

~~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

*O. Friesen*

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

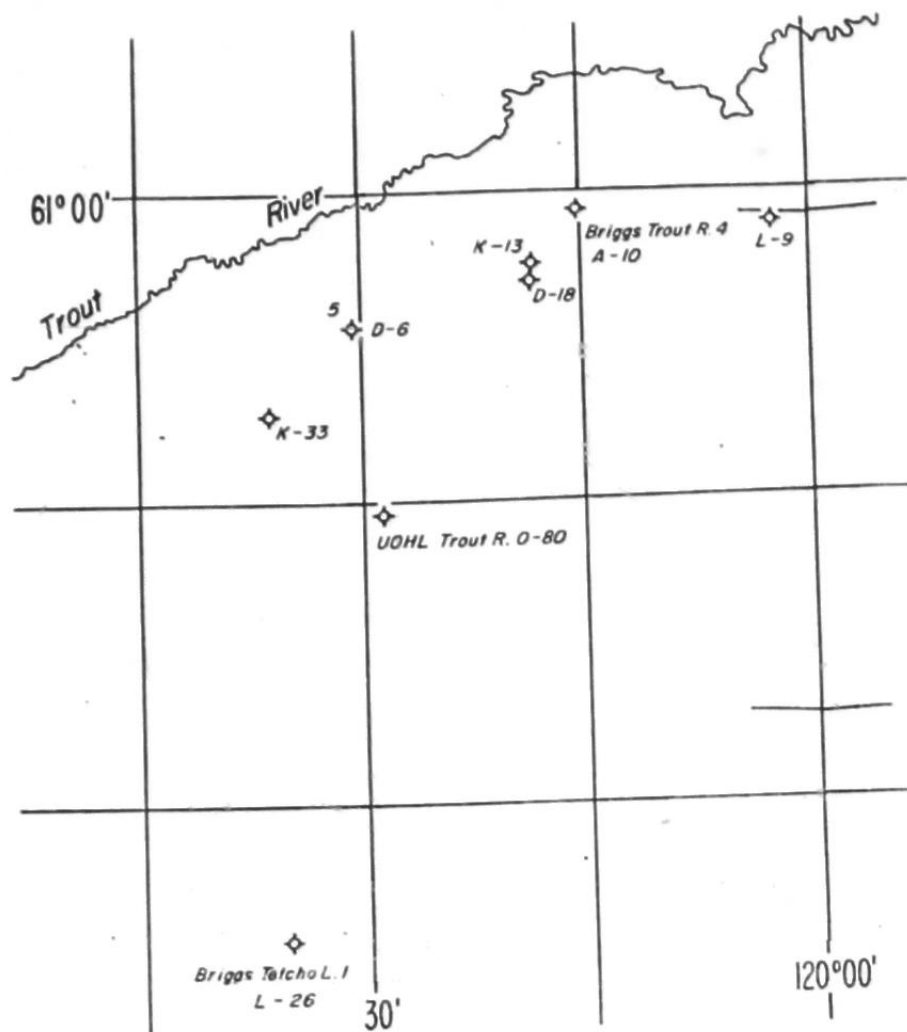
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Introduction

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

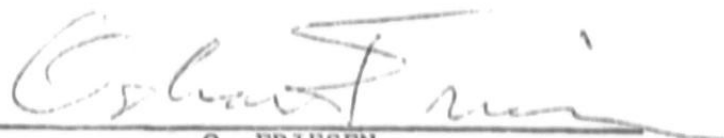
The quality of seismograms obtained was fair to good. Two consistent reflections could be carried. These were from the Tetcho Limestone and the Slave Point. A time structure map of each of these horizons was constructed, together with the isochron between them. The seismic coverage was tied to all velocity 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

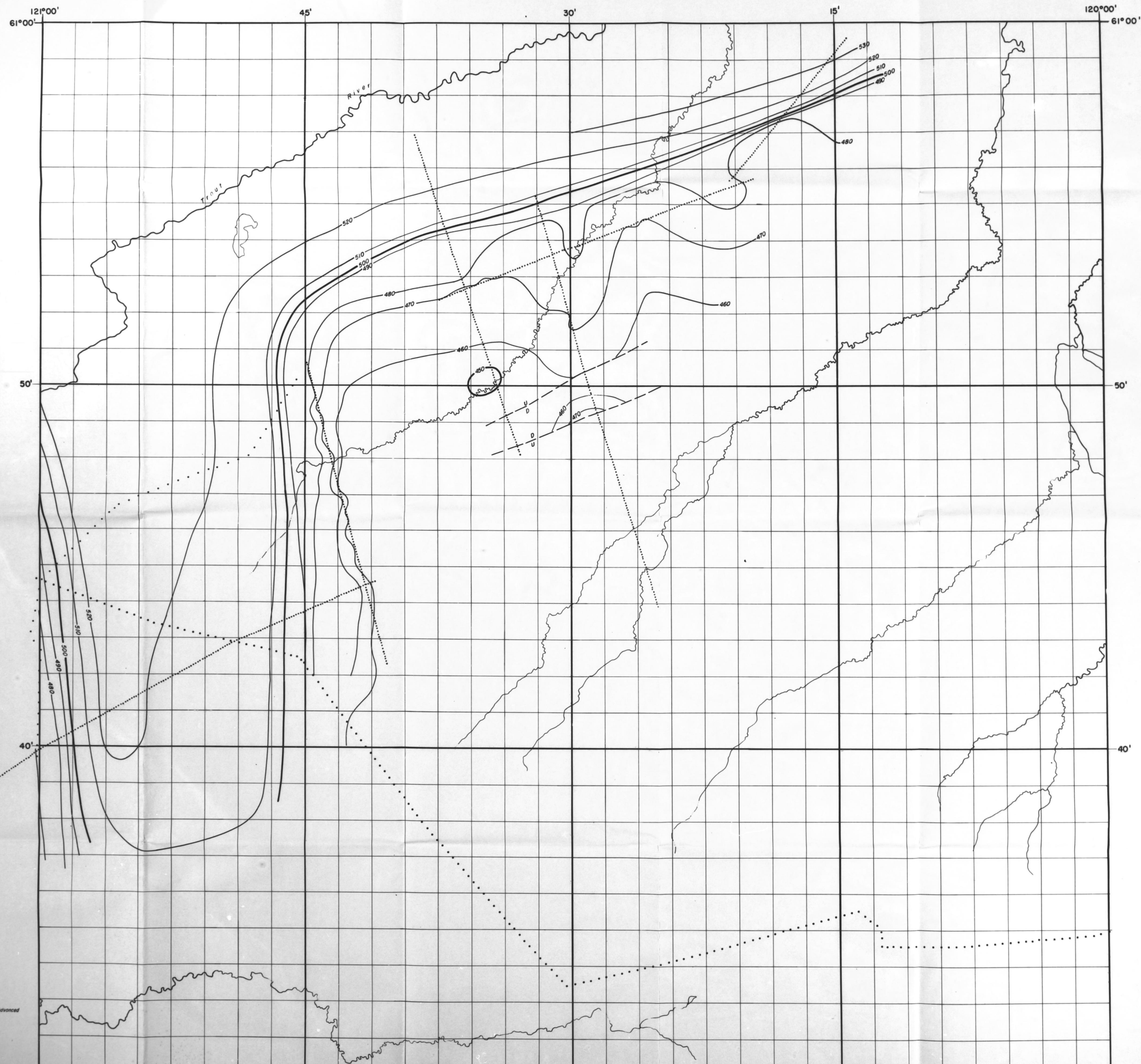
In summary, 95 miles of 600% CDP seismic coverage was received and processed. This coverage has been interpreted to show a carbonate bank, cut by a wide channel. No other significant anomalies were observed.



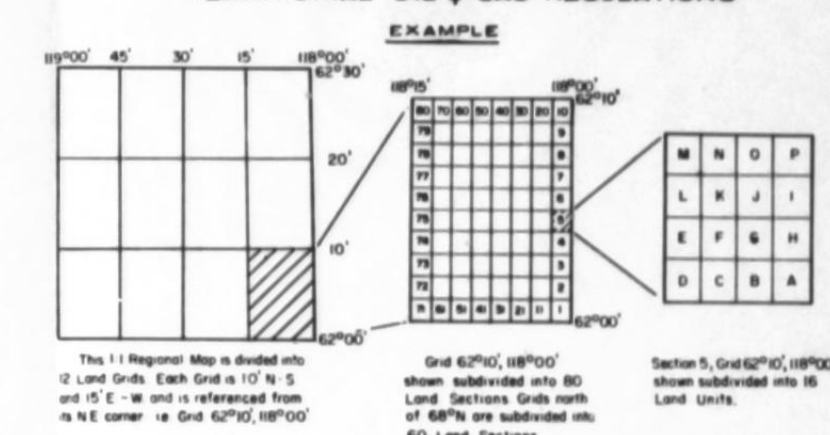
O. FRIESEN

Southern Exploration District Manager  
Imperial Oil Enterprises Ltd.  
Edmonton, Alberta.





N.W.T. LAND REFERENCING SYSTEM  
AS APPLIED TO  
TERRITORIAL OIL & GAS REGULATIONS



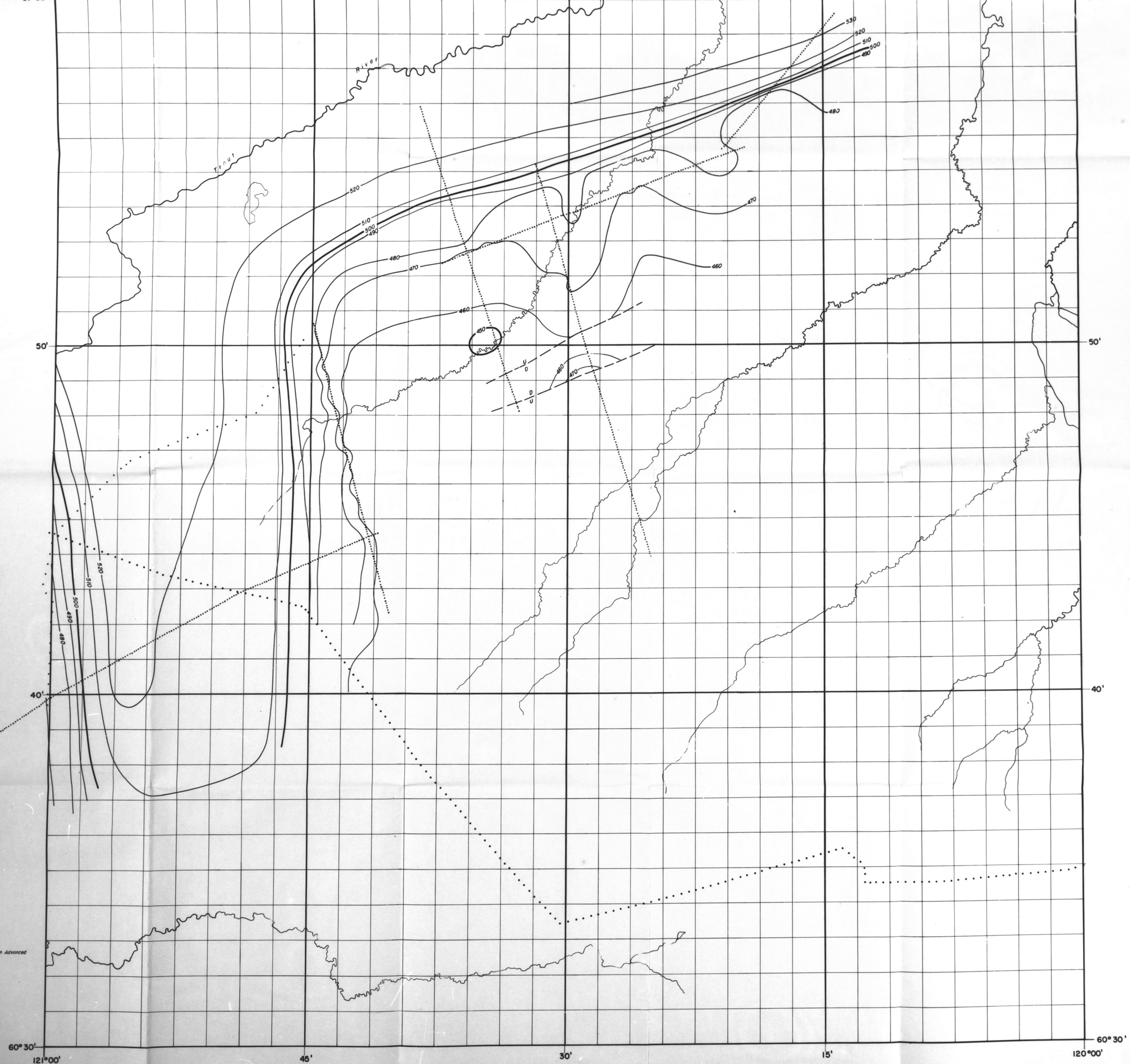
TETCHO LIMESTONE TO  
SLAVE POINT ISOCHRON  
SEISMOGRAPH MAP

Contour Interval: 10 Sec.  
Datum: Plane Velocity

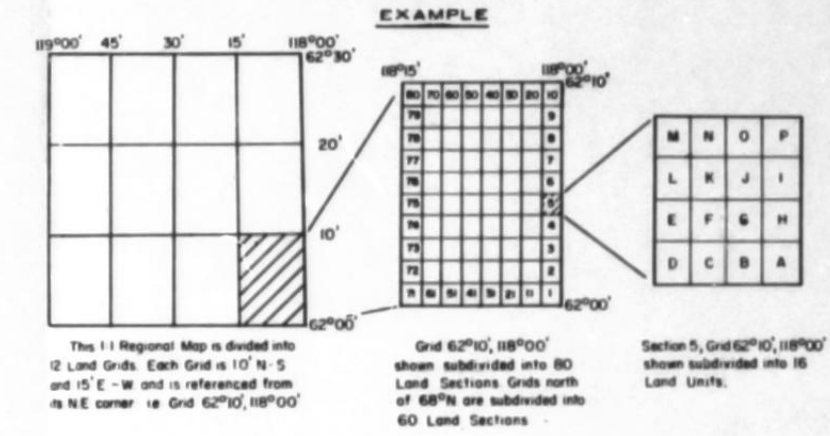
Seismic Revised  
Values Revised  
Contours Revised  
Wells Revised

Contours Revised 1984, 1985





# N.W.T. LAND REFERENCING SYSTEM AS APPLIED TO TERRITORIAL OIL & GAS REGULATIONS



## TETCHO LIMESTONE TO SLAVE POINT ISOCHRON SEISMOGRAPH MAP

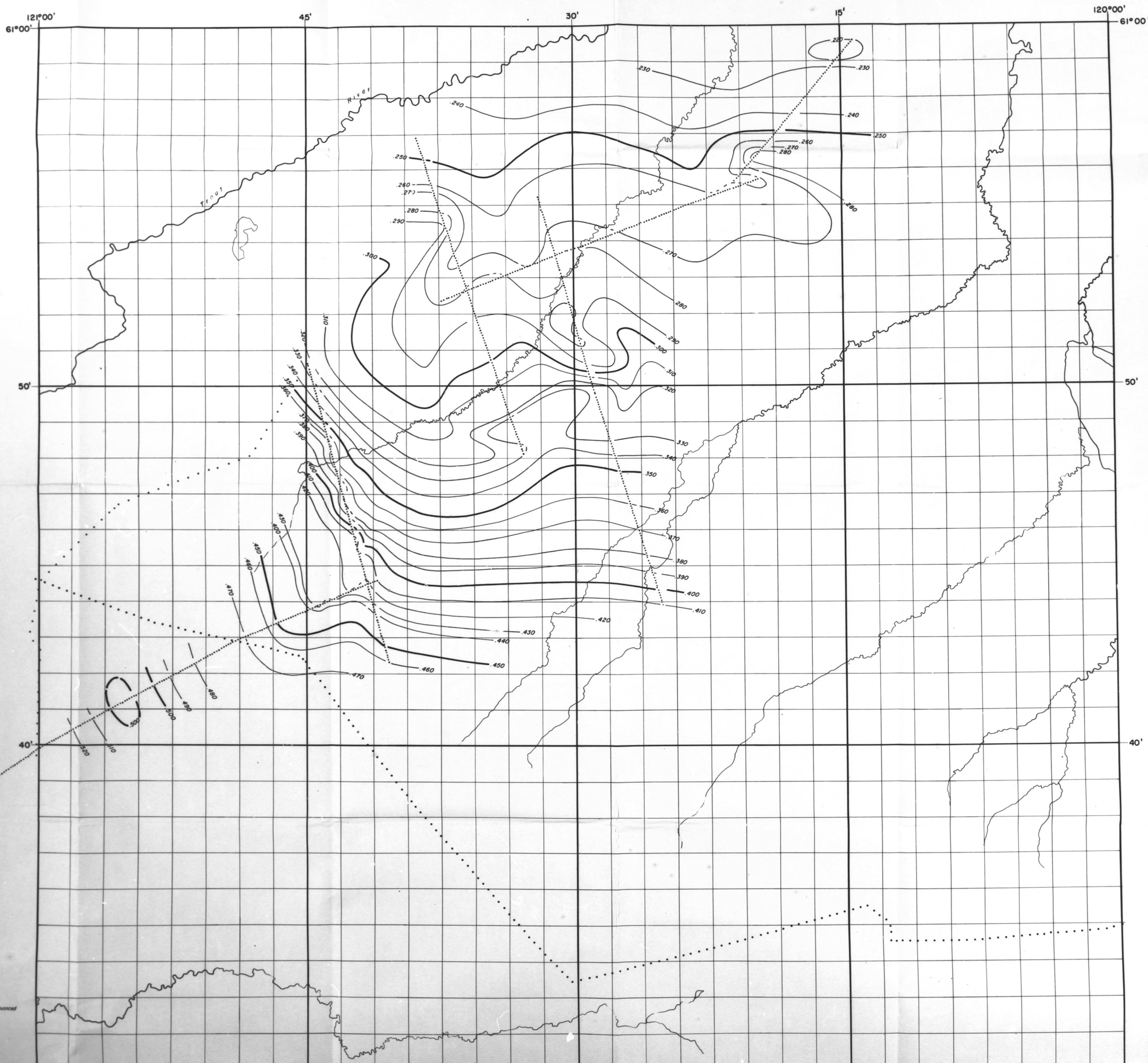
Contour interval ..... 0.10 Sec.  
Datum: Plane ..... Velocity .....

Seismic Revised .....  
Values Revised .....  
Contours Revised .....  
Wells Revised .....

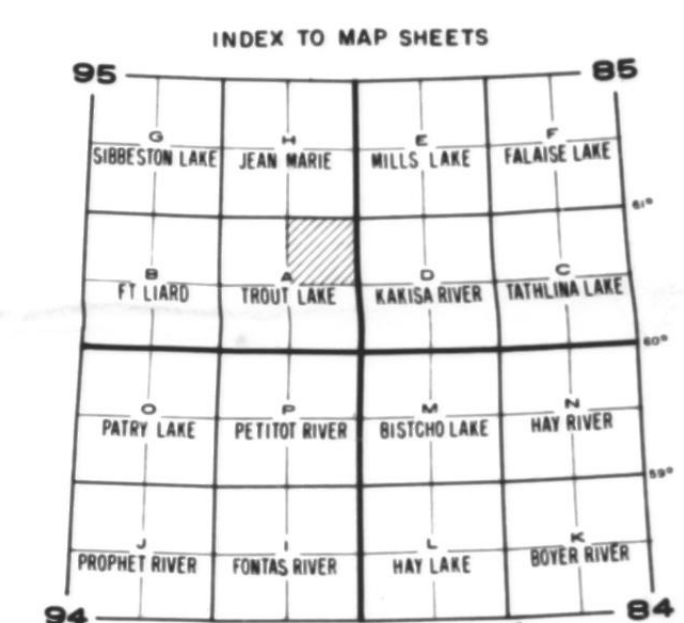
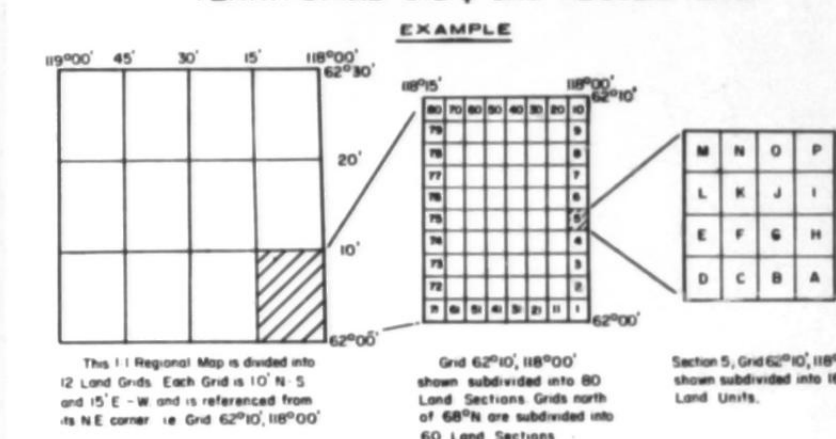
Contours Revised JAN 14, 1972

95 <sup>A</sup>/<sub>N.E.</sub> TROUT LAKE  
1 MILE TO 1 INCH





N.W.T. LAND REFERENCING SYSTEM  
AND APPLIED TO  
TERRITORIAL OIL & GAS REGULATIONS

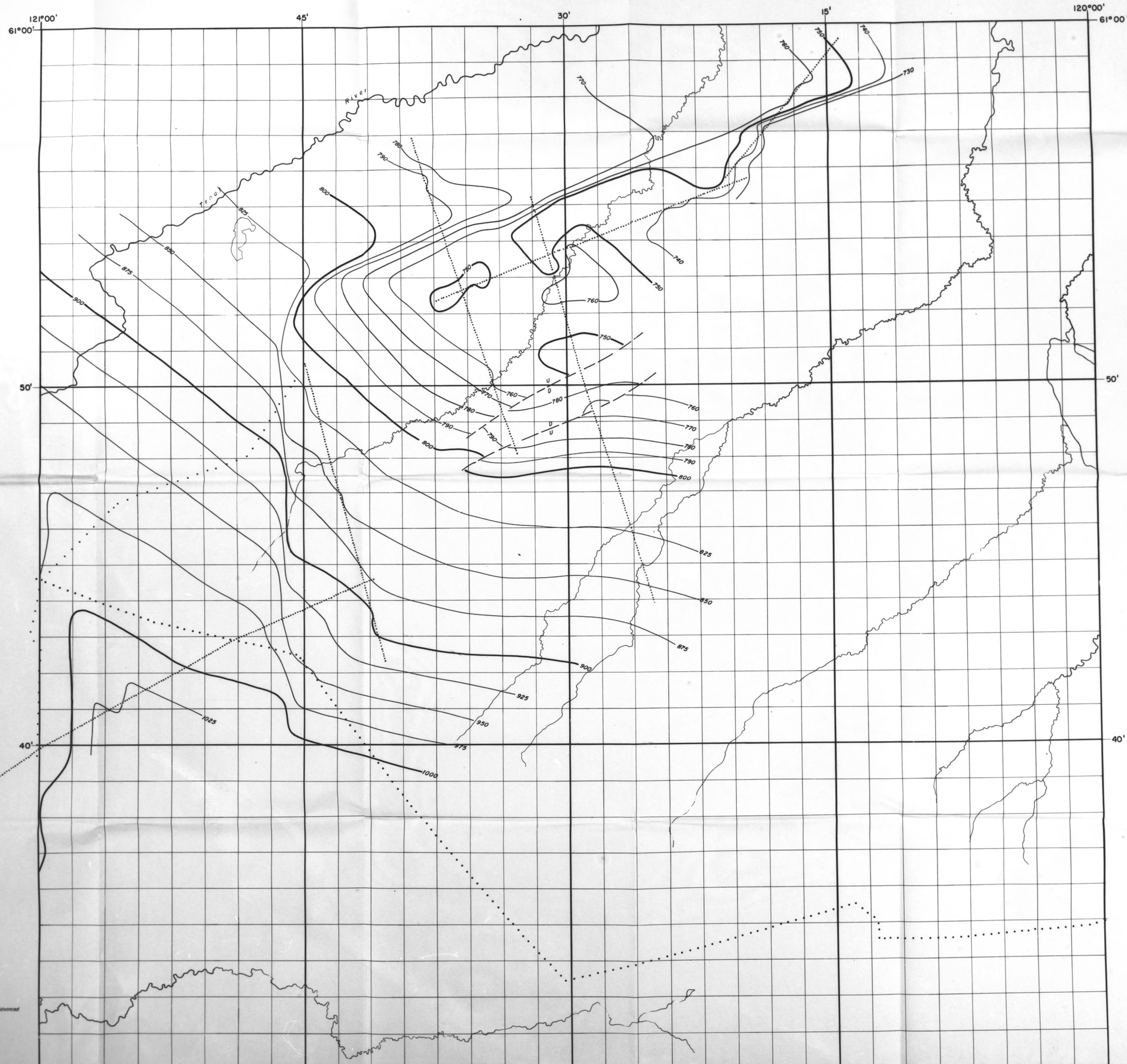


TETCHO LIMESTONE  
TIME STRUCTURE  
SEISMOGRAPH MAP

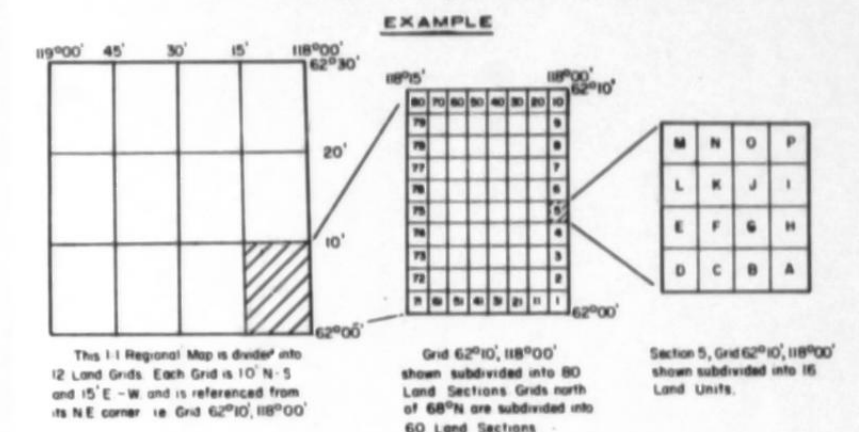
Contour interval: 100.000  
Datum: Plane 1500', Velocity 9000.000

Seismic Revised  
Values Revised  
Contours Revised  
Wells Revised





N.W.T. LAND REFERENCING SYSTEM  
TERRITORIAL OIL & GAS REGULATIONS



SLAVE POINT  
TIME STRUCTURE  
SEISMOGRAPH MAP

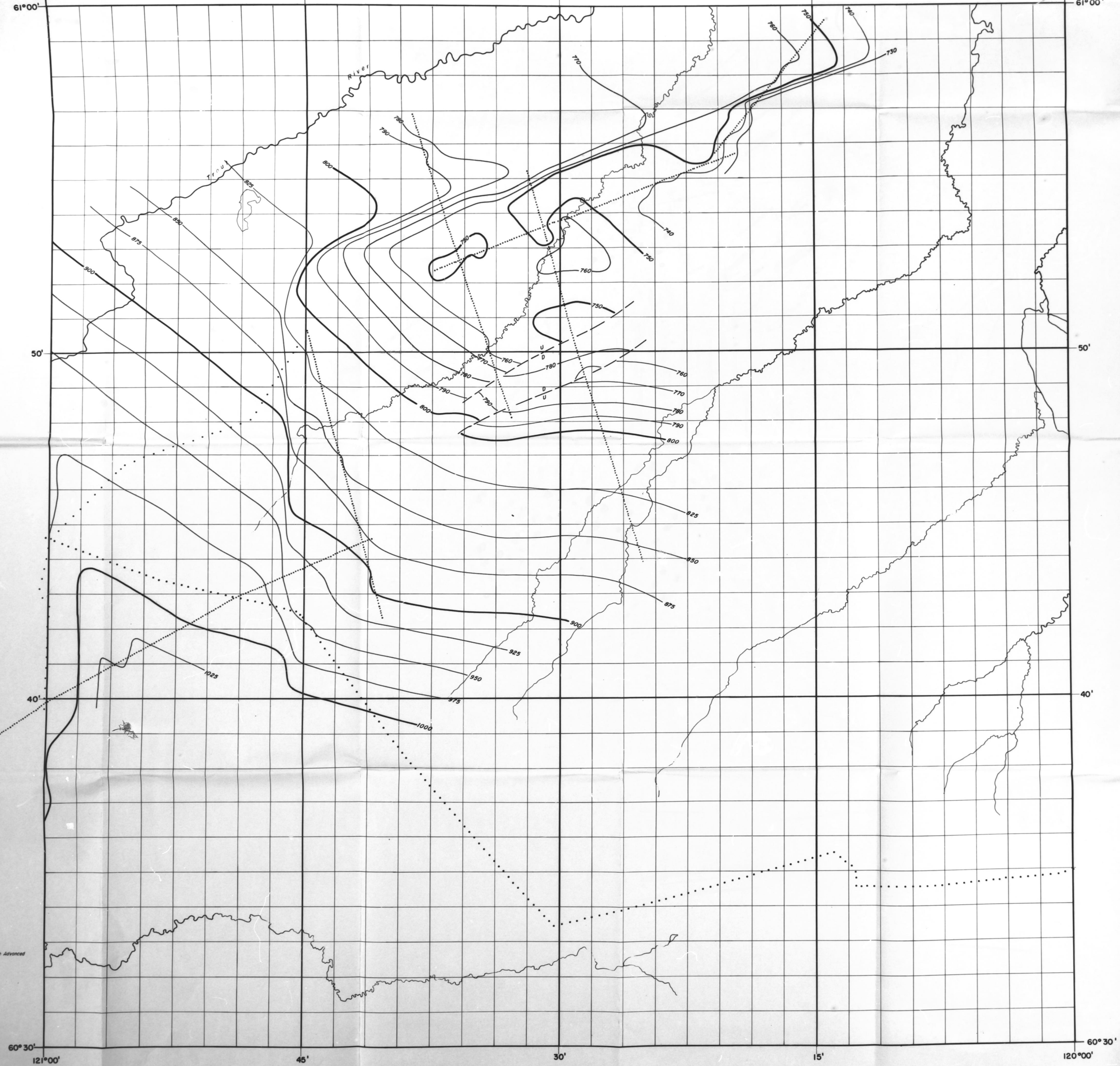
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Seismic Revised .....  
Values Revised .....  
Contours Revised .....  
Wells Revised .....

Contours Revised 11/12/77

Topography obtained from 2 miles to 1 inch Advanced Information Maps





Topography obtained from 2 miles to 1 inch Advanced Information Maps

**N.W.T. LAND REFERENCING SYSTEM**  
AS APPLIED TO  
**TERRITORIAL OIL & GAS REGULATIONS**

**EXAMPLE**

This 1:1 Regional Map is divided into 12 Land Grids. Each Grid is 10' x 10' and is subdivided into 144 Land Sections. Grids are numbered 1 through 12, and sections are numbered 1 through 144. The diagram shows how a specific location is identified by its grid coordinates and section number.

**INDEX TO MAP SHEETS**

95	G	H	E	F
	SIBBISTON LAKE	JEAN MARIE	MILLS LAKE	FALGISE LAKE
	B	A	D	C
	ELLIS LAKE	TRIST LAKE	BARBARA RIVER	SATIN LAKE
	O	P	W	N
	PATRY LAKE	PETITOT RIVER	BUSTON LAKE	HAY RIVER
94	J	I	M	K
	PROPHET RIVER	FONTAS RIVER	HAY LAKE	BOYER RIVER

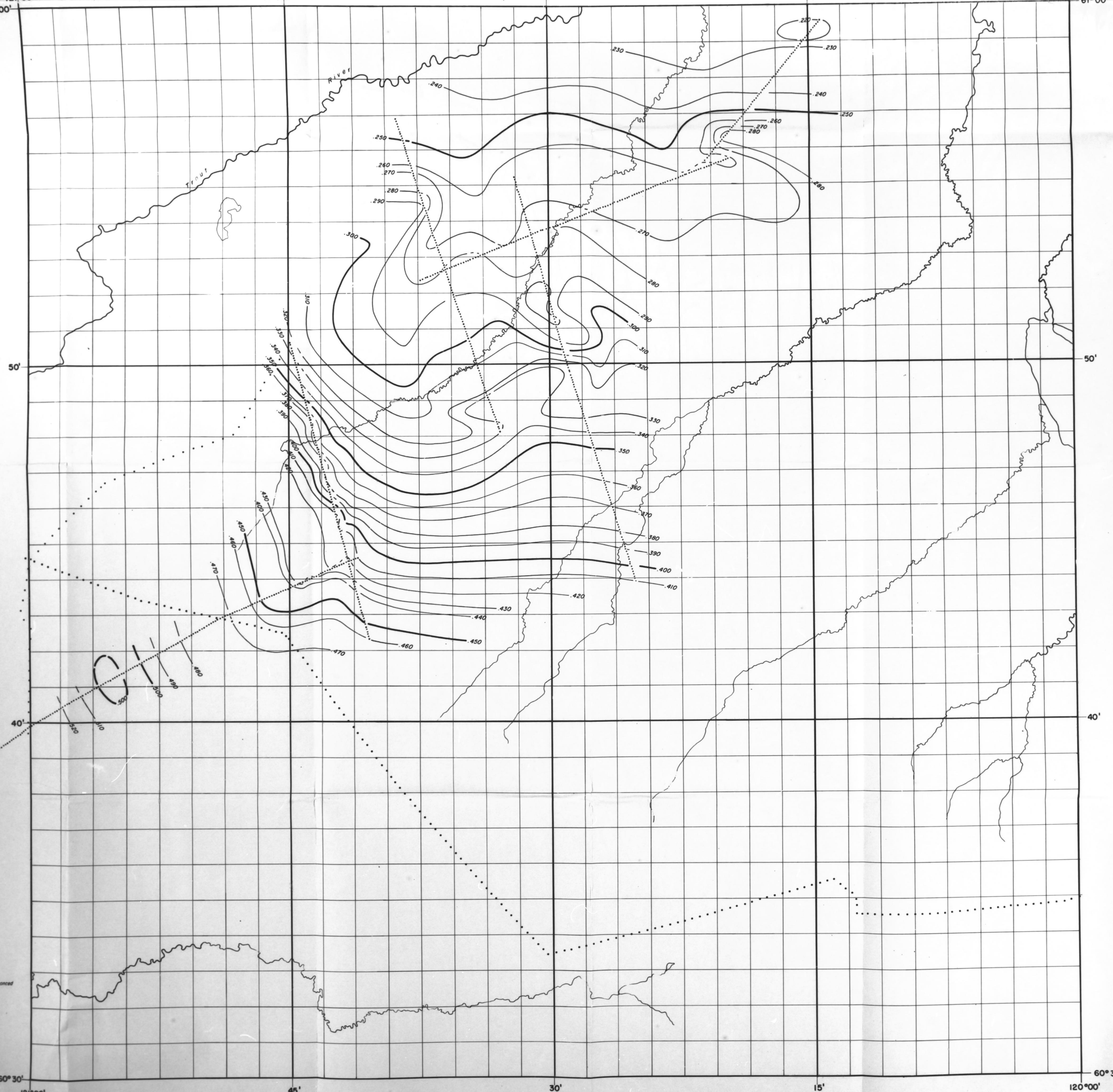
**SLAVE POINT  
TIME STRUCTURE  
SEISMOGRAPH MAP**

Contour Interval: .025 Sec.  
Datum: Plane 1,500'. Velocity: 9000' Sec.

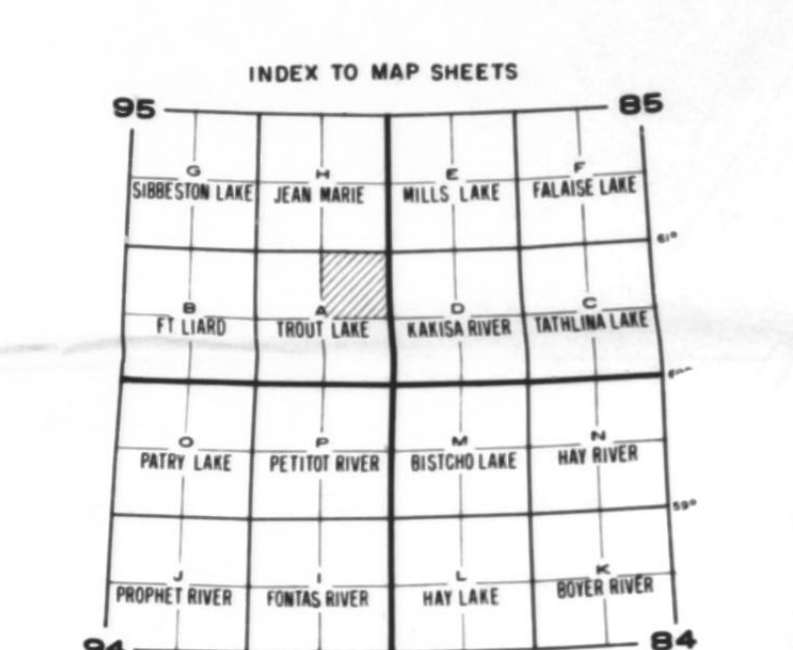
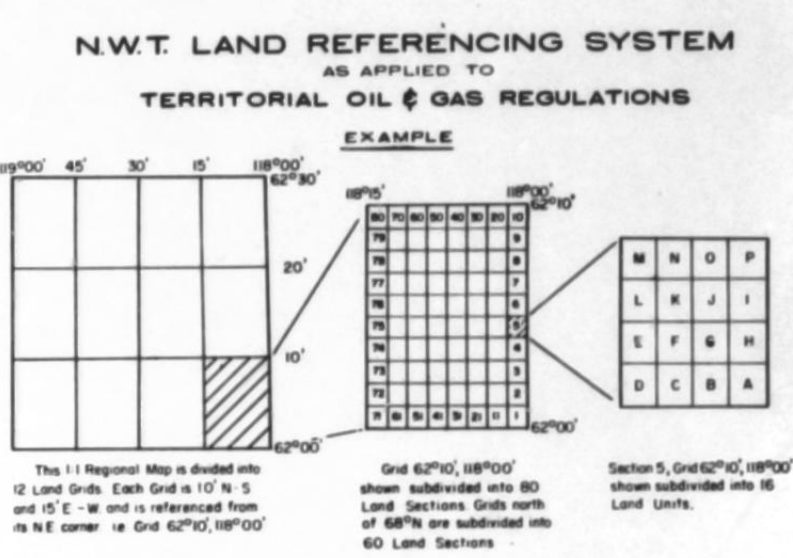
Seismic Revised: \_\_\_\_\_  
Values Revised: \_\_\_\_\_  
Contours Revised: \_\_\_\_\_  
Wells Revised: \_\_\_\_\_  
Contours Revised: \_\_\_\_\_



61°00'



Topography obtained from 2 miles to 1 inch Advanced Information Maps



TETCHO LIMESTONE  
TIME STRUCTURE  
SEISMOGRAPH MAP

Contour interval ..... 90' 555'  
Datum Plane 1500'. Velocity 9000' 5 sec

Seismic Revised .....  
Values Revised .....  
Contours Revised .....  
Wells Revised .....