gummy material. The effect of the antibiotic principle under various conditions reveal it to be stable at room temperature for 15 days, at refrigeration (4° C.) temperature for one month and unstable above 50° C.

The antibiotic spectrum is a narrow one, in the sense that it is active against *Candida albicans* and *Staphylococcus aureus*. Towards the other normal and pathogenic bacterial and fungal cultures tested (Table II), the antibiotic was inactive.

TABLE II
Antibiotic spectrum

Staphylococcus aureus	+	*Salmonella typhosa*	–
Sarcina lutea	–	*Proteus vulgaris*	–
Streptococcus fæcalis	–	*Shigella dysenteriæ*	–
Bacillus subtilis	–	*Candida albicans*	+
Mycobacterium smegmatis	–	*Cryptococcus neoformans*	–
Escherichia coli	–	*Coccidioidis immitis*	–
Klebsiella pneumoniæ	–	*Aspergillus niger*	–

+ → active; – → no activity.

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SCAPOLITE FROM KONDAPALLI

DURING a detailed mineralogical study of the rock types from the hill ranges of Kondapalli, Krishna district, Andhra Pradesh, the writer has observed the common occurrence of scapolite, especially in the basic charnockites and anorthosites. Scapolite is never found as primary crystals in these rocks but always as secondary grains in trace amounts replacing plagioclase; it occurs as small individual grains or in clusters within the plagioclase. The majority of the plagioclase grains show no scapolitization and the extent to which the plagioclase is scapolitized differs from grain to grain even in the same rock. The scapolite has very nearly the same refractive index as the enclosing plagioclase, but it is readily identified by its uniaxial character and greater birefringence. Scapolite is considered to be a common accessory in the granulite facies rocks[1] and the mineral is reported from many charnockitic[2-4] and anorthositic[5,6] terrains of Peninsular India; its occurrence in the rocks of Kondapalli is here reported for the first time.

The scapolite occurring in the anorthositic norite (55) from Kondapalli is studied in detail. The plagioclase feldspar in this rock is bytownite with composition $Or_{1.99}$ $Ab_{17.79}$ $An_{80.21}$ and scapolitization of the mineral is rather common. Uncorrected electron microprobe measurements (with a possible maximum error of 10%) indicated that the scapolite contains 17% CaO, 30% Al_2O_3, 47% SiO_2 and 0·4% Cl, while the plagioclase has 16% CaO (15·84% CaO by chemical analysis), 35% Al_2O_3 and 47% SiO_2. These results indicate that CaO and SiO_2 are nearly the same in both the minerals, but Al_2O_3 is more in plagioclase and less in scapolite and that the scapolite is a mizzonite with more than 70% meionite. The slightly higher CaO in scapolite when compared to that of the enclosed plagioclase is not without significance (*see* Marakushev,[7] 1964). The occurrence of calcite and quartz in the anorthositic norite under study may be of some paragenetic importance.

The charnockites and anorthosites of Kondapalli have been subjected to the granulite facies metamorphism, but the Kondapalli scapolite is not a primary product of this metamorphism unlike the scapolite reported in some rocks of the Madras State.[2,4] On the other hand the Kondapalli scapolite is considered as an alteration product of plagioclase. Knowledge of the plagioclase-scapolite system in general is deficient and the genesis of scapolites is still little understood.[1] Shaw[8] has listed the main parageneses of scapolite; the principal requirement for scapolite formation according to him is diminution of $p\text{-}H_2O$ and concomitant increase in one or all of $p\text{-}CO_2$, $p\text{-}Cl_2$ and $p\text{-}SO_3$. The introduction of such a fugitive constituent as Cl in not inconsiderable amount (0·4%) during the formation of mizzzonite from bytownite in the Kondapalli anorthositic norite seems to be rather significant. The presence of scapolite (and calcite) in the Kondapalli rocks is taken as an evidence of a certain volatile influx, but this influx might have taken place subsequent to the major granulite facies metamorphism. This secondary mineralization may probably be explained, as suggested by Quensel[9] for the Varberg rocks of Sweden, "by a casual and insignificant addition of volatiles during a subsequent upheaval to higher positions within the crust of the earth".

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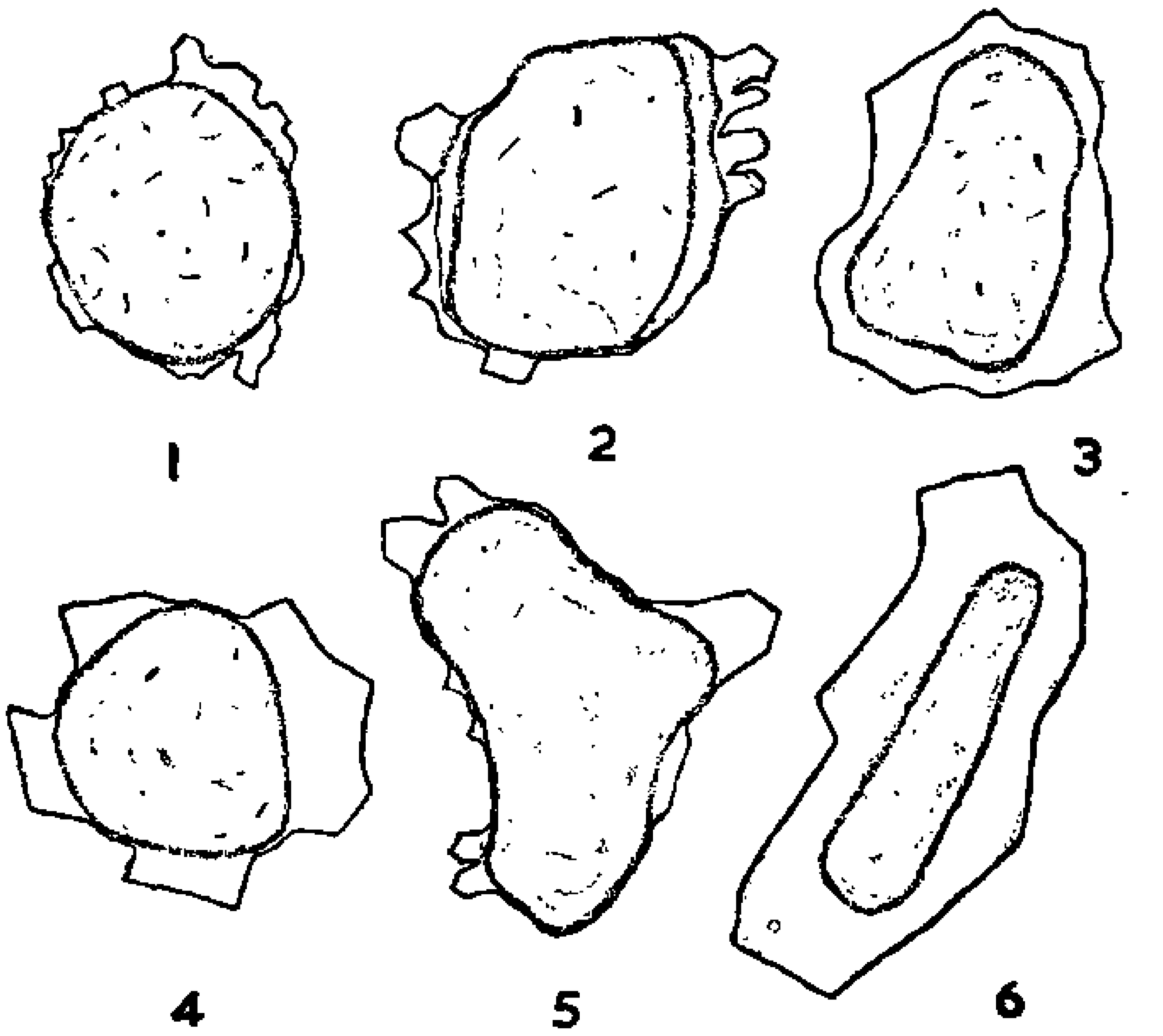
AUTHIGENIC QUARTZ FROM THE LOWER KALADGI SANDSTONES, SALAPUR, BELGAUM DISTRICT MYSORE STATE

THE Lower Kaladgi (Pre-Cambrian) formations consisting of sandstones and shales are exposed around Salapur in the form of an anticline, where the beds strike W.N.W.-E.S.E., dipping 25° North and 10° South. A detailed study of the sandstones revealed the occurrence of quartz grains with authigenic growths. The sandstones are fairly hard and compact exhibiting pink and purple colours. They are mostly made up of medium-grained quartz and exhibit earthy lustre. Thin layers of chert, jasper and quartz pebbles occur along the bedding planes as intercalations.

Under the microscope, the quartz grains are sub-rounded to well-rounded (Fig. 1) indicating a long period of transportation. They also consist of randomly distributed sub-microscopic inclusions and in a few grains the presence of acicular inclusions of rutile has occasionally given rise to pseudo-cleavages. Under crossed nicols, the thin sections disclose that the detrital grains are cemented by siliceous matrix, thus converting the whole mass into a dense rock. The cementing material can be distinguished from the detrital quartz grains by being clear and pellucid.

This cementing material has given rise to authigenic growths around the detrital quartz grains which invariably contain dusty opaque inclusions. Usually fringes of ferruginous impurities occur bordering the quartz grains as dust rings by means of which they can be easily distinguished from the secondary enlargements. The authigenic growths occur mostly in the form of overgrowths and rarely as outgrowths (Fig. 2). Majority of the overgrowths are in the form of rims and in irregular patterns (Fig. 3) around the cores. Some authigenic growths are scaly and appear as tabular envelopes (Fig. 4), while a few attain pyramidal outline (Fig. 5). Each overgrowth is in optical continuity with the detrital grain upon which it develops. It is observed that the authigenic growths are well-developed where there are intergranular spaces and partially developed where grains are concentrated. Usually the overgrowths are smaller than the nuclei, but a few are larger than the host grains (Fig. 6).



FIGS. 1-6. Camera lucida drawings. Fig. 1. Well-rounded detrital quartz with overgrowth, × 42. Fig. 2. Quartz grain showing outgrowth as well as overgrowth, × 75. Fig. 3. Detrital quartz with irregular secondary enlargement. × 75. Fig. 4. Tabular envelope around the parental quartz, × 75. Fig. 5. Overgrowths showing pyramidal outline, × 145. Fig. 6. Secondary enlargement completely enclosing the parental grain. × 150.

The maximum and minimum sizes of the parental grains range from 1·12 × 0·71 mm., to 0·12 × 0·09 mm., whereas overgrowths vary in size from 0·49 × 0·43 mm., to 0·031 × 0·15 mm.

A few thin sections of sandstone are planimetrically analysed by using Shand's integrating stage in order to know the relative proportion of the detrital grains and authigenic