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7/88

ALL STAR RESOURCES LTD.
REPORT ON
SEISMIC REFRACTION INVESTIGATION
CANYON PROJECT
QUESNEL, B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,154

FILMED

PRINCE GEORGE

87-439-16/54



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) GEOPHYSICAL	TOTAL COST \$ 10,340.77
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AUTHOR(S) .. Russell Hillman..... SIGNATURE(S) *Russell Hillman*

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED .. July 13, 1987... YEAR OF WORK 1986

PROPERTY NAME(S) .. **TERTIARY**

COMMODITIES PRESENT .. **Placer Au**

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN .. **93G-41**

MINING DIVISION .. **Cariboo** NTS .. **93G/2E**

LATITUDE .. **53°07'** LONGITUDE .. **122°38'12"**

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples TAX 1-4, FIRE 2 (12 units), PHOENIX (Lot 1706), Mineral Lease M 123, Mining or Certified Mining Lease ML 12 (claims involved)]

... **CAN 5-9 (72 Units)**

OWNER(S)
(1) .. **Jacques Thibault** .. (2) ..

MAILING ADDRESS
#405-1436 Graveley Street
Vancouver, B.C., V5L 3A4

OPERATOR(S) (that is, Company paying for the work)
(1) .. **as above** .. (2) ..

MAILING ADDRESS
.. **as above**

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):
A buried gold-bearing Tertiary river channel, 244 metres wide is deeply incised in the Pennsylvanian Cache Creek Group of sheared black argillites that constitute the bedrock.

The location and direction of the paleo channel is controlled by a strong north westerly trending splay fault related to the major Pinchi Fault.....

REFERENCES TO PREVIOUS WORK ..

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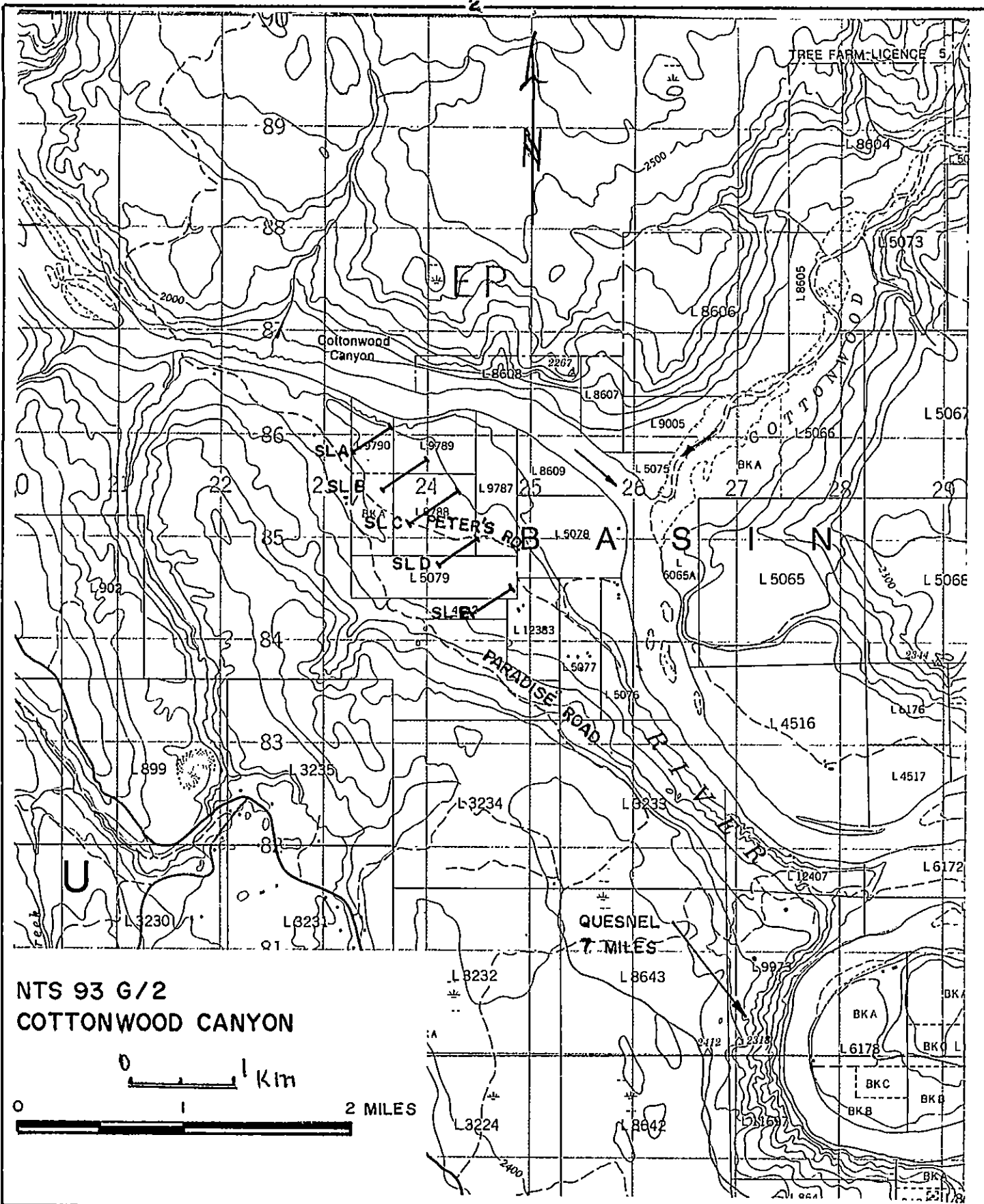
1. INTRODUCTION

In the period December 7 to December 10, 1986, Foundex Geophysics Inc. carried out a seismic refraction investigation for All Star Resources Ltd. at their property adjacent to the Fraser River near Quesnel, B.C. The investigation was carried out along five separate seismic lines within placer leases staked to the south of the river to cover the postulated position of a buried Tertiary gold bearing channel. The investigation was carried out to determine the thickness of overburden soils overlying bedrock, the general nature of these soils and the configuration of the bedrock surface.

A survey location plan is presented in Figure 1. All seismic lines were run parallel and at an azimuth of approximately 58 degrees.

In total, 7,525 feet of seismic refraction survey work was carried out at the site.





2. SEISMIC REFRACTION SURVEY METHOD

2.1 EQUIPMENT

The seismic refraction investigation was carried out using a Geometrics Model ES-1225, 12 Channel, signal enhancement seismograph. A 1000 foot, together with a 500 foot cable was used for all seismic refraction lines. The use of a long cable shortened at some geophone points permitted site-specific flexibility in terms of geophone spacings at road crossing points. Geophone spacings were 25, 50, or 100 feet. Explosive charges were detonated electrically using a Nimbus Instruments HVB-1 high voltage, capacitor-type blaster.

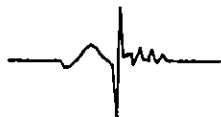
2.2 SURVEY PROCEDURE

For each spread, the seismic cables were stretched out in a straight line and the geophones implanted. Six different shot holes were then excavated: one at either end of the twenty-four geophone line, one at the mid-point where the cables joined, one at the centre of the 1000 foot cable, and one off each end of the line to ensure adequate coverage of the basal layer. Seventy-five percent Forcite was utilized as an energy source in the survey. Shots consisting generally of two to seven sticks of Forcite were detonated individually and arrival times for each geophone were automatically recorded in the seismograph. Hard copy records



were made on electrically sensitive recording film. Data recorded during field surveying operations was generally of good to excellent quality.

Throughout the survey, notes were recorded regarding seismic line position in relation to topographic and geological features of the area. Elevation surveying was not carried out at the site. All seismic lines were run along a flat bench with little or no relief along the lines. The bench is, on average, approximately 1850 feet above sea level.



3. SEISMIC REFRACTION ANALYSIS METHODS

3.1 INTERPRETATION

Interpreted geological conditions at the site indicate deep bedrock overlain by two or three layers of overburden. In general, the velocity contrast between refractive layers was more than adequate for interpretation, however, the contrast between the basal layer and the layer immediately overlying it was small, requiring careful application of the standard interpretive methods to arrive at final profiles. Interpreted boundaries between layers with different velocities are indicated by dashed lines in the profiles. The basal dashed line in all cases represents the interpreted competent bedrock surface.

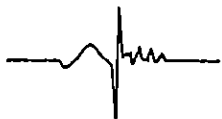
3.2 INTERPRETIVE METHODS

The final interpretation of the seismic data was arrived at using the method of differences technique. This method utilizes the time taken to travel to a geophone from shotpoints located at either side of the geophone. Using the total time, a small vertical time is computed which represents the time taken to travel from the refractor up to the ground surface. This time is then multiplied by the velocity of each overburden layer to obtain the thickness of each layer at that point.

3.3 LIMITATIONS

The depths to subsurface boundaries derived from seismic refraction surveys are generally accurate to within ten percent of the true depths to the boundaries. In some cases, unusual geological conditions may produce false or misleading seismic arrivals with the result that computed depths to subsurface refractors may be less accurate.

In this survey, the large depths to bedrock resulted, in some instances, in incomplete coverage of the basal layer interpreted as the bedrock surface. This difficulty was overcome by extrapolation of some arrival times based on a knowledge of the true bedrock velocity. In addition, the small velocity contrast between the interpreted bedrock and the overlying layer may result in some additional depth to bedrock errors. The results are interpretive and are considered, however, to be a reasonably accurate presentation of existing subsurface conditions within the limitations of the seismic refraction method.



4. GEOPHYSICAL RESULTS

4.1 GENERAL

Seismic refraction profiles at a natural scale of 1"=100 feet are shown in the accompanying drawings. The topographic information was based on field notes recorded during survey operations.

4.2 SURFICIAL LAYER

A surficial layer having a velocity range of 1850 f.p.s. to 2310 f.p.s. is evident underlying the seismic lines. This layer which ranges up to 145 feet in thickness is representative of recent unsaturated, loose, alluvial silt, sand, and sand and gravel with occasional cobbles, evident throughout the area and intersected in shallow, hand-excavated shotholes.

4.3 INTERMEDIATE LAYERS

A very thick intermediate layer overlies the interpreted bedrock surface on Seismic Lines A through E. Based on the high seismic velocities of 7000 to 8300 f.p.s., this layer is believed to be dense sand, gravel, cobbles and boulders which may or may not be cemented throughout. The base of the zone is probably cemented coarse Tertiary sediments consistent with cemented materials encountered in the

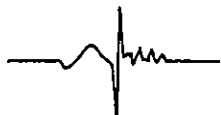
underground workings immediately to the north.

On Lines C, D, and E, an additional intermediate layer having velocities ranging from 4650 f.p.s. to 5350 f.p.s. was detected. This layer ranges in thickness from 20 to approximately 130 feet. It is interpreted as unsaturated, coarse sand, gravels, cobbles and boulders.

4.4 BASAL LAYER

The basal layer having velocities ranging from 10,000 f.p.s. to 12,470 f.p.s. is interpreted as the competent bedrock surface composed of Cache Creek metasediments. The bedrock surface is apparently flat lying and broad from Seismic Line A to E, but does form apparent channels on Seismic Lines A, C and E. The postulated channel in the bedrock surface is supported by the seismic interpretation with the interpreted bedrock surface elevation decreasing generally downstream from Seismic Line A toward Seismic Line E at an approximate 4 percent grade.

On Seismic Lines B and D, the channel may have been only partially traversed and is still open to the southwest. Additionally, there is some suggestion that the channel splits as a second depression at the same approximate depth was detected on Seismic Lines B and D.



5. SUMMARY AND RECOMMENDATIONS

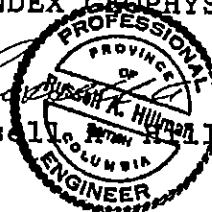
A total of 7525 feet of detailed seismic refraction work has been completed on All Star Resources Ltd.'s placer claims on the Fraser River near Quesnel, B.C.

The seismic work was carried out along five separate seismic lines and the results reveal a consistent bedrock depression dipping generally in a downstream, southerly direction. The presence of a thick, high velocity layer consistent from Seismic Lines A to E overlying the bedrock surface and correlated with cemented Tertiary sand, gravels, cobbles and boulders, supports the presence of a buried channel at the site.

Based on the results of the initial seismic work, it is recommended that additional seismic surveying be carried out to the south to further define the bedrock configuration and to determine the presence and thickness of the interpreted cemented materials. Given the large thicknesses of overburden at the site, it is recommended that a small scale, high resolution seismic reflection test survey be carried out which may result in a much higher resolution of subsurface features.

FOUNDEX GEOPHYSICS INC.

Russell A. Hillman, P. Eng.

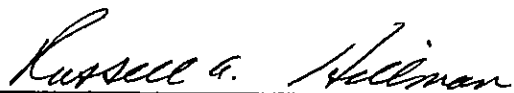


CERTIFICATE

I, RUSSELL ALEXANDER HILLMAN, resident of Vancouver, Province of British Columbia, hereby certify as follows:

1. I am a Consulting Geophysicist with an office at #7 - 84 Lonsdale Avenue in North Vancouver, B.C.
2. I graduated with a degree of Bachelor of Science, Geophysics, from the University of British Columbia in 1969.
3. I have practised my profession for 17 years. I am a Professional Engineer in the Province of British Columbia.
4. I am a member in good standing with the European Society of Exploration Geophysicists.
5. I have no direct, indirect, or contingent interest in the shares or business in the property of All Star Resources Ltd. nor do I intend to have any interest.
6. I supervised and interpreted the results of a seismic refraction survey carried out on the property of All Star Resources Ltd. near Quesnel in the period December 7 to December 10, 1986.
7. I hereby consent to the publication of this report in a prospectus or a statement of material facts.

DATED at Vancouver, Province of British Columbia
this 21st day of December, 1986.


Russell A. Hillman, P.Eng.



FOUNDEX GEOPHYSICS INC.

13315 Comber Way, Surrey, B.C., Canada V3W 5V8 • Phone (604) 594-5559 • Telex 04-507542

INVOICE #044

December 22, 1986

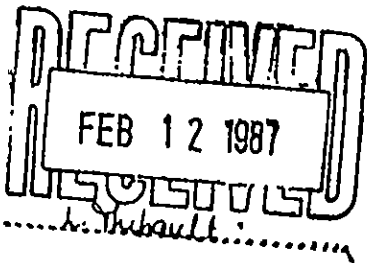
All Star Resources Ltd.
#615 - 200 Granville Square
P. O. Box 47
Vancouver, B.C.

ATTENTION: MR. J. THIBAUT
PRESIDENT

RE: PROFESSIONAL SERVICES
SEISMIC REFRACTION SURVEY
PLACER GOLD EXPLORATION
QUESNEL, B.C.
OUR PROJECT NO. FGI-032

REPORT PREPARATION:

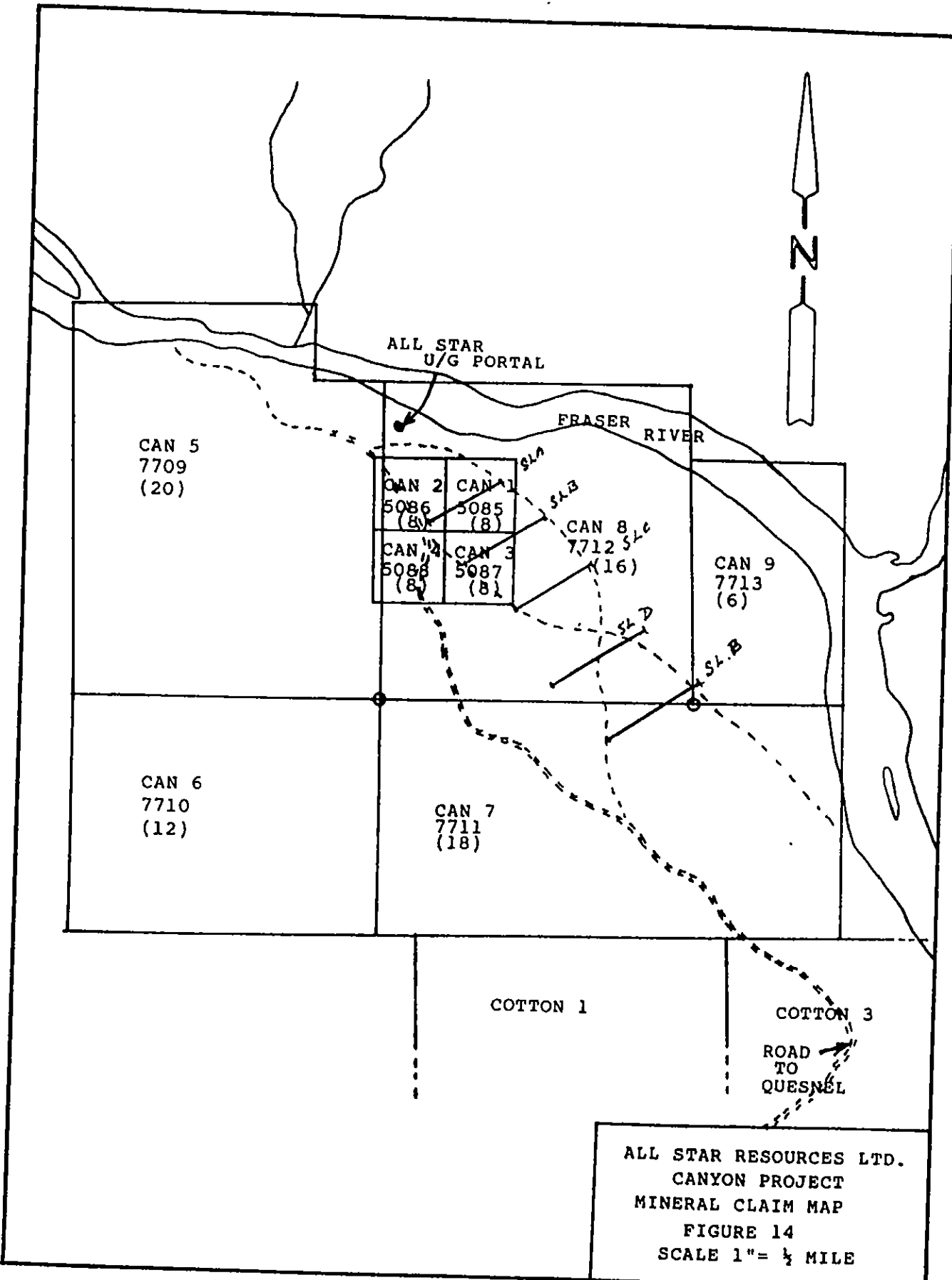
- Drafting 7.0 hours @ \$20.00/hour	\$ 140.00
- Secretarial Service 6.5 hours @ \$18.00/hour	117.00
- Photocopying and drawing reproduction	83.77
	<hr/>
	\$ 340.77
	<hr/>



EXPENSES:

- Seismograph Rental		
- 4.0 days @ \$175.00 per day	\$	700.00
- One roll of recording film		20.00
- Magazine opening charges and possession permits		60.00
- Seismic blasting caps		
- 60 caps @ \$3.90 per cap		234.00
- One case of dynamite		150.40
- Truck rental		700.00
- Accommodations		483.60
- Meals		412.00
- Gas		<u>150.00</u>
	Subtotal - Expenses	<u>\$2,910.00</u>

TOTAL INVOICE \$10,000.00



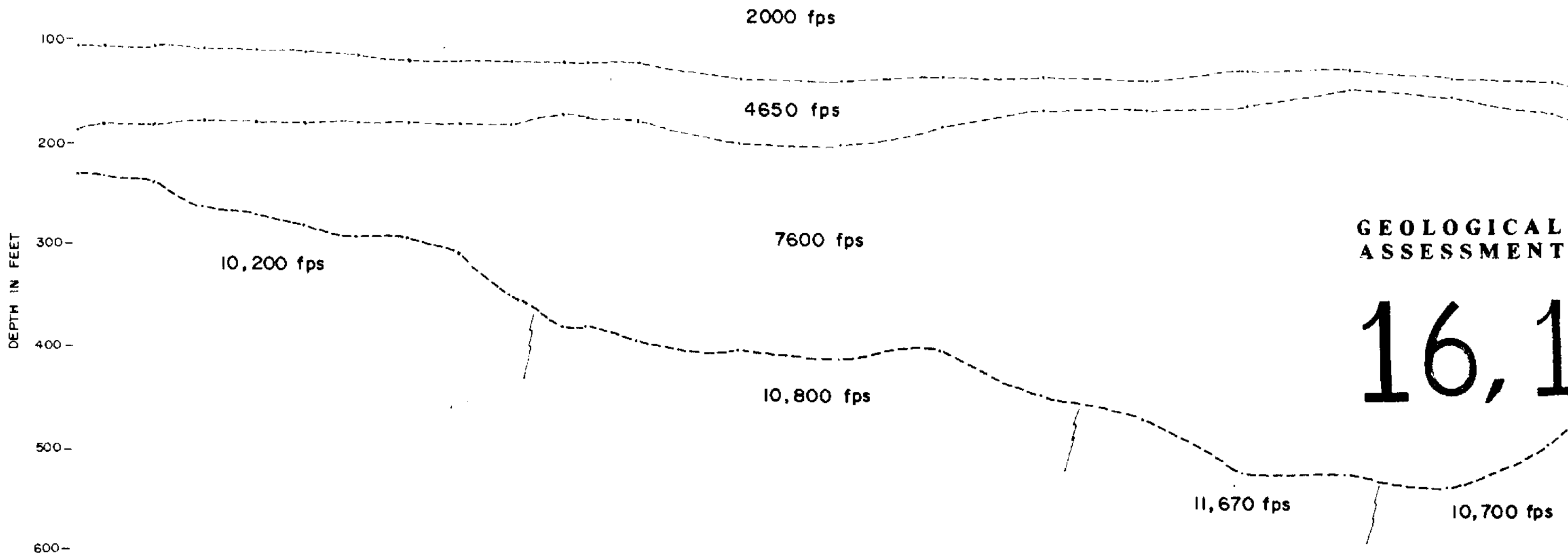
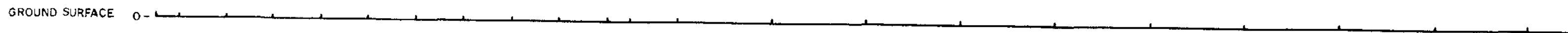
ALL STAR RESOURCES LTD.
 CANYON PROJECT
 MINERAL CLAIM MAP
 FIGURE 14
 SCALE 1" = 1/2 MILE

Ground
 Magnetic

SEISMIC LINE C

NE

SW



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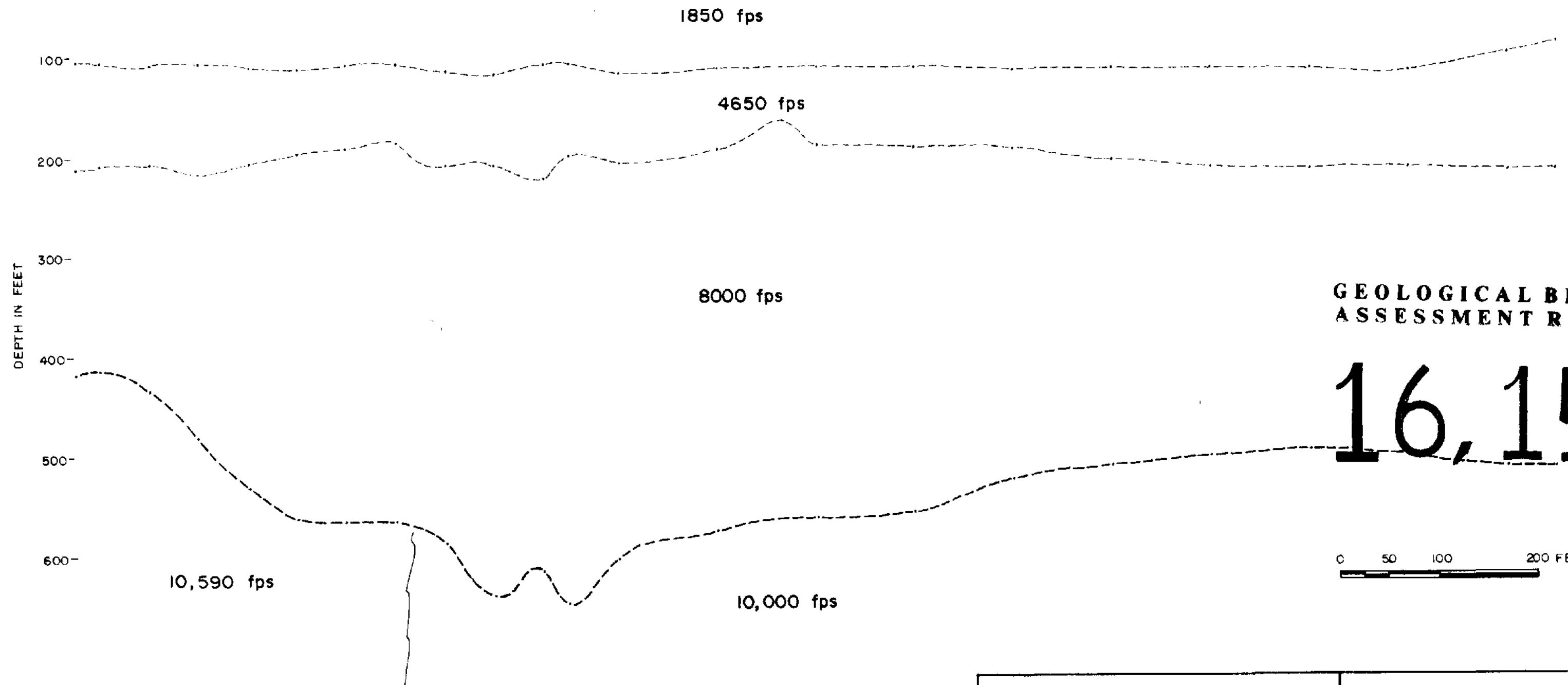
ALL STAR RESOURCES LTD.	FOUNDEX GEOPHYSICS INC.	
CANYON PROJECT SEISMIC LINE C	December, 1986	FIG.4
	FGI -032	

SEISMIC LINE E

NE

SW

GROUND SURFACE 0-



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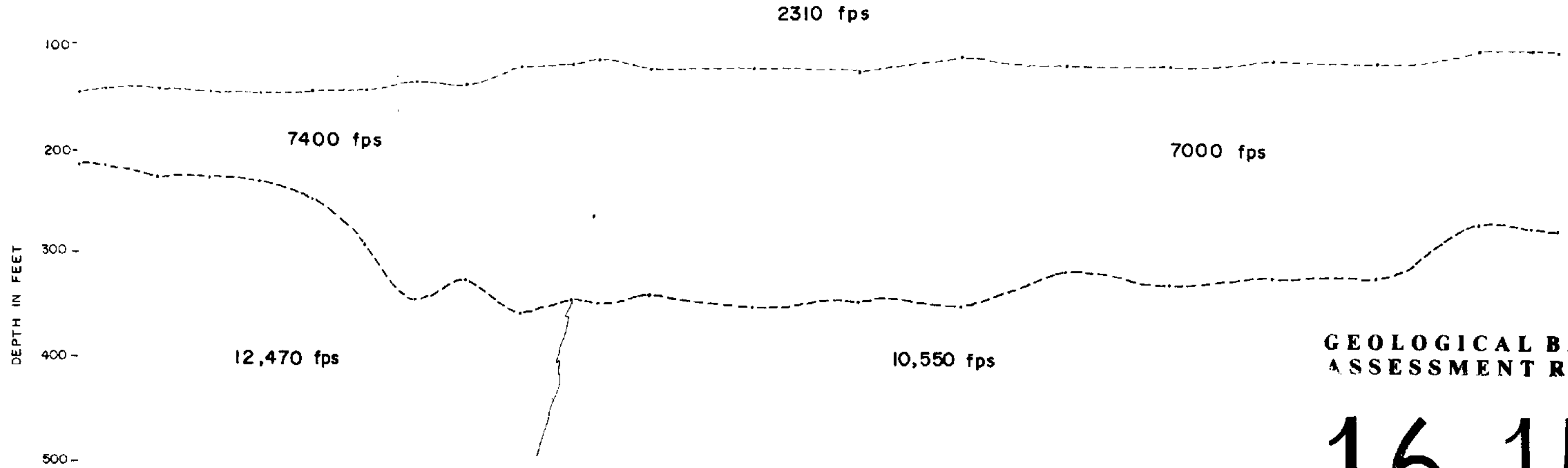
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CANYON PROJECT SEISMIC LINE E	December, 1986	FIG. 6
	FGI - 032	

SEISMIC LINE A

NE

SW

GROUND SURFACE - 0



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0 50 100 200 FEET

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CANYON PROJECT SEISMIC LINE A	December, 1986	FIG. 2
	FGI - 032	

SEISMIC LINE B

NE

SW

GROUND SURFACE — 0

100 —
200 —
300 —
400 —
500 —
DEPTH IN FEET

2180 fps

8300 fps

10,240 fps

10,000 fps

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0 50 100 200 FEET

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CANYON PROJECT
SEISMIC LINE B

December, 1986

FGI - 032

FIG. 3

SEISMIC LINE D

NE

SW

GROUND SURFACE - 0

2000 fps

5350 fps

7500 fps

11,000 fps

DEPTH IN FEET

100-

200-

300-

400-

500-

600-

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0 50 100 200 FEET

ALL STAR RESOURCES LTD.	FOUNDEX GEOPHYSICS INC.	
CANYON PROJECT SEISMIC LINE D	December, 1986	FIG. 5
	FGI - 032	