

STOREYS CREEK

This prospect is situated two miles south of Rossarden, on the banks of Storeys Creek. It is best reached by travelling by car from Avoca to the outskirts of Rossarden and then following an old water race along the eastern bank of Storeys Creek until it leaves the Creek and runs over a small saddle. A diagonal path is then made across country to the Creek. The countryside in this area is easily traversed and practically bare of undergrowth.

The only rock outcropping in the area is granite. In Mr. Hughes' lease it is well exposed along the Creek banks. The granite is mainly coarse grained with prominent orthoclase feldspar crystals giving the rock a reddish appearance. Plagioclase feldspar is subordinate and in places is altering to green pinite. Biotite is very sparse and sometimes the quartz has a dark appearance. In places however is a fine-grained variety of granite with occasional xenoliths. In the Creek bed the granite contains a series of narrow quartz veins striking at 25°.

The prospect is situated within fifty feet of and on the western bank of Storeys Creek. Here the Creek, which falls very rapidly between Rossarden and Avoca, is 700 feet above the latter town and 1350 feet above sea-level. Early prospectors had put a small cut into the hill side and pieces of rock on the dump show plentiful galena and sphalerite. A thin section of the rock has been cut by G. Everard who describes it as follows:-

"Coarse grained greenish gray rock, exhibiting light and dark coloured, subhedral quartz in a siliceous groundmass. Appreciable amounts of galena and sphalerite can be seen.

The quartz occurs as irregular grains somewhat corroded and embayed, and in larger masses with wavy extinction, and micaceous inclusions lineally arranged. These larger masses appear to be altered feldspar in which a microperthitic structure is preserved. In the granular quartz hexagonal outlines of original crystals are preserved as lines of vesicles. There may be many parallel lines of vesicles. Minute hexagonal crystals are common in these grains, and the extinction of the grains is wavy on a very minute scale. All the quartz contains minute vesicles in lines and patches. The vesicles are liquid filled, with mobile bubbles.

Mica is pale greenish brown and is pleochroic in the larger plates; but most of it is in small masses of plates and in radiating structures. Reaction rims and aureoles of mica about quartz are common.

Galena and sphalerite may enclose small hexagons of clear quartz.

There are a few veins of quartz.

Zircon crystals are present, but rare.

The whole rock is disseminated with inclusions too minute for identification.

The rock is a greisen showing alteration silicification and recrystallisation".

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Not very much of the greisen can be seen in outcrop. Three samples were taken; at the pit (1) twelve feet south-east (11) and 30 feet south-east, (111) of the pit. Jointing is well developed at this particular locality and a main direction is 340° with a dip to the west at 80° . Greisenisation has apparently taken place along these joint planes. The lateral extent of this cannot be established without uncovering the bed rock but a certain limitation can already be seen by the normal granite outcropping 50 feet to the east in Storeys Creek and 20 feet to the west up the hill. A few hundred feet to the south along the line of strike in a big cliff face there is no sign of greisenisation. 43

The average count of the granites in this locality is 250 to 300 c.p.m. as registered on a PRM 200 Counter. At locality 1, the count was 800, at 11, 1100 and at 111, 800 c.p.m. A chip sample from area 11 was forwarded to the South Australian Department of Mines for radiometric assay and identification of the uranium mineral. The result showed only 0.03% U_3O_8 and a report stated.

"This sample was found to be a sericitized quartzofelspathic granular rock containing sphalerite and galena in considerable amounts.

Sphalerite contains oriented exsolution lamellae of chalcopyrite.

Sections of the rock were autoradiographed but no evidence of radioactivity was recorded in the specimens examined. The rock was shown to have weak radioactivity by radiometric assay, but the traces of mineral causing this are not readily isolated."

This result is very disappointing, and on the result of the sample sent does not seem to encourage any further work on this prospect. On the other hand, the area is mineralised and, in Tasmania, the localities showing greisenisation of the granite, have proved the most favourable for uranium mineralisation.

I would therefore suggest that if any further work is to be done, it should be of limited extent and aim at exposing by means of one trench, a section of bedrock across the greisenisation (that is on a bearing of 70°) in the vicinity of sample 11.

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