

ASSESSMENT REPORTS

MAP No. 105B2 TYPE OF WORK: *Geology, Heronmag Survey*

|                    |   |                |
|--------------------|---|----------------|
| REPORT FILED UNDER | Emperor Mines Ltd.  |                |
| DATE PERFORMED     | DATE FILED: Jan., 15, 1968  |                |
| LOCATION - LAT.    | 60° 00' N   |                |
| LONG.              | 130° 35' W  |                |
| CLAIM Nos.         | Cassiar Area, Yukon   |                |
|                    | PAGI 3-6  | 89587-89590    |
|                    | JSK 1,2   | Y22503, Y22504 |
|                    | 7,12  | Y22505-Y22510  |
|                    | 14  | Y22511         |
| WORK DONE BY       | W.J. Weymark, P.Eng.  |                |
| WORK DONE FOR      | Emperor Ms. L.  |                |
| REMARKS            | This report contains assays of gold, silver, lead, zinc, antimony, bismuth, nickel, manganese, copper, titanium, zirconium, and vanadium. |                |
|                    | Location Map  | 1" - 10 mi.    |
|                    | Claim Map   | 1" - 2500'     |

|                          |            |
|--------------------------|------------|
| Topographic Map          | 1" - 2500' |
| <del>B</del> Geology Map | 1" - 750'  |
| Sampling Map.            | 1" - 1000' |
| Air Mag Survey Map       | 1" - 1 mi. |

EMPEROR MINES LTD. (N.P.L.)

REPORT ON

THE ALAN CREEK MINERAL CLAIM HOLDINGS

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

LIARD MINING DIVISION, BRITISH COLUMBIA

15 January 1968

This is Appendix A to the application of Emperor Mines  
Ltd (N.P.L.) under the Northern Mineral Exploration Program

REPORT ON THE ALAN CREEK MINERAL CLAIM HOLDINGS  
WATSON LAKE MINING DISTRICT, YUKON TERRITORY  
LIARD MINING DIVISION, BRITISH COLUMBIA

C O N T E N T S

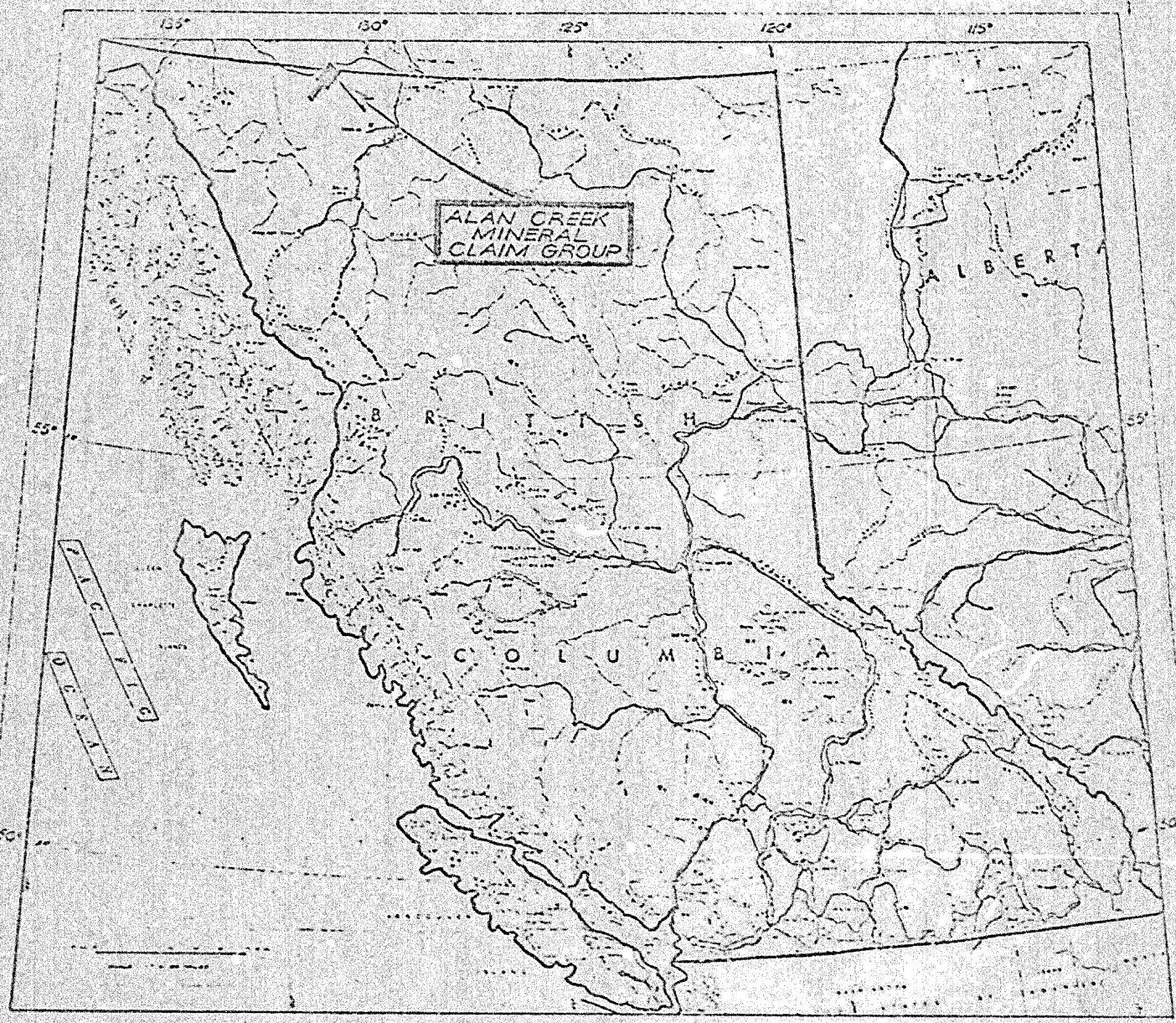
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thru C-3            and 50515 December 1965, Pacific Giant  
                     Steel Ores Ltd.
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INDEX MAP

LOCATION

EMPEROR MINES LTD

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

and  
LIARD MINING DIVISION, BRITISH COLUMBIA

REPORT ON THE ALAN CREEK MINERAL CLAIM HOLDINGS  
WATSON LAKE MINING DISTRICT, YUKON TERRITORY AND  
LIARD MINING DIVISION, BRITISH COLUMBIA

1.0 INTRODUCTION

This report presents a general description of the mineral claim holdings of Emperor Mines Ltd. (N.P.L.) situated partially in the Watson Lake Mining District, Yukon Territory and partially in the Liard Mining Division of the Province of British Columbia together with a review of the relevant technical data pertaining to their geological - mineralogical characteristics and potentialities.

The text of the report covers the background history of mining activities carried out by previous owners and investigators, the scope of the investigation completed and underway on the mineral claims since procurement by Emperor Mines Ltd. (N.P.L.), hereinafter designated "Emperor".

This report is based on an examination of the claims area in November 1967 and a subsequent review of all the available data relating to the Alan Creek mineral claim possibilities dating to the original staking in 1947. No field work has been completed on the claims since procurement by Emperor due to the limitations imposed by prevailing winter conditions in the area.

Recommendations are included in the report relating to the detailed programmes of investigations required to assess the metalliferous potentialities of these presently held mineral claims of Emperor.

## 2.0 OBSERVATIONS

On the basis of this review of the available information and analyses of conducted tests carried out by Weymark Engineering Ltd. on the Alan Creek Mineral Claim Holdings of Emperor Mines Ltd. (N.P.L.), the following general observations are presented.

- (a) The Alan Creek Mineral Claim Group, situated partially in the Yukon Territory and in the Province of British Columbia, consisting of 68 located claims, is favourably situated with respect to geological formations suitably known as host rocks for such metalliferous minerals as lead, silver, antimony and copper.
- (b) Tests conducted since discovery of the metalliferous containing zones in 1947 to the present date have confirmed the presence of lead, silver and other metallic minerals in zones located within the existing claim boundaries, however, there is not sufficient information available on which to assess commercial significance of the deposits or zones as presently known.
- (c) Additional investigation of the metallic bearing mineral zones is warranted and should be carried out to extend the information relating to the geological and mineralogical characteristics of the formations underlying the claims. Exploration work consisting of prospecting, geophysical-geological-topographical surveys, trenching, diamond drilling, testing and engineering is recommended. A programme of works involving an expenditure of \$105,000 is justifiable as an initial phase to evaluate commercial potentialities of the metalliferous mineral resources of these claim holdings.

## 4.0 PROPERTY, LOCATION AND DESCRIPTION

### 4.1 PROPERTY

The mineral claim holdings of Emperor comprise 68 recorded mineral claims with 13 situated in the Watson Lake Mining District, Yukon Territory and 55 recorded claims situated in the Liard Mining Division of British Columbia. These claims are contiguous adjoining on either side of the Yukon - British Columbia boundary. See the Frontispiece and Figures 2 and 3.

Emperor originally obtained by purchase Pagi claims Nos. 3, 4, 5 and 6 located in the Yukon Territory and Pagi claims Nos. 3 - 14 located in the Liard Mining Division of British Columbia. The transfer is recorded with the applicable mining recorders in the Yukon Territory and British Columbia. The remainder of the 9 claims situated in Yukon Territory and 43 situated in the Liard Mining Division of British Columbia were procured under a purchase vendor agreement with Messrs. Harry Yen, David William Rees and Harrison Lowe, all of Vancouver, British Columbia. According to legal opinion, Emperor is the beneficial holder of all the mining claims.

All of the mineral claims are currently in good standing with respect to the requirements of the Mining Regulations of the Yukon Territory and of the Province of British Columbia, as applicable insofar as assessment work provisions are concerned, and extend to the earliest date of 5 September 1968 with others extending to the 1 December 1968 and latterly to the 2 January 1969. Verification has attested that the staking of the claims has been in conformity with the provisions of the applicable regulations insofar as posts, cairns, tags and location lines are concerned. Bearings and distances of the lines and boundaries with respect to the requirements have not been surveyed to establish conformity, reference is Annex A. There are no contraventions recorded.

#### 4.1.1 Mineral Claim Holdings

The designated name, record number and expiry date for each claim holding currently held by Emperor is listed in the tabulation given below. Reference is to Figure 3.

#### Alan Creek Mineral Claims

| <u>Name and Number</u>                                  | <u>Record Number</u> | <u>Tag Number</u> | <u>Expiry Date</u> |
|---|----------------------|-------------------|--------------------|
| (a) <u>Yukon Territory, Watson Lake Mining District</u> |                      |                   |                    |
| Pagi - 3 to 6 incl.                                     | 89587-90             | 89587-90          | 1 Dec. 1968        |
| JSK 1 and 2   | Y-22503-04           | Y-22503-04        | 2 Jan. 1969        |
| JSK 7 and 12 incl.                                      | Y-22505-10           | Y-22505-10        | 2 Jan. 1969        |
| JSK 14  | Y-22511              | Y-22511           | 2 Jan. 1969        |
| (b) <u>Liard Mining Division, British Columbia</u>      |                      |                   |                    |
| Pagi - 3 to 6 incl.                                     | 19745-48             | 608721-24         | 1 Dec. 1968        |
| Pagi - 7 to 14 incl.                                    | 28339-46             | 699801-08         | 5 Sept. 1968       |
| JSK 15 to 30 incl.                                      | 29244-59             | 857501-16         | 28 Dec. 1968       |
| DR 51 to 61 incl.                                       | 29260-70             | 857517-27         | 28 Dec. 1968       |
| NY 30 to 45 incl.                                       | 29271-86             | 857528-43         | 28 Dec. 1968       |

#### 4.0 Property, Location and Description - continued.

Mineralized zones and areas have been located on Pagi claims 3,4,5 and 6 containing various types and degrees of enrichment of lead, silver, antimony, copper and other metalliferous minerals all of economic significance, however, to date the commercial value of the zone deposits has not been established. There are no producing mines in the immediate vicinity of the Alan Creek claims at the present time. The nearest property currently undergoing field investigation is Silverknife Mines Ltd., located some 10 miles to the East on the Tootsie River System.

##### 4.2.1 Alan Creek Claim Groups:

These holdings are located about five miles south of mile 705 on the Alaska Highway and straddle the British Columbia - Yukon Boundary. The approximate geographical reference is  $130^{\circ}35'' - 60^{\circ}00''$ . The air line distance from Watson Lake is about 45 miles south of west. The location of these claims is shown on Figure 2 and 3.

The geographical area lies within the Cassiar Mountains and the Alan Creek-Rancheria-Liard River drainage system. The reference map for the British Columbia claim group is the Jannage River, Sheet 104-0, First Edition 1952 and the Wolf Lake Sheet 105A, First Edition for the claims situated in the Yukon Territory. The applicable mineral claim map in British Columbia is No. 791 of the Department of Mines and Petroleum Resources, Liard Mining Division. The nearest fueling point on the Alaska Highway is Rancheria at Mileage 710. Watson Lake is the nearest community with communication and other support facilities, at Mileage 657.

The applicable recording district is Watson Lake Mining District for the claims situated in the Yukon Territory and Lower Peel Office, Liard Mining Division for the claims situated in British Columbia.

##### 4.3 Description:

All of the claims were located by staking and recorded in the applicable mining recording offices in the Yukon Territory and the Province of British Columbia. They involve an area extending to about 5000 feet North of the Yukon-British Columbia to 21,000 feet south, of about 3400 acres. The location lines bear North Magnetic, approximately, see Figure 3. The claims are at elevation 4,000 to 5,000 feet above sea level.

5.0 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY AND LOCAL RESOURCES

5.1 Accessibility

The general location of the Emperor mineral claim holdings referenced to established routes of access is shown on Figure 1, 2 & 4.

5.1.1 Alan Creek Mineral Claims: Access to these holdings is via the Alaska Highway, the turnoff being the bridge over the Rancheria River at mile 706 connecting the radio-telephone micro wave tower located about one mile south of the Highway. At the present time a horse or foot trail which follows along Alan Creek provides the only access route to the claims area. Helicopter landing sites are available at several locations within the claims area. Chartered services are available at Watson Lake. Whitehorse provides the nearest distribution center and connection to port facilities at Skagway. Airline facilities at Watson Lake provide daily, except Sunday, connections to outside centers.

The nearest southern rail shippings are Fort St. John and Dawson Creek with truck transportation providing connecting services.

Telecommunication facilities are available at Watson Lake and Rancheria, on the Alaska Highway.

5.2 Climate:

Alan Creek Mineral Claims: For climatic purposes, this area is referenced to the southeast division of the Yukon Territory. Conditions are continental in nature. Summers are short and winter conditions prevail from October through May.

Climatological records available for Watson Lake indicate the following conditions, on the basis of 13 years of record.

|                                     |       |           |
|-------------------------------------|-------|-----------|
| Watson Lake - Temperature - Maximum | ....  | 73°F      |
| Minimum                             | ....  | 74°F      |
| Mean                                | ....  | 20°       |
| Precipitation - Mean Total          | ...   | 13 inches |
| Snow                                | ..... | 13 inches |

Climatic conditions would limit mining activities in Alan Creek area, especially in the winter months. In the claims area, especially in the valleys and depressions several feet of snow collect during the winter season and provision would have to be made for snow removal on any connecting roads that might be established between the Alaska Highway and the claims area.

5.3 Physiography:

Alan Creek Mineral Claims: As shown on Figure 4, these claims are situated within the Cassiar Mountain formation and the Alan Creek

Rancheria River-Laird River drainage basin. Elevations within the claim group range from 4000 to 6000 feet in altitude. The area is rugged and mostly lies above the timber zone. There is considerable difference in altitude from point to point within the claim area and except for the mountain peaks and slopes, the ground is covered with overburden and talus. The access ways from the claims area to the Alaska Highway is wooded with Jackpine and related species. The area presents difficulties in carrying out exploration work, especially in the zones near the mountain slopes. There appears to be sufficient water in the streams confluent with Alan Creek on the claims area to support mining activities during exploration periods. Measurements would have to be taken to assess volumes to support mining operations if contemplated.

All supplies, equipment, labour and other requirements would have to be imported to support mining activities on the Alan Creek claims. Power would have to be based on diesel type generating equipment.

5.5 Structures and Equipment: There are no equipment or structures presently on the Alan Creek Mineral claims. The only workings consist of trenches and test pits.

## 6.0 HISTORY

6.1 General: The following resume outlines the available information relating to records of past activities on the Alan Creek property.

6.2 Alan Creek Mineral Claims: According to the records of the B.C. Minister of Mines Reports, Annex B, the original Discovery Vein was located in the fall of 1947 by Allan Holliday and in 1948 a 65 per cent interest in the 13 located claims was optioned by the Yukon Ranges Syndicate of Toronto. Under this arrangement certain surface trenching was carried out and a 5-ton shipment of ore was sent to Trail for smelting with the results given in Section 9.2. In the fall of 1948 the option was relinquished. No work was done in 1949 and the claims lapsed for various periods until 26th November 1965 when the claims area was staked by J. S. Kubiak on behalf of Pacific Giant Steel Ores Ltd. of Whitehorse, Yukon Territory. Pacific Giant Steel Ores Ltd. held the Page 3-6 inclusive claims situated in British Columbia until the 1 November 1967 when they were transferred to John S. Kubiak by Bill of Sale No. 15188E, and Page Claims Nos. 3-6 inclusive situated in the Yukon Territory were transferred to the same John S. Kubiak under document No. W/L 1041, Yukon Territory. Subsequently these eight claims were sold by Kubiak to Emperor Mines Ltd. and registered with the applicable Mining Recorder in British Columbia and the Yukon Territory. Page claims Nos. 7-14 were staked by John S. Kubiak in August 1967 and transferred to Emperor under a Bill of Sale No.

The remainder of the claims designated as JSK Nos. 1,2,7,8,9, 10,11,12,14 situated in the Yukon Territory and JSK Nos. 15-30 inclusive, HY - 30-45 inclusive and DR 51-61 inclusive situated in the Liard Mining Division, British Columbia were sold to Emperor Mines Ltd. (W.P.L.) under registered documents No.WL125 with the Mining Recorder, Yukon Territory and No.152425 with the Mining Recorder, Province of British Columbia, respectively.

The claims are all in good standing with respect to current assessment work requirements of the applicable mining regulations of the Yukon Territory and of the Province of British Columbia.

7.0 GEOLOGY

7.1 General: In this section of the report a brief resume is given of the geological, lithological and structural characteristics of the rock formations underlying the Alan Creek mineral holdings of Emperor. Generally speaking, there is not much information available relating to the formations underlying these areas of the Yukon and British Columbia, and so reliance has to be made on published reports of the Geological Survey of Canada.

7.2 Alan Creek Mineral Claim Group: The reference coverage for the geological-mineralogical and structural controls of this area of the Yukon and British Columbia is outlined on Map 10-1960 entitled Geology, Wolf Lake, Yukon Territory, released by the Geological Survey of Canada, 1960 with geology by W.H. Poole, J.A. Roddick and L. H. Green. This map is included herein as Figure 5. Within the claims area, the dominant rocks include the various derivatives of the Cassiar Batholith, mainly quartz monzonite and granodiorite. Reference is to Annex B for further details relating to the geological characteristics of the claims and exposed mineral zones. Mineralization is primarily related to veins of silver-bearing galena which occur in the shear and fracture zones within the batholith or near the contact. A major northwesterly trending fault-shear zones cuts across the formations of the claims area to which the metalliferous mineralization appears to be related. The lower sections of the claims area and the depressions between the mountain peaks are covered with gravels, talus and other erosional and glacial materials. Reference is to Figure 6, which outlines current information relating to the geological features of the claims area. A considerable amount of investigation is required in order to obtain an interpretation of the controlling geological features referred to mineralization possibilities.

### 3.0 EXPLORATION AND DEVELOPMENT WORK

**3.1 General:** To date investigation of the economic mineral potentialities of the Alan Creek mineral claims of Emperor has been undertaken by previous owners and locators. This work has involved prospecting, surface stripping, rock trenching, smelter testing and related work. To date Emperor has not conducted any physical work on the property, apart from the initial examination and review of all background data relating to this report. There are no structures or equipment belonging to Emperor on the claims.

**3.2 Completed Works Description:** As recorded in the Minister of Mines Reports for British Columbia, 1948 and 1949, Annex B, work completed by the original stakers involved surface stripping and shipment of five tons of ore from the Shipment Vein. A portable gasoline drill was used for mining and the ore was sacked and packed on horseback to the Alaska Highway over a trail built by the then controlling Syndicate. This test shipment assayed Gold - 0.08 oz per ton, silver, - 40.1 oz per ton; lead, - 65.4 per cent; zinc, - 1.5 per cent. The works involved with this Shipment Vein involved a trench 4 feet wide, 6 feet deep, and 150 feet long.

Works completed to date on the Discovery vein involve shallow trenching exposing a width of 8 feet and a length of 10 feet with both ends covered by talus.

Other cuts and stripping have been excavated on various sections of the geological formations, but these are presently saved.

Examinations and sampling sponsored by Pacific Giant Steel Corp Ltd. as released are included as Annex C with sampling results given on Figure 7.

Background reference geological information conducted by the Geological Survey of Canada include Geological Mapping as depicted on Map 10-1940, Geology Wolf Lake, Yukon Territory, Sheet 105D by W.H. Fossie, 1951-55 and J.A. Roddick and L.H. Green, 1957 Figure 5 and an airborne magnetic survey conducted by Aero Surveys Ltd., June to September 1961, shown on Map 70013, Wolf Lake, Yukon Territory, Sheet 105D a portion of which is included here as Figure 8.

An inspection of the claims was made in August 1967 by G.R. Percall, R.F. and H.R. Consulting Ltd., Toronto, Ontario during which a grab sample of mineralized vein was taken and assayed, 18.50 oz. per ton of silver; 61.56 per cent lead and 1.56 per cent zinc. It was reported that the geology of the area did not appear to be very complex from the limited amount of time spent on the property.

**3.3 Work Requirements:** In view of the results obtained to date from the sampling conducted, indicating the presence of such economic metallic minerals as lead, silver, antimony, copper and other metallics, see Annexes C and D, and the preliminary costs of the investigation work completed, a comprehensive program of exploration is required to assess the mining potentialities of the exposed mineral zones on the claims. These works will

involve prospecting for extension of the present zones, trenching, diamond drilling, geophysical - geological - topographical surveys, sampling and tests. In addition communication and camp facilities must be provided including an access road, camp buildings, radio-telephones and related equipment. The estimates of cost are given in Section 10 of this report covering the initial phase of the proposed works that will be required to assess the presently known mineral possibilities of the claims.

## 9.0 MINERAL DEPOSITS, ORE RESERVES, ECONOMICS OF PRODUCTION

9.1 General: Because of the limited extent of information available relating to the mineral zones presently outlined on the Alan Creek mineral claims, no assessment can be made at this date with respect to the commercial significance of the metalliferous possibilities presently indicated.

9.2 Mineral Zones Presently Outlined: As noted in Annex B, two main mineral zones have been outlined to date. These include the Discovery and Shipment designated veins. Other mineral containing zones have been reported, but the extent and nature of these are not recorded. These mineral zones are located within the presently defined claim boundaries belonging to Emperor.

The Shipment Vein: According to the information obtained during the examination of W. H. Poole in 1953, this vein is exposed in a caved trench some 145 feet long, located about 300 yards south of the British Columbia-Yukon Boundary and strikes North  $65^{\circ}$  east and is vertical to steeply dipping. It consists of quartz and galena with minor chalcopyrite and pyrite and is bordered by sheared granite typical of the Cassiar Batholith. The visible parts of the vein pinch and swell along strike from less than two inches to as much as ten inches. The reported last shipment of 5 tons of ore shipped to the Trail Smelter yielded 187 ounces of silver and 5,657 pounds of lead, see Annex B. The recorded assays yielded Gold, - 0.04 ounces per ton, Silver, - 40.1 ounces per ton; Lead, - 15.4 per cent; and Zinc, - 1.5 per cent. A sample of this ore assayed in connection with this report, see Annex C, assayed Antimony 0.5%, Bismuth, -0.003%; Copper, - 0.3%, Manganese 0.003%; Nickel, - 0.001%, Lead, -74.21%; Silver, -59.80%; Tin, -0.01%; Titanium, -0.01% Vanadium, -0.003%; Zinc, -1-2% and Zirconium, -0.001%. Other sampling results are shown on Figure 7.

On the basis of presently experienced prices for gold of \$99.00 per ounce, silver at \$2.40 per ounce and lead and zinc of \$0.14 per pound, the market value of the 5-ton shipment would be \$285.00 per ton without allowances for recovery or costs of mining, shipment, smelting and marketing. Confirmation is required as to the continuity of the mineral bearing zone and the costs of development and extraction, if feasible.

The Discovery Vein: This vein is located about 1500 feet west of the Shipment vein and 1000 feet higher in elevation. It is situated on the north slope about 20 feet below the peak of the local mountain. The outcrop is quartz with galena, pyrite and hematite contained within walls of rusty-weathered granite, see Annex A. The vein strikes North  $35^{\circ}$  east and dips vertically. Both ends are talus covered. The recorded sample taken across 6 feet assayed Gold, - Trace; Silver, -2.2 ounces per ton; Lead, -1.7 per cent.

Other Sampling: The following assay results were obtained from Pacific Giant Steel Ores Ltd. of samples taken from various locations on the claims.

| <u>Claim.</u> | <u>Sample No.</u> | <u>Gold</u><br><u>oz. per ton</u> | <u>Silver</u><br><u>oz. per ton</u> | <u>Lead</u><br><u>%</u> | <u>Zinc</u><br><u>%</u> |
|---------------|-------------------|-----------------------------------|-------------------------------------|-------------------------|-------------------------|
| Pagi - 9      | 27                | 0.01                              | 141.5                               | 69.9                    |                         |
| Pagi - 7      | 28                | 0.03                              | 377.6                               | 65.6                    |                         |
| Pagi - 10     | 29                | 0.01                              | 149.7                               | 69.0                    |                         |
| Pagi - 3      | 3                 | 0.01                              | 38.4                                | 74.5                    |                         |
| Pagi - 4      | 4                 | 0.04                              | 47.3                                | 76.8                    |                         |
| Pagi - 5      | 5                 | 0.02                              | 47.3                                | 85.5                    |                         |
| Pagi - 6      | 6                 | 0.02                              | 36.2                                | 76.1                    |                         |
| Pagi - 7      | 7                 | 0.02                              | 41.4                                | 76.8                    |                         |
| Pagi - 8      | 8                 | 0.04                              | 35.6                                | 62.5                    |                         |
| Pagi - 9      | 9                 | 0.04                              | 28.3                                | 75.8                    |                         |
| Pagi - 10     | 10                | 0.04                              | 43.4                                | 76.5                    |                         |
| Pagi - 11     | 11                | 0.02                              | 2.3                                 | 6.1                     |                         |
| Pagi - 12     | 12                | 0.02                              | 32.4                                | 69.3                    |                         |
| Pagi - 13     | 13                | 0.04                              | 66.8                                | 76.8                    |                         |
| Pagi - 14     | 14                | 0.02                              | 44.5                                | 81.4                    |                         |

Assay certificate No. 2648-6, December 20, 1965, Whitehorse Assay Office, P.O. Box 346, Whitehorse, Yukon.

9.3 Ore Deposits: No deposit of mineable metallic minerals has been located on the property todate as the extent of the exploration investigation has been most limited.

9.4 Ore Reserves: No reserves of metalliferous ores have been calculated todate on the property due to the limited extent of the investigation conducted todate.

9.5 Economics of Production: Insufficient information is presently available relating to the extent, nature and grades of metalliferous mineralization that will obtain should a deposit be located on the property so that assessment of the economic factors that may prevail under future conditions is not feasible at this time.



Department of Energy, Mines and Resources  
Ministère de l'Énergie, des Mines et des Ressources

Geological Survey of Canada  
Commission géologique du Canada

File Number  
N° à l'appeler

601 Booth Street,  
Ottawa, December 1, 1967.

Mr. W.J. Weymark,  
Weymark Engineering Ltd.,  
3310 Westmount Road,  
West Vancouver, B.C.

Dear Mr. Weymark:

Your letter of 20 November 1967 to the Director of the Geological Survey requesting information on a mineral occurrence marked on Map 10-1960, Wolf Lake, Yukon, has been passed to me for reply.

The veins occur  $6\frac{1}{2}$  miles south of Mile 707 on the Alaska Highway on a property known as the Holliday Ranson group. They have been described in the Annual Reports to Minister of Mines, British Columbia, for 1948, pp. A60-61, and for 1949, pp. A69-70. The Shipment vein was briefly examined by myself in 1953 during geological mapping of the area. The vein was exposed in a partly caved trench some 145 feet long, about 300 yards south of the British Columbia - Yukon boundary. The vein strikes north 65 degrees east and is vertical to steeply dipping. It consists of quartz and galena with minor chalcopyrite, and pyrite, and is bordered by sheared granite typical of the Cassiar Batholith. The visible parts of the vein pinched and swelled along strike from less than 2 inches to as much as 10 inches. The Annual Report for 1949 reports that a test shipment of 5 tons of ore, sent to the Cominco Smelter at Trail, B.C., assayed gold, 0.04 oz. per ton; silver, 40.1 oz. per ton; lead, 65.4 per cent; and zinc, 1.5 per cent.

Yours very truly,

W.H. Poole

WHP/rg

DATE DEC 20th 1966  
 FILE NO. 20025

# ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE

P.O. BOX 349, WHITEHORSE, YUKON

RECEIVED FROM Pacific Giant Steel Ores Ltd.

| SAMPLE NO.         | GOLD<br>G. PER TON | SILVER<br>OZ PER TON | LEAD | COPPER | ZINC |
|--------------------|--------------------|----------------------|------|--------|------|
| PAGT-20-24         | .03                | 2.32                 | 9.5  |        |      |
| 25                 | .04                | 1.52                 | 0.3  |        | 30.0 |
| 26                 | .04                | 5.0                  | 53.3 |        |      |
| 27                 | .02                | 143.5                | 69.9 |        |      |
| 28                 | .03                | 377.6                | 65.6 |        |      |
| 29                 | .03                | 140.7                | 69.0 |        |      |
| COMPOSITE<br>24-29 |                    |                      |      | 0.62   | 6.9  |

ASSAYER [Signature]

WHITEHORSE ASSAY OFFICE

P.O. BOX 340 WHITEHORSE, YUKON

RECEIVED FROM

Pacific Giant Steel Ores Ltd.

| SAMPLE NO. | GOLD  |         | SILVER |         | Lead | Zinc | Copper |
|------------|-------|---------|--------|---------|------|------|--------|
|            | Gr.   | Per Ton | Gr.    | Per Ton |      |      |        |
| PAGE-20-#  | .02   |         | 3.52   |         | 5.3  |      |        |
| 2          | .04   |         | 3.40   |         | 9.4  |      |        |
| 3          | .01   |         | 58.4   |         | 74.5 |      |        |
| 4          | .04   |         | 47.3   |         | 76.8 |      |        |
| 5          | .02   |         | 47.3   |         | 85.5 |      |        |
| 6          | .02   |         | 36.2   |         | 76.3 |      |        |
| 7          | .02   |         | 41.4   |         | 76.8 |      |        |
| 8          | .04   |         | 35.6   |         | 62.5 |      |        |
| 9          | .04   |         | 28.3   |         | 75.4 |      |        |
| 10         | .04   |         | 43.4   |         | 76.5 |      |        |
| 11         | .02   |         | 2.30   |         | 6.2  |      |        |
| 12         | .02   |         | 32.4   |         | 69.3 |      |        |
| 13         | .04   |         | 66.6   |         | 76.3 |      |        |
| 14         | .02   |         | 44.5   |         | 81.4 |      |        |
| 15         | .04   |         | 53.6   |         | 83.5 |      |        |
| 16         | .04   |         | 36.3   |         | 47.6 |      |        |
| 17         | .02   |         | 45.3   |         | 23.4 |      |        |
| 18         | .02   |         | 4.43   |         | 10.5 |      |        |
| 19         | Trace |         | .08    |         |      |      |        |
| 21         | .04   |         | 37.1   |         | 64.8 |      |        |

Composite

1.4

.07

Spectro on 20, 22, 23

No 19 for Gold Silver only

ASSAYED

*E. J. Spiller*



# CERTIFICATE OF ASSAY



File No. CCIE 1  
Date December 14, 1965

## GENERAL TESTING LABORATORIES (CO.) LTD.

325 HOWE STREET • VANCOUVER 1 B.C. CANADA • TELEPHONE 664-1374

We hereby certify that the following are the results of assays made by us upon the herein described submitted 3 sample

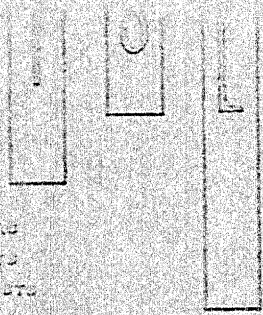
| MARKED   | GOLD              |                  | SILVER   |                  |         |                  |         |                  |         |                  | TOTAL VA<br>PER TON<br>(2000 LB) |
|--|-------------------|------------------|--|------------------|---------|------------------|---------|------------------|---------|------------------|----------------------------------|
|  | Ounces<br>per ton | Value<br>per ton | Ounces<br>per ton                                | Value<br>per ton | Percent | Value<br>per Ton | Percent | Value<br>per Ton | Percent | Value<br>per Ton |                                  |
| <u>Spectrographic Analysis of sample No. 2629 # 20</u> |                   |                  |  |                  |         |                  |         |                  |         |                  |                                  |
| Major Constituent .....                                |                   |                  | Lead.  |                  |         |                  |         |                  |         |                  |                                  |
| Intermediate Constituents .....                        |                   |                  | Silicon, Iron, Copper, Zinc.                     |                  |         |                  |         |                  |         |                  |                                  |
| 0.01% - 0.1% .....                                     |                   |                  | Magnesium, Sodium, Aluminum, Calcium, Manganese. |                  |         |                  |         |                  |         |                  |                                  |
| 0.001% - 0.01% .....                                   |                   |                  | Tin, Strontium.                                  |                  |         |                  |         |                  |         |                  |                                  |
| Traces .....   |                   |                  | Cadmium, Titanium, Barium.                       |                  |         |                  |         |                  |         |                  |                                  |
| Silver - present.                                      |                   |                  |  |                  |         |                  |         |                  |         |                  |                                  |
| <u>Spectrographic Analysis of sample No. 2629 # 22</u> |                   |                  |  |                  |         |                  |         |                  |         |                  |                                  |
| Major Constituents .....                               |                   |                  | Silicon, Iron.                                   |                  |         |                  |         |                  |         |                  |                                  |
| Intermediate Constituents .....                        |                   |                  | Aluminum, Manganese.                             |                  |         |                  |         |                  |         |                  |                                  |
| 0.01% - 0.1% .....                                     |                   |                  | Magnesium, Sodium.                               |                  |         |                  |         |                  |         |                  |                                  |
| Traces .....   |                   |                  | Vanadium, Copper, Titanium, Barium, Lead.        |                  |         |                  |         |                  |         |                  |                                  |
| <u>Spectrographic Analysis of sample No. 2629 # 23</u> |                   |                  |  |                  |         |                  |         |                  |         |                  |                                  |
| Major Constituents .....                               |                   |                  | Silicon, Iron.                                   |                  |         |                  |         |                  |         |                  |                                  |
| Plus 1% .....  |                   |                  | Manganese.                                       |                  |         |                  |         |                  |         |                  |                                  |
| 0.01% - 0.1% .....                                     |                   |                  | Aluminum, Magnesium, Sodium.                     |                  |         |                  |         |                  |         |                  |                                  |
| Traces .....   |                   |                  | Vanadium, Copper, Titanium, Barium, Lead.        |                  |         |                  |         |                  |         |                  |                                  |

Gold calculated at 0 per ounce

Calculated at per lb.

Silver calculated at 0 per ounce

per lb.



# Laboratories Limited

325 HOWE STREET - VANCOUVER 1, B.C.

TELEPHONE 684-1374

ASSAYERS  
CHEMISTS  
GEOCHEMISTS

## CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM

Mr. W. J. Weymark  
Sample given by J. Kubiak  
Lead Silver Showing - Yukon Territories  
November 15, 1967

REPORT NO.

V-3258

SAMPLE(S) OF

ROCK

Corresponding to Spectrographic - V-3215

Sample submitted on December 4, 1967.

#10705

Silver(Ag)oz:ton 59.80

Lead(Pb)% 74.21

oz:ton - Troy ounces per 2,000 lbs.

DATE December 6, 1967.

SIGNED

# Laboratories Limited

325 HOWE STREET - VANCOUVER 1, B.C.

TELEPHONE 684-1374

ANALYSTS  
CHEMISTS  
GEOCHEMISTS

## CERTIFICATE OF ANALYSIS

Semi-quantitative Spectrographic

SAMPLE(S) FROM Mr. W. J. Weymark

Sample Given by J. Kubiak

Lead Silver Showing - Yukon Territories

SAMPLE(S) OF

ROCK

November - 15 November 1967

REPORT NO.  
1509208  
V-3215

|   | Sample<br>10705 | Sample | Sample | Sample<br>10705                            | Sample    | Sample |
|---|-----------------|--------|--------|--|-----------|--------|
| Antimony  | .5%             |        |        | Phosphorus                                 | -         |        |
| Arsenic   | -               |        |        | Platinum                                   | -         |        |
| Bismuth   | -               |        |        | Radium                                     | A         |        |
| Barium (BaO)  | -               |        |        | Rhodium                                    | -         |        |
| Berthelium  | .000%           |        |        | Rubidium                                   | A         |        |
| Boron   | -               |        |        | Ruthenium                                  | -         |        |
| Cadmium   | -               |        |        | Silver                                     | >2000:ton |        |
| Calcium (CaO)                                       | -               |        |        | Strontium                                  | -         |        |
| Chromium  | X               |        |        | Tantalum (Ta <sub>2</sub> O <sub>5</sub> ) | -         |        |
| Chlorine  | -               |        |        | Tellurium                                  | -         |        |
| Cobalt  | -               |        |        | Thallium                                   | -         |        |
| Calcium Oxide (CaO)                                 | -               |        |        | Thorium (ThO <sub>2</sub> )                | -         |        |
| Copper  | .5%             |        |        | Tin  | .01%      |        |
| Gallium   | -               |        |        | Titanium                                   | .01%      |        |
| Germanium   | -               |        |        | Tungsten                                   | -         |        |
| Gold  | -               |        |        | Uranium (U <sub>2</sub> O <sub>3</sub> )   | -         |        |
| Iron  | -               |        |        | Vanadium                                   | .003%     |        |
| Iridium   | -               |        |        | Yttrium (Y <sub>2</sub> O <sub>3</sub> )   | -         |        |
| Iodine  | -               |        |        | Zinc                                       | 1-2%      |        |
| Vanadium Pentoxide (V <sub>2</sub> O <sub>5</sub> ) | -               |        |        | Zirconium (ZrO <sub>2</sub> )              | .001%     |        |
| Lead  | 1               |        |        | ROCK FORMING METALS                        |           |        |
| Lithium (Li <sub>2</sub> O)                         | -               |        |        | Aluminum (Al <sub>2</sub> O <sub>3</sub> ) | .2%       |        |
| Manganese   | .003%           |        |        | Calcium (CaO)                              | .1%       |        |
| Nickel  | -               |        |        | Iron (Fe)                                  | 1-2%      |        |
| Niobium   | -               |        |        | Magnesium (MgO)                            | .02%      |        |
| Niobium Pentoxide (Nb <sub>2</sub> O <sub>5</sub> ) | -               |        |        | Silica (SiO <sub>2</sub> )                 | 1.5-1     |        |
| Platinum  | .001%           |        |        | Sodium (Na <sub>2</sub> O)                 | .7%       |        |
| Potassium   | -               |        |        | Titanium (TiO <sub>2</sub> )               | -         |        |

Figures are approximate:

COB 2

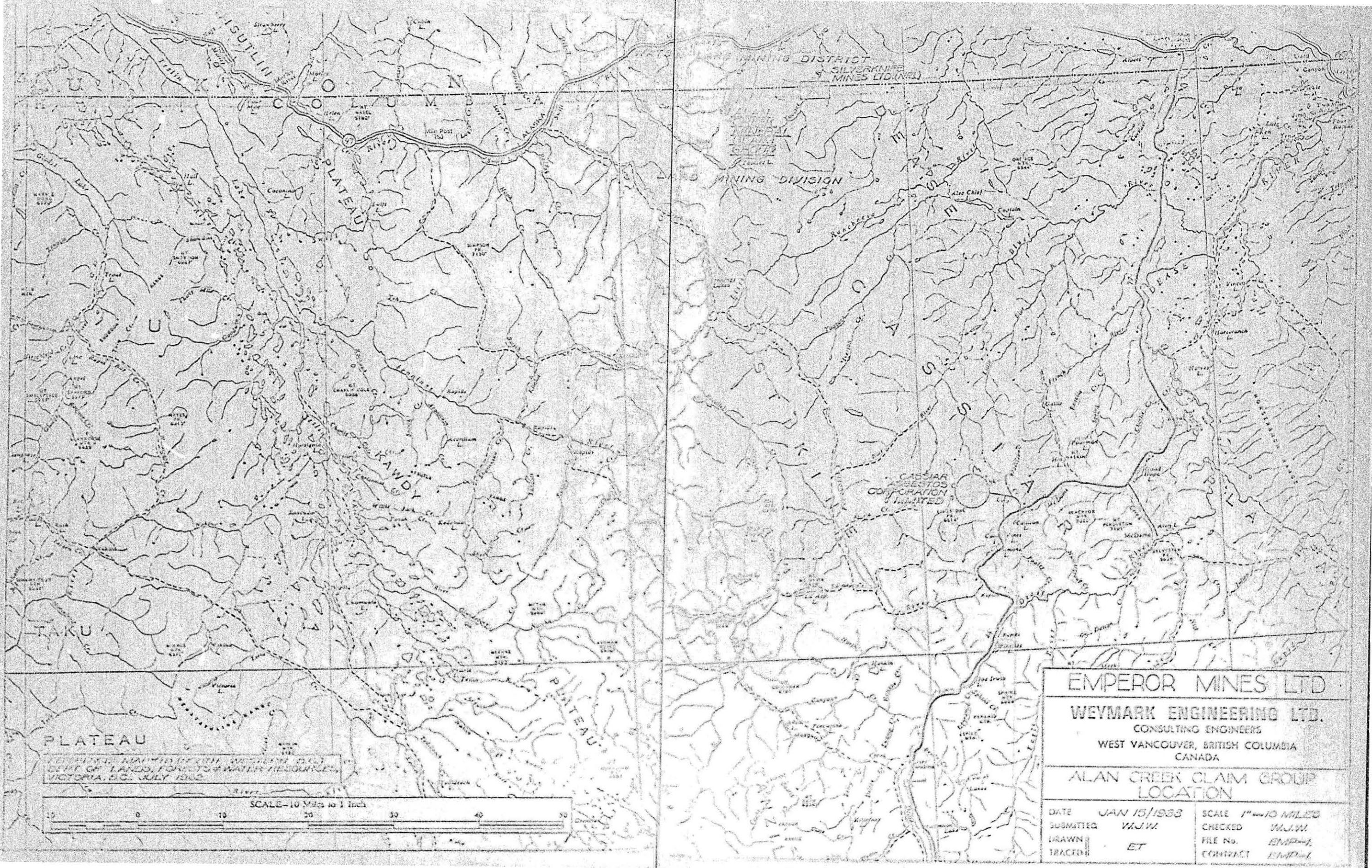
Pulps are stored for 6 months, then discarded.

H - High      - N - 10% approx.      LM - Low Medium      - I - 5% approx.      FT - Faint Trace      - approx. 1st class 10%  
 M - Medium High      - S - 10% approx.      L - Low      - J - 1% approx.      PT - Possible Trace      - Presence on "approx."  
 B - Base      - T - 10% approx.      TT - Trace Low      - SS - 5% approx.      -      - Not Detected      - Elements not listed  
 T - Trace      - SI - 1% approx.      -      -      X - Not looked for

November 30, 1967.

DATE \_\_\_\_\_

SIGNED \_\_\_\_\_



MINING DISTRICT  
SILVERKNIFE  
MINES LTD (R.F.)

MINING DIVISION

CASSIAR  
ASBESTOS  
CORPORATION  
LIMITED

PLATEAU

PREPARED, MAINTAINED BY THE WESTERN DISTRICT  
DEPT. OF LANDS, FORESTS & WATER RESOURCES,  
VICTORIA, B.C., JULY 1962

SCALE - 10 Miles to 1 inch

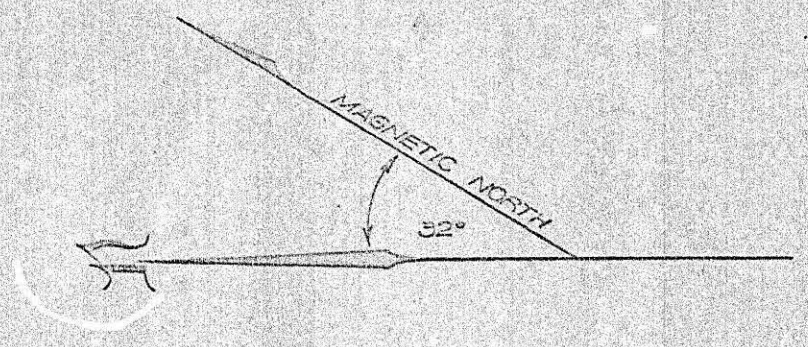
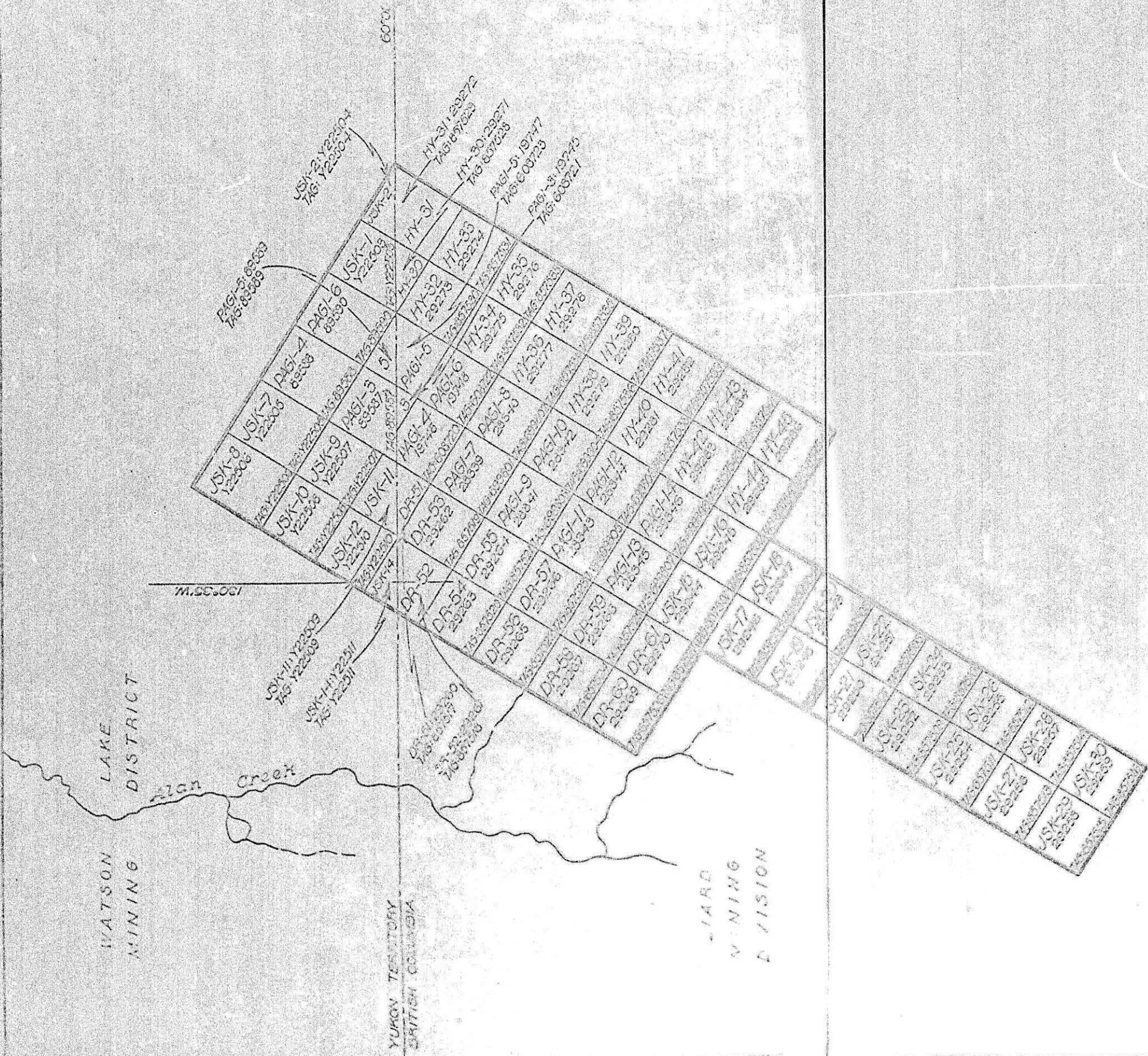


EMPEROR MINES LTD

WEYMARK ENGINEERING LTD.  
CONSULTING ENGINEERS  
WEST VANCOUVER, BRITISH COLUMBIA  
CANADA

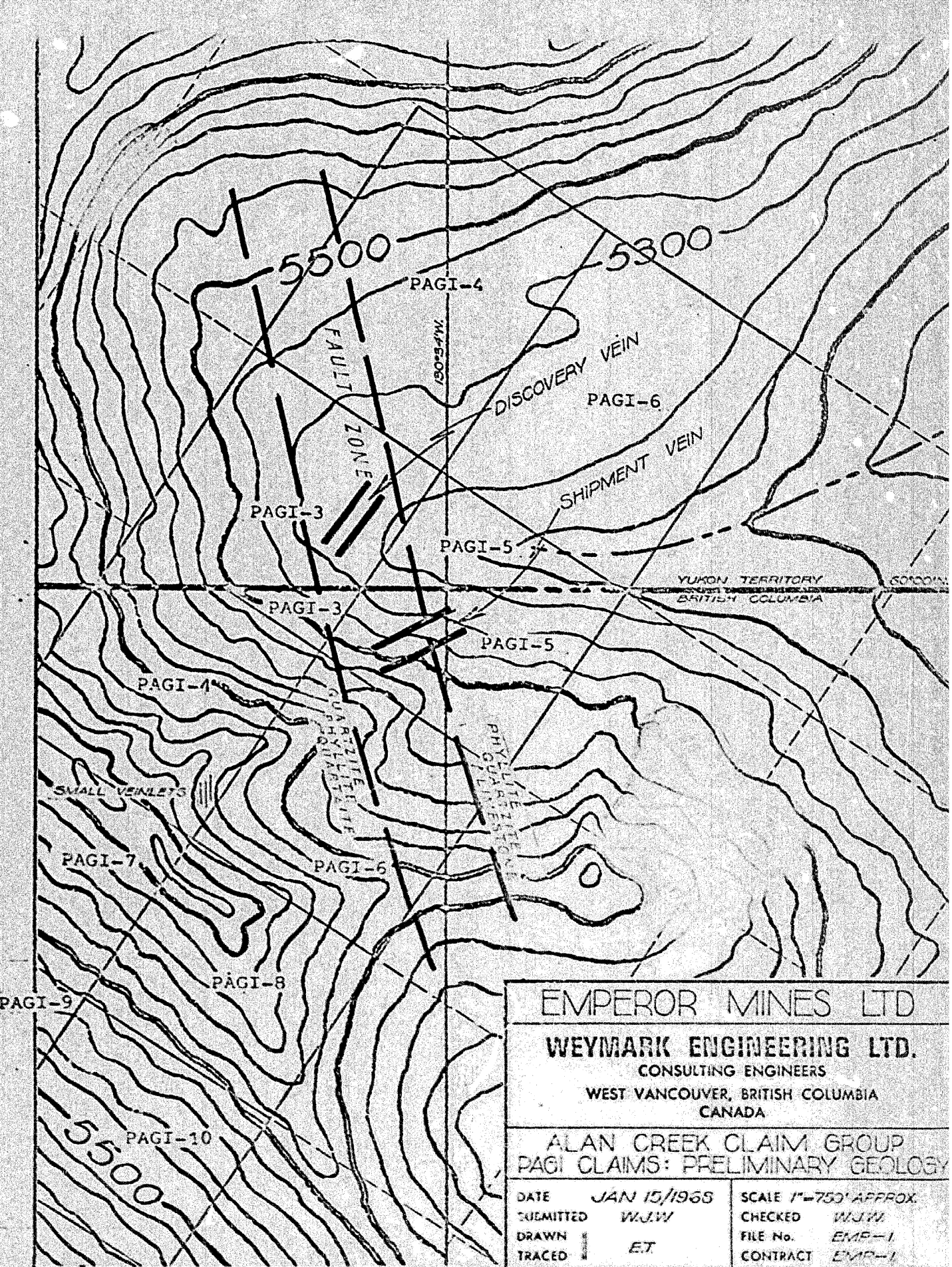
ALAN CREEK CLAIM GROUP  
LOCATION

|           |             |          |               |
|-----------|-------------|----------|---------------|
| DATE      | JAN 15/1933 | SCALE    | 1" = 10 MILES |
| SUBMITTED | W.J.W.      | CHECKED  | W.J.W.        |
| DRAWN     | ET          | FILE NO. | EMP-1         |
| TRACED    |             | CONTRACT | EMP-1         |



|                                  |             |                    |
|----------------------------------|-------------|--------------------|
| EMPEROR MINES LTD                |             |                    |
| WEYMARK ENGINEERING LTD.         |             |                    |
| CONSULTING ENGINEERS             |             |                    |
| WEST VANCOUVER, BRITISH COLUMBIA |             |                    |
| CANADA                           |             |                    |
| ALAN CREEK PROPERTY CLAIMS       |             |                    |
| DATE                             | JAN 15/1968 | SCALE 1" = 2500 FT |
| SUBMITTED                        | WJW         | CHECKED WJW        |
| DRAWN                            | ET          | FILE No. EMP-1     |
| TRACT                            | ---         | CONTRACT EMP-1     |





EMPEROR MINES LTD

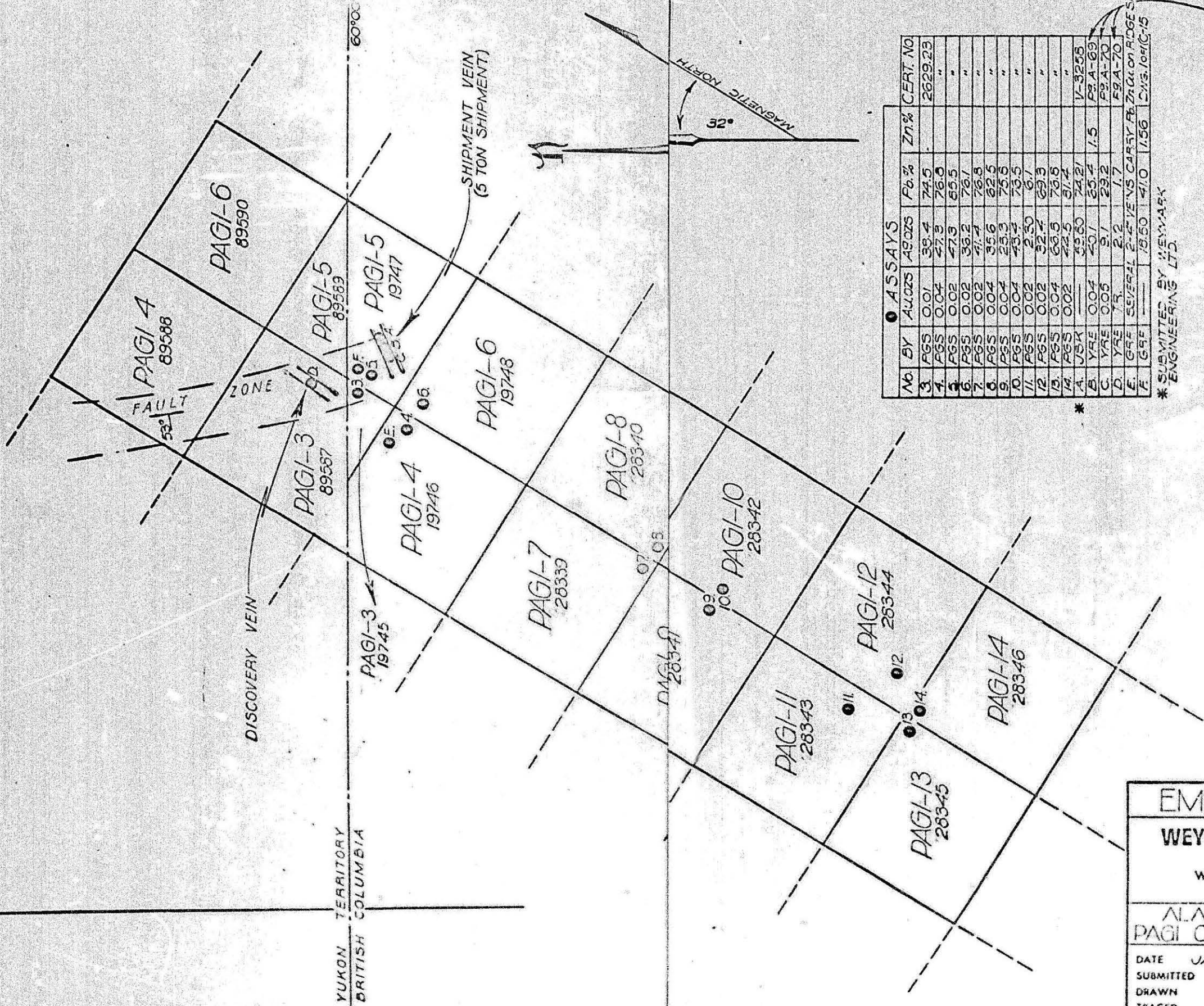
WEYMARK ENGINEERING LTD.  
 CONSULTING ENGINEERS  
 WEST VANCOUVER, BRITISH COLUMBIA  
 CANADA

ALAN CREEK CLAIM GROUP  
 PAGI CLAIMS: PRELIMINARY GEOLOGY

DATE JAN 15/1968  
 SUBMITTED WJW  
 DRAWN ET  
 TRACED ET

SCALE 1"=750' APPROX.  
 CHECKED WJW  
 FILE No. EME-1  
 CONTRACT EMR-1

13033081



| No. | By  | ANALYSIS                                   | Pb. % | Zn. % | CERT. NO. |
|-----|-----|--|-------|-------|-----------|
| 3   | PGS | 0.01                                       | 39.4  | 74.5  | 2629.23   |
| 4   | PGS | 0.04                                       | 47.9  | 76.0  | "         |
| 5   | PGS | 0.02                                       | 47.9  | 69.5  | "         |
| 6   | PGS | 0.02                                       | 36.2  | 76.1  | "         |
| 7   | PGS | 0.02                                       | 41.4  | 76.8  | "         |
| 8   | PGS | 0.04                                       | 35.6  | 82.5  | "         |
| 9   | PGS | 0.04                                       | 25.3  | 75.5  | "         |
| 10  | PGS | 0.04                                       | 43.4  | 79.5  | "         |
| 11  | PGS | 0.02                                       | 2.50  | 6.7   | "         |
| 12  | PGS | 0.02                                       | 32.4  | 69.3  | "         |
| 13  | PGS | 0.04                                       | 66.5  | 76.6  | "         |
| 14  | PGS | 0.02                                       | 22.5  | 81.4  | "         |
| A   | YSK | —  | 55.60 | 74.21 | V-3258    |
| B   | YRE | 0.04                                       | 40.1  | 65.4  | F9A-69    |
| C   | YRE | 0.05                                       | 9.1   | 29.2  | F9A-70    |
| D   | YRE | 7.5  | 2.2   | 1.7   | F9A-70    |
| E   | GRF | SEVERAL 2-5 VEINS CARRY Pb Zn Cu ON RIDGES | —     | —     | —         |
| F   | GRF | —  | 18.50 | 41.0  | 1.56      |

\* SUBMITTED BY WEYMARK ENGINEERING LTD.

PGS = PACIFIC GIANT STEEL ORES LTD. DECEMBER 1965.  
 YSK = J.S. KUBIAK, DECEMBER 1967.  
 YRE = YUKON RANGES EXPLORATION SYNDICATE, 1968.  
 GRF = G.R. FERRELL, TORONTO, ONTARIO, DECEMBER 1967.

REPORT OF THE MINISTER OF MINES, B.C., 1975-1979.

**EMPEROR MINES LTD.**

**WEYMARK ENGINEERING LTD.**  
CONSULTING ENGINEERS  
WEST VANCOUVER, BRITISH COLUMBIA  
CANADA

ALAN CREEK CLAIM GROUP  
PAGI CLAIMS: SAMPLING RESULTS

|           |             |          |                |
|-----------|-------------|----------|----------------|
| DATE      | JAN 15/1968 | SCALE    | 1" = 1000 FEET |
| SUBMITTED | W.J.W.      | CHECKED  | W.J.W.         |
| DRAWN     | ET.         | FILE NO. | EMP-1          |
| TRACED    | —           | CONTRACT | EMP-1          |

BASED ON INFORMATION GIVEN BY PACIFIC GIANT STEEL ORES LTD., G.R. FERRELL OF W.P.E.R. CONSULTING LTD., JOHN S. KUBIAK AND B.C. MINISTER OF MINES REPORT 1968/1969. LOCATIONS ARE APPROX. BASED ON AVAILABLE INFORMATION.