

## Let us Enjoy Geo-Tetsu - the Eighth Geo-tour through Train Windows, Kita-Rias Line of the SANRIKU RAILWAY

\*Masayo Fujita<sup>1</sup>, Keisuke Imao<sup>1</sup>, Shoji Ueno<sup>1</sup>, Shunji Yokoyama<sup>1</sup>, Hironori Kato<sup>1</sup>, Tadashi Yasuda<sup>1</sup>

1. Geo-Tetsu project committee of the Fukada Geological Institute

### 1. Aims of Geo-Tetsu activities

Geo-Tetsu is the name of the activity that shows people enjoy and learn about geology related sciences, using railways (Kato et al., 2009). Following nine years Geo-Tetsu promote activities are continued by geological engineers who love railways, organized with the corporation of the Fukada geological institute since 2009 (Fujita et al., 2013) and established Geo-Tetsu Project Committee since 2013 (<http://fgi.or.jp/geo-tetsu>). Geo-Tetsu offers the chance to get acquainted with geological features alongside the railway routes. We selected enjoyable Geo-Tetsu courses and Geo-points.; the railway itself, geology, geography, cultural heritage and sight-seeing as well. We hope that the general public will enjoy a new style of railway traveling provided by the Geo-Tetsu. The Kita-Rias Line is presented in this as eighth route of Geo-tetsu, based on Sanriku Railway Geo-Tetsu Map, 2017.

### 2. The Kita-Rias Line, the eighth Geo-Tetsu project

#### (1) Abstract of the Kita-Rias Line

The Kita-Rias Line runs from Miyako City to Kuji City on the Sanriku Coast on the most easterly region of Iwate Prefecture on Honshu. The railway connects from Miyako Sta. to Kuji Sta. at 71.0km. It is single track and the route is non-electrification. The Sanriku Railway's original railcar 36type (the white body with red and blue lines) and the luxurious passenger railcar with unique events are operated throughout the year. Sanriku Railway was built to resist tsunami because this area has suffered tremendous damage from natural disasters in the past several times. It started to be constructed as a high-standard trunk line by Japanese National Railway (JNR) in the 1960s. Following the decision to close JNR's Sakari, Miyako and Kuji Lines, Sanriku Railway opened in April 1984 as a third-sector railway company in Iwate Prefecture, local governments and private companies to maintain local rail services. In the 11 March 2011, the company suffered serious damage by Great East Japan Earthquake and Tsunami. The service was fully resumed on April 2014. It is continued by Sanriku Railway Company themselves that the plans of Disaster Area Front Line Training and Earthquake disaster learning train as disaster tourism.

#### (2) The rich geological and sight-seeing resources of the Kita-Rias Line

The Kita-Rias Line runs eastern region in Kitakami Mountains that consist of the Cretaceous volcanic rocks and granitoids, Jurassic accretionary complex, and Cretaceous and Paleogene sedimentary rocks in the North Kitakami Belt. Geographical feature of this line is in the marine terrace region. The train goes through long tunnels under the terrace and crosses high-standard bridges at deep valleys.

The train leaves to the inland at Miyako Sta. near the Jodogahama Beach. It goes up and down the incline of 16-20 % passing through three stations. Arriving at Taro Sta., the Sanno Rock (Miyako Group) stands at the entrance of the Taro Bay. Sea wall is constructing in past town area. The train advances straight the longest Masaki Tunnel 6532m at the north side of Taro Sta., you can hear it carefully that the change of engine sound up and down inside the long tunnel. Crossing the Omotogawa Bridge, Iwaizumi-Omoto Sta. is role of a disaster prevention center and a sightseeing base to Ryusendo Cave and Moshi area. Between Shimanokoshi Sta. and Tanohata Sta., there are lots of Geo Points that Miyako Group is rich in the fossils, a Tsunami Rock is in the Haipe Coast, and the sightseeing ships to Kitayamazaki Cliff are waiting for you at the ports. Through the Hudai Water Gate, train crosses the Osawa and Akkagawa Bridges with beautiful

view of marine terrace. Passing Noda Tamagawa Mine Remains and Daito no Kura (Noda Group) at Tofugaura Beach, lastly train arrived at Kuji Station. In the north entrance of Sanriku Railway you can touch the interesting Kuji Culture; Kuji Amber, Kuji iron, Kokuji Ware and also the stage areas of the NHK's morning TV drama *Amachan*.

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Geo-Tetsu Map