

### PETROGRAPHIC STUDY RESULTS, BHARATBAHAL G3 BLOCK

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
1	MBMGP-01 (MBMG-02/ 12.50 – 12.60m)	It is a medium to coarse grained rock showing hypidiomorphic granular texture.	Microcline/ Orthoclase Quartz Diopside/ Augite	Sphene Plagioclase	Sericite Kaolinite	Microcline/ orthoclase occur as medium to coarse subhedral grains showing crypto-perthitic exsolutions. Quartz occurs as anhedral grains and patches. Diopside/ augite are present as medium to fine subhedral prismatic grains. Sphene is seen present as fine wedges. Plagioclase occurs as fine anhedral patches showing myrmekitic intergrowths. Sericite has intruded as very fine fillings cutting across feldspar grains. Kaolinite is noted as very fine dirty particles developing after feldspar alterations. The specimen is <b>aproxene granite (granulite?)</b> .
2	MBMGP-02 (MBMG-02/ 14.20 – 14.30m)	It is a fine to medium grained rock showing schistosity.	Quartz Diopside Scapolite Microcline/ Orthoclase	Calcite Wollastonite Sphene	Tremolite Plagioclase Opaques	Quartz occurs as fine to medium anhedral grains. Diopside is present as fine subhedral to anhedral grains. Scapolite is present as fine to medium subhedral grains. Microcline/ orthoclase are present as medium subhedral grains. Calcite occurs as fine to medium anhedral to subhedral grains. Wollastonite is seen present as fine to medium subhedral grains in association with calcite. Sphene is found present as very fine wedges in dissemination. Tremolite occurs as fine subhedral prismatic grains. Plagioclase is noted as fine anhedral patches showing myrmekitic texture. Opaques occur as very fine to fine anhedral grains in accessories. The specimen is a <b>meta-calc silicate</b> .
3	MBMGP-03 (MBMG-02/ 25.50 –	It is a medium to coarse grained rock showing	Microcline/ Orthoclase Quartz	Rhodonite Sphene Carbonates	Kaolinite Ferruginous matter	Microcline/ orthoclase occur as medium to coarse subhedral grains showing crypto-perthitic exsolutions. Quartz occurs as medium to fine anhedral grains and

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	25.60m)	hypidiomorphic granular texture.	Diopside/ Augite	Plagioclase		lensoidal patches. Diopside/ augite are present as medium to fine subhedral prismatic grains, often clustering in pockets. Rhodonite have intruded as moderately thick vein comprising fine to medium prismatic aggregates and associating carbonate fillings. Sphene is seen present as fine disseminated wedges. Plagioclase occurs as turbid patches being replaced by carbonate fillings and altering to kaolinite. Reddish ferruginous patches and fillings are noted in the specimen. The specimen is a <b><u>pyroxene granite (granulite?)</u></b> .
4	MBMGP-04 (MBMG-02/ 49.50 – 49.60m)	It is a dark blackish grey coloured massive rock showing fine to very fine vein intrusions. It reacts instantly with cold and dilute HCl.	Goethite/ Psilomelane Calcite Quartz	Biotite Ferruginous matter	....	The specimen is made up of coarse to massive patches of goethite/ psilomelane showing colloform texture and associating reddish ferruginous patches and stains. Calcite occurs as fine to very fine criss-cross and dendritic veins throughout the specimen and cutting across goethite/ psilomelane patches. Quartz occurs as fine to very fine subrounded grains, often clustering in pockets. Biotite is seen present as patches in pockets comprising microcrystalline aggregates. The specimen is a <b><u>massive goethite/ psilomelane intruded by calcite veins</u></b> .
5	MBMGP-05 (MBMG-02/ 36.80 – 36.90m)	It is a fine to medium grained rock showing granular texture.	Quartz Clay minerals Biotite Feldspar Calcite	Sphene Opakes Muscovite	Apatite	The specimen is made up of fine to medium subrounded quartz-feldspathic clasts floating over calcite mixed clayey matrix. Biotite is present as flakes and patches comprising micro-crystalline aggregates. Sphene occurs as fine to very fine disseminated wedges. Opakes occur as very fine to fine anhedral to subhedral and

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						<p>skeletal grains. Muscovite is present as fine flakes and flaky aggregates in pockets. Apatite is noted as fine hexagonal grains in accessories.</p> <p>The specimen is a <b><u>meta-arkosicwacke</u></b>.</p>