

37-6-6-97

**GEOPHYSICAL REPORT ON SEISMIC TRADE DATA
IN THE PEEL RIVER AREA, YUKON-N.W.T.
TO THE GOVERNMENT OF CANADA**

**To Accompany Statement of Expenditures
for Work Conducted During
January 1, 1968 to June 30, 1968**



**SHELL CANADA LIMITED
NORTHERN DIVISION EXPLORATION
EDMONTON, ALBERTA, APRIL 1970**

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I INTRODUCTION

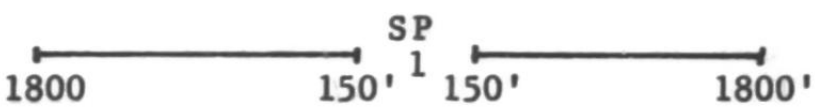
This report is submitted in compliance with the Canada Oil and Gas Regulations on our Permits 3606, 3607, 3608 and 3615 of Group No. 181 in the Peel River Area of the Northwest Territories between $66^{\circ}30'$ and $66^{\circ}50'$ North latitude and $133^{\circ}15'$ and $134^{\circ}45'$ West longitude.

II HISTORY OF PERMIT

Shell Canada obtained permits in Group 181 on October 10, 1963 for Work Bonus commitments. Approval for off-permit expenditures was received by letter dated May 3, 1968.

III STATISTICAL DATA OF TRADE LINES

Two hundred and fifty five miles of single coverage of seismic data were obtained in trade from Imperial Oil Enterprises in fall of 1967. It was recorded by Imperial between February and April 1965 using the following field parameters:

Stations:	24 geophones at 150' interval
Geophones:	16 at 18' interval
Spread:	 1800' 150' 150' 1800'
Shotpoints:	1800' interval
Charges:	three hole pattern in line, 100' long 3 x 5 lbs to 3 x 20 lbs
Depth:	30' to 45' top

IV SHELL OFFICE PROCEDURE

The Imperial FM field tapes were digitized and processed digitally using Shell's own processing facilities. A special computer program was used to derive static corrections for a datum of 400' above sea level,

with a correction velocity of 10,000 ft/sec. Dynamic corrections were derived from NMO studies on monitor records and sonic logs of nearby wells.

The total corrections were applied to the digitized field data and VAR-sections were then produced through Shell's playout facilities. These sections formed the base of our interpretation.

V INTERPRETATION

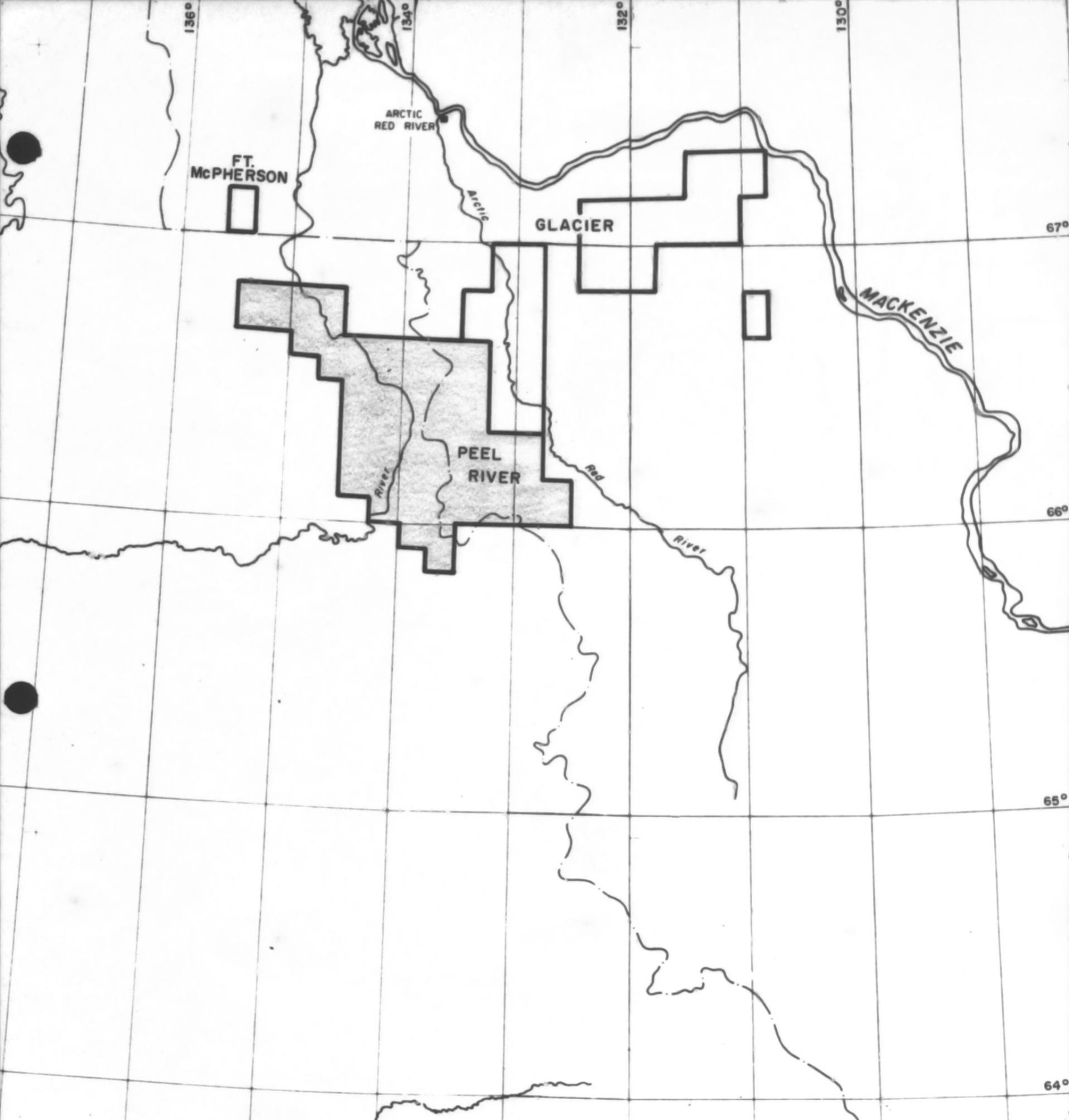
The record quality may be considered as fair to good.

Maps submitted with this report include:

- 1) Surface Elevation
- 2) Hume Time Structure
- 3) Cambrian Time Structure
- 4) Hume-Cambrian Isotime

The general strike of the Hume and Cambrian events is in a N-S direction, in the southern part of the area a strike of NW-SE is noticable.

A Hume time of 1.0 sec. corresponds to a depth of -5300 (below sea level), and a Cambrian time of 1.8 sec. to a depth of about -14,000 feet (below sea level). The Hume-Cambrian isotime map shows a gentle thickening of this interval in a westerly direction.



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PEEL RIVER AREA

YUKON - N.W.T.

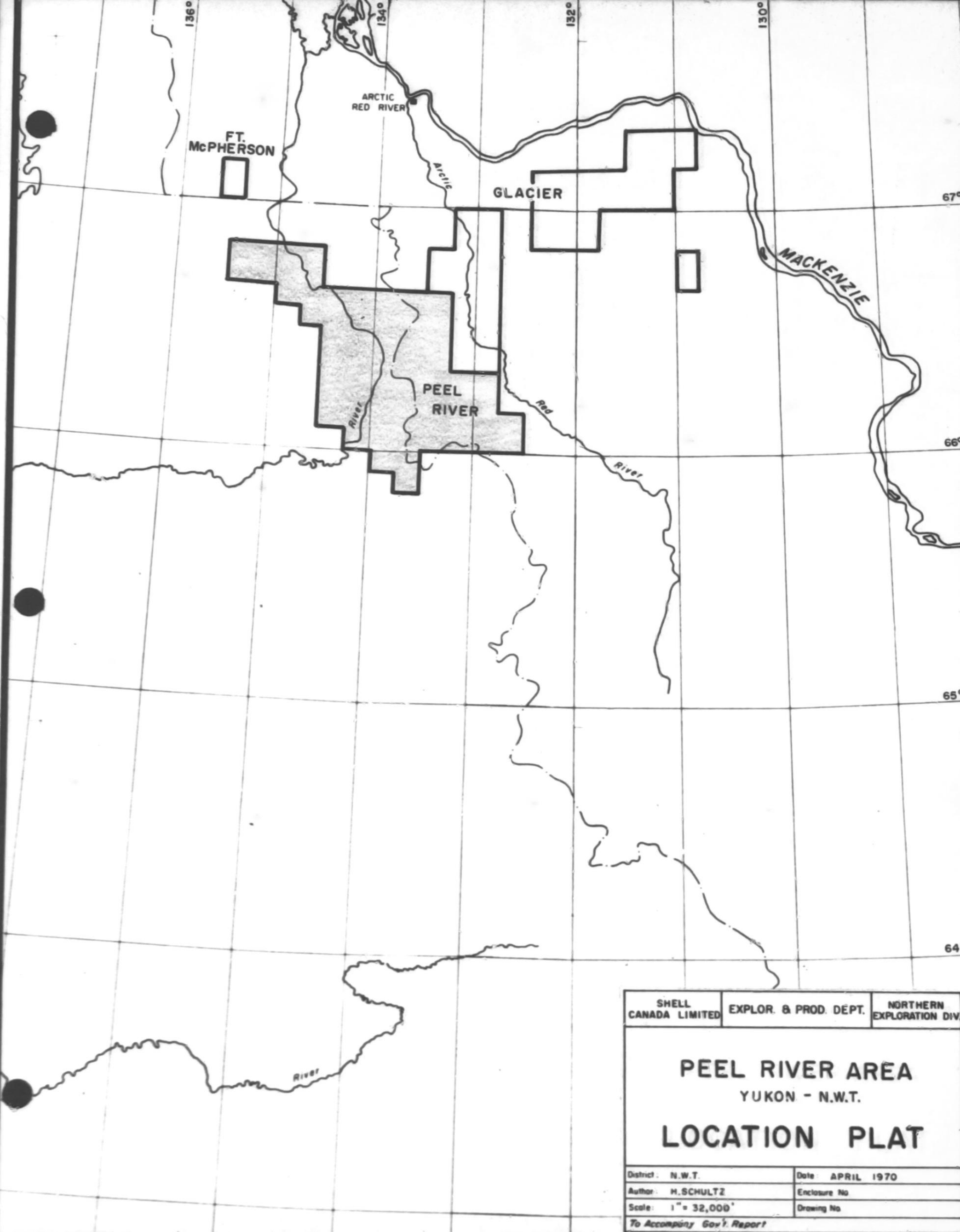
LOCATION PLAT

District: N.W.T.	Date: APRIL 1970
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Author: H. SCHULTZ	Enclosure No.
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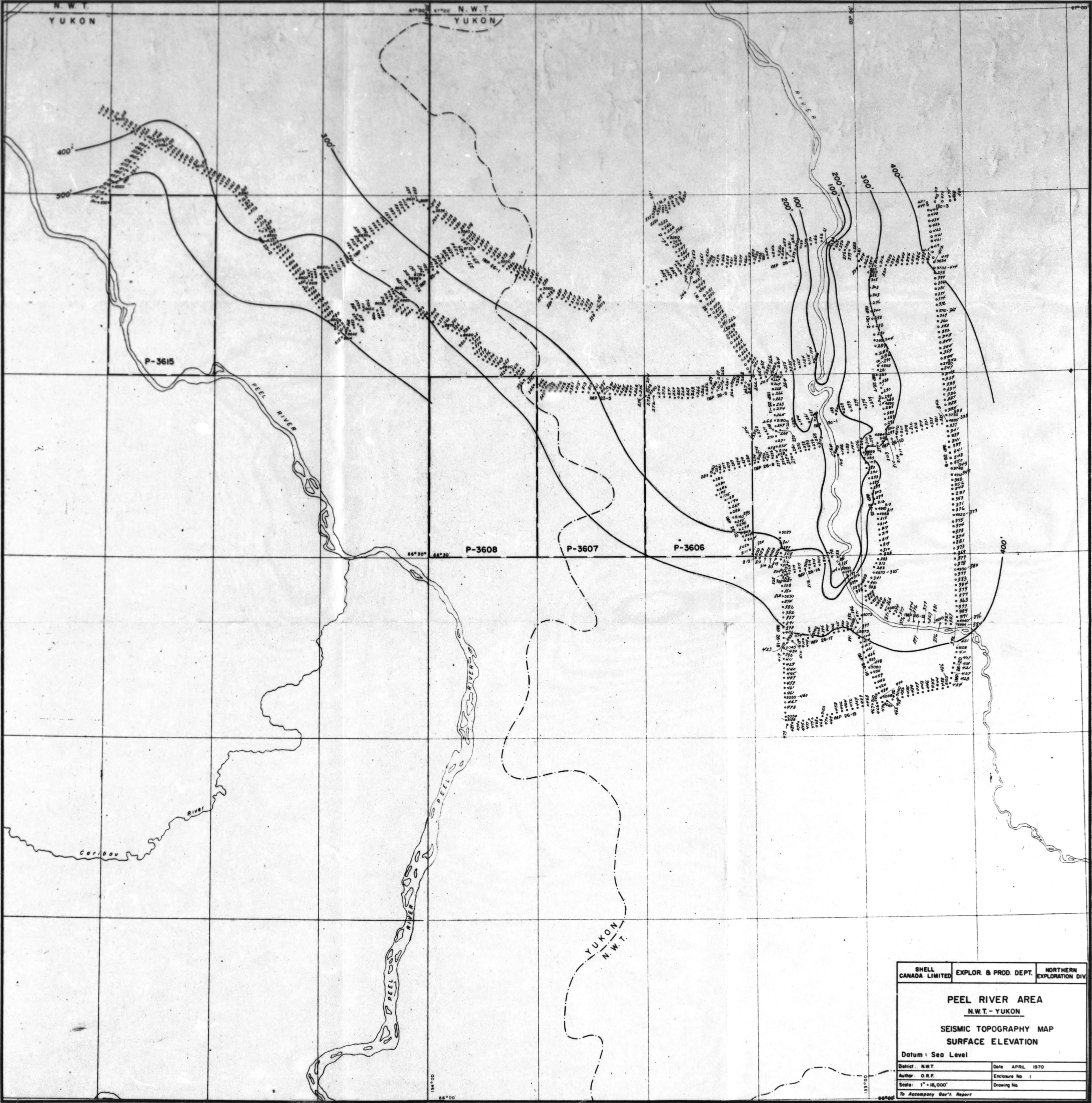
Scale: 1" = 32,000'	Drawing No.
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To Accompany Gov't. Report

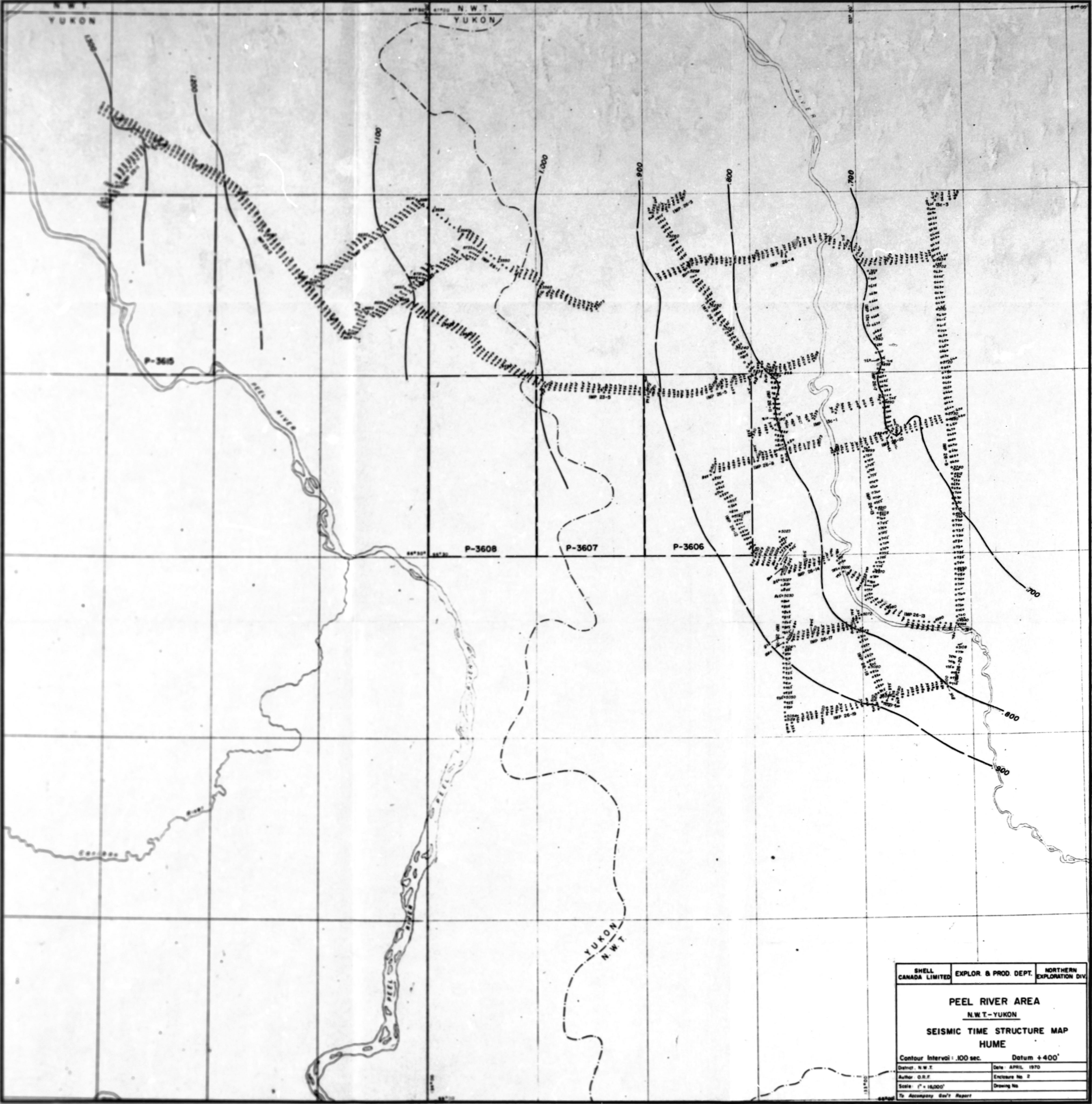


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PEEL RIVER AREA YUKON - N.W.T.			
LOCATION PLAT			
District: N.W.T.		Date: APRIL 1970	
Author: H.SCHULTZ		Enclosure No.	
Scale: 1" = 32,000'		Drawing No.	
To Accompany Gov't Report			

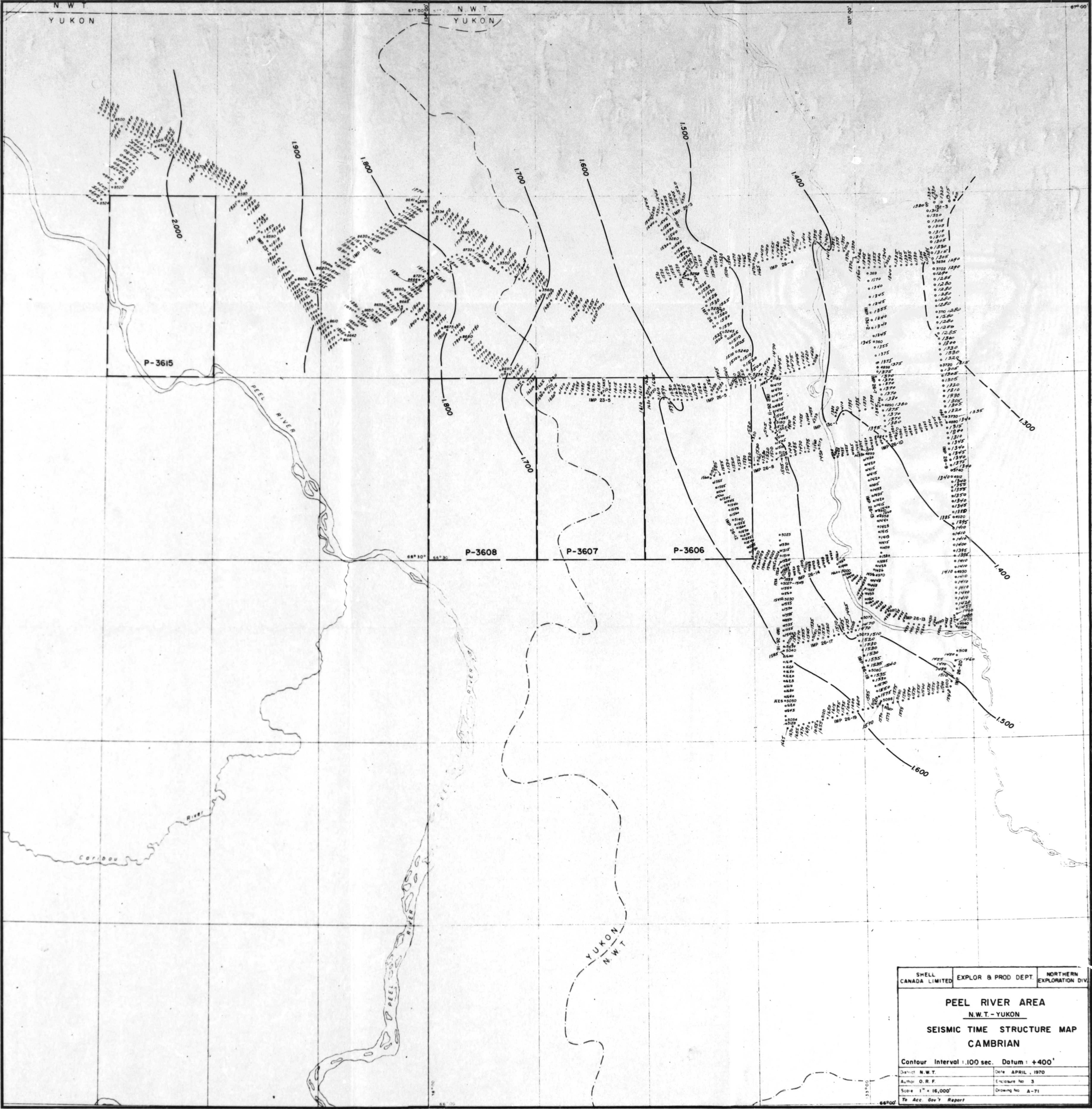
Prepared by Northern Division Exploration -
Northwest Territories District under the
supervision of R.S. Mahannah, Manager,
Northern Division Exploration, Shell
Canada Limited, April, 1970

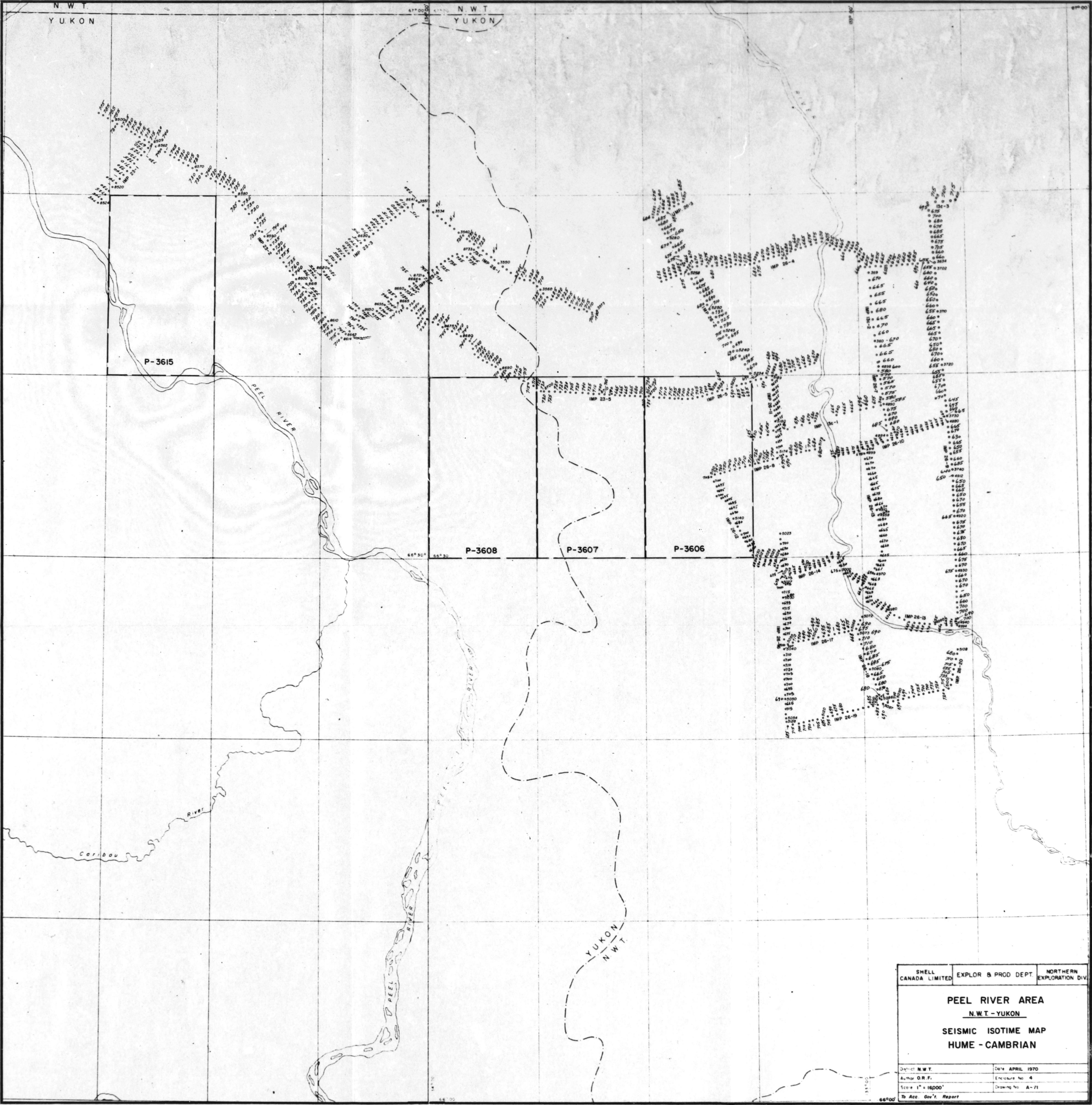


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PEEL RIVER AREA <u>N.W.T. - YUKON</u>		
SEISMIC TOPOGRAPHY MAP SURFACE ELEVATION		
Datum : Sea Level		
District : N.W.T.	Date : APRIL 1970	
Author : O.R.F.	Enclosure No : 1	
Scale : 1" = 16,000'	Drawing No.	
To Accompany Geol. Report		



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PEEL RIVER AREA N.W.T.-YUKON		
SEISMIC TIME STRUCTURE MAP HUME		
Contour Interval: .100 sec.		Datum +400'
District: N.W.T.	Date: APRIL 1970	
Author: D.R.F.	Enclosure No. 2	
Scale: 1" = 10,000'	Drawing No.	
To Accompany Geol. Report		





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PEEL RIVER AREA N.W.T.-YUKON SEISMIC ISOTIME MAP HUME - CAMBRIAN		
District N.W.T.		Date APRIL 1970
Author O.R.F.		Enclosure No. 4
Scale 1" = 16000'		Drawing No. A-71
To Acc. Gov't. Report		