

APG-FB FIELD WORKSHOP AT HIMACHAL PRADESH FROM 9TH TO 15TH DECEMBER 2009

A Field workshop was organised at Himachal Pradesh, under the aegis of APG and Frontier Basins, Dehradun from 9th to 15th December 2009. The purpose of this workshop was to give an idea to the delegates about the leading edge and trailing edge deformation concepts in the Nahan Salient and the Kangra recess. The trip was planned for all geoscientists from industry and academia. The faculty comprised Shri Narendra K. Verma, GM-Basin Manager, Frontier Basins and Dr. V.C. Thakur, Retd. Director, Wadia Institute of Himalayan Geology, Dehradun. Both the faculty members have done extensive field work in these areas, which was evident from the knowledge that was dispersed to the delegates.

The first day's itinerary covered the Paonta thrust, MBT at Dadahu, Bilaspur thrust beyond Nahan and HFT at Salehpur. The days' itinerary also included a visit to the Saketi Fossil Park. During the day, the delegates were exposed to the signatures of thrusts in a field setup, depositional conditions for the Siwalik sediments and the evolution of Himalayas in general. Night halt was at Hotel Grand View at Jamta.

At the outbreak of the next day (10th Dec 2009), the group started on the next towards Barog, where the major litho-stratigraphic elements of the Lower and Upper Dharamsalas were covered. The delegates also learnt the techniques of map reading and usage of clinometers compass. The group was also shown the Naina Devi released location and the location being prepared for drilling near Garkhal at Kasauli. Night halt was at Hotel Barog Heights.

On the third day (11th December 2009), the delegates were shown MBT at Barog, followed by a visit to the Subathu type section and the Kasauli type section. The next stop was made at Haripur to see the Haripur fault and the Nalagarh fault on the way to Bilaspur. Exposures of the Proterozoic Limestone were also shown to the delegates, with its significance in the depositional setup and tectonic history of Himalayas. They were shown the recent river terraces also. Night halt was at Bilaspur.

The fourth day (12th December 2009) began with the delegates being shown the Proterozoic Bilaspur limestone type section, followed by a drive down to the Gambar bridge, where they could see ripple marks on an outcrop. This was followed by a visit to the section near the Naina Devi temple where the delegates got exposure to the intense tectonics and cross trends of faults in the area. The group crossed over the Bhakra reservoir and was shown the Barsar back thrust. This was followed by a visit to the well R-BH-C at Jawalamukhi. Incidentally, the well was spudded on the same day in the presence of the APG Group. Night halt was at Hotel Jwalaji, Jawalamukhi.

On the fifth day (13th December), the delegates visited the first well drilled by ONGC (JMI#1), followed by a visit to the deepest drilled well JMIB by ONGC (Drilled depth 6720m). They even lit the gas coming out from the annulus in the form of minor seepages, under

proper safety supervision. The group moved on towards Kangra to see the gradational contacts between Upper Siwaliks and Mid Siwaliks. A walk through the tunnel dug out in Upper Siwaliks was an awesome experience for all the delegates. On the way to Palampur, the delegates were shown the transported Granite boulders, which had their provenance in the Dhauladhar ranges. Night halt was at Hotel Vishal Residency, Palampur.

The sixth day's (14th December 2009) itinerary was from Palampur to Mandi. The group moved to the base of the Dhauladhar ranges, to view the MBT. A spectacular view of the MBT and MCT was seen at Dyna Park by the delegates. They also visited the Himriganga gas shows where live bubbling of thermogenic gas occurs continuously. A visit to the Drang salt mine, located in Proterozoic rocks was an enchanting experience for all. The last stop was the exposures of the Mandi Darla volcanics, prior to night halt at Visco resorts, Mandi.

A valedictory function was held at Visco resorts where Shri Narendra K. Verma and Dr V.C. Thakur gave away the certificates to all delegates who attended the Field Workshop. A Bonfire in the night, with a lot of fun and frolic marked the close of the Field Workshop.

Our sincere thanks to all the faculty members who spared their valuable time to share their vast knowledge of the area for the benefit of all the delegates. The efforts of Shri Gopal Joshi, SG and Shri Manoj K. Baruah for compiling the field manuals and assisting the management of the trip are commendable. Most of all, the efforts of Shri V.K. Bhardwaj, DGM (Geol)-Secretary APG and Shri L.K. Khaneja, Dy. Manager (HR), who handled all the planning of logistics and finances of this trip, are deeply appreciated. Had they not spent long hours each night in their planning for numerous tomorrows to come, many lapses would have occurred.



FLAG-OFF FROM DEHRADUN



DISCUSSIONS AT PAONTA THRUST



EVENING BRIEFING AT JAMTA HOTEL



GROUP PHOTO AT JAMTA HOTEL



BURROWS SEEN IN LOWER DHRAMSALA ROCKS



INTENSE FOLDING AT BILASPUR THRUST NEAR NAHAN



OUCROPS UNDER STUDY



GROUP PHOTO AT BAROG HEIGHTS HOTEL



SWEATING OUT IN A NALA SECTION AT HARIPUR



HARIPUR FAULT



RIPPLE MARKS IN DHARAMSALA ROCKS



GEOLOGIST 'S RESTING PLACE

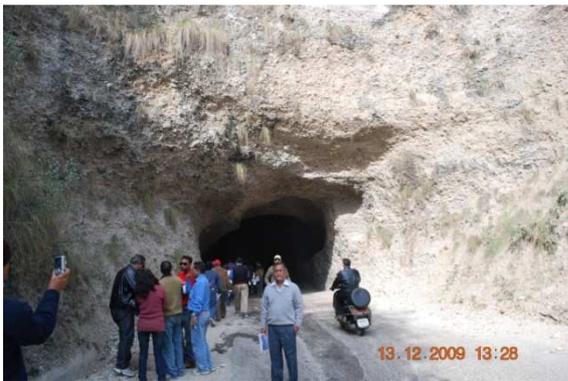


GROUP PHOTO AT RIG ON R-BH-C, JWALAMUKHI BIRTHDAY CELEBRATION AT JWALAMUKHI



AT FIRST WELL OF ONGC (JMI#1)

GAS BURNING AT JMIB WELLSITE



TUNNEL IN UPPER SIWALIKS NEAR KANGRA

KANGRA FORT, ON UPPER SIWALIKS



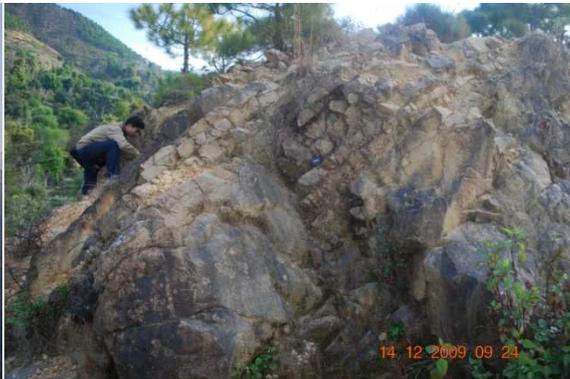
GROUP PHOTO NEAR PALAMPUR AT GRANITE BOULDERS



GROUP PHOTO WITH DHAULADHAR RANGES IN BACKGROUND



DHAULADHAR RANGES SHOWING TERTIARIES AND PROTEROZOIC ROCKS



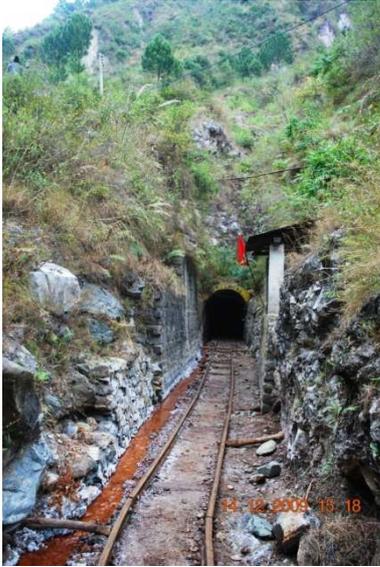
TAKING DIPS IS NOT EASY



BEDDING FEATURES NEAR PALAMPUR



GAS BUBBLING AT HIMRIGANGA



DRANG SALT MINE IN PROTEROZOICS



VALEDICTORY FUNCTION AT VISCO RESORTS



FUN AND FROLIC AFTER THE FIELD TRIP

