

### DETAILS OF PETROGRAPHIC STUDIES OF BOREHOLE CORE SAMPLES OF ANVARAPAT BLOCK, DISTRICT - LOHARDAGA, JHARKHAND

Sl. No.	Sample Number	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
1	MAP/ P /01	It is a whitish grey coloured weathered and altered rock showing fine to coarse pisolites, reddish/ brownish patches, pores and cavities.	Clay minerals Cliachite Gibbsite	Ferruginous matter Boehmite Opaques	....	Clay minerals are the chief constituting minerals of the specimen, occurring as dark semi-opaque patches throughout the specimen. Cliachite occurs as fine to coarse pisolites, often showing concentric rings and contraction cracks. Gibbsite and boehmite are present as very fine granular aggregates seen replacing cliachite and also occurs as very fine fillings. Reddish/ brownish ferruginous patches and stains are seen present, often being intermixed with clay minerals. Opaques are noted as patches, fillings and as relicts within ferruginous patches. The specimen is a clay rich bauxite.
2	MAP/ P /02	It is reddish brown coloured weathered and altered rock showing fine to coarse pisolites, whitish grey patches, pores and cavities.	Cliachite Gibbsite Opaques Clay minerals	Ferruginous matter Boehmite	....	The specimen is mostly made up of fine to coarse cliachitic pisolites and patches, often showing concentric rings and is being replaced partially or fully by very fine granular aggregates of gibbsite-boehmite. Gibbsite also occurs as very fine to fine cavity fillings comprising very fine to fine prismatic grains and showing comb structure. Opaques occur as medium to coarse patches and patchy fillings associating reddish ferruginous patches and stains. Clayey patches are seen present, mostly in association with cliachite. The specimen is a bauxite.
3	MAP/ P /03	It is a reddish brown coloured weathered and altered rock showing whitish patches, pores, cavities and cavity fillings.	Ferruginous matter Opaques Cliachite	Clay minerals Gibbsite	....	Ferruginous matter occurs as reddish patches and amorphous aggregates throughout the specimen. Opaques are present as patches, patchy fillings and relicts within ferruginous patches. Cliachite occurs as fine to medium pisolites and patches, often associating clayey patches with it. Gibbsite is present as fine pisolites, cavity fillings and as very fine dissemination within cliachitic patches and seen replacing it. The specimen is a bauxite rich laterite.

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			Major >5%	Minor <5%->1%	Accessory <1%	
4	MAP/ P /04	It is a reddish brown coloured weathered and altered rock showing whitish patches, pisolites, pores and cavities.	Gibbsite/ Boehmite Clay minerals Opakes	Ferruginous matter Cliachite	....	Gibbsite/ boehmite occur as fine to moderately coarse patches, pisolites and cavity fillings comprising very fine granular aggregates. Clay minerals occur as dirty patches and fine pisolites in association with bauxite minerals. Opakes occur as medium to coarse patches and patchy fillings associating reddish ferruginous patches and stains. Cliachite is noted as relict patches and pisolites being replaced by gibbsite/ boehmite. The specimen is a bauxite.
5	MAP/ P /05	It is a reddish brown coloured weathered and altered rock showing pores, cavities and cavity fillings.	Ferruginous matter Gibbsite Opakes	Clay minerals Cliachite	....	Ferruginous matter occurs as reddish patches and amorphous aggregates throughout the specimen. Gibbsite is mainly present as thin cavity fillings, comprising very fine to fine prismatic grains showing typical comb structure. It also occurs as very fine dissemination, associating boehmite in areas. Opakes are seen present as patches and patchy relicts within ferruginous patches. Clay minerals occur as dirty patches in association with ferruginous patches in areas. Cliachite is noted as fine pisolites and patches, often being replaced by gibbsite and boehmite. The specimen is a bauxite rich laterite.
6	MAP/ P /06	It is a reddish brown coloured weathered and altered rock showing whitish patches, pisolites, pores and cavities.	Gibbsite Clay minerals Ferruginous matter	Opakes Boehmite Cliachite	....	Gibbsite and boehmite together occur as medium to coarse patches, pisolites and cavity fillings comprising very fine granular and prismatic aggregates. Clayey patches and pisolites are seen present throughout the specimen often stained by reddish ferruginous matter. Ferruginous matter also occurs as reddish patches and amorphous aggregates. Opakes occur as patches and patchy fillings. Cliachite is noted as pisolites and patches, mostly being replaced gibbsite and boehmite. The specimen is a bauxite.

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7	MAP/ P /07	It is a reddish brown coloured weathered and altered rock showing whitish patches, pisolites, pores and cavities.	Opakes Gibbsite Ferruginous matter	Clay minerals	....	Opakes occur as medium to moderately coarse patches and fine pisolites associating reddish ferruginous patches, fillings and stains. Gibbsite occurs as fine pisolites and cavity fillings comprising very fine to fine granular/ subhedral aggregates. Clayey patches are often seen associated with gibbsite. It also occurs as fine pisolites. The specimen is a bauxite rich laterite.
8	MAP/ P /08	It is a reddish brown coloured weathered and altered rock showing whitish patches, pisolites, pores and cavities.	Gibbsite Clay minerals Ferruginous matter	Opakes Cliachite Boehmite	....	Gibbsite and boehmite together occurs as very fine granular aggregates in segregated patches and also occurs as very fine fillings comprising very fine to fine prismatic aggregates with comb structure. Clayey patches and pisolites are seen associated with bauxite minerals. Ferruginous matter is present as reddish patches, often showing relicts of opaque patches within it. Cliachite is noted as fine pisolites and patches. The specimen is a bauxite.
9	MAP/ P /09	It is a reddish brown coloured weathered and altered rock showing medium to fine pisolites, pores and cavities.	Gibbsite Clay minerals Ferruginous matter	Opakes Cliachite Boehmite	....	Gibbsite and boehmite together occurs as medium to moderately coarse segregated patches and fine pisolites comprising very fine to fine granular/ prismatic aggregates. Fine to medium clayey pisolites are common in the specimen surrounded by thin reddish ferruginous rim. Clay minerals are also seen associated with bauxite aggregates. Ferruginous matter is also seen present as reddish patches, fine to very fine pisolites and as amorphous aggregates in association with clayey patches. Opakes occur as fine to medium patches, fillings and as relicts within ferruginous patches. Cliachite is noted as fine to medium pisolites mostly being replaced by gibbsite and boehmite. The specimen is a bauxite.

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10	MAP/ P /10	It is a reddish brown coloured weathered and altered rock showing whitish patches, pisolites, pores and cavities.	Gibbsite Clay minerals Ferruginous matter	Opakes Boehmite	....	Gibbsite occurs as segregated patches, cavity fillings and fine pisolites comprising very fine granular/ prismatic aggregates. Dark semi-opaque clayey patches are seen associated with gibbsite aggregates. It also occurs as fine pisolites. Ferruginous matter occurs as reddish patches and stains over clayey patches. Opakes are seen present as anhedral patches in association with ferruginous patches. Boehmite is noted as very fine granular aggregates in association with gibbsite in areas. The specimen is a bauxite.