

KAPHALDA BLOCK

PETROGRAPHIC STUDY RESULTS

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
1	KPBL/P/1	It is a fine to medium grained rock showing granular texture.	Quartz Feldspar	Lithic fragments	Clay minerals Sericite Zircon	Quartz and feldspar occur as fine to medium sand sized subangular to subrounded grains showing well sorting and tight packing. Lithic fragments are present as fine to medium subangular to subhedral clasts of quartzitic nature. Very fine clay particles are seen developing after feldspar alterations in areas. Sericite occurs as very fine disseminated flakes. It also seen developing after feldspar, particularly plagioclase alterations. Zircon is noted as very fine prismatic and zoned grains in accessories. The specimen is an <u>arkose</u> .
2	KPBL/P/2	It is a dark grey coloured fine to very fine grained rock showing granular texture. It reacts instantly with cold and dilute HCl.	Quartz Calcite Sericite	Opakes Clay minerals Biotite	Chlorite Tourmaline Zircon	Quartz occurs as very fine sand sized clasts floating over very fine micro-crystalline to crystalline calcite matrix. Sericite occurs as very fine disseminated flakes showing crude alignment. Opakes are present as very fine to fine subhedral to anhedral grains, segregated pockets, streaks and as fillings. Clay minerals have seen intruded very fine sub-parallel fillings. Biotite and chlorite are seen present as very fine to fine flakes and

						patches. Tourmaline occurs as very fine prismatic grains in accessories. Zircon is noted as very fine slender prismatic grains in accessories. The specimen is a <u>quartz wacke/ impure limestone.</u>
3	KPBL/P/3	It is a dark grey coloured very fine grained rock showing slaty cleavage.	Quartz Calcite Carbonaceous matter Sericite	Feldspar Ferruginous matter	Clay minerals	Quartz and feldspar occur as very fine silt sized clasts showing crude alignment. Calcite occurs as very fine clasts, lensoidal aggregates, patches and fillings. Carbonaceous matter is present as very fine amorphous aggregates aligned along the foliation. Sericite occurs as very fine disseminated flakes showing parallel alignment. Ferruginous matter is present as reddish patches and patchy fillings in areas. Very fine clay particles are seen developing after feldspar alterations. The specimen is a <u>carbonaceous slate.</u>
4	KPBL/P/4	It is a dark grey coloured very fine grained massive rock showing vein intrusions. It reacts instantly with cold and dilute HCl.	Calcite Quartz	Clay minerals	Opaques Gypsum	The specimen is made up of very fine micro-crystalline aggregates of micrite. Sparry calcite patches are common in the specimen. Very fine hairline calcite veins/ veinlets are also seen present. Stylolitic cracks are noted, mostly filled by dirty clay minerals. Thin to moderately thick quartz veins have intruded, often accompanied by calcite. Quartz is also seen present as very fine to fine grains floating over micritic matrix and as patchy fillings. Opaques occur as very fine specks in accessories. Gypsum is noted as very fine long prismatic grains. The specimen is a <u>micritic limestone intruded by</u>

						<u>quartz veins.</u>
5	KPBL/P/5	It is a very fine grained rock showing slaty cleavage.	Quartz Biotite Sericite/ Muscovite Feldspar	Opakes	Chlorite Clay minerals	Quartz and feldspar occur as very fine to fine grains showing crude alignment. Biotite and sericite/ muscovite are present as very fine flakes, often being interleaved with each other and showing parallel alignment and crenulations. Opakes occur as very fine to fine anhedral grains, patches and fillings. Chlorite is noted as very fine to fine flakes and patches in accessories. Clay minerals are seen developing after feldspar alterations. The specimen is a <u>slate.</u>
6	KPBL/P/6	It is a dark grey coloured very fine grained massive rock. It reacts instantly with cold and dilute HCl.	Calcite Dolomite Carbonaceous matter Quartz	Clay minerals	Sericite Opakes Gypsum	The specimen is made up of very fine micro-crystalline aggregates of calcite and crystalline rhombic aggregates dolomite. Carbonaceous matter occurs as very fine amorphous aggregates, mostly seen segregated in thin sub-parallel zones/ laminations. Quartz occurs as silt sized to very fine sand sized disseminated clasts. Very fine flaky clay minerals are seen present as segregated patches, lenses and laminations. Sericite occurs as very fine disseminated flakes showing crude alignment. Opakes are noted as very fine specks, fine subhedral grains and anhedral patches. Gypsum is noted as very fine long prismatic/ flaky grains in accessories. The specimen is a <u>carbonaceous matter rich limestone/ dolostone.</u>

7	KPBL/P/7	It is a dark grey coloured very fine grained rock showing slaty cleavage.	Quartz Carbonaceous matter Calcite Sericite Feldspar	Ferruginous matter	Clay minerals	Quartz and feldspar occur as very fine silt sized clasts showing crude alignment, where feldspar is altering to clay minerals. Carbonaceous matter is present as very fine amorphous aggregates aligned along the foliation. Calcite occurs as very fine to fine clasts, lensoidal clusters and patches in dissemination. It also seen present as thin veins/veinlets. Sericite occurs as very fine flakes and flaky aggregates showing parallel alignment and crenulations. Reddish ferruginous patches are noted, at places. The specimen is a <u>carbonaceous slate.</u>
8	KPBL/P/8	It is a dark grey coloured very fine grained thinly laminated rock.	Quartz Carbonaceous matter Sericite Feldspar		Clay minerals	Quartz and feldspar occur as very fine silt sized disseminated clasts, where feldspar is altering to clay minerals. Carbonaceous matter is seen present as very fine amorphous aggregates along grain contacts and also occurs as segregated patches in areas. Sericite is noted as very fine disseminated flakes showing crude alignment. The specimen is a <u>carbonaceous shale.</u>