List of Figures

FIG. 1 Map of India
2 Map of Nagaland
3 Map of Kohima district
4 Communication map of North-eastern region
5A Geological map of the study area
5B Geological cross section along X-Y
6 Tectonic Map of Assam
7 Geological map of Manipur (Part) and Nagaland
8 Contact between Disang Group and Barail Group
9(a to l) Cumulative curves of the Barail sandstones
10 Combination plots of mean size ($M_z$) Vs standard deviation ($\sigma_1$) of Barail sandstones
11 Combination plots of mean size ($M_z$) Vs skewness ($Sk_1$) of Barail sandstones
12 Combination plots of mean size ($M_z$) Vs kurtosis ($K_G$) of Barail sandstones
13 Combination plots of standard deviation ($\sigma_1$) Vs skewness ($Sk_1$) of Barail sandstones
14 Combination plots of standard deviation ($\sigma_1$) Vs kurtosis ($K_G$) of Barail sandstones
15 Combination plots of skewness ($Sk_1$) Vs kurtosis ($K_G$) of Barail sandstones
16(A) Cumulative curve for sphericity of Barail sandstones
16(B) Histogram for sphericity of Barail sandstones
17(A) Cumulative curve for roundness of Barail sandstones
17(B) Histogram for roundness of Barail sandstones
18 Sphericity and roundness of clastic grain of Barail sandstones
FIG. 19 Histogram of elongation quotient of quartz grains of Barail sandstones
20 Diamond diagram of Barail sandstones
21 Discriminant diagram of Barail sandstones
22 Q.F.R. provenance diagram of Barail sandstones
23 Bivariate log-log plots of the ratios of quartz to feldspar + rockfragments and polycrystalline quartz to feldspar + rockfragments of Barail sandstones
24 Bivariate plots of $\text{SiO}_2$ versus $\text{Al}_2\text{O}_3 + \text{K}_2\text{O} + \text{Na}_2\text{O}$ of Barail sandstones
25 C-M pattern of Barail sandstones
26 C-M pattern of Barail sandstones
27 Bivariate plots of Barail sandstones
28 Energy process diagram of Barail sandstones
29 Energy process diagram of Barail sandstones
30 Bivariate discriminant plot of skewness versus kurtosis
31(a to l) Log probability plots of Barail sandstones
32 Triangular plot of sand, silt and clay percentage for textural classification of Barail sandstones
33 Graphic plot of Q, Md, Q3 indices for grain size indices classification of Barail sandstones
34 Triangular plot of Q.F.R. percentage for mineralogical classification of Barail sandstones
35 A ternary plot of Si-Al-Fe ratios of Barail sandstones for geochemical classification
36 Log $\text{SiO}_2/\text{Al}_2\text{O}_3$ and Log $\text{Fe}_2\text{O}_3/\text{K}_2\text{O}$ plot for chemical classification of Barail sandstones
37(a to f) Scatter diagram of zircon of Barail sandstones
38(a to f) Scatter diagram of tourmaline of Barail sandstones
39(a to f) Size frequency diagram of zircon of Barail sandstones
FIG. 40(a to f) Size frequency diagram of tourmaline of Barail sandstones

41(a to f) Elongation quotient diagram of zircon of Barail sandstones

42(a to f) Elongation quotient diagram of tourmaline of Barail sandstones

43 Tectonic discriminant diagram of Barail sandstones

44 CaO-Na₂O-K₂O plot for Barail sandstones

45 Fe₂O₃-MgO-TiO₂ diagram of Barail sandstones

46 Fe₂O₃ + MgO - Na₂O - K₂O triangular tectonic setting diagram of Barail sandstones

47 Al₂O₃/SiO₂ vs Fe₂O₃ + MgO plots for tectonic setting discrimination of Barail sandstones

48 K₂O/Na₂O vs Fe₂O₃ + MgO plots for tectonic setting discrimination of Barail sandstones

49 Al₂O₃/CaO + Na₂O vs Fe₂O₃ + MgO plots for tectonic setting discrimination of Barail sandstones

50 Bivariate diagram of Rb and B of Barail sandstones

51 Bivariate diagram of Ga and B of Barail sandstones

52 Triangular diagram showing abundance of Ga, Rb and B of Barail sandstones

53 Triangular diagram showing the percentage of Boron Rubbidium-Gallium of Barail sandstones

54 Chondrite normalised REE pattern of sandstones of Barail Group