

and the wall of the well. When the cement had all been forced out of the casing the top plug came down and met the top of the tapered plug, this stage in the operation being marked by a sudden rise in the pressure against which the pumps were working. The plugs and rock used in making the "bridge" were drilled out, and, after cleaning out the hole to bottom, bailing was commenced, and on the 13th October an excellent show of oil was obtained. A considerable amount of gas was also in evidence, and when the level of the fluid in the well was lowered sufficiently by means of boiling, the gas-pressure blew the rest of the material out of the well, carrying with it a spray consisting of oil and water. It was thought at first that this water had been absorbed by the coarse sand at 2,100 ft. during the operations of drilling and cementing, but after waiting some few days in the hope that it would exhaust itself, the conclusion had to be accepted that it was natural water issuing from some fissure or bed of sand below the point at which the casing was set. The pressure of the gas in this lower sand was 375 lb. to the square inch— not much more than half the pressure of the gas met with at 1,555 ft. This difference in gas-pressure serves to prove that there is no fault or leak in the 10 in. casing or in the cement, otherwise on shutting in the well the full pressure of 625 lb. would have been developed. The results obtained in the vicinity of the 2,300 ft. horizon fell far short of anticipation, for while a nice skew of oil was got in the sand at 2,150 ft., and oil was seen all the way down to about 2,600 ft., production on a commercial scale was never realized. On one occasion, after the well had been standing idle for six hours, about four barrels of oil were bailed, and altogether the oil so bailed and blown out from time to time by gas or otherwise brought to surface may have approximated sixty or seventy barrels. The oil when sampled was found to be of excellent quality—similar in general character to that obtained from old wells in the locality.

It is proposed to continue this well down to about 4,200 ft. with the object of testing the sands, the existence of which had been demonstrated in the Blenheim Well.

Sulphur.

The White Island Agricultural Chemical Company (Limited).—Receiving and transmitting wireless is in operation, with masts 57 ft. high, making the station one of the most powerful in the North Island. A bathhouse has been erected near the well, and the men can daily indulge in the luxury of a warm shower. Properly constructed latrines are situated in the timber near the camp. The company has provided a completely equipped medical stores chest under the care of a trained man. There has been no sickness and only a very few minor accidents. Every man before proceeding to the island is medically examined, and the company is fully covered against accident and sickness by a policy with the South British Insurance Company (Limited). 300 tons of high-grade sulphur were fossicked out in the first six weeks from surface deposits in and near the flat contiguous to Crater and Wilson Bays. Of this, 100 tons were shipped to Auckland and has liquified out at 99.8 per cent. pure; the balance is on hand. This work was done during prospecting by any men who could be spared from the urgent work of trail-cutting and erecting camp. A traverse cut 10 ft. wide, 8 ft. deep, and 150 yards long has been opened up across the crater-bed, running north and south 100 yards west of Troup Head. This was done so as to get down to the level of the old crater-bed (as it existed prior to the disaster). Only volcanic mud was expected throughout this area until the old bed was reached, but heavy showings of sulphur were found, and all the material taken out analyses similar to the original fertilizer, varying only in actual sulphur content. The bottom of the cut is still 5 ft. above the old crater-level. Time will be given this cut to cool before going deeper. Ten tunnels or open cuts have been driven into East Cliff near the Wilson Bay side and into Troup Head. These vary in depth from 10 ft. to 25 ft. and are remarkably uniform in sulphur content. The cliffs are alive and very hot, so work has to stop from time to time as the tunnels proceed in order to let the material cool. In several cases there was struck rock sulphur of 95 per cent. purity. A hopper dump has been cleared at Crater Bay buttress, and this place is now connected with the Troup Head workings by a well-graded 2 ft. gauge tram-line. Some 400 yards have already been laid, and the rails and sleepers have been landed for two extensions. A grade has also been commenced at East Cliff, many deep cuttings having to be made to get the tramway up to the workings-dump. It having been decided to concentrate on the winning of the mineral fertilizer, men have been kept excavating, and there is now 500 tons of fine-quality fertilizer on the dump at Troup Head. This is constantly being added to. In course of quarrying, when pure rock sulphur is come upon, this is separately dumped in such a way as to interfere as little as possible with the Troup Head deposit. A dump-site has been blasted out of the adjoining rock, and the tramway runs immediately under the dump.

It is reported after a recent survey that the guano deposits are very much more extensive than originally supposed. The perpendicular cliffs on the north side of the island and north-west Point are capped with deserted rookeries centuries old and some showing 40 ft. faces. The upper strata has become timber-covered, and this timber area is honeycombed with the burrows of countless thousands of mutton-birds (the grey-headed puffin). Sampling of the guano from all depths and from all the beds is nearly completed, and these surface samples already analysed are satisfactory in manurial value. With the exception of four rookeries between Crater Bay and Bungalow Beach, the beds are in exposed positions, but over deep water. Special shoots or towers will have to be constructed for loading. When the present buttress and grid have been completed and are in operation the company can safely count on continuous and regular shipping except in such severe weather as makes Crater Bay unworkable. Seven weeks from the date of commencing operations 100 tons of sulphur were shipped to Auckland. This consignment of sulphur cost £3 19s. 8d. per ton on wharf, Auckland; it liquified out 99.8 per cent. pure. It was decided to purchase a suitable site for the works and to handle the local fertilizer trade at the Port of Tauranga. These works comprise a crushing and bagging plant and are under construction at the present time. The site, including an old building (45 ft. by 110 ft.), covers one-third of an acre, has foreshore rights, and is conveniently situated at The Spit, Tauranga, and adjacent to the main-line station. Access of 7 ft. of water will be given by a light jetty to be constructed next month.

The average wages on the mainland are 15s. 6d. per day, and on the island 16s. The number of men employed is twenty-five.

Accidents.

One fatal accident and one serious but non-fatal accident occurred during the year.

Fatal Accident, Waihi Mine.—William Angell, married man, aged 63 years, died in the local Hospital on the 23rd July, 1925, as a result of being struck on the head by a falling beam on the 22nd July. Deceased, who had been employed by the above-named company for twenty-eight years attending to the delivery of blunt tools and seeing that the sharp tools were sent down to different contractors, was sitting having his crib, and rose with the object of going over to the other men, who were sitting on the other side of the building, and had just got under a beam, 6 in. by 4 in. which rests on top of the principals 21 ft. above, and is used to lift the cover off one of the drill-sharpening machines set directly underneath this beam, when a sudden gust of wind occurred, which struck the building, causing the beam to fall, striking deceased on the head and seriously fracturing his skull. My inspection disclosed the fact that the principals, which are 6 in. in width, had warped, due to the heat from the furnaces used to heat the drills. One end of the beam had two skewered nails driven into the principal, but on the other end, owing to the principal having warped, was only resting on 3 in. and not nailed, and it is quite evident that the gust of wind struck the building with such force that it lifted this beam out of position and caused it to fall on deceased. At an inquiry the following verdict was returned and with which I agree: "William Henry Angell died at Waihi on the 24th July, 1925, from injuries received by a falling of an overhead beam in the Waihi Gold-mining Company's workshop on the 22nd July, 1925, and that the said beam that fell was not properly secured, and that in our opinion all overhead beams and stagings should be securely cleated and bolted."

Serious Accident, Waihi Mine.—On the afternoon of the 10th June a timberman named Joseph Mannix lost his little finger and next finger of his left hand. Mannix and his mate, G. Leather, were engaged repairing an old pass on the Royal lode, and whilst in the act of replacing a cribbing Mannix noticed a detonator in the old filling. He