

427

KENNCO EXPLORATIONS, (WESTERN) LIMITED  
REPORT ON GEOLOGICAL SURVEY  
Red No. 1 Claim Group  
Red Claims No.'s 1, 2, 3, 4, 5, 6,  
Three miles south<sup>west</sup> of town of Alice Arm  
Alice Arm Area  
Skeena Mining Division, B. C.  
55° 129° SW 103 P/5E  
By: R. W. Stevenson July 22 to 25, 1962

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REPORT

ON

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Three miles southeast of town of Alice Arm  
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British Columbia

55° 129° SW

By

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MAP

Plate No. 1

Geology

1" = 400'

 <b>Department of Mines and Petroleum Resources ASSESSMENT REPORT</b> NO. <u>427</u> MAP.....
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DISTRIBUTION OF WORK

<u>Claim Group</u>	<u>Claim</u>	<u>Record No.</u>	<u>Distribution of Work</u>	<u>Years Work Claimed</u>
Red No.1	Red No.1	19993	111.50	1
	Red No.2	19994	150.00	1
	Red No.3	19995	150.00	1
	Red No.4	19996	110.00	1
	Red No.5	19997	100.00	1
	Red No.6	19998	<u>0.00</u>	<u>1</u>
			621.50	6

## INTRODUCTION

The claim group discussed in this report is on the north shore of Alice Arm, British Columbia. The exploration work was done on these claims during the period July 22nd to July 25th, 1962 and consisted of detailed geological mapping. The geological survey was done by R. W. Stevenson, with assistance from T. Treasure.

## LOCATION AND ACCESS

The property is located at Latitude 55°28'N, Longitude 129°34'W. It is about one mile north of Alice Arm, and about three miles southwest of the town of Alice Arm, British Columbia. Elevation ranges from 1100 feet to 2200 feet a.s.l. The claims are on the side of the valley of Alice Arm. The north boundary of the claims is near a narrow area of tableland. Toward the south, slopes are locally very steep, although the general overall gradient is only about 20°. The forest cover is generally cedar, with local areas of spruce. Underbrush is dense, but there are numerous small open swamps.

Access from the shore of Alice Arm was explored prior to the time the claims were staked, and was found to be almost impossible. The area between the claims and the seashore was burned over some years ago. It has regrown very densely with spruce and cedar, and the old trail up Tidewater Creek is all but obliterated. There are numerous small open swamps in the claim area. These give access to the claims by helicopter. By this means the geologist is set out at the start of his working area, and picked up at a different location at the end of the day. Thus all travelling time is spent on geological traverses. This greatly speeded the progress of the work. There is a convenient base and gasoline supply for the helicopter in the town of Alice Arm.

### FIELD PROCEDURES

The cost of cutting picket lines would have been extremely high, because of the dense underbrush and locally rugged topography. The government air photos were not sufficiently large scale to allow detailed mapping. Therefore, the outcrops were located by careful pace and compass work, and "tied in" to topographic features such as main streams and the larger ponds and swamps. A tracing of the air photo drainage was then enlarged to a scale of 1" = 400'. This was used as a base for compiling the field maps which were originally done at a scale of 1" = 400'. Scale on the air photos was considered to be uniform because only the near-center portion of one photo was used.

### GEOLOGY

A map of the geology is shown on Plate No. 1. Outcrop is fairly continuous along the banks of Tidewater Creek. It often forms cliffs over 100 feet high. On the north half of the claim group, outcrop is fairly plentiful. A little occurs along well exposed cliff faces, but most occurs as moss covered mounds. Sufficient moss could usually be stripped off to reveal the rock type and at least some information concerning contact relationships. On the south half of the claim group a change in slope and apparent deeper overburden have made outcrops relatively scarce except in the valley of Tidewater Creek.

The rocks underlying the Red Claim Group consist of tuffs and sediments which have been intruded by a small stock of leuco-granite porphyry. A hornfels zone extends around the stock, and varies in width from a few tens of feet to over 400 feet. There are also several diabase dykes and one intrusive andesite dyke.

The leuco-granite porphyry contains phenocrysts of quartz and white feldspar. These generally make up 50% to 65% of the rock. The phenocrysts are generally similar in size with a maximum of about 2/10". The groundmass varies from a fine-grained dense white mass near the intrusive margins, to a fairly equigranular matrix away from the margins. In the granite

porphyry with the chilled matrix, the phenocrysts stand out very clearly with only casual inspection. Close inspection of the rock with the more granular groundmass, however, reveals that the phenocrysts remain about the same size; whereas the groundmass becomes an aplitic mixture of quartz and feldspar with a few chloritized plates of biotite. Thin section work indicates that the phenocrysts are 40% perthitic microcline, 35% plagioclase (An6), and 25% quartz. The groundmass is 50% quartz, 24% microcline, 24% plagioclase, and 2% biotite.

The sediments are composed mostly of tuffs and pyritic carbonaceous phyllite. The tuffs are medium grained and mostly of dacitic composition. The phyllite is a dense black rock with a partly conchoidal fracture. It contains finely disseminated pyrite, which is streaked out parallel to the direction of poorly developed schistosity. The sediments generally show very little banding; however, a general N40°E trend can be seen on the air photo and in a lake one-half mile northeast of the claims. Two strike determinations taken near the west end of the stock indicate some distortion of bedding adjacent to the stock. Where noted, the sediments have a south dip.

A hornfels zone has developed around the margin of the stock. The hornfels is a dark reddish-brown rock, characterized by the development of very fine plates of mica. There also appears to have been some addition of silica. The width of the zone varies from a few tens of feet to over four hundred feet. Its width may be partly related to the shape of the stock at depth, but it is also a function of the type of rock adjacent to the intrusive. The zone is narrowest where the carbonaceous phyllite is the wallrock, and in one outcrop about 15 feet from the contact, a small pod of phyllite was unaltered even though the surrounding rock was hornfelsed. In one outcrop on the north boundary of the stock, disseminated pyrite is streaked through the hornfels in a manner identical to its occurrence in nearby phyllite. In the latter outcrop, some of the less carbonaceous rock is slightly hornfelsed. Therefore, the pyrite in the hornfels is thought to be of sedimentary origin, as are the pyrite and carbonaceous matter in the phyllite.

Two diabase dykes were noted in the central part of the stock. One dyke is at least 35 feet wide. They both have a north-south strike. The margin of the more northerly dyke is only poorly exposed, but it would appear to be younger than the granite porphyry. In the bed of Tidewater Creek, near the south contact of

the stock, an andesite dyke intrudes the granite porphyry.

The leuco-granite porphyry stock is about 2000 feet long and varies in width from a few hundred feet throughout the west half to about 1100 feet at the east end. It has a general northeast by east trend, and appears to be partly concordant with the regional trend of the sediments. It does not appear to have been strongly fractured, except perhaps near the north central contact where there is a local development of numerous barren milky quartz veins. The contact of the stock with the hornfelsed sediments is not well exposed except in the valley of Tidewater Creek. There, the intrusive underlies the sediment for about 50 feet at the north contact, and overlies the sediment for about 100 feet at the south contact. However, because of the irregular nature of the contact, this is not considered proof of any regional plunge to the stock. The stock is exposed through a vertical range of about 350 feet, without significant change in texture or composition.

Vancouver, B.C.

July 30, 1962.

R. W. Stevenson  
R. W. Stevenson



N astr



Red No-1

Red No-2

Red No-3

Red No-6

Red No-5

Red No-4

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 427 MAP 1

LEGEND

Intrusive Andesite  
Diabase Dyke  
Leuco-granite Porphyry  
Hornfels  
Sediments & Tuffs



pyrite p  
quartzvein q.v.

MI

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R.W. Stevenson

KENCO EXPLORATIONS (WESTERN) LIMITED

Alice Arm Area  
Skeena Mining Division, B.C.  
Red Claim Group No.1  
Red Claims 1 to 6

GEOLOGY

DATE: July 30, 1961

DRAWN BY: R.W.S

PLATE NO. 1

REVISED BY

DATE

SCALE:

1 inch = 400 feet