upon whose powers of original investigation more dependence can be placed than is the case at present. In the meantime it is undesirable to make any more appointments to the class of Sub-Assistants, which was only created as a tentative measure.

5. The Government of India have found themselves unable to accept the view of the Public Service Commission that the graded system is unsuitable to the Geological Survey Department. In the first place the officers of the Department become continuously more useful, at any rate for the earlier part of their employment, with each year of service, and secondly, a system of grade promotion is desirable to secure efficiency of labour as well as of qualifications; for even an officer who is eminently qualified for geological research will require some incentive to make a sufficiently industrious use of his abilities, especially under circumstances in which (as is often the case in the prosecution of geological investigation) it is not easy to detect perfunctory performance of work. A reduction in the number of grades has, however, been made in the revised scheme.

6. With the suggestions of the Public Service Commission, that the organization of the Department should not exceed that required to secure systematic investigation, and that the system of engaging specialists should be continued, the views of the Government of India are in entire accord. The necessity for reserving a certain number of appointments, to be held for a limited term by persons specially qualified for scientific or economic investigations in particular branches of science, instead of creating new posts whenever the need for such investigation arises, has long been felt; and the opportunity afforded by the present re-organisation has been taken to give an extended application to the principle advocated by the Public Service Commission by providing two appointments of this class, which may, when necessary, be recruited from specialists in other branches of science besides geology. These special appointments will be made for such term as the Government of India may determine in each case, and will not ordinarily be pensionable. They are made part of the cadre of the Geological Survey Department, first, because they will frequently be given for special geological investigations, and secondly, because it is convenient that the holders of such appointments should be subjected in respect of their movements, reports and other proceedings to the control of some responsible head of department.

7. The future staff of the department, to which the sanction of Her Majesty's Secretary of State for India has been obtained, is contrasted below with that now existing, and the new scheme will come into force from the 1st of April 1893.

Present scale.	Future scale.
1 Director (Pay ₹1,500 and Personal Allowance ₹300).	1 Director ₹1,500.
3 Superintendents on ₹800—50—1,100 per mensem.	3 Superintendents on ₹700—50—1,100 per mensem.
1 First Grade Deputy Superintendent on ₹700—50—1,000 per mensem.	4 Deputy Superintendents on ₹500—40—700 per mensem.
5 Deputy Superintendents on ₹500—40—700 per mensem.	† 5 Assistant Superintendents on ₹350—30—500 per mensem.
* 6 Assistant Superintendents on ₹350—30—500 per mensem.	1 Palæontologist on ₹500—40—700 and then rising by annual increments of ₹50 to ₹1,000 per mensem.
1 Palæontologist on ₹500—40—700 and then rising by increments of ₹50 to ₹1,000 per mensem.	2 Specialists on any salary not exceeding ₹1,100 and not less than ₹700.
2 Sub-Assistants on ₹200—20—300 per mensem.	

8. In order that there may be no interruption in the purely scientific geological inquiry, the Governor-General in Council has resolved that not less than eleven officers out of the total of sixteen executive officers, shall, as a rule, be employed on such duties. Of the remaining five officers, one will be the Director

* Two appointments were reserved to cover the cost of existing Sub-Assistants.
† Only one appointment is now reserved to cover the cost of Sub-Assistants.

and one the Palæontologist. The remaining three, two of them specialists, will be available for mineral and other economic investigations. The staff assigned to scientific geological research is smaller than the originally sanctioned scale of the Geological Survey Department. But this scale has for some time not been worked up to, and the holders of even those appointments which have been filled have been largely employed on economic instead of purely scientific work. The reductions and alterations now resolved on are fully justified both by financial considerations and the undoubted necessity of expert advice and investigation for the development of the mineral and economic resources of the empire. Orders for bringing the new scale into effect will be separately communicated to the Director, Geological Survey.

9. One important point, *viz.* the infusion of a practical element in the training of candidates for the Geological Survey Department, which did not come under the notice of the Public Service Commission, has recently pressed itself on the attention of the Government of India. Under the system hitherto adopted for recruitment, the only qualification required from candidates has been a sound geological education of an academic character. Practical training has not been insisted on, but the necessity for combining scientific education with a practical training in applied science, especially in mining, has been brought prominently forward in connection with the development of the mineral resources of Burma, Baluchistan and other parts of the Indian Empire. After an examination of the character of the education which the officers in the Department had received and their qualifications for practical investigations, the Government of India find that, with a few notable exceptions, the appointments to the Department were filled until quite recently by officers who had not previously gone through a course of practical training, and that the talent for practical exploration, though in some instances of a remarkable character, has had generally to be developed by what has virtually amounted to an apprenticeship during the later years of service in India. The new rules accordingly provide that candidates must undergo one or two years' training in mines, or technical laboratories, as may be required by the Government of India.

ORDER.—Ordered that a copy of the foregoing Resolution be forwarded to the Local Governments and Administrations marginally noted, and to the Director of the Geological Survey of India, for information, and that it be published in the Supplement to the *Gazette of India*.

To the Secretary to the Government of Madras.
" " Bombay.
" " Bengal.
" " the N.-W. P. and Oudh.
" " the Punjab.
To the Chief Commissioner, Central Provinces.
" " Burma.
" " Assam.
" " Coorg.
" " Ajmere.
To the Secretary for Berar to the Resident, Hyderabad.

[True Extract.]

Secretary to the Government of India.

To the Secretary to the Government of Madras.

No. $\frac{3}{74}$.

Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department (Surveys),—dated Calcutta, the 8th March 1893.

READ the following despatches:—

From Government of India, Financial Department, to Secretary of State, Nos. 201 and 202, dated 28th July 1891.
From Government of India, Revenue and Agricultural Department, to Secretary of State, No. 67 (Surveys), dated 8th September 1891.
From Secretary of State, No. 86 (Statistics), dated 17th December 1891.
From Secretary of State, No. 6 (Statistics), dated 28th January 1892.
From Government of India, Financial Department, to Secretary of State, No. 150, dated 21st June 1892.
From Secretary of State, No. 70 (Revenue), dated 25th August 1892.

RESOLUTION.

The papers read in the preamble have reference to the future organization and recruitment of the Geological Survey of India. Changes in the scale of pay, designations and other particulars having considerably modified the rules or conditions of appointment to the Department originally published in 1867, a revision of these rules was undertaken in 1886. Meantime, however, the constitution of the Department came under examination by the Public Service Commission appointed in that year, and it was found advisable to postpone further consideration of the subject until the recommendations of the Commission were before Government. A final settlement of the questions to be dealt with has been retarded by the discussion of proposals affecting scientific appointments generally, but the questions which specially affect the Geological Department have now been separately disposed of, and the rules as revised are appended to this Resolution.

2. The recommendations of the Public Service Commission regarding the Geological Survey of India, as recorded in Chapter X, paragraphs 70 to 74 of their report, are transcribed below:—

(1) That candidates should continue to be obtained from England so long as Indian schools do not provide adequate geological and scientific education, but that selection should be made irrespective of nationality.
(2) That appointments as Sub-Assistants should be limited to the number required to assist the upper grade, and that promotion to the upper grade should be open to Sub-Assistants who prove their ability for independent work.
(3) That the organization of the Department should not exceed that required to secure systematic investigation.
(4) That the graded system is unsuited to a Department which calls for the highest efficiency in an equal degree throughout the whole term of employment.
(5) That the system of engaging specialists for a limited term of years is advantageous and should be continued.

3. Subject to the exception and modifications explained in the succeeding paragraphs, these recommendations have been accepted generally by the Government of India and effect has been given to them in the revised organization.

4. In the Sub-Assistant class referred to in the second of the recommendations there are at present two appointments. These were created experimentally in 1873 with the object of affording natives of India educated in the country an opening in the Department. His Excellency the Governor-General in Council is anxious that natives of India, whether educated here or in England, should be utilized in the Department, provided that they are found to possess the qualifications essential to independent and original work in the field of geological investigation. It has been found, however, owing to the difficulty which is experienced in obtaining Asiatics with pronounced talent for geological research, that the system of appointing natives as probationary Sub-Assistants is not likely to be successful. It may, perhaps, be hoped that with an improved system of school education, in which habits of observation and practical enquiry will be more developed than they now are, candidates will eventually be forthcoming

6-4-93

Public Revenue 1893 Dept 823

File No. 74.

Serial No. 2.

1893.

GOVERNMENT OF INDIA.

REVENUE AND AGRICULTURAL DEPARTMENT.

SURVEYS.

RESOLUTION.

No. 3/74.

Dated Calcutta, the 8th March 1893.

Rec'd 17 — "
in Public 18"

Hist. and Circ
Order 6 April 93 / 273 Ch. H.
Res 23 March 2/4/93

Recorded.

21 March

J. N. B.
20/3.

To the Revenue Dept.

SUBJECT.

RE-ORGANIZATION and recruitment of the Geological Survey Department of India.

Government of India Central Printing Office.—No. 598 R. & A.—10-3-93.—430.—deS.

DESPATCHED
SAVED
IN M.S.

15 Share copies by post

WITH ORDER

2 21/3

Appendix.

Revised Conditions for Indian Geological Survey Appointments.

The Geological Survey Department is constituted as follows:—

		Monthly Salary.		
		R	R	R
1	Director	1,500		
3	Superintendents	700 rising by	50 to	1,100
4	Deputy Superintendents	500 ,,	40 ,,	700
5	Assistant Superintendents	350 ,,	30 ,,	500
1	Palæontologist	500 ,,	40 ,,	700, and then to R1,000 by increments of R50.
2	Specialists	Specially engaged for short terms on such pay as may be agreed upon, not exceeding R1,100 per mensem.		

The rates of pay for natives of India appointed to any of the above posts will be two-thirds of the full scale of pay.

2. Appointments to the department are made, as occasion requires, by the Secretary of State for India. Every candidate for such an appointment must be in sound bodily health, and will be required to satisfy the Medical Board at the India Office of his physical fitness in all respects to perform the duties of a Surveyor, which involve considerable fatigue and exposure. His age should not exceed 25.

3. Besides a good general education, a sound education in geology is essential; a university degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required.

4. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India.

5. First appointments are probationary for two years, at the end of which time the probationer, if found qualified, and continued in the department, will reckon his service for leave and pension from the date of original appointment.

6. Pay commences from date of joining appointment in India. Travelling allowances, regulated by the rules applicable to the department, are allowed at a rate calculated to cover actual expenses of tentage and locomotion.

The officer holding the appointment of Museum-Curator receives special Presidency house-rent allowance of R150 per mensem.

A first-class passage to India will be given.

7. Under ordinary circumstances, all Assistants, unless they have special claims from previous training and experience elsewhere, will enter the Department, in the lowest class, on a salary of R350 per month. This will increase annually at the rate of R30 per month; the first increase to be from the date on which the Assistant be declared to have passed the ordinary examination in the language of the country by the first or lower standard, according to the general rules provided for such examinations.

8. This annual increase will, in all cases, be granted only on the certificate of the Head of the Department, that the Assistants so recommended have proved fully deserving of the promotion by the intelligence and zeal with which their duties have been performed.

9. The said increase of salary, at the rate of R30 per month annually, will proceed until the limit of pay for the lower grade, namely, R500 per month, be attained.

10. Promotion to the higher grades will then depend on the qualification and merit of the several officers, and on the existence of a vacancy in the number of those holding these appointments. But in the event of no vacancy occurring, the candidate's claim to the same regulated increase of pay will continue (subject to certificate of qualification and good conduct), so that the rate of pay to which he will be entitled when promoted, on the subsequent occurrence of a vacancy, will be regulated by his length of service.

(For instance, a qualified Assistant having, by good service, attained to the highest pay of the Assistant grade, namely, R500 per month, may be prevented from rising to the grade of Deputy Superintendents by the fact of there being no vacancy, although he may be in every way qualified; and this vacancy may be delayed for, say, three years. In the event of his promotion after this time, he will be entitled to his former pay, plus the sanctioned increase of R40 per month for three years, or plus R120, and will at once receive R620 per month. No substantive or acting promotion to a higher grade will, however, be allowed to an Assistant Superintendent until he is in receipt of his maximum pay.)

11. While local experience and training must always hold a very prominent place in estimating the position or the promotion of Assistants, it must be distinctly understood that mere seniority of service, unaccompanied by proved ability and steady devotion to duty, gives no claim to promotion into the higher grades of the staff of the Survey.

12. The leave, leave allowances and pensions of officers of the Department will be governed by the provisions of the Civil Service Regulations applicable thereto. These regulations are liable to be modified by the Government of India from time to time.

13. The foregoing rules do not apply to the two special appointments, except in so far as they may be made applicable in each case by the Government of India or Her Majesty's Secretary of State for India.

14. The changes made by the present rules in the rules previously in force will not affect existing incumbents.

upon whose powers of original investigation more dependence can be placed than is the case at present. In the meantime it is undesirable to make any more appointments to the class of Sub-Assistants, which was only created as a tentative measure.

5. The Government of India have found themselves unable to accept the view of the Public Service Commission that the graded system is unsuitable to the Geological Survey Department. In the first place the officers of the Department become continuously more useful, at any rate for the earlier part of their employment, with each year of service, and secondly, a system of grade promotion is desirable to secure efficiency of labour as well as of qualifications; for even an officer who is eminently qualified for geological research will require some incentive to make a sufficiently industrious use of his abilities, especially under circumstances in which (as is often the case in the prosecution of geological investigation) it is not easy to detect perfunctory performance of work. A reduction in the number of grades has, however, been made in the revised scheme.

6. With the suggestions of the Public Service Commission, that the organization of the Department should not exceed that required to secure systematic investigation, and that the system of engaging specialists should be continued, the views of the Government of India are in entire accord. The necessity for reserving a certain number of appointments, to be held for a limited term by persons specially qualified for scientific or economic investigations in particular branches of science, instead of creating new posts whenever the need for such investigation arises, has long been felt; and the opportunity afforded by the present re-organisation has been taken to give an extended application to the principle advocated by the Public Service Commission by providing two appointments of this class, which may, when necessary, be recruited from specialists in other branches of science besides geology. These special appointments will be made for such term as the Government of India may determine in each case, and will not ordinarily be pensionable. They are made part of the cadre of the Geological Survey Department, first, because they will frequently be given for special geological investigations, and secondly, because it is convenient that the holders of such appointments should be subjected in respect of their movements, reports and other proceedings to the control of some responsible head of department.

7. The future staff of the department, to which the sanction of Her Majesty's Secretary of State for India has been obtained, is contrasted below with that now existing, and the new scheme will come into force from the 1st of April 1893.

Present scale.	Future scale.
1 Director (Pay ₹1,500 and Personal Allowance ₹300.	1 Director ₹1,500.
3 Superintendents on ₹800—50—1,100 per mensem.	3 Superintendents on ₹700—50—1,100 per mensem.
1 First Grade Deputy Superintendent on ₹700—50—1,000 per mensem.	4 Deputy Superintendents on ₹500—40—700 per mensem.
5 Deputy Superintendents on ₹500—40—700 per mensem.	† 5 Assistant Superintendents on ₹350—30—500 per mensem.
* 6 Assistant Superintendents on ₹350—30—500 per mensem.	1 Palæontologist on ₹500—40—700 and then rising by annual increments of ₹50 to ₹1,000 per mensem.
1 Palæontologist on ₹500—40—700 and then rising by increments of ₹50 to ₹1,000 per mensem.	2 Specialists on any salary not exceeding ₹1,100 and not less than ₹700.
2 Sub-Assistants on ₹200—20—300 per mensem.	

8. In order that there may be no interruption in the purely scientific geological inquiry, the Governor-General in Council has resolved that not less than eleven officers out of the total of sixteen executive officers, shall, as a rule, be employed on such duties. Of the remaining five officers, one will be the Director

* Two appointments were reserved to cover the cost of existing Sub-Assistants.
† Only one appointment is now reserved to cover the cost of Sub-Assistants.

and one the Palæontologist. The remaining three, two of them specialists, will be available for mineral and other economic investigations. The staff assigned to scientific geological research is smaller than the originally sanctioned scale of the Geological Survey Department. But this scale has for some time not been worked up to, and the holders of even those appointments which have been filled have been largely employed on economic instead of purely scientific work. The reductions and alterations now resolved on are fully justified both by financial considerations and the undoubted necessity of expert advice and investigation for the development of the mineral and economic resources of the empire. Orders for bringing the new scale into effect will be separately communicated to the Director, Geological Survey.

9. One important point, *viz.* the infusion of a practical element in the training of candidates for the Geological Survey Department, which did not come under the notice of the Public Service Commission, has recently pressed itself on the attention of the Government of India. Under the system hitherto adopted for recruitment, the only qualification required from candidates has been a sound geological education of an academic character. Practical training has not been insisted on, but the necessity for combining scientific education with a practical training in applied science, especially in mining, has been brought prominently forward in connection with the development of the mineral resources of Burma, Baluchistan and other parts of the Indian Empire. After an examination of the character of the education which the officers in the Department had received and their qualifications for practical investigations, the Government of India find that, with a few notable exceptions, the appointments to the Department were filled until quite recently by officers who had not previously gone through a course of practical training, and that the talent for practical exploration, though in some instances of a remarkable character, has had generally to be developed by what has virtually amounted to an apprenticeship during the later years of service in India. The new rules accordingly provide that candidates must undergo one or two years' training in mines, or technical laboratories, as may be required by the Government of India.

ORDER.—Ordered that a copy of the foregoing Resolution be forwarded to the Local Governments and Administrations marginally noted, and to the Director of the Geological Survey of India; for information, and that it be published in the Supplement to the *Gazette of India*.

To the Secretary to the Government of Madras.
" " Bombay.
" " Bengal.
" " the N.-W. P. and Oudh.
" " the Punjab.
To the Chief Commissioner, Central Provinces.
" " Burma.
" " Assam.
" " Coorg.
" " Ajmere.
To the Secretary for Berar to the Resident, Hyderabad.

[True Extract.]

E. C. BUCK,

Secretary to the Government of India.

No. $\frac{3}{74}$.

Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department (Surveys),—dated Calcutta, the 8th March 1893.

READ the following despatches:—

From Government of India, Financial Department, to Secretary of State, Nos. 201 and 202, dated 28th July 1891.
From Government of India, Revenue and Agricultural Department, to Secretary of State, No. 67 (Surveys), dated 8th September 1891.
From Secretary of State, No. 86 (Statistics), dated 17th December 1891.
From Secretary of State, No. 6 (Statistics), dated 28th January 1892.
From Government of India, Financial Department, to Secretary of State, No. 150, dated 21st June 1892.
From Secretary of State, No. 70 (Revenue), dated 25th August 1892.

RESOLUTION.

The papers read in the preamble have reference to the future organization and recruitment of the Geological Survey of India. Changes in the scale of pay, designations and other particulars having considerably modified the rules or conditions of appointment to the Department originally published in 1867, a revision of these rules was undertaken in 1886. Meantime, however, the constitution of the Department came under examination by the Public Service Commission appointed in that year, and it was found advisable to postpone further consideration of the subject until the recommendations of the Commission were before Government. A final settlement of the questions to be dealt with has been retarded by the discussion of proposals affecting scientific appointments generally, but the questions which specially affect the Geological Department have now been separately disposed of, and the rules as revised are appended to this Resolution.

2. The recommendations of the Public Service Commission regarding the Geological Survey of India, as recorded in Chapter X, paragraphs 70 to 74 of their report, are transcribed below:—

(1) That candidates should continue to be obtained from England so long as Indian schools do not provide adequate geological and scientific education, but that selection should be made irrespective of nationality.
(2) That appointments as Sub-Assistants should be limited to the number required to assist the upper grade, and that promotion to the upper grade should be open to Sub-Assistants who prove their ability for independent work.
(3) That the organization of the Department should not exceed that required to secure systematic investigation.
(4) That the graded system is unsuited to a Department which calls for the highest efficiency in an equal degree throughout the whole term of employment.
(5) That the system of engaging specialists for a limited term of years is advantageous and should be continued.

3. Subject to the exception and modifications explained in the succeeding paragraphs, these recommendations have been accepted generally by the Government of India and effect has been given to them in the revised organization.

4. In the Sub-Assistant class referred to in the second of the recommendations there are at present two appointments. These were created experimentally in 1873 with the object of affording natives of India educated in the country an opening in the Department. His Excellency the Governor-General in Council is anxious that natives of India, whether educated here or in England, should be utilized in the Department, provided that they are found to possess the qualifications essential to independent and original work in the field of geological investigation. It has been found, however, owing to the difficulty which is experienced in obtaining Asiatics with pronounced talent for geological research, that the system of appointing natives as probationary Sub-Assistants is not likely to be successful. It may, perhaps, be hoped that with an improved system of school education, in which habits of observation and practical enquiry will be more developed than they now are, candidates will eventually be forthcoming

FILE No. 74.

SERIAL No. 2.

1893.

GOVERNMENT OF INDIA.

REVENUE AND AGRICULTURAL DEPARTMENT.

SURVEYS.

RESOLUTION.

No. 3/74.

Dated Calcutta, the 8th March 1893.

SUBJECT.

RE-ORGANIZATION and recruitment of the Geological Survey Department of India.

Government of India Central Printing Office.—No. 598 R. & A.—10-3-93.—430.—deS.

Appendix.

Revised Conditions for Indian Geological Survey Appointments.

The Geological Survey Department is constituted as follows:—

		Monthly Salary.			
		₹		₹	
1	Director	1,500			
3	Superintendents	700	rising by 50	to	1,100
4	Deputy Superintendents	500	„ 40	„	700
5	Assistant Superintendents	350	„ 30	„	500
1	Palæontologist	500	„ 40	„	700, and then to ₹1,000 by increments of ₹50.
2	Specialists	Specially engaged for short terms on such pay as may be agreed upon, not exceeding ₹1,100 per mensem.			

The rates of pay for natives of India appointed to any of the above posts will be two-thirds of the full scale of pay.

2. Appointments to the department are made, as occasion requires, by the Secretary of State for India. Every candidate for such an appointment must be in sound bodily health, and will be required to satisfy the Medical Board at the India Office of his physical fitness in all respects to perform the duties of a Surveyor, which involve considerable fatigue and exposure. His age should not exceed 25.

3. Besides a good general education, a sound education in geology is essential; a university degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required.

4. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India.

5. First appointments are probationary for two years, at the end of which time the probationer, if found qualified, and continued in the department, will reckon his service for leave and pension from the date of original appointment.

6. Pay commences from date of joining appointment in India. Travelling allowances, regulated by the rules applicable to the department, are allowed at a rate calculated to cover actual expenses of tentage and locomotion.

The officer holding the appointment of Museum-Curator receives special Presidency house-rent allowance of ₹150 per mensem.

A first-class passage to India will be given.

7. Under ordinary circumstances, all Assistants, unless they have special claims from previous training and experience elsewhere, will enter the Department, in the lowest class, on a salary of ₹350 per month. This will increase annually at the rate of ₹30 per month; the first increase to be from the date on which the Assistant be declared to have passed the ordinary examination in the language of the country by the first or lower standard, according to the general rules provided for such examinations.

8. This annual increase will, in all cases, be granted only on the certificate of the Head of the Department, that the Assistants so recommended have proved fully deserving of the promotion by the intelligence and zeal with which their duties have been performed.

9. The said increase of salary, at the rate of ₹30 per month annually, will proceed until the limit of pay for the lower grade, namely, ₹500 per month, be attained.

10. Promotion to the higher grades will then depend on the qualification and merit of the several officers, and on the existence of a vacancy in the number of those holding these appointments. But in the event of no vacancy occurring, the candidate's claim to the same regulated increase of pay will continue (subject to certificate of qualification and good conduct), so that the rate of pay to which he will be entitled when promoted, on the subsequent occurrence of a vacancy, will be regulated by his length of service.

(For instance, a qualified Assistant having, by good service, attained to the highest pay of the Assistant grade, namely, ₹500 per month, may be prevented from rising to the grade of Deputy Superintendents by the fact of there being no vacancy, although he may be in every way qualified; and this vacancy may be delayed for, say, three years. In the event of his promotion after this time, he will be entitled to his former pay, plus the sanctioned increase of ₹40 per month for three years, or plus ₹120, and will at once receive ₹620 per month. No substantive or acting promotion to a higher grade will, however, be allowed to an Assistant Superintendent until he is in receipt of his maximum pay.)

11. While local experience and training must always hold a very prominent place in estimating the position or the promotion of Assistants, it must be distinctly understood that mere seniority of service, unaccompanied by proved ability and steady devotion to duty, gives no claim to promotion into the higher grades of the staff of the Survey.

12. The leave, leave allowances and pensions of officers of the Department will be governed by the provisions of the Civil Service Regulations applicable thereto. These regulations are liable to be modified by the Government of India from time to time.

13. The foregoing rules do not apply to the two special appointments, except in so far as they may be made applicable in each case by the Government of India or Her Majesty's Secretary of State for India.

14. The changes made by the present rules in the rules previously in force will not affect existing incumbents.

upon whose powers of original investigation more dependence can be placed than is the case at present. In the meantime it is undesirable to make any more appointments to the class of Sub-Assistants, which was only created as a tentative measure.

5. The Government of India have found themselves unable to accept the view of the Public Service Commission that the graded system is unsuitable to the Geological Survey Department. In the first place the officers of the Department become continuously more useful, at any rate for the earlier part of their employment, with each year of service, and secondly, a system of grade promotion is desirable to secure efficiency of labour as well as of qualifications; for even an officer who is eminently qualified for geological research will require some incentive to make a sufficiently industrious use of his abilities, especially under circumstances in which (as is often the case in the prosecution of geological investigation) it is not easy to detect perfunctory performance of work. A reduction in the number of grades has, however, been made in the revised scheme.

6. With the suggestions of the Public Service Commission, that the organization of the Department should not exceed that required to secure systematic investigation, and that the system of engaging specialists should be continued, the views of the Government of India are in entire accord. The necessity for reserving a certain number of appointments, to be held for a limited term by persons specially qualified for scientific or economic investigations in particular branches of science, instead of creating new posts whenever the need for such investigation arises, has long been felt; and the opportunity afforded by the present re-organisation has been taken to give an extended application to the principle advocated by the Public Service Commission by providing two appointments of this class, which may, when necessary, be recruited from specialists in other branches of science besides geology. These special appointments will be made for such term as the Government of India may determine in each case, and will not ordinarily be pensionable. They are made part of the cadre of the Geological Survey Department, first, because they will frequently be given for special geological investigations, and secondly, because it is convenient that the holders of such appointments should be subjected in respect of their movements, reports and other proceedings to the control of some responsible head of department.

7. The future staff of the department, to which the sanction of Her Majesty's Secretary of State for India has been obtained, is contrasted below with that now existing, and the new scheme will come into force from the 1st of April 1893.

Present scale.	Future scale.
1 Director (Pay ₹1,500 and Personal Allowance ₹300).	1 Director ₹1,500.
3 Superintendents on ₹800—50—1,100 per mensem.	3 Superintendents on ₹700—50—1,100 per mensem.
1 First Grade Deputy Superintendent on ₹700—50—1,000 per mensem.	4 Deputy Superintendents on ₹500—40—700 per mensem.
5 Deputy Superintendents on ₹500—40—700 per mensem.	† 5 Assistant Superintendents on ₹350—30—500 per mensem.
* 6 Assistant Superintendents on ₹350—30—500 per mensem.	1 Palæontologist on ₹500—40—700 and then rising by annual increments of ₹50 to ₹1,000 per mensem.
1 Palæontologist on ₹500—40—700 and then rising by increments of ₹50 to ₹1,000 per mensem.	2 Specialists on any salary not exceeding ₹1,100 and not less than ₹700.
2 Sub-Assistants on ₹200—20—300 per mensem.	

8. In order that there may be no interruption in the purely scientific geological inquiry, the Governor-General in Council has resolved that not less than eleven officers out of the total of sixteen executive officers, shall, as a rule, be employed on such duties. Of the remaining five officers, one will be the Director

* Two appointments were reserved to cover the cost of existing Sub-Assistants.
† Only one appointment is now reserved to cover the cost of Sub-Assistants.

and one the Palæontologist. The remaining three, two of them specialists, will be available for mineral and other economic investigations. The staff assigned to scientific geological research is smaller than the originally sanctioned scale of the Geological Survey Department. But this scale has for some time not been worked up to, and the holders of even those appointments which have been filled have been largely employed on economic instead of purely scientific work. The reductions and alterations now resolved on are fully justified both by financial considerations and the undoubted necessity of expert advice and investigation for the development of the mineral and economic resources of the empire. Orders for bringing the new scale into effect will be separately communicated to the Director, Geological Survey.

9. One important point, *viz.* the infusion of a practical element in the training of candidates for the Geological Survey Department, which did not come under the notice of the Public Service Commission, has recently pressed itself on the attention of the Government of India. Under the system hitherto adopted for recruitment, the only qualification required from candidates has been a sound geological education of an academic character. Practical training has not been insisted on, but the necessity for combining scientific education with a practical training in applied science, especially in mining, has been brought prominently forward in connection with the development of the mineral resources of Burma, Baluchistan and other parts of the Indian Empire. After an examination of the character of the education which the officers in the Department had received and their qualifications for practical investigations, the Government of India find that, with a few notable exceptions, the appointments to the Department were filled until quite recently by officers who had not previously gone through a course of practical training, and that the talent for practical exploration, though in some instances of a remarkable character, has had generally to be developed by what has virtually amounted to an apprenticeship during the later years of service in India. The new rules accordingly provide that candidates must undergo one or two years' training in mines, or technical laboratories, as may be required by the Government of India.

ORDER.—Ordered that a copy of the foregoing Resolution be forwarded to the Local Governments and Administrations marginally noted, and to the Director of the Geological Survey of India, for information, and that it be published in the Supplement to the *Gazette of India*.

To the Secretary to the Government of Madras.
" " Bombay.
" " Bengal.
" " the N.-W. P. and Oudh.
" " the Punjab.
To the Chief Commissioner, Central Provinces.
" " Burma.
" " Assam.
" " Coorg.
" " Ajmere.
To the Secretary for Berar to the Resident, Hyderabad.

[True Extract.]

E. C. BUCK,

Secretary to the Government of India.

No. $\frac{3}{74}$.

Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department (Surveys),—dated Calcutta, the 8th March 1893.

READ the following despatches:—

From Government of India, Financial Department, to Secretary of State, Nos. 201 and 202, dated 28th July 1891.
From Government of India, Revenue and Agricultural Department, to Secretary of State, No. 67 (Surveys), dated 8th September 1891.
From Secretary of State, No. 86 (Statistics), dated 17th December 1891.
From Secretary of State, No. 6 (Statistics), dated 28th January 1892.
From Government of India, Financial Department, to Secretary of State, No. 150, dated 21st June 1892.
From Secretary of State, No. 70 (Revenue), dated 25th August 1892.

RESOLUTION.

The papers read in the preamble have reference to the future organization and recruitment of the Geological Survey of India. Changes in the scale of pay, designations and other particulars having considerably modified the rules or conditions of appointment to the Department originally published in 1867, a revision of these rules was undertaken in 1886. Meantime, however, the constitution of the Department came under examination by the Public Service Commission appointed in that year, and it was found advisable to postpone further consideration of the subject until the recommendations of the Commission were before Government. A final settlement of the questions to be dealt with has been retarded by the discussion of proposals affecting scientific appointments generally, but the questions which specially affect the Geological Department have now been separately disposed of, and the rules as revised are appended to this Resolution.

2. The recommendations of the Public Service Commission regarding the Geological Survey of India, as recorded in Chapter X, paragraphs 70 to 74 of their report, are transcribed below:—

(1) That candidates should continue to be obtained from England so long as Indian schools do not provide adequate geological and scientific education, but that selection should be made irrespective of nationality.
(2) That appointments as Sub-Assistants should be limited to the number required to assist the upper grade, and that promotion to the upper grade should be open to Sub-Assistants who prove their ability for independent work.
(3) That the organization of the Department should not exceed that required to secure systematic investigation.
(4) That the graded system is unsuited to a Department which calls for the highest efficiency in an equal degree throughout the whole term of employment.
(5) That the system of engaging specialists for a limited term of years is advantageous and should be continued.

3. Subject to the exception and modifications explained in the succeeding paragraphs, these recommendations have been accepted generally by the Government of India and effect has been given to them in the revised organization.

4. In the Sub-Assistant class referred to in the second of the recommendations there are at present two appointments. These were created experimentally in 1873 with the object of affording natives of India educated in the country an opening in the Department. His Excellency the Governor-General in Council is anxious that natives of India, whether educated here or in England, should be utilized in the Department, provided that they are found to possess the qualifications essential to independent and original work in the field of geological investigation. It has been found, however, owing to the difficulty which is experienced in obtaining Asiatics with pronounced talent for geological research, that the system of appointing natives as probationary Sub-Assistants is not likely to be successful. It may, perhaps, be hoped that with an improved system of school education, in which habits of observation and practical enquiry will be more developed than they now are, candidates will eventually be forthcoming

File No. 74.

Serial No. 2.

1893.

GOVERNMENT OF INDIA.

REVENUE AND AGRICULTURAL DEPARTMENT.

SURVEYS.

GOVERNMENT OF MADRAS
18 MAR 93
REVENUE DEPARTMENT

RESOLUTION.

No. $\frac{5}{74}$.

Dated Calcutta, the 8th March 1893.

SUBJECT

RE-ORGANIZATION and recruitment of the Geological Survey Department of India.

Government of India Central Printing Office.—No. 598R. & A.—10-3-93.—430.—deS.

Appendix.

Revised Conditions for Indian Geological Survey Appointments.

The Geological Survey Department is constituted as follows:—

		Monthly Salary.			
		₹	₹		₹
1	Director	1,500			
3	Superintendents	700	rising by 50	to	1,100
4	Deputy Superintendents	500	,, 40	,,	700
5	Assistant Superintendents	350	,, 30	,,	500
1	Palæontologist	500	,, 40	,,	700, and then to ₹1,000 by increments of ₹50.
2	Specialists	Specially engaged for short terms on such pay as may be agreed upon, not exceeding ₹1,100 per mensem.			

The rates of pay for natives of India appointed to any of the above posts will be two-thirds of the full scale of pay.

2. Appointments to the department are made, as occasion requires, by the Secretary of State for India. Every candidate for such an appointment must be in sound bodily health, and will be required to satisfy the Medical Board at the India Office of his physical fitness in all respects to perform the duties of a Surveyor, which involve considerable fatigue and exposure. His age should not exceed 25.

3. Besides a good general education, a sound education in geology is essential; a university degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required.

4. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India.

5. First appointments are probationary for two years, at the end of which time the probationer, if found qualified, and continued in the department, will reckon his service for leave and pension from the date of original appointment.

6. Pay commences from date of joining appointment in India. Travelling allowances, regulated by the rules applicable to the department, are allowed at a rate calculated to cover actual expenses of tentage and locomotion.

The officer holding the appointment of Museum-Curator receives special Presidency house-rent allowance of ₹150 per mensem.

A first-class passage to India will be given.

7. Under ordinary circumstances, all Assistants, unless they have special claims from previous training and experience elsewhere, will enter the Department, in the lowest class, on a salary of ₹350 per month. This will increase annually at the rate of ₹30 per month; the first increase to be from the date on which the Assistant be declared to have passed the ordinary examination in the language of the country by the first or lower standard, according to the general rules provided for such examinations.

8. This annual increase will, in all cases, be granted only on the certificate of the Head of the Department, that the Assistants so recommended have proved fully deserving of the promotion by the intelligence and zeal with which their duties have been performed.

9. The said increase of salary, at the rate of ₹30 per month annually, will proceed until the limit of pay for the lower grade, namely, ₹500 per month, be attained.

10. Promotion to the higher grades will then depend on the qualification and merit of the several officers, and on the existence of a vacancy in the number of those holding these appointments. But in the event of no vacancy occurring, the candidate's claim to the same regulated increase of pay will continue (subject to certificate of qualification and good conduct), so that the rate of pay to which he will be entitled when promoted, on the subsequent occurrence of a vacancy, will be regulated by his length of service.

(For instance, a qualified Assistant having, by good service, attained to the highest pay of the Assistant grade, namely, ₹500 per month, may be prevented from rising to the grade of Deputy Superintendents by the fact of there being no vacancy, although he may be in every way qualified; and this vacancy may be delayed for, say, three years. In the event of his promotion after this time, he will be entitled to his former pay, plus the sanctioned increase of ₹40 per month for three years, or plus ₹120, and will at once receive ₹620 per month. No substantive or acting promotion to a higher grade will, however, be allowed to an Assistant Superintendent until he is in receipt of his maximum pay.)

11. While local experience and training must always hold a very prominent place in estimating the position or the promotion of Assistants, it must be distinctly understood that mere seniority of service, unaccompanied by proved ability and steady devotion to duty, gives no claim to promotion into the higher grades of the staff of the Survey.

12. The leave, leave allowances and pensions of officers of the Department will be governed by the provisions of the Civil Service Regulations applicable thereto. These regulations are liable to be modified by the Government of India from time to time.

13. The foregoing rules do not apply to the two special appointments, except in so far as they may be made applicable in each case by the Government of India or Her Majesty's Secretary of State for India.

14. The changes made by the present rules in the rules previously in force will not affect existing incumbents.

upon whose powers of original investigation more dependence can be placed than is the case at present. In the meantime it is undesirable to make any more appointments to the class of Sub-Assistants, which was only created as a tentative measure.

5. The Government of India have found themselves unable to accept the view of the Public Service Commission that the graded system is unsuitable to the Geological Survey Department. In the first place the officers of the Department become continuously more useful, at any rate for the earlier part of their employment, with each year of service, and secondly, a system of grade promotion is desirable to secure efficiency of labour as well as of qualifications; for even an officer who is eminently qualified for geological research will require some incentive to make a sufficiently industrious use of his abilities, especially under circumstances in which (as is often the case in the prosecution of geological investigation) it is not easy to detect perfunctory performance of work. A reduction in the number of grades has, however, been made in the revised scheme.

6. With the suggestions of the Public Service Commission, that the organization of the Department should not exceed that required to secure systematic investigation, and that the system of engaging specialists should be continued, the views of the Government of India are in entire accord. The necessity for reserving a certain number of appointments, to be held for a limited term by persons specially qualified for scientific or economic investigations in particular branches of science, instead of creating new posts whenever the need for such investigation arises, has long been felt; and the opportunity afforded by the present re-organisation has been taken to give an extended application to the principle advocated by the Public Service Commission by providing two appointments of this class, which may, when necessary, be recruited from specialists in other branches of science besides geology. These special appointments will be made for such term as the Government of India may determine in each case, and will not ordinarily be pensionable. They are made part of the cadre of the Geological Survey Department, first, because they will frequently be given for special geological investigations, and secondly, because it is convenient that the holders of such appointments should be subjected in respect of their movements, reports and other proceedings to the control of some responsible head of department.

7. The future staff of the department, to which the sanction of Her Majesty's Secretary of State for India has been obtained, is contrasted below with that now existing, and the new scheme will come into force from the 1st of April 1893.

Present scale.	Future scale.
1 Director (Pay R1,500 and Personal Allowance R300.	1 Director R1,500.
3 Superintendents on R800—50—1,100 per mensem.	3 Superintendents on R700—50—1,100 per mensem.
1 First Grade Deputy Superintendent on R700—50—1,000 per mensem.	4 Deputy Superintendents on R500—40—700 per mensem.
5 Deputy Superintendents on R500—40—700 per mensem.	† 5 Assistant Superintendents on R350—30—500 per mensem.
* 6 Assistant Superintendents on R350—30—500 per mensem.	1 Palæontologist on R500—40—700 and then rising by annual increments of R50 to R1,000 per mensem.
1 Palæontologist on R500—40—700 and then rising by increments of R50 to R1,000 per mensem.	2 Specialists on any salary not exceeding R1,100 and not less than R700.
2 Sub-Assistants on R200—20—300 per mensem.	

8. In order that there may be no interruption in the purely scientific geological inquiry, the Governor-General in Council has resolved that not less than eleven officers out of the total of sixteen executive officers, shall, as a rule, be employed on such duties. Of the remaining five officers, one will be the Director

* Two appointments were reserved to cover the cost of existing Sub-Assistants.
† Only one appointment is now reserved to cover the cost of Sub-Assistants.

and one the Palæontologist. The remaining three, two of them specialists, will be available for mineral and other economic investigations. The staff assigned to scientific geological research is smaller than the originally sanctioned scale of the Geological Survey Department. But this scale has for some time not been worked up to, and the holders of even those appointments which have been filled have been largely employed on economic instead of purely scientific work. The reductions and alterations now resolved on are fully justified both by financial considerations and the undoubted necessity of expert advice and investigation for the development of the mineral and economic resources of the empire. Orders for bringing the new scale into effect will be separately communicated to the Director, Geological Survey.

9. One important point, *viz.* the infusion of a practical element in the training of candidates for the Geological Survey Department, which did not come under the notice of the Public Service Commission, has recently pressed itself on the attention of the Government of India. Under the system hitherto adopted for recruitment, the only qualification required from candidates has been a sound geological education of an academic character. Practical training has not been insisted on, but the necessity for combining scientific education with a practical training in applied science, especially in mining, has been brought prominently forward in connection with the development of the mineral resources of Burma, Baluchistan and other parts of the Indian Empire. After an examination of the character of the education which the officers in the Department had received and their qualifications for practical investigations, the Government of India find that, with a few notable exceptions, the appointments to the Department were filled until quite recently by officers who had not previously gone through a course of practical training, and that the talent for practical exploration, though in some instances of a remarkable character, has had generally to be developed by what has virtually amounted to an apprenticeship during the later years of service in India. The new rules accordingly provide that candidates must undergo one or two years' training in mines, or technical laboratories, as may be required by the Government of India.

ORDER.—Ordered that a copy of the foregoing Resolution be forwarded to the Local Governments and Administrations marginally noted, and to the Director of the Geological Survey of India, for information, and that it be published in the Supplement to the *Gazette of India*.

To the Secretary to the Government of Madras.
" " Bombay.
" " Bengal.
" " the N.-W. P. and Oudh.
" " the Punjab.
To the Chief Commissioner, Central Provinces.
" " Burma.
" " Assam.
" " Coorg.
" " Ajmere.
To the Secretary for Berar to the Resident, Hyderabad.

[True Extract.]

E. C. BUCK,

Secretary to the Government of India.

No. $\frac{3}{74}$.

Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department (Surveys),—dated Calcutta, the 8th March 1893.

READ the following despatches:—

From Government of India, Financial Department, to Secretary of State, Nos. 201 and 202, dated 28th July 1891.
From Government of India, Revenue and Agricultural Department, to Secretary of State, No. 67 (Surveys), dated 8th September 1891.
From Secretary of State, No. 86 (Statistics), dated 17th December 1891.
From Secretary of State, No. 6 (Statistics), dated 28th January 1892.
From Government of India, Financial Department, to Secretary of State, No. 150, dated 21st June 1892.
From Secretary of State, No. 70 (Revenue), dated 25th August 1892.

RESOLUTION.

The papers read in the preamble have reference to the future organization and recruitment of the Geological Survey of India. Changes in the scale of pay, designations and other particulars having considerably modified the rules or conditions of appointment to the Department originally published in 1867, a revision of these rules was undertaken in 1886. Meantime, however, the constitution of the Department came under examination by the Public Service Commission appointed in that year, and it was found advisable to postpone further consideration of the subject until the recommendations of the Commission were before Government. A final settlement of the questions to be dealt with has been retarded by the discussion of proposals affecting scientific appointments generally, but the questions which specially affect the Geological Department have now been separately disposed of, and the rules as revised are appended to this Resolution.

2. The recommendations of the Public Service Commission regarding the Geological Survey of India, as recorded in Chapter X, paragraphs 70 to 74 of their report, are transcribed below:—

(1) That candidates should continue to be obtained from England so long as Indian schools do not provide adequate geological and scientific education, but that selection should be made irrespective of nationality.
(2) That appointments as Sub-Assistants should be limited to the number required to assist the upper grade, and that promotion to the upper grade should be open to Sub-Assistants who prove their ability for independent work.
(3) That the organization of the Department should not exceed that required to secure systematic investigation.
(4) That the graded system is unsuited to a Department which calls for the highest efficiency in an equal degree throughout the whole term of employment.
(5) That the system of engaging specialists for a limited term of years is advantageous and should be continued.

3. Subject to the exception and modifications explained in the succeeding paragraphs, these recommendations have been accepted generally by the Government of India and effect has been given to them in the revised organization.

4. In the Sub-Assistant class referred to in the second of the recommendations there are at present two appointments. These were created experimentally in 1873 with the object of affording natives of India educated in the country an opening in the Department. His Excellency the Governor-General in Council is anxious that natives of India, whether educated here or in England, should be utilized in the Department, provided that they are found to possess the qualifications essential to independent and original work in the field of geological investigation. It has been found, however, owing to the difficulty which is experienced in obtaining Asiatics with pronounced talent for geological research, that the system of appointing natives as probationary Sub-Assistants is not likely to be successful. It may, perhaps, be hoped that with an improved system of school education, in which habits of observation and practical enquiry will be more developed than they now are, candidates will eventually be forthcoming

FILE No. 74.

SERIAL No. 2.

1893.

GOVERNMENT OF INDIA.

REVENUE AND AGRICULTURAL DEPARTMENT.

SURVEYS.

RESOLUTION.

No. $\frac{3}{74}$.

Dated Calcutta, the 8th March 1893.

SUBJECT.

RE-ORGANIZATION and recruitment of the Geological Survey Department of India.

Government of India Central Printing Office.—No. 593 R. & A.—10-3-93.—430.—deS.