

and was more than fully occupied then with transport and labour difficulties. This year it is likely that conditions may be easier at the base, and we anticipate that Colonel Norton will leave Captain Bruce or Mr. Shebbeare in charge there and transfer the headquarters to Camp III., at least for a while. The first climb can hardly take place before about May 17 at the earliest; the last not later than about June 10, unless the monsoon is delayed. There are perhaps three weeks in which success may be won whenever there are three consecutive fine days, and it is a good deal more than possible that oxygen and non-oxygen parties may both have made the ascent by the time this note (written May 19) is published. The despatch of April 29 was published on May 17, nineteen days from the base camp. It looks as if we may expect some news of the climbing any time after June 7.

THE TELEGRAPH TO LHASA

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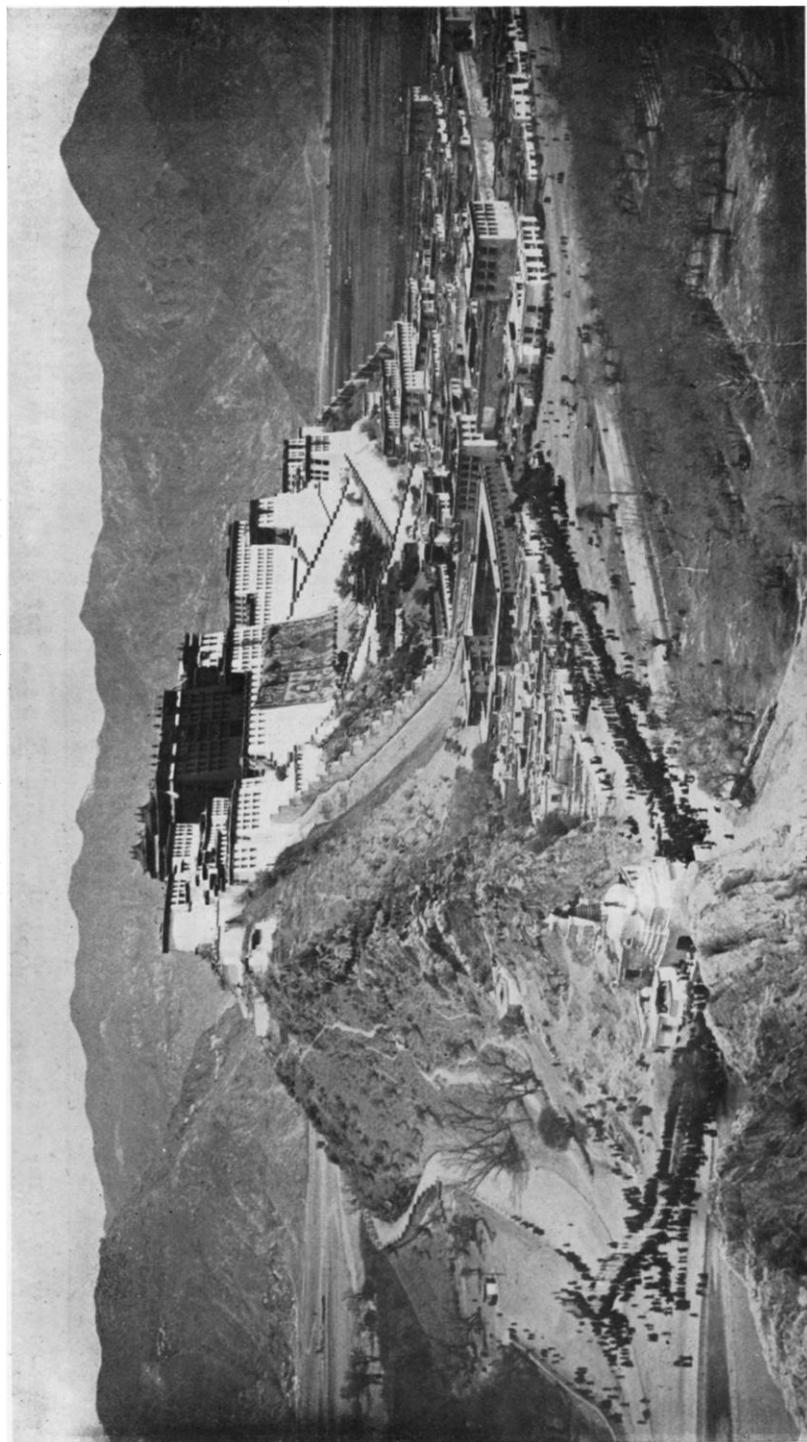
THE idea of extending the line from Gyantse 144 miles to Lhasa was conceived by the Tibetan Government. They purchased the wire, brackets, and insulators from us, and supplied their own wooden poles and labour in addition to paying the wages of the twenty-two head coolies recruited by us. The Indian Government lent them the services of one deputy assistant engineer, a supervisor, and the four linemen. The poles of the Lhasa line are of wood of a light type, but their transport was a stupendous task. In many cases they had to be carried by manual labour 60 miles to the site of the line, one village taking them on to the next. I saw teams of six villagers, husband and wife, two sons and two daughters, harnessed to three poles and carrying them along. The Tibetans distributed the material along the line, and I was given a further supply of eighty coolies for the work. All the transport and labour worked gratis for the Tibetan Government. The estimate allowed three months for the work, but thanks to the very sensible specification of the material prepared by Mr. J. Fairlay, Divisional Engineer Telegraphs, after his survey in 1921, the success of Col. Bailey in getting the Tibetan Government to realize the need for quick action if they wished to keep within the estimated expenditure, and the splendid arrangements made by the Tibetan authorities, the line was completed in five weeks at an average rate of 4 miles per day. For these arrangements the Tibetan Trade Agent, a Lama of high degree at Gyantse, is primarily responsible. Four Tibetan gentlemen were sent with us for training as linemen, but as their social status was too high for the class of work, four men of the peasant class were trained

instead. Of the four gentlemen two, named Keesoo and Jorkay, were recommended to the Tibetan Government for employment as supervisors.

In order to prevent trouble with the Tibetans, to serve as a mentor for Tibetan etiquette and customs, and to act as interpreter, a young Tibetan aristocrat named Kyipook was sent along with us. He is one of the four young Tibetan gentlemen who were sent to Rugby in 1914 for education. On his return he was given a further training in civil engineering in Roorkee Engineering College, and then a year's training in telegraphy at Kalimpong. He proved very useful, and, thanks to his genial and kindly nature, everything went off without a single dispute. He has been selected to be the Director of the Telegraph and Telephone in Tibet.

I was told that the Tibetan labourer was slow, stupid, and indolent, but I found him to be the best worker I have yet seen in my experience of labour in many parts of India and East Africa. In lieu of taxation Tibetans perform Government work without pay. For the telegraph line, therefore, the labour and transport had to be changed at every district. A large pile of stones on each side of the road marks the end of one and the beginning of another district. Under no pretext will a villager from one district work beyond his boundary. In spite of the privations which hard work under such trying conditions caused, I always found them happy and contented. The Tibetan labourer is quick to grasp what is required to be done, and quick to perform it. He is very submissive, cheerful, and polite. His position in life is very humble; he must pay very deferential respect to his superiors, and when he approaches any of them take off his cap and hold it in both hands, bow his body forward, and loll his tongue out and remain in that posture until dismissed. He, however, possesses a lease of land, flocks, and herds which yield him and his family ample supplies; so he goes through life with a full stomach, and is perfectly contented.

The completion of the line was looked upon as a great event by the inhabitants of Lhasa, and on the day on which the line was taken through the city the streets were crowded with people. The line was very favourably received all round except by those along whose fields it went; and the reason for this exception is that the owners thought they would be held responsible in case the posts broke. The Lamas gave us a friendly reception throughout, and in one case where the line had to be taken through the grounds of a monastery, the Lamas in occupation were very helpful. When within 3 miles of Lhasa the Tibetan Council sent a messenger asking me to avoid the main road for the last 3 miles and to enter Lhasa from across country, the reason assigned being that the Lamas from the two big monasteries of Drepon and Sera pass frequently along the road, and the younger men might be tempted to smash the insulators, just as they used to do with a Chinese line years ago. But the general effect of the line on all classes was one of pride that Tibet had



THE POTALA, LHASA; AND PROCESSION OF LAMAS.



Seated—MR. W. H. KING; TSARONG SHAPÉ, COMMANDER-IN-CHIEF; NGAPPA SHAPÉ, CIVIL MEMBER OF COUNCIL; PARKHANG SHAPÉ, LAMA MEMBER OF COUNCIL
Standing—MR. KYIPOOK, TIBETAN DIRECTOR OF TELEGRAPHS; MR. W. P. ROSEMEYER

telegraph and telephone lines at last, and that they would no longer be the laughing-stock of Chinese and Japanese merchants and pilgrims.

The Potala and the large Buddhist temple now have telephones in them connecting the offices of the Prime Minister and Council Chamber with the Dalai Lama's summer palace. We were allowed to wander freely over these buildings, and Rosemeyer was given permission to photograph anything he liked except one image in the Cathedral. The majority of the shopkeepers are Nepalese, and there are also a few Ladakhi Muhammedans. The latter, I was told, are noted for their sobriety and good behaviour. I found them good fellows, but in the habit of putting on prices tremendously. Their leader Khan Saheb Faizulla was very helpful in arranging our financial affairs by getting his agent to draw our money in Gyantse and paying us in Lhasa, and also in getting his brethren to sell at reasonable prices.

The first Telegraph Master of Lhasa is Mr. Sonam Tsering, sent on deputation from the Indian Postal Department. He is Tibetan by birth but a Christian by religion, educated in Kalimpong and Darjeeling. Except for him the line is worked by Tibetans. Two Lamas are undergoing training in telegraphy in Kalimpong, and on their passing out will relieve the Indian Telegraph Master. The system will then be managed and worked entirely by the Tibetan Government. The telegraph system is used almost entirely by the Nepalese and Ladakhi Muhammedans and a few Tibetan merchants, the majority of Tibetans not having any use for it. But the telephone is very popular with the Tibetans, and whenever opportunity affords the chance of a chat with a friend or relation the other side they avail themselves of it eagerly, and it is difficult to get them to end the conversation once they start. The post and telegraph system in Tibet is managed by joint Postmasters-General, one a Lama and the other a civilian. The postal system is fairly good and letters are regular. They have a system of runners worked on our Indian system, and I have often seen these men running their beat of 5 miles with the short spear and bells of the Indian runner.

The Buddhist priests of Tibet are called Lamas, and it is the invariable custom that at least one male and one female from every family be dedicated to the life of a Lama. The Prime Minister is an old gentleman of over sixty years of age, of august bearing and charming manners. He is a Tibetan of the old school, and a firm believer in the greatness of Tibet and the goodness of the Buddhist religion, with an unwavering belief in its gods and dragons. It was easy to interest this charming nobleman, as he possessed intelligence of a high order, and had visited India with the Dalai Lama and had seen a good deal of our modern inventions. His courteous manner displayed itself in a delicate style of flattery. When talking about the telegraph line he said, "Your department has erected a monument in Tibet which can be seen for miles and appreciated by all. Thousands of pilgrims will come from

China, Japan, and Manchuria, and will realize that at last Lhasa possesses telegraphs and telephones, and on their return home will spread the news and the name of the builder all over the East." Talking in this connection, he said that there was a waterfall 4 miles out of Lhasa which offered the means for working a large hydro-electric scheme for lighting Lhasa. At the same time he said a young Tibetan was learning electrical engineering in London, and on his return a scheme for lighting Lhasa was to be undertaken. It was his great ambition, he said, that God would spare him long enough to see the streets of Lhasa lighted with electricity.

Tsarong Shapé, the Commander-in-Chief, is the Dalai Lama's favourite councillor and his constant companion. He has a short, tough, wiry figure, and looks every inch a soldier and a leader. He possesses intelligence of a high order and a happy, vivacious disposition. He is very easy to interest, as he loves to listen to military, police, and diplomatic exploits, and takes a keen interest in everything Western, and is quick to understand its use. I found his house full of engineering instruments of all descriptions. He is an expert photographer and takes and develops his own plates. His daughter is being educated in a girls' school in Darjeeling. He accompanied the Dalai Lama during his journey through China and Manchuria in 1904, and also during his journey through India in 1911. When I was leaving Lhasa he asked me not to be anxious about the future of the telephones in Lhasa, as he would repair them himself. From what I saw him doing there, he is capable of carrying out his promise.

I came in occasional contact with a few military officers. Their uniforms are entirely British, and all of them cut smart figures in them. Surkong Depon (Colonel) is the mint-master of Lhasa, and an enthusiastic progressive like his master the Commander-in-Chief. The modern Tibetan army is well trained and smart. They have a fife-and-drum band, bagpipes, and bugles. These can compare with some of the best Indian regiments. It is quite inspiring to see the battalions fix bayonets, present arms to His Holiness to the tune of "God save the King," which the Tibetans have adopted as their national anthem, and march away with gorgeous yellow satin banners flying to the tune of "The-girl I left behind me."

The Dalai Lama took a keen interest in the fixing of his telephone, and pointed out the exact position where he would like it. A large battery was needed as the bell was of the battery-ringing type. He sent for his carpenter and ordered a box for the cells from his own design. The carpenter delivered the box ready with partitions in 20 minutes. We had no dry cells and had to prepare a battery by putting perished dry cells into a solution of sal-ammoniac. We had no jars, and His Holiness promptly satisfied this want with highly glazed Japanese flower-pots, which he cheerfully sacrificed. To enable him to use one telephone

on two circuits at will, I designed a plug-switch which the court blacksmith promptly made up from brass. The plugs needed an insulating handle, and His Holiness ordered his Manchurian ivory-carvers to make one of ivory. He was quick to grasp the idea of the switch and to understand how it worked, and he used to watch the preparation of batteries and adjustment of bells with great interest. His Holiness's hobby is gardening. His summer palace grounds are laid out on the English system, and are full of flowers and turf lawns. When I bade him farewell, I told him that I would send him the best magneto telephone on the market; his reply was that I may do so, but what he would like above all was some good flower seeds. I promised to send him some which were obtained from flowers grown in the Kashmir valley, as these would be more suitable to the Lhasa soil. The Dalai Lama talks in a low voice, and most people would think that it would never penetrate a long-distance line, but it surprised me to find that his voice penetrated often when others failed to reach. I listened-in on the line once on my return journey, and I was surprised at the rich timbre of his voice. His personal interest in his own servants was great. When I was leaving Lhasa for India, he asked me if I could take Rs.20 for him to two Tibetan youths who were learning gardening in the Residency at Gangtok, and also to deliver a message to them. He is a keen photographer and takes good photographs. I thought I was taking him a very rare present in an electric call-bell with bell-push, but I found that he had just six of these and about ten telephones, with large quantities of insulated wire.

On my return to Calcutta I was sent back to Rawalpindi and then up the Tochi valley in Waziristan on the North-West Frontier for a month. The difference between the two frontiers there is no mistaking, for where I could travel even at night without an escort in Tibet my work in the Tochi was restricted to the hours of 8 a. m. to 3 p. m., after which the road was closed and every one must be within barbed wire or remain out at their own risk. Even in the working hours my party had to be escorted, and we were a continual source of anxiety to the Officer Commanding Signals. Walking to and fro amongst the Waziri travellers on the road during the day is like walking amongst tame lions.

INTERNATIONAL GEODESY

Bulletin Géodésique No. 2 (Avril 1923), Conseil International de Recherches, Union Géodésique et Géophysique Internationale, section de Géodésie. Toulouse: Édouard Privat, [1923]. 10 × 6½, pp. 173. 4 *Diagrams and a Map*. No price.

Prime indagini sperimentali relative al Collegamento geodetico della Sardegna alla Liguria.— Antonio Loperfido. *L'Universo*, Gennaio,