

7-6-4-106

REPORT COVERING TRANSCRIPTION
AND REINTERPRETATION OF SEISMIC

TROUT LAKE, N.W.T.

JUNE 24, 1970

IMPERIAL OIL ENTERPRISES LTD.

by

O. FRIESEN

Jan. 7, 1972

Project 7-6-4-70-7

Abstracted for
Geo-Science Data Index

Date _____

IMPERIAL OIL ENTERPRISES LIMITED
Producing Department - Western Region

Transcription and Reinterpretation of Seismic Data

Trout Lake Area

I.O.E. P.W.O. No. K-081433

Department Code No. 7-6-4-70-7



by

O. Friesen

Southern Exploration District
Edmonton, Alta.

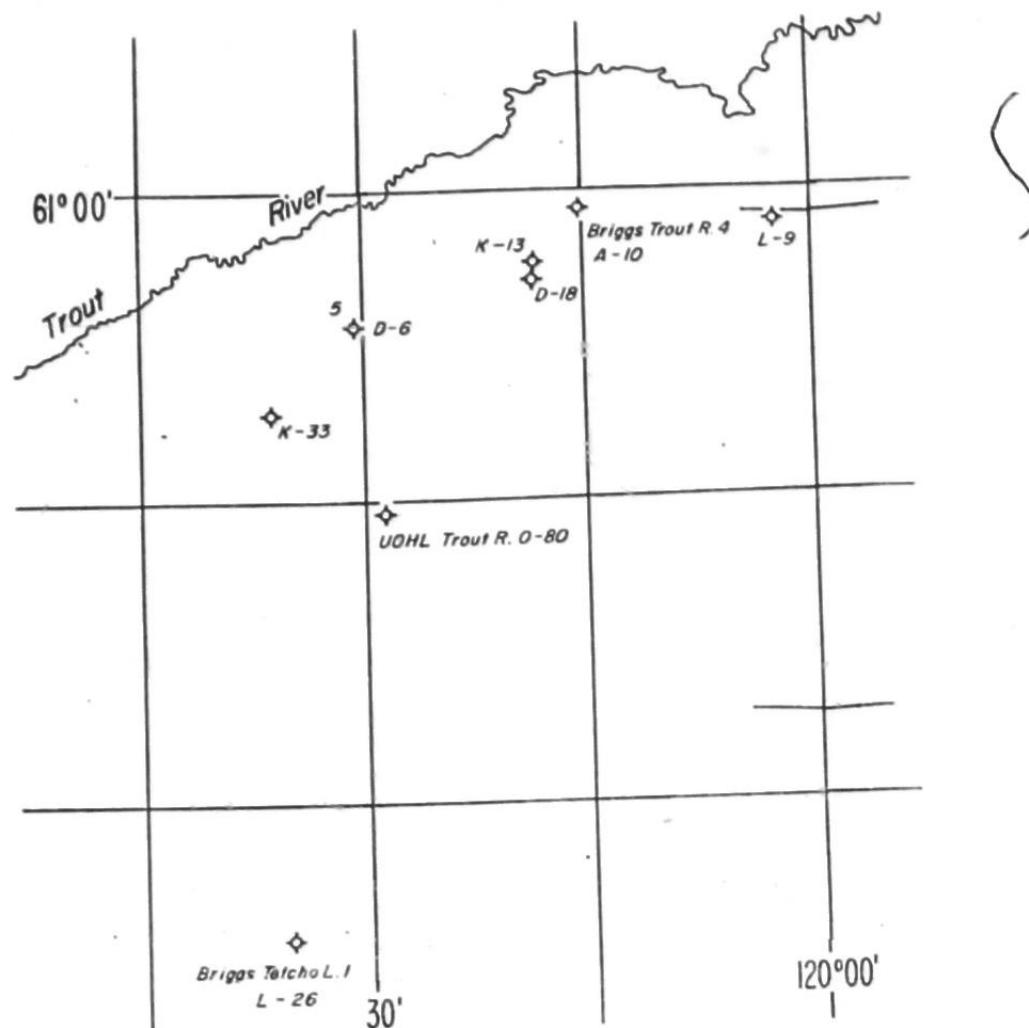
Date: January 7, 1972

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Introduction

This is a report on the transcription and reinterpretation of seismic data obtained from Union Oil in the Trout Lake area. The transcribed data was received on June 24, 1970.



TROUT LAKE AREA

SCALE 1:500,000



Statistical Data

Dates: The data was received from Nicholson Copy Centre following transcription from analog tapes to digital reels on June 24, 1970.

Quantity & Type: There was 95 miles of 600% CDP data received.

Data Processing: All of the seismograms were corrected to a datum of +1500' A.S.L. using a datum velocity of 9000 1/sec. Weathering corrections were applied where the base of shot did not penetrate the weathering layer.

The data were played back digitally with 6-fold stacked sections produced on variable density film. All of the data were filtered with selective filters used to remove low frequency interference energy. The processing was done in Imperial Oil's Process Centre.

Results and Interpretation

The quality of seismograms obtained was fair to good. Two consistent reflections could be carried. These were from the Tetcho Limestone and the Slave Point. A time structure map of each of these horizons was constructed, together with the isochron between them. The seismic coverage was tied to all velocity surveys taken in the area. The interpretation was made from the maps prepared and the stacked seismic sections, with assistance of geological control in the area.

As a result of the interpretation made from this seismic coverage, a Slave Point carbonate bank cut through by a wide channel was observed. The isochron shows both the bank edge and channel best, but it is also readily apparent on the Slave Point structure map. The Tetcho Limestone structure map shows that the channel had partially filled by that time but was still active. The carbonate bank seems to have shifted north or become diffuse by that time.

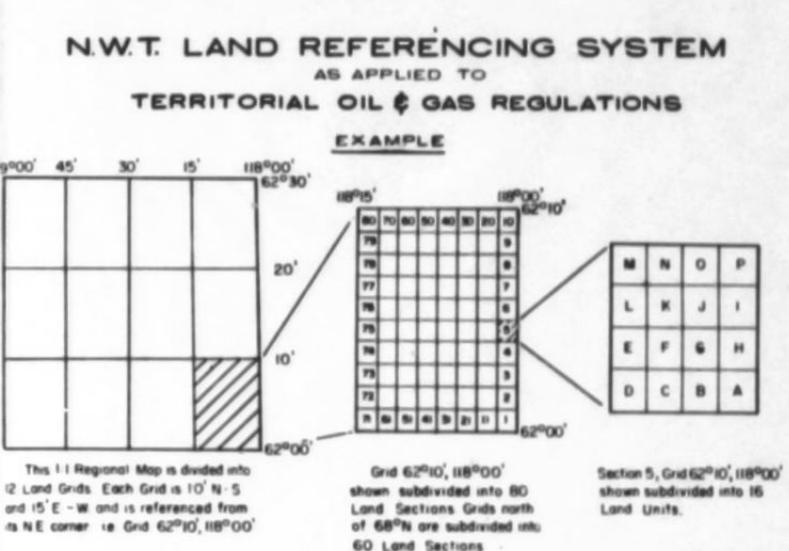
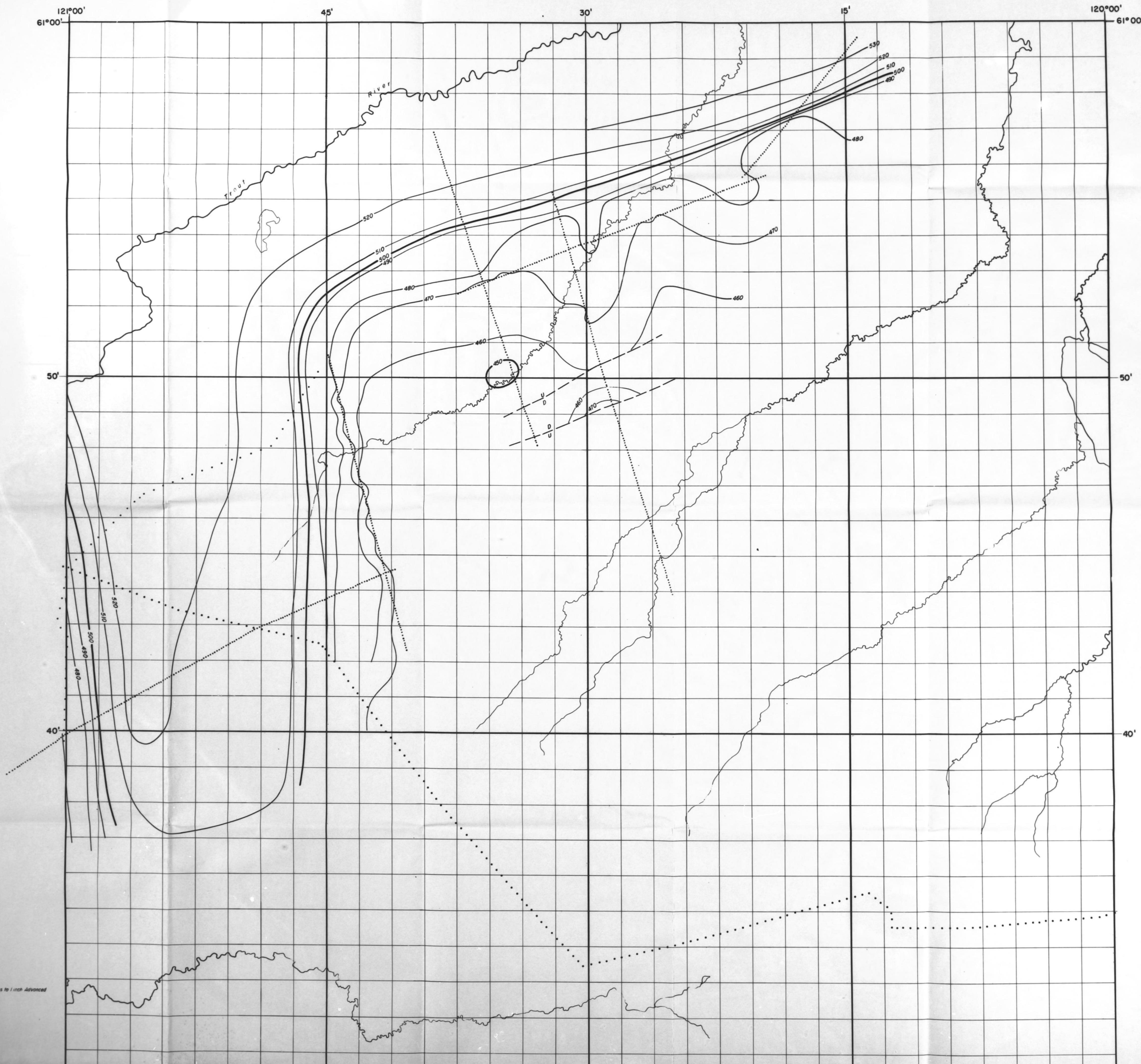
Since the present-day dip is to the southwest, no closure exists on the two horizons in the area of this seismic coverage, thus considerably reducing the possibility of hydrocarbon accumulation.

Summary and Conclusions

In summary, 95 miles of 600% CDP seismic coverage was received and processed. This coverage has been interpreted to show a carbonate bank, cut by a wide channel. No other significant anomalies were observed.



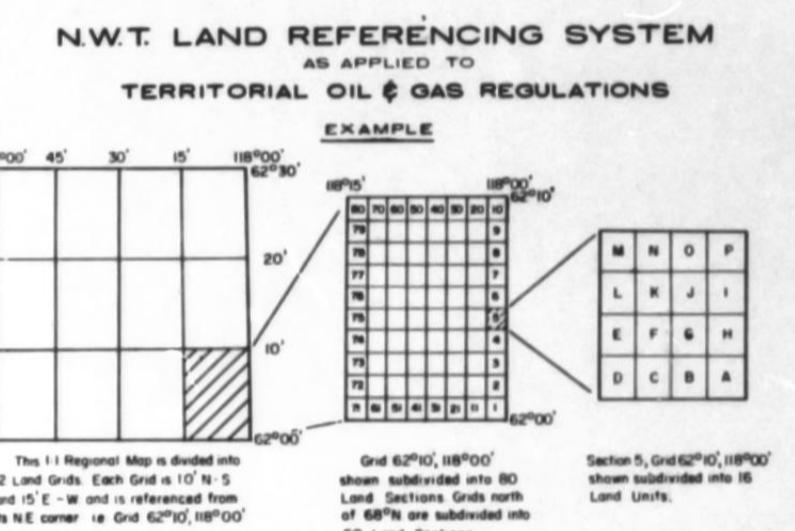
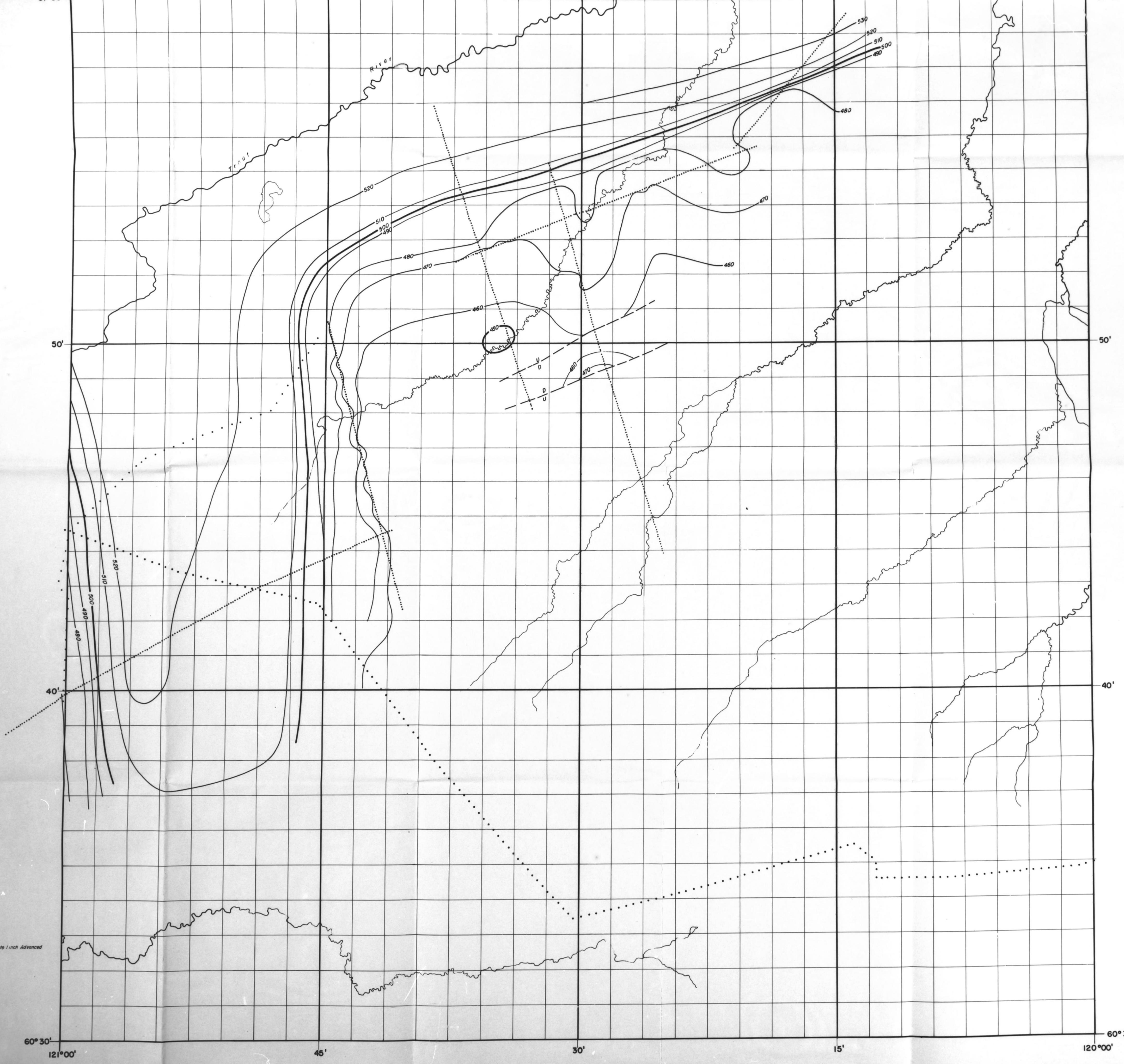
O. FRIESEN
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Imperial Oil Enterprises Ltd.
Edmonton, Alberta.



TETCHO LIMESTONE TO SLAVE POINT ISOCRON
SEISMOPHYPH MAP

1 OF 2

Seismic Revised
Values Revised
Contours Revised
Wells Revised



INDEX TO MAP SHEETS

95	85
SIBESON LAKE	JEAN MARIE
FT LIARD	WILLS LAKE
PATRY LAKE	FALAISE LAKE
PROPHET RIVER	KARISA RIVER
TROUT LAKE	TATLINNA LAKE
PETTOT RIVER	BISTCHO LAKE
HAY RIVER	HAY LAKE
	BOYER RIVER

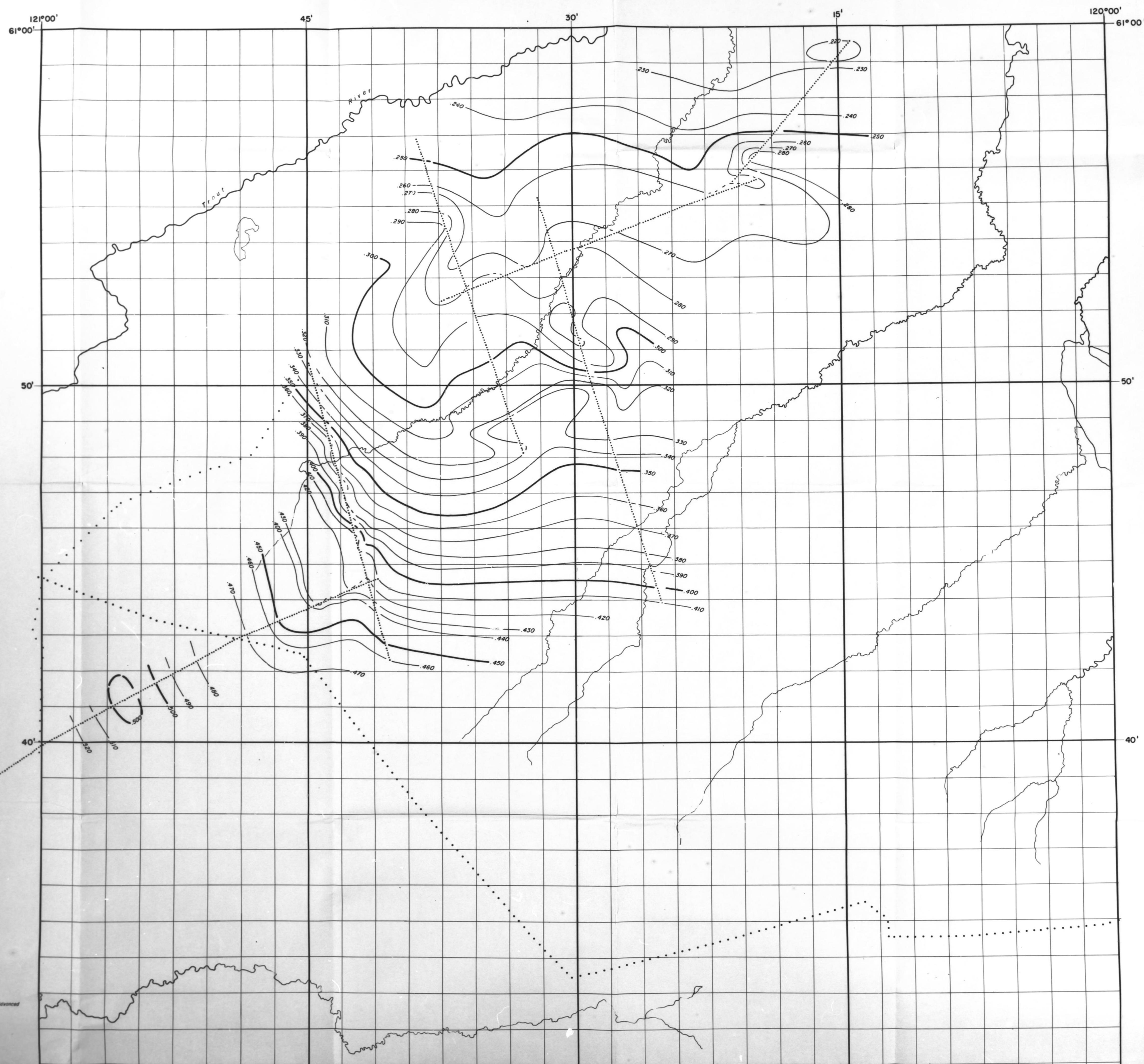
TETCHO LIMESTONE TO
SLAVE POINT ISOCRON
SEISMOGRAPH MAP

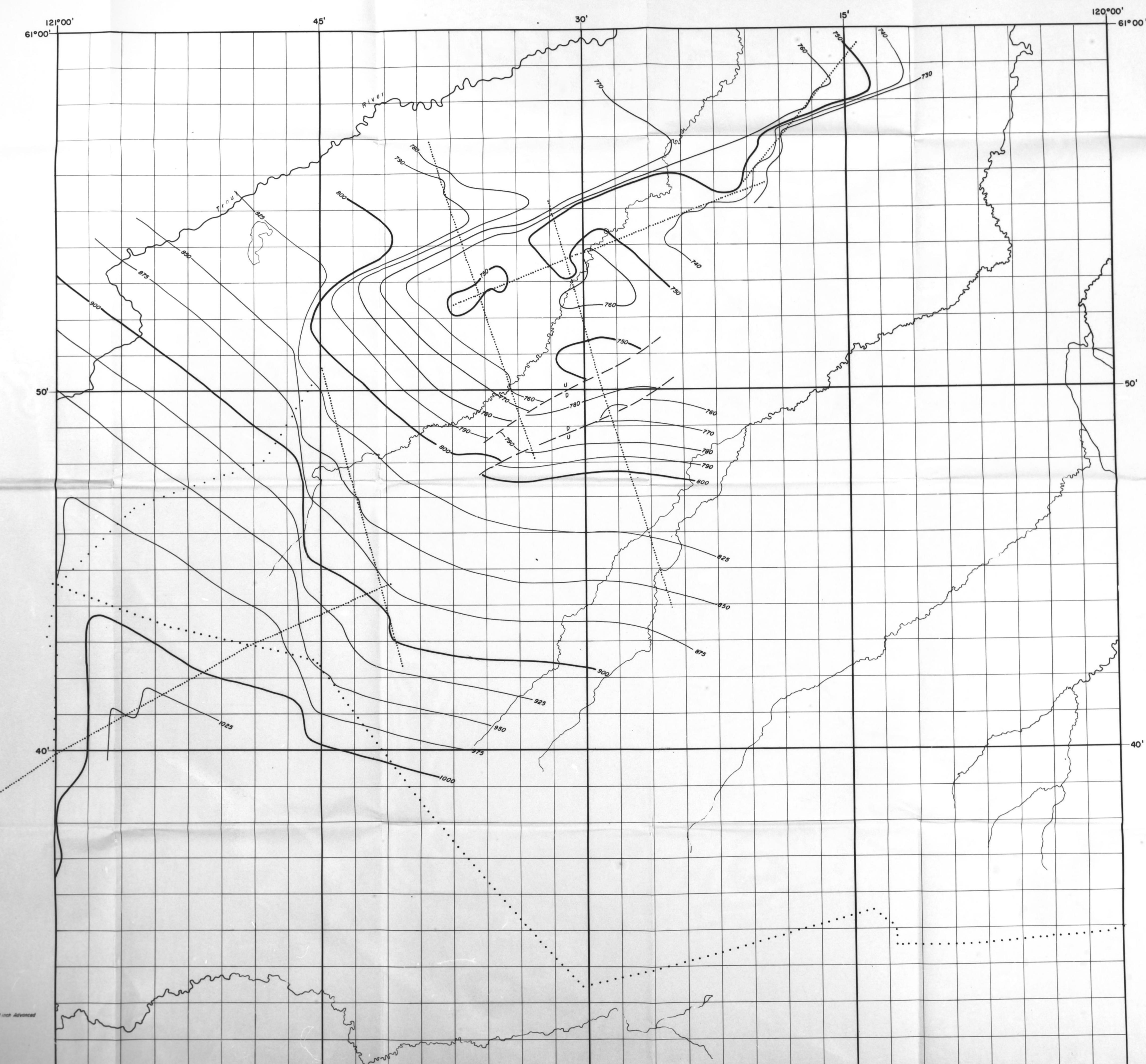
Contour interval: 100 ft. Datums: Plane Velocity

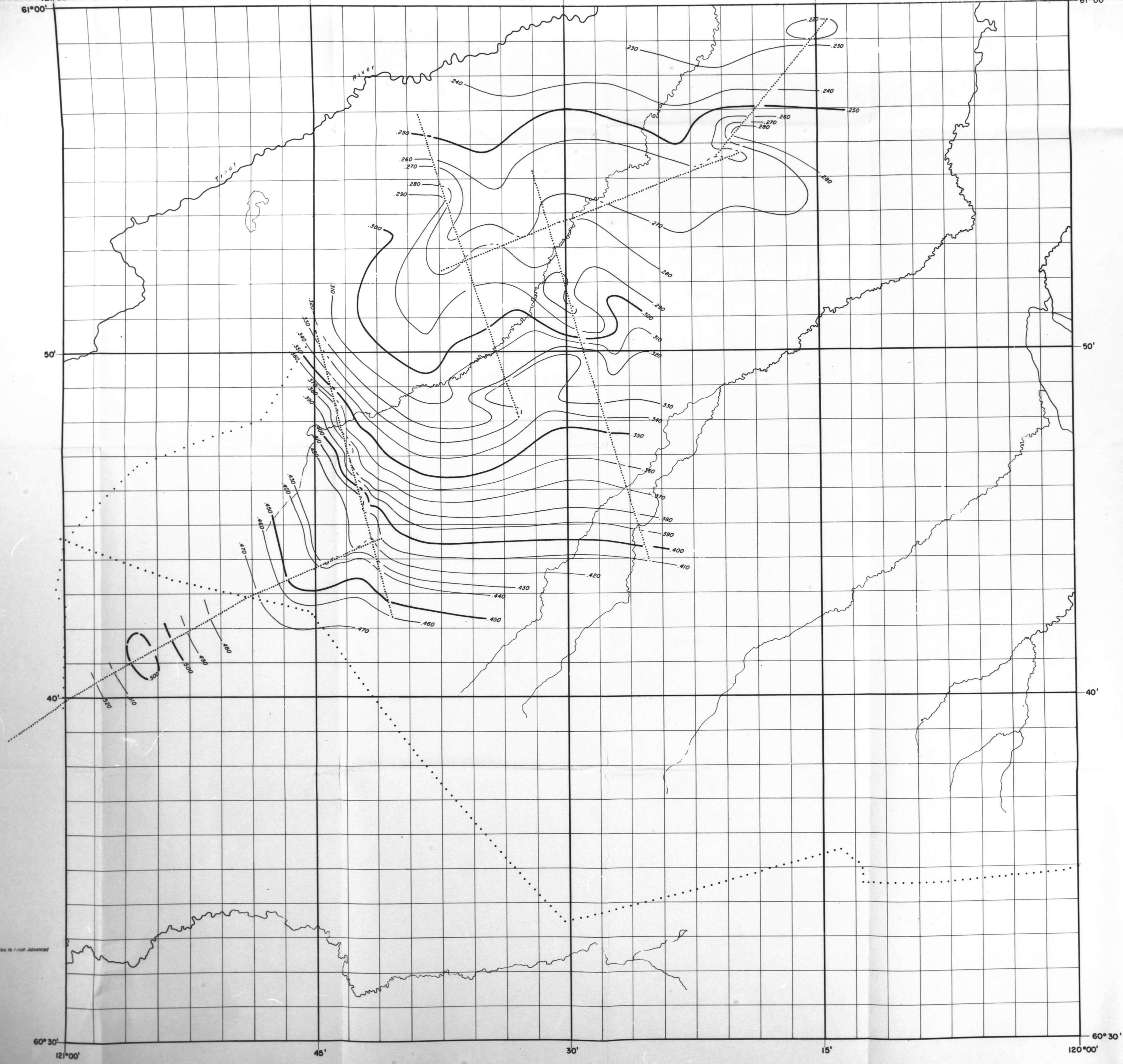
Seismic Revised: _____ Values Revised: _____ Contours Revised: _____ Wells Revised: _____

Contours Revised: 100 ft. 200 ft. 300 ft. 400 ft. 500 ft.

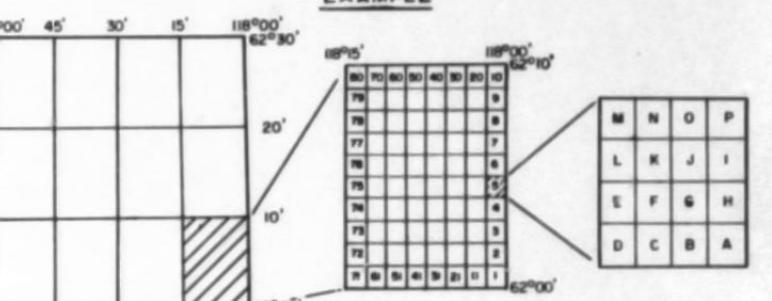
95-A TROUT LAKE
1 MILE TO 1 INCH







LAND REFERENCING SYSTEM
AS APPLIED TO
TERRITORIAL OIL & GAS REGULATIONS
EXAMPLE



This 1:1 Regional Map is divided into 2 Land Grids. Each Grid is 10' N - S and 15' E - W and is referenced from a NE corner i.e. Grid 62°10', 118°00' Grid 62°10', 118°00' shown subdivided into 80 Land Sections. Grids north of 68°N are subdivided into 60 Land Sections. Section 5, Grid 62°10', 118°00' shown subdivided into 16 Land Units.

INDEX TO MAP SHEETS

TETCHO LIMESTONE
TIME STRUCTURE
SEISMOGRAPH MAP

tour interval 0.0 SEC
ums: Plane 1500' Velocity 9000' Sec

istic Revised _____
values Revised _____
ontours Revised _____
ells Revised _____
January 1955 _____

**95 - A
N.E. TROUT LAKE**
1 MILE TO 1 INCH