

5458

5458

GEOPHYSICAL REPORT
on a
HAMMER SEISMIC REFRACTION SURVEY
on behalf of
CHINOOK CONSTRUCTION LTD.

Coalmont area, Similkameen Mining Division
Lat. 49°31'N Long. 120°43'W N.T.S. 92 H/10

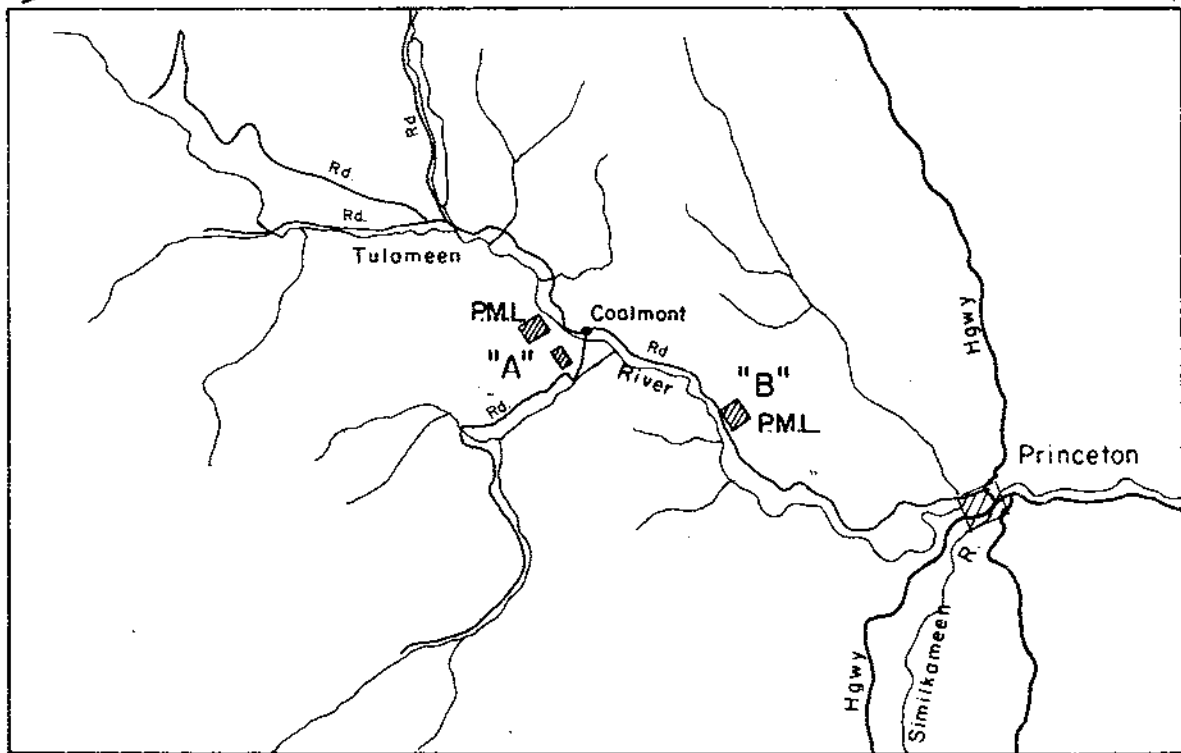
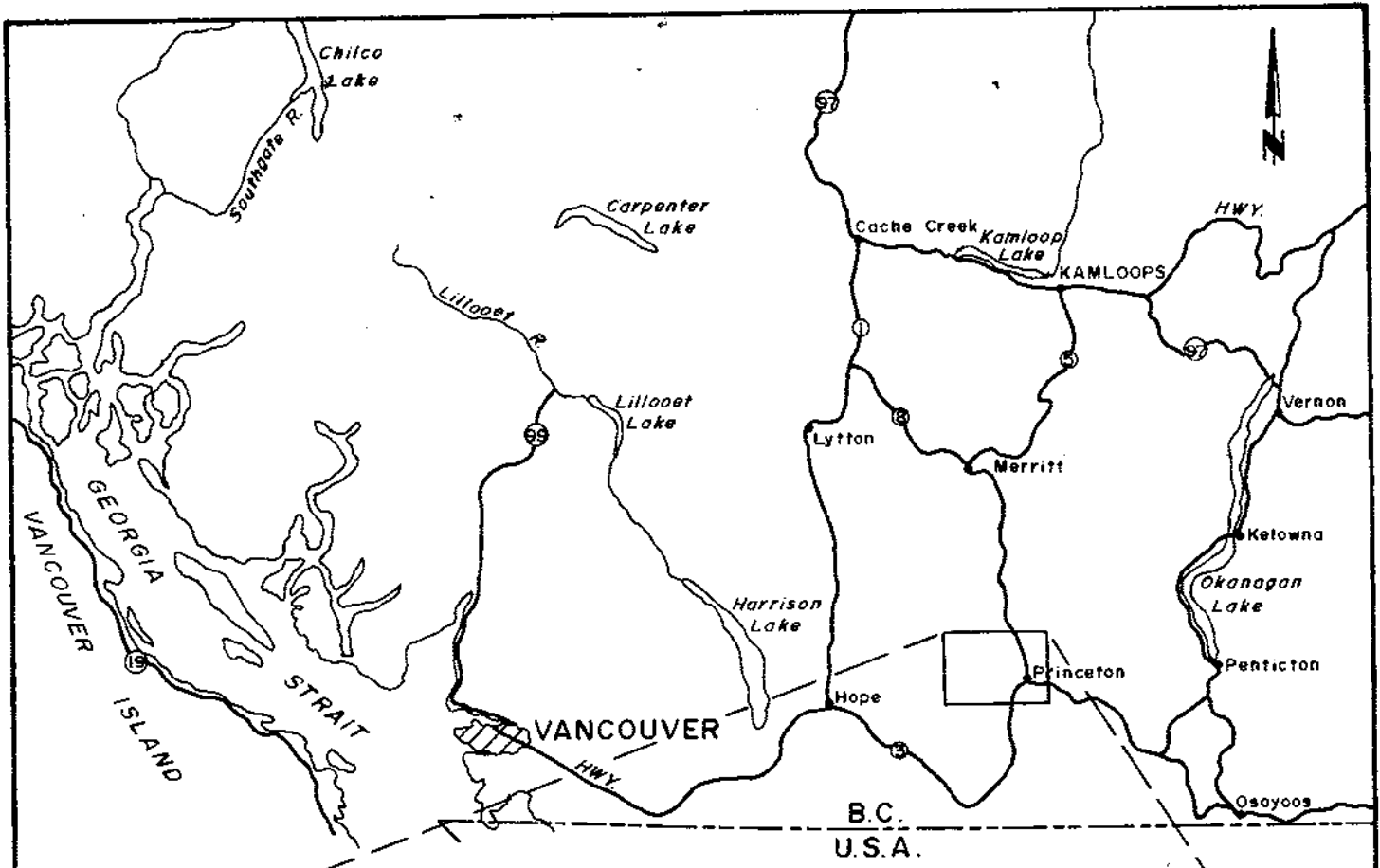
AUTHOR: Glen E. White, B.Sc., Geophysicist
P. ENG: E. D. Cruz
DATE OF WORK: April 15 - 19, 1975
DATE OF REPORT: May 6, 1975

92H: 0E, 92H/7E

PLASTER LENSES 2098, 2088, 2089,
2084, 2085.

92H/10E, 7E

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5458 MAP



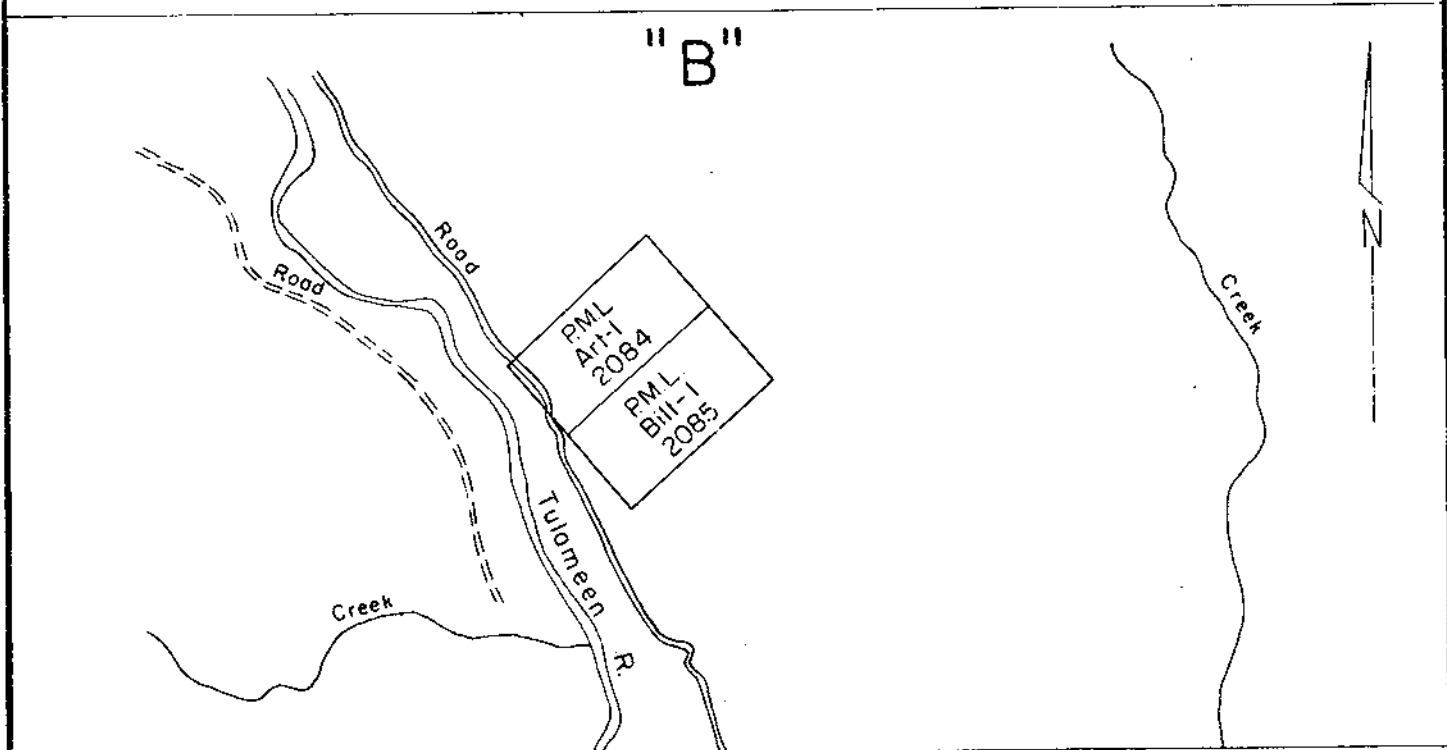
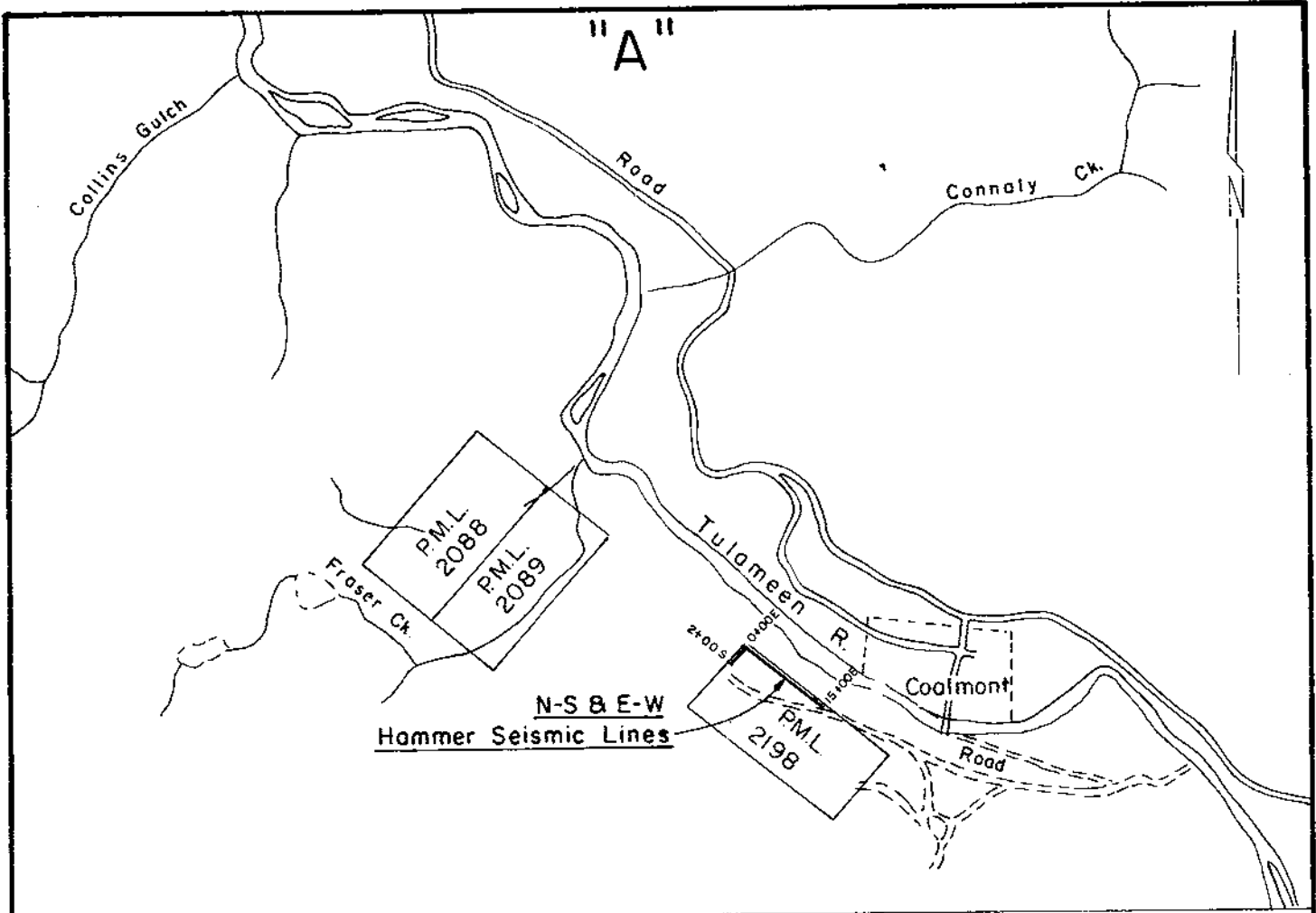
CHINOOK CONSTRUCTION
LOCATION AND CLAIMS MAP

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MAP 1

SCALE LOCATION MAP 1" = 40 MILES APPROX

CLAIMS MAP 250,000

*Allen C. White
geophysical consulting
&
services ltd.*



CHINOOK CONSTRUCTION
LOCATION AND CLAIMS MAP

SCALE - 1" = 1/2 MILE APPROX.

5458
MAP 2

May / 75

Glen & White
geophysical consulting
&
services ltd.

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INTRODUCTION

During the interim April 15 - 19, 1975, Glen E. White Geophysical Consulting & Services Ltd. conducted a limited program of refraction hammer seismic surveying over the Tulameen River group of placer gold leases located on a gravel bench to the west of Coalmont, Similkameen Mining Division, B.C.

The purpose of the survey was to obtain an exemplary profile over a level area on the lease to try and outline any material compositional changes or the depth to bedrock. The hammer seismic method, depending upon soil composition, can yield depth estimates up to 100 feet without using explosives. Thus, this survey was conducted in part to determine if a more powerful energy source would be required in the future.

Thus, after examination of the placer leases, Lease 2198 was found to have a level area which would suit the purposes of this survey.

PROPERTY

The hammer seismic refraction survey discussed in this report was conducted over Lease 2198 of the Tulameen placer group consisting of placer leases 2198, 2088, 2089, 2084 and 2085.

LOCATION AND ACCESS

The Tulameen placer leases are located some $1\frac{1}{2}$ miles west of Coalmont, B.C. which is 11 miles north of Princeton. Latitude $49^{\circ}31'N$, Longitude $120^{\circ}43'W$, N.T.S. 92 H/10.

Access to the survey area, leases 2198, 2088, 2089, is by the road west to Granite Creek out of Coalmont to the first junction some $\frac{1}{2}$ mile up the road, to a secondary road to the right, up the hill for approximately one mile to the area of interest. This claim group is just to the west of a one-man sawmill operation. Leases 2084 and 2085 are just to the east off the Coalmont-Princeton road, approximately 2 miles south of Coalmont, B.C.

GENERAL GEOLOGY

The placer leases lie on either side of the Tulameen River as shown on the enclosed sketch map, at an elevation of some 2500 feet A.S.L. The terrain in the area of the survey slopes to the north and forms a level bench in a NW-SE direction parallel to the Tulameen River.

The placer material is composed of varying mixtures of sand, gravel and boulders and clay seams. The bedrock of the area is of the Nicola Group consisting mainly of Variable coloured volcanic rocks ranging from polyphyritic and non-porphyritic dacite to basalt.

A road cut along the E-W survey line revealed that the uppermost layer is unsorted glacial till with a distribution of approximately - 10% boulders of 6" and larger, 20% cobbles from 3" - 6" and 30% pebbles under 3". The remaining 40% was coarse to fine sand.

SURVEY SPECIFICATIONS

Method

The data was obtained in the form of refraction waves recorded from a single geophone source using a 12 lb. sledge hammer as the wave source. The line sounding method was used with hammer stations extending beyond the next station for partial overlap. The average length of hammer stations was out to 250'; however, on one instance, the length was out to 300'. The lengths of stations were not extended beyond this due to local noise. Over the area where bedrock was found, the survey was partially reversed to allow for Hawkins' method for profile interpretation.

Equipment

The equipment used on the survey was the FS-3, a portable seismic refraction instrument designed by Hunttec Ltd. for engineering geophysical surveys. The instrument prints a permanent time-distance graph on facsimile paper in the field.

Survey Grid

The seismic refraction survey was conducted along the previously flagged claim line of lease 2198 for 1500 feet at 100 foot stations, from the northeast end of the lease to about half way along the lease. A second line of 200 feet was surveyed along the top of the lease to the southwest for a three dimensional interpretation.

DATA PRESENTATION

The N-S and E-W survey lines are shown on the enclosed foldout at a horizontal and vertical scale of 1" = 100 feet. The distance-time graphs are shown for each line with the calculated velocities in feet/second. The terrain and velocity interpretation is presented in profile form directly beneath the time-distance data.

DISCUSSION OF RESULTS

The hammer seismic data located high velocity material of 14,000 feet/second and over between stations 13E and 15E, which would appear to reflect bedrock. The high velocity layer would appear to extend within 50 feet of the surface though a fractured and weathered surface may possibly extend further as indicated by the 10,000 to 14,000 ft/sec material. This high velocity section appears to form a ridge upon which are draped a mixture of alluvial materials. The depth limitation for the amount of imparted hammer energy appears to be approximately 80 feet. Scattered throughout this section are no doubt a number of thin clay and/or sand seams which would interfere with the indicated arrival times and thus alter the interpretation somewhat. However, in generalities, the area from 0 to 10E is a mixture of lower velocity materials and from 10E - 13E a zone of increased velocities where these materials may show evidence of sorting and compaction as they drape a bedrock ridge from 13E to 15E.

CONCLUSION AND RECOMMENDATION

During the month of April 1975, a limited amount of hammer seismic surveying was conducted over a group of placer leases, Coalmont area, B.C. The survey located a bedrock ridge at a depth of approximately 50 feet. The top of this ridge could be further traced using the hammer as an energy source. However, a deeper delineation of bedrock would require possibly caps as an energy source.

Respectfully submitted,
GLEN E. WHITE GEOPHYSICAL
CONSULTING & SERVICES LTD.



Glen E. White B.Sc.
Geophysicist

Instrument Specification

Instrument Portable reflection-refraction seismic unit
with permanent time-distance graph.

Model Huntex FS-3

Manufacturer Huntex (70) Ltd., Toronto, Ontario

Energy Source Hammer or powder with shot box.

Power 30 volts - D cell batteries

Sensitivity $\frac{1}{2}$ 2 milliseconds

Attenuation 0 - 60 decibels

STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology
University of British Columbia

Professional Associations: Associate member of Society of Exploration Geophysicists.

Active member B.C. Society of Mining Geophysicists.

Experience: Pre-Graduate experience in Geology-Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W. P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions with Geo-X Surveys Ltd.

Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Four years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada..

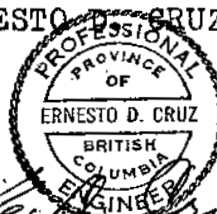
C E R T I F I C A T E

I, Ernesto D. Cruz, DO HEREBY CERTIFY AS FOLLOWS:

- (1) That I am a Consulting Mining Engineer and reside at 8596 Terrace Dr., Delta, B.C.
- (2) That I am a Graduate of Mapua Institute of Technology Phillipines (B.A.Sc.) and University of Washington (M.A.Sc.) in the Faculty of Mining Engineering.
- (3) That I am a registered P. ENG in the Association of Professional Engineers in the province of British Columbia.
- (4) That I have practised geological engineering for 12 (twelve) years.
- (5) That I have reviewed a report dated May 6, 1975 based on work conducted by Glen E. White Geophysical Consulting and Services Ltd. under the supervision of Glen E. White, B.Sc., Geophysicist, and concur with the findings therein.
- (6) That this report consists of 7 typewritten pages and
- (7) That I have no interest directly or indirectly in the Tulameen placer leases or the securities of Chinook Construction Ltd. nor do I expect to acquire or receive any.

DATED at Vancouver, British Columbia, this 6th day of May, 1975.

ERNESTO D. CRUZ, P. ENG



Ernesto D. Cruz, P. ENG

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 TO WIT:

In the Matter of
 HAMMER SEISMIC SURVEY

I, GLEN E WHITE

of GLEN E WHITE GEOPHYSICAL CONSULTING SERVICES LTD

in the Province of British Columbia, do solemnly declare that the costs for the above survey were as follows:

PERSONNEL	PERIOD	WAGES	TOTAL
T. JOHNSON	April 15-19/75	\$ 60	\$ 300.00 ✓
P. SCHMID	" "	\$ 40	\$ 200.00 ✓
Meals AND ACCOMODATIONS	- - - - -	- - - - -	\$ 200.00 ✓
Vehicle including gas	- - - - -	- - - - -	\$ 150.00 ✓
Instrument lesse	- - - - -	- - - - -	\$ 150.00 ✓
Drafting and report	- - - - -	- - - - -	\$ 250.00 ✓
Total			\$ 1250

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
 of Vancouver, in the
 Province of British Columbia, this 14th
 day of May, 1975, A.D.



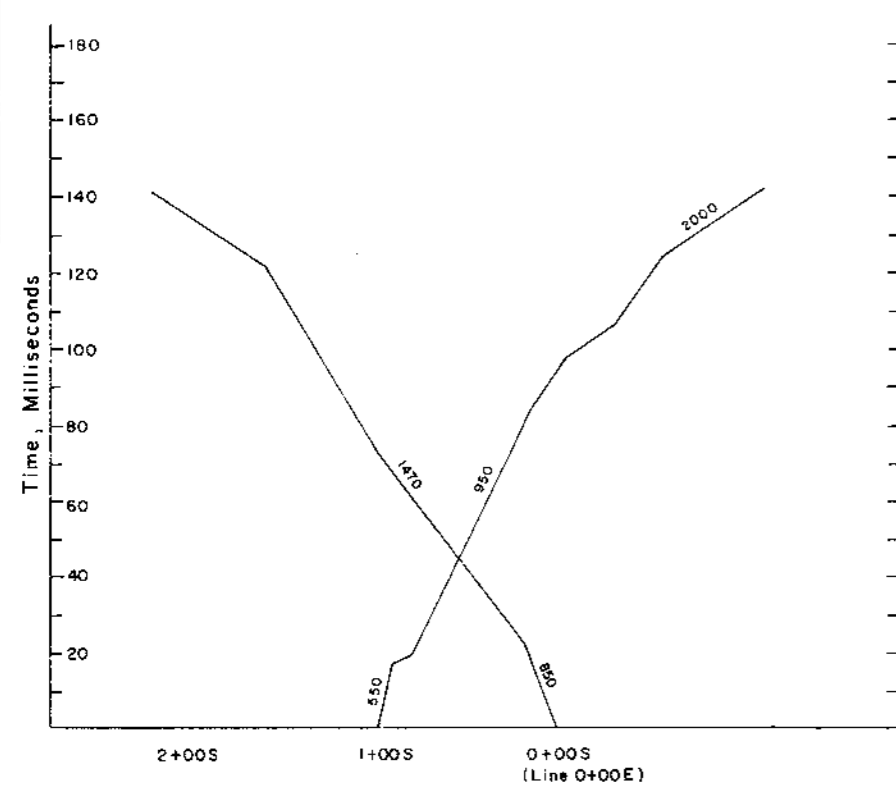
Joan Paul Subj Mining Recorder
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.

In the Matter of

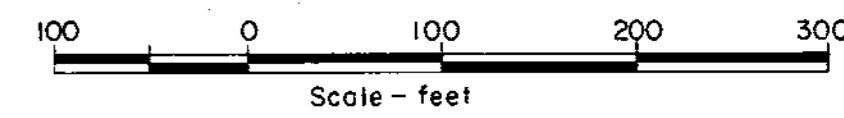
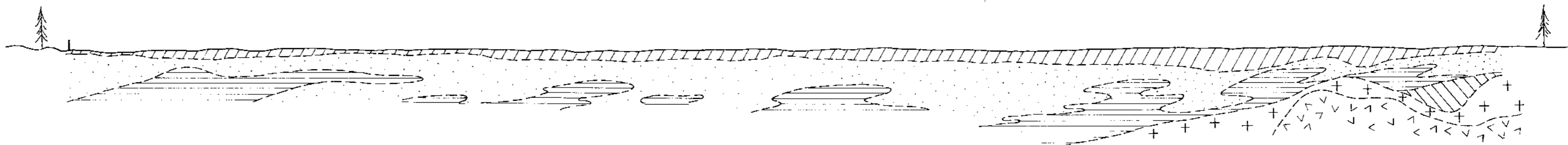
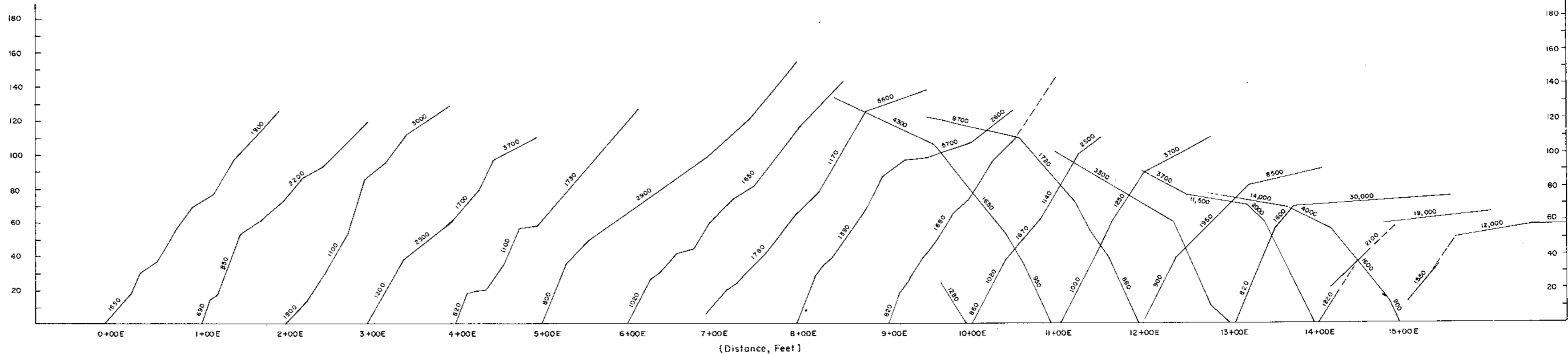
Statutory Declaration

(CANADA EVIDENCE ACT)

N-S Section



E-W Section



Time-Distance Plot Legend

- Velocity feet/second
- 0 - 1000 topsoil, loose material
 - 1000 - 1800 silts and gravel
 - 1800 - 4000 gravel and silt
 - 4000 - 10,000 compact till - clay - gravel weathered country rock
 - 10,000 - 14,000 fractured country rock
 - 14000 + country rock

**Department of
Mines and Petroleum Resources
ASSESSMENT REPORT**

NO. 5458 MAP 3

5458 MAP 3
CHINOOK CONSTRUCTION

REFRACTION HAMMER SEISMIC DATA
INSTRUMENT - HUNTEC FS-3

To Accompany Geophysical Report on
Chinook Construction
Date *May 1975*
By GLEN E. WHITE - *G.E.W.* GEOPHYSICIST

Glen E. White
geophysical consulting
services Ltd.

INTERPRETED BY: G.E.W.
DRAWN BY: G.E.W./r.j.e.
CHECKED BY:
DATE: May / 75
FIG. No.: