

COAL RESOURCES OF PUNJAB (PAKISTAN): AN OVERVIEW

Syed Jawad Arif ¹ and M. Sadiq Malkani ²

¹*Geological Survey of Pakistan, Sariab Road, Quetta*

²*Geological Survey of Pakistan, Muzaffarabad, Azad Kashmir*

jawadarif14@gmail.com

Abstract

Permian and Paleocene are two main horizons for coal in Punjab. **Permian coal** was mined near the Buri Khel in Mianwali district in western Salt Range. A discontinuous coal seam found between the conglomerates tillite of Tobra Formation and cross bedded sandstone of Warcha formation. Bhatti in 1967, Shah in 1990, Warwick and Shakoor in 1988, Malkani in 2012 and Malkani and Zafar in 2016 reported the limited extent and found only limited nalah cuttings. However the significant Latest Cretaceous-Early Paleocene Hangu coal (Patala is the junior synonym) is found in Punjab. **Tertiary coal** is being exploited in one horizon in northern Punjab like Hangu Formation (Patala is the junior synonym) in Makerwal and Surghar areas and also Central and Eastern Salt Range. Warwick and Shakoor in 1988 reported that the Patala formation grades laterally towards west into Lockhart limestone and Hangu Formation. In southern Punjab, Thangani et al. in 2006, Malkani in 2012 and Malkani and Zafar in 2016 reported coal from Domanda formation of Rakhi Munh area and Dera Ghazi Khan District with analysis moisture at 11.19%, Ash 21.83%, volatile matter 34.63%, fixed carbon 32.35%, ADI 7.20%, total sulphur 6.24% and heating value 8617BTU/lb and Abbas et al. reported in 2008 Domanda coal from Upper Tusso, Nabi Bakhsh Thal Nala and Khan BMP post area of Rajan Pur district, Mahoi and Zain BMP post area of D.G.Khan district, Eocene Drazinda coal from Haft Gath/Shahheed Ghat area (Zinda Pir Ziarat area), Oligocene Chitarwata Formation coal in Khandor BMP post area of D.G. Khan district. Due to recent research by Malkani in 2012, and Malkani and Mahmood in early 2016 the total coal reserves of Pakistan increased upto 186,288.05mt with break up as Sind 185457mt, Balochistan 458.72mt, Punjab 235mt, Khyber Pakhtunkhwa 126.74mt and Azad Kashmir 10.59 mt. Coal is found in northern Punjab (Potwar sub basin) in areas of Makarwal (22mt) and Salt Range (213mt) while in southern Punjab (Sulaiman basin) in areas of D.G.Khan (exposed), Layah, Muzaffargarh and Multan (deep subsurface). Makerwal Coalfields include the leased area in the Makerwal and some other parts of Surghar Range. Salt Range Coalfields include the leased area in the Chakwal, Khushab, Jhelum and Mianwali districts. A bore hole in the north of Multan shows 3m coal and carbonaceous shale at depth 2904m. Malkani in 2012 and Malkani and Zafar in 2016 reported and interpreted this bore hole coal of Multan belong to K-T boundary Vitakri Formation (lateral variations of Latest Cretaceous to Early Paleocene Hangu coal).