

deposits that range from thin crusts to a complete filling of the voids (Dawson, 1985).

In British Columbia stratabound cavity filling or replacement type deposits are almost wholly restricted to the eastern Rocky Mountains rocks in strata of primarily Proterozoic to Devonian age. Discordant vein type deposits occur west of the Rocky Mountain Trench in rocks of Proterozoic to Silurian age. Essentially all of the above deposit types occur within the Omineca and Rocky Mountain Fold and Thrust Belts.

For purposes of this report the author has attempted to distinguish between stratabound occurrences and discordant vein type deposits. Deposits and occurrences included in the first category are typically cavity filling and replacement types and restricted to specific stratigraphic horizons. Post-mineralization structures present in these deposits may give them the appearance of being discordant or of a vein nature.

STRATABOUND DEPOSITS: (Cavity Filling and Replacement Types)

SOUTHEASTERN BRITISH COLUMBIA

Several stratabound lead-zinc-barite deposits occur in southeastern British Columbia (Figure 25) within a major structure known as the Purcell Anticlinorium. This is a broad north-plunging structure in Helikian to Hadrynian age rocks that

occupies the region between the Rocky Mountain Fold and Thrust Belt and the Kootenay Arc. A number of major faults transect the anticlinorium and may have controlled deposition of the sediments and localization of the mineral deposits. The majority of barite deposits in this area of the province occur in the Proterozoic Mount Nelson Formation and underlying Dutch Creek Formation or its stratigraphic equivalents (Figure 26). The Middle to Upper Cambrian Jubilee Formation is also host to a number of barite occurrences.

The Mount Nelson Formation consists of a prominent basal quartzite overlain by a thick succession of dolomite and interlayered argillite. It is underlain by up to 1000 metres of dark grey argillite and slate of the upper Dutch Creek Formation and is unconformably overlain by the Toby Formation conglomerate. Deposits present in the Mount Nelson Formation, such as the Mineral King Mine, appear to have been deformed along the enclosing strata. Sulphide deposits generally occur in structurally elongated, irregular lenses either in dolomite or in barite gangue (Hoy, 1980).

The Jubilee Formation consists of a thick succession of massive to thin bedded dolomite and limestone. It overlies argillaceous dolomite and limestone, argillite and argillaceous quartzite of the Eager Formation and quartzite of the Cranbrook Formation. It is overlain by dark shale and argillaceous limestone of the McKay Group. During Jubilee time shallow-water

platformal carbonates developed on the Purcell arch. This structure was intermittently emergent during the Lower Paleozoic. In the region of the lead-zinc-barite replacement deposits the upper part of the Jubilee Formation comprises a carbonate shoal complex that developed west of a deeper-water shale basin (Hoy, 1980). Breccia zones related to karst development in reefs appear to be the local ore control.

Mineral King (36)

Minfile Number: 082KSE 001

Latitude: 50°20'30" Longitude: 116°25'42" NTS: 82K/8W

The Mineral King deposit is located 45 kilometres by road west of Invermere on the Toby Creek side of the ridge between Jumbo and Toby Creeks (Figure 25). Replacement type mineralization consisting of galena, sphalerite, barite and pyrite was discovered in 1898. The property was explored by two short adits and surface trenches between 1915 and 1922.

Base metal production began in 1954 and continued to 1967 during which time 200,000 tonnes grading 6 per cent zinc and 0.5 ounces per ton silver were produced. Production of barite by Sheep Creek Mines Limited began in 1959 and during the period 1959 to 1967 produced 22,600 tonnes of barite. Mountain Minerals assumed control of the mine in 1968 and began producing barite from the tailings pond, estimated to contain 254,000 tonnes of recoverable barite (Dawson, 1985). During the period 1971 to 1974 44,000 tonnes of barite were produced from the tailings.