MAP NO.: 116 B 02

PLACER X
ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL
OPEN FILE

DOCUMENT NO: 120137
MINING DISTRICT: Dawson
TYPE OF WORK: Seismic testing

REPORT FILED UNDER: Sylvain Montreuil

DATE PERFORMED: June 12, 1991
DATE FILED: July 12, 1991

LOCATION: **LAT.:** 64°05'N
LONG.: 138°57'W
AREA: Klondike River
VALUE $: 250.00

CLAIM NAME & NO.: P34707

WORK DONE BY: Ted Sandor

WORK DONE FOR: Sylvain Montreuil

DATE TO GOOD STANDING:

REMARKS: 116 B 02 - Klondike River
A seismic reflection survey was conducted on the claim in 1991. The author interpreted the results as showing a possible moss or sandy surface/frozen solid gravel interface at a depth of 4.5 ft. and bedrock at 27 ft..

SEISMIC TESTING REPORT

Klondike River

Tropic Claim #P34707

NTS 116B-2

Prepared for

Owner: Sylvain Montreuil
Box 1012
Dawson City, Yukon
YOB 1GO

and

Fieldman: Scott Cone
Box 964
Dawson City, Yukon
YOB 1GO

~~~

Prepared by
Ted Sandor
RR1 Site 20 Comp 121
Whitehorse, Yukon
Y1A 4Z6
(Phone/Fax 667-6193 [403])

June 12, 1991
~~~

This report has been examined by the Geological Evaluation Unit under Section 41 Yukon Placer Mining Act and is recommended as allowable representation work in the amount of $ 250.00.

W P LeBarge

Chief Geologist, Exploration and Geological Services Division, Northern Affairs Program for Commissioner of Yukon Territory.

TABLE OF CONTENTS

Table of Contents Continued...

ASSESSMENT REPORT

on June 12, 1991

Seismic Survey

on Klondike River

Placer Tropic Claim #P34707

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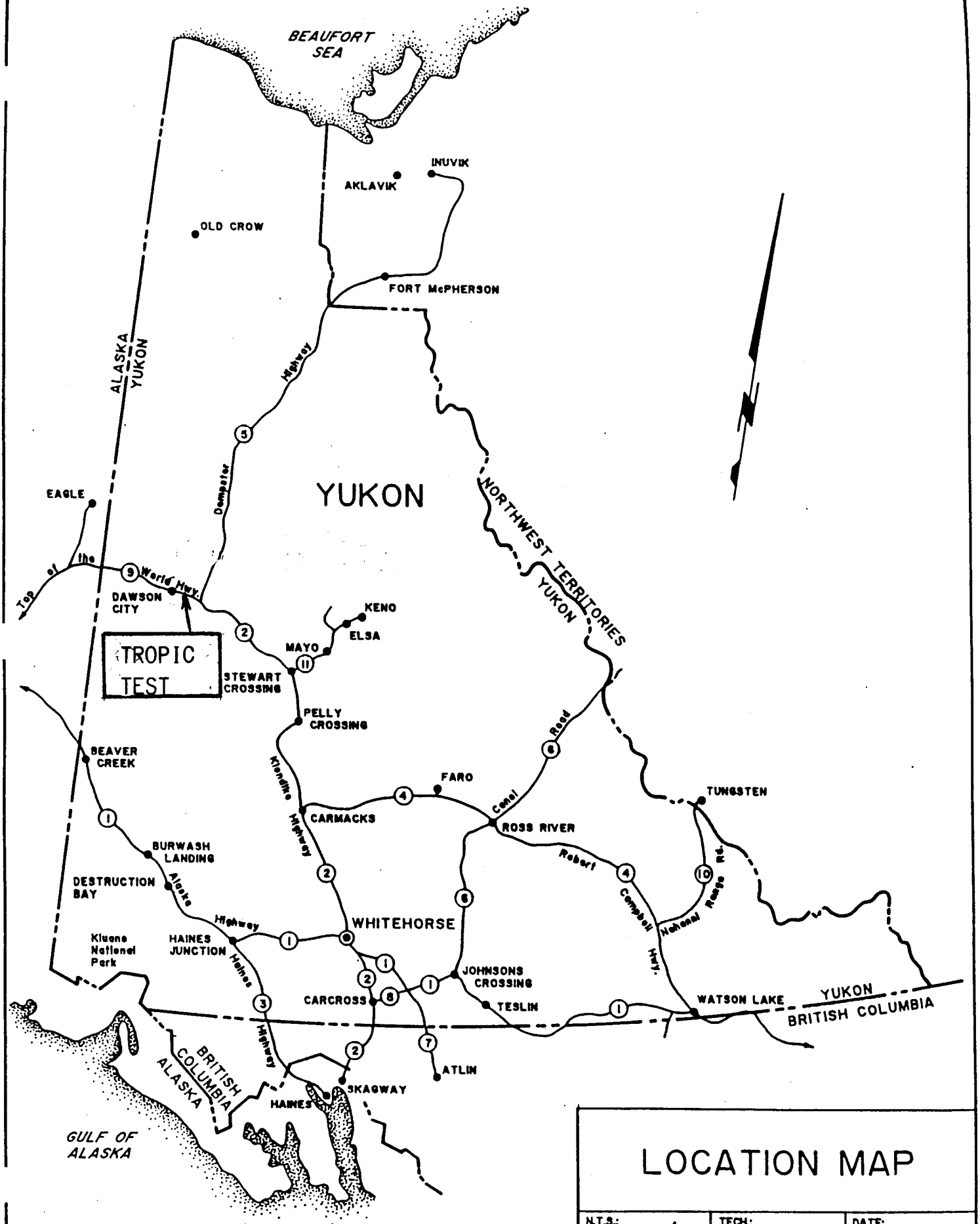
1. INTRODUCTION

On June 12, 1991, a seismic survey was conducted on the Tropic Placer Claim #P34707 for the owner Sylvain Montreuil by fieldsman Scott Cone.

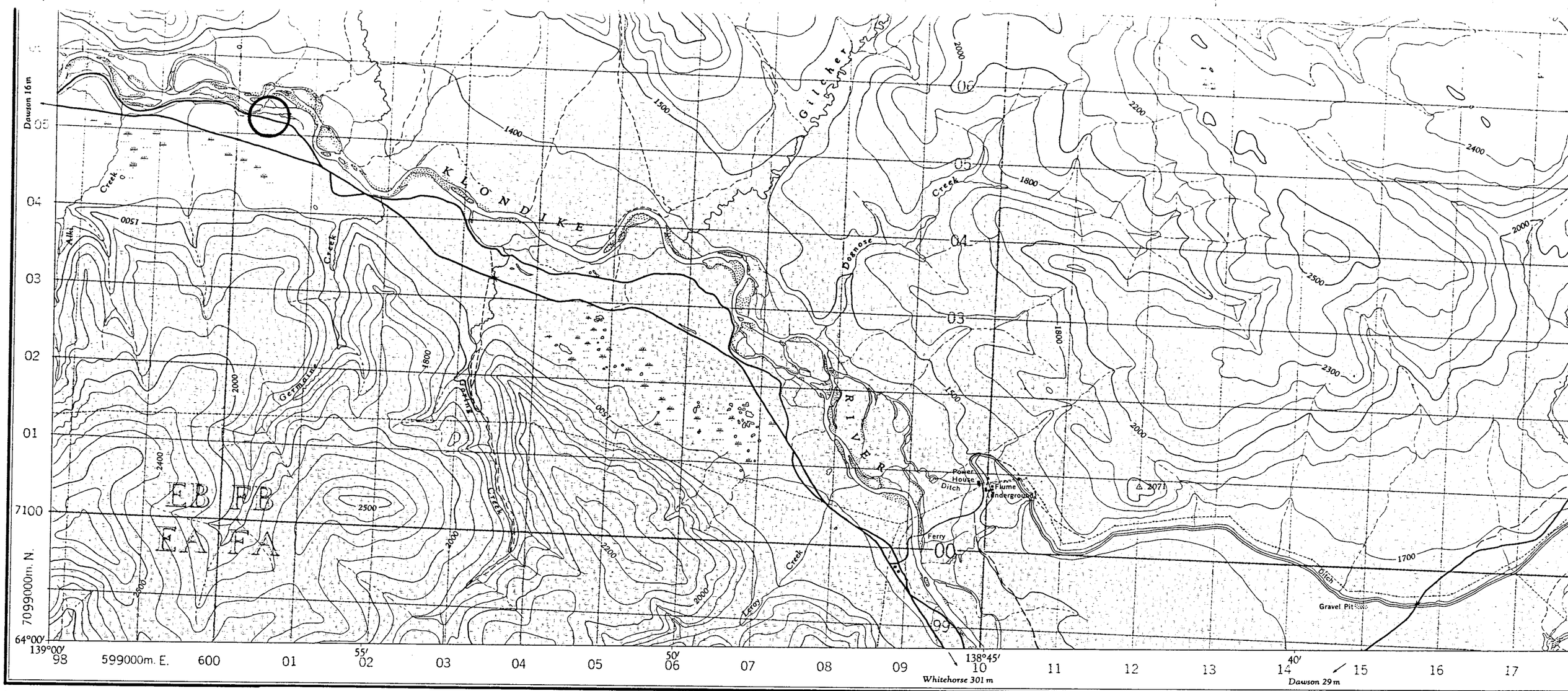
Scott Cone, using a compass and hip chain, located one (1) test site on the north side of the claim close to the river. The test location was marked with flagging and labelled (see Fig. C)

The seismic consultant, Ted Sandor, processed field recordings and interpreted the data received.



LOCATION MAP

N.T.S.: 116B/2	TECH:	DATE: JUNE 12/91
SCALE: 1"=112.5mi.	DRAFTING: HANDESIGN	FIGURE: A



Compiled, 1961, by the SURVEYS AND MAPPING BRANC
DEPARTMENT OF MINES AND TECHNICAL SURVE
from air photographs taken in 1951 and 1960. Field sun
1948 and 1955. Printed 1964.

Copies may be obtained from the Map Distribution Office,
Department of Mines and Technical Surveys, Ottawa.

GRID ZONE DESIGNATION	100,000 M. SQUARE IDENTIFICATION
7 W	EB FB / EA FA 71 / 6

TO GIVE A REFERENCE TO NEAREST 100 METRES

EXAMPLE. STREAM JUNCTION

EASTING Read number on grid line immediately to left of point	09	
Estimate tenths of a square from this line eastward to point.		4
		094
NORTHING Read number on grid line immediately below point	11	
Estimate tenths of a square from this line northward to point.		8
		118
MILITARY GRID REFERENCE	094118	

Nearest similar grid reference 100,000 metres (about 63 miles)

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID

LOCATION MAP
NTS. 116B/2
REFERENCE - TEST SITE "O"
Fig. B June 12/91

all weather	toute saison	
dry weather	période sèche	
cart track	de terre	
trail or portage	sentier ou portage	
Railway, normal gauge, single track	Chemin de fer, voie unique (écartement normal)	siding / voie d'evitement; station / gare
Power transmission line	Ligne de transport d'énergie	
Mine or Open cut	Mine ou fosse à ciel ouvert	
Horizontal control point, with elevation	Point géodésique avec cote	454 △
Bench mark, with elevation	Repère de nivellement avec cote	BM 157→

(Joins Flat Creek 115 O/15)

RABBIT CREEK
YUKON TERRITORY

SCALE 1:50,000 ÉCHELLE

Miles 1 0 1 2 3 Miles
Metres 1000 500 0 1000 2000 3000 4000 Mètres
Yards 1000 500 0 1000 2000 3000 4000 Verges

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES: 100 PIEDS
Élévations en pieds au-dessus du niveau moyen de la mer
Réseau géodésique nord-américain unifié (1927)
Projection transverse de Mercator

MAGNETIC DECLINATION 32°52′ EAST
AT CENTRE OF MAP 1964
Annual change (decreasing) 3.8′

DÉCLINAISON MAGNÉTIQUE AU CENTRE
DE LA FEUILLE EN 1964: 32°52′ EST
Variation annuelle (décroissante) 3.8′

CONVERSION SCALE FOR ELEVATIONS
30 20 10 0 50 100 150 200 250 300 Metres
100 50 0 100 200 300 400 500 600 700 800 900 1000 Feet

Building	Bâtiment	Barn	
School	École	Post Office	
Church	Église	Cemetery	
Lighthouse	Phare		
River with bridge	Rivière avec pont		
Stream, intermittent or dry	Cours d'eau intermittent, ou à sec		
Lake intermittent; indefinite	Lac intermittent, rive imprécise		
Marsh or Swamp	Marais ou marécage		
Depression contours	Courbes de cuvette		

NATIONAL TO
SYSTÈME DE RÉFÉRENCE CARTOGR

SEISMIC TEST

S-41

PL8762

1 MILE

TROPIC P34707

RIVER

1500

O.I.C. 1985-1364

DISC.

Creek

P21286

P21285

PL8433

1 MILE 4TH TIER

MIKE 1 P36156

Willoughby P36135

BENCH DISC. BIRD P9935

HEREFORD P9108

CHARLAIS P9109

BORING 7 P34672

BORING 5 P34678

BORING 6 P34677

BORING 3 P34674

BORING 4 P34673

HUGUETT P36601

S-86

YT G 002

KLONDIKE

BORING P36803

S-40(b)

S-85A

Dognose

ATKI

PL8590 2 MILE

2000

PL 8777

2 MILE

Creek

2500

Germaine

G.C.21 P35229

G.C.20 P35228

G.C.19 P35227

G.C.18 P35226

G.C.17 P35225

G.C.16 P35224

G.C.15 P35223

G.C.14 P35222

G.C.13 P35221

G.C.12 P35220

G.C.11 P35219

G.C.10 P35218

G.C.9 P35217

G.C.8 P35216

G.C.7 P35215

G.C.6 P35214

G.C.5 P35213

G.C.4 P35212

G.C.3 P35211

G.C.2 P35210

G.C.1 P35209

P13839

P13840

P13841

P13842

P13843

P13844

P13845

TOK 23

TOK 24

TOK 25

TOK 26

TOK 27

TOK 28

TOK 29

YM 1 P21166

YM2 P21167

YM 5 P21170

YM 6 P21171

YM 7 P21172

YM 8 P21173

YM 9 P21174

YM10 P21175

YM11 P21176

YM12 P21177

YM 13 P21178

YM 14 P21179

YM 15 P21180

YM 16 P21181

YM 17 P21182

YM18 P21183

KARLI 1

KARLI 2

KARLI 3

KARLI 4

KARLI 5

KARLI 6

KARLI 7

KARLI 8

KARLI 9

KARLI 10

P14719

P14720

P14721

P14722

P14723

P14724

P14725

P14726

P14727

P14728

ANGEL 1 P28752

ANGEL 2 P28753

139° 00'

55'

116B-2

PLACER

LATITUDE 64° 00' TO 64° 15'
LONGITUDE 138° 30' TO 139° 00'

ISSUED UNDER THE AUTHORITY OF THE MINISTER
OF
INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

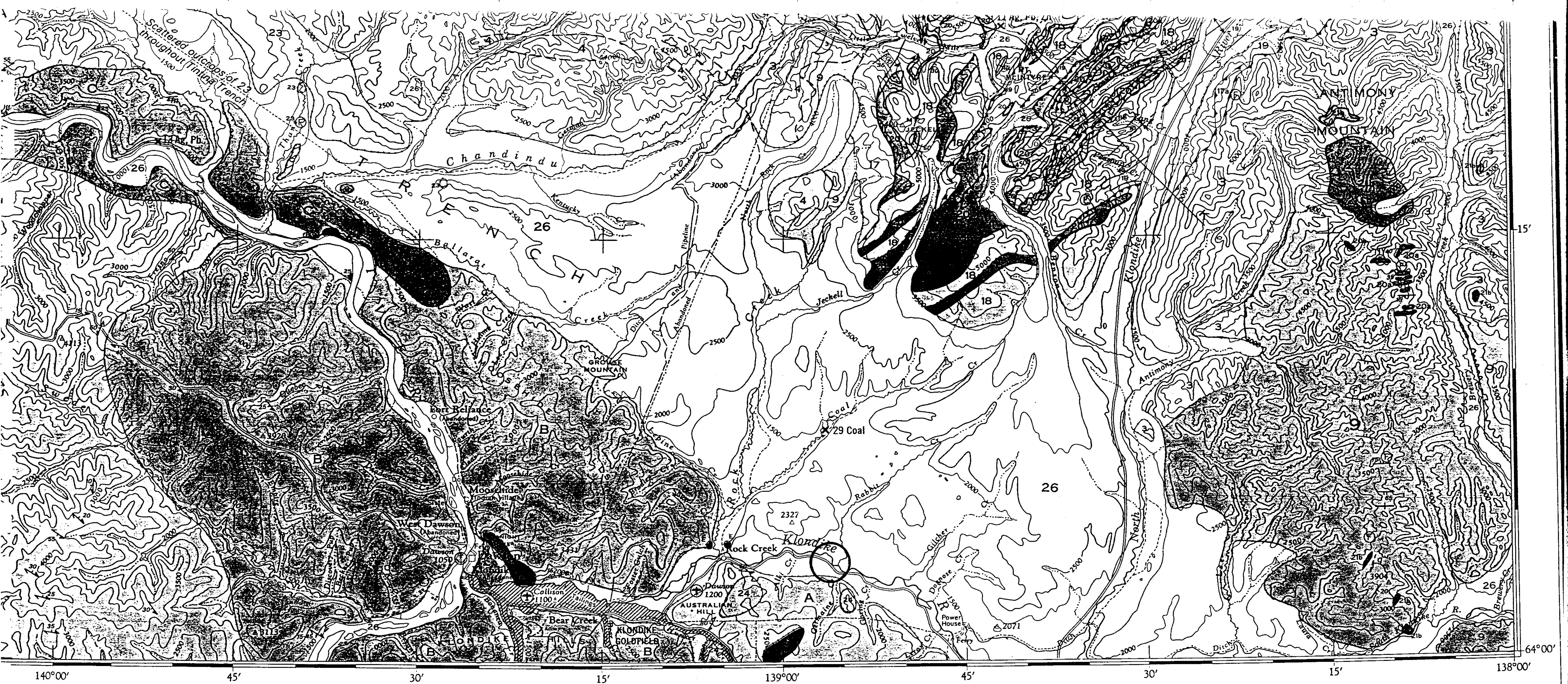
CLAIM MAP
Fig. C

SCALE 1:30,000

JUNE 12,1991
ONE SEISMIC TEST

1000 0 1000 2000 METRES

1500 0 1500 3000 4500 6000 7500 9000 10500 FEET



Printed by the Surveys and Mapping Branc

MAP 1284A

GEOLOGY

DAWSON

YUKON TERRITORY

GEOLOGY MAP
REFERENCE - TEST SITE "O"
Fig. D June 12/91

Scale 1:250,000

Miles 4 0 4 8 12 Miles

Kilometres 6 0 6 12 18 Kilometres

Magnetic declination 1970 varies from 31°33' easterly at centre of west edge to 33°17' easterly at centre of east edge. Mean annual change decreasing 3.7'

Elevations in feet above mean sea-level

Base-map at the same scale published by the Surveys and Mapping Branch in 1954, 1957 and 1958. Roads were revised by the Geological Survey of Canada for this edition

Any revisions or additional information known to the user would be welcomed by the Geological Survey of Canada

Copies of the topographical edition of this map may be obtained from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa

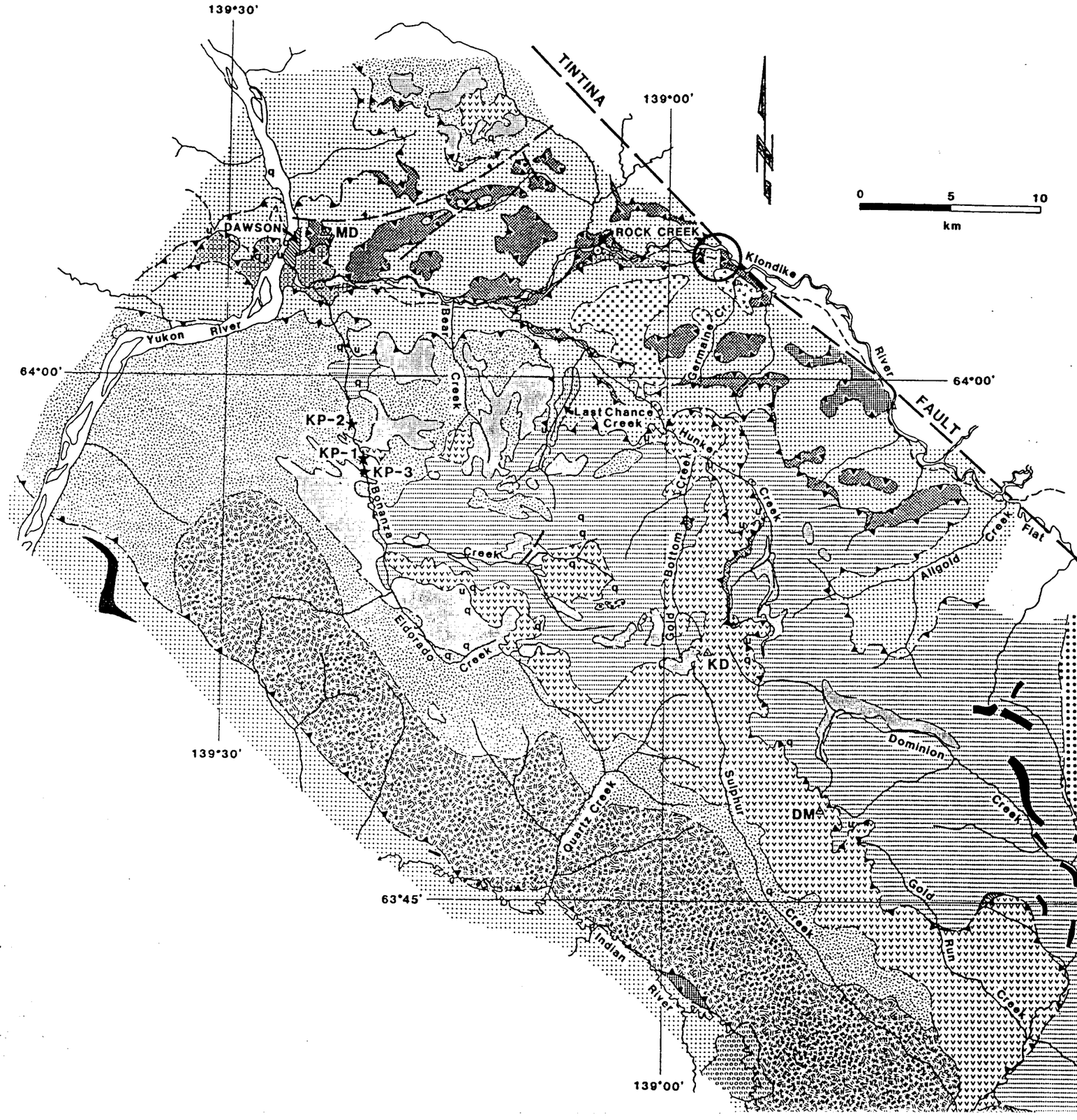
The following names have not been approved by the Canadian Permanent Committee on Geographical Names: Trace Hill, McCann Hill, Porcupine Hill, Woodchopper Creek, Monster River, East Blackstone River, Spotted Fawn Gulch

N

116 G-116 F (E 1/2)	116 H	106 E
116 B-116 C (E 1/2) 1284A	116 A 1283A	106 D 1282A
115-O-115 N (E 1/2) 711A	115 P 1143A	105 M 890A

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO GEOLOGICAL SURVEY OF CANADA MAPS

DAWSON
YUKON TERRITORY



LEGEND

- quartz-feldspar porphyry (Eocene)
- felsic lapilli tuff, includes sandstone and conglomerate
- plagioclase-phyric basalt, diabase, minor gabbro
- hornblende-biotite granodiorite (late Cretaceous-Paleocene)
- interbedded siltstone, sandstone, and andesitic flows (± sills)

SMT
- massive greenstone, minor diabase
- serpentinite, carbonatized serpentinite, talc-carbonate schist

YTT
- felsic schist (muscovite and quartz-muscovite schist)(Permian)(I, II)
- chloritic schist (quartz-chlorite (± actinolite, biotite, feldspar) schist locally includes minor metagabbro and amphibolite (I, II, III)
- foliated metagabbro (I)
- micaceous and chloritic quartzite and feldspathic quartzite (I, II)
- carbonaceous quartz-muscovite (± biotite) phyllite and schist, includes minor chloritic schist (I, II, III)
- medium-grained marble and calcite-muscovite-quartz schist (II, III)
- quartz-augen schist (quartz ± feldspar augen-bearing quartz-muscovite schist)(Permian) (I
- biotite-bearing quartz monzonitic orthogneiss (Sulphur Creek orthogneiss)(Permian) (I)
- medium-grained quartz dioritic orthogneiss (II?)
- feldspar augen-bearing granitic orthogneiss (Mt. Burnham orthogneiss)(late Dev.-early Miss

- lithological contact (definite, approximate)
- thrust fault (definite, approximate)
- steep fault (definite, approximate)
- u altered ultramafic occurrence
- q quartz-feldspar porphyry occurrence
- highway

GEOCHRONOLOGY OF THE KLONDIKE DISTRICT, WEST CENTRAL.

J. K. MORTENSEN. REV. 1990

REFERENCE - TEST SITE "O"

Fig. E June 12/91

2. SURVEY

2.1 Location and Access

The Tropic Claim P#34707 is located on the south side of the river just one (1) mile west of Germaine Creek, and 45 miles east of Dawson City by road.

Access to the test site was by 4x4 pickup. Testing was done on foot. (See Access Map B.)

2.2 Claim Information

Name	Placer Claim Number	Owner
Tropic	P 34707	Sylvain Montreuil

Claim Sheet 116B-2

3. PERSONNEL

Scott Cone surveyed, marked, measured, expedited and carried out the field work.

Ted Sandor supervised the quality, directed the data processing and prepared the report.

Flora Evans assisted with the word processing.

4. GEOLOGY

This property consists of Klondike River unconsolidated glacial and alluvial deposits. (See Geology Maps D and E)

5. INSTRUMENTATION

Directional Electret Microphone
800 OHMS 30 - 18,000 Hz Response

Panasonic Magnetic Tape Recorder Model #RQ-L335
Frequency Range: 180 - 7,000 Hz
Tape Speed: 4.8 cm/s (1-7/8 I.P.S.)
Track System: 2-track monaural, recording and playback
16 ga. shotgun, 1-1/8 oz. shot, #7-1/2 shot

Software:
Sound Filler St. Visual Sample Editor
Requires TOS in ROM

Akai Professional S700 Digital Sampler
12-Bit Sampling
Sampling Frequency: 4KHZ - 40 KHZ
Sampling Time: 8 Sec. - 08 Sec.
Frequency Response: 25 Hz - 16 KHz
Atari 520 St. Computer
Processor: MC6800, 32 Bit Internal,
16-Bit External Architecture
8 MHz clock frequency.
Memory: 524,288 Bytes of RAM; 196,608 Bytes of ROM
Keyboard: 94-key Intelligent keyboard, using 6301 Microprocessor
Storage Medium: 3-1/2 inch, Microfloppy disk;
Single-Side, Double Density;
135 Tracks per inch
Data Transfer
Speed: 250 Kilobits per second
Atari Sc. 1224 RGB Colour Monitor
Seikosha SP-1600 Dot Matrix Printer
Printing Method:Impact Dot Matrix Bidirectional Logic
Seeking Printing
Print Head: 9 Pins

6. THEORY

This report is intended as a guide to the application of seismic refraction and reflection techniques to shallow, subsurface exploration of engineering sites. Many civil engineers and geologists have some acquaintance with this basic geophysical tool, but few apply it frequently. The primary purpose of the report is to provide the reader with a working knowledge of the method, with a convenient reference, and further, with a basis to judge the applicability of the method and the results to his particular exploration problem.

Solid state electronics have improved the portability of engineering-type refraction and reflection instruments, but they operate fundamentally in the same way they did 50 years ago. The basic field practices and methods of interpreting the data have not changed with time, although specialized interpretational techniques have been proposed and developed for some difficult cases.

The conduct of refraction and reflection surveys and the interpretation of the data are well-established and reasonably straight forward, although they are not invariant. The user can change the field layout of his equipment and apply judgement and imagination in his handling of the raw data. In common with other indirect methods of subsurface exploration, there are no rigid inflexible approaches to making sense of the data, nor are there any handbooks that infallibly direct the engineer, geologist or geophysicist to the correct answer. The general case will require thought and care: ambiguities and uncertainties are not uncommon. Some foreknowledge of the site conditions and an understanding of what is geologically plausible will always assist in resolving the raw data into meaningful information.

Figure 1 shows a refraction survey. This method could be quite costly and require complicated data processing should multiple layers of soil and gravels be encountered.

6. THEORY CONTINUED

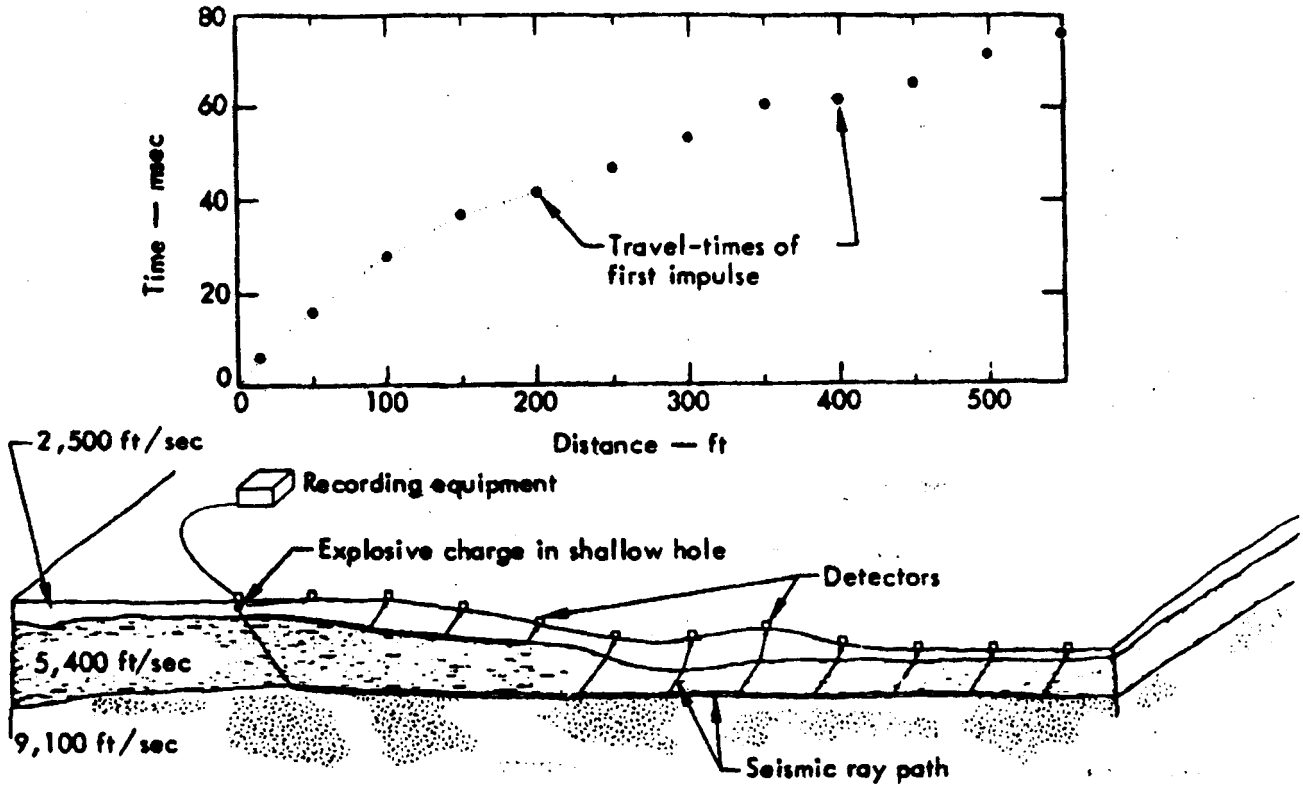


Figure 1. Schematic of seismic refraction survey

Figure 2 represents a refraction survey.

There is a definite relation between reflected and refracted energy which could be observed in Figure 2B. Using this principle and Tables A1 and A2 calculation is simplified, for the sound in a reflected survey only has to go down, turn around at point of geophone or microphone without going along the higher velocity layers and then back up. Seismic waves will bounce off of most surface with a lot of amplitude but not necessarily with a wide range of frequencies. The reflected seismic waves returning to the geophone with the strongest amplitude and frequencies should come from the layer with the highest velocity change which, in most cases, should be bedrock (solid rock) or from a gravel layer directly beneath an organic surface cover.

6. THEORY CONTINUED

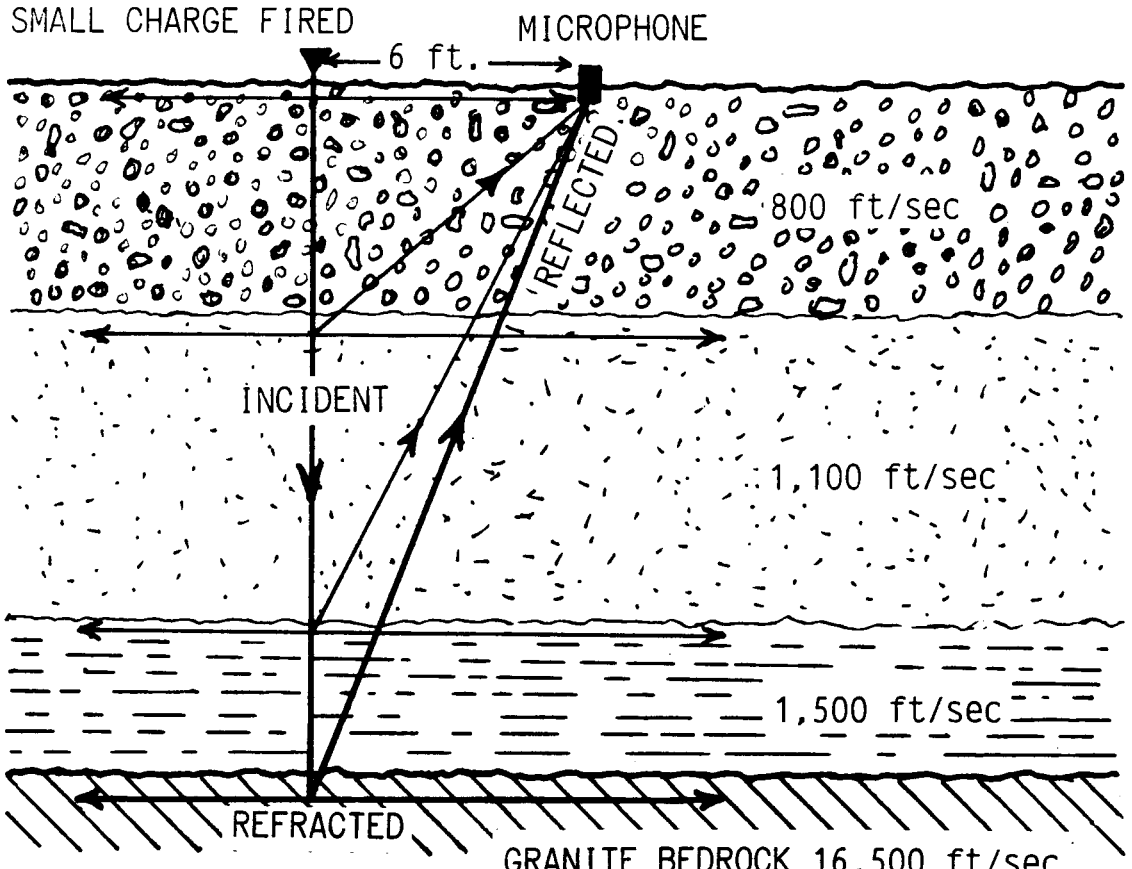


FIG. 2

The thicker line representing the reflected seismic wave from the bedrock to the microphone should be the wave with the highest amplitudes and the widest range of frequencies in Figure 2. The six foot distance from microphone to charge is to prevent damage to the delicate recording equipment. The error of this footage can usually be made up by averaging the total of the velocities a little higher to simplify interpretation. In this case "1,200 ft/sec." will be close enough.

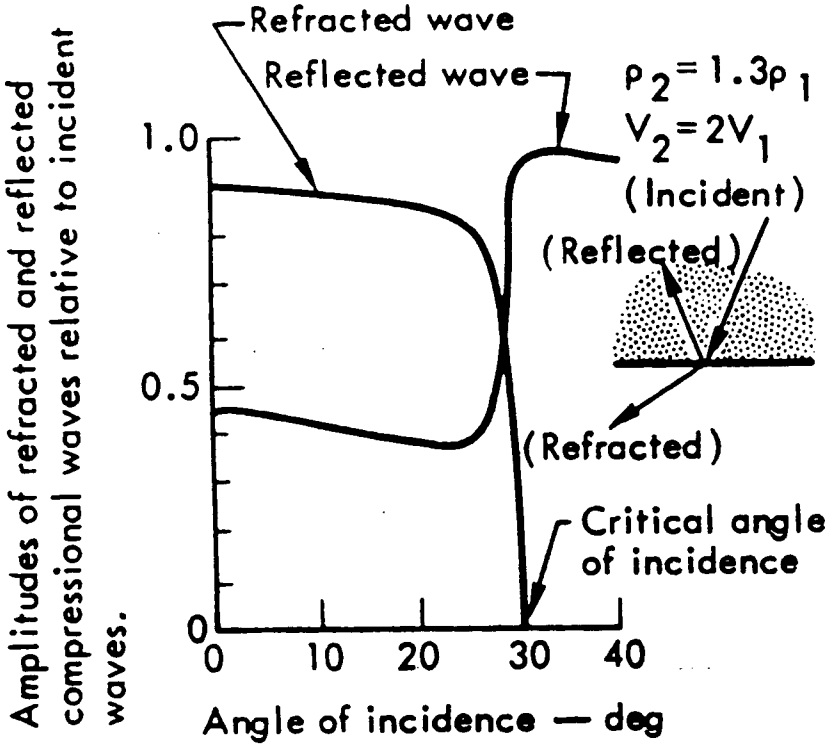


Fig. 2b. Amplitudes of reflected and refracted compressional waves relative to incident waves as a function of angle of incidence.

It may seem anomalous in Figure 2b that the sum of the amplitudes of the reflected and refracted pulses is greater than that of the incident wave (i.e., greater than 1.0). However, the energy of a pulse is proportional to the square of its amplitude, and the sum of the energies of the reflected and refracted waves is equal to the energy of the incident wave.

7. METHOD

After the grid pattern is established on a given claim by the owner or party in charge, we mark each test with flagging. We clean loose debris to allow firm soil contact with the microphone. We then cover the microphone to lessen the surface noise. A small charge is fired (usually a 16 gauge shotgun) to generate a seismic wave six feet from the microphone. The wave going into the ground and the reflected signal coming out is recorded on a magnetic tape recorder. We also do a field test on a nearby area with similar conditions where bedrock depth is known by drilling or excavation to determine the velocity of the gravels.

8. DATA PROCESSING AND PRESENTATION

The recording is sent back to base camp and is transferred into the Akai S700 Digital Sampler by means of a coaxal cable with 6.3 mm phone plug jack. The Akai is coupled with the Atari 520 St. computer with Midi Interface. Other peripherals are connected with various other interface connections.

The seismic recording is now analyzed in various formats and then the best choice is printed out on a Seikosha SP-1600 Dot Matrix Printer. A report on the testing and the interpretation of the data is made out to finalize the survey, along with copies of the original Fourier Transform for 3-D wave form analysis.

9. INTERPRETATION

In tests conducted in the past on Hunker Creek and on the Klondike River, we determined that those frozen gravels had a velocity of 1,500 ft/sec. (1.5 ft./ms). Based on this calculation the following formula is used:

> Reflected milliseconds x 1.5 divided by 2 = feet to bedrock or the layer to be of interest.

Test 1

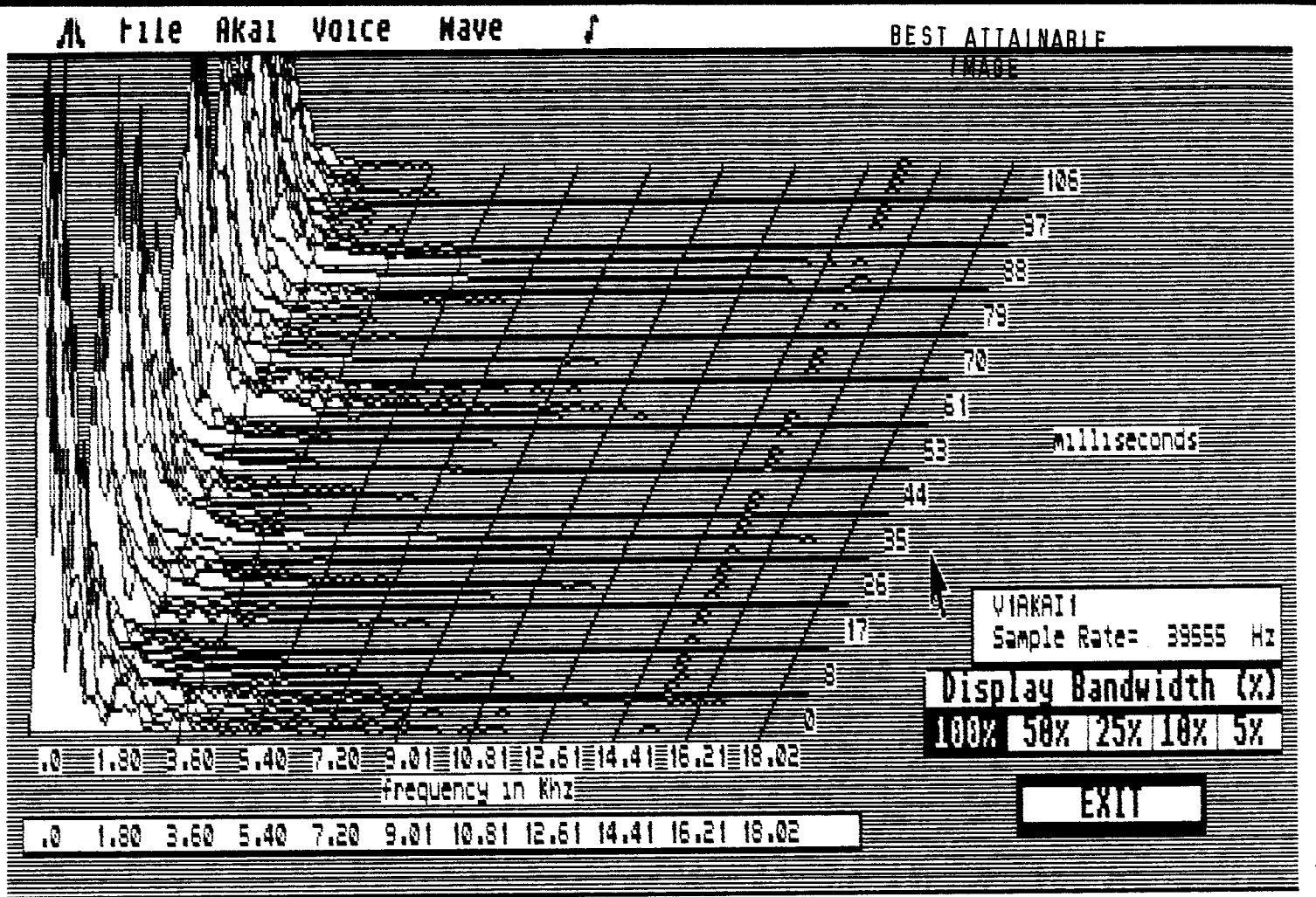
Six milliseconds indicates a very strong layer change at a 4.5 foot depth. Possible moss or sandy surface, then frozen solid gravel. The next strong reading is at 36 milliseconds indicating bedrock to be 27 feet deep.

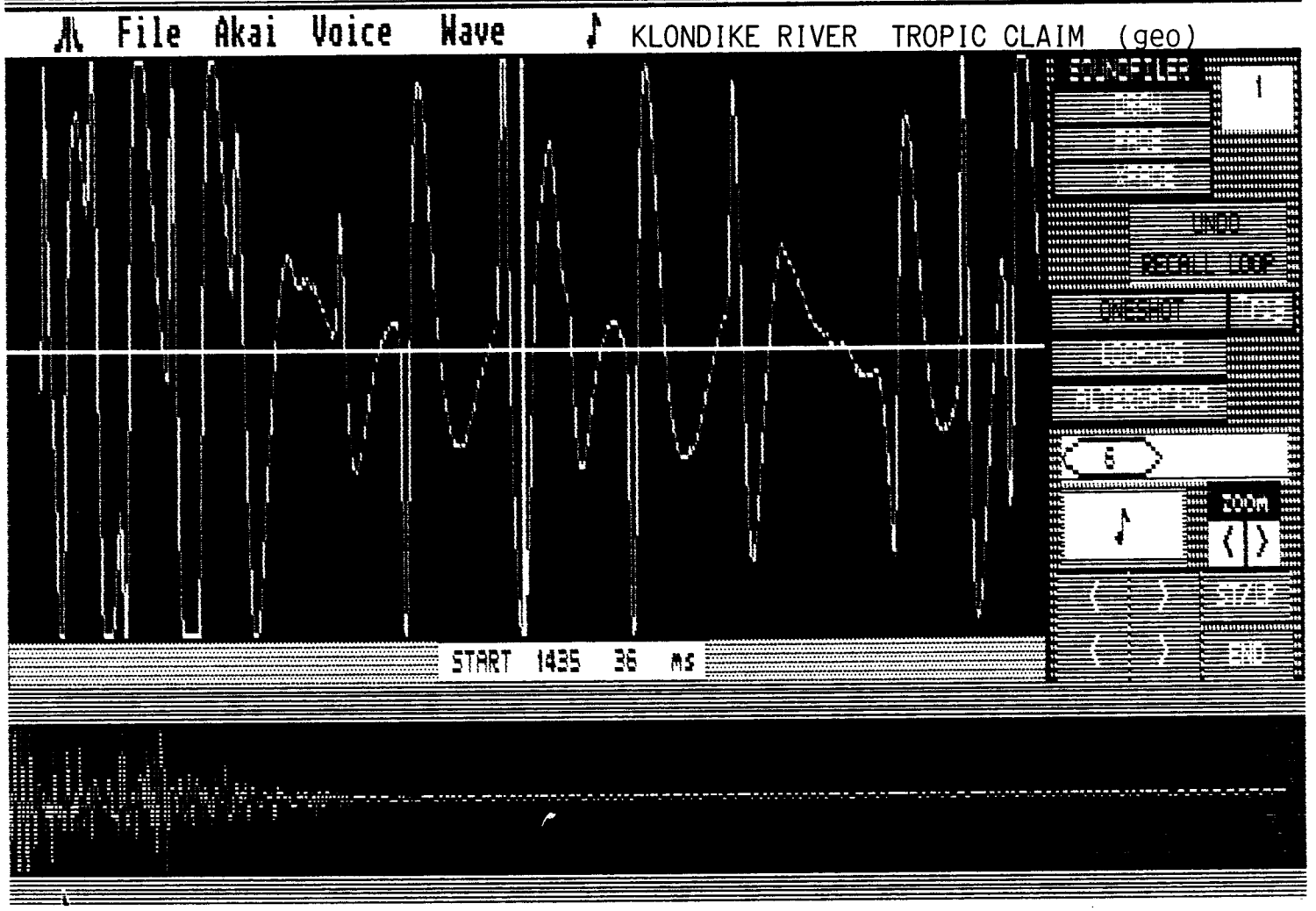
10. CONCLUSION

For the many varying soil conditions in different geographical locations could alter the final results. For this fact, an actual excavation on one of the test sites is strongly recommended. The most shallow reading test site is the best suited for this purpose. More accurate results can be achieved in this manner.

11. RECOMMENDATION

This type of reflected seismic testing is ideal in shallow placer ground. Without drilling or excavating near the test sites to establish velocity, the contour of the subsurface profile could still be charted in a cross test of a given valley. Old stream beds are possible to locate this way, giving a target area for a drill. A re-analysis of the seismic data after a drill log can make these tests surprisingly accurate. A tighter grid pattern in the future may be of great value in a drilling or mining strategy program.


File Akai Voice Wave
BEST ATTAINABLE
IMAGE
106
97
88
79
70
61
53
44
35
26
17
8
0
milliseconds
.0 1.80 3.60 5.40 7.20 9.01 10.81 12.61 14.41 16.21 18.02
frequency in Khz
VIAKAI1
Sample Rate= 39535 Hz
Display Bandwidth (%)
100% 50% 25% 10% 5%
EXIT
.0 1.80 3.60 5.40 7.20 9.01 10.81 12.61 14.41 16.21 18.02


File Akai Voice Wave
KLONDIKE RIVER TROPIC CLAIM (geo)
SOUNDFILER
UNDO
RECALL LOOP
ONE-SHOT
ZOOM
START 1435 36 ms

12. STATEMENT OF ASSESSMENT COSTS

For seismic survey conducted on Klondike River, Tropic Claim #P34707.

Seismic Test

$250 per test x 1 shot = $250

Includes:

Seismic consultant
Assistant for field and expediting
Computer and printer time
Computer and program time
Computer down-loading (off-loading/data dumping)
Seismic interpretation
Equipment - ATV, axe, hip chain with thread, flagging tape, marker etc.
Transportation
Food and camping supplies
Accommodations (hotel, tent or camper)
Test shots where applicable (for calibration)

Report Preparation

Report writing, drafting,
map and figure preparation,
photocopying and binding = $300

Total Cost $550

CERTIFICATION

I, Ted Sandor, of Whitehorse, Yukon Territory certify that:

1. I hold a Gas and Arc Welding diploma from Northern Alberta Institute of Technology, Edmonton, Alberta, and have been practising continuously since mid seventies in Ardco Industries on oil field and seismic related equipment.

2. I am a journeyman welder, licensed to practise in Alberta. The geophysical technology came from extensive field work in the oil patch, and the very need to satisfy my own mining strategy since 1978.

3. The geophysical field work was conducted with assistance that may change from test to test. The report preparation and interpretation is done by me personally to keep up the highest quality of this report.

4. I have based conclusions and recommendations contained in this report on my knowledge of geophysics, my previous experience and the results of the field work conducted on the property.

5. Directly or indirectly I hold no interest in this property other than professional fees, nor do I expect any interest in the property or any other of the owner's holdings.

6. The accuracy of the final results depends more on the calibration of the recording device and the computers then on the qualification of the operator.

Whitehorse, Yukon Territory
June 12, 1991

Ted Sandor, Seismic Consultant

13. REFERENCES

1. M.B. Dobrin, Introduction to Geophysical Prospecting (McGraw-Hill, New York. 1960)

2. J.J. Jakosky, Exploration Geophysics. (Trija Publishing Co., Newport Beach, California. 1957)

3. Technical Report E-73-4 Seismic Refraction Exploration for Engineering Site Investigations. Bruce B. Redpath (May, 1973)

4. 1984 Open File, R.L. Debicki, Bedrock Geology and Mineralization of the Klondike Area (West), 1150/14,15 and 116B/2,3.

5. J.K. Mortensen, Geochemistry of the Klondike District, West Central Revised, 1990.