seen where shafts have passed through large masses of soil, rich in fine gold, more especially on the highest point of the mountain above Pilgrim's Rest, which afterwards became known as the

"Company's Reef" and is now worked for fine gold upon the same spots that were successively abandoned as worthless.

Instances of a different nature may be seen in groups of claims at present worked for both reef and alluvial gold upon the farm Spitzkop. Here, in one case, the predecessors of the present claimholders, whilst ground-sluicing alluvial soil, after stripping the "bottom," found gold, and finally discovered white quartz leaders partially decomposed, with a thickness varying from 2 inches to \(\frac{1}{2}\) an inch and occasionally running out to that of a knife. These are rich in heavy reef-gold and are being worked at the present day; the ground is already stripped to within a few feet of the shafts sunk some 3 years ago.

It is worthy of notice that a bed of drift with many water-worn pebbles and boulders occurs at a level of probably 1000 feet above that of the Sabie River drift, the line of the former channel leading down to the river through the Spitzkop creek. This drift is now being worked for alluvial gold by ground-sluicing; paved sluiceboxes and tailraces saving the heavy gold whilst blankets are used to catch as much of the fine gold as can be recovered.

The history of the Lydenburg Gold Fields from the date of the Annexation of the Transvaal on the 12th April 1877, to its Retrocession on the 8th August 1881, may be written in almost as few words as the famous chapter on "Snakes in Iceland," for it may fairly be said to have had no history at all. Of those diggers who persevered through discouragements of every kind, the majority met with a fair measure of success,

whilst not a few have been enabled to leave the country with several thousands of pounds.

Many attempts have been made to estimate the total amount of gold yielded by the Lydenburg fields from the year 1873 to the present time, some placing the ascertained purchases within the Transvaal at the total amount of £300,000, although others claim for the fields a total yield of one million sterling. It must be borne in mind that ne one public Institution was a continuous purchaser of the precious metal, and that, therefore, the amounts declared to be purchased afford. no real basis for an estimate of the actual yield of these fields. It must also be remembered that the price of cleaned and retorted gold sometimes ruled as low as £3.5s. per ounce and never exceeded £3.13s. Those personally acquainted with the customs of a mining population, know well that at such values a digger will rarely dispose of more gold than will provide him with the usual necessaries of life, and defray the cost of native labour. The digger when at work and finding well has no need of money; it is then, of all times, that he will probably dispose of the least gold, for, distrustful of buyers of gold, it is then that many diggers will avoid all Banking Institutions, lest it become known that they are finding too well. Their surplus gold will then be secreted until the time comes when they consider they have made their "pile," or until that love of change, so congenial to the restless digger's nature, moves him to try life in some other form or locality. So he takes his gold with him when he goes to enjoy his well earned holiday elsewhere; probably some place where he can obtain a fairer value

for the results of his toil than the rates current in this country afford.

When it is remembered that the difference the ligger would receive from the sale of a thousand ounces of native gold in this country, and the sale of the same in London or in Melbourne, would amount to some £400, it can easily be seen how great is the incentive for each individual digger to reserve his gold. Numbers of men have been known to take away with them large amounts of native gold, and it follows, therefore, that all attempts to estimate the total yield of the Lydenburg Gold Fields must be misleading and fallacious.

It has already been noticed that some diggers (Willey & Mitchell), on Brown's Hill, were the first to use blankets for washing fine or flour gold. Many means had been adopted, but it was found, after the use of cotton cloths, cotton blankets, silk plush, &c., that by the use of rough coarse woollen blankets, a larger proportion of the fine gold that passed over the tables was retained than by the use of any other kind. Fine gold was known to exist upon the heights above Middle Creek, formerly known as Craig's Reef, but it was not considered payable, and owing to the difficulty of obtaining water at so high an elevation, nothing was accomplished. "Rotten Reefs" so-called and exceedingly rich in fine gold, have since been opened upon these heights by Lewin & Marshall, Kneebone & Son, and Kinleyside, for the working of which, machinery is now being brought out by the "Transvaal Gold, Land & Exploration Company."

Fine gold was also found on the summit of the

opposite heights above Middle Creek, but was not considered payable; the "Port Elizabeth Company," which had given its name to the "Company's Reef," had never found payable gold. Shafts had been sunk at different points and had passed through thick masses of the auriferous pay-dirt (semi-decomposed rock or alluvial soil, as the case may be) locally known as "rotten reef," which were yet to prove so important a factor in the revival of the fields. Looking for a permanent reef, they failed to recognise the value of the fine gold occurring under conditions apparently peculiar to this country; and thus claims were considered worthless that now rank amongst the most valuable properties in the district.

Little now remains to be recorded, but the repeal of the "Gold Laws" in regard to that part of the country, known as the "Wijk" or division of Origstadt, comprising Pilgrim's Rest, McMe, Waterfall and contiguous areas, which by proclamation in the Staatscourant, 11th November, 1881, was followed by the granting of concessions, giving full, free and undisturbed right to all minerals within certain areas.

The following important concessions have been granted, bearing the dates placed opposite the respective names:—

D. Benjamin (Pilgrim's Rest), 10 November,	1881.
H. Gwynne Owen (Waterfall), 6 January,	1882.
McHattie and King (Elands-	

drift and Hendriksdal), 30 March, 1882.

J. Franck, (Spitzkop), 3 July, 1882. A. Hollard (Graskop), 31 July, 1882.

CHAPTER IV.

THE GOLD FIELDS ON THE BLYDE RIVER.

The success of the Pilgrim's Rest creek induced small prospecting parties to go out from time to time in various directions, everywhere finding gold, a color here and a good prospect there, but without much real success until early in 1874, when a "New Rush" was announced at Waterfall Creek. This creek is situated about 10 miles distant from Pilgrim's Rest, on the farms "Lisbon" and "Berlin," its waters flowing into the Blyde River through a deep gorge, on either side of which are old slatey rocks, with basaltic intrusions. The finds were fair, the gold described as of good quality and free from the black coating by which the Pilgrim's Rest gold is characterised. On the 23rd March the "New Rush," now called "Waterfall," was declared a gold field and finds continued to be made. In November of the same year a reef was discovered and from that date to the present, although alternately rushed and partially abandoned, Waterfall has continued to yield a payable quantity of gold. Water races have been brought in at a high level, dams constructed, and the yield has been continually on the increase. In one group of claims no less than thirteen defined leaders are known, nine of which are exposed and are at present worked. The excavating here is carried on with a "face," the harder nature of the rocks necessitating much heavy work, and although the yield is large, much gold is found to remain in the "tailings" through the lack of proper machinery.

In October of the same year another "rush" took place, on both sides of the Blyde River, for a considerable distance below the point where it is joined by the waters of Pilgrim's Rest Creek. The finds were good and several nuggets were shewn as the result of the first day's work. Some claims yielded well and more especially those of the upper terrace, upon which a large amount of heavy labour had been expended. The most of them have, however, from various causes, been abandoned, although some few have been worked continually until the properties were placed by the Government under concession to their present owners.

A further rush took place also to "Rotunda Creek," a spot some 15 miles down the Blyde River; claims were marked out and, with a few exceptions, as quickly abandoned. In every instance gold was found, but again the experience of gold diggers seems to have been at fault. No further work was done at this spot until the year 1879—80, when gold was again discovered here and this time not in the valley but upon the hills at a point some 1000 feet above the level of the river and some three miles distant from water.

Fortunately, water was found in a ,, Kloof" some four miles distant, by Messrs. Lowin and Durnin, the successful prospectors. Rising as it does at a great height, near the top of the basaltic precipice, they were able to bring down a sufficient head of water to commence work in earnest. Up to this time no defined

reef had been discovered, but the presence of gold amongst the loose soil, broken quartz, and large masses of debris, gave sufficient confidence to the two miners to continue their enterprise. Even the soil between the grass roots, in the neighbourhood of the ancient workings before alluded to, would, when panned off, give a colour. Whilst passing some of this loose soil through the sluice boxes, Steeve Lowin found a silver Portuguese coin, one of those previously mentioned.

Judging from the presence of this coin and similar evidence, there can be no doubt that white men have, at some time not less distant than a few centuries, worked in these goldfields, but in what manner and with what tools or implements, remains for the present undiscovered. The distance of some of the ancient workings from available water, taken together with the contour of the country, indicates that if the search for gold was not thorough, it was very wide spread and, for those times at least, must have been remunerative.

The Blyde River, from the point where it is joined by the waters of Pilgrim's Rest Creek, flows in a deep, rugged valley, almost a gorge, and the whole country exhibits much evidence of prolonged water-action. The valley contains the usual old river terraces that some day may be worked with profit. For, like all rivers, the Blyde, at times a mountain torrent, has frequently changed its course, as it has worn its way down through the rocks, and has, therefore, run at a much higher elevation. The high level terraces of river gravel bear witness to the great influence the action of water has had in carving out

these valleys, being now at so great an elevation as from 5,000 to 7,000 feet above the sea.

Continuing down the Blyde River Valley and passing the entrance of the Waterfall Creek beyond where the valley opens out into a magnificent basin, crossing the hills and passing through another long and beautiful valley, one comes to the Treur River. So interesting and touching a story, connected with the early history of this country, has given names to these two rivers that no traveller can visit this place without recalling the event. In the early days, when the voortrekkers first emigrated to this part of the country, then the "Orighstad Republic,"* some forty Dutchmen, leaving their wives and families at home, went down to Delagoa Bay. The road was then dangerous and difficult, and unknown except to an occasional Portuguese trader. They accomplished their journey in safety and were on their road home, when they were met at this point by a messenger, who told them that their wives and children had been massacred by the Kafirs. This intelligence caused the deepest sorrow; the Dutchmen wept aloud and named the place "Treur Rivier," or the "River of Tears." Hurrying forward, at the next river, they met a second runner, who told them that all was well and that their families had received no harm. Then they broke out into shouts of joy and named the second river "Blyde River," or "River of Joy." Thus it is that we find rivers, places and objects with names given to

^{*} On April 4tb, 1860, the Orighstad Republic became a part of the Transvaal.

them by the earlier races which usually convey some natural characteristic, side by side with others possessing names given them by the Dutch voortrekkers, that afford expression to some emotions or passions which possessed them, or that bear testimony to some remarkable circumstances which attended them during their earlier wanderings in this then unknown land.

CHAPTER V.

THE ZOUTPANSBERG AND WATERBERG GOLD FIELDS.

Whilst the events recorded had been taking place in the Lydenburg Gold Fields, the spirit of enterprise was active also in the districts of Zoutpansberg and Waterberg, as well as further north at the Tati.

Passing towards the N.W. from Lydenburg, in 1872, Mr. Button and party had commenced prospecting at Marabastadt and Eersteling, with sufficient success to warrant the belief that he had discovered permanent and payable gold reefs. A concession of the mining rights on the farm "Eersteling" was applied for, and was granted by the Government on December 28th, 1872. The farm was purchased for £15,000 and a company formed with a capital of £50,000, in shares of £10 each, to work the reefs. Costly buildings were erected and machinery of the latest kind was brought up at great expense. A correspondent to the Gold Fields Mercury of October 2, 1874, thus describes the scene:—

"The machinery, which is in full and complete working order, and of the latest designs and improvements, has at present only two stampers,* and crushes only ten tons per day. All the machinery and company's buildings on

^{* ?} Two Batteries of five stamp-heads each.—W. H. P.

Eersteling estate (of course, not private cottages) are built of massive stones with shot-holes, to make their houses serve as fortresses in case of need or of invasion by Kafirs, of which I hope there never need be any fear, as Mr. Button is on the most friendly terms with all the surrounding native tribes, and can command any amount of Kafir labour, which he considers a great advantage, as some of his black miners are really equal to the white. As an example, I was told that the foreman (Kafir) to a gang of natives, generally cut through 18 feet of hard rock every week. There are on Eersteling estate 200 black labourers, the greater part of whom come from so far as the Zambezi. I need say very little about the Eersteling gold quartz, because that speaks for itself in cakes of retorted gold; but the number of gold reefs and mines about there is astonishing. I was in one tunnel, worked underground, 250 feet long, and saw several large mining works, which proves that Mr. Button and his staff have not been asleep."

Between 1872 and 1875, the Company had expended nearly the whole of its capital in costly machinery and transport, in buildings and in mining operations, when it would appear that under the altered conditions of the country and a war with Sekukuni now threatening, the Company was not able or not disposed to sanction a further expenditure. The evidence of the presence of gold in payable quantities, however, remains, and it is probable that the same want of knowledge of the geological characteristics of the country, which led to discouragement elsewhere, led to failure here.

As a record of the value of land at that time in this part of the Transvaal, it may be mentioned that a half farm (3,000 English acres) was purchased for £15, payable in Transvaal currency at the then depreciation of 75 per cent. The new owner thought he

was achieving a good stroke of business in exchanging the half farm for four oxen; but within six menths' time gold was discovered upon the property.

The discovery of gold at Eersteling was followed by further discoveries at Mount Maré and other places near Marabastadt, and also at Buffelspoort and other places near the town of Nijlstroom, in the Waterberg district. A concession upon the farm "Buffelspoort," was granted to Mr. Verdoorn on June 23rd, 1875. The same causes, however, which led to the failure of the workings at Eersteling, prevented the development of gold fields in the Waterberg, and it may be said that since the first Sekukuni war, scarcely any prospecting has been carried on. Sufficient, however, has been done to indicate the presence of gold reefs spread over a large area, and it is to be hoped that the holders of large tracts of land in these districts will take measures for their discovery by competent persons and their consequent utilisation. Another extract of a letter from the same correspondent of the Mercury must be quoted here:-

"Not far from Nijlstroom is Sand River Poort, and after passing this, the really fertile and milieral Waterberg commences; that is to say, about Tambootie and Palala Rivers, and about Hanglip Mountains. This country is mountainous and has many fine rivers. Two farms here have been sold for gold mining purposes at £1000 each, and Mr. Dunn, a geologist, lately in the service of the Cape Government, has proceeded to those parts of Waterberg, to prospect for an English mining company, that has great landed possessions there. One of the farms sold, as mentioned above, belonged to Gert Nel, and is situated not far from Tambootie and Sand Rivers. The other entrance to these golden regions is through Marabastadt, striking

out from there for the Hanglips, which are not far distant, and coming down to Tambootie and Palala Rivers."

By this time the number of men (black and white) at work upon the whole fields is estimated to have been about 2,000. Prospecting parties went out from time to time, as far north as the Oliphants River, and as far east and south as the Krokodil and Kaap River Valleys. In no case could the result be said to be completely barren, and, in the latter district especially, heavy "shotty" gold was found by McLachlan and others. But the then-disturbed state of the country and other circumstances combined to deter prospectors from following up their discoveries. It remained for others, at a later date, in the year 1882, stirred up by the late rushes to the Godwan plateau and the lower country in the Kaap Valley, to follow in the footsteps of the early prospectors and to profit by their labours.

The Lydenburg Gold Fields had now passed through fluctuations and changes, such as are common to all mining communities in their early days. Parties of Australian and Californian diggers of long experience had come to these fields and had worked long with varying fortune. Some had made money, others had toiled equally hard; but, baffled by the different rock-formations and other conditions of a country so strange to them, had been less fortunate.

Men, too, had come, such as are to be found in all new gold fields, impecunious clerks, broken-down men of every rank in life and "loafers," with a good

sprinkling of men accustomed to hard work but of a different kind, and who had come a great distance with little money to fall back upon. These latter were the most to be pitied, for the country was heavy, the roads difficult and provisions became both scarce and dear, and to make a living was almost impossible. The disturbances with the Sekukuni Kafirs became more frequent, labour was dearer and more difficult to obtain; at length the long threatened war with Sekukuni broke out and further prospecting was out of the question, whilst intermittent digging could only be continued upon the two known creeks. Need it be a matter for surprise that not only the fainthearted but the strong became disheartened and left the fields? Some took away their "pile," others left, intending to return so soon as the country should become more settled. Some found lucrative employment at the Diamond Fields, which were now in the enjoyment of their most prosperous times, while others—the flotsam and the jetsam of the mining world—dispersed as only such a population can.

But an extract from a letter by an old digger to the Volksstem, written as early as the 14th February 1874, will sufficiently describe the state of things which existed from the commencement of the first Sekukuni war to the 12th April 1877, the date of the annexation of this country by the British Government.

"But among us are some eld 'grumblers'—Australians"—plucky, staunch men, sober and industrious, who have with a grunt said "Go on, boys." I may mention their names as many of your readers may knew them:—Cairns, McKinnon, Crawford, Tierney, Cameron, Osborne, Charley Marshall, Joe Sykes, Buckley, Mansfield, and last

though first, our future Governor, M'Lachlan.—N.B. I must not forget "Yankee Dan."

Now Sir, it 'riles us', 'some', to see a parcel of dandies, jewelry pedlars, gamblers, and canteenkeepers come up here, try their hands for a few hours at their little games, find it "no go", and then return, abasing "our fields", and we also pity a tew well-deserving men who have really worked "like niggers" and done nothing, for the reason above stated, "want of experience in the locality."

CHAPTER VI.

THE TATI GOLD-FIELDS.

The following remarks upon these fields, are based chiefly upon Mr. T. Baines's book, on 'The Gold Regions of S. E. Africa', from which extracts have been freely made—the reader is referred to that excellent work for further and more detailed information.

There are ancient workings on the Tati, as on all the fields opened, or re-opened, in recent times, and these present traces of fire, as though the ore had either been roasted, and disintegrated, or possibly smelted, by its agency. At the bottom of the mines also are similar traces, indicating the probable splitting up of the rock by the application, first of fire, then of cold water, an operation for which tools of soft iron, or of stone, were evidently unfitted.

The natives of this part obtain gold from quartz, as Mr. Baines mentioned that Mr. G. Wood bought from the Mashonas a few grains of gold in a quill, and presented it to him. He saw a place in which a heap of quartz had been burned, and another heap, piled with wood among it, ready for burning. The crushing stones used were like a printer's slab and muller.

"THE TATI, OR VICTORIA GOLD FIELDS, MATABILI LAND.

The discovery of these and of the northern gold fields was so nearly simultaneous that it is hardly possible to separate them, yet as the Tati claims precedence by a menth or two, it will be well for the sake of clearness to consider it first.

We had heard for many years amongst the Dutch

emigrants rumours of gold found beyond the Zoutpansberg, and about 1865, Mr. H. Hartley, while hunting in Matabili land, observed groups of ancient diggings, and connecting these with the current stories, he invited Herr Carl Mauch to accompany him on his next trip; and in 1866, the then young and almost unknown traveller, announced the discovery of a gold field eighty miles in length by two or three miles in breadth.

In 1868, the London and Limpopo Mining Company, headed by Sir John Swinburne, Bart., and Captain Arthur Lionel Levert, left England, taking with them an expensive equipment, including a traction engine, which, however, was left, and subsequently sold in Natal. They reached the Tati on the 27th April, 1869; set up their steam engine and opened a store. Sir John and Mr. Levert proceeded to Myati. The former obtained leave to proceed to the northern gold fields-the latter returned to Natal, and had a stamping machine constructed there by Mr. Gavin, of Durban.

About this time quite a little village had arisen on the north bank of the Tati river.... Several of the shafts were 50 feet deep; but, though 150 tons of quartz, some of it apparently rich, had been got out, the crushing machines that had been extemporised did not succeed. Nevertheless, specimens had been sent home, and Messrs. Johnson and Matthey, assayers to the Bank of England, certified as under:-

"Assay Offices and Ore Floors, May 7th, 1870.

"Certificate of Assay. For London and South African Bank we have examined the samples of mineral, marked as under, and find the following to be the result:—Sent by J. J. Dickenson, D'Urban.

"No 1.—Specimen of rock cut through to meet the

quartz; no gold.

"No. 2.—New Zealand reef, average stone, produce of gold 4.900 oz. per ton of 20 cwt. of ore, silver traces.

"No. 3, X.—New Zealand reef, produce of gold, 10

oz., produce of silver, 0.900 oz. per ton.
"No. 4, X.—Alliance reef, produce of gold, 65.250 oz.; produce of silver, 5 oz. per ton.

- "No. 5, X.—Burrell's reef, average stone; produce of gold, 0.500 oz. per ton; silver traces.
- "No. 6, X.—Pioneer reef, produce of gold, 39.725 ez.; produce of silver, 3.250 ez. per ton.
- "No. 7, X.—Reef, produce of gold, 3.250 oz. per ton; silver traces.
- "No. 8, X.—Blue Jacket Reef, produce of gold, 4.700 oz. per ton; silver traces.

"From Mr. Bayne.

- "No. 9.—Five pieces of quartz, produce of gold 20.250 oz.; produce of silver, 1.250 oz. per ton.
- "No. 10.—One piece of quartz marked satisfactory, gold evenly dispersed; produce of gold 52.250 oz.; produce of silver, 3 oz. per ton.

"Signed

"Johnson, Matthey & Co."

Beside these, another specimen was received by a mercantile house in London, and when tested by Mr. Claudel, proved to contain 26.8 oz. gold, and $31\frac{1}{2}$ oz. silver to the ton.

Early in 1876, Captain Levert returned to Tati, and had the crushing machinery erected; and the following is the certified result by Mr. B. N. Acutt, of the first quartz subjected to anything like a fair test upon the spot:—

Name of Reef. Quartz crushed. Yield of Gold. Yield per ton.

Blue Jacket 19 tons 10 owt. 42 oz. 2 oz. 3 dwts 1 gr. Australian Reef A 2 tons 10 owt. 16 oz. 10 dwts. 7 oz. 12 dwts.

Captain Levert also certified during the same year that 125 oz. had, to his knowledge, been produced from the reefs at or near the Tati.............

Several of the smaller properties had been bought up by Sir John Swinburne, who left Mr. August Greite to work the Blue Jacket reef, and during his visit to London in 1870-71, had engaged Mr. C. J. Nelson (originally the Mineralogist of the South African Gold Field Exploration Company), to come out and take charge of mining operations for him.......

Mr. Greite had gone about 70 feet deep, and had reached water, which, however, did not much inconvenience him. He had raised about £300 worth of gold, and had 150 tons of quartz lying on the surface in assorted heaps, of which the most promising he thought would yield 10 oz. of gold to the ton. He showed me several specimens of quartz of almost fabulous richness; one piece he estimated at about 1,500 oz. to the ton. Of course these were picked specimens, but the mass must be rich from which such could be selected.........

Mr. Nelson has been working steadily on, despite the difficulty of procuring labour and the imperfectness of his machinery; and towards the close of 1872 I was informed by Mr. Acutt that between 1,500 and 2,000 ez. of gold had been sent home from Tati. In November of that year, Mr. Nelson brought down 250 ez., and is, I believe, now working on in expectation of the arrival of more complete machinery from England.

I am not aware that alluvial gold in any appreciable quantity has been discovered near the Tati. Deeds of grant and agreement were made to the Limpopo Gold Mining Company.

On May the 14th, 1870, Captain Levert called the residents at Tati together, and read to them the grants and agreement, and then informed them, that in virtue of these deeds, the Tati district was virtually his property, and that of the company he represented; but that he intended throwing it open to all who would subscribe to the laws made by the community, that all their hitherto acquired rights would be respected, and that the only difference would be that instead of dealing with the Matabili, they would have to deal with him.

He claimed, however, 1st, to be perpetual chairman of their assembly. 2nd. That the company should have the power of leasing auriferous or other land, water rights, and licensing machinery. 3. That on every newly-discovered reef the company should claim one-fourth, allowing only three ordinary claims to the discoverers. 4. None of the company's claims should be liable to be "jumped" for any reason whatever.

POSITION AND EXTENT OF THE TATI GOLD FIELDS.

The Tati district, as described in the grant made to Captain Levert, is a triangle, of which the southern side, formed by the Shashi river from its source to the junction of the Ramoqueban, is about 85 miles in length; its northwestern, formed by the mountains in which those rivers rise, about 60, and its north-eastern, defined by the Ra-

moqueban river, about 85 miles.

The Tati river flows between the two previously named. and enters the Shashi on its northern side, four miles above the junction of the Ramoqueban. The settlement is about 20 miles up the Tati river. On the north bank its latitude, by my own observation, is 21°27' S., and by that of Edwin Mohr, the German explorer, 21°28'. Its longitude, very carefully taken by Mr. Mohr, with more time at his command than I had, and with superior instruments, 27°51' E. The London and Limpopo Company's store is conspicuous on the west or left hand side of the road on the north of the river. To the north of this, on a rounded hill, is the house of Mr. Nelson, and a little to the east, that of Mr. Brown, of the Glasgow and Limpopo Company...... On a small range of hills north of the settlement remain the mines of the various parties, all of them containing quartz more or less auriferous, but now deserted because the owners had exhausted their means in sinking down to the reefs, and had not capital either to go on working their mines, or to provide machinery for crushing the quartz. About three miles north-west is Blue Jacket mine, formerly worked by Mr. Greite. Eight or nine miles north is Halfway Reef, and about 35 miles up the Tati from the settlement is Todd's Creek, formerly worked with very good results by the Australians, equipped from Natal, but in 1871 deserted by all except one or two of the party

The rivers affluent of the Limpopo flow through a granite district, and are generally crossed where they are to appearance deep worn channels, filled for many miles in length by broad flat beds of sand. During the rainy season heavy floods rush down, and when they pass away, leave the sand saturated with moisture, so that water may be obtained cool, clear, and pure by merely scraping with the hand; but as the dry season advances this drains off, and unless a supply be retained by some inequality of the underlying rock forming a reservoir, the sand, by the end of June, is completely dried, and the traveller must enquire carefully of natives, or others, where small supplies of water are still likely to remain."

About 1872, Sir John Swinburne held, on behalf of the London and Limpopo Mining Company, a concession from Lo Bengula, the King of the Matabele, in whose country the Tati is situated. He left Mr. Nelson as his agent, who had in his employ a miner named Hugh H. Dobbie, who eventually (when that concession lapsed in 1879) obtained for himself a concession of the tract of land lying between the rivers Shashi, Tati and Ramoquebane. He and his friends worked the old mines with varying success; there was plenty of gold, but they could not work the reefs which are plentiful there, as they require to be worked, for want of proper machinery. Several hundredweights of the quartz were brought down to the Diamond Fields and assayed by the writer in 1881, proving very rich in gold, and on the strength of this the concession was offered to a financial firm in Paris for £100,000. The proposition was entertained subject to professional examination and verification; but, owing to circumstances entirely foreign to the question, the negociations fell through. Dobbie and his friends then fitted out an expedition on their own account one of them, Mr. D. Francis (late Manager of the Standard Diamond Mining Company) providing

machinery, it is said, to the extent of £10,000. But they were unfortunate, as during the following summer fever prevailed amongst the party; Mr. W. Francis fell a victim and, it was rumoured, several others. There are thus far, it appears, no later accounts of either of the welfare or success of the venture.

Lo Bengula is, it seems, a reasonable and intelligent Kafir Chief. He has travelled amongst white men even as far as Cape Town. He acts fairly and honourably by those who treat him in the same manner, and there can be no doubt that by the exercise of tact and fair dealing, these rich gold fields might be opened to the world—to the advantage of those who are willing and able to undertake the task, and tending also to promote the spread of civilisation.

CHAPTER VII.

THE NORTHERN GOLD FIELDS.

In a N.E. direction from the Tati district, runs a high granite range, called the Mashona Mountains; beyond this range, and therefore in the basin of the Zambesi, lies a tract of country explored by Baines, and over part of which he secured a concession from Lo Bengula, it being also in Matabelelan 1.

"The discovery of these fields in 1866 and 1867 followed that of the Tati only by the interval of the few weeks necessarily occupied in travelling 350 miles more to the north-east, but the difficulty of exploring and ascertaining their reality increased at every step..........

Meanwhile the letters of Herr Mauch announcing the discovery of the gold fields arrived in Europe, and were given to the public under the sanction of scientific societies in Germany and in England. The glowing language he employed was considered open to discussion, but it proved fortunate, for it roused the public to action when a more sober relation of facts might have fallen flat on inattentive ears......

During the year 1868,.....a number of gentlemen interested in that colony, enrolled themselves as "The South African Gold Fields' Exploration Company," and

offered the command of their expedition to me. Mr. C. J. Nelson, a Swedish mineralogist who had travelled and worked for 16 years in California, was placed in his proper capacity on our staff."

The Baines' party arrived in Natal on the 14th February, 1869, and, leaving Maritzburg on the 13th March, reached the King's Kraal, in Matabeleland on the 19th July. Mr. Baines thus describes an interview with the Regent, Umwombata:—

"He received us in a friendly unaffected manner, and after a little pleasant conversation, proposed to adjourn to the kotla, or place of council, to grant the formal audience.When he announced his readiness to hear us, I requested Mr. Lee to say that I had been sent by a company from London, the city of our great Queen, many thousand miles across the great water, to pay him a friendly visit, and to ascertain whether the report, that his country contained gold, was true. Also that I was the bearer of a letter from the governor of the English in Natal, asking him to give me leave to travel and explore, and to protect me in doing so, in order that I might ascertain and report the truth, so that if the gold really existed, his excellency might make laws to regulate the conduct of those who would come to seek it, or if I found none he might make the fact known, and advise them not to undertake the journey.

In the vicinity of Um Nombata's kraal, Mr. Nelson,

On the 6th August the party trekked northwards through a granite region, and met Mr. S. Edwards coming out to fetch supplies for Sir John Swinburne, who was in advance. They crossed the Gwailo and the Imgwainya Rivers, the Bembesi and the Sebaque, "near the junction of which, many apparently rich quartz reef exist," and galena was remarked in several specimens of the quartz. "And at the drift of the Umzwezwie, Mr. Nelson found gold among the stones and sand, in the river bed which only the flooded river could fill." They met Mr. Hartley at the Imbeeta River, where there are several quartz reefs to the westward of the road; and hereabouts is a reef bordered by clay slate and other rocks, in which are old pits, some ten feet deep, and in groups of six or eight together.

The reefs seemed to be the greater part of a mile in length, but were so covered with refuse, thrown from the old surface workings, that their exact limit could not be easily determined, the holes were three or four feet wide, and sometimes ten or twelve feet deep. Here and there a group of holes had been worked into one, forming a large pit, and in many of these mimosa and other trees, from three to ten inches thick, were growing, proving that many years must have elapsed since they were worked, but not establishing for them a high autiquity.

Nearly a mile to the south Sir John Swinburne had encamped, and with the help of his head miner, Mr. August Griete, had sunk two shafts about twenty-five feet deep, from which he had obtained some very rich, and visibly auriferous quartz, some white and crystalline, some coloured red or yellow with oxide of iron.

Mr. Nelson, in his official report, thus describes the place we had selected:—

"Profitable quartz mining depends largely on the facilities for working and crushing quartz; here these are very good, an unlimited supply on the ground, and a fine stream, the Simbo, within a few hundred yards, with constant water, which can probably be used as a motive power.

"The rock strata enclosing these veins are gness and a mixture of talcose and chloritic schists striking northeast and south-west or thereabouts, and these dip westward at an angle of 70° or 80° judging by the dip and strike of the rocks lying close on both sides of the hill.

"Just where the reefs are the underlying formation is so covered with soil that it cannot be seen.

"Everywhere in the northern mining district the stratified rocks are so hardened and metamorphosed, that their geological age cannot be ascertained. I believe they belong to the lower palceozoic epoch.

"On the north-eastern boundary of the chain are several kopjies, or small hills of igneous rocks (Hartley hills), which have burst through the rocks containing the quartz veins, and pressed them aside; hence, though by the line of old workings, the reef No. 1, appears to have a

north and south strike, its real course is north-east and south-west. Prospectors in South Africa will find it to their interest to explore places where the stratified rocks have been invaded by the igneous rocks, as precious metals are most likely to be found there.

"I cannot tell the breadth of these veins, as they are hidden by refuse quartz from the old workings; but I believe it to be considerable. They are larger and more extensive than any others I have seen in Africa; and nowhere else did I find silver-bearing galena disseminated through gold quartz.

"I brought samples of quartz from these mines, and have assayed them; some gave low results, some high.

"From one piece of quartz taken from vein No. 1, the result was at the rate of sixty and three-quarters ounces of gold, and seventeen one-hundreth (17·100) ounces of silver, to the ton; but this was taken from a very choice piece.

"Since my arrival in London, Messrs. Johnson, Matthey and Co. have made six different assays of quartz, taken at various places from the old workings, with the following results:—

Sample (a) - 0.225 ounces of gold to the ton.
, (b) - 1.450 , , , ,

"	ゾツ	_	1 300	"	"	"
"	(c)	_	3.125	22	"	**
"	(d)	-	3.150	37	33	13
"	(e)	-	3·500 0·975	22	"	99
**	(f)	_	0.872	39	**	**

The samples α and b were taken from vein No. 2, c d e f were from vein No. 1. These assays do not afford sufficient ground for estimating the value of the mine; but they prove, beyond a doubt, there is rich quartz in them.

(Signed) "C. J. Nelson.

Mineralogist, assayer, and practical
miner to the S. A. G. F. E. Co."

Mr. Baines obtained from the King a grant or concession, giving him permission to mine in all that country lying between the Gwailo River on the southwest and the Ganyana on the north-east. In his work on the gold fields, page 50, is a verbatim copy of the "Ratification of Grant, made verbally by Lo Bengula, Supreme Chief of the Matibili Nation, to Mr. Thomas Baines, on behalf of the South African Gold Fields Exploration Company (Limited), on the ninth day of April, 1870."

CHAPTER VIII.

DE KAAP GOLD FIELDS.

In a copy of the Volksstem, published in January, 1875, it is stated that a letter had been sent to the President by Mr. M'Lachlan, accompanied by a splendid sample of alluvial gold, which he had found when prospecting to the south of Spitzkop, in a district where, hitherto, the occurrence of gold seems only to have been suspected. This gold was found somewhere upon the surveyed farms, 80 in number, belonging to the Government, marked as "Government Farms" on the map; and from their being situated mainly in the valley overlooked by De Kaap, a bold promoritory in the lofty krantz some 1,500 feet high, which forms the first 'drop' in the eastern slope of the Drakensberg, they are known under the general appellation of "De Kaap." From that time no notice seems to have been taken of McLachlan's discovery until last year (1882), when he officially made known to the Government that he had discovered payable gold in the Kaap Valley and claimed the reward of £500. This was after Mr. Chomse had found gold in a gorge running down the back of the Kaap headland, where he was prospecting on behalf of Mr. Albrecht, the owner of a farm close by, called "Berlin," which was afterwards the scene of gold-digging operations. A few others went to work in the gorge and found a good deal of gold, in the form of nuggets-not only in the alluvial sand and gravel, but in the surface

soil, frequently under large boulders, whence it was taken by scratching out the earth with pieces of hoopiron, knives and similar implements. Soon there was tremendous excitement, not only in the Transvaal but on the Diamond Fields (where the news was doubly welcome on account of the stagnation there in all branches of industry) and, indeed, throughout South Those living in the Transvaal, of course, had the start, and soon several hundred men, the majority being Boers, were on the new fields, and, it must be added, had the best of the situation. By the time that outsiders began to arrive, it was found that the time for surface-scratching was over-the gold in the positions referred to being in very limited patches and soon exhausted. When actual digging commenced, it was carried on under great disadvantage, all the soil having to be taken some distance to the water, and only in rare instances did the quantity of gold found pay for the labour. However, men were hopeful of better things and set to work with a will in the neighbouring creeks-some in a desultory and others in a workmanlike manner. The result is but too well known. A few only, very few, have made a small profit out of their claims; some others have about paid their expenses; but the great majority have lost both time and money. The actual cost per ounce, in money and labour, of the gold found at the Kaap will, probably, never be known, and has been variously estimated. In some cases it has been a hundred pounds and more, and it may with certainty be assumed that ten pounds an ounce would be below the average of the whole of the diggings. And, if so, as the digger sells his gold at three pounds ten shillings an ounce, the new fields have thus far proved a failure. But there is good reason to believe that payable alluvial ground will be found in large quantity in the Kaap Valley. Indeed, it is now asserted, that payable ground has been struck near the Kaap Poort, the lucky prospectors having already sent in a claim for the reward.

The ground discovered by M'Lachlan, (from which he previously sent a sample of gold to the President), has never yet been declared, although, last year the Government instructed the Gold Commissioner to examine the spot, and, if found payable, to declare it an open field. M'Lachlan raised two objections which caused some delay; he would not go without first receiving a written guarantee from the Commissioner that if the yield of gold averaged 4 dwt. per man per day, he should get the reward. This was given, but the delay made compliance with his other condition almost impossible. He would not go if more than six men accompanied the party. But the news had leaked out and every hour saw more diggers prepared to start for the new rush. The Commissioner however left, M'Lachlan promising to overtake the wagon by 9 the next morning. He did not turn up at the appointed time, so the wagon went on in what was supposed to be the right direction; scouts were sent out to try and fall in with the missing prospector. Many diggers and others were on the road, and by night the party must have numbered nearly a hundred men en route for the new rush. For three or four days they wandered about the Kaap Valley, halting at the entrance to the Kaap Poort—a few men only going further and several washing the sand from the rivers and streams. Fair prospects were obtained at several spots, and although M'Lachlan never came to disclose his secret, men were put on the trail, and it is more than probable that it has now been discovered.

In the early days of the Kaap discoveries two members of the Triumvirate, the Hon'ble Messrs. Pretorius and Joubert, went to judge for themselves of the value of the fields and to settle, in some manner, the way in which they were to be regulated. For it was doubtful what laws, if any, were applicable to the Kaap Gold Fields, and it was highly necessary that there should be some definite organisation. were meetings and speeches, and so on, but nothing much came of them beyond the appointment of a Gold Commissioner, Mr. J. P. Ziervogel, the election of a Diggers' Committee, and a sort of general encouragement to the diggers to go to work prospecting, wheresoever they pleased, upon the Godwaan plateau. The boundaries of the farm "Berlin" were then in dispute, therefore it was considered that the diggers' rights would be respected, in the event of their opening up good ground; if no actual promise of the Executive was recorded, it was given by implication.

Some of the foregoing statements may be considered to condemn the new fields in toto, not merely tending to prove them hitherto a "delusion and a snare," but denying their future prospects. It is not so, however; the facts cannot well be disputed or even

qualified, yet there can be little doubt that these fields have a grand future before them. Whether there are good grounds for this conviction, will be seen in treating of the Kaap in greater detail, in noticing its physical and geological characteristics, and drawing therefrom their logical conclusions.

The Kaap Gold Fields are really not in the Kaap at all; that is, if we take the meaning of "The Kaap" to be the Kaap River Valley, or catchment-basin, as we do that of "The Komati" to be the area of the Komati River and its tributaries. The new fields are all on the Godwaan plateau, except the few isolated cases of gold found in the Kaap Valley, and the most recent discovery down by the Kaap Poort. The first gold was found just below the "Devil's Kantoor," which lies on the back of De Kaap, a bold headland that juts into and gives its name to the Kaap Valley; to this fact is owing the misnemer of the "Kaap Gold Fields."

In the angle formed by the junction of Eland's Spruit with the Krokodil River is the Godwaan plateau, an elevated tract some four or five miles in width. Its surface is not flat but undulating and upon the whole slopes westward, so that its drainage flows by several channels and deep gorges to the Eland's Spruit. It is important to note this feature, on account of its bearing upon certain points hereafter mentioned. The plateau presents a very precipitous face or krantz to the east, about 1500 feet in

height and forming the western boundary of the Kaap Valley, through which flow two streams, bearing that name and which unite at the Kaap Poort before turning north to the Krokodil. The high krantz, although broken by short transverse gullies, follows a nearly straight north and south line from Tafelberg to the N.E. corner of the plateau, then turns to form its northern boundary, and a continuation of it, but not so high, faces the Eland's Spruit on the western side of the tract in question. The plateau dies away to the south amongst the hills and highlands about the sources of the Godwaan River, whence a continuation of the krantz, but much more broken, turns S.E. towards Swaziland and merges in the mountain range which forms the southern boundary of the Kaap Valley.

A peculiar prominent portion of the high krantz resembles a cape or headland, and from this doubtless arose the name of "De Kaap." The view from its summit, suddenly presented to one walking up from the Kantoor, is one of the finest in South Africa. The calm, peaceful looking valley, apparently undisturbed by the hand and untrodden by the foot of man, is stretched out like a panaroma some 1,500 feet below. Its distant boundaries and landmarks appear much nearer than they really are when seen from this elevation; its hills and valleys look like small mounds and hollows, but are found, upon closer acquaintance, to be almost impassable. The streams show here and there, like silver ribbons amidst the green veldt, which is further relieved by touches of red and yellow, due to exposures of soft rock cut into by sluits and dongas

that are sometimes a hundred feet, or more, in depth. From this point one can plainly discern Spitzkop, Mauch's Berg, Pretorius' Kop, Tafelberg, the Umgane Range and the prominent mountains of Amaswaziland.

But the Kaap Valley, picturesque as it looks, fertile and pleasant as it is, cannot be considered as habitable by white men, except during a portion of the year. It may be tolerably safe at all times in its more elevated parts by the exercise of due precautions, but its lowlands are haunts of fever, horse-sickness is rampant, and the tsetse fly comes even through the Kaap Poort in the summer season. And the prevalence of mist and rain, during at least three days a week, in the early summer, renders the Godwaan plateau and similarly-situated portions of the Drakensbergen, anything but a pleasant abode at that time. The thick fog is seen rolling, from the direction of the sea, across the valley, ascending the hills and creeping up the gullies in various fantastic forms. It covers the plateau as with a mantle, and when in detached masses, it frequently leaves the valleys that are transverse to its direction, exposed to bright sunlight, whilst the higher ground is completely enshronded.

CHAPTER IX.

THE KAAP GOLD FIELDS.

(Continued.)

The following remarks are put into the briefest and simplest form necessary to a proper understanding of the subject, an important one, although some may fail to see any direct connection between gold-fields and geology. We have seen that hitherto the Kaap Gold Fields have been, practically, a failure, not because gold does not exist thereabouts-for it does, and in large quantity—but thus far its precise situation has not been discovered. Now, "the most direct practical result of field-geology is the impetus it is enabled to give to the productiveness of any district scientifically explored, by indicating its sources of mineral wealth and guiding the miner and the capitalist to the hidden stores of nature," (Field Geology). And in his Playbook of Metals, Prof. Pepper says: "Geology is of incalculable value to that man who will venture to lead a party away from the multitude and search for gold in unexplored districts."

The lowest strata observed in the Kaap valley consist of a series of soft grey argillaceous shales or "slates," so greatly tilted as to be found in some places almost in a vertical position. These beds were originally horizontal, being clay deposited by water; they have since been greatly metamorphosed by heat and pressure of many hundreds of feet of rock accumulated above them. Their being so much broken

and tilted out of position is due to plutonic or volcanic action, of which the granite and other eruptive igneous rocks, so plentiful in the valley, afford ample evidence. Now, Prof. J. A. Phillips, the great authority upon these matters, says in his Elements of Metallurgy, page 684:-"Native gold, in situ, is most frequently met with in quartz veins intersecting metamorphic rocks"; and, "the metamorphic rocks inclosing gold veins are mostly chloritic, talcose and argillaceous slates-auriferous veins also occur in granite." These "slates," traversed by dykes of granite, are said to form the surface-rocks in Swaziland and along the border of the Transvaal which follows the Southern boundary of the Kaap valley. If this be so, the region offers a tempting field to prospectors, not only for alluvial gold (as hereafter to be suggested) but also for lodes containing gold and other valuable metals.

Above the slates is a series of hard shales, sandstones and conglomerates, traversed by dykes of igne-These beds also are titled at various ous origin. angles, and are broken or "faulted" in every direction; they are highly metamorphosed, especially near the trap dykes, where the sandstones are altered into quartzite. The beds of this series are exposed in the high krantz described, and extend beyond it over a good part of the Kaap valley. The krantz appears to have had its origin in a big N. and S. fault, with a downthrow to the E.; its line being also more or less followed by an extensive dyke of greenstone. There are numerous quartz reefs in these rocks, for the most part vertical, or nearly so, and some of them have been proved auriferous.

In certain portions of the Godwaan Plateau, and near its eastern edge, are some remnants of what must have been formerly a very extensive deposit of sandstone; probably of the age of the South African Coal Measures. These, when broken, are seen to be white crystalline sandstones, grits and conglomerates, which weather to a grey colour, and now, broken up into large lumps, form the boulders beneath which the gold nuggets were found. The sandstones also are traversed by veins of quartz, in some places highly ferruginous. and these, or some of these, have been proved to contain gold; but up to the present time very little work has been done upon the reefs in either of the formations described. The occurrence of these groups of rocks, which are known to enclose auriferous veins elsewhere, and the prevalence of quartz-veins and trap-dykes running in various directions, render the geology of the district important to the question under consideration. The first series of rocks described are doubtless of Lower or older Palæozoic age; the se. ond probably belong to the newest rocks of that period, or the oldest of the Upper Palæozoic; the third are, in the writer's opinion, certainly of that age, Upper Palæozoic, and belong to the Carboniferous series. Now, Prof. Forbes, an eminent authority, speaking of Australia, says: "It is useless to waste time in searching for gold in the older Tertiaries or in Secondary rocks...... The older Palæozoic, the Metamorphic rocks that lie beneath them, and the newest Tertiaries, all taken in connexion with mountain chains, are the best guides in this matter"; remarks which we may reasonably assume, would apply also to the geology of South