

A note on the field inspection and Training cum field workshop along Bhalukpong-Tawang transect (8th to 15th March 2019)

By

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On 8th March 2019, a meeting was held with Sh. Rajiv Yadav, IAS & Chairman Brahmaputra Board to discuss regarding water resource projects, apart from Majuli Islands and modalities to enter into a MoU with GSI accompanied by Sh. Manoj Kumar Kaistha, Director, Engineering Geology, Shillong, Sh. Somnath Sharma, Director, Guwahati and Dr. B. N. Mahanta, Suptdg. Geologist, GSI, NER, Shillong. It was followed by a visit to office SU: Assam, Guwahati and held discussions with Sh. Kajal Mondal, Dy. DG, SU: Assam, T&M, Sikkim, Meghalaya and conducted an interactive meeting with officers of SU: Assam. In the evening, he also participated in discussions during a cruise in Brahmaputra River along with IGC (NER004) team members and others represented by Dr. Tapan Pal, Director PSS & Co-ordinator, Dr. B. N. Mahanta, Suptdg. Geologist, Dr. N. Surdas Singh, Sr. Geologist, Dr. N. B. Singha, Sr. Geologist, Sh. Ankur Srivastava, Sr. Geologist, observer from DGCO apart from Sh. Manoj Kumar Kaistha, Director, Engineering Geology Division. An inspection visit to Seismic Microzonation item of Dibrugarh town was undertaken accompanied by Sh. Manoj Kumar Kaistha, Director, Earthquake Geology Division and Dr. B. N. Mahanta, Suptdg. Geologist on 9th and 10th March, 2019. Detailed technical discussions with Sh. B. R. Syngai and Dr. M. Shyamkumar Singh, Sr. Geologists were also undertaken at Dibrugarh. The progress of work was discussed with officers particularly about LULC map and SPT drilling results and problem faced during the work due to NRC issue. The officers were advised to validate their LULC maps and to observe and document the excavation of foundation for houses and bluff sections along river banks to see the nature of the soil strata during the ensuing field season. A few of SPT drill hole sites were inspected and discussed the status of pebbly horizons which posed problem during SPT drilling but such horizons seem to thin out towards south. The sediment in the 30 m drilled SPT holes are dominantly cohesion less and constituted by fine sand and silt. Pebble horizon thin out away from the Brahmaputra River. The bank protection measures by way of concrete blocks, polypropylene geotextile sand bags and wire mesh crates in spurs were also examined. In the evening of 10th March 2019, the ADG & HoD, NER joined the training cum field workshop along Bhalukpong-Tawang transect at Bhalukpong, Assam.

The training programme entitled “**Training cum field workshop along Bhalukpong-Tawang transects, Arunachal Pradesh**” was inaugurated by ADG & HoD, NER on 10th March 2019 at Conference Hall, Assam Tourism, Prashanti Cottage, Bhalukpong. Dr. N. Surdas Singh, Sr. Geologist, RTD, NER welcomed all the trainees and faculties. The ADG & HoD interacted with the trainees during the inaugural session and advised them to interact with the faculties and try to take maximum benefits from them during the entire programme. All efforts were made to encourage and motivate the trainees while introducing them to the geology of this arduous terrain. During inauguration Sh. D. K. Thawait presented a brief overview of the course content and the requirement of conducting this specific training programme starting from Bhalukpong to Tawang. The main objective was to create awareness amongst officers about the geological transect mapping in Himalaya with a focus on different tectono-stratigraphic contacts starting from Siwalik sediments to Higher Himalayan crystalline rocks passing across HFT, MBT, MCT. The officers were introduced to the basic geological mapping in the complex topography of Himalaya and acquainted them with different tectono-stratigraphic units and contact of alluvium, quaternary

rocks, Neogene Siwaliks, Gondwanas succession of Lesser Himalayan sequence, Higher Himalayan crystalline rocks exposed along Bhalukpong to Tawang section. The training programme includes a lecture on general geology and tectonostratigraphy of the Western Arunachal Himalaya and given more emphasis on field traverse by stopping at important geological section along Bhalukpong to Tawang section. The trainees also visited the high altitude wetland complex of PTSO or Pankang Teng Tso Lake along Tawang-Lumla section which remains snow covered for most part of the year. The Engineering Geology Projects enroute particularly the problem of Pinjoli Bridge was also discussed by Sh. M. K. Kaistha, Director, Engineering Geology and various alternative sites for proposed bridge were shown by an engineer from BRO. The tentative site of Sela tunnel outlet portal was also observed on either side of Sela Pass.

The training cum workshop was successfully concluded on 13.03.2019 (evening) by group discussion during valedictory function at Meeting Hall of New Circuit House, Tawang, Arunachal Pradesh. All the trainees appreciated the core and guest faculty arranged for the workshop and assured that the training remained very beneficial for their future works. They showed keen interest in various tectonostratigraphic contacts in the field and were particularly eager to observe the inverted metamorphic sequence (IMS) within the metamorphosed low-alumina pelitic rocks of Dirang and Se La Group with increasing structural levels. Sh. D. K. Thawait, Director, RTD congratulated the trainees on successful completion of the workshop. The RTD conducted the programme satisfactorily and smoothly followed by distribution of the certificates to trainees on successful completion of the training. The course contents, hospitality and selection of traverses was well appreciated by all. It was advised to all trainees to submit a brief note individually supplemented with field photographs to the Director, RTD, NER, Shillong. The certificates were distributed to the participant trainees and the programme concluded with a vote of thanks by Dr. N. Surdas Singh, Sr. Geologist, RTD, NER, Shillong. The trainees also furnished their feedback on the programme and expressed their views appreciating the entire arrangement and planning of the field traverses. On 15th March, 2019 accompanied by Sh. M. K. Kaistha, Director, an inspection visit was undertaken in the STM item of SU Assam in TS 83B/8 along Nellie Umapanai-Khanduli road with Sh. Kajal Mandal, Dy. DG, SU: Assam. Supervisory Officer Sh. R. R. Meshram and associated officers Sh. Rafiq and Sh. Ved Prakash, Geologists who showed the field map and exposure of metabasics and occurrence of Khondalite, the latter expected to be the north eastern extension of the Barapani shear zone. The officers were advised to establish the nature of lithocontacts of various units and display it in geological cross sections.



Inaugural session at Bhalukpong



Delivering lecture on geology of western Himalaya



Discussion about HFT at Bhalukpong



Discussion about Tipi Thrust at Bhalukpong



Discussion with BRO official at the Pinjoli TDR bridge located across Pinjoli Nala following the MBT near Bhalukpong



Valedictory session of the training at Tawang

Glimpses of the training cum field workshop along Bhalukpong-Tawang transect, Arunachal Pradesh