

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
1	SMRPT/01	It is a reddish brown coloured thinly laminated rock showing fast reaction with cold and dilute HCl.	Quartz Calcite Ferruginous matter/ Opakes Feldspar	Sericite	Glaucanite Lithic fragments	Quartz and feldspar occur as very fine sand sized to silt sized subangular to subrounded clasts floating over reddish ferruginous matter mixed/ stained calcitic matrix. Ooid/ peloid like structures are noted in areas. Opaques are present as anhedral patches and patchy relicts within ferruginous patches. Sericite occurs as very fine flakes. Glaucanite is noted as very fine to fine subrounded pellets. Lithic fragments are seen present as fine clasts in accessories. The specimen is an arkosic wacke .
2	SMRPT/02	It is a very fine grained reddish brown coloured rock showing granular texture.	Quartz Ferruginous matter/ Opakes	Feldspar Limonite Sericite	Lithic fragments Calcite Tourmaline Monazite Zircon	Quartz and feldspar are present as very fine sand sized to silt sized subangular to subrounded clasts floating over reddish ferruginous/ opaque matrix. Limonitic patches are seen associated with ferruginous patches in areas. Sericite is present as very fine disseminated flakes. Lithic fragments are seen present as very fine subrounded clasts, mostly quartzitic in nature. Calcite occurs as very fine to fine patches in pockets. Tourmaline, monazite and zircon are noted as very fine subrounded grains in accessories. The specimen is a quartz wacke/ ferruginous



ANNEXURE-IV-A/2

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
						<u>sand stone.</u>
3	SMRPT/03	It is a fine to medium grained rock showing granular texture.	Quartz Feldspar		Lithic fragments Opaques Clay minerals Calcite	Quartz and feldspar are the main framework minerals in the specimen, occurring as fine sand to coarse sand sized subangular to subrounded clasts, where greater the size shows more the roundness. Grains are moderately sorted and tightly packed. Lithic fragments are seen present as fine to medium subrounded clasts of quartzitic nature. Opaques are noted as fine patches and very fine fillings. Clay minerals and calcite occur as very fine aggregates along grain contacts and acting as matrix in areas. Clay minerals are also seen developing feldspar alterations, at places. The specimen is an <u>arkose.</u>
4	SMRPT/04	It is a reddish brown coloured fine grained rock showing granular texture. It reacts instantly with cold and dilute HCl.	Quartz Calcite Ferruginous matter/ Opaques		Lithic fragments Sericitic Clay minerals	Quartz and feldspar occur as fine to very fine sand sized subangular to subrounded grains floating over reddish ferruginous matter mixed/ stained calcitic/ micritic matrix. Coarse sand to granule sized subrounded quartz clasts are noted occasionally. Opaques patches are often associated with reddish ferruginous patches. Lithic fragments are noted as fine subrounded



ANNEXURE-IV-A/3

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
			Feldspar			clasts of quartzitic and cherty nature. Sericite occurs as very fine disseminated flakes. Very fine clay particles are seen developing after feldspar alterations. The specimen is an <u>arkosic wacke</u> .
5	SMRPT/05	It is a fine to medium grained rock showing granular texture.	Quartz Ferruginous matter/ Opakes	Lithic fragments	Zeolite Sericite	The specimen is made up of fine to coarse sand sized subrounded to subangular clasts floating over reddish ferruginous matter mixed/ stained silt sized quartz matrix. Opaque patches are seen associated with ferruginous patches. Lithic fragments occur as fine to medium subrounded clasts of quartzitic nature. Zeolite is noted as flaky/ fibrous aggregates in pockets. Sericite occurs as very fine flakes in accessories. The specimen is a <u>quartz wacke</u> .
6	SMRPT/06	It is a reddish buff grey coloured fine to medium grained rock showing granular texture. It reacts instantly with cold and dilute HCl.	Quartz Calcite Ferruginous matter/	Lithic fragments Limonite	Sericite Clay minerals	Quartz and feldspar occur as fine to coarse sand sized subangular to subrounded clasts floating over reddish ferruginous matter mixed/ stained clastic matrix. Grains are poorly sorted and packed. Greater the grain size shows more the roundness. Subrounded granule sized clasts are occasionally noted. Opaque patches are seen



ANNEXURE-IV-A/4

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
			Opaques Feldspar			associated with ferruginous patches. Fine to medium quartzitic lithic fragments are seen present in the association. Limonite occurs as fine subrounded pellets and patches. Sericite is noted as very fine disseminated flakes. Dirty clay minerals are seen developing after feldspar alterations. The specimen is an <u>arkosic wacke</u> .
7	SMRPT/07	It is a dark melanocratic very fine grained rock showing porphyritic texture.	Olivine Augite Plagioclase Opaques (Magnetite/ Ilmenite)	Ferruginous matter Carbonates	Quartz	Olivine occurs as fine to moderately coarse subhedral prismatic phenocrysts. Augite occurs as very fine granular aggregates in ground mass. Plagioclase is present as very fine prismatic laths in groundmass. Opaques (magnetite/ ilmenite) occur as very fine subhedral to euhedral grains in ground mass. Ferruginous matter and carbonates are seen present as very fine fillings, especially in association with olivine phenocrysts. Quartz is noted as fine secondary cavity fillings in areas. The specimen is a <u>porphyritic olivine basalt</u> .
8	SMRPT/08	It is a fine to medium grained rock showing	Quartz	Limonite	Sericite	Quartz and feldspar occur as fine to coarse sand sized subangular to subrounded clasts floating

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			Major >5%	Minor <5%->1%	Accessory <1%	
		granular texture.	Calcite Ferruginous matter/ Opakes Feldspar		Lithic fragments Zeolite Tourmaline Monazite	over reddish ferruginous matter mixed/ stained clastic matrix. Opaque patches are seen associated with ferruginous patches. Limonite is noted as fine pisolites and patches. Sericite occurs as very fine disseminated flakes. Fine to medium subrounded lithic fragments are seen present of quartzitic nature. Zeolite occurs as cavity fillings comprising flaky aggregates and also seen associated with limonite patches in areas. Tourmaline and monazite are found present as very fine prismatic grains in accessories. The specimen is an <u>arkosic wacke.</u>
9	SMRPT/09	It is a dark brownish grey coloured fine grained rock showing granular texture.	Quartz Ferruginous matter/ Opakes Feldspar	Lithic fragments Limonite	Sericite Clay minerals Tourmaline	Quartz and feldspar occur as fine to medium sand sized subangular to subrounded clasts floating over ferruginous matrix. Opaque patches are seen associated with ferruginous matrix. Lithic fragments are seen present as fine to medium subrounded clasts of quartzitic and cherty nature. Limonite is seen associated with and possibly developing after alterations of ferruginous matrix and causing high cavity and porosity in the specimen. Sericite occurs as very fine disseminated flakes. Very fine dirty



ANNEXURE-IV-A/6

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
						clay minerals are seen developing after feldspar alterations. Tourmaline is noted as fine prismatic grains in accessories. The specimen is an <u>arkosic wacke/ ferruginous sand stone.</u>
10	SMRPT/10	It is a pale brownish coloured very fine-grained massive rock showing reddish stains in areas.	Collophane Ferruginous matter/ Opaques Clay minerals Quartz Feldspar	Calcite Dahllite Sericite	Zeolite	The specimen is mainly made up of very fine amorphous mixture of collophane, ferruginous matter and clay minerals. Clay minerals are also seen present as very fine disseminated flakes showing crude alignment Ferruginous matter is often seen segregated in thin bands associating patchy opaques with it. Quartz and feldspar are seen present as very fine silt sized disseminated clasts. Calcite has intruded as very fine hairline crisscross fillings. It may also be associated with very fine collophane rich matrix. Dahllite is noted as very fine subrounded grains and patches in areas. Sericite and zeolite occur as very fine disseminated flakes. The specimen is a <u>collophane rich shale.</u>