

feldspar megacrystic granite commonly with xenoliths of diorite, in places comprising up to 40 per cent. The vein strikes about 055 degrees, dips 70 degrees southeast and varies in width up to 0.6 metre, averaging 0.3 metre.

The distribution of sulphide and gangue minerals indicates a vertical zoning pattern within the vein system. Quartz decreases downward into a more carbonate-rich siderite and calcite mineralogy. Sulphide assemblages also change from galena and tetrahedrite-rich upper sections to more sphalerite-rich at depth.

At the Westmont property the main lode strikes 060 degrees, dips 75 degrees southeast, averages 1.2 metres in width and comprises a zone of brecciated and silicified country rock. Sulphide mineralogy includes galena, sphalerite, pyrite, tetrahedrite and silver sulphosalts.

## PROSPECTS AND SHOWINGS IN KOKANEE GLACIER PARK

Mineral occurrences in the park are described below and plotted on Map 4. Of the 14 mineral occurrences, Al and Silver Ranch contain elevated gold values in grab sample assays.

The Al (82FNW253) showing is located approximately 1 kilometre south of Wheeler Lake in potassium-feldspar porphyritic granite. This is a relatively recent discovery which has received only cursory trenching and soil sampling. Elevated gold values have been obtained from grab sampling in sloughed trenches. The quartz veins are less than 5 centimetres thick, base metal-rich and occupy a northerly trending argillic-altered zone 15 centimeters wide. Vein mineralogy comprises galena, sphalerite and pyrite. Grab sample analyses are listed in Table 5. ←

The Silver Ranch vein (82FNW215) occupies a sheared and faulted northwest-trending joint set located on the east flank of Boomerang Mountain. Mineralization is covered by crown grants, over which a hand trenching and sampling program was completed in 1987. The quartz vein is up to 1 metre thick and occupies a 5-metre-wide clay and limonite-altered zone in potassium feldspar porphyritic granite. Mineralization comprises coarse-grained pyrite, intergrown galena and sphalerite and silver minerals, grab sample analyses are listed in Table 5.

Four additional mineral occurrences are distributed along regional structures parallel to the Silver Ranch vein system. These include the Hudson Bay (82FNW123), Silver Crest (82FNW124), Soldier Boy (82FNW125) and Gold Galena (82FNW177). Mineralization comprises galena, sphalerite, pyrite and various silver minerals, in quartz veins (generally <15

centimeters wide) and flanked by limonitic and argillic-altered wallrocks.

The Joker (82FNW115) is located on the east side of Joker Lake at the head of Keen Creek. The crown grants cover workings begun before 1900 and include four or more adits (now caved) which tested quartz veins containing base and precious metals. A lower vein at the southeast end of the lowest Joker Lake strikes 055 degrees, dips 85 degrees southeast and carries traces of disseminated galena and tetrahedrite. At the uppermost lake another vein striking 015 degrees, dips 60 degrees southeast contains disseminated pyrite, galena, sphalerite and chalcopyrite. The veins are narrow (less than 10 centimetres wide) hosted by potassium-feldspar porphyritic granite.

The Barnett (82FNW126) crown grant is situated 1 kilometre north of McGuire Creek on the east side of Mount Ruppel. The vein has been tested by three short exploratory adits and over 450 metres of surface stripping. The quartz vein follows a flat sheared and altered joint plane in potassium-feldspar porphyritic granite. Vein mineralogy comprises pyrite, galena and tetrahedrite in massive, banded and drusy varieties of quartz. A 75-centimetre argillic and sericitic alteration envelope contains sparse disseminated sulphides that reportedly carry gold values (Minister of Mines Annual Report, 1922).

The Black Eagle (82FNW239) and King Solomon (a second occurrence of the same name; 082FNW242) prospects are situated at the head of Woodbury Creek. Neither could be located during 1987 fieldwork. The King Solomon is reported to have produced 32 tonnes of ore which yielded 1698 kilograms lead and 514 kilograms zinc (Minister of Mines Annual Report, 1947).

## GALENA LEAD ISOTOPE CHARACTERISTICS OF MINERALIZATION

The following discussion of new galena lead isotope data from 22 mineral deposits located in and around Kokanee Glacier Provincial Park is condensed from Logan *et al.* (1988). The study was undertaken to determine lead isotope characteristics of a variety of mineral occurrences. Deposits were selected on the basis of past production, mineralogy and vein orientation, to ensure all types were represented. Lead isotope ratios cluster in three separate groups. The groupings suggest three separate lead sources; two show mixing with Nelson batholith leads. The majority of the deposits have lead signatures close to Nelson batholith potassium-feldspar leads and a few have old nonradiogenic leads. Lead isotope ratios, when

In the AINSWORTH MINING CAMP a significant new find has been made by E.H. HELGREN and JAMES KENNEDY who have a new Ag-Pb-Zn vein at WHEELER LAKE (122) west of Ainsworth. The vein structure is reported to be 150 metres long and .3 to 1.5 metres wide. A grab sample yielded 480 grams of silver per tonne.

In the BOUNDARY MINING CAMP, CONSOLIDATED BOUNDARY EXPLORATION and GRAND FORKS MINES LTD. have drilled a significant hole at the WINNIPEG MINE (123). Massive sulphides were encountered which are reported to have yielded good gold values. Other drilling has been conducted on the Crown, Golden Crown Hole and Prominent properties. Total drilling exceeds 2 400 metres. KETTLE RIVER RESOURCES continued work near Greenwood on the properties joint ventured with NORANDA EXPLORATION COMPANY LTD., particularly SYLVESTER K (124). Work done included four diamond drill holes totalling 290 metres, airborne and ground geophysics, geochemistry, and detailed geological mapping. A similar program is planned for 1985. Large precious metal deposits continue to be explored.



PHOTO 7 - Sylvester K Deposit.  
Siltite beds in massive sulphides.  
Drill indicated reserves 45 to 90 000  
tonnes grading 2.05 grams of gold per  
tonne.

On the SKYLARK CLAIM (128) east of Greenwood, SKYLARK RESOURCES and VISCOUNT RESOURCES LTD. have a new silver bearing shear zone in granite that is 97 metres long, and 2.6 metres wide, and grades 198 grams of silver per tonne. Diamond drilling is in progress.