

ANIL BHUSAN DUTT

(13 April 1904 – 10 October 1980)

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Amil B. Ghosh



ANIL BHUSAN DUTT

(1904 - 1980)

Elected Fellow 1962

ANIL BHUSAN DUTT was born on April 13, 1904 at his ancestral home in Meshabchak Village, near the well known pilgrimage place of Tarakeshwar in the Hooghly District of West Bengal (then the province of Bengal). His father Woomesh Chandra Dutt was employed with the East Indian Railways and Anil's early years were spent in his native village and in several places of eastern India where his father was posted from time to time in course of his official duties. Woomesh Chandra had five sons and three daughters, Anil being the youngest son.

SCHOOL AND UNIVERSITY EDUCATION

Anil Bhusan received his early education at Sahebganj in Bihar and later at the Railway School at Asansol in Bengal from where he passed the Matriculation Examination of the Calcutta University in 1920, obtaining an aggregate of over 75% marks, with *letter marks* (>80%) in both Compulsory and Additional Mathematics and in Sanskrit. He then joined the Intermediate Science (I. Sc.) course at the Presidency College, Calcutta, and studied there till 1926. He lived in the celebrated Hindu Hostel during his College days. He obtained the B.Sc. (Honours) degree in Geology in 1924, securing the first rank and the M.Sc. degree in 1926, securing the second rank. Among his class-fellows were Dharendra Kishore Charabarti who later joined the Geology faculty at the Benaras Hindu University and Austin Manindra Nath Ghosh who started the exploration wing at the Oil and Natural Gas Commission in 1956.

His teacher was Professor Hem Chandra Das Gupta, the first whole time Indian teacher in Geology at the Presidency College and who headed the Geology Departments of both the Presidency College and the University of Calcutta. His other teachers were Bhupendra Nath Moitra and Sarat Lal Biswas. In those days Officers from the Geological Survey of India regularly taught at the Presidency College and among his teachers were H Walker, H Crookshank, DN Wadia and GV Hobson.

PROFESSIONAL CAREER

In those days, there was very little job opportunity for an Indian geologist in the country. A few years after post-graduation he succeeded in getting an employment as a Museum Assistant at the Geological Survey of India and he joined the Survey



1929. His first assignment in the GSI took him to the Precambrian belt of Singhbhum and Mayurbhanj, where he carried out geological mapping under the direction of JA Dunn. His associate was Abani Kumar Dey, who later became a member of the Planning Commission. AB Dutt's name is recorded as one of those who prepared the well-known geological map of Eastern Singhbhum. He was promoted to the post of Assistant Geologist in 1936 and was attached to the Burma Party of the Geological Survey of India, under the leadership of ELG Clegg. He continued his assignment in Burma as a deputationist even after the separation of Burma in 1937. There he carried out geological mapping and mineral-investigations on gemstones, gold, iron ores, wolfram, coal and petroleum. He stayed on in Burma even after the Second World War started, but just before the fall of Rangoon he was sent back to India through the overland route. He entered India through Manipur towards the end of 1942, and came back to the headquarters of the Geological Survey of India at Calcutta.

From 1944, he started resurvey of the Bokaro Coalfield and this work continued till 1951. He remapped the entire basin and made a detailed study of its coal resources. The work was mainly on economic aspects with special reference to an accurate assessment of the reserves of different grades of coal. Bokaro Coalfield is characterised by several unusually thick coal seams. Inch-by-inch logs of the coal seams were prepared, the seams were correlated and the reserves were accurately calculated on the basis of surface observations and drilling. Many faults were identified and their effects on the coal seams were revealed. The petrography of dolerite and lamprophyre intrusives was studied.

His findings were published in a Memoir of the Geological Survey of India and the work earned him the D.Sc. Degree of the University of Calcutta. In the wake of the War, the Government had a strategic need of tungsten and while he was working in the Bokaro Coalfield he was also put in charge of the wolfram operation in the Chhendapathar area in the Bankura District of Bengal. He was also sent to Lucknow to carry out mineral-investigations in the Kumaun and Garhwal Himalayas. At the same time he also carried out a time-bound investigation on the possibilities of producing synthetic petroleum from coal from the Damodar Valley Coalfields as an alternative source of energy. It is unfortunate that most of his findings were buried in government files.

When India became independent, for rapid industrialization the country had to develop its mineral resources, and this became one of the main tasks of the Geological Survey of India. Dr Dutt devoted himself to the task of exploration and development of mineral resources. This resulted in the publication of a number of tracts on important metallic and non-metallic minerals, detailing their industrial uses and resource positions. In 1953, he was promoted to the post of Superintending Geologist-In-Charge of the Hyderabad and Central Circles, and was transferred to



the Hyderabad Office. From there, he carried out exploration of several minerals, including high grade limestone and coal in the then Central Province and the erstwhile Hyderabad State.

In 1956, he came back to Calcutta to take over the charge of the Eastern Circle and organised a number of activities including the systematic survey of the Precambrians of Assam and exploration for coal in the Garo Hills. To preserve the coal resources and avoid land subsidence it was necessary to abandon the old wasteful mining practices and adopt sand-stowing procedure in underground mining. For this purpose, he made an assessment of the stowing-sand resources in the Damodar and Ajoy river basins falling within the Raniganj and Jharia Coalfields. In 1958, he was promoted to the post of Deputy Director (Surveys). Dr Dutt, in his capacity as Deputy Director (Surveys), was instrumental in formulating the exploration programmes of the GSI during the Second Five Year Plan, which witnessed a spurt of exploration activity of the organization. He retired from the Survey in 1959 after a distinguished career. After retirement, Dr Dutt had a short tenure as the Director of Mining and Geology of the Government of Assam at Shillong; he organized and guided the new born department in its infancy. But he felt that he had to come back to Calcutta to pay more attention to his family, and soon he relinquished the assignment.

Dr Dutt served with distinction in various Governmental Committees, including the Committee on Assessment of Resources set up by the Coal Council of India, and the Mine Fire Committee set up by the Planning Commission. He was a Fellow of the Geological, Mining and Metallurgical Society of India and the Mining, Geological and Metallurgical Institute of India. During 1948-1949, he was a deputed teacher at the Presidency College, Calcutta. He was associated with the Academic Committees of a number of Indian universities.

PERSONAL LIFE

Dr Dutt was married in 1934 to Arati Mitra who hailed from an aristocratic family in Calcutta that originally migrated from Barisal (now in Bangladesh). Their only son Amit Bhusan Dutt, born in 1943, became a distinguished geologist and rose to the position of Senior Deputy Director General of the Geological Survey of India. Though he had to spend long times in the field away from his family, Dr Dutt took his family obligations very seriously and was deeply attached to his family.

To his colleagues, he was a strict disciplinarian, at times gruff in manner, who demanded the highest standard from his fellow scientists and from the students whom he examined, but he was reputed to be scrupulously fair in his dealings with the colleagues and others with whom he came in contact. In 1971 he was afflicted



with the Parkinson's Disease and became practically confined to his home. He passed away on October 10, 1980.

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