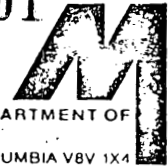


MEMORANDUM FROM E.W. Groves

008701



TO Mr. J. Poyen,
Mineral Development Division.

THE DEPARTMENT OF
MINES AND PETROLEUM
PARLIAMENT BUILDINGS, VICTORIA, BRITISH COLUMBIA V8V 1X4

CONFIDENTIAL:

DATE Sept. 9/75
File - M-12

RE: CAROLIN MINES LTD.,
AURUM-IDAHO-PIPESTEM PROJECT.

At the request of Jurgen Rohwedder (September 3rd, 1975) I have made a preliminary appraisal of the Aurum-Idaho-Pipestem property owned by Carolin Mines, and being explored under a joint venture by Precambrian Shield Resources, and Numac Oil and Gas.

In July, 1975, Mr. Earl E. Curry, president of Precambrian, announced that the company had decided to defer underground bulk testing of the Idaho zone for the present. The reason given for this move was that "a satisfactory operating profit could only be achieved prior to deduction of the B.C. 'super' royalty or mineral land tax".

Location and Access

The Carolin Mines Idaho property is located 10 miles north of Hope on Ladner Creek roughly between elevations 2,500 ft. and 4,500 ft. The Idaho area has been clear cut recently and lies on a steep hillside. Overburden averages from 20 to 30 feet thick and rock outcrop is sparse.

The property is about 21 miles by road from Hope, about 16 miles of which are class 4 or better. The last five miles to the deposit provides good access, but the property roads have deteriorated and reconstruction was commenced September 8th, 1975, using a TD-25 cat with rippers.

History

Activity in the area dates to the 1850's with "rich" gold discovered in the Aurum veins in 1928 and 533 ounces of gold were subsequently produced. Intermittent exploration in the locality continued in 1936 and 1945-46.

Recent Exploration

In late 1973 the Aurum and Idaho zones were explored by reconnaissance soil geochemistry, magnetometer survey and geological mapping. In addition, 1,764 feet of B.Q. W.L. core was drilled for a total expenditure of more than \$100,000.

In 1975, 6 more diamond drill core holes totalling 5,603 ft. were completed on the Idaho zone. To date 39 holes totalling 21,876 ft. have been drilled on the Idaho zone.

PROPERTY FILE

-12

PRESTEM
92HNW011(IHW) -07

Mr. J. Poyen,
Mineral Development Division.

September 9/75

Currently the company plans to explore a geochemical anomaly on the Pipestem ground which lies 3,500 feet north of the Aurum-Idaho zone above 4,000 feet elevation.

"Ore Reserves"

Precambrian Shield Resources has announced that the Idaho zone has drill indicated reserves estimated at 1,750,000 tons at 0.114 ounces gold per ton using a cut off of 0.05 ounce or 1,000,000 tons at 0.157 ounces gold per ton using a cut-off of 0.09 ounces gold per ton.

Evaluation

The geological interpretation of the Idaho property by the Precambrian staff suggests that the gold bearing mineralization is largely confined within a simple sheet-like alteration horizon that dips at about 20-25 degrees northeasterly into the steep hillside. Using this concept they have arrived at a mineralized zone which has a width of about 350 feet, a drilled length of 1,200 feet, and a thickness of from 30 to 110 feet. They suggest that smaller, less extensive, zones lie both above and below the main zone. If this interpretation is correct the tonnage and grade estimates are reasonable.

I made a quick study of the situation at the property on September 8th, 1975, and arrived at a considerably different geological interpretation. I will give the results only. My structural interpretation indicates that the mineralized zone is in fact an irregular lens-like vein-breccia that trends about 140° and dips about 60° northeast. This breccia-vein comprises quartz, albite, carbonate, rock fragments and sulfide mineralization (8-10% by volume). It lies within a recognizable narrow shear zone and is paralleled by lesser vein/stringer vein zones. In other words it appears the deposit is merely a simple vein-type deposit.

If the vein structure is accepted, all the diamond drill intercepts would have to be recalculated, as would the overall dimensions of the deposit. On this revised basis and without having all the data at hand I would very crudely estimate a drill indicated tonnage ranging from 200,000 to 300,000 tons depending on true vein widths. This alternative structural concept and tonnage estimate could be substantiated if time and money were available.

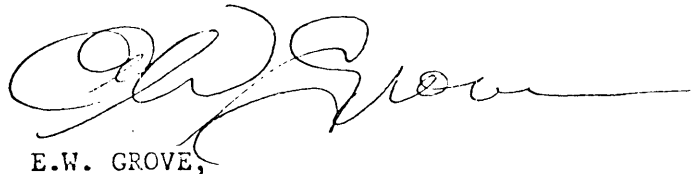
Mr. J. Poyen,
Mineral Development Division.

September 9th, 1975.

Conclusion

Two interpretations of the mineral deposit structure and tonnage have been made by the company and by myself. My very quick estimate suggests a maximum tonnage of about 200,000 tons versus the company estimate of 1,750,000 tons. The overall potential of the Idaho deposit is diminished likewise.

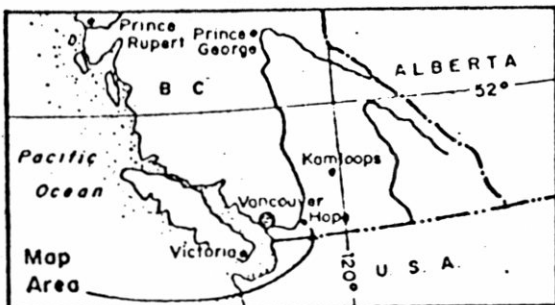
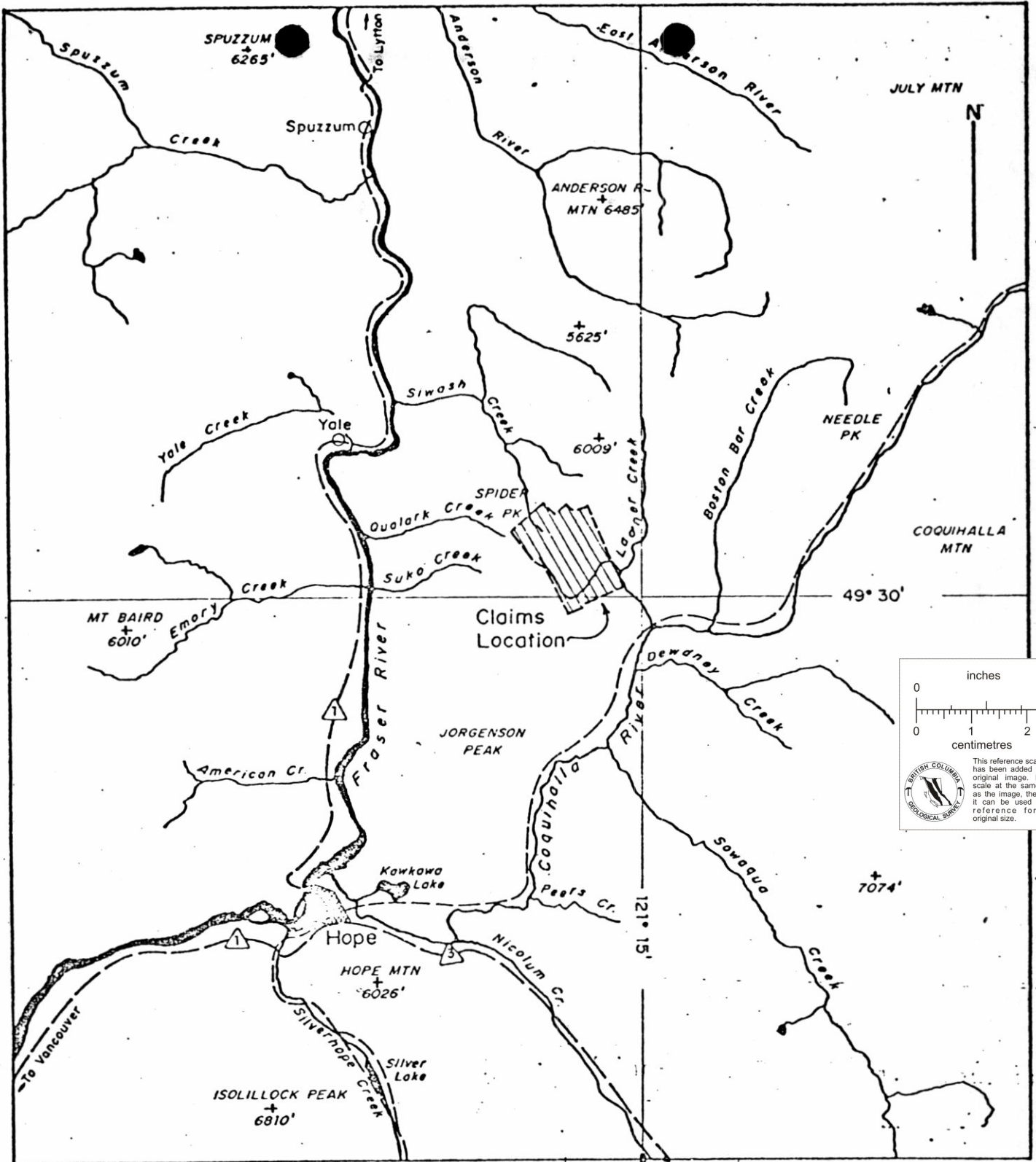
I have not communicated this concept to the company personnel and suggest that this report be kept confidential.



E.W. GROVE,
Senior Geologist, Geological Division,
Mineral Resources Branch.

EWG/jr

cc: J.T. Fyles
J. Rohwedder



LOCATION MAP

Fig. 1

carolin mines limited

Aurum/Idaho/Pipestem Project
 Coquihalla River/Ladner Creek Area
 New Westminster Mining Division, B. C.

N.T.S. 92 H/11 west half

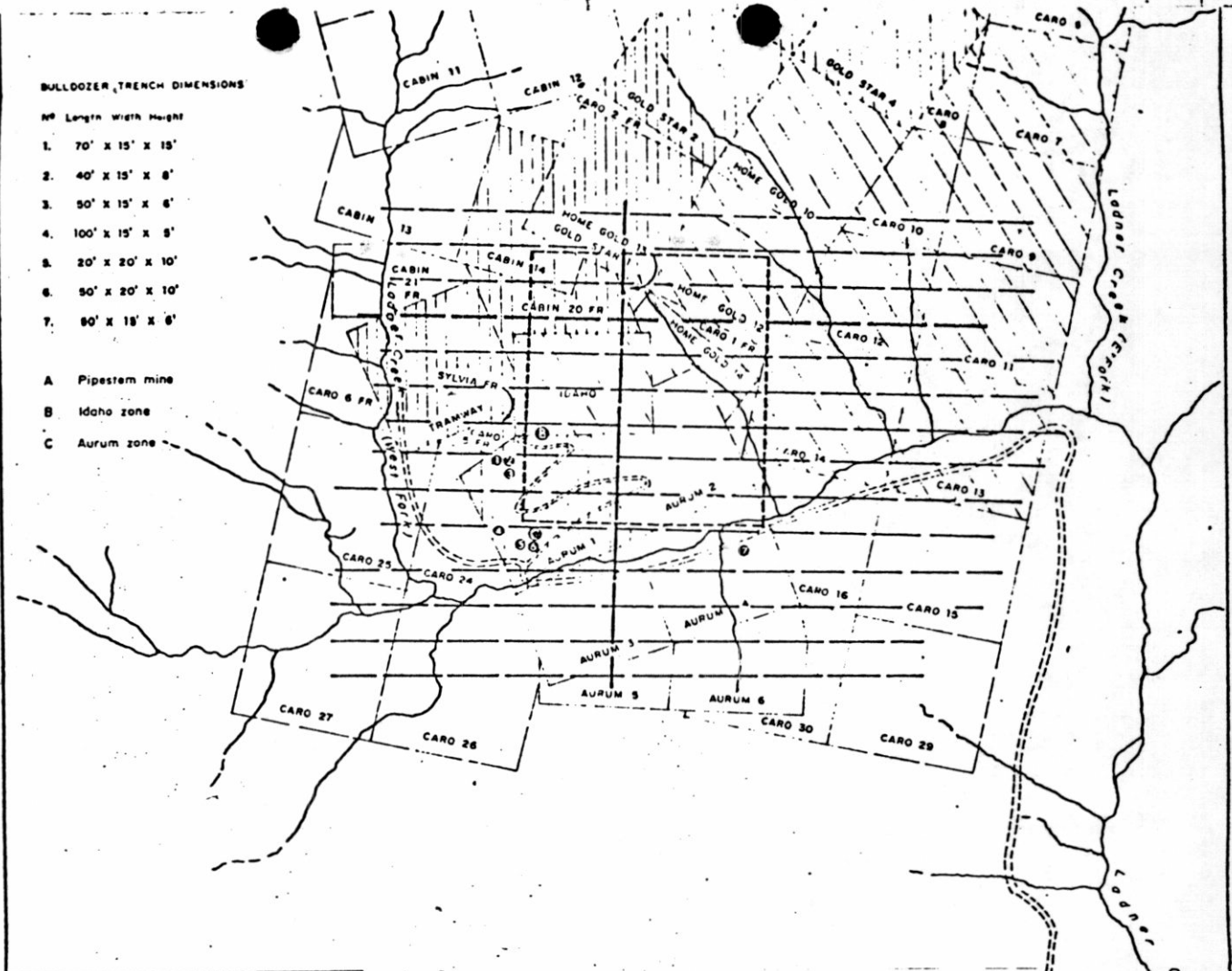
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BULLDOZER TRENCH DIMENSIONS

Nº Length width Height

1. 70' x 15' x 15'
2. 40' x 15' x 8'
3. 50' x 15' x 6'
4. 100' x 15' x 8'
5. 20' x 20' x 10'
6. 50' x 20' x 10'
7. 80' x 18' x 6'

- A Pipestem mine
- B Idaho zone
- C Aurum zone

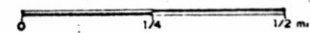


CLAIMS & GRID MAP Fig. 2a

carolin mines ltd.

Aurum/Idaho/Pipestem Project
 Coquihalla River/Ladner Creek Area
 New Westminster Mining Division, B.C.

Scale: one inch = one quarter mile = forty chains



Drawn: January 1974, b & c
 N.T.S. 92 M/11 west half

Legend

- Gold Star group
- Cabin group
- NT group
- Claim line
- Reconnaissance lines
- Detail area

