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RANGER

166 (1986)

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ASSESSMENT REPORT
ON THE RANGER PROPERTY
NEAR GOLDBRIDGE, B.C.

Lillooet Mining Division
N.T.S. 92-J-15-W
Lat. 50 50 N. Long. 122 45 W.

BRADFORD J. COOKE
COOKE GEOLOGICAL CONSULTANTS LTD.

APRIL 11, 1986

SUMMARY

The Ranger property occurs in the Bridge River district, east of the main Eralorne-Pioneer belt of Triassic volcanic and sedimentary rocks. It is underlain by basaltic volcanics and cherty sediments of the Triassic Bridge River Group, intruded by porphyry dikes, Bendor diorite and granodiorite of Tertiary age, and mineralized along narrow shears near intrusive and stratigraphic contacts.

Some 90 talus samples were collected over 1.35 miles at 330 foot intervals along two reconnaissance lines extending southwest and southeast from the North Ridge zone. No significant anomalies were discovered in Au, Ag, As, Sb, Pb and Zn.

A total of 9 dynamite trenches were blasted in the North Ridge zone to follow up soil anomalies containing up to 17,600 ppb Au and 5.3 ppm Ag from Newmont's work. Only 2 trenches produced gold values, namely 0.028 oz/ton Au over 22.3 feet (TR3) and 0.013 oz/ton Au over 3.3 feet (TR4).

The Adit and Saddle zones remain to be systematically trenched and sampled. However, the North Ridge and East Ridge zones require no further work.

Talus cover in the Adit and Saddle zones means that a portable backhoe is required to expose and explore the veins. Any drilling will have to be carried out by a small, transportable drill, using helicopter support.

A two phase, CA \$60,000 program is recommended to explore the Ranger property. Phase 1, a continuation of surface work started in 1985, includes backhoe trenching at a cost of CA \$15,000 over a two week period. Phase 2, contingent upon the successful completion of Phase 1, involves diamond drilling from surface, at a cost of CA \$45,000 over a one month period.

Phase 1 surface exploration calls for backhoe trenching, rock sampling and geological mapping in the Adit and Saddle zones to extend the known veins and discover new veins. A helicopter-supported camp will utilize the Kubota KH35 excavator, and possibly dynamite, to expose and explore the veins.

Phase 2 diamond drilling encompasses 1,000 feet in 5 holes to test the Ranger and other veins at 165 foot intervals along strike and down dip. A helicopter-supported camp would make use of the JK Smit 300 drill, or BBS-15 drill, to drill off the veins.

INTRODUCTION

Purpose and Scope

The purpose of this document is to report on assessment work carried out on the Ranger property between September and October, 1985. Included in this report are the results of talus sampling, and dynamite trenching, but not geological mapping or soil sampling, which were covered in an earlier report (Turner 1985).

Location and Access

Ranger property is located approximately 7 kilometres east-southeast of Goldbridge and 180 kilometres north-northeast of Vancouver in southwestern British Columbia (Figure 1). Access to the property is by automobile from Vancouver, 145 kilometres east on Highway 1 to Hope, 225 kilometres north on Highways 1 and 12 to Lillooet, and 100 kilometres west on gravel road towards Goldbridge. Helicopters are available in Lillooet, 65 kilometres to the east, and Pemberton, 60 kilometres to the south, for commuting to the claims from Goldbridge.

Physiography and Climate

The claims lie north of Truax Mountain and east of MacDonald Lake, at elevations of 1280 metres up from the lake to 2,680 metres on top of the peak, north of Mount Truax. Vegetation cover is typical coniferous forest or alpine meadow, and the climate is characterized by hot, dry summers and cold, snowy winters.

Accommodation and Labour

Goldbridge Hotel is convenient for room and board, self-contained suites are available for rent in Goldbridge, and there is a recreational campsite at Gun Creek. Cooke Geological Consultants Ltd. supervised the exploration program and carried out dynamite trenching and talus sampling.

Claims Description

The Ranger property consists of five (5) modified grid claims totalling seventy (70) units and covering 1,750 hectares in the Lillooet Mining Division (Figure 2). Total annual assessment on the claims is \$14,000 for the whole group, which is in good standing until 1988 (Table 1).

Mining History

Exploration and mining history is summarized from the reports of many workers on the Ranger property, with emphasis on British Columbia Minister of Mines Annual Reports and Company Reports (see References).

First staked in 1944, the claims were optioned to Bralorne Mines Ltd., who drilled 3 shallow holes that failed to reach bedrock, dug several surface trenches and drove a 12 metre adit on the Ranger vein. Surface prospecting was carried out by the Ashmore Syndicate in 1945, after which the property fell dormant.

The claims were restaked in 1970 and some magnetic surveying, trenching and sampling were completed. Rabbit Oil and Gas Ltd. bought the property in 1980 and trenched arsenopyrite mineralization in Steep Creek, some 1.6 kilometres along strike from the Ranger adit, followed by some airborne VLF electromagnetic and PP magnetic surveys in 1981.

Newmont Exploration Canada Ltd. restaked the ground in 1983 and performed geological mapping and soil, silt and rock sampling in 1983, and 1984. Tanker Oil and Gas Ltd. acquired the claims in 1985 and brought in Levon Resources Ltd. to earn a 50% interest in the property by performing exploration work, including the trenching and sampling program reported herein.

Claim List,

Claim Name	Record No.	No Units	Expiry Date
Ranger 1	2404	4	May 2, 1988
Ranger 2	2405	20	May 2, 1988
Ranger 3	2406	6	May 2, 1988
Ranger 4	2407	20	May 2, 1988
Lucky Ranger	2818	20	April 27, 1988

TABLE 1: Claim List

GEOLOGY

Regional

Regional geology and tectonics are summarized from the reports of many workers in the Bridge River district, with emphasis on Geological Survey of Canada Reports and University of British Columbia Reports (see References).

The Bridge River district lies at the western margin of the Intermontaine Belt of volcanic and sedimentary rocks where it abuts against the Coast Plutonic Complex of plutonic and metamorphic rocks (Figure 3). Triassic arc volcanics and backarc sediments (Cadwallader and Bridge River Groups) are intruded by synvolcanic, intermediate plutons (Bralorne Intrusions) and faulted against ophiolitic, ultramafic intrusions (President Intrusions) (Table 2).

Jurassic and Cretaceous basinal sediments and rift volcanics (unnamed, Taylor Creek and Kingsvale Groups) are sequentially intruded by Cretaceous and Tertiary plutons of felsic composition (Coast, porphyry and Bendor Intrusions). Relatively flat-lying Tertiary intermediate and mafic volcanics (Rexmount porphyry and plateau basalt) cap the lithological sequence.

Triassic rocks probably formed a discrete plate, the Bridge River terrane, prior to collision with the North American plate to the northeast in Jurassic time. That collision thrust arc volcanics, backarc sediments and oceanic crust onto the already assembled exotic terranes of the Intermontaine Belt and prompted uplift and erosion that produced the Jurassic and Cretaceous sediments.

Bridge River terrane then got sandwiched by the arrival of eastward-drifting Insular belt rocks from the west in Cretaceous time. This collision probably remobilized old faults and sparked several periods of intrusive activity that resulted in Cretaceous and Tertiary plutons and volcanics.

Old breaks such as the Fergusson and Cadwallader faults were probably mobilized again as Tertiary dextral strike-slip faults, followed by extrusion of plateau basalts in response to extensional tectonics. Finally, Pleistocene glaciation and Recent uplift and erosion sculpted the existing mountainous terrain.

Bralorne and Pioneer mines comprise the largest and richest lode gold mining camp in British Columbia. Between 1899 and 1971, they produced 4.16 million ounces gold and 0.95 million ounces silver from 8.23 million tons ore grading 0.51 oz/ton gold and 0.12 oz/ton silver. Gold-bearing quartz veins follow two sets of narrow fissures in Pioneer andesite and Bralorne diorite near Bralorne granite and albitite dikes. Mining stopped in ore some 2,000 metres down because of the ventilation problem and high mining costs.

Many other gold prospects in the region, such as the Ranger vein on the Ranger property, are gold-bearing sulfide replacements along narrow shears in Bridge River basalts and cherts, often near Tertiary porphyry dikes. A significant new discovery on the Congress property of Levon Resources Ltd., some 7.5 kilometres north-north west of Levon's Ranger claims, assays up to 0.37 oz/ton Au, 0.32 oz/ton Ag and 1.7% Sb over 6.9 metres true width. Thus, the exploration and mining potential of old prospects such as the Ranger vein needs to be re-evaluated.

Property

The Ranger property is underlain by northwest striking, steeply dipping basaltic volcanics, cherty sediments, and minor rhyolite, serpentinite, argillite and limestone of the Triassic Bridge River Group (Figure 4). They are intruded by northwest trending, steeply dipping porphyry dikes, of Tertiary age and diorite and granodiorite plugs of the Bendor Intrusions.

Early tectonic deformation has shattered the cherts and sheared the argillites, and serpentinites, but the more competent basalts are only mildly deformed. Gold-mineralized shear zones often follow the intrusive contacts of dikes and plugs or the stratigraphic contacts of sediments and volcanics and late, strike-slip faults offset the strata intrusions and veins.

Mineralization

Mineralization consists of quartz and calcite veins and replacements containing disseminated to massive pyrite and arsenopyrite, minor pyrrhotite, chalcopyrite, tetrahedrite, galena, stibnite, and sphalerite. Silicification and pyritization also permeate sheared chert and argillite wall rocks.

Four mineralized zones occur on the property, the Adit, Saddle, East Ridge and North Ridge zones. The most important of these is the Adit zone (Ranger prospect or Ben D'Or vein), where a massive sulfide vein occurs in fractured chert, is up to 30 cm wide and assays up to 4.5 oz/ton Au and 7.5 oz/ton Ag, at the portal of a northwest-striking, 12 metre-long adit.

Saddle zone consists of several old pits located 200 metres along strike to the northwest of the adit. Narrow sulfide veinlets occur in fractured chert, containing anomalous values in Au, Ag, As, Sb, Pb, Zn and Cu.

East Ridge zone contains soil anomalies with up to 955 ppb Au and 1.1 ppm Ag in cherts, argillites and a quartz-carbonate unit. North Ridge zone comprises soil anomalies with up to 17,600 ppb Zn and 5.3 ppm Ag, which were the subject of geological mapping, talus sampling and dynamite trenching reported herein.

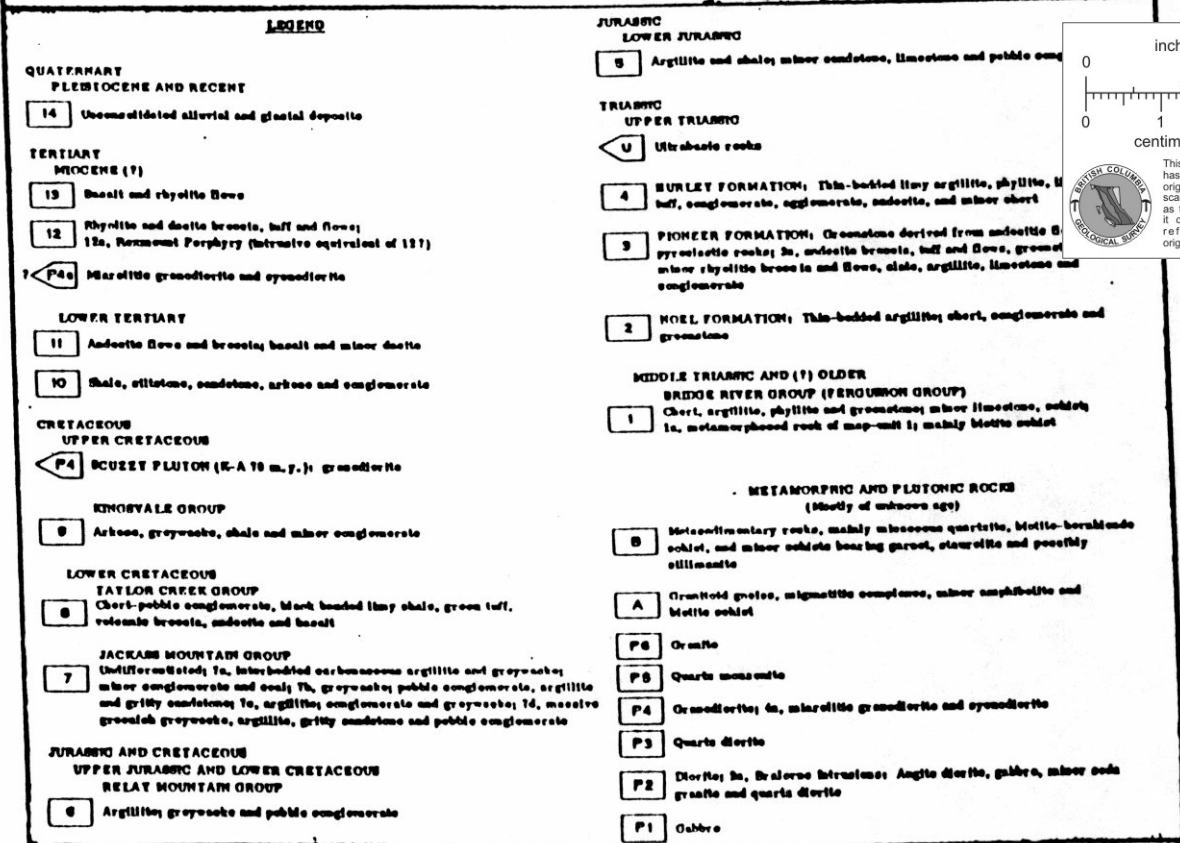
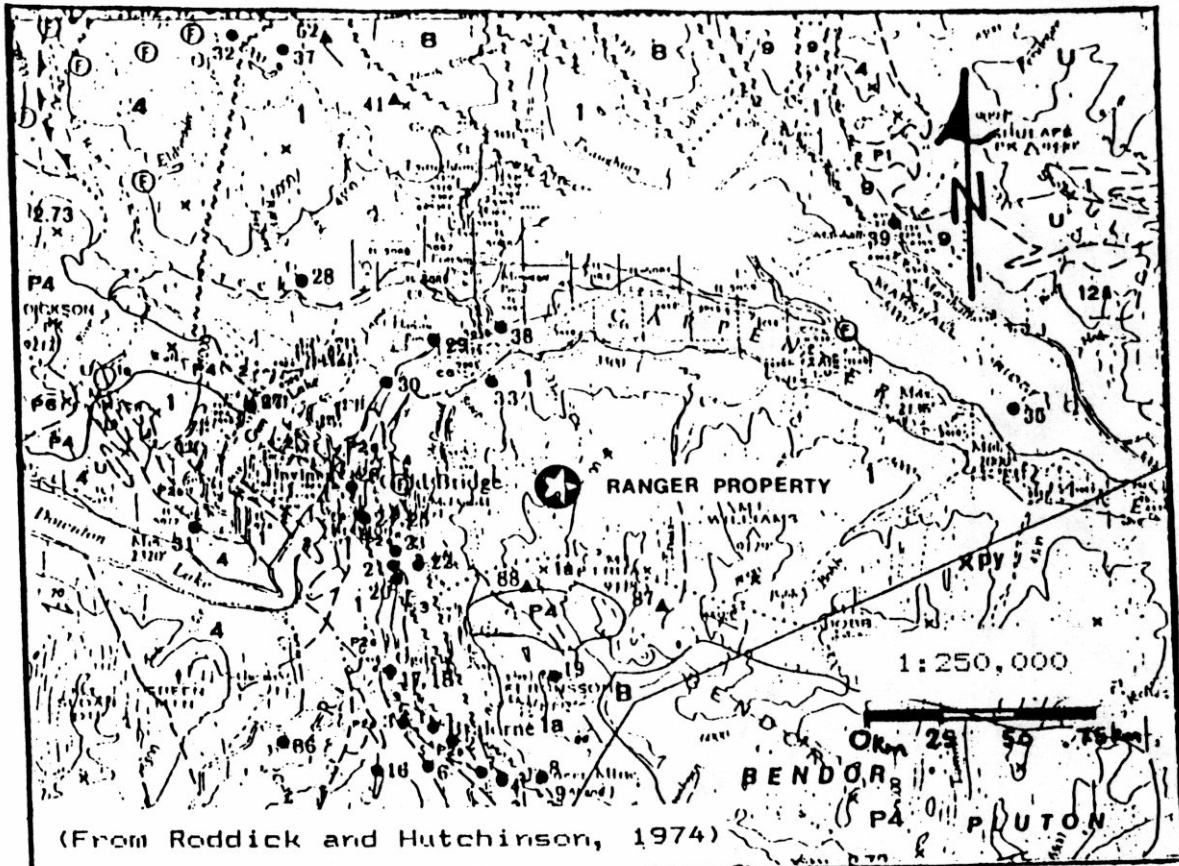
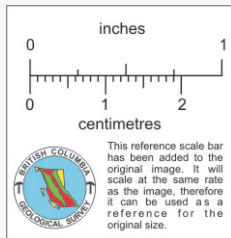
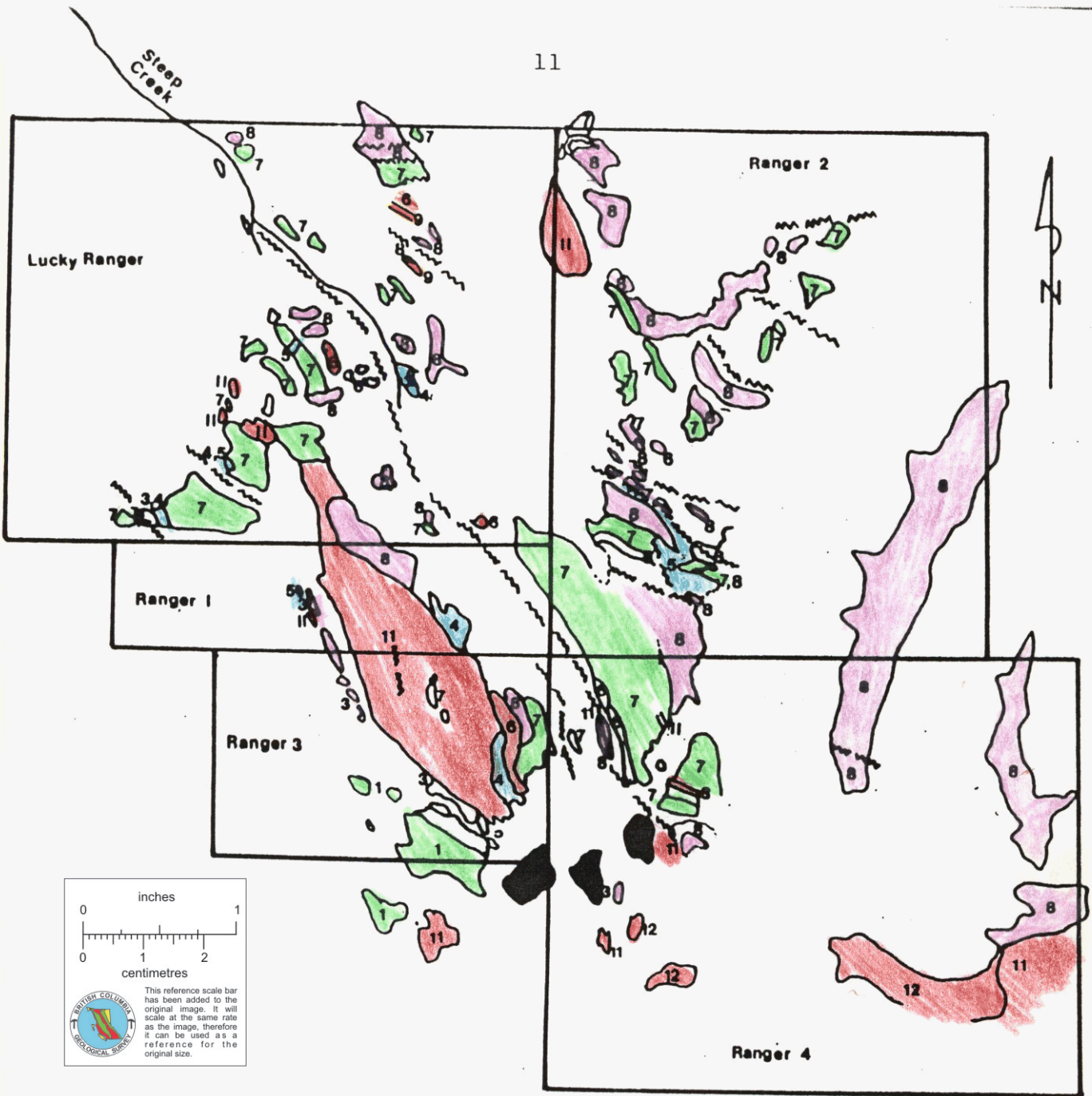


Figure 3: Regional geology map.

PERIOD	UNIT	LITHOLOGY
upper Tertiary	Plateau basalt	basalt, rhyolite flows, breccias
		unconformable contact
lower Tertiary	Rexmount porphyry	rhyolite, dacite, andesite tuffs, breccias, flows, plugs
		unconformable contact
upper Cretaceous	Porphyry dikes	quartz, feldspar, hornblende porphyry dikes
		intrusive contact
	Coast Range intrusions	quartz diorite, diorite, granodiorite
		intrusive contact
	Kingsvale group	arkose, greywacke, shale, conglomerate
		unconformable contact
lower Cretaceous	Taylor Creek group	conglomerate, shale, tuff, breccia
		unconformable contact
lower Jurassic	Unnamed sediments	argillite, shale, sandstone, limestone, conglomerate
		unconformable contact
upper Triassic	Bralorne intrusions	augite diorite, soda granite, albitite dikes
		intrusive contact
	President intrusions	serpentinite, peridotite, pyroxenite, dunite, gabbro
		fault contact
	Cadwallader Hurley formation	group limy argillite, phyllite, limestone, tuff, conglomerate, greenstone, chert
	Pioneer formation	greenstone, basalt, andesite, flows, tuffs
	Noel formation	argillite, chert, conglomerate, greenstone
		conformable contact?
middle Triassic	Bridge River group	chert, argillite, phyllite, limestone, greenstone, metamorphic equivalents

Table 2: Formation names, ages and lithologies.



LEGEND

17	BASALT
2,10	RHYOLITE
3, 8	CHERT
4,5	ARGILLITE, LIMESTONE
6	SERPENTINITE
9	FELDSPAR PORPHYRY
11,12	DIORITE, GRANODIORITE
~~~~~	FAULT



(From Turner, 1985)

LEVON RESOURCES LTD.	
<b>Ranger Claims</b>	
<b>GEOLOGY</b>	
COOKE GEOLOGICAL CONSULTANTS LTD	
By B Cooke	FIGURE 4:
Date April '86	

## CONCLUSION

### Conclusions

1) The Ranger property occurs in the Bridge River district, east of the main Bralorne-Pioneer belt of Triassic volcanic and sedimentary rocks. It is underlain by basaltic volcanics and cherty sediments of the Triassic Bridge River Group, intruded by porphyry dikes, Bendor diorite and granodiorite of Tertiary age, and mineralized along narrow shears near intrusive and stratigraphic contacts.

2) Some 90 talus samples were collected over 2.25 kilometres at 100 metre intervals along two reconnaissance lines extending southwest and southeast from the North Ridge zone. No significant anomalies were discovered in Au, Ag, As, Sb, Pb and Zn.

3) A total of 9 dynamite trenches were blasted in the North Ridge zone to follow up soil anomalies containing up to 17,600 ppb Au and 5.3 ppm Ag from Newmont's work. Only 2 trenches produced gold values, namely 0.028 oz/ton Au over 6.8 metres (TR3) and 0.013 oz/ton Au over 1.0 metres (TR4).

4) The Adit and Saddle zones remain to be systematically trenched and sampled. However, the North Ridge and East Ridge zones require no further work.

5) Talus cover in the Adit and Saddle zones means that a portable backhoe is required to expose and explore the veins. Any drilling will have to be carried out by a small, transportable drill, using helicopter support.

### Recommendations

- 1) A two phase, CA \$60,000 program is recommended to explore the Ranger property. Phase 1, a continuation of surface work started in 1985, includes backhoe trenching at a cost of CA \$15,000 over a two week period. Phase 2, contingent upon the successful completion of Phase 1, involves diamond drilling from surface, at a cost of CA \$45,000 over a one month period.
- 2) Phase 1 surface exploration calls for backhoe trenching, rock sampling and geological mapping in the Adit and Saddle zones to extend the known veins and discover new veins. A helicopter-supported camp will utilize the Kubota KH35 excavator, and possibly dynamite, to expose and explore veins.
- 3) Phase 2 diamond drilling encompasses 1,000 feet in 5 holes to test the Ranger and other veins at 165 foot intervals along strike and down dip. A helicopter-supported camp would make use of the JK Smit 300 drill, or BBS-15 drill, to drill off the veins.

*Mount ?***REFERENCES**

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