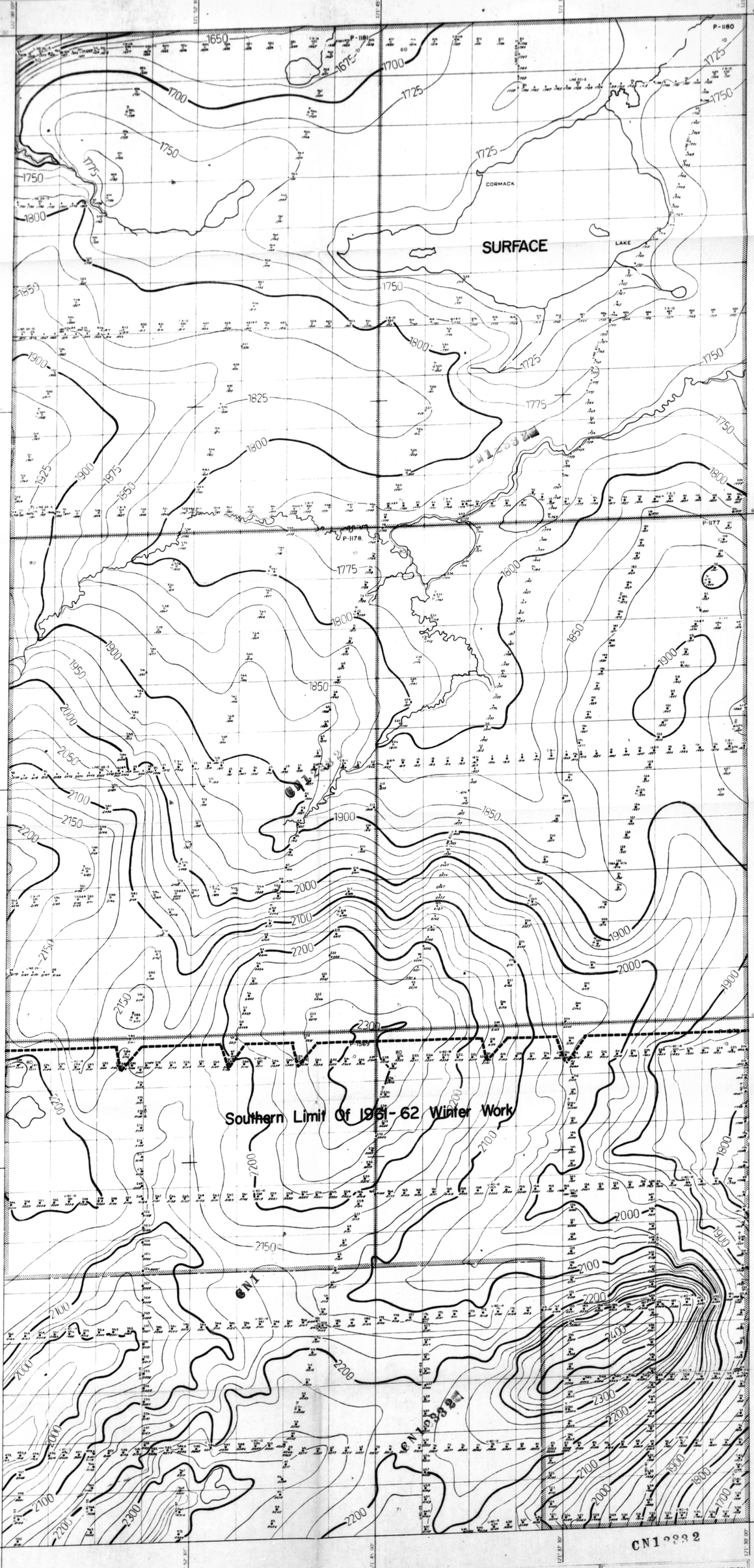


CN12332

This map replaces/supplements Registration No. ______ dated ______,
which is to be destroyed/kept
(Refer transmittal dated ______)
Map distribution: ☐ Division ☐ General Office
Other maps prepared this report: Div G.O.
Top Devonian ☐ ☐
3rd Hay River Lime to Top Carbonate ☐ ☐
☐ ☐
☐ ☐
☐ ☐
☐ ☐
This map checked by ______ Pan Am Geophysicist/Geologist

All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Pan American Petroleum Corporation. The publication or reproduction thereof without the written permission of said Corporation is strictly prohibited.

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: Cormack Lake	GRID CM-20/NW
PROVINCE: Northwest Territories	SCALE 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT 25 ft
SHOT BY: Century C-9	FOR: Pan Am
INCL DATES: Dec. 11, 1961 to Mar 6, 1962	
INTERP BY: E.F.K. Zarudzki	CO AFFIL: Pan Am
REPORT No. E-62-40	DATE July 5, 1962
REMARKS	

SURFACE
SIXTY FIVE FEET WAS SUBTRACTED FROM ELEVATIONS SHOWN ON AMUREX RECORDS TO TIE TO CENTURY 9
CN12349
PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT
WELL NORTH CELIBETA
PROJECTION N.W.T.
SCALE 1" = 4000'
HORIZON Surface
TYPE OF MAP Contours
CONTOUR INT 25 ft
FOR Pan Am
DATE Jany 5, 1962
REMARKS

REPORT OF GEOPHYSICAL SURVEY

REPORT OF SEISMOGRAPH REFLECTION SURVEY

Conducted By

Century Geophysical Corporation of Canada.

for

Pan American Petroleum Corporation

During the Period : May 24, 1961 to May 23, 1962

On Permit Nos:

1175	1180
1176	1181
1177	1569
1178	1570
1179	

Prepared By

M.A. Knock

District Geophysicist

November 15, 1962

Submitted in accordance with Government Regulations under Section 30(C) of the Territorial Lands Act.

TABLE OF CONTENTS

(Maps are enclosed in envelope at back of this report).

TEXT

INTRODUCTION

During the period May 24, 1961 to May 23, 1962, a seismograph reflection program was conducted by Century Geophysical Corporation of Canada for Pan American Petroleum Corporation. Century Party #9 spent 91.775 operating days on Permits numbered 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1569 and 1570. The field operations commenced December 11, 1961 and ended on March 6, 1962.

The seismic lines were cut by Richardson Bros.(Olds) Ltd., and J.B. Gordon Construction Ltd.

Century Party #9 was under the supervision of Mr. G.R. Jackson.

The interpretations were carried on simultaneously with the field work by Century's interpretative staff located in Edmonton.

The operations in this area were conducted by wheeled equipment. The camp was comprised of nine units mounted on trailers.

No unusual operating problems were encountered in this area.

TEXT (CONTINUED)

SEISMIC TECHNIQUE

Shot holes averaged 40 feet in depth. Shot depth was determined by near-surface lithology with best results obtained when the shot was detonated in clay.

Normal charge size averaged 6 pounds per shot. Three hole patterns were maintained throughout the area. The average spread length used was 2640 feet. The energy was recorded on split spreads as diagrammed on Figure #1.

The instruments used by Century Party #9 were 501A type manufactured by Century Geophysical Corporation. The data was recorded on Techno type magnetic tapes.

The reflection method was used to obtain the subsurface data throughout the area.

The data that appears on the subsurface maps are vertical two way times between an arbitrary reference plane and the particular horizon mapped.

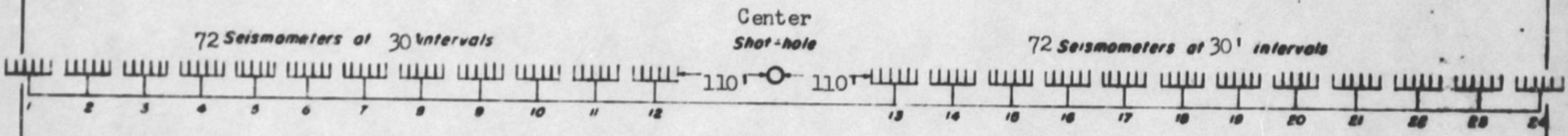
Respectfully submitted,

PAN AMERICAN PETROLEUM CORPORATION

By: M.A. Knock

M.A. Knock,

District Geophysicist.



Three hole pattern - Holes drilled in line - 75 feet apart.

Distance from last pattern hole to first geophone in group - 35 feet.

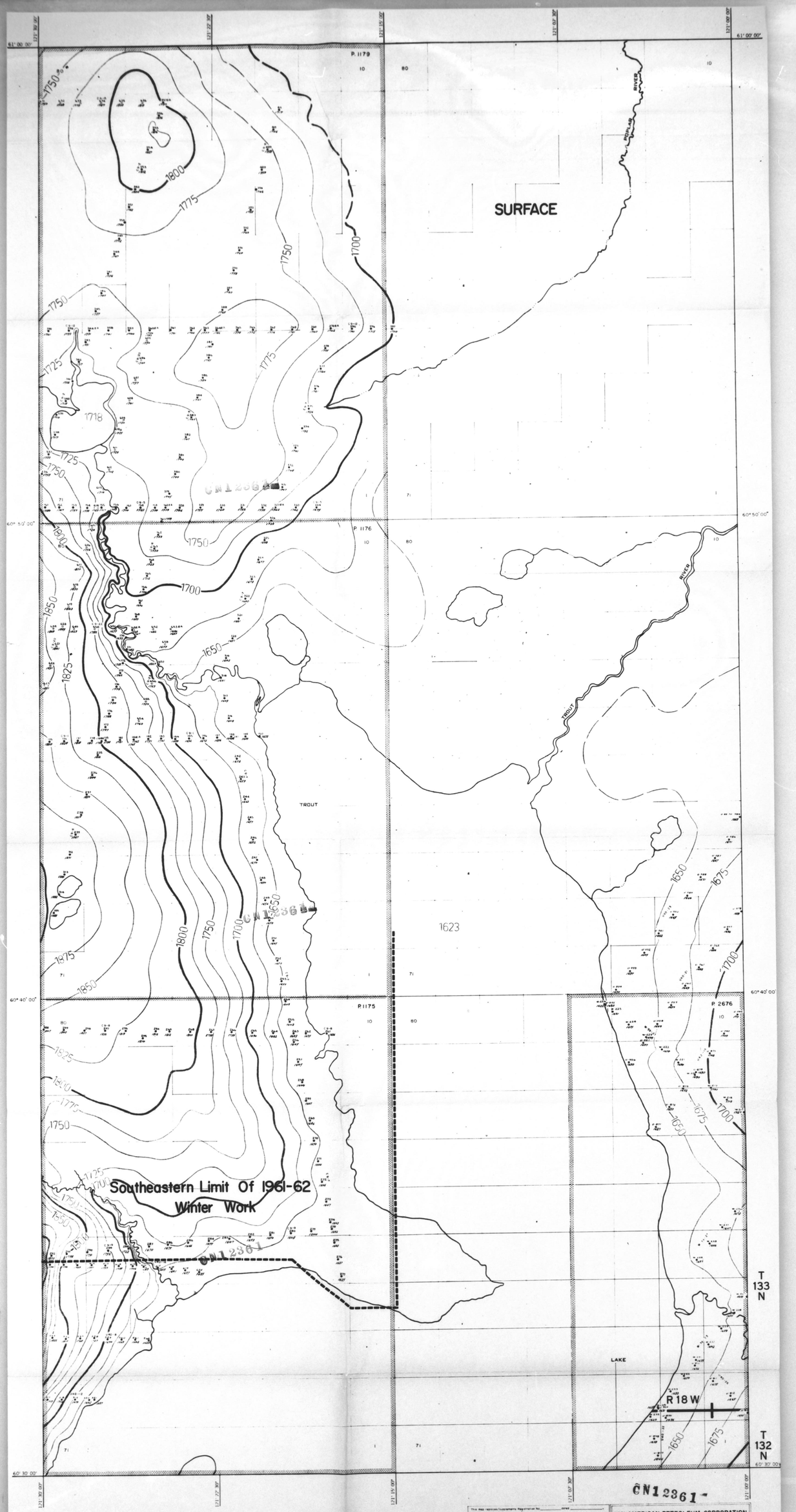
Party: Century #9

Area: Cormack Lake.

Permits: 1175 to 1181, 1569,1570

Spread Length: 2640 feet.

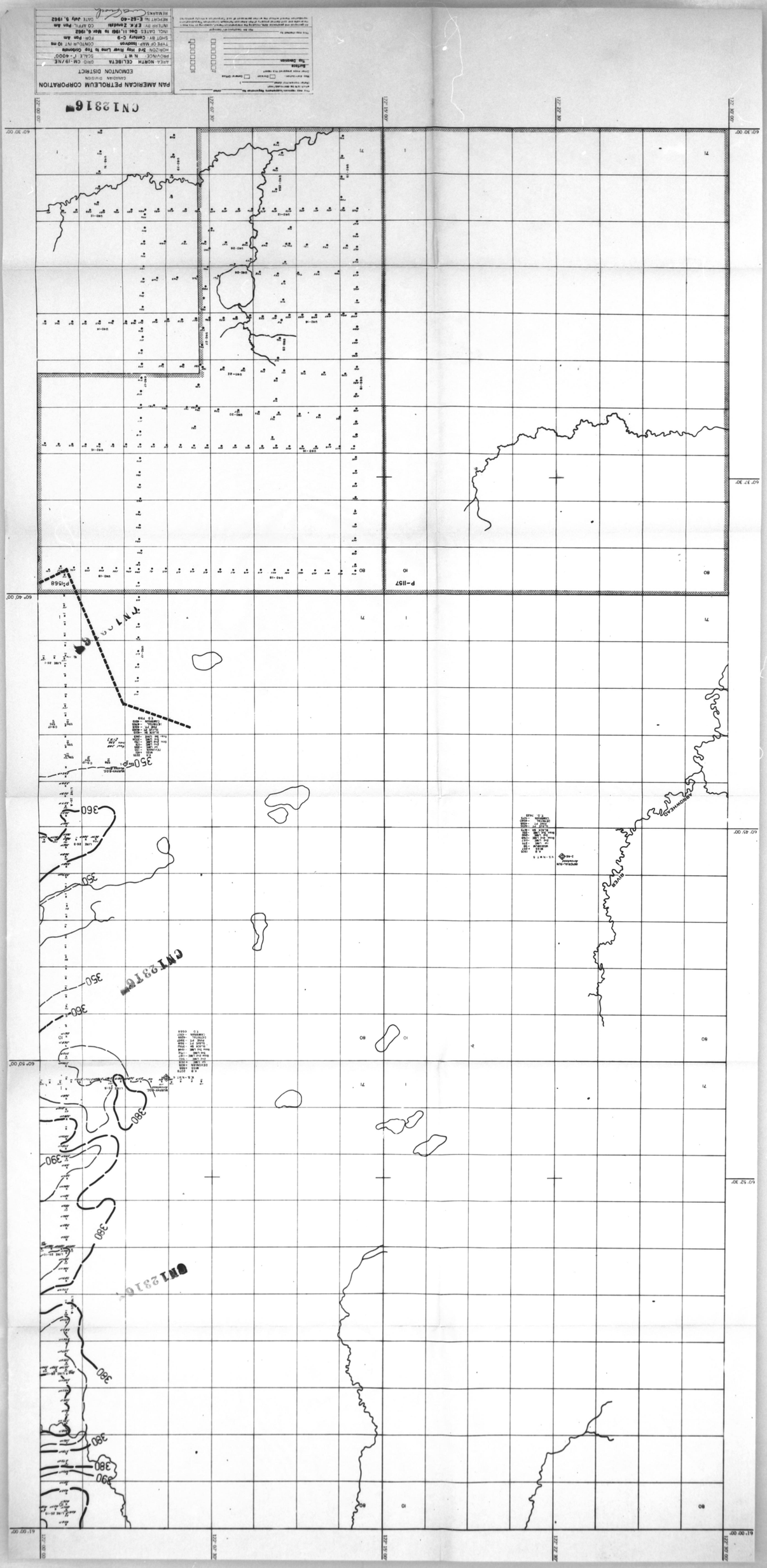
Figure #1

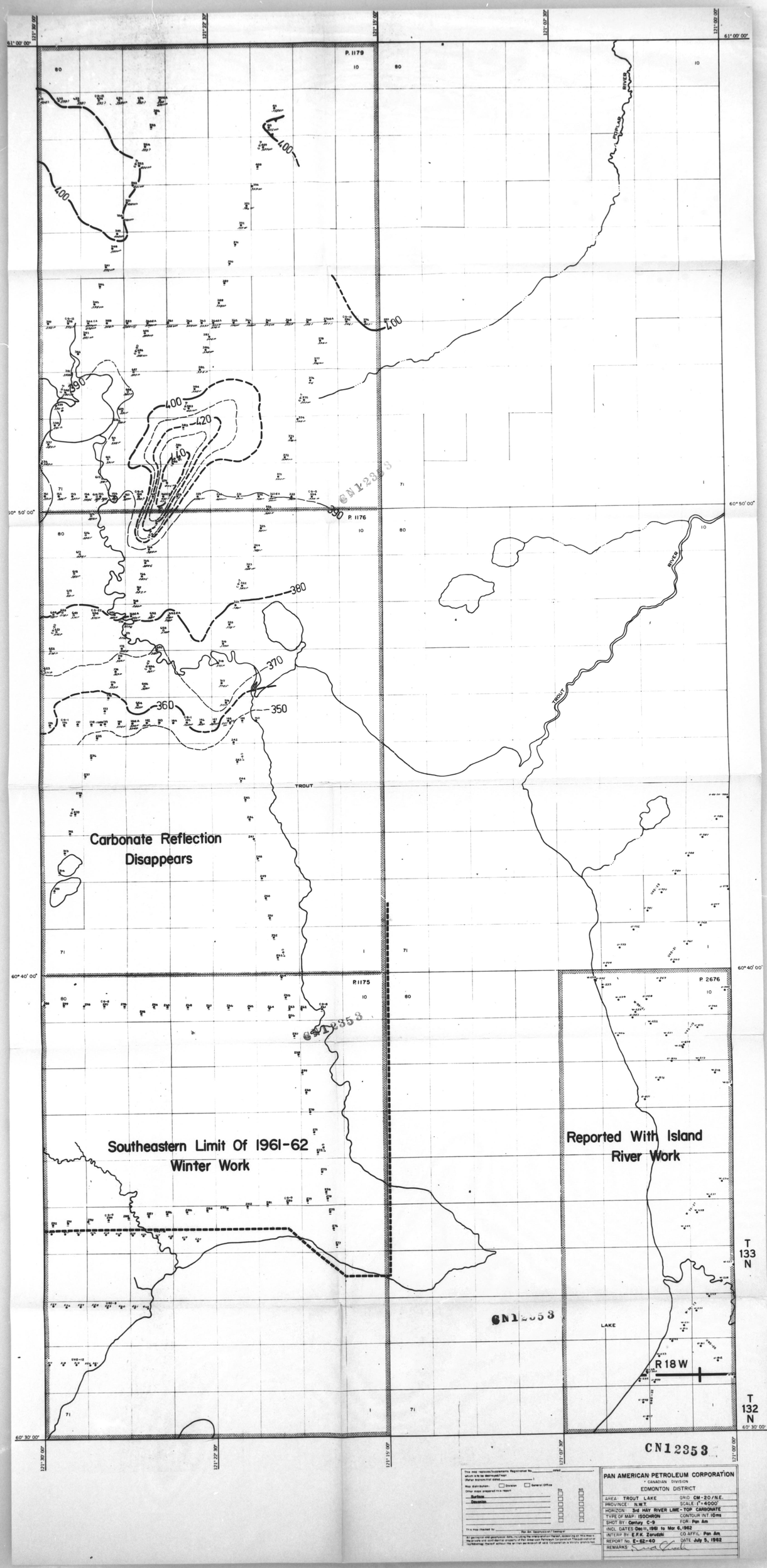


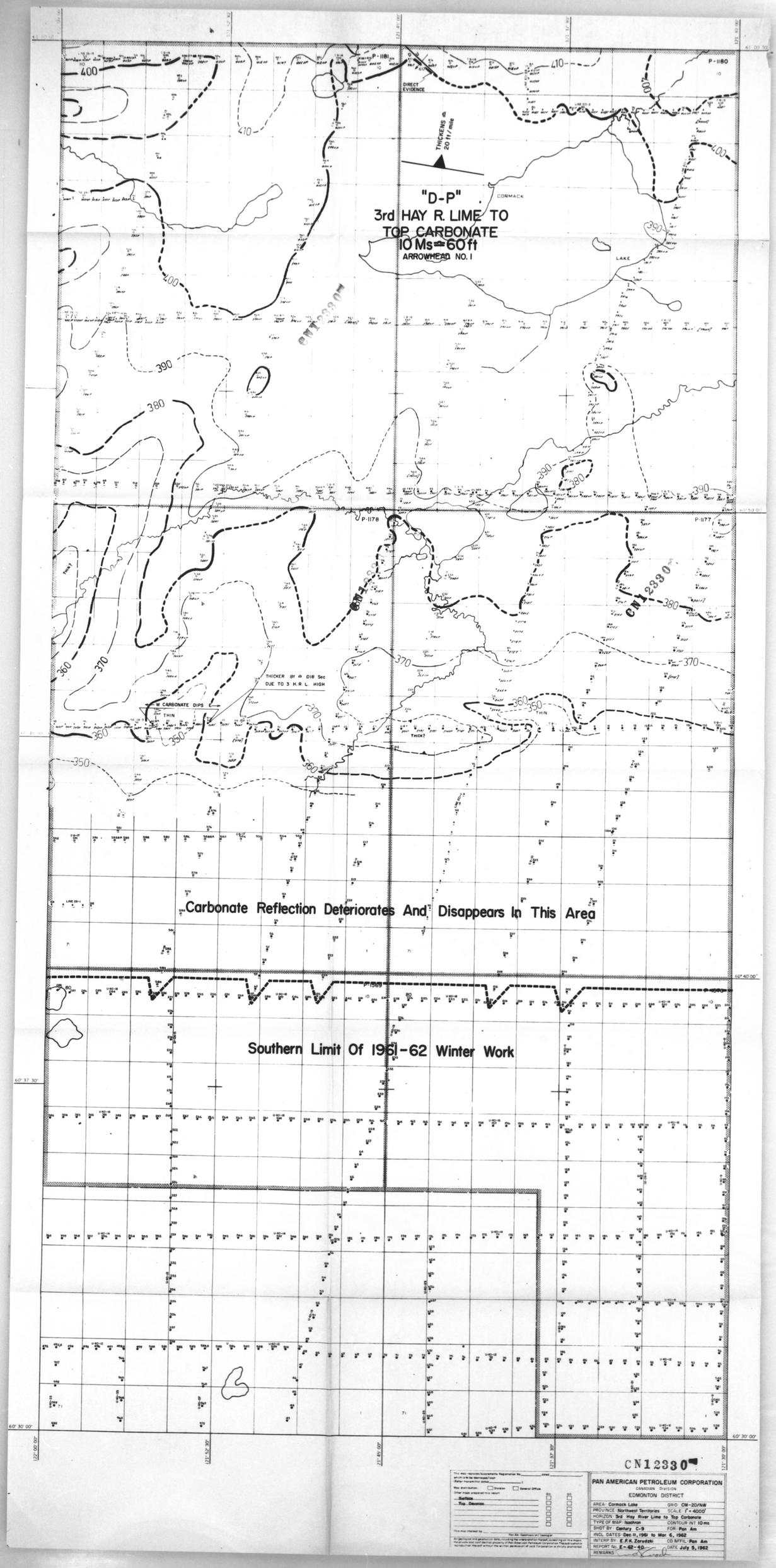
PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: TROUT LAKE	GRID CM 20/NE
PROVINCE: N.W.T.	SCALE 1"=4000
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT. 25 ft
SHOT BY: Century C-9	FOR: Pan Am
INCL. DATES: Dec. 11, 1961 to Mar. 6, 1962	
INTERP. BY: E.F.K. Zarudzki	CO. AFFIL. Pan Am
REPORT No. E-62-40	DATE July 5, 1962
REMARKS	
GEOLOGICAL INT.	DATE
FROM GEOPH. REPORT No(s)	DATED
REMARKS	

CN12361


PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT
AREA-NORTH CELIBETA
PROVINCE N.W.T.
HORIZON: 3rd Hay River Lime to Top Ordovician
TYPE OF MAP: Isochron
SHOT BY: Chetwyn C-9
INCL. DATES Dec 11,1961 to Mar 6,1962
REPORT No. E-62-60
DATE July 5, 1962
CONTOUR INT 10 ms
FOR: Pan Am
CO APRIL, Pan Am
GRID CH-19/NE
SCALE 1"=4000'
Drilling
The Dominion
P-1157
P1568
GREENHORNE & O'MARA
RIVER
CNI2316
CNI2316
CNI2316
CNI2316
360
350
390
380
60° 40' 00"
60° 37' 30"
60° 35' 00"
60° 32' 30"
60° 30' 00"
127° 00' 00"
127° 07' 30"
127° 15' 00"
127° 22' 30"
127° 30' 00"


61° 00' 00"
121° 22' 30"
121° 15' 00"
121° 07' 30"
121° 00' 00"
P. 1179
P. 1176
P. 1175
P. 2676
400
390
420
410
380
370
360
350
TROUT
RIVER
LAKE
Carbonate Reflection
Disappears
Southeastern Limit Of 1961-62
Winter Work
Reported With Island
River Work
60° 50' 00"
60° 40' 00"
60° 30' 00"
T
133
N
T
132
N
R 18 W
CN12353
PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT
AREA: TROUT LAKE
GRID: CM-20/N.E.
PROVINCE: N.W.T.
SCALE: 1"=4000'
HORIZON: 3rd HAY RIVER LIME - TOP CARBONATE
TYPE OF MAP: ISOCHRON
CONTOUR INT. 10ms
SHOT BY: Century C-9
FOR: Pan Am
INCL. DATES: Dec 11, 1961 to Mar 6, 1962
INTERP BY: E.F.K. Zarudzki
CO. AFFIL: Pan Am
REPORT No. E-62-40
DATE: July 5, 1962
REMARKS:

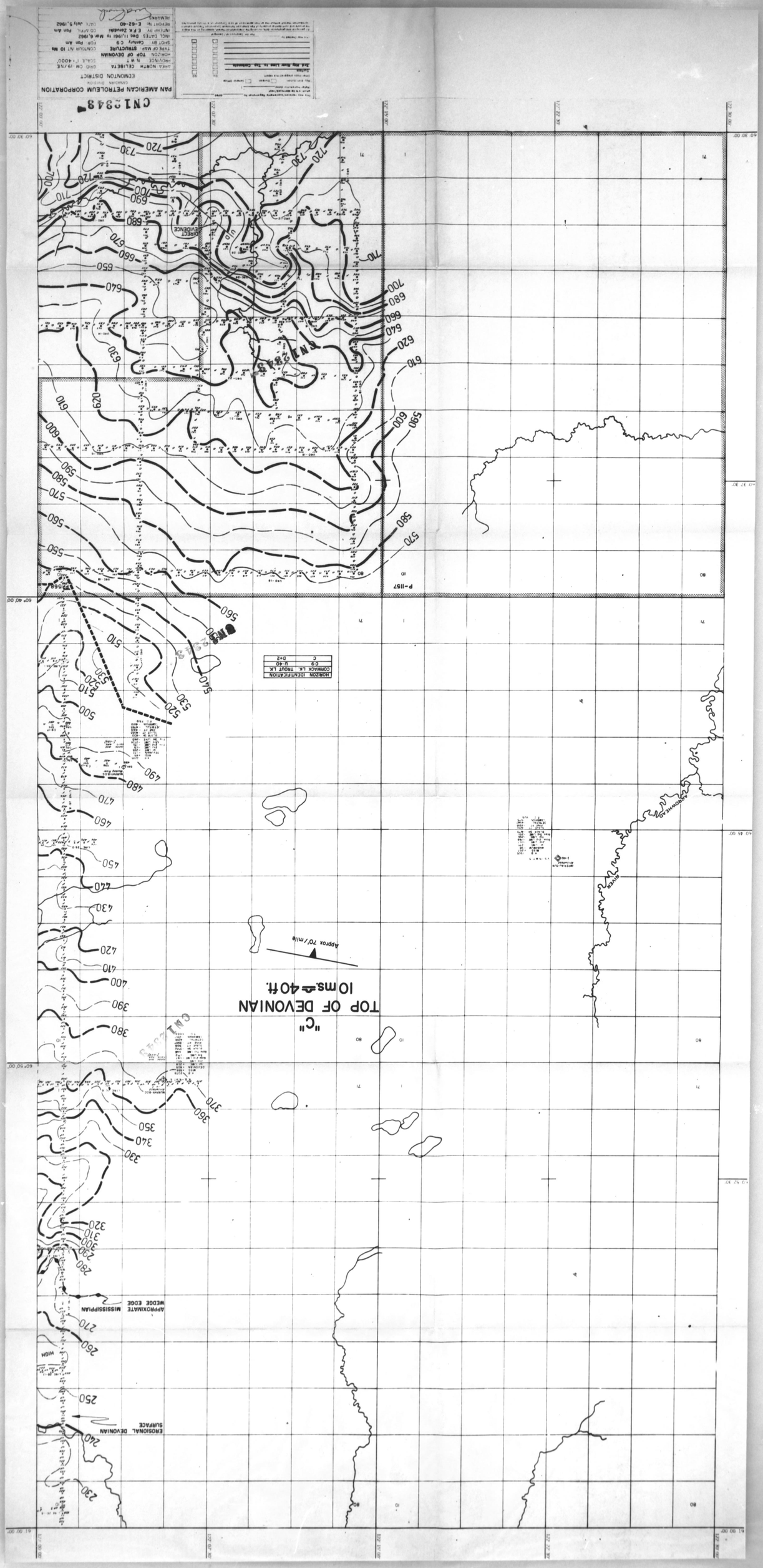


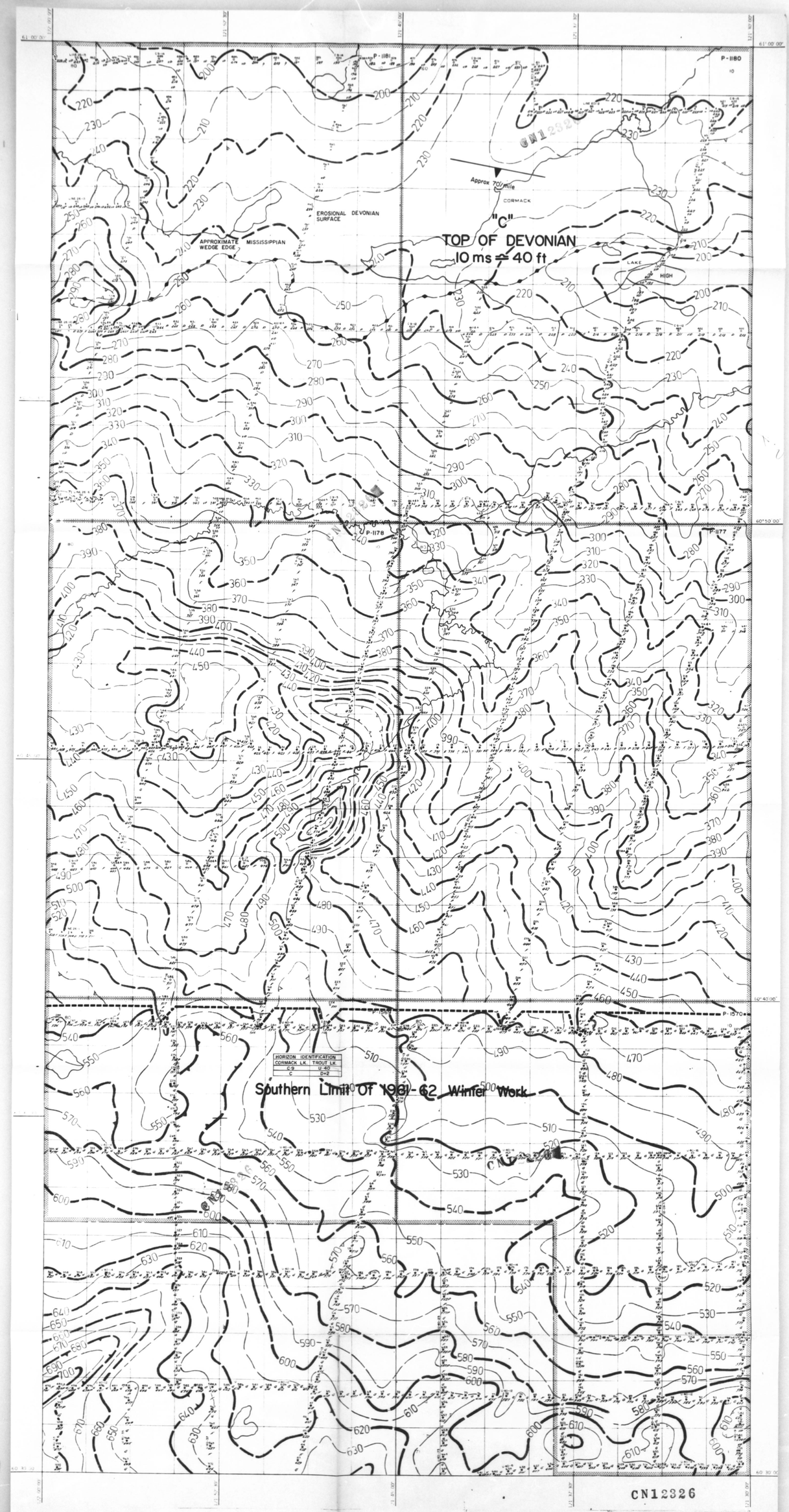
PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: Cormack Lake — GRID: CM-20/NW
PROVINCE: Northwest Territories — SCALE: 1" = 4000'
HORIZON: 3rd Hay River Lime to Top Carbonate
TYPE OF MAP: Isochron — CONTOUR INT: 10 ms
SHOT BY: Century C-9 — FOR: Pan Am
INCL. DATES: Dec. 11, 1961 to Mar. 6, 1962
INTERP BY: E.F.K. Zaradzki — CO.&FIL.: Pan Am
REPORT No.: E-62-40 — DATE: July 5, 1962
REMARKS:

This map represents Seismograms Registration No. _____ dated _____ which is to be destroyed/kept
(Refer Inspection dates) _____
Map distribution: ☐ Division ☐ General Office
Other maps prepared this report:
Surface
Top Devonian

This map checked by _____
Pan Am Geophysical Geologist


PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT
AREA NORTH CELIBETA
PROVINCE N.W.T.
HORIZON TOP OF DEVONIAN
TYPE OF MAP: STRUCTURE
SPOT BY CANADY C-9
INTERP BY E.F.K. ZANDBIEH
REPORT NO. E-62-40
DATE JULY 5, 1962
"C"
TOP OF DEVONIAN
10 ms = 40 ft.
Approx 70'/mile
EROSIONAL DEVONIAN SURFACE
APPROXIMATE MISSISSIPPIAN WEDGE EDGE
HIGH
DRY HOLE
HORIZON IDENTIFICATION
CORNMACK L.K. TROUT L.K.
C-9 L-40
C D-2
P-1157
OIL

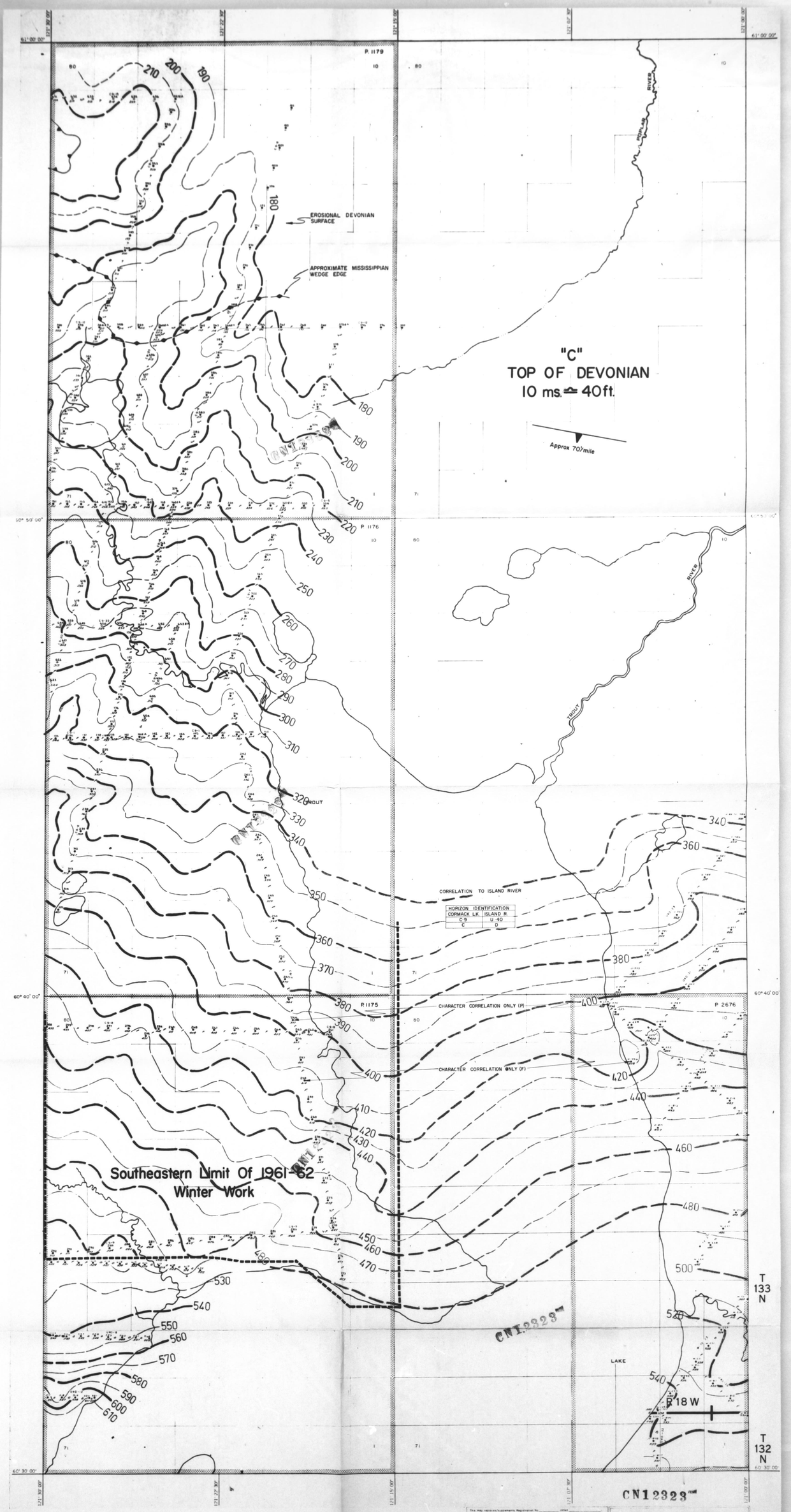


CN12326

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Cormack Lake	GRID CM-20/NW
PROVINCE Northwest Territories	SCALE 1" = 4000'
HORIZON TOP OF DEVONIAN	
TYPE OF MAP STRUCTURE	CONTOUR INT 10 ms
SHOT BY Century C-9	FOR Pan Am
INCL. DATES Dec. 11, 1961 to Mar 6, 1962	
INTERP BY E.F.K. Zarudzki	CO. APPR. Pan Am
REPORT No. E-67-40	DATE July 5, 1962
REMARKS	

Surface
3rd Hby River Lime to Top Carbonate



PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: TROUT LAKE — SHEET: CM 20/NE
PROVINCE: N.W.T. — SCALE: 1" = 4000'
HORIZON: TOP OF DEVONIAN
TYPE OF MAP: STRUCTURE — CONTOUR IN: 10 Ms
SHOT BY: Century C-9 — FOR: Pan Am
INCL. DATES: Dec. 11, 1961 to Mar. 6, 1962
INTERP. BY: E.F.K. Zarudzki — CO. APPR.: Pan Am
REPORT No.: E-62-40 — DATE: July 5, 1962
REMARKS: Sand Creek

This map revises/supplements Registration No. ____ which is to be terminated
Refer map-print date ____
Map distribution: ☐ Division ☐ Same as Office
Other maps prepared this report
Surface
Sed. Top River Line to Top Carbonate

REPORT OF GEOPHYSICAL SURVEY
REPORT OF SEISMOGRAPH REFLECTION SURVEY

CONDUCTED BY: United Geophysical Company and
Western Geophysical Company

on PERMIT NOS. 1136, 1137, 2301, 2713

Abstracted for
Geo-Science Data Index

Date_____

REPORT OF GEOPHYSICAL SURVEY

REPORT OF SEISMOGRAPH REFLECTION SURVEY

Conducted By

Western Geophysical Company of Canada Ltd.,

And

United Geophysical Company of Canada.

for

Pan American Petroleum Corporation

During the Period: March 10, 1961 to August 31, 1962.

On Permit Nos:

1136
1137
2301
2713

Prepared By

M.A. Knock

District Geophysicist

November 15, 1962

Submitted in accordance with Government Regulations under Section 30(C)

of the Territorial Lands Act

TABLE OF CONTENTS

TEXT

INTRODUCTION

During the period March 10, 1961 to August 31, 1962, a seismograph reflection program was conducted by Western Geophysical Company of Canada Ltd. and United Geophysical Company of Canada for Pan American Petroleum Corporation. Western Party #60 spent a total of 23.515 operating days on Permits Numbered 1136, 1137, 2301 and 2713 during February and March 1962. United Party #40 spent a total of 5.1 operating days on Permit No. 2713 during December 1961, and January 1962.

The seismic program was conducted on trails predozed by Bruce Rome Limited.

Western Party #60 was under the supervision of Mr. J. Trotter, while United Party #40 was supervised by Mr. L.E. Sexsmith.

The interpretation was carried on simultaneously with the field operation by Pan American's interpretative staff located in Edmonton.

The operation in this area was conducted by wheeled equipment. The camp facilities were comprised of three expandable type units mounted on "highboy" trailers.

No unusual operating problems were encountered in this area.

TEXT (CONTINUED)

SEISMIC TECHNIQUE

Shot holes averaged 40 feet in depth. Shot depth was determined by near-surface lithology with best results obtained when the shot was detonated in clay.

Both three-hole and five-hole patterns were used, dependent on record quality variations, in the portions of the area shot by Western Party #60 with normal charge size of 3 pounds and 5 pounds per shot respectively. Five-hole patterns were maintained throughout the portions of the area shot by United Party #40 with a normal charge size of 10 pounds per shot. The energy was recorded on split spreads as diagrammed in Figures #1, #2 and #3.

The instruments used by Western Party #60 were FA-32 type manufactured by Western Geophysical Company, while UGC 1-38 type, manufactured by United Geophysical Company, were used by United Party #40. The data was recorded on Techno type magnetic tapes.

The reflection method was used to obtain the subsurface data throughout the area.

The data that appears on the subsurface maps are vertical two way times between an arbitrary reference plane and the particular horizon mapped.

Respectfully submitted

PAN AMERICAN PETROLEUM CORPORATION.

By: M.A.Knock, District Geophysicist.

TEXT (CONTINUED)

SEISMIC TECHNIQUE

Shot holes averaged 40 feet in depth. Shot depth was determined by near-surface lithology with best results obtained when the shot was detonated in clay.

Both three-hole and five-hole patterns were used, dependent on record quality variations, in the portions of the area shot by Western Party #60 with normal charge size of 3 pounds and 5 pounds per shot respectively. Five-hole patterns were maintained throughout the portions of the area shot by United Party #40 with a normal charge size of 10 pounds per shot. The energy was recorded on split **spreads** as diagrammed in Figures #1, #2 and #3.

The instruments used by Western Party #60 were FA-32 type manufactured by Western Geophysical Company, while UGC 1-38 type, manufactured by United Geophysical Company, were used by United Party #40. The data was recorded on Techno type magnetic tapes.

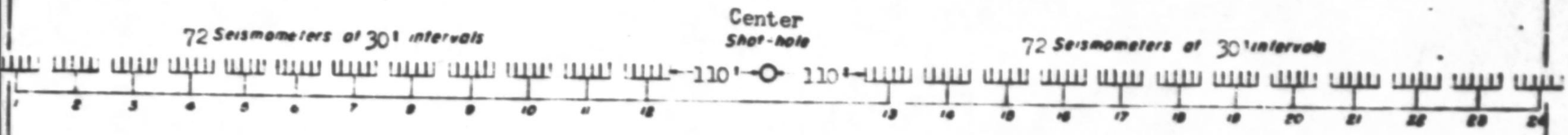
The reflection method was used to obtain the subsurface data throughout the area.

The data that appears on the subsurface maps are vertical two way times between an arbitrary reference plane and the particular horizon mapped.

Respectfully submitted

PAN AMERICAN PETROLEUM CORPORATION.

By: M.A.Knock, District Geophysicist.



Three hole pattern - Holes drilled in line - 75 feet apart.

Distance from last pattern hole to first geophone in group - 35 feet.

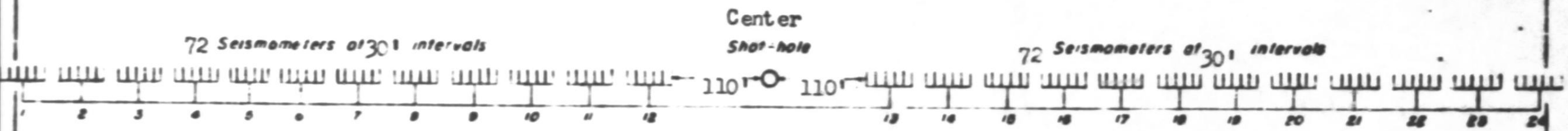
Party: Western #60

Area: Bovie Celibeta

Permits: 1136,1137,2301, 2713

Spread Length: 2670 feet

Figure #1.



Five hole patterns - Holes drilled in line - 75 feet apart

Distance from last pattern hole to first geophone in group - 35 feet.

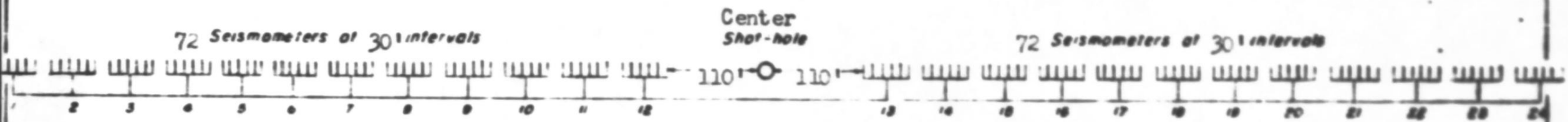
Party: Western #60

Area : Bovie Celebeta

Permits:1136,1137,2301,2713

Spread Length: 2670 feet.

Figure #2



Five hole pattern - Holes drilled in line - 75 feet apart

Distance from last pattern hole to first geophone in group - 35 feet

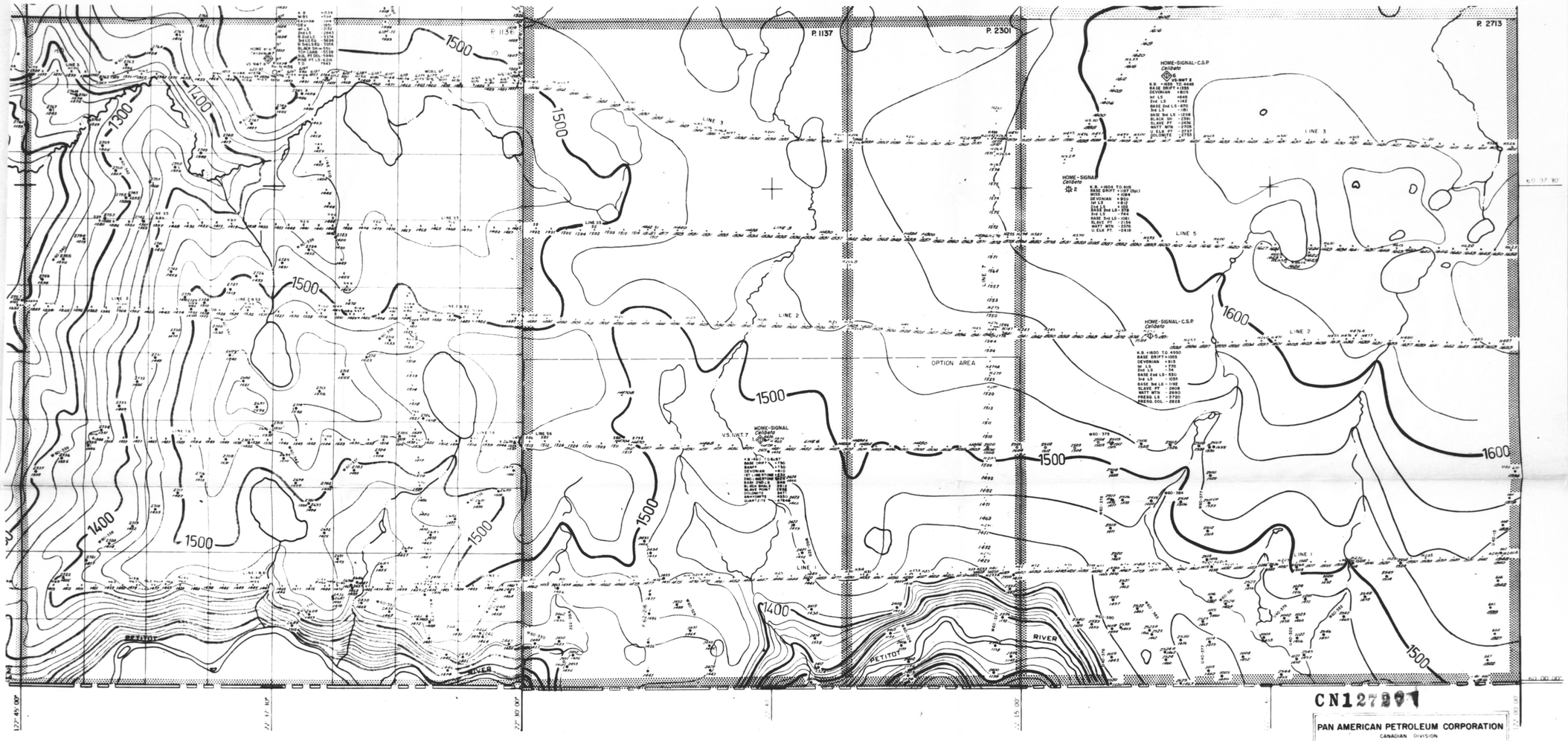
Party: United #40

Area : Bovie Celebeta

Permit: 2713

Spread Length: 2640 feet.

Figure #3

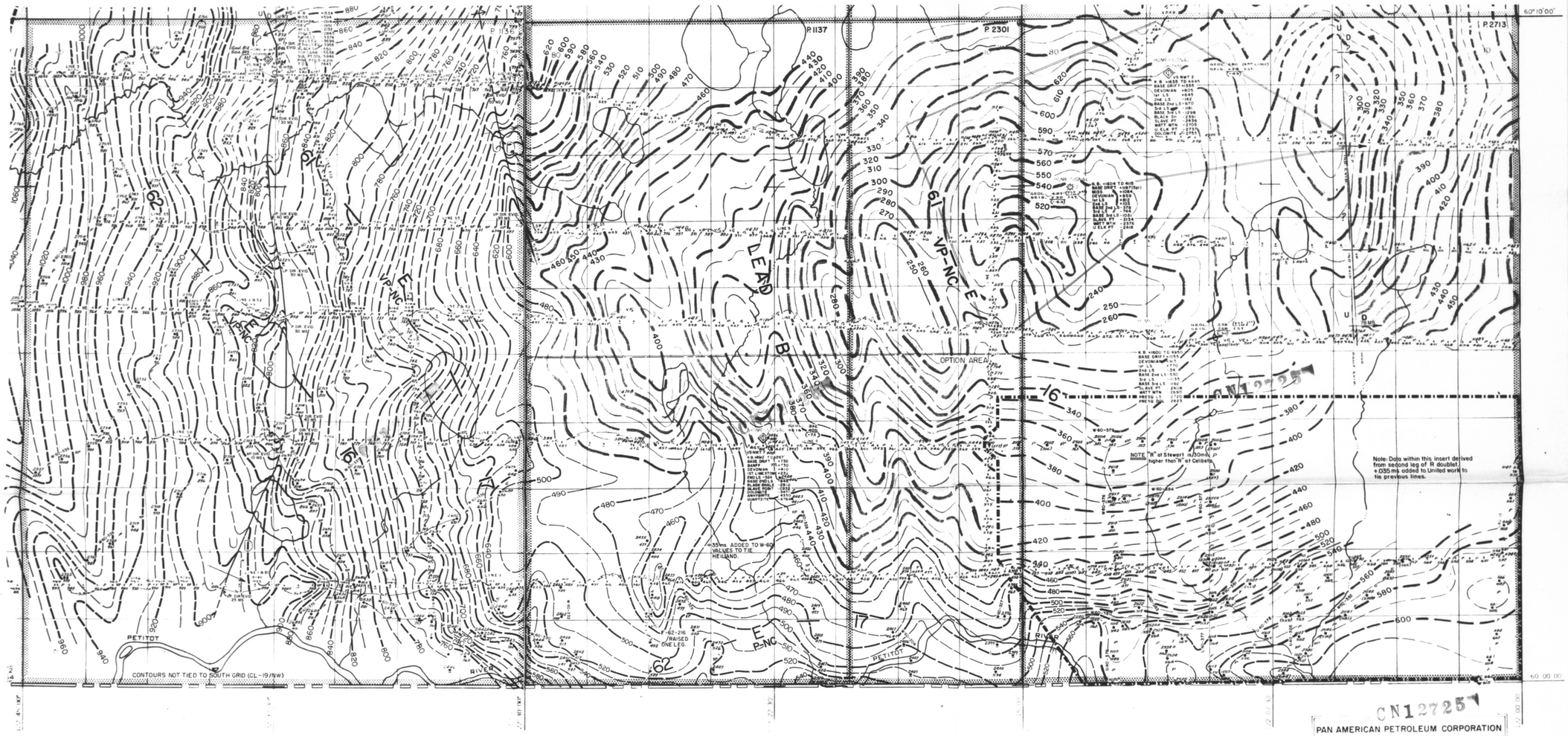


CN12727

CN12727

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Celibeta	GRID CM19/SE
PROVINCE Northwest Territories	SCALE 1" = 4000'
HORIZON Surface	
TYPE OF MAP Elevation	CONTOUR INT 25 ft.
SHOT BY	FOR
INCL DATES	
INTERP BY J. Werner	CO AFFIL Pan Am.
REPORT No. E-62-48	DATE Sept. 14, 1962
REMARKS	



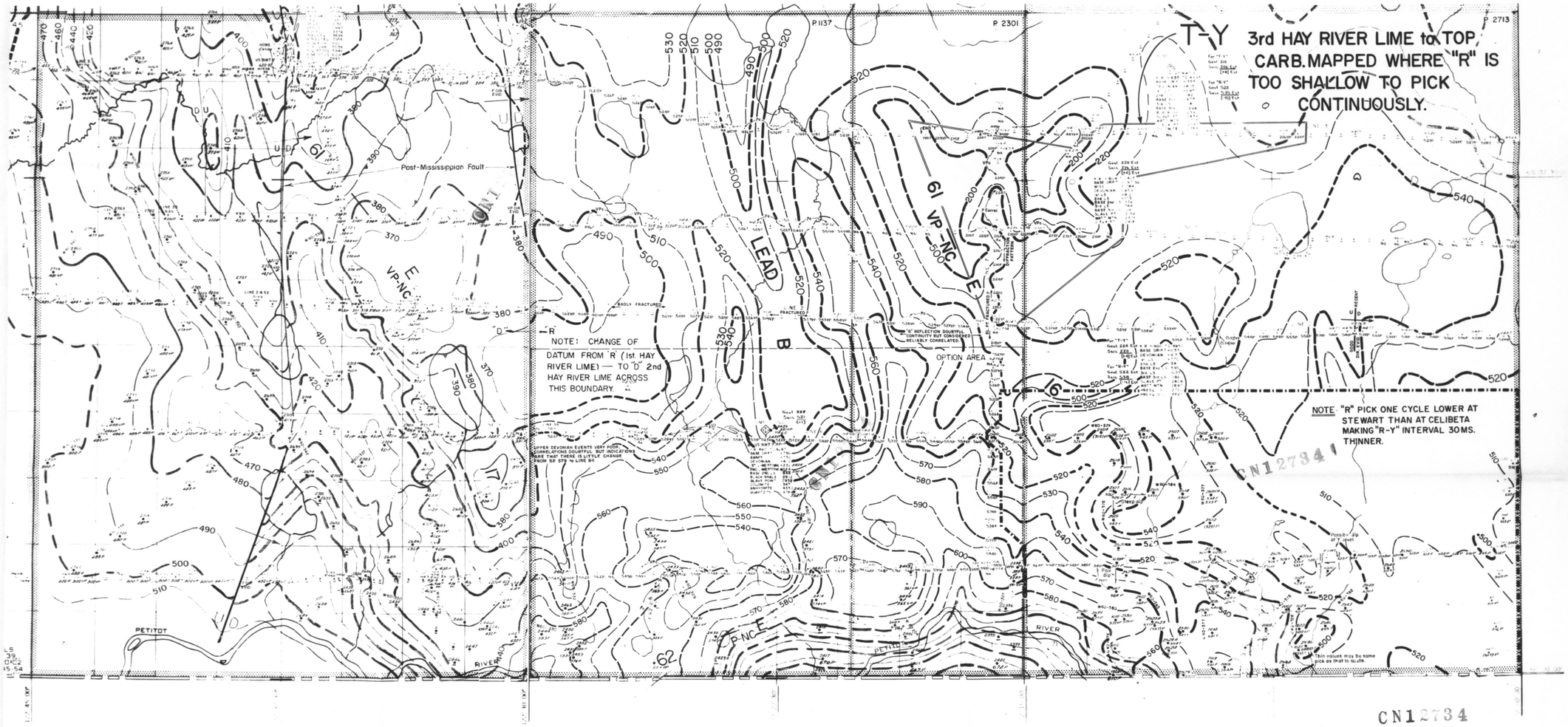
CN12725

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA Celibeta	GRID CM-19/SE
PROVINCE Northwest Territories	SCALE 1:14000
HORIZON Hay River Lime	
TYPE OF MAP Structure	CONTOUR INT 10 ms
SHOT BY	FOR
INCL. DATES	
INTERP BY J. Werner	CO. AFFIL Pan Am
REPORT No. E-62-48	DATE Sept. 14, 1962.
REMARKS	



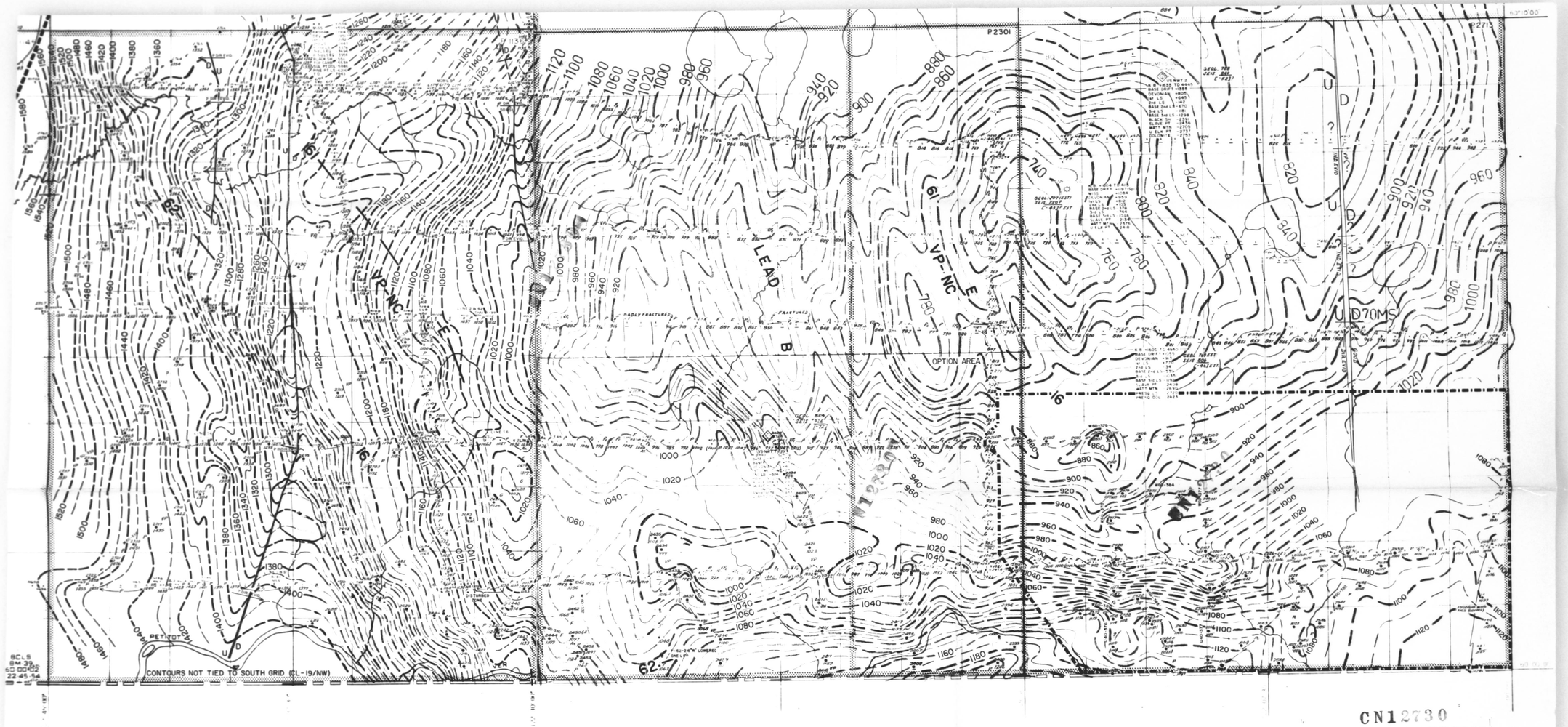
CN12734

PAN AMERICAN PETROLEUM CORPORATION

Hay River Lime to Top Carbonate
Isochron 10 ms

J. Werner
E-62-48

Pan Am
Sept. 14, 1962.



CN12730

PAN AMERICAN PETROLEUM CORPORATION

EDMONTON DISTRICT

Top Carbonate

Structure

J. Werner

E-62-48

Pan Am

Sept 14, 1962.