

# Kettle River Resources

"It's usually easier to find a mine where there used to be one," says an old adage in the mining industry. Brian Fagan and George Stewart, of Kettle River Resources Ltd. believe this implicitly and this belief is being borne out in exciting activity at the Kettle River Greenwood development.

They're into diamond drilling on two gold-bearing massive sulphide zones on the Sylvester K property where high grade gold values have been discovered. Mineralization in the zone occurs in several modes; stratiform massive sulphide pyrite-pyrrhotite layers, fracture-controlled stockwork pyrite, and disseminated pyrite.

The company is also in a joint venture with New Frontier Petroleum Corp. and Fairmont Gas and Oil Corp. to explore the combined holdings of Kettle River and New Frontier in the Summit Camp, about three miles north of Phoenix. The large block of claims includes three important past producing mines — the B.C. Mine, the Oro Denoro and the Emma — and total production to date from the camp is 506,000 tons of copper, gold and silver ore.

Mapping by Kettle River geologists has demonstrated that the favourable rocks which host the Sylvester K and Phoenix deposits are present in several places on the joint venture property. In addition, another 11 sulphide occurrences with gold, copper and silver values are known and a number of geophysical (EM) conductors have been located.

All of this activity is in the Greenwood area about 40 miles west of Trail, bounded by Midway on the west, Grand Forks on the east and the United States border on the south. It is a large area, measuring some 16 by 20 miles.

It's a fascinating piece of real estate with the topography running moderate to steep along the valleys with a few precipitous slopes. It has the advantage of generally mild winters which permit exploration activities such as drilling, trenching and some geophysical surveys during the worst of winter.

Kettle's main property under exploration is under option from Noranda, near the center of the camp. Kettle has the right to earn a 49 per cent interest in the large block of claims which formed the old Granby Mines Phoenix property. Kettle River has also acquired huge acreages on several sides of the Phoenix property, adjacent to the Grenoble/Teck Corp. property, and northwest of Midway.

In the past, major mineral production came from deposits with values in gold, silver and copper. The eight largest mines produced more than 32 million tons of ore. The Phoenix Group was the largest operation and produced half a billion pounds of copper, 1.1 million ounces of gold and 6.5 million ounces of silver from several different ore bodies.

Phoenix was in and out of production for more than 70 years. At the start, the ore was shipped to a smelter at Grand Forks. However, after the First World War the declining price of copper, combined with a shortage of coal (if you can feature that) forced closure of the mines and the smelter. In the 1930s, gold and silver ore was produced from several properties in the Phoenix camp and shipped to the Cominco smelter.

There was a resurgence in 1955 when the Granby company again began production at Phoenix from an enormous open pit from which more than 100 million tons of ore and waste were mined. The mine was in operation until 1976 and the mill until 1978.

Thus there is plenty of history in the area where the productive deposits were discovered before the turn of the century by the old prospectors. Some 85 per cent of the favourable ground is covered by overburden (no outcrop) and is heavily treed. Thus the potential for new discoveries using modern concepts and technology appears to be excellent.

The area has three main types of mineralization. There is high grade gold and silver ores in quartz veins, probably of tertiary (young) age. The second includes sulphide deposits associated with certain intrusive rocks and carrying gold and copper values. Deposits of the third type, by far the most important, are large sulphide deposits, like Phoenix, in sedimentary and volcanic rocks with values in gold, silver and copper.

Many of these deposits have suffered extreme metamorphism and have been



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remobilized and reformed as skarn deposits. However, the genesis of the sulphide bodies is now believed to have been by volcanogenic processes.

The implication of this re-interpretation is that potential exists for the discovery of

large tonnages of gold, silver, copper and zinc mineralization. The Kettle River discovery was based on the volcanogenic concept and the entire camp is being revived. Really, every property in the Greenwood area must be re-evaluated in light of the new discovery.

Historically, mining operations concentrated on developing economically exploitable copper deposits. By-product gold and silver values were recovered, but, in general, little precious-metal oriented exploration or development was carried out. Kettle River has determined that gold-bearing mineralization exists on the Phoenix claims without accompanying high copper values. Thus exploration for this type of gold mineralization is being aggressively pursued.

Meanwhile, all the data accumulated by the former operators, Granby Mining Co., is being compiled and re-evaluated. All known mineral deposits are being re-examined in the context of current geological concepts.

This isn't an original idea, however. The Phoenix camp was re-evaluated in this way 25 years ago and the resulting discoveries equalled previous mine production. So, looking for a mine where there used to be one appears to be the way to go. It worked for Kettle River.

**Mac Roberts**

## KETTLE RIVER RESOURCES LTD.

### ASSAY RESULT MAP FROM CURRENT TRENCHING ON THE SYLVESTER PROPERTY

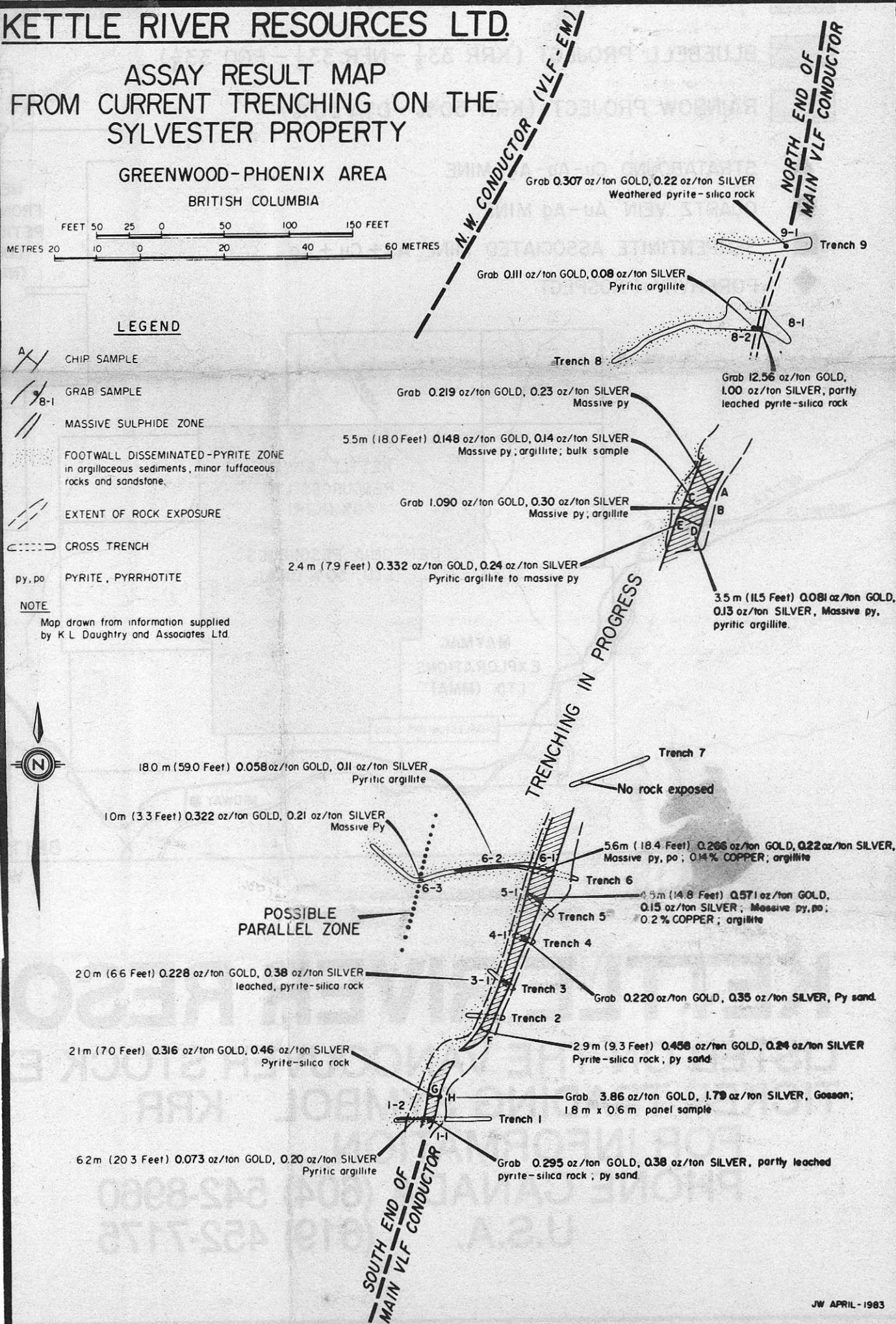
GREENWOOD-PHOENIX AREA  
BRITISH COLUMBIA

FEET 50 25 0 50 100 150 FEET  
METRES 20 10 0 20 40 60 METRES

#### LEGEND

- CHIP SAMPLE
- GRAB SAMPLE
- MASSIVE SULPHIDE ZONE
- FOOTWALL DISSEMINATED-PYRITE ZONE  
in argillaceous sediments, minor tuffaceous  
rocks and sandstone.
- EXTENT OF ROCK EXPOSURE
- CROSS TRENCH
- py, po PYRITE, PYRRHOTITE

NOTE  
Map drawn from information supplied  
by K L Dougherty and Associates Ltd.



JW APRIL-1983