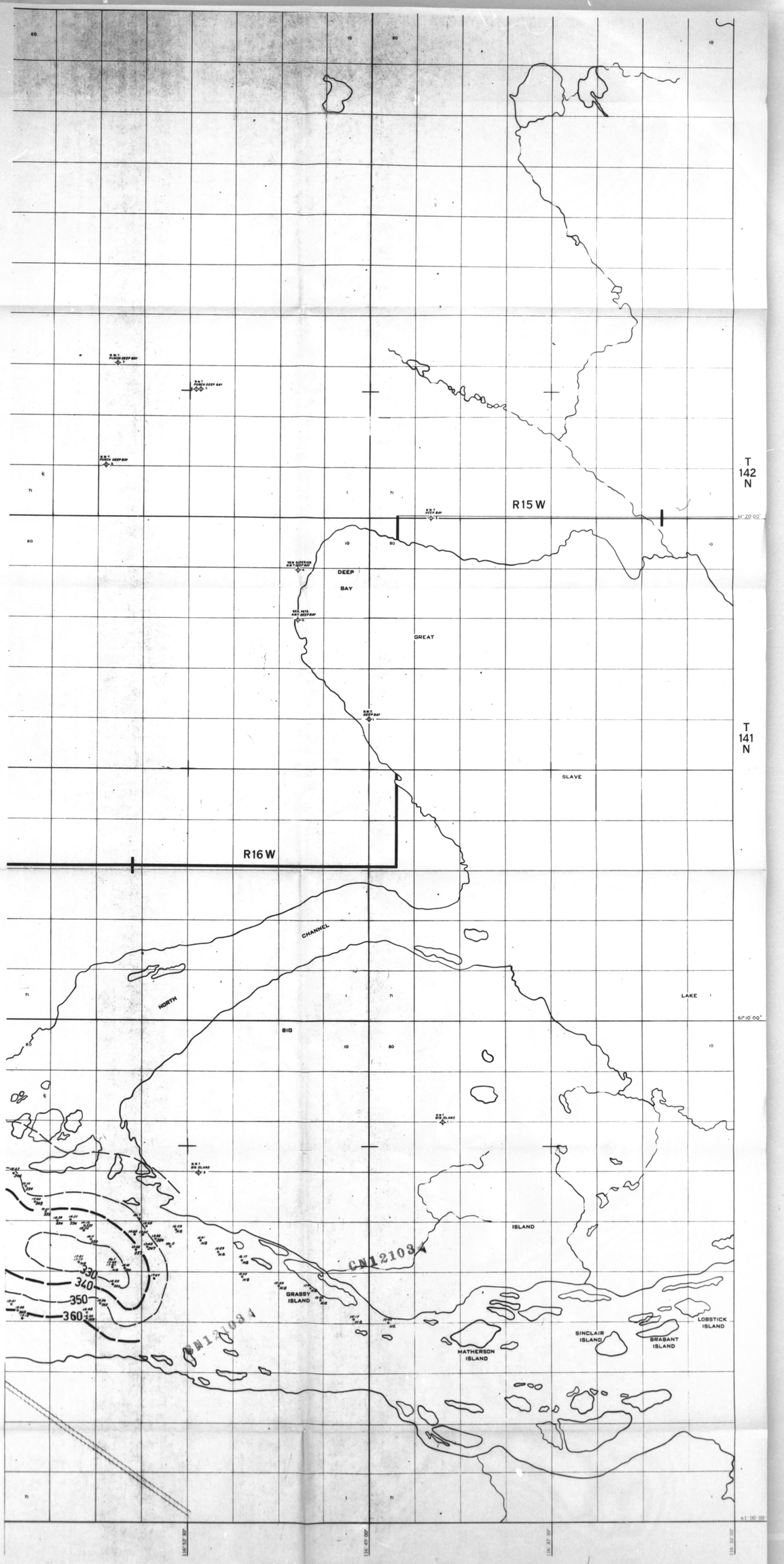


CN12108

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA	Deep Bay	GRID	CN - 25/ SW
PROVINCE	Northwest Territories	SCALE	1" = 4000'
HORIZON	Approx. Pine Point		
TYPE OF MAP	Structure	CONTOUR INT.	10 ms
SHOT BY	Western P-63	FOR	Pan Am - Shell
INCL. DATES	Feb. 12 - March 18, 1962		
INTERP BY	E. Horne & R. Lundberg	CO. AFFIL.	Pan Am
REPORT No.	E - 62 - 30	DATE	5-18-62
REMARKS			

CLASS I MATERIAL

GEOLOGICAL INT.	W. E. Moore	DATE	5-18-62
FROM GEOPH. REPORT No. (s)		DATED	
REMARKS			

PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT

CN12100

AREA West Escarpment Lake GRID CM-25/NW
PROJECT Northwest Territories SCALE 1" = 4000'
HORIZON Aspen Pine Point CONTOUR INT 10 ms
TYPE OF WAVE Structure
SHOT BY Western F-63 FOR Pan Am-Sun
INCL DATES Feb. 12 - March 18, 1962
UNTIED BY E.Rowe & R.Lindsay CO-ORD. Pan Am
REPORT No. E-62-30 DATE 5-18-62
REMARKS

CLASS I MATERIAL

GEOLOGICAL INT. W.E. Moore DATE 5-18-62
FROM GEOPH. REPORT No (s) DATE
REMARKS

CN12100

CN12100

CN12100

REPORT OF GEOPHYSICAL SURVEYS

Conducted by

Western Geophysical Company of Canada Ltd.
and
Accurate Exploration Ltd.

for

PAN AMERICAN PETROLEUM CORPORATION

during the period

December 15, 1960 to June 15, 1962

on and immediately off

KAKISA LAKE PERMIT NOS.

3142
3143
3144
3145
3146
3147
3148
3149
3180
3181
3182
3193
3194
3229
3238
3239



Prepared By

M. A. Knock
District Geophysicist

Submitted in accordance with Government Regulations under Section 29 (c) of the Territorial Lands Act

TABLE OF CONTENTS

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Title Page 1

Table of Contents 2

Text 3

Introduction 3

Seismic Technique 4

Seismic Spread Diagram (Figure #1) 6

Shot Hole Plat and Elevation Maps of Work Conducted.

Structure Contour Map for the Area.

(Maps are enclosed in the envelope at the back of this Report)

The stratometer crew operated from both a tent camp and houseboat. All recording equipment was contained in a powered boat, and locations were related to prominent landmarks by survey using a sextant.

No unusual operating problems were encountered during the operations in this area.

SEISMIC TECHNIQUE

Conventional Reflection Technique

Shot holes averaged 45 feet in depth. Depth of shot was determined by near-surface lithology with the best results being obtained when the shot was detonated in either clay or shale.

Normal charge size averaged 3 pounds per shot. Three and five hole patterns with holes drilled 75 feet apart were employed throughout the area. Spread length was 2640 feet.

The energy was recorded on split spreads as diagrammed in Figure #1. The instruments used were FBX seismometers, Techno type magnetic tape recorder and FA32 amplifiers manufactured by Western Geophysical Company. One Mayhew 1000 and three Western 1200 drills were employed for shot hole drilling.

Stratometer Technique

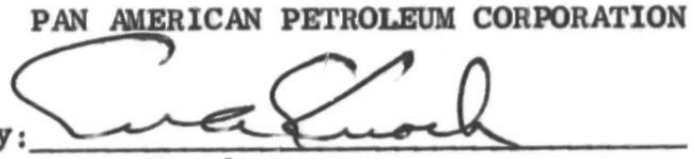
The stratometer equipment was contained in a powered boat from which extended a single floating cable having six hydrophones spaced 25 feet apart for recording into a conventional seismic amplifier and Alden recorder. Initiation was obtained from two exploder "fish" containing explosion chambers in which a mixture of oxygen and propane was exploded at two second intervals.

The reflection method was used to obtain the subsurface data shown on the enclosed map. A refraction method was used to correct for near-surface weathering and drift irregularities in the conventional shooting. The stratometer work was corrected for varying water depths as recorded on a continuous recording fathometer.

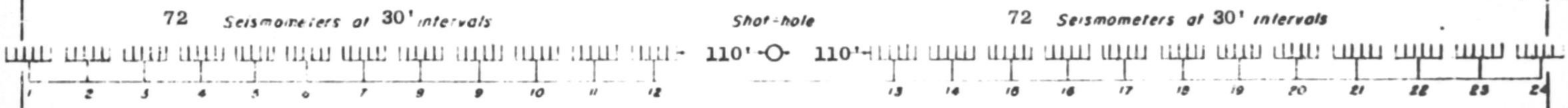
The data that appears on the subsurface map is vertical two-way times between an arbitrary reference plane and the particular horizon mapped. The reflection seismograph is somewhat hampered in this area by the scarcity of reflected events. Generally only one band of energy appears on the records and for this reason we have been unable to make more than the one subsurface map which is accompanying this report.

Respectfully Submitted:

PAN AMERICAN PETROLEUM CORPORATION

By: 

M. A. Knock,
District Geophysicist.



Three hole patterns with holes drilled 75' apart.

Party: Western F-63

Area: Kakisa Lake

Permit Nos. 3142-3149, 3180-3182, 3193, 3194, 3229, 3238, 3239

Spread Length: 2640'

Figure #1.

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA	Grassy Island
PROVINCE	Northwest Territories
HORIZON	Approx. Pine Point
TYPE OF MAP	Structure
SHOT BY	Western Z-G3
INCL. DATES	Feb. (2 - March 18, 1962
INT'P BY	Evans & R Lindberg
RE MARKS	E-62-30

GEOLOGICAL INT. W.E. Moore
FIELD OPN NE PORT No (s)

DATE 5-18-62
DATE 5-18-62

CN 2152

SPECULATIVE CONTOURS

R6W
R5W
T142N
T141N

60°50'00"

60°40'00"

60°30'00"

KAKIBA RIVER

R6W

R5W

R4W

T 133 N

T 132 N

118°52'30"

118°45'00"

118°37'30"

118°30'00"

CN12142

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Robb Lake	SHEET CM-25/NW
PROVINCE Northwest Territories	SCALE 1" = 4000'
HORIZON Approx. Pine Point	
TYPE OF MAP Structure	CONTOUR INT. 10 ms
SHOT BY Western F-63	FOR Pan Am - Shell
INCL. DATES Feb. 12 - March 18, 1962	
INTERP. BY E.Horne & R.Lundberg	TO APPR. Pan Am
REPORT No. E-62-30	DATE 5-18-62
REMARKS	
GEOLOGICAL INT. W.E. Moore	DATE 5-18-62
FROM GEOPH. REPORT No.	DATE
REMARKS	

CN12154

PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT

AREA Fort Providence
PROJECT Network Surveys
SCALE 1"=4000'
CONTOUR INT 10 MS
Type of Map Structure
Approx. Pole Dept
Depth dn Western F-63 Fish Am - Sand
Incl. Data Feb 12 - March 18, 1962
Drawn by Evans & Lindsay CO ATTA. Fish Am
Report No E-62-30 DATE 5-18-62
REMARKS
Geologist in Charge W.E. Moore DATE 5-18-62
FROM SEISMIC SURVEY No(s)
REVISED

CN12154

CN12155

CN12156

CN12157

CN12158

CN12159

CN12160

CN12161

CN12162

CN12163

CN12164

CN12165

CN12166

CN12167

CN12168

CN12169

CN12170

CN12171

CN12172

CN12173

CN12174

CN12175

CN12176

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CN12186

CN12187

CN12188

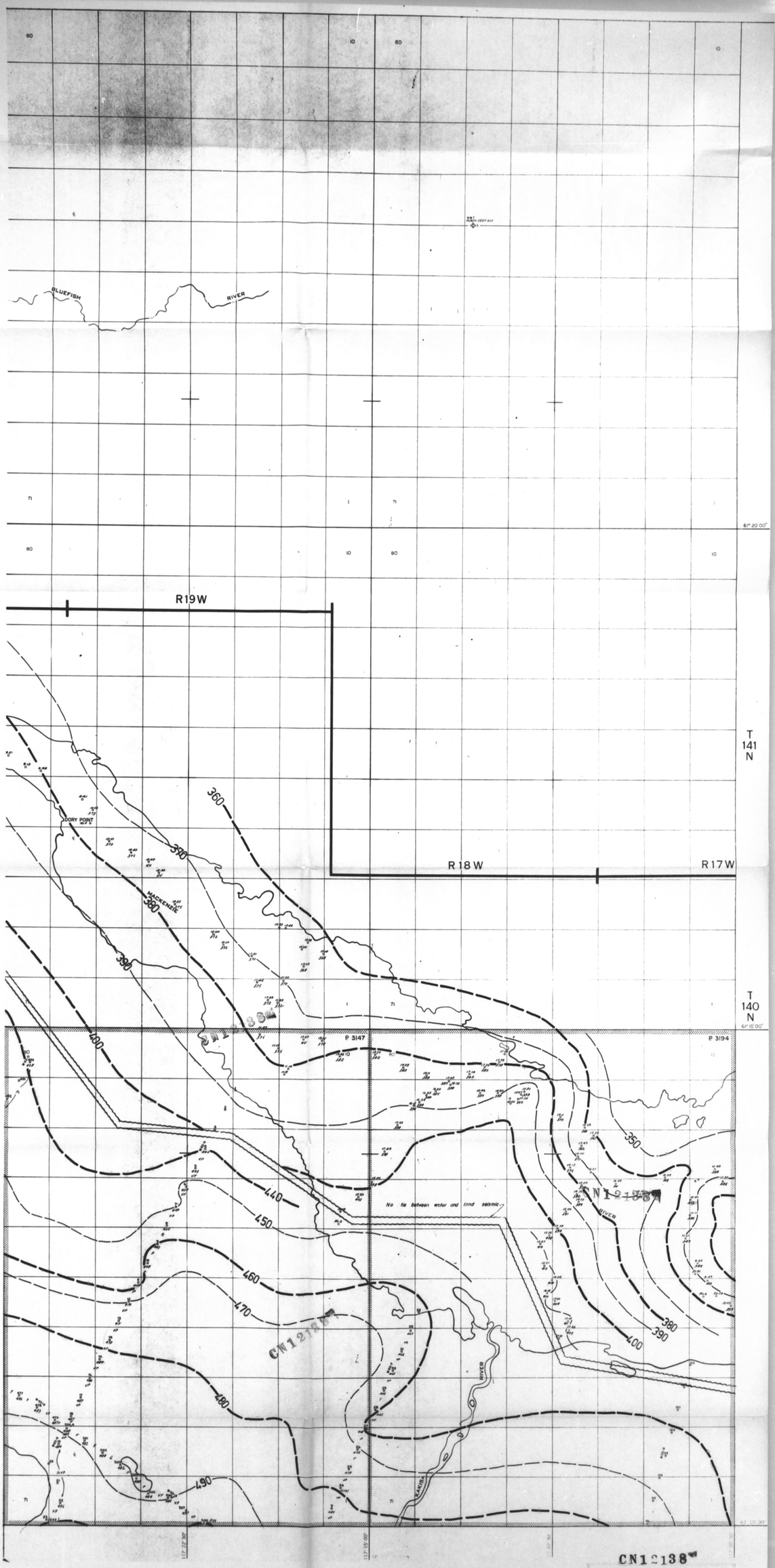
CN12189

CN12190

CN12191

CN12192

CN12193


BLUEFISH
RIVER
R19W
R18W
R17W
T
141
N
T
140
N
DORY POINT
MACKENZIE
360
380
390
400
420
440
450
460
470
480
490
350
P 3147
P 3194
No tie between water and land seismic
CN12187
CN12188
CN12189
CN12190
CN12191
CN12192
CN12193
CN12194
CN12195
CN12196
CN12197
CN12198
CN12199
CN12200
CN12201
CN12202
CN12203
CN12204
CN12205
CN12206
CN12207
CN12208
CN12209
CN12210
CN12211
CN12212
CN12213
CN12214
CN12215
CN12216
CN12217
CN12218
CN12219
CN12220
CN12221
CN12222
CN12223
CN12224
CN12225
CN12226

CLASS I MATERIAL

PAN AMERICAN PETROLEUM CORPORATION

CN12136

CN12186

CN12186A

CN12186B

CN12186C

SPECULATIVE CONTOURS

T 138 N
T 139 N
T 140 N
T 141 N
T 142 N
T 143 N

R 1 W
R 2 W
R 3 W

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA	Kakisa River
GRID	CM-24/NE
PROVINCE	Northwest Territories
SCALE	1" = 4000'
HORIZON	Approx. Prop. Point
TYPE OF MAP	Structure
CONTOUR INT	10 ms
SHOT BY	Weathers F-63 FOR Pan Am - Sinc
INCL. DATES	Feb 12 - March 19, 1962
INTERP BY	E Payne B R Lindberg CO AFFIL. Pan Am
REPORT No.	E-62-30 DATE 5-8-62
REMARKS	
GEOLOGICAL INT	W E Moore DATE 5-18-62
FROM GEOPH REPORT No (s)	DATED
REMARKS	

CN12140

LAKE

TATHLINA

KAKISA

R18W

T 132 N

T 133 N

60°40'00"

60°30'00"

60°30'00"

117°00'00"

117°06'00"

117°12'00"

117°18'00"

CN12140

CN12140

CN12140

CN12140

550 540 530 520 510 500 490 480 470 560 570 580 590 600

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA North Amaranth Field
LEASE OR PROPERTY Gas Unit #1
FORMATION Keg River - Pine Point
TYPE OF MAP Structure
CONTOUR INT. 10 ms
INCL. DATES Feb 12-March 18, 1962
INITIAL P.T. E Penn & R.H. Lundberg Co Ltd. Pan Am
DATE 1-10-62
REMARKS E 60-30

GEOLOGICAL INT. W.E. Moore DATE 5-18-62
DRAWN BY COMPILED BY/CHART NO. 131 DATE
REVISED BY DATE

CN12144

118° 22' 30"
118° 15' 00"
118° 07' 30"
118° 00' 00"
60° 40' 00"
60° 30' 00"

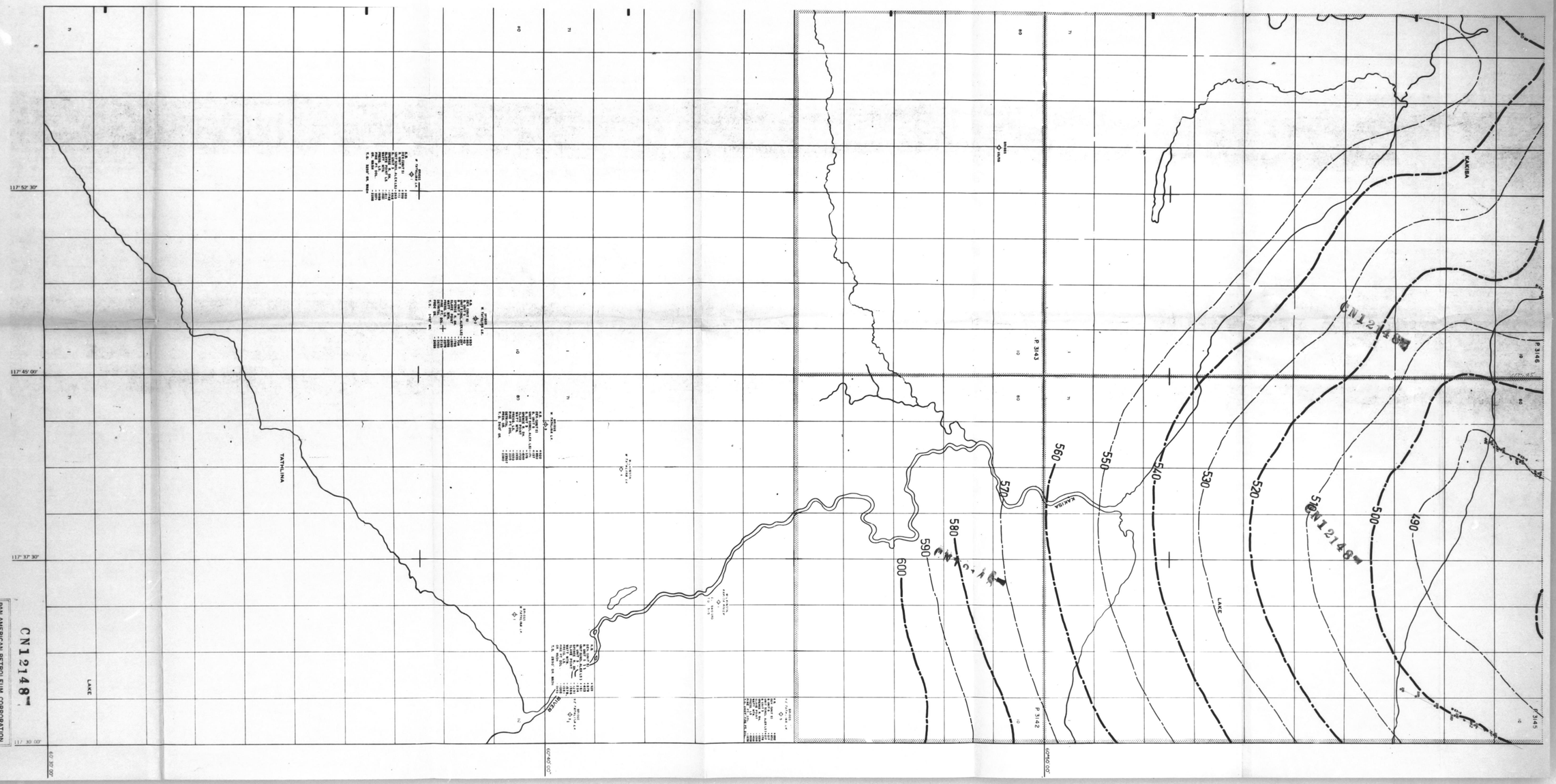
R3W
R2W
R1W

T 138 N
T 137 N
T 136 N
T 135 N
T 134 N
T 133 N
T 132 N

P.2677
P.3181
P.3182

510
520
530
540
550
560
570

CN12144
CN12144



CN12148

PAN AMERICAN PETROLEUM CORPORATION

EDMONTON DISTRICT

AREA Tathlina Lake — GRID OR-PAN/W

PROVINCE Northwest Territories — SCALE 1" = 4000'

TOPOGRAPHY Aspen Pine Poplar — CONTOUR INTERVAL 10 ms.

SHOT BY Western F-63 FOR Pan Am Pet

INCL. DATES Feb 12 - March 16, 1962

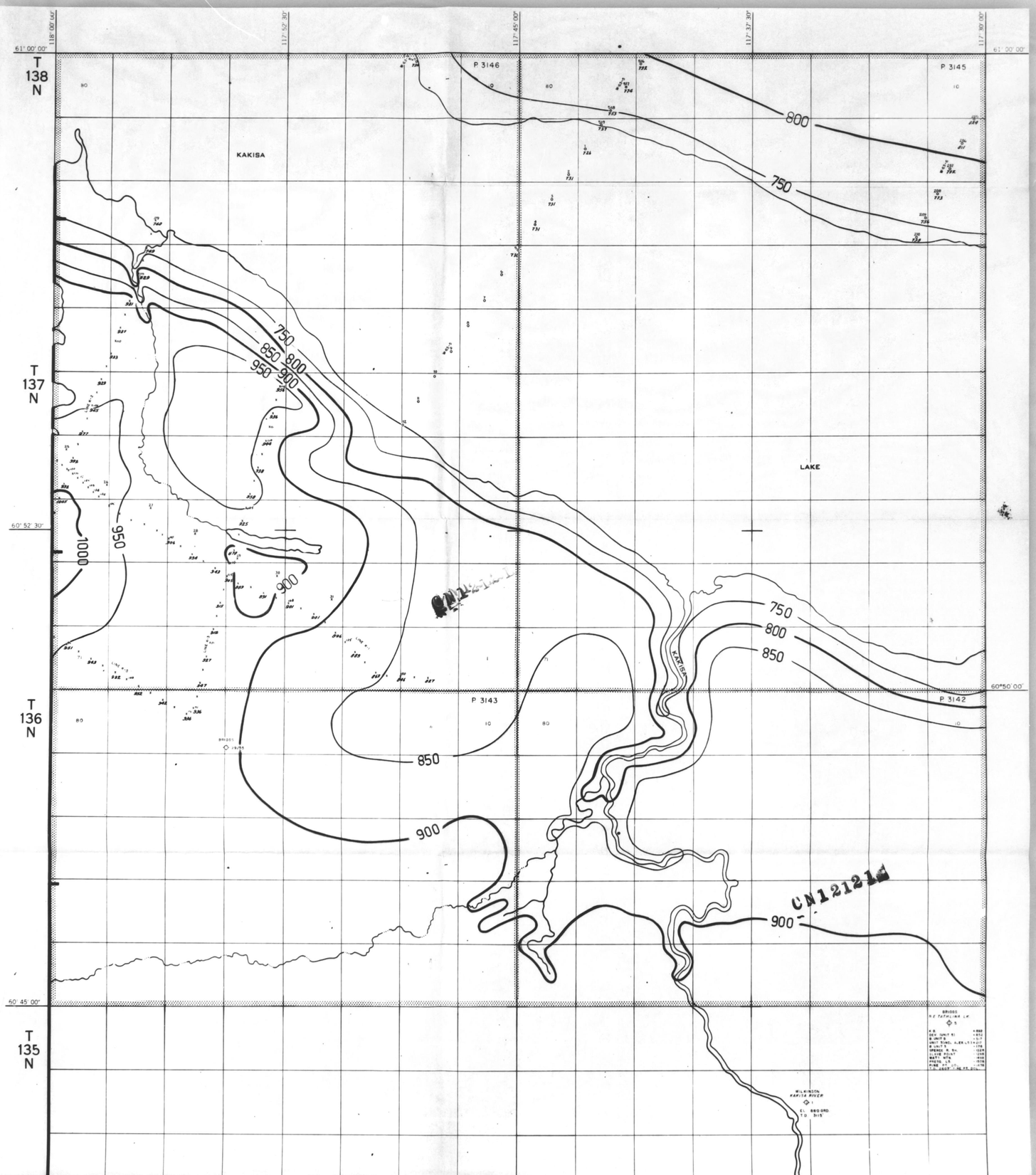
REPORT No. E-62-30 — DATE 5-18-62

REMARKS

RECORDED BY W.F. Moore — DATE 5-18-62

FROM GEOPH. REPORT No. — DATE

REVISIONS


118° 00' 00"
117° 52' 30"
117° 45' 00"
117° 37' 30"
117° 30' 00"
61° 00' 00"
60° 52' 30"
60° 45' 00"
60° 50' 00"
T 138 N
T 137 N
T 136 N
T 135 N
P 3146
P 3145
P 3143
P 3142
KAKISA
LAKE
KATISH
800
750
750
850
950
900
800
1000
950
900
850
900
750
800
850
900
CN121214

1 of 2

T 135 N

T 134 N

T 133 N

T 132 N

60° 37' 30"

60° 30' 00"

60° 40' 00"

117° 52' 30"

117° 45' 00"

117° 37' 30"

117° 30' 00"

WILKINSON KAKISA RIVER
EL. 860 GRD
T.D. 3615'

WILKINSON W. TATHLINA L.K.

BRIGGS W. TATHLINA L.K.

BRIGGS NE TATHLINA L.K.

BRIGGS W. TATHLINA L.K.

BRIGGS W. TATHLINA L.K.

BRIGGS W. TATHLINA L.K.

RIVER

TATHLINA

LAKE

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO. AFFIL.	APPROX. LOC. ON MAP

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

This map checked by _____ Pan Am Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
- ○ Conventional Survey
- ● C.V.S.
- ⊗ Synthetic Record
- X Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
CALGARY DISTRICT

CN 12101

AREA: Tathlina Lake	GRID: CM-24/NW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Structure	CONTOUR INT. 50 FT.
SHOT BY: Western F-63	FOR: Pan Am-Shell
INCL. DATES: Feb. 12 - March 18, 1962	
INTERP BY: E. Horne & R. Lundberg	CO. AFFIL: Pan Am
REPORT No. E-62-30	DATE: 5-18-62
REMARKS: CLASS I MATERIAL	
GEOLOGICAL INT: W. E. Moore	DATE 5-18-62
FROM GEOPH REPORT No.(s)	DATED
REMARKS:	

242

R6W

R5W

R4W

MACKENZIE RIVER

CN12112

T 142 N

T 141 N

61°20'00

PAN AMERICAN PETROLEUM CORPORATION

CN 2112 EDMONTON DISTRICT

AREA: Geogr. Mtmd GRID: CN-23/28

PROVINCE: Northwest Territories SCALE: 1" = 4000'

HORIZON: Surface CONTOUR INT: 50 Ft

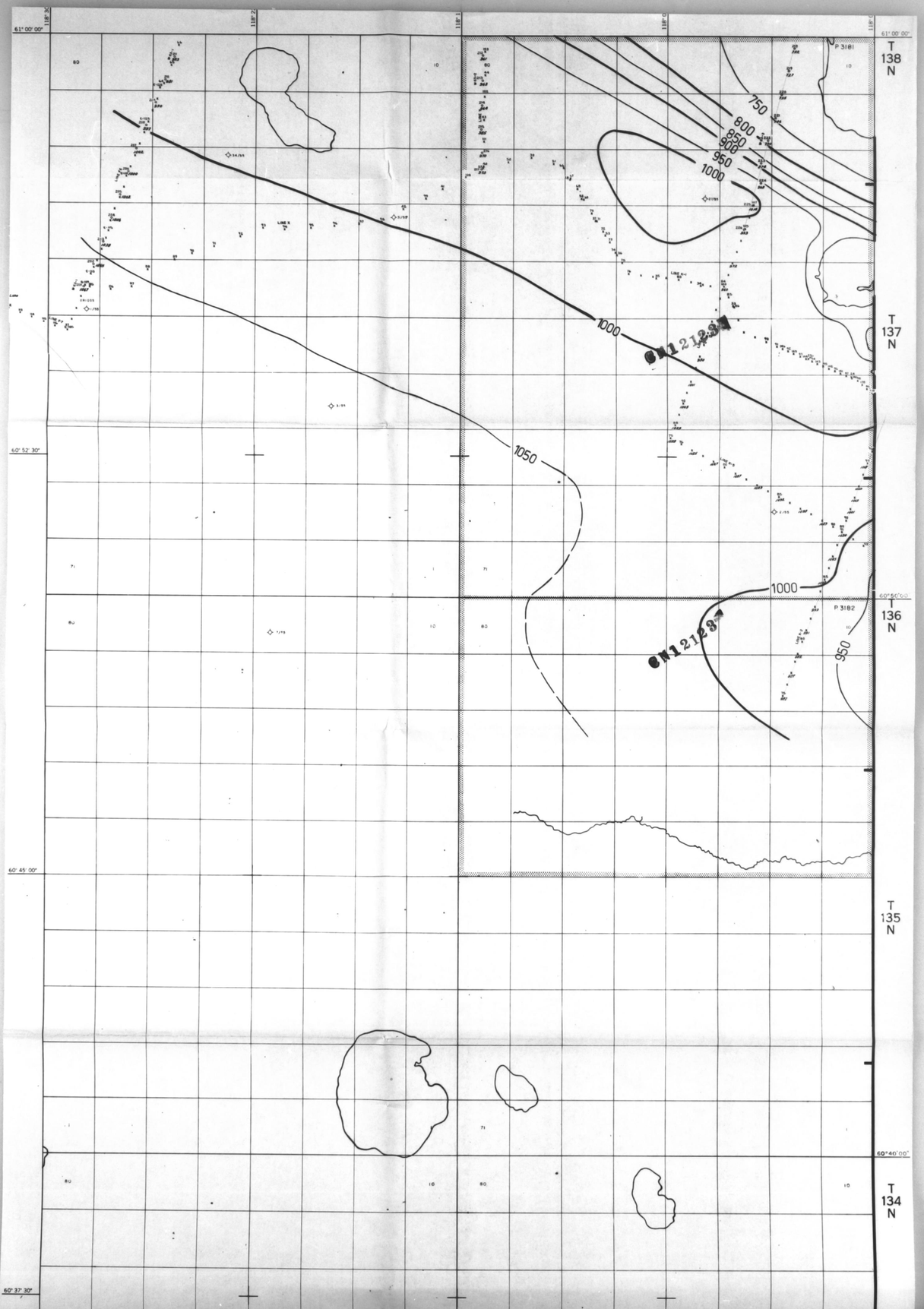
TOPOGRAPHY: Aerial Photos

SHOT BY: Western P-43 FOR: Pan Am - Shell

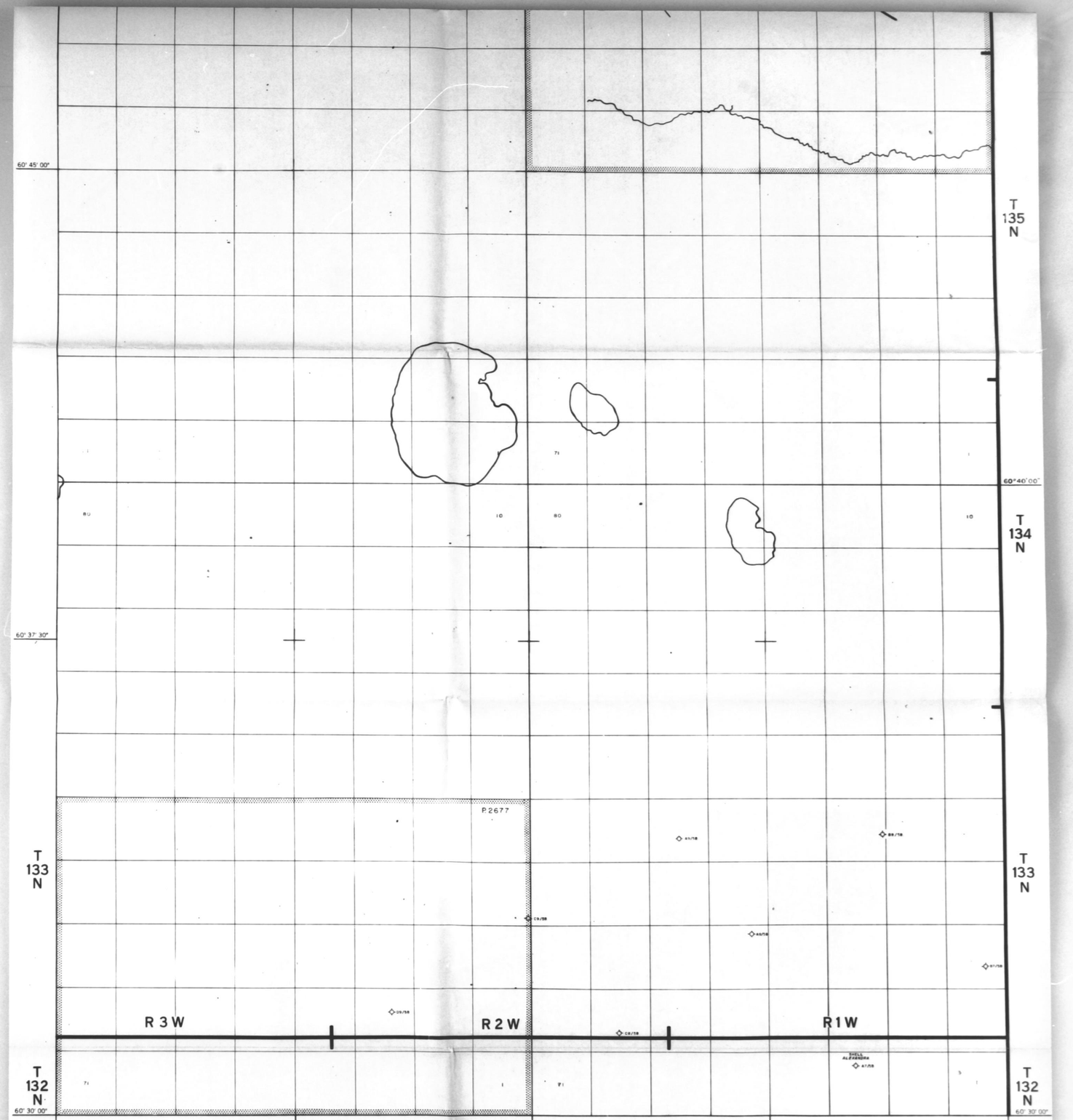
INCL. DATES: Feb. 12 - March 18, 1962

DRAFTED BY: Edmonton DRAFTING DEPT.

REPORT BY: Earl Lundberg DATE: 5-9-62


61° 00' 00"
118° 3C
118° 2
118° 1
118° 0
P 3181
P 3182
T 138 N
T 137 N
T 136 N
T 135 N
T 134 N
750
800
850
900
950
1000
1050
1000
950
1000
60° 52' 30"
60° 45' 00"
60° 37' 30"
60° 50' 00"
60° 40' 00"

1 of 2



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Quantitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP

This map replaces/supplements Registration No. _____ dated _____ which is to be destroyed/kept (Refer Instruction dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared this report

This map checked by _____ Pan Am Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
- Conventional Survey
- C.V.S.
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION
DISTRICT

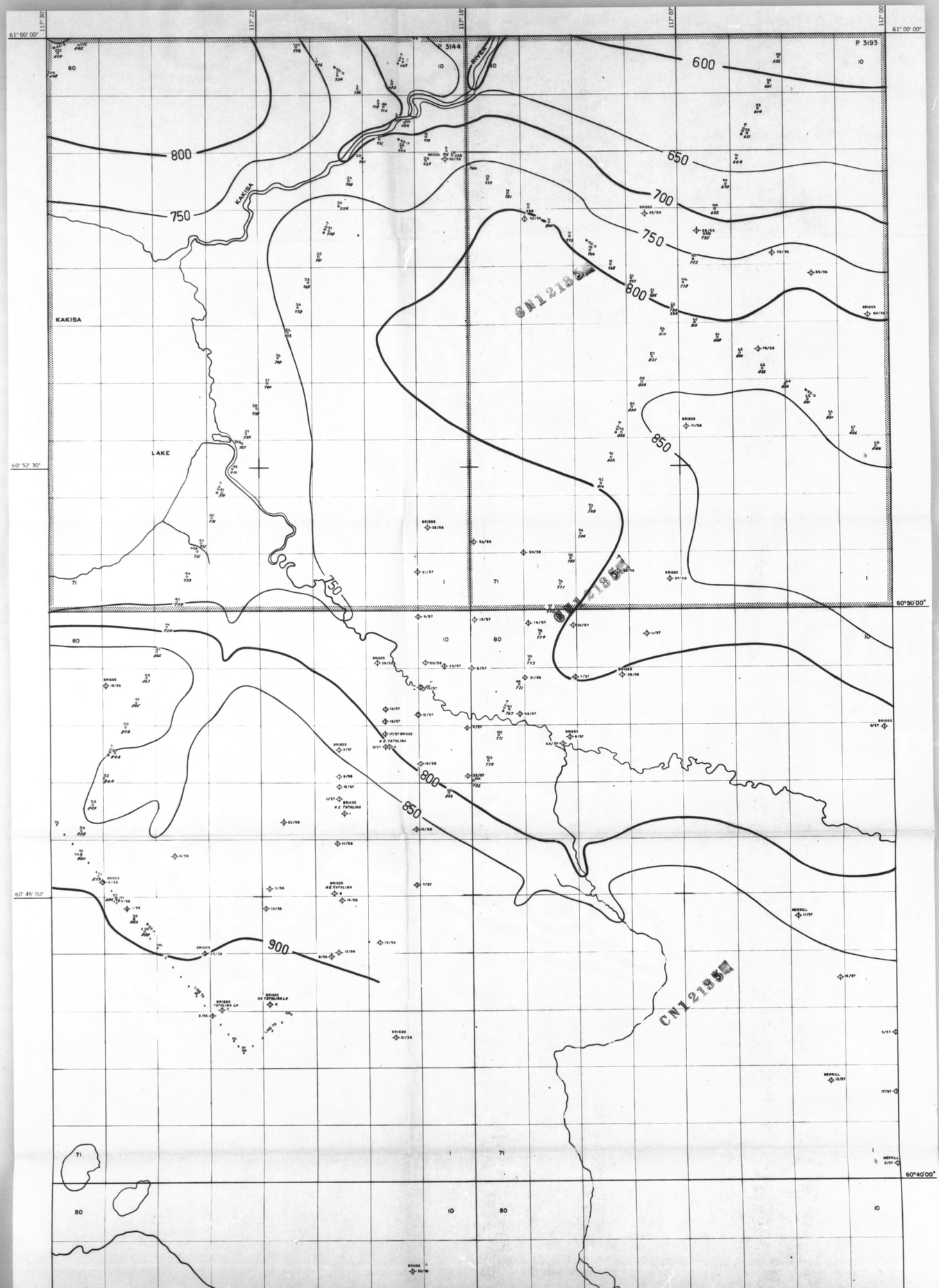
CN1223

AREA: North Alexandra Falls GRID: CM-23/NE
PROVINCE: Northwest Territories SCALE: 1" = 4000'
HORIZON: Surface
TYPE OF MAP: Structure CONTOUR INT. 50 Ft.
SHOT BY: Western F-63 FOR: Pan Am - Shell
INCL. DATES: Feb. 12 - March 18, 1962
INTERP BY: E. Horne & R. Lundberg CO. AFFIL: Pan Am
REPORT No. E-62-30 DATE: 5-18-62
REMARKS:

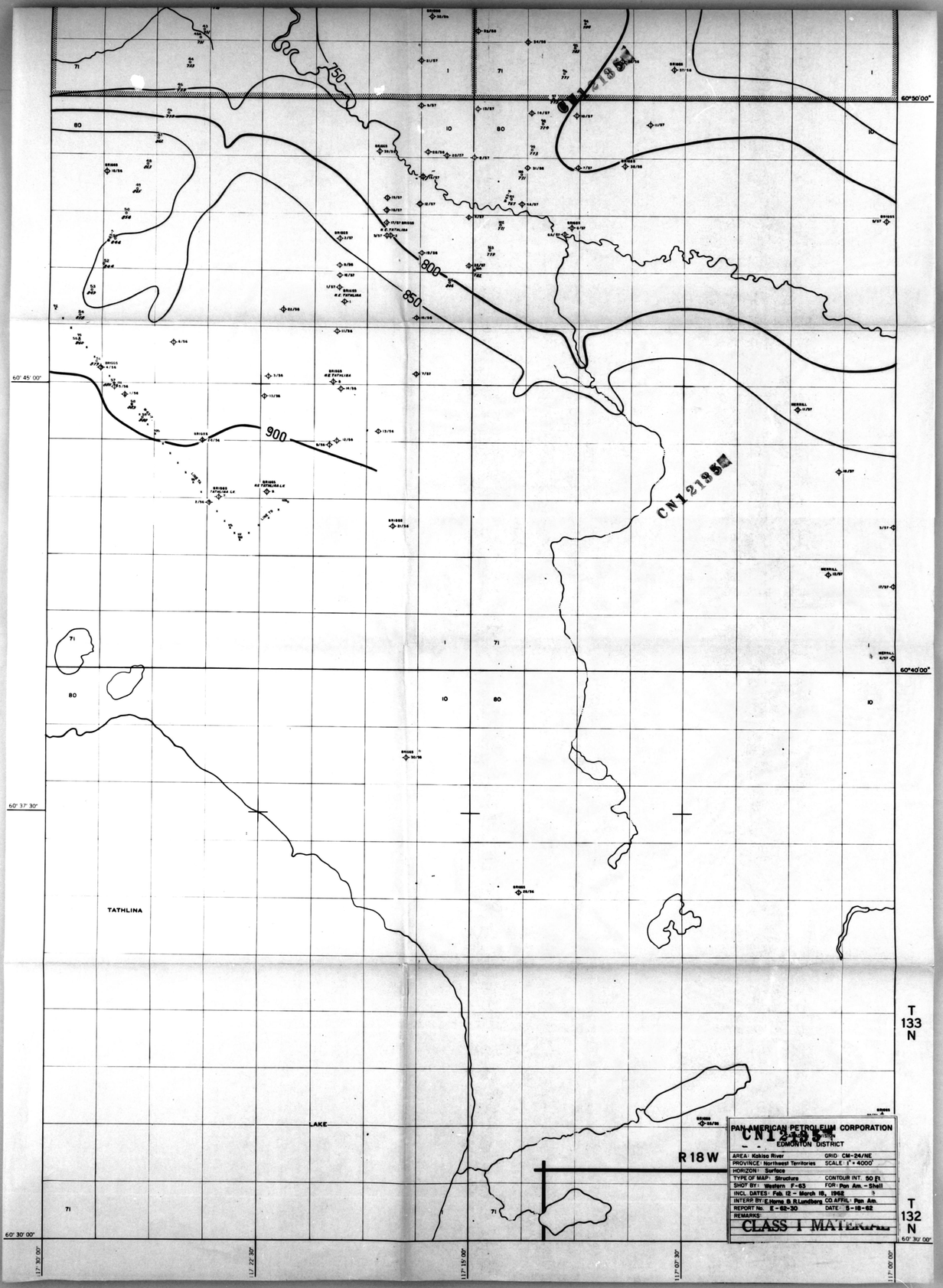
CLASS I MATERIAL

GEOLOGICAL INT: W. E. Moore DATE: 5-18-62
FROM GEOPH REPORT No.(s) DATED:
REMARKS:

242


61° 00' 00"
117° 30'
117° 22'
117° 15'
117° 07'
117° 00'
P 3144
P 3193
RIVER
KAKISA
KAKISA
LAKE
600
650
700
750
800
850
900
60° 52' 30"
60° 45' 00"
60° 50' 00"
60° 40' 00"
CN12185
CN12185
CN12185

1 of 2


750
800
850
900
CN12185
CN12185
60° 50' 00"
60° 45' 00"
60° 40' 00"
60° 37' 30"
60° 30' 00"
TATHLINA
LAKE
R 18 W
T 133 N
T 132 N
117° 30' 00"
117° 22' 30"
117° 15' 00"
117° 07' 30"
117° 00' 00"
PAN AMERICAN PETROLEUM CORPORATION
CN12185
EDMONTON DISTRICT
AREA: Kakisa River GRID: CM-24/NE
PROVINCE: Northwest Territories SCALE: 1" = 4000'
HORIZON: Surface
TYPE OF MAP: Structure CONTOUR INT. 50 Ft.
SHOT BY: Western F-63 FOR: Pan Am. - Shell
INCL. DATES: Feb. 12 - March 19, 1962
INTERP BY: E.Horne & R.Lundberg CO.AFFIL: Pan Am.
REPORT No. E-62-30 DATE: 5-18-62
REMARKS:
CLASS I MATERIAL

242

GN19106

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: West Edmonton Lobe — GRID: CM-25/NW
PROVINCE: Northwest Territories — SCALE: 1" = 4000'
HORIZON: Surface
TYPE OF MAP: Structure — CONTOUR INT 50 Ft
SHOT BY: western F-63 — FOR: Pan Am - Shell
INCL DATES: Feb 12 - March 18, 1962
INTERP BY: E.Penny & H.Lindberg CO APPL. Pan Am
REPORT No. E-62-30 — DATE 5-16-62

GN19106

R17W R16W R15W

T 133 N

T 132 N

60° 40' 00"

60° 50' 00"

800 850 850 800 750 700 650 600

GN19106

P 3238

T 142 N

T 141 N

R15W

R16W

GREAT SLAVE LAKE

DEEP BAY

BIG CHANNEL

NORTH ISLAND

LOBSTICK ISLAND

BINCLAIR ISLAND

BRABANT ISLAND

MATHERSON ISLAND

DRASBY ISLAND

CN12111

PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT

AREA	Deep Bay
PROVINCE	Northwest Territories
HORIZON MAP	Surface
SHOT BY	Western P-S
REC. DATES	Feb 12 - March 31, 1962
REPORT No.	EDM-62-53
GRID	CN-26/FM
SCALE	1" = 4000'
CONTOUR INT.	50 ft.
FOR	Pan Am - Shell
DRAWN BY	[illegible]
CHECKED BY	[illegible]
DATE	5-30-62

CN12108

T 142 N

T 141 N

R20W

R21W

R22W

FORT PROVIDENCE

MACKENZIE RIVER

ISLAND

INDIAN VILLAGE

MILLS LAKE

MERIDIAN

550

600

650

700

750

800

850

P.3148

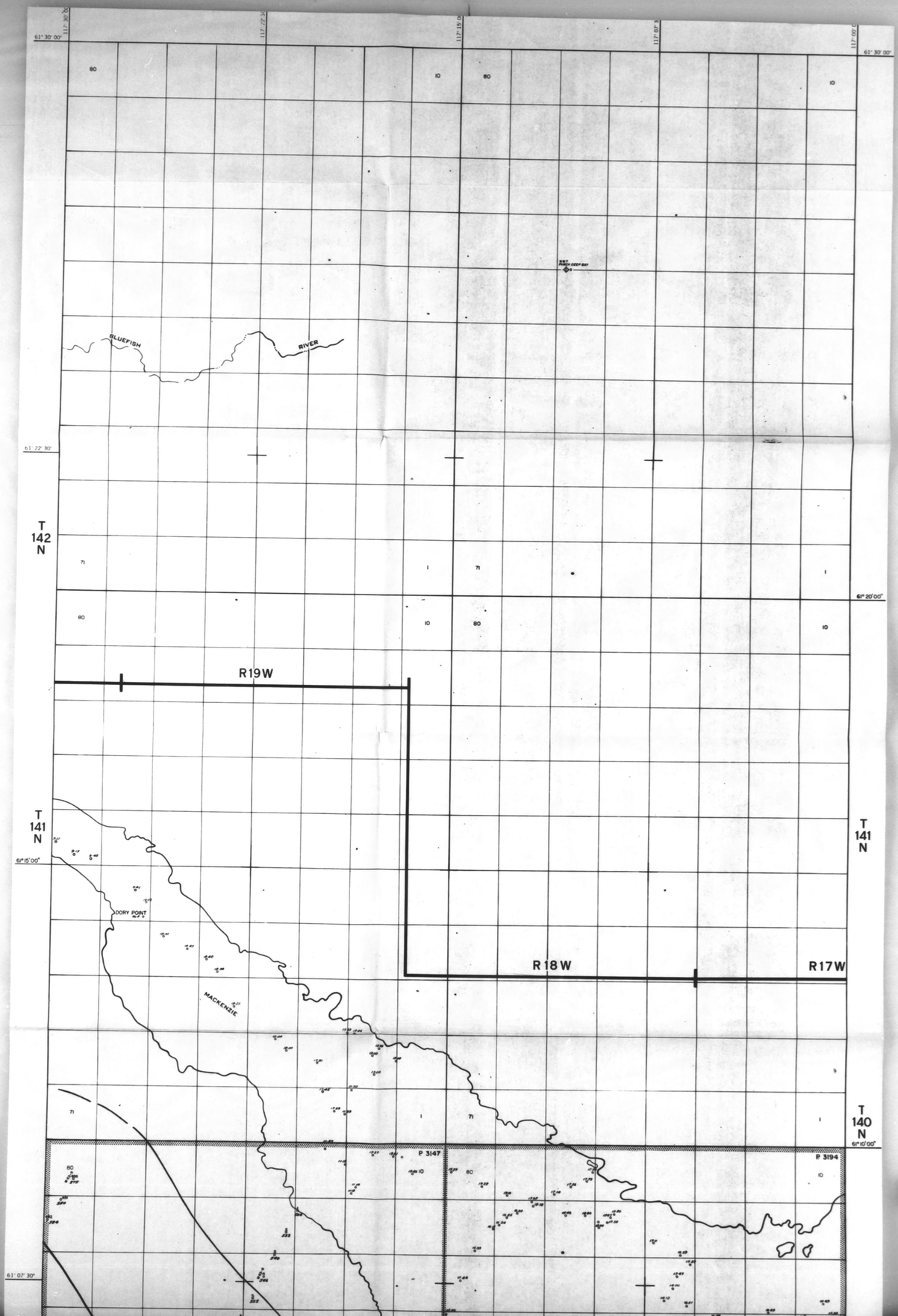
KAKISA LAKE

CN12108

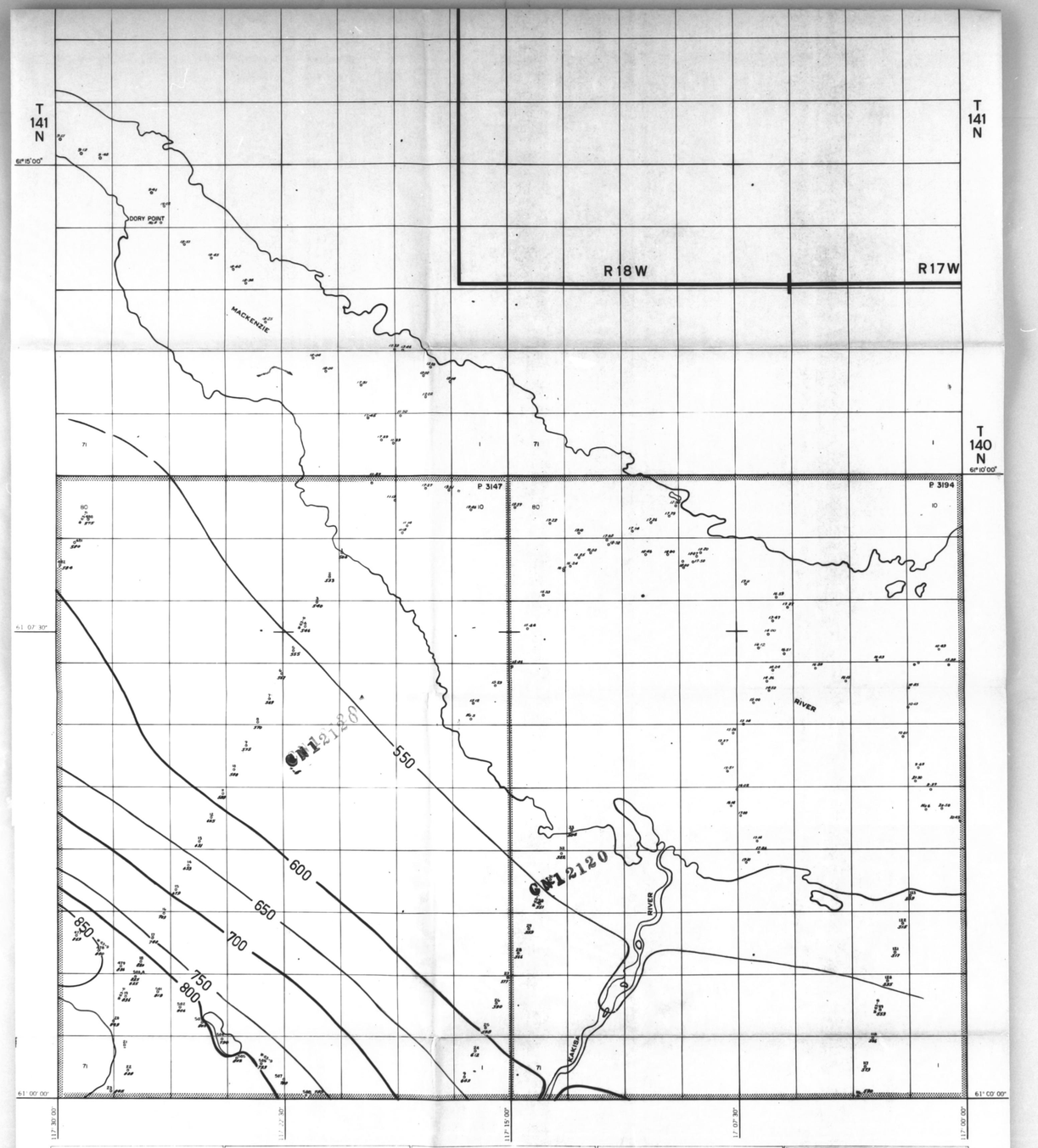
CN12108

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: Fort Providence GRID: CN-34/3W
PROVINCE: Northwest Territories SCALE: 1" = 4000'
TYPE OF MAP: Structure CONTOUR INT.: 50 Ft.
SPOT BY: Seismic 1-63 FOR: Pan Am - Shell
INTERPRETED BY: Seismic 1-63 & 2-63
INTERPRETED BY: Horiz. & Lundberg CO-APPR.: Pan Am
REPORT No. E-64-30 DATE: 5-18-64


61° 30' 00"
117° 30' 00"
117° 22' 30"
117° 15' 00"
117° 07' 30"
117° 00' 00"
61° 30' 00"
BLUEFISH
RIVER
61° 22' 30"
T
142
N
61° 20' 00"
R19W
T
141
N
61° 15' 00"
DORY POINT
MACKENZIE
R18W
R17W
T
141
N
T
140
N
61° 10' 00"
P 3147
P 3194
61° 07' 30"

1 of 2



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP

This map replaces/supersedes Registration No. _____ dated _____

Prior transmittal dated _____ to _____

Map distributed: ☐ Division ☐ General Office

Other maps prepared this report

This map checked by _____ Pan Am Geophysicist or Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON THIS MAP

LEGEND
- Conventional Survey
- C.N.S.
- Seismic Record
- Converted Velocity

PAN AMERICAN PETROLEUM CORPORATION

CN12120 (CN)

CALGARY DISTRICT

AREA: Dory Point	GRID: CN-24/SE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Structure	CONTOUR INT: 50 Ft.
SHOT BY: Western F-63	FOR: Pan Am - Shell
INCL. DATES: Feb. 12 - March 19, 1962	
INTERP. BY: E.Horne & R.Lundberg	CO. AFFIL: Pan Am
REPORT No. E-62-30	DATE: 5-18-62
REMARKS: CLASS I MATERIAL	
GEOLOGICAL INT'P: W.E. Moore	DATE: 5-18-62
FROM GEOPH REPORT No.(s)	DATED
REMARKS:	

242

1 of 2

T 140 N

T 141 N

T 142 N

T 143 N

R1W

R2W

R3W

700

750

800

LAKE

NILLS

MACKENZIE

BLUFF

MERRIMAN ISLAND

T 142 N

T 141 N

T 140 N

T 139 N

T 138 N

61°20'00"

61°15'00"

61°10'00"

61°07'30"

61°05'00"

61°00'00"

R 3 W

R 2 W

R 1 W

MACKENZIE

MERRILL ⊕ 7/56

MERRILL ⊕ 6/56

MERRILL ⊕ 5/56

MERRILL ⊕ 4/56

MERRILL ⊕ 3/56

BRIGGS ⊕ 13/55

BRIGGS ⊕ 12/55

700

750

800

850

900

950

1000

P 318

ON121284

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: South Mills	WELL: N-23/5E
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Structure	CONTOUR INT. 50 Ft.
SHOT BY: Western F-63	FOR: Pan Am - Shell
INCL. DATES: Feb. 12 - March 18, 1962	
INTERP. BY: E.Horne & R.Lundberg	CO.AFFIL: Pan Am
REPORT No. E-62-30	DATE: 5-18-62
REMARKS:	

CLASS I MATERIAL

CN12128

60° 30' 00"
119° 30' 00"
119° 22' 30"
119° 15' 00"
119° 07' 30"
119° 00' 00"
60° 20' 00"

P 2665
Project 137

U-40-105

Camp

Access to Lake

1300

1960-61 Program Cut but not Shot
(approx. locations)

1400

1500

Project 138

Gravel and Boulder Drilling
U-40-110

Camp

SHELL MOBIL
Alexandra

Air Strip

Stunted Pines and Muskeg

1600

Access Road to Mackenzie Highway

SURFACE

1 of 2

60° 10' 00"

60° 00' 00"

119° 30' 00" 119° 22' 30" 119° 15' 00" 119° 07' 30" 119° 00' 00"

CN11493

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
DEC.,1960- MAR.,1961	U-40	PAN-AM.	LINES 1018 to 1358-1540 110, 118

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	N.W. QUAD.

This map replaces/supplements Registration No. _____ dated _____, which is to be destroyed/kept (Refer inspection date)

Map distribution: ☐ Division ☐ General Office

Other maps prepared in this report

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON THIS MAP.

LEGEND
- Conventional Survey
- C.D.P.
- Synthetic Record
- Compiled Velocity

PAN AMERICAN PETROLEUM CORPORATION

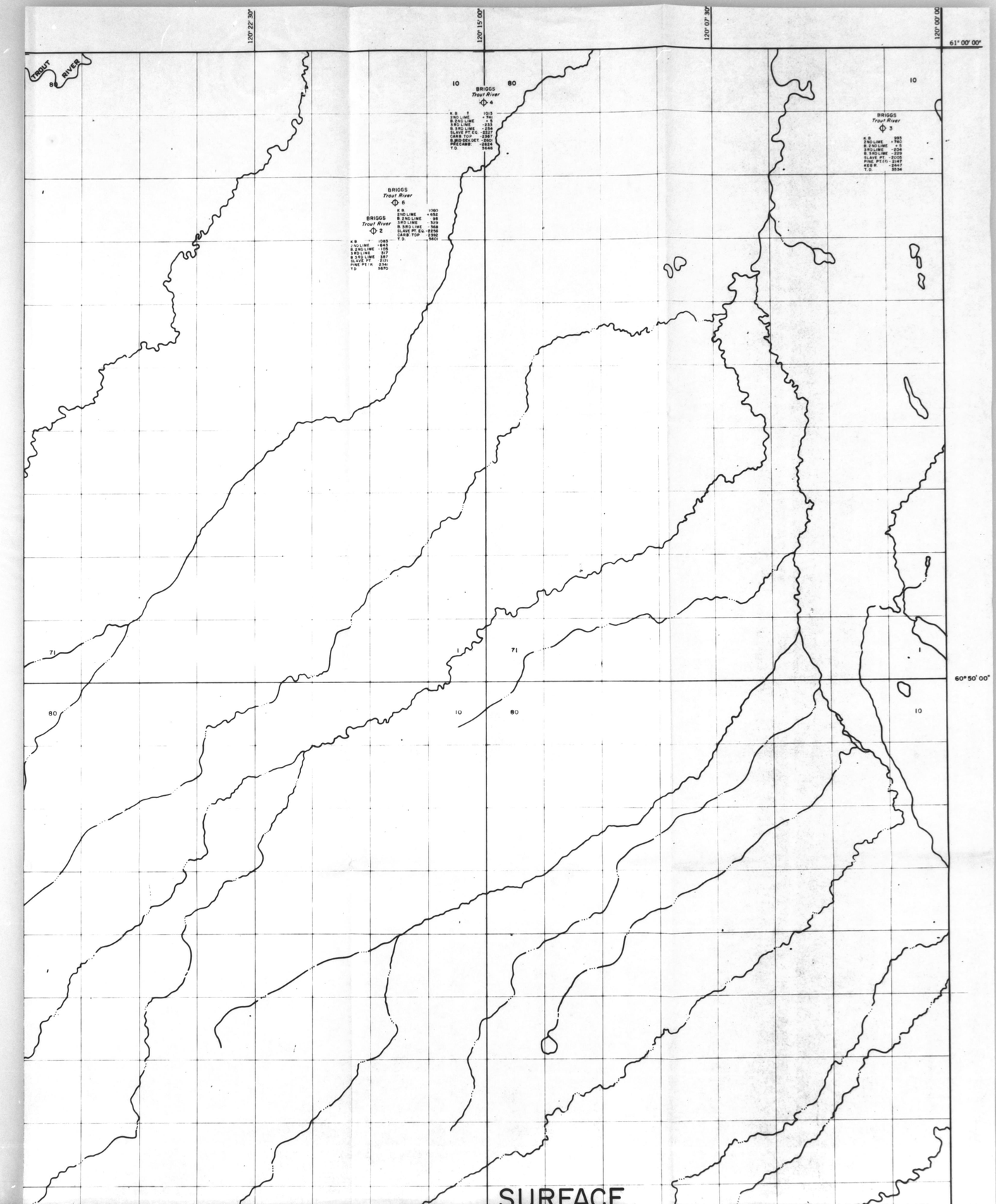
CANADIAN DIVISION

EDMONTON DISTRICT

AREA: East Kakisa River	GRID: CM-22/SE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT. 100'
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Dec.,1960 – March,1961	
INTERP. BY: J. Harding	CO. AFFIL: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS:	
* Lakes upon which planes landed to service crews.	
GEOLOGICAL INT:	DATE:
FROM GEOPH. REPORT No.(s)	DATED
REMARKS:	

242

E01278


120° 22' 30"
120° 15' 00"
120° 07' 30"
120° 00' 00"
61° 00' 00"
60° 50' 00"
TROUT RIVER
10
80
BRIGGS
Trout River
4
BRIGGS
Trout River
3
BRIGGS
Trout River
2
BRIGGS
Trout River
1
71
SURFACE

1 of 2

SURFACE

P. 2682
Project 319

P. 2681
Project 320

CN11439

CN11439

CN11439

2000

2100

2200

2400

2500

U-40-100

U-40-102

U-40-103

Muskeg

Rolling Hilly Terrain
Small Timber

Road cut for Access

Access cut to base

Wet

CAMP II

Access Rd. to Pioneer Camp

R14W

R13W

R12W

T 133 N

T 132 N

60° 40' 00"

60° 30' 00"

120° 22' 30"

120° 15' 00"

120° 07' 30"

120° 00' 00"

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

——— Geological data
——— Reliable Geophysical Data
— — — Qualitatively Reliable Geophysical data
- - - - - Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
MARCH, 1960	E.C.L.-3	PAN AM	LINES E14, E-19
MARCH, 1960	W.G.C. F-39	PAN AM	LINES 4, 5, 8, 22
FEB., 1961	U.G.C. U-40	PAN AM	LINES 100, 102, 103

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
E-60-32	OCT. 31, 1960	R.H. WHITT	W.G.C.	S.W. QUAD.
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	S.W., S.E. QUADS.

This map supersedes/supplements Registration No. _____ dated _____ which is to be destroyed/kept
(Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared this report

	Div	GO
	☐	☐
	☐	☐
	☐	☐
	☐	☐

This map checked by _____
Pan Am. Geophysicist / Geologist

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VELOCITY PLOT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
○ Conventional Survey
✱ C.V.L.
◉ Synthetic Record
▼ Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION
EDMONTON DISTRICT

AREA: North Trainor Lake	GRID: CM-21/NE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT. 100 ft.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Feb., 1961	
INTERP. BY: J. Harding	CO. AFFIL.: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	

† Lakes upon which planes landed to service crews.

GEOLOGICAL INT: DATE
FROM GEOPH REPORT No.(s) DATED
REMARKS

CN11439

242

P 2691
Project 322

P 2690
Project 323

P 2699
Project 328

P 2698
Project 329

SURFACE

Muskeg

TETCHO

LAKE

CAMP 7

1800

1900

2000

2100

2200

60° 30' 00"

60° 22' 30"

60° 15' 00"

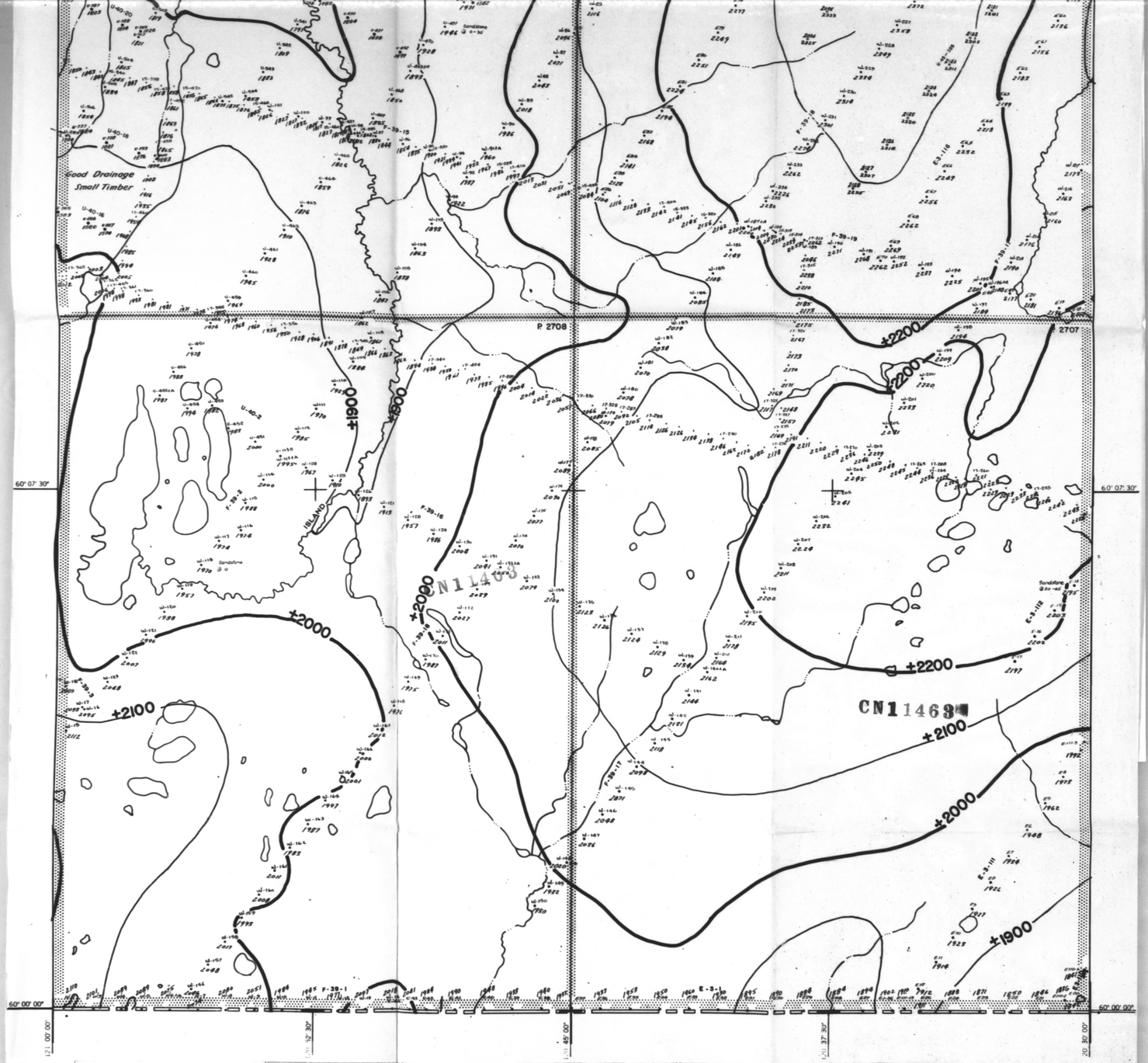
120° 37' 30"

120° 45' 00"

120° 52' 30"

121° 00' 00"

1 of 2



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control. (geophysical or geological)

- Unlocated data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's	APPROX LOC. ON MAP
JAN. 1954	IMP. 15	IMPERIAL	S/30-34L/48-49L	SOUTH HALF

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX LOC. ON MAP
3	FEB. 24/1959			

This map replaces/supplements Registration No. ____ dated ____ which is to be destroyed/kept
Refer memo/rpt dated ____

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Other maps prepared this report

This map checked by ____

for Minister of Natural Resources

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LEGEND
- Conventional Survey
- C.V.L.
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA: Tetcho Lake	GRID: CM-21/SW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT: 100'
SHOT BY: U-45	FOR: Pan Am.
INCL. DATES: MAR. 1962	
INTERP BY: J. G. JONES	CO. AFFIL: Pan Am.
REPORT No.	DATE
REMARKS: Island River Area	

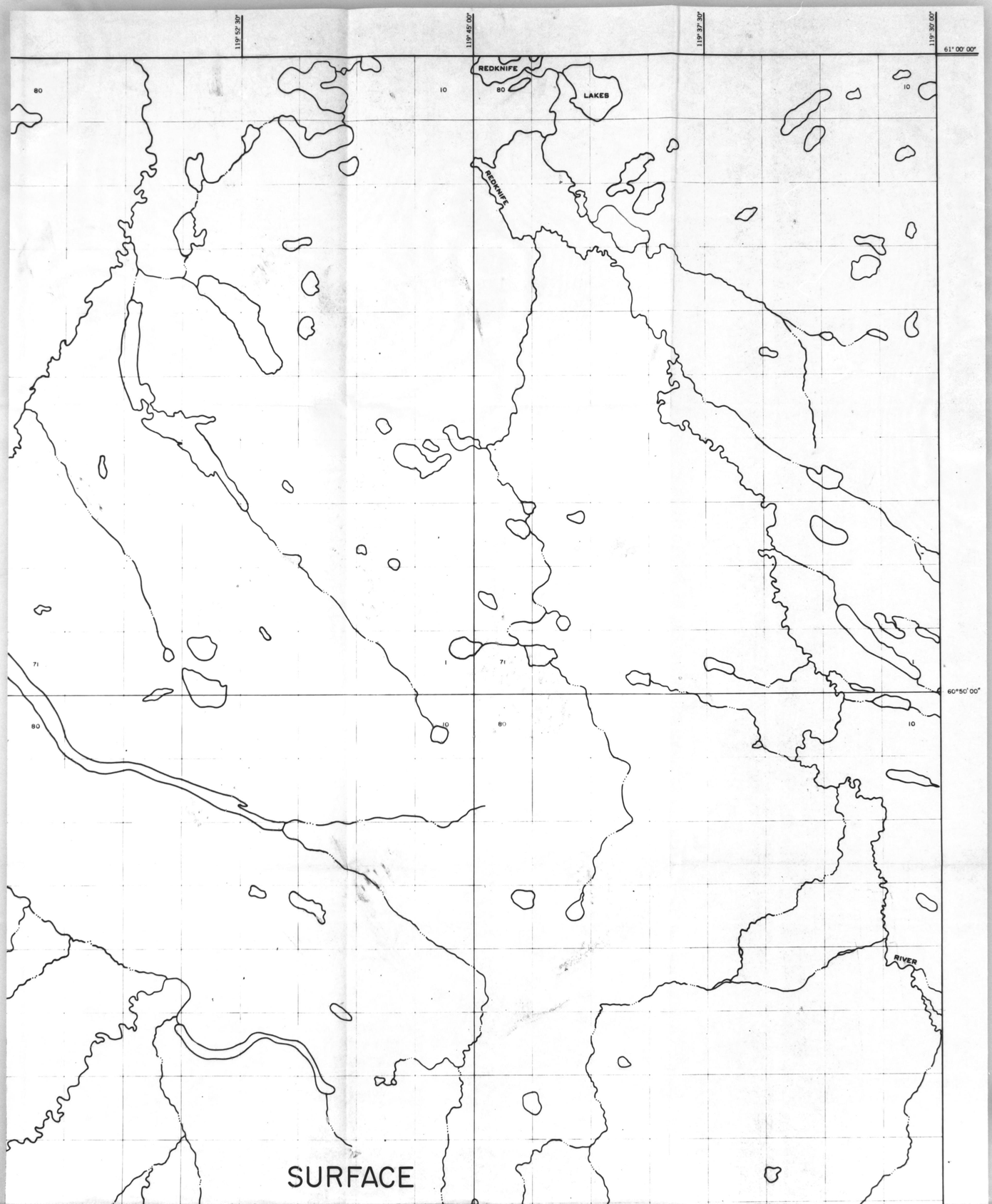
✈ Lakes upon which plane landed to service crews.

GEOLOGICAL INT.	DATE
FROM GEOPH. REPORT No (s)	DATED
REMARKS	

CN11463

E01227

242


119°52'30"
119°45'00"
119°37'30"
119°30'00"
61°00'00"
60°50'00"
REDKNIFE
LAKES
REDKNIFE
RIVER
80
10
71
SURFACE

1 of 2

SURFACE

P 2680
Project 321

P 2679
Project 142

60° 40' 00"

T 133 N

T 132 N

60° 30' 00"

119° 52' 30"

119° 45' 00"

119° 37' 30"

119° 30' 00"

R11W

R10W

R 9 W

1200

1400

1600

1800

2000

2200

2400

Very

Hilly

Terrain

Heavy

Timber

Boggy

Muskeg

REDKNIFE

Gap in line due to slough

Previously cut line

1960-61 Program Cut but not Shot

Triangulation Station Bench Mark

CN114451

CN114451

CN114451

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P AND/OR LINE No's
FEB., MAR., 1961	U.O.C. U-40	PAN AM.	LINES 101,102-104,105,106

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX.LOC ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	S.W., S.E. QUADS.

This map replaces/supplements Registration No. _____ dated _____, which is to be destroyed/kept
(Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office
Other maps prepared in this report

This map checked by _____
Pan Am. Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP.

LEGEND
- Conventional Survey
- V.S.L.
- Synthetic Record
- Computed velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION
EDMONTON DISTRICT

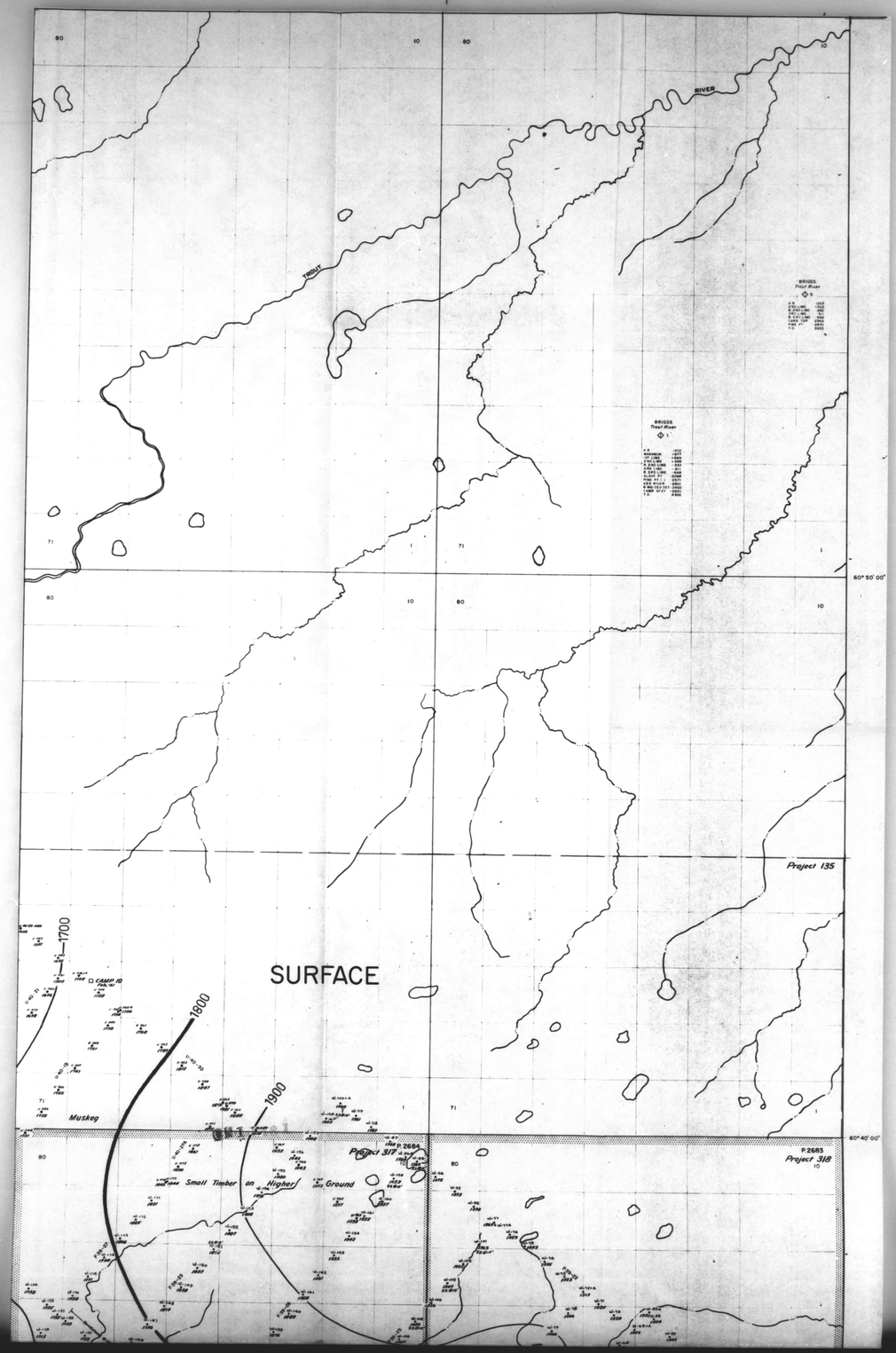
AREA:	Red Knife Lakes	GRID	CM-22/NW
PROVINCE:	Northwest Territories	SCALE	1" = 4000'
HORIZON:	Surface		
TYPE OF MAP:	Elevation	CONTOUR INT.	100 ft.
SHOT BY:	U-40	FOR:	Pan Am.
INCL. DATES:	Feb., March, 1961		
INTERP BY:	J. Harding	CO AFFIL:	Pan Am.
REPORT No.	E-61-17 Final	DATE	May 10, 1961
REMARKS	Island River Area		

T Lakes upon which planes landed & service crews.

GEOLOGICAL INT: DATE
FROM GEOPH REPORT No.(s) DATED
REMARKS

CN114451

2 of 2


TROUT
RIVER
BRIGGS
Trout River
BRIGGS
Trout River
SURFACE
1700
1800
1900
Muskeg
Small Timber on Higher Ground
Project 135
Project 317
P.2684
Project 318
P.2683
60° 50' 00"
60° 40' 00"

1 of 2

SURFACE

Project 135

Project 317 — P.2684

Project 318 — P.2683

Small Timber on Higher Ground

Muskeg

CAMP 10

CAMP 9

1700

1800

1900

CN11481

R17W

R16W

R15W

T 133 N

T 132 N

60° 40' 00"

60° 30' 00"

120° 52' 30"

120° 45' 00"

120° 37' 30"

120° 30' 00"

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological):

- Geological data
- Reliable Geophysical Data
- Quantitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
MARCH, 1960	U.S.C. U-40	PAN AM	LINE 1-9
MARCH, 1960	W.S.C. F-35	PAN AM	LINES 7-9,11,2-27
JAN.-FEB., 1961	U.S.C. U-40	PAN AM	LINES 25,26,28,29

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
W-60-22	OCT. 31, 1960	R.H. WHITT	W.S.C.	SOUTH QUADS
E-61-17	MAY 10, 1961	J. HARDING	PAN AM	S.W. QUAD.

This map replaces/supplements Registration No. dated
which is to be destroyed/kept
(Refer transmittal dated)

Map distribution: ☐ Division ☐ Calgary Office

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This map checked by

For Pan American Geologist

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VELOCITY PLAT AND EFFECTS OF NEAR SURFACE ON THIS MAP

LEGEND
- Conventional Survey
- D.E.L.
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA: North Tetcho Lake	GRID: CM-21/NW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT.: 100 ft.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Jan. - Feb., 1961	
INTERP. BY: J. Harding	CO. AFFIL.: Pan Am.
REPORT No.: E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	
GEOLOGICAL INT.:	DATE
FROM GEOPH. REPORT No.(s)	DATED
REMARKS:	

CN11481

E01252

242

121° 22' 30"

121° 15' 00"

121° 07' 30"

121° 00' 00"

61° 00' 00"

60° 52' 30"

60° 45' 00"

60° 37' 30"

RIVER

POPLAR

RIVER

TROUT

TROUT

Project 135

1960 GL Project Abandoned
Too Wet !

Muskeg

SURFACE ELEVATION

1800

1700

P 2676
Project 375

Muskeg

CAMP 5

1 of 2

SURFACE ELEVATION

TROUT

TROUT

Project 135

60° 45' 00"

1960-61 Program Abandoned Too Wet !

Muskeg

P 2676
Project 375

CAMP 2

Muskeg

1800

1700

1700

60° 37' 30"

CN1

U40-14

U40-8

U40-12

CN11477

LAKE

R 18 W

T 133 N

T 132 N

60° 30' 00"

121° 22' 30"

121° 15' 00"

121° 07' 30"

121° 00' 00"

MAP EVALUATION

Qualification considers type of map or grid, amount of relief considered critical, quality of data and density of control, (geophysical or geological):

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
Mar. 1959	United 40	Pan Am	LINES 8, 12, 14
Mar. 1960	Western 39	Pan Am	LINES 21, 23, 27
JAN. - FEB. 1961	UNITED 40	PAN AM	LINES 13, 21, 22, 23, 26, 30

INTERPRETIVE HISTORY

FINAL REPORT No	DATE	INTERP	CO AFFIL	APPROX LOC ON MAP
Final	May 29/59	G.E. Langshaw	United 40	121°24' 60°35'
NOD-15	Apr. 15/60	R.H. Whitt	Western 39	121°03' 60°35'
E-60-27	Sept. 30/60	C.J. Frankovitch	United 40	121°28' 60°35'
W-60-52	Oct. 31/60	R.H. Whitt	Western 39	121°05' 60°35'
E-61-17	May 10, 1961	J. Harding	Pan Am.	S.E. Quad.

This map replaces Supplements Registered No. _____ dated _____ which is to be destroyed/kept.
(Refer Interim Key dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared this report

This map checked by _____

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VELOCITY PLAT AND EFFECT OF HOT CLAY AND/OR VELOCITY ON TIME MAP

MARKING
- Commercial Survey
- Field
- Summary Report
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

NORTH CANADIAN DISTRICT

AREA: Trout Lake	GRID: OM-20/NE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT: 100 ft.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Jan. - Feb., 1961	
INTERP. BY: J. Harding	CO AFFIL: Pan Am.
REPORT No: E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area.	

Lakes upon which plane landed to service crews.

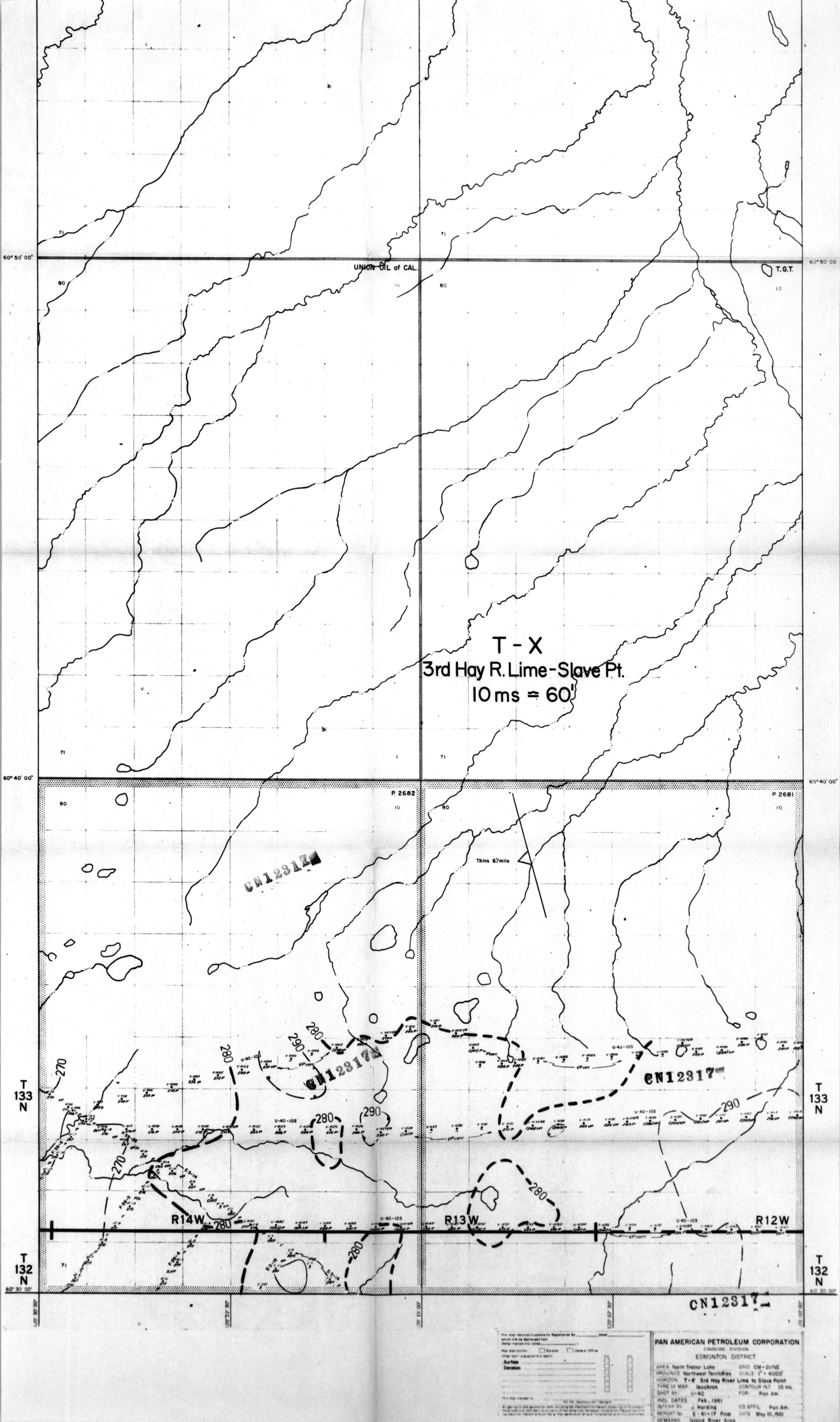
GEOLOGICAL INT: DATE

FROM GEOPH REPORT No (s) DATED

REMARKS

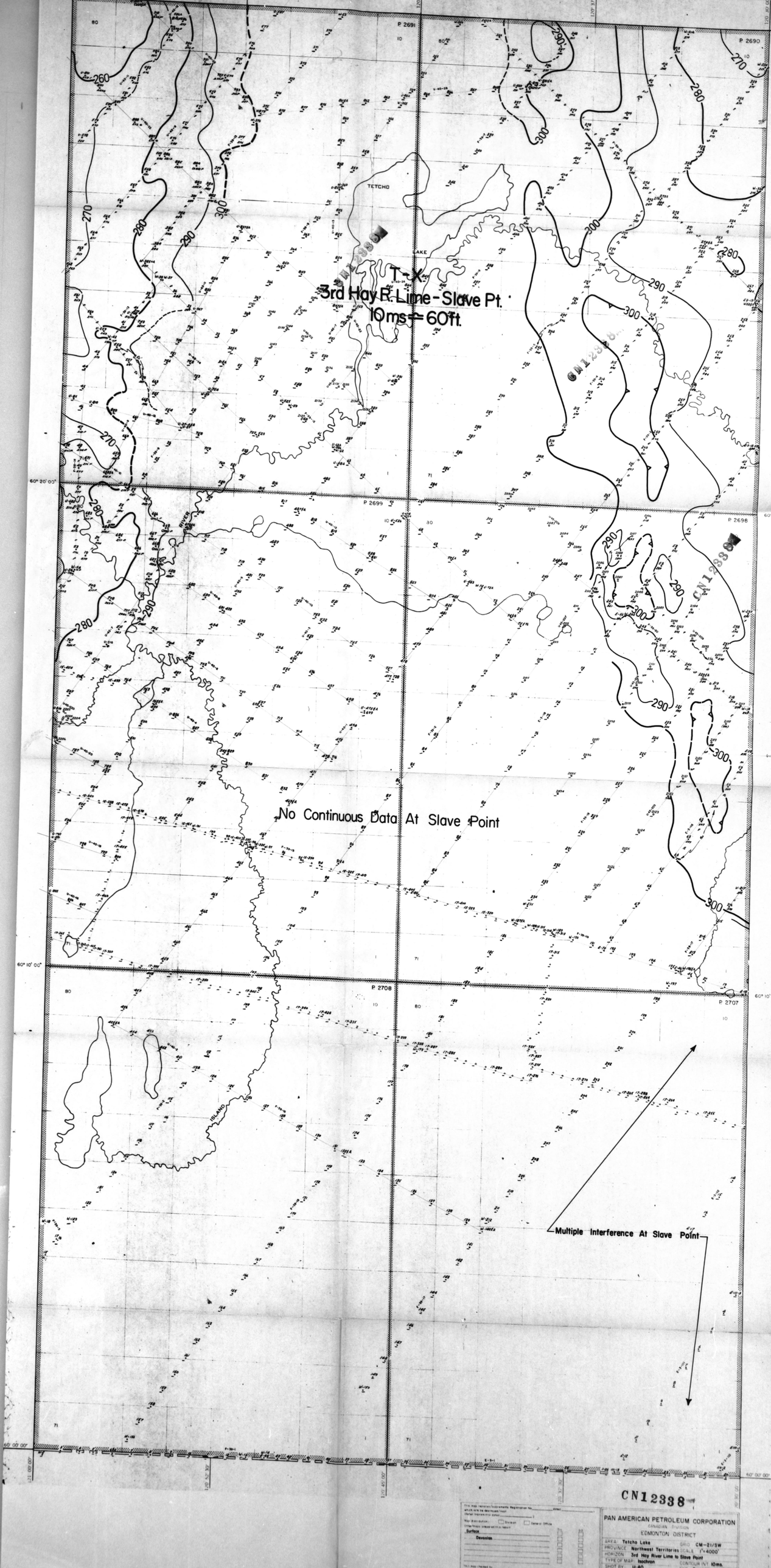
CN11477

242



PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

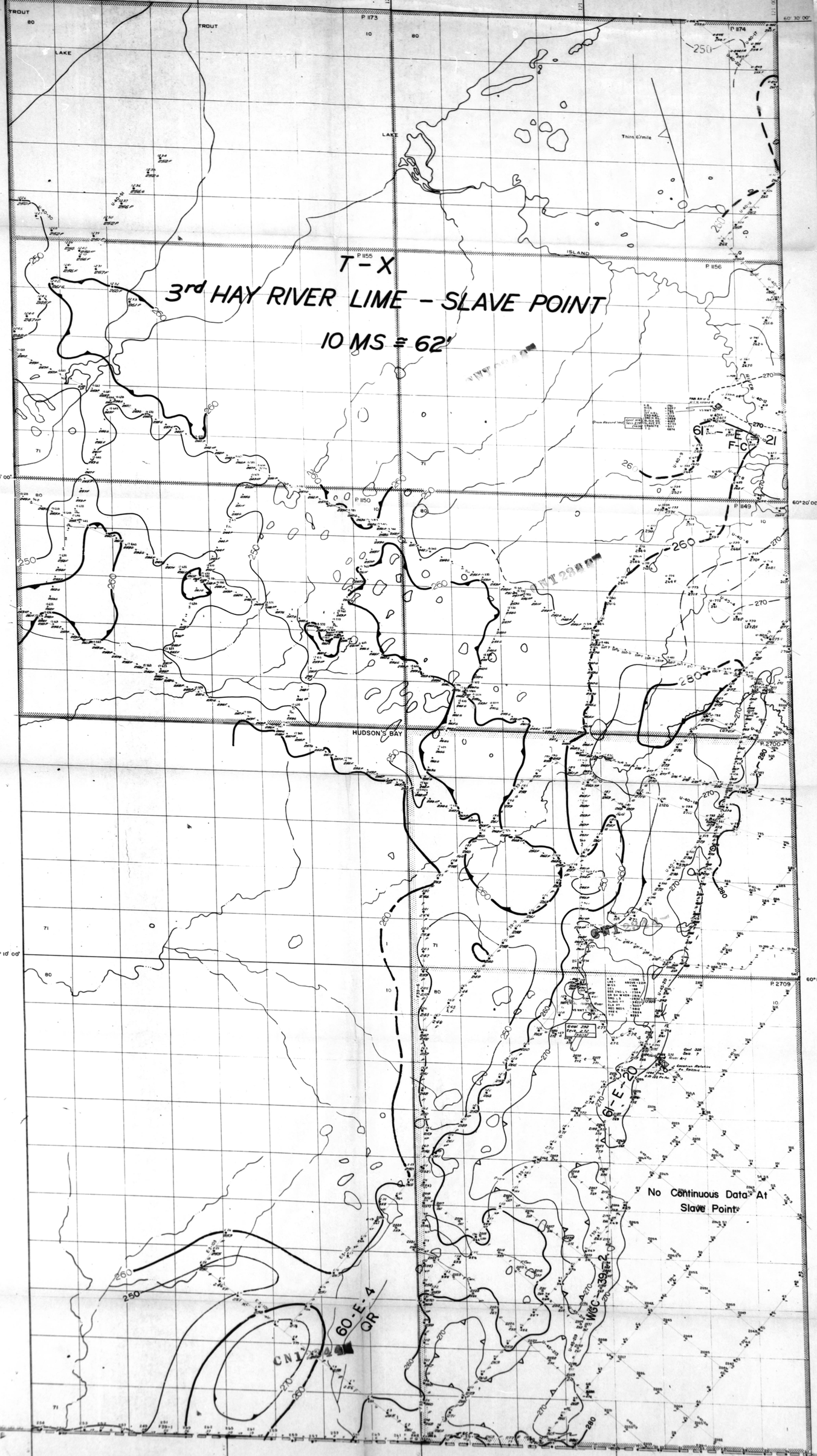
AREA	North Trainor Lake
GRID	CM-2UNE
PROVINCE	Northwest Territories
SCALE	1" = 4000'
HORIZON	T-X 3rd Hay River Lime to Slave Point
TYPE OF MAP	Isochron
CONTOUR INT	10 ms
SHOT BY	U-40
FOR	Pan Am.
INCL. DATES	Feb., 1961
INTERP BY	J. Harding
CO. AFFIL	Pan Am.
REPORT No.	E-61-17 Engr.
DATE	May 10, 1961
REMARKS	Island River Area



CN12338

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

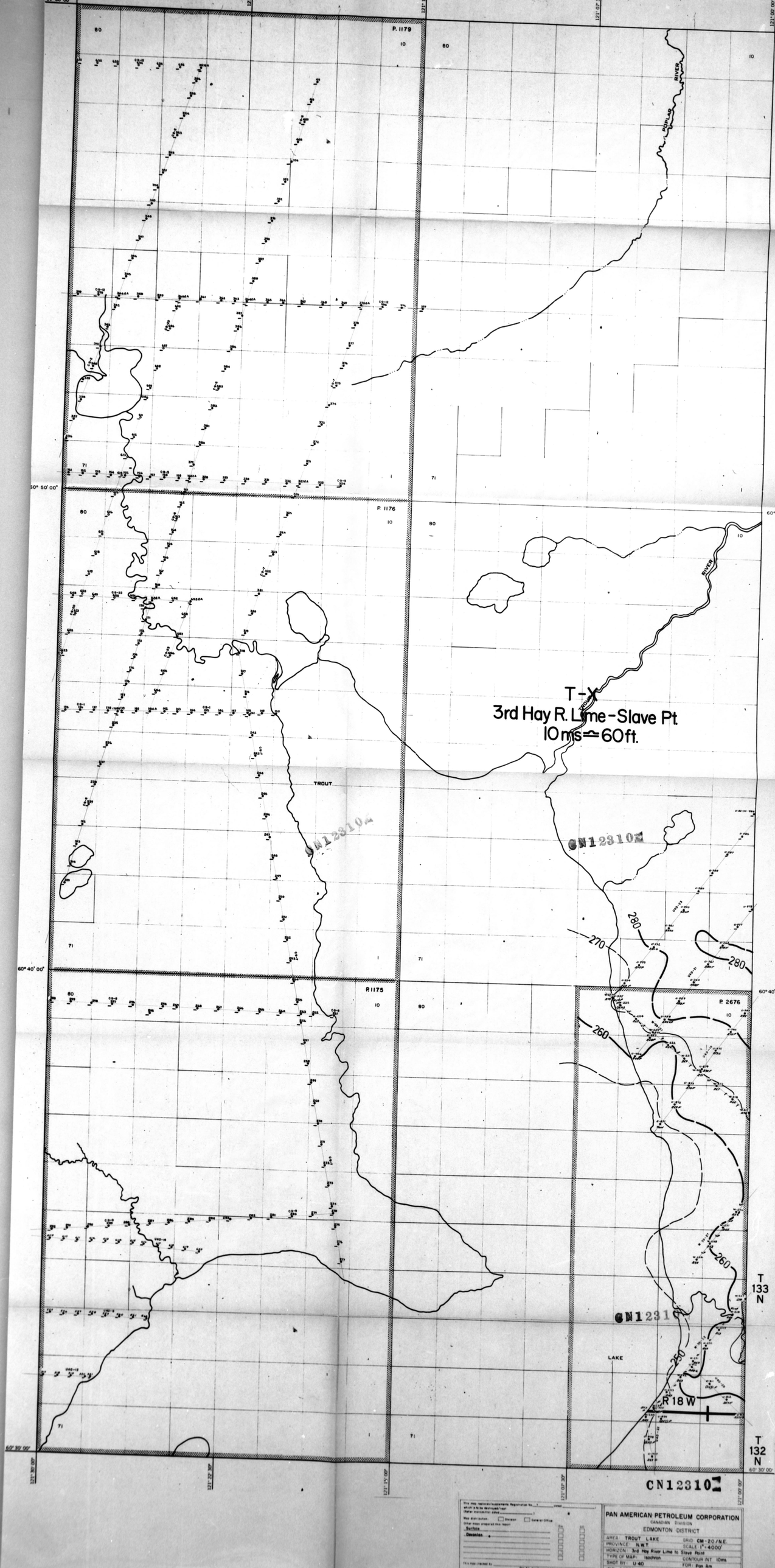
AREA	Tetcho Lake
PROVINCE	Northwest Territories
HORIZON	3rd Hay River Lime to Slave Point
TYPE OF MAP	Isochron
SHOT BY	U-GR
GRID	CM-21/SW
SCALE	1"=4000'
CONTOUR INT	10ms.



CN12344

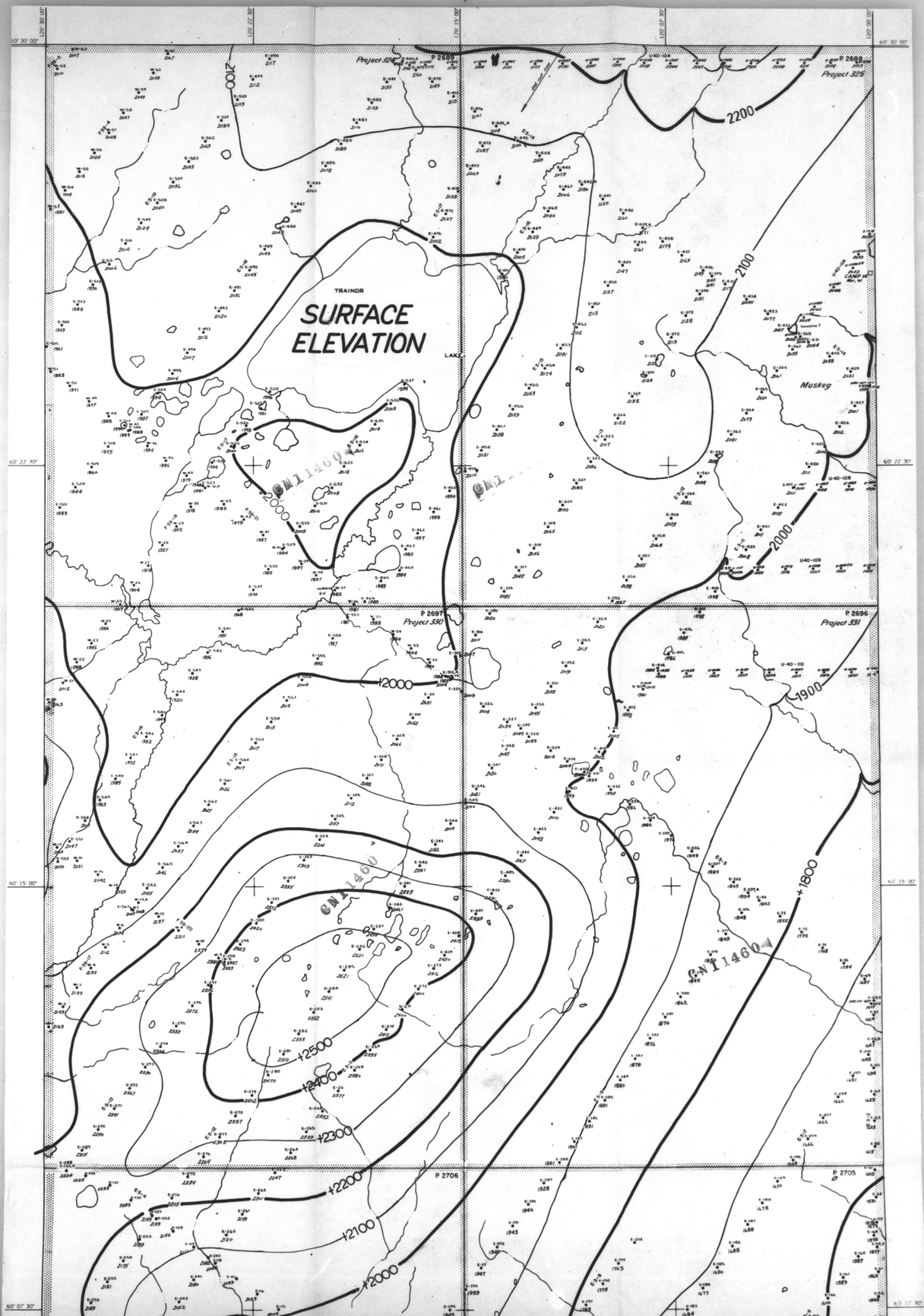
PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Island River GRID CM-20/5E
PROVINCE Northwest Territories SCALE 1"=4000'
HORIZON 3rd HAY RIVER LIME to SLAVE POINT
TYPE OF MAP ISOCHRON CONTOUR INT 10ms
SHOT BY U-45 FOR PAN AM.
INCL. DATES FEB - MAR., 1962

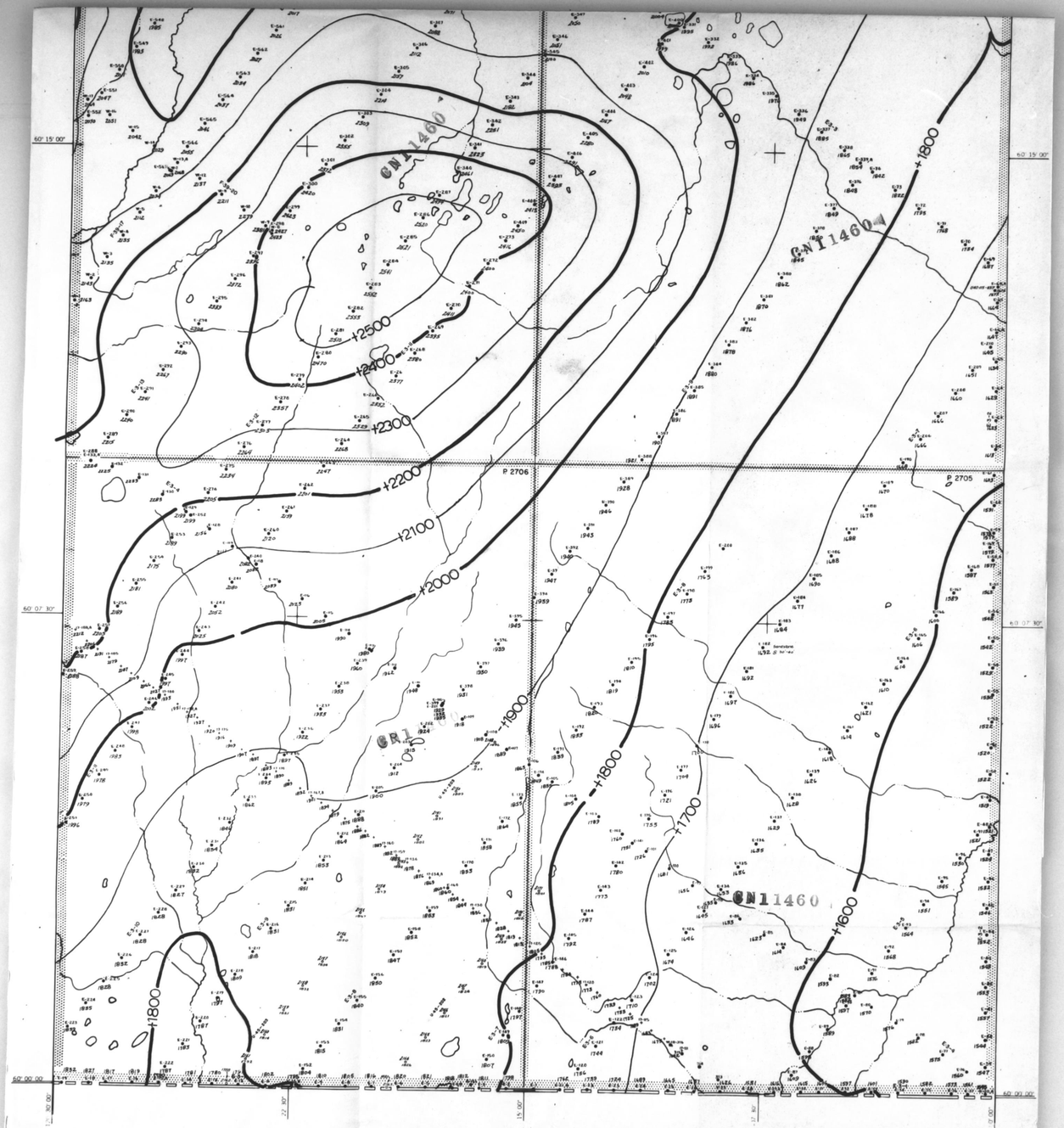


PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA	TROUT LAKE
PROVINCE	N.W.T.
HORIZON	3rd Hay River Lime to Slave Point
TYPE OF MAP	Isochron
SHOT BY	U-40
GRID	CM-20/NE.
SCALE	1"=4000'
CONTOUR INT.	10ms
FOR	Pan Am


SURFACE
ELEVATION
TRAINOR
LAKE
Muskeg
Project 326
Project 325
Project 330
Project 331
P 2689
P 2688
P 2697
P 2696
P 2706
P 2705
2100
2200
2000
2100
1900
1800
2000
2500
2400
2300
2200
2100
2000
GNI 1460
GNI 1460
GNI 1460
60° 30' 00"
60° 22' 30"
60° 15' 00"
60° 07' 30"
120° 30' 00"
120° 22' 30"
120° 15' 00"
120° 07' 30"

1 of 2



MAP EVALUATION

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	SP. AND/OR LINE No.s	FINAL REPORT No.
JAN. 1954	IMPERIAL	IMPERIAL	(Y-W to SW) 28-28 to 28	3
JAN.-MAR 1960	E.G.S.	PAN AM	LINES 03-1410	5
JAN.-MAR 1960	W.S.C. P-28	PAN AM	LINES P28-A,B,C,16, 28-B	W.D-10
DEC. 1960-MAR. 1961	U.S.C. 2-60	PAN AM	LINES 2-60-28A,28B to 28J,16J,16K	W.D-10
MAR. 1962	U.S.C. 0-65	PAN AM	LINES 1-65-203,203	W-60-02
				W-60-02
				E-61-17
				E-62-28

INTERPRETIVE HISTORY

DATE	SHOT BY	DATE	APPROX. LOC. ON MAP
FEB. 23, 1959	W. H. ROLLANS	W.S.C. P-28	SW QUAD
FEB. 28, 1959	H. Mc MICHELEN	PAN AM	SW QUAD
APRIL 15, 1960	V.S. FITZER	E.G.S. 5	WHOLE GRID
APRIL 15, 1960	R.H. WHITT	W.S.C. P-28	NW QUAD
OCT. 20, 1960	R.H. WHITT	W.S.C. P-28	WHOLE GRID
OCT. 20, 1960	V.S. FITZER	E.G.S. 5	SW QUAD
NOV. 22, 1961	J. HARDING	PAN AM	NE QUAD
NOV. 17, 1962	A.R. JONES	PAN AM	SW QUAD

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Trainor Lake — GRID CM-21/SE
PROVINCE Northwest Territories — SCALE 1" = 4000'
HORIZON Surface
TYPE OF MAP Elevation — CONTOUR INT. 100'
SHOT BY U - 43 — FOR Pan Am.
INCL. DATES MAR. 1962
INTERP. BY J. G. JONES — CO. AFFIL. Pan Am.
REPORT No. E-62-28 — DATE MAY 17, 1962
REMARKS Island River Area

CN11460

GEOLOGICAL INT.
FROM GEOPH. REPORT No.(s) — DATED
REMARKS

242

E01241

119° 22' 41"
119° 15' 00"
119° 07' 30"
119° 00' 00"
61° 00' 00"
60° 50' 00"
60° 40' 00"

WILKINSON
Redknife River
1

WILKINSON
Redknife River
2

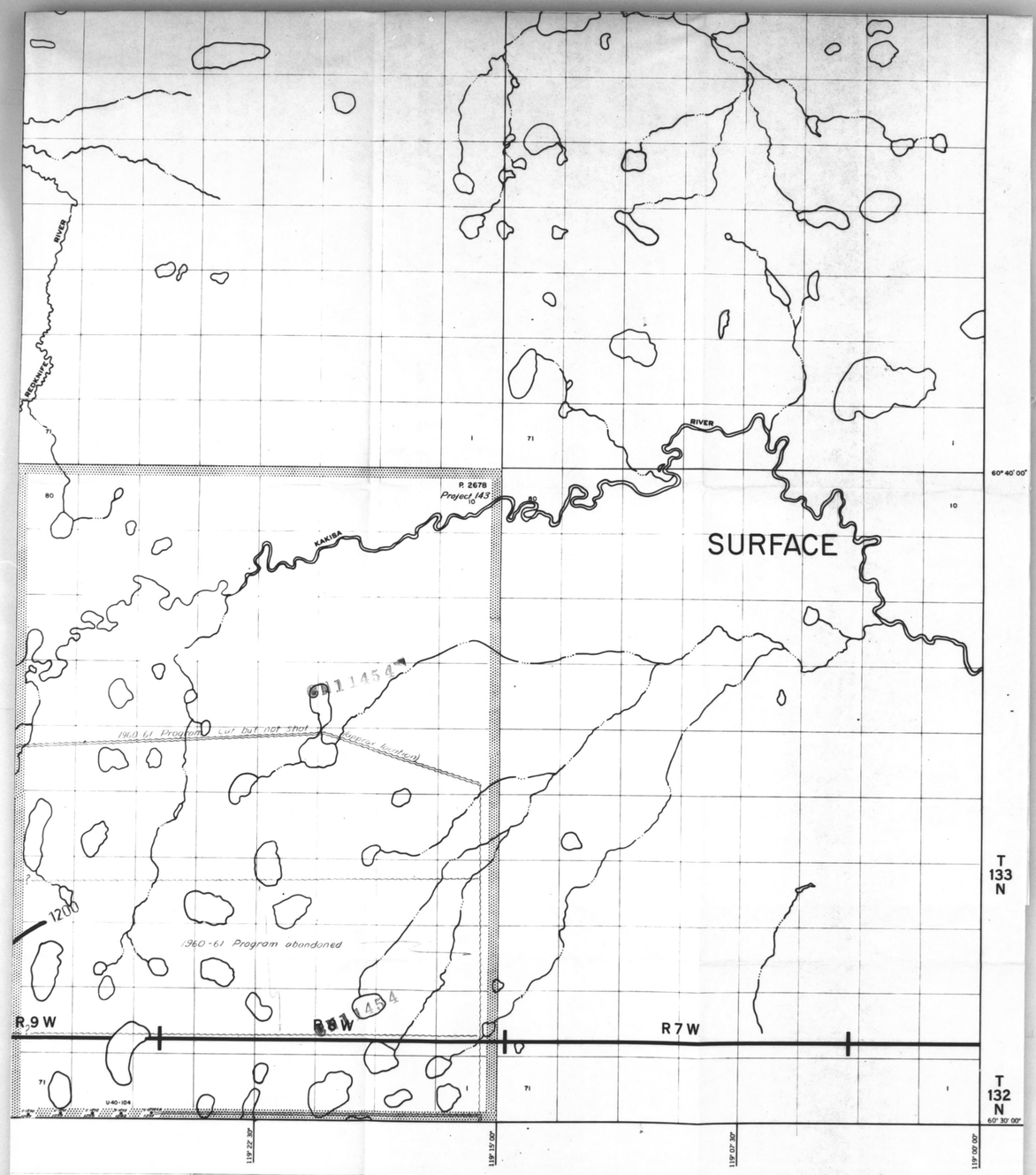
RIVER
BEAVER
RIVER
REDKNIFE
RIVER
RIVER
KANIBA

80
10
71
1

P. 2678
Project 143
10

SURFACE

1 of 2



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered (critical, quality of data and density of control), (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Quantitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's (LINE KM IN 1000 KMS)
MARCH, 1961	UNITED 40	PAN AM.	

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP (KM SQUARE)
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	

This map replaces / supplements Registration No. _____ zoned _____ which is to be destroyed / kept
(Refer Instruction Letter dated _____)

Map distribution: ☐ Division ☐ Company Office

Other maps prepared this report

This map marked by _____

Pan American Petroleum Corporation

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VELOCITY PLOT (IN FEET / SECOND) — VELOCITY ON TIME MAP

LEGEND
- Conventional Survey
- Shot
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA:	West Rabbit Lake	GRID:	CM-22/NE
PROVINCE:	Northwest Territories	SCALE:	1 = 4000'
HORIZON:	Surface		
TYPE OF MAP:	Elevation	CONTOUR INT.	100 ft.
SHOT BY:	U-40	FOR:	Pan Am.
INCL. DATES:	March, 1961		
INTERP BY:	J. Harding	CO. AFFIL.	Pan Am.
REPORT No.	E-61-17 Final	DATE	May 10, 1961
REMARKS:	Island River Area		

CN 1454

GEOLOGICAL INT: _____ DATE _____

FROM GEOPH REPORT No.(s) _____ DATED _____

REMARKS

242

E01203

JAMES C. WILKINSON

REDKNIFE LAKES

REDKNIFE

T.G.T.

RIVER

T - X
3rd Hay R. Lime - Slave Pt.
10 ms. = 55'

CN12811

P 2680

P 2679

RIVER

NOTE:
3rd Lime reflection over area covered by recent shooting is very weak. Therefore many of the values have been derived from phantom from Base 2nd Lime. This reflection, though often weak, is generally reliable.

Thins 6/mile

REDKNIFE

Reflection from Base of 2nd Lime deteriorates towards East as section becomes shallower.

280

300

310

T 133 N

T 132 N

R11W

R10W

R9W

U-40-100

U-40-102

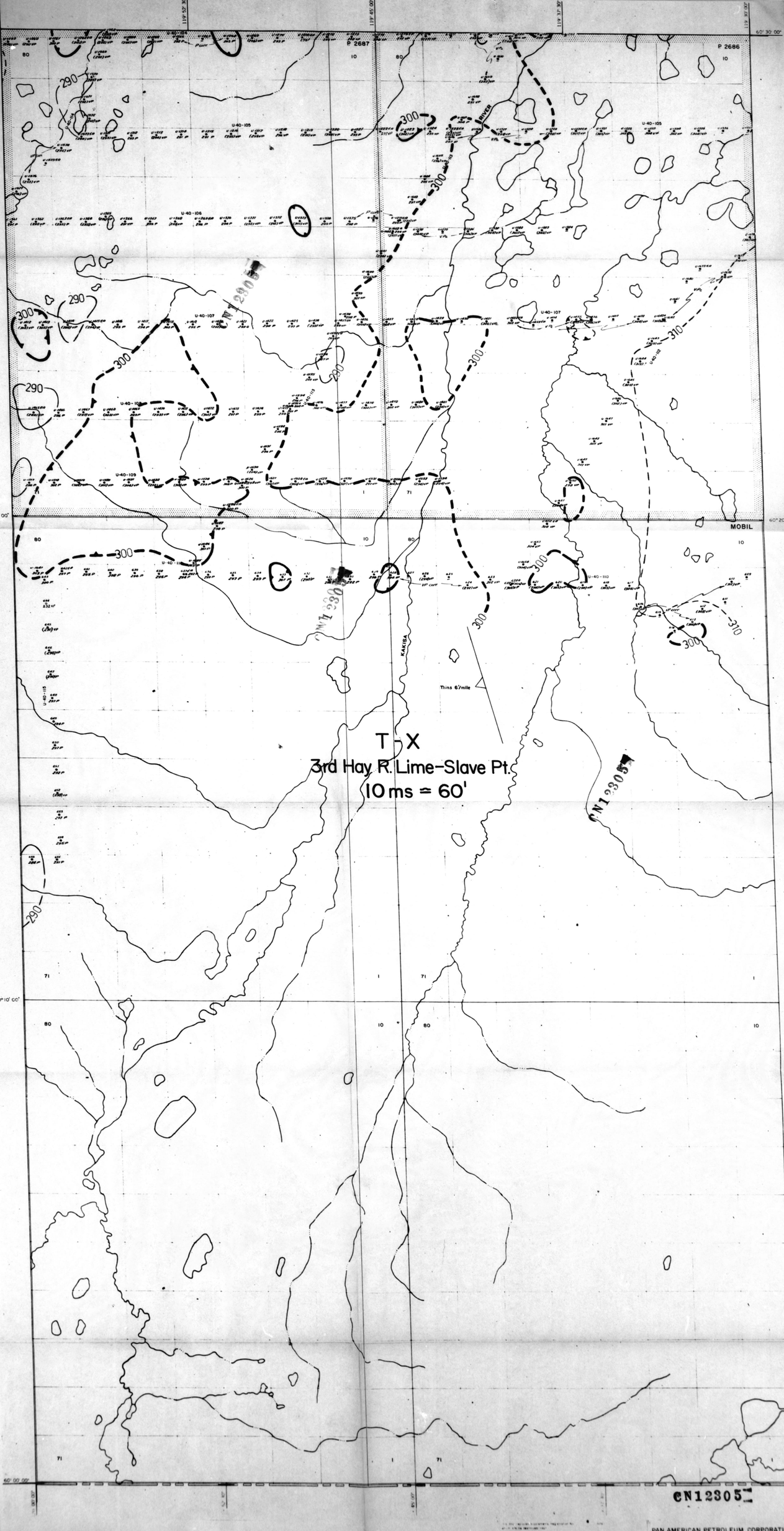
U-40-103

U-40-104

CN12811

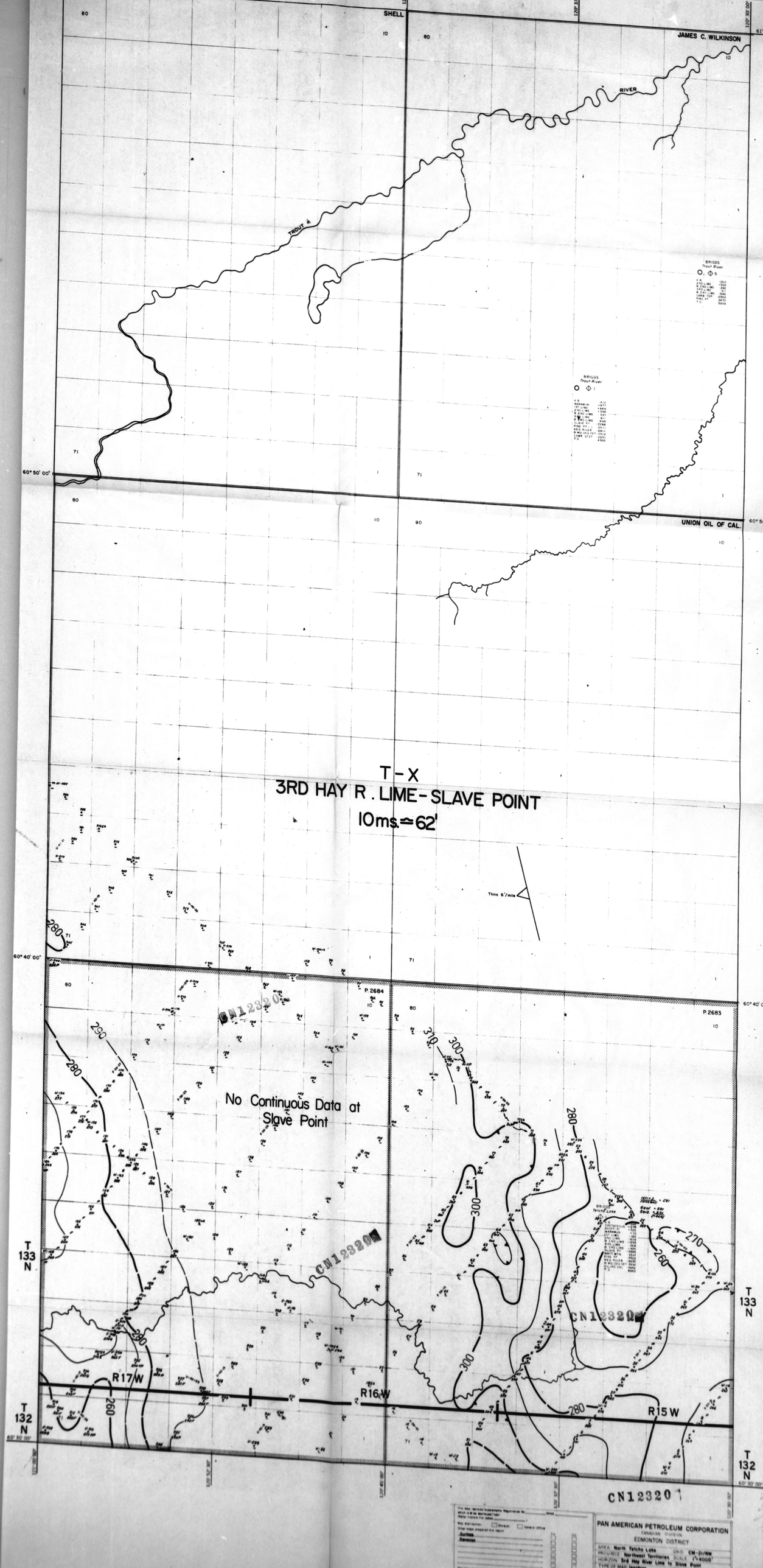
PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Red Knife Lakes
PROVINCE Northwest Territories
HORIZON T-X 3rd Hay River Lime to Slave Point
TYPE OF MAP Isochron
SHOT BY U-40
INCL. DATES Feb. March, 1961
INTER. BY J. Harding
VERSION No. E-81-17 Final



PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT

AREA Kakisa River — GNS CM-22/58
PROVINCE Northwest Territories — SCALE 1" = 4000'
TITLE ON T-X 3rd Hay River Lime to Slave Point
TYPE OF MAP Isochron — CONTOUR INT 10 ms
SHOT BY U-40 — FOR Pan Am
INCL. DATES Dec. 1960, March, 1961
INTERP'D BY J. Harding — CO. DATE Pan Am
REPORT No. E-61-17 Final — DATE May 10, 1961


SHELL
JAMES C. WILKINSON
UNION OIL OF CAL.
TROUT R.
RIVER
BRIGGS
Trout River
60° 50' 00"
60° 40' 00"
T - X
3RD HAY R. LIME - SLAVE POINT
10ms. ≏ 62'
Thins 6'/mile
No Continuous Data at
Slave Point
P.2684
P.2683
CN12320
CN12320
CN12320
CN12320
280
250
260
270
300
310
T 133 N
T 132 N
R17W
R16W
R15W
PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT
AREA North Yatcha Lake
PROVINCE Northwest Territories
HORIZON 3rd Hay River Lime to Slave Point
SCALE 1"=4000'
CN12320

T-X
TRAINOR

3rd HRL. - SLAVE PT.

10 MS ≅ 62'

Multiple Interference At Slave Point

PAN AMERICAN PETROLEUM CORPORATION

EDMONTON DISTRICT

CN12385

PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT

Survey Chainage — Dwg. No. CM-22/NE

Alberta — Scale 1 : 63360 — Date August 1961

Well Data — 3rd Hay River Lime to Slave Point

T - X

Elev. K.B. — Elev. Gd. — Plan

Total Depth — Drilling Completed — Status

Contractor — Rig No. — Spud Date

Remarks: Inland River Area

May 10, 1961

CM-22/NE

CN 23564

CN 28560

T - X

3rd Hay R. Lime-Slave Pt.

T 133 N

T 132 N

R 7W

R 8W

R 9W

R 26 W

JAMES C. WILKINSON

UNION OIL OF CAL.

RIVER

LAKE

RESERVE

BUTTE

BOUVIER

WILKINSON
Kakisa River
1

WILKINSON
Kakisa River
2

117° 00' 00"

117° 07' 30"

117° 15' 00"

117° 22' 30"

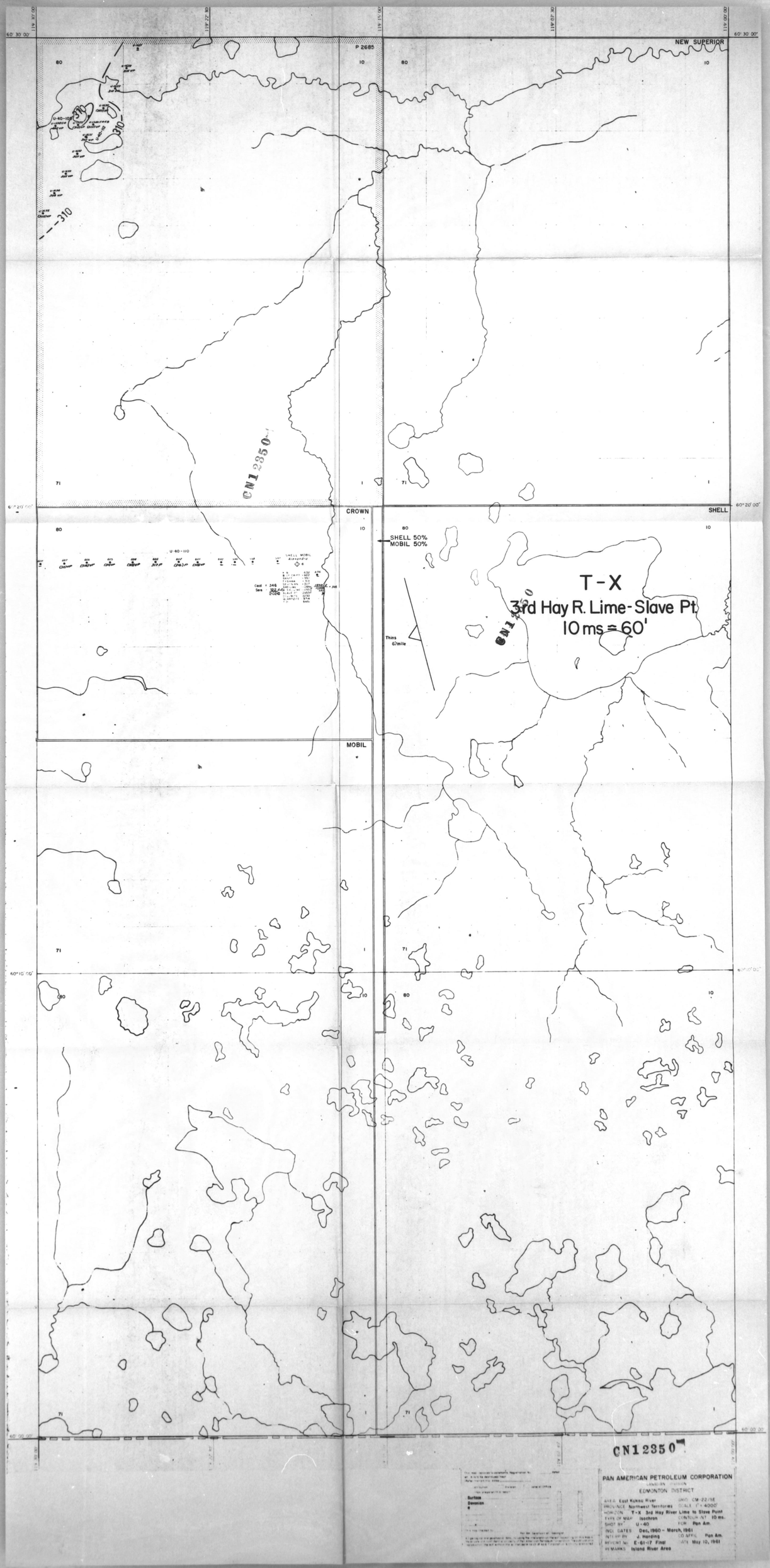
117° 30' 00"

61° 00' 00"

60° 50' 00"

60° 40' 00"

60° 30' 00"


NEW SUPERIOR
P 2685
CROWN
SHELL
MOBIL
SHELL 50%
MOBIL 50%
T-X
3rd Hay R. Lime-Slave Pt.
10 ms = 60'
Thins
67/mile
CN12350
CN12350
CN12350
PAN AMERICAN PETROLEUM CORPORATION
EDMONTON DISTRICT
Surface
Devonian

Abstracted for
Geo-Science Data Index

Date_____

REPORT OF GEOPHYSICAL AND SEISMOGRAPH REFLECTION SURVEY

Conducted By

United Geophysical Company of Canada

for

PAN AMERICAN PETROLEUM CORPORATION

on

ISLAND RIVER PERMIT NOS.

2676	2688
2678	2689
2679	2690
2680	2691
2681	2696
2682	2698
2684	2699
2685	2700
2686	2705
2687	2706
	2709

during the period

September 9th, 1960 to April 30th, 1962

Prepared By

M. A. Knock
District Geophysicist

Submitted in accordance with Government Regulations under
Section 29 (c) of the Territorial Lands Act

T E X T

INTRODUCTION

During the period September 9th, 1960, to April 30th, 1962, two seismograph reflection surveys were conducted by United Geophysical Company of Canada for Pan American Petroleum Corporation on Island River Permits. One program was shot during the months of December, 1960, through March, 1961, during which a total of 115.916 days were spent on Island River Permit Nos. 2676, 2678-2682, 2684, 2685, 2686, 2687, 2688, 2689, 2690, 2691, 2696, 2698-2700. A second program was shot during the months of February and March, 1962, in which 34.4 days were spent on Permit Nos. 2690, 2691, 2698-2700, 2705, 2706, and 2709.

Seismic lines were cut or cleaned by J. B. Gordon Construction Limited and Bruce Rome Limited for the initial program and by J. B. Gordon Construction Limited for the latter program.

The initial seismograph survey crew was under the supervision of Mr. L. E. Sexsmith, while the second crew was under Mr. J. Lebeau. Both crews operated out of a mobile wheel-mounted camp consisting of a kitchen-sleeper unit, a utility-sleeper unit and an office-sleeper unit. All equipment used by the crews was of the wheel-mounted type. Interpretation was performed by the office staff headquartered in Edmonton.

No unusual operating problems were encountered during operations in this area.

SEISMIC TECHNIQUE

Shot holes averaged 45 feet in depth throughout the area. Depth of shot was determined by near-surface lithology with best record quality being obtained when the shot was detonated in either clay or shale. Three-hole shot hole pattern was used throughout

the area. Normal charge size averaged 6 pounds per shot for the initial survey, while 2.27 pounds was found to be adequate for the terrain covered by the latter survey.

Spread length and type are indicated on Figures #1 and #2. The instruments used were FA-39 Amplifiers, manufactured by Pan American Petroleum Corporation, recording from Electro-Tech EVS-2 seismometers onto Techno type magnetic tape and an oscillograph camera display. Three 1,000 foot Mayhew drills were utilized for each survey.

The reflection method was used to obtain the subsurface data and the refraction method was used to correct for near-surface weathering and drift irregularities.

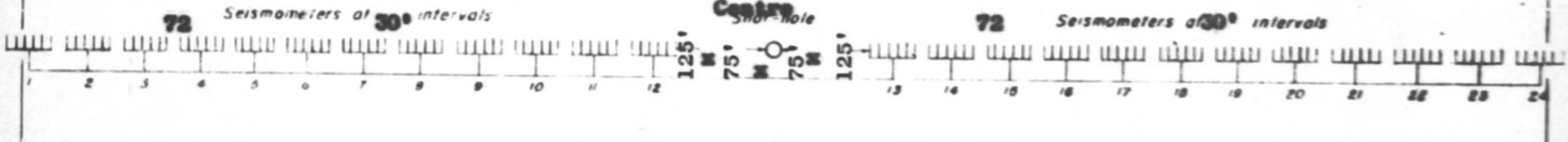
The data that appears on the subsurface maps are vertical two-way times between an arbitrary reference plane and the particular horizon mapped.

Respectfully submitted:

PAN AMERICAN PETROLEUM CORPORATION

By: M. A. Knock

M. A. Knock,
District Geophysicist.



Three-hole patterns, holes drilled 75' apart.

Party United #40

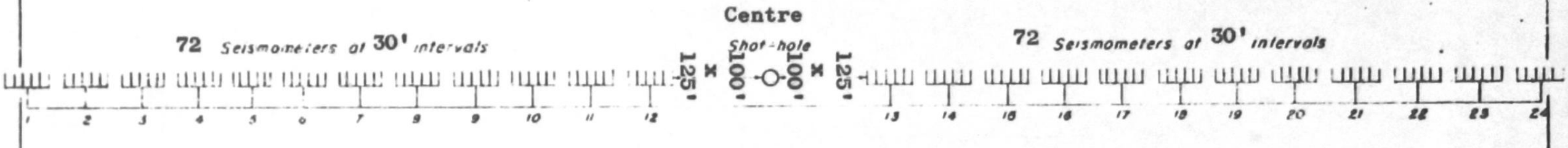
Area Island River

Permits 2676, 2678-2682, 2684-2691
2696, 2698-2700

Spread Length - 3025'

Period - Dec./60 - March/61

Figure #1



Three-hole patterns, holes drilled 100' apart.

Period: Feb-March., 1962
Party United #45
Area: Island River
Permits: 2690,2691,2698-2700,2705,2706
2709
Spread Length: 3050'

Figure #2

120° 00' 00"
119° 52' 30"
119° 45' 00"
119° 37' 30"
119° 30' 00"
60° 30' 00"
60° 20' 00"

P 2687
Project 326
P 2686
Project 136
Project 332
Project 138

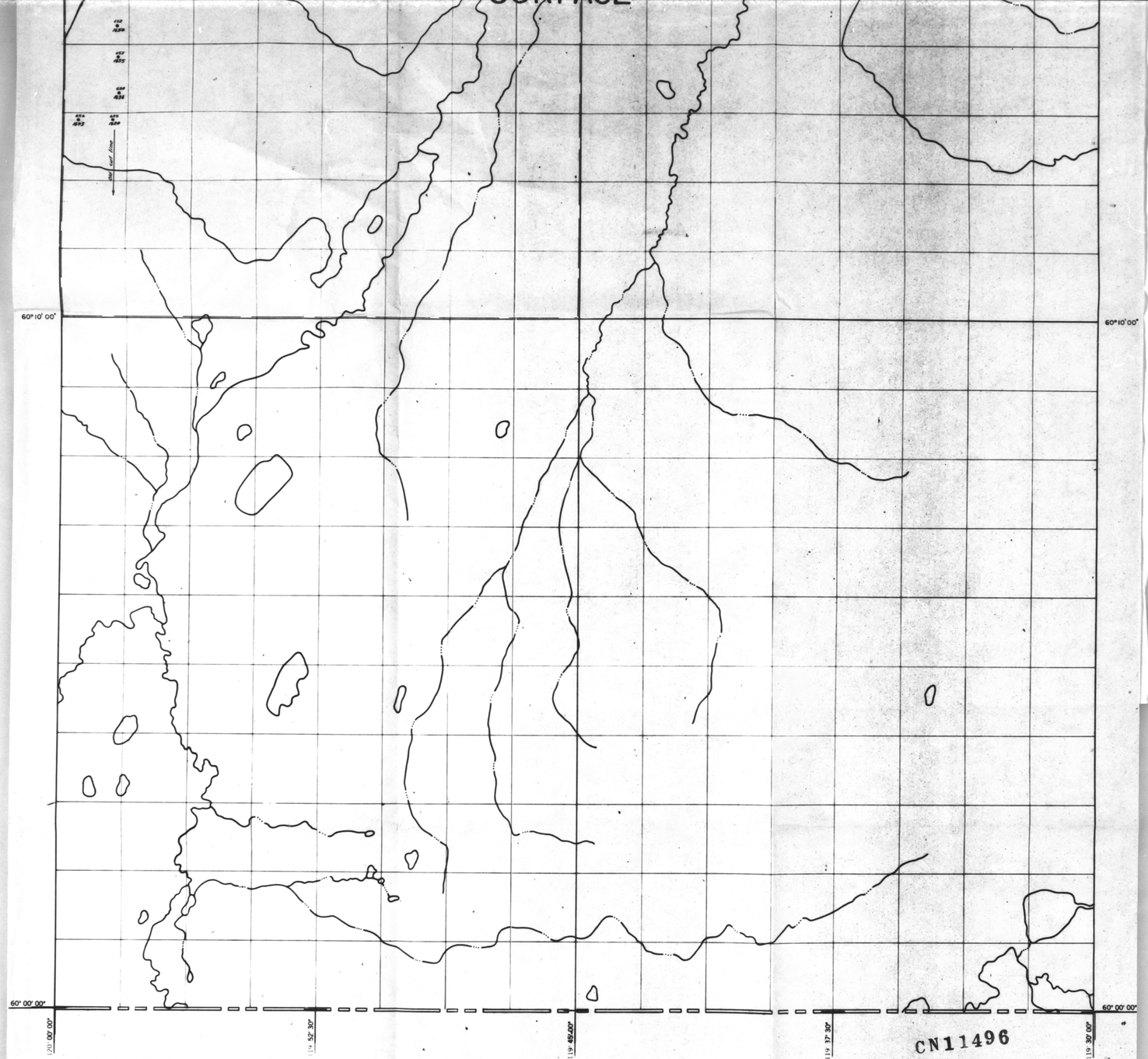
Muskeg
Fairly Heavy
Gravel and sand drilling
Timber
Very Steep Hills and Coulees
Fairly
Heavy
Timber
Flat
Swampy
Boggy
Gravel and Boulder drilling

2000
1800
1600
1400
1200
1300

U-40-105
U-40-106
U-40-107
U-40-108
U-40-109
U-40-110
U-40-118

CAMP 3
CAMP 15
CAMP 19
CAMP 2

Previously cut line (624 642)
Poor crossing
Good crossing sharp steep bank
Deep Gorge with steep banks
Good crossing sharp steep bank
Good crossing ground thaw
Good crossing sharp steep bank
Good crossing sharp steep bank
Good crossing sharp steep bank



CN11496

MAP EVALUATION

Qualification considers type of map or plan, amount of relief considered critical, quality of data and density of control.

(geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's	APPROX. LOC. ON MAP
DEC., 1960 - MAR., 1961	U-40	PAN AM.	LINES 104-110, 112-115	N.E., N.W. QUADS

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.

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

	DY	GO
	☐☐	☐☐
	☐☐	☐☐
	☐☐	☐☐
	☐☐	☐☐

This map checked by _____

(for Am. Geophysical / Geological)

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
- Conventional Survey
- C.V.L.
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

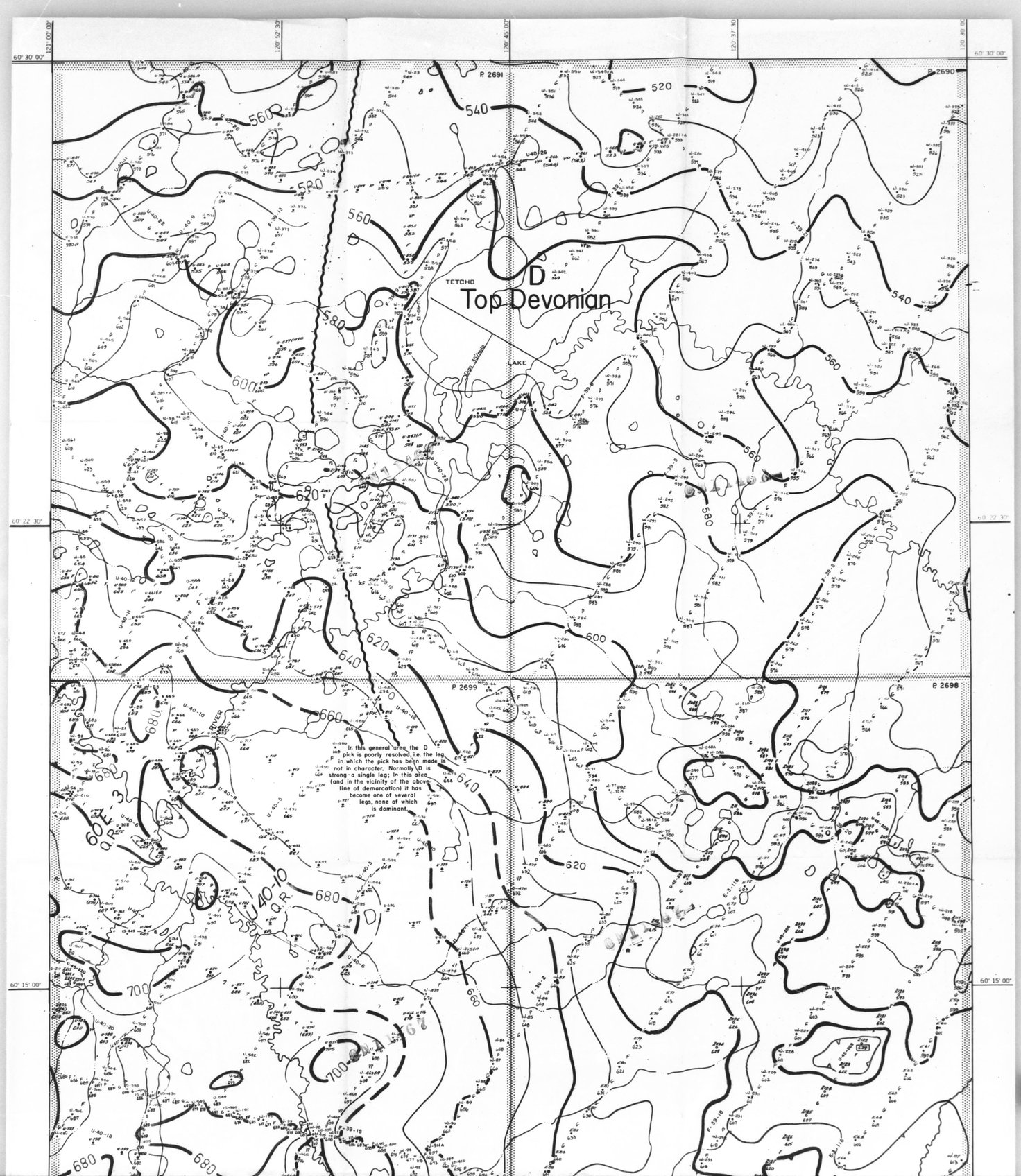
EDMONTON DISTRICT

AREA: Kakisa River	GRID: CM-22/SW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Surface	
TYPE OF MAP: Elevation	CONTOUR INT. 100'
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Dec., 1960, March, 1961	
INTERP BY: J. Harding	CO. AFFIL.: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	

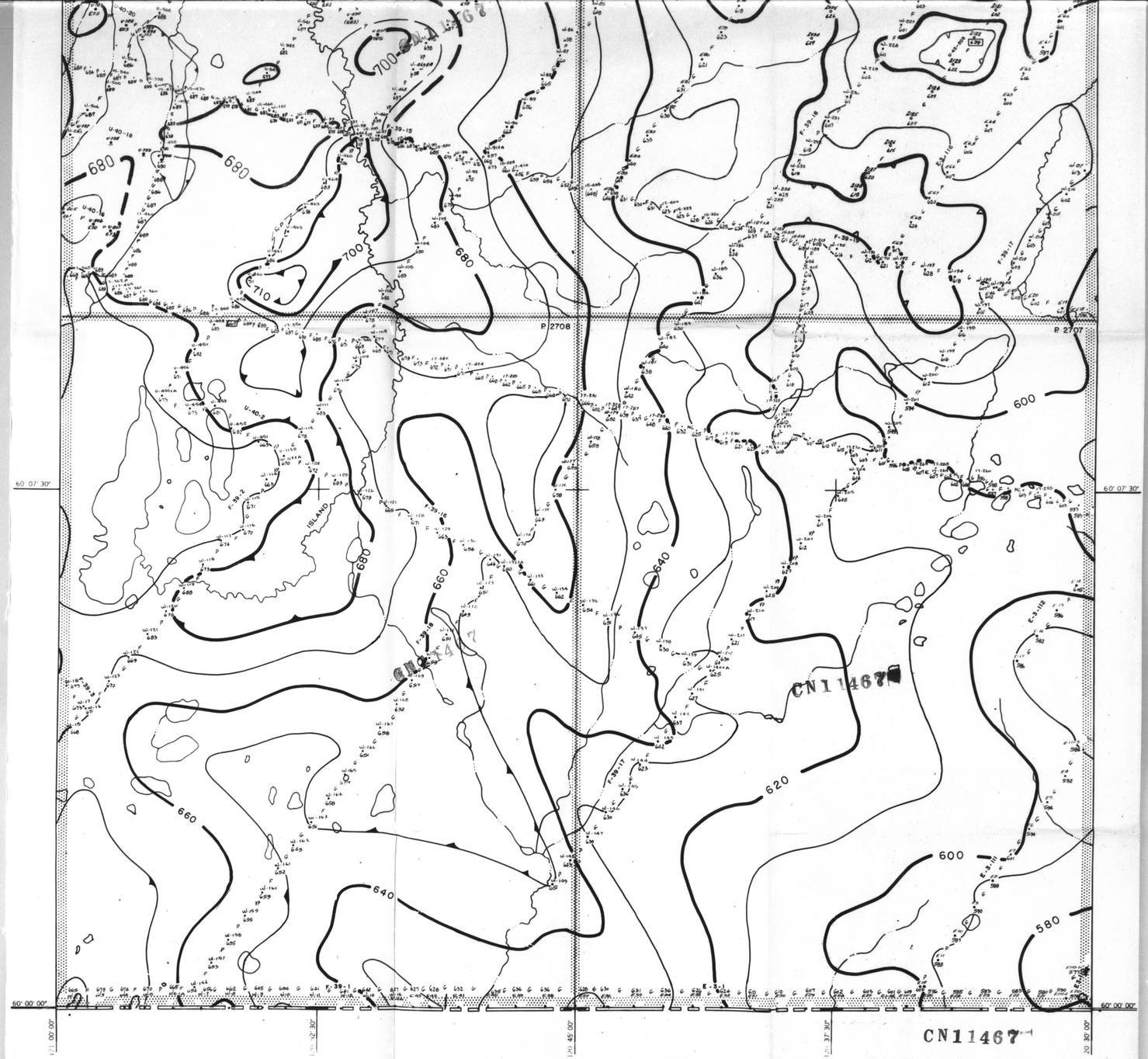
Lakes upon which plane landed to service crews.

GEOLOGICAL INT.:	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS:	

242


121° 00' 00"
120° 52' 30"
120° 45' 00"
120° 37' 30"
120° 30' 00"
60° 30' 00"
60° 22' 30"
60° 15' 00"
P 2691
P 2690
P 2699
P 2698
520
540
560
580
600
620
640
660
680
700
D
Top Devonian
TETCHO
LAKE
Dore River
U40-10
OR
In this general area the D pick is poorly resolved, i.e. the leg in which the pick has been made is not in character. Normally D is a strong - a single leg; in this area (and in the vicinity of the above line of demarcation) it has become one of several legs, none of which is dominant.

1 of 2



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, geophysical or geological:

- Geological data
- Reliable Geophysical Data
- Quantitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
JAN-FEB. 1954	IMP. 15 B 17	IMPERIAL	17-251-288,313-366,451-465,400-410,15-313-334 460-472
JAN-MAR. 1960	W.G.C. F-39	PAN. AM.	F-39-1-9, 12-21
" " "	U-40	" "	U-40-1-9,7,9,11
" " "	E.C.I.-3	" "	E-3-1,111,112,116,118
Jan.-Feb., 1961	United 40	Pan Am.	LINES 4,6,9,10-16, 18,20,22,24,26 (S.Pa U658-U923)
MAR. 1962	UNITED-45	PAN. AM.	LINES: 209, 209-209, 210-212

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX LOC ON MAP
W-60-32	OCT. 31/60	R.H. WHITT	W.G.C.	WHOLE GRID
E-61-17	May 10, 1961	J. Harding	Pan Am	N.W Quad.
E-62-25	MAY 7, 1962	J.G. JONES	PAN AM	N. QUADS.

This map replaces/supplements Registration No. _____ dated _____ which is to be destroyed/kept. (Refer transmittal) dated _____

Map distribution: ☐ Division ☐ General Office

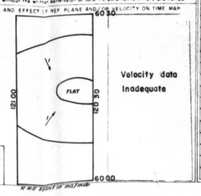
Other prints prepared this report

	DP	SC
	☐☐☐☐☐☐	☐☐☐☐☐☐

This map checked by _____ Pan Am. Geophysicist or Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND VELOCITY ON TIME MAP



PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA: Tetcho Lake	GRID: CM-21/SW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top of Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT: 10 ms.
SHOT BY: U-45	FOR: Pan Am.
INCL DATES: MAR. 1962	
INTERP BY: J.G. JONES	CO AFFIL: Pan Am.
REPORT No: E-62-25	DATE: MAY 7, 1962
REMARKS: Island River Area	
GEOLOGICAL INT	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS	

242

E01225

120° 30' 00"
120° 22' 30"
120° 15' 00"
120° 07' 30"
120° 00' 00"
60° 30' 00"
60° 22' 30"
60° 15' 00"

P 2689
P 2697
P 2696

500
520
540
460
440
480
520
550
540
560
600
610
580
560
500
520
540
560

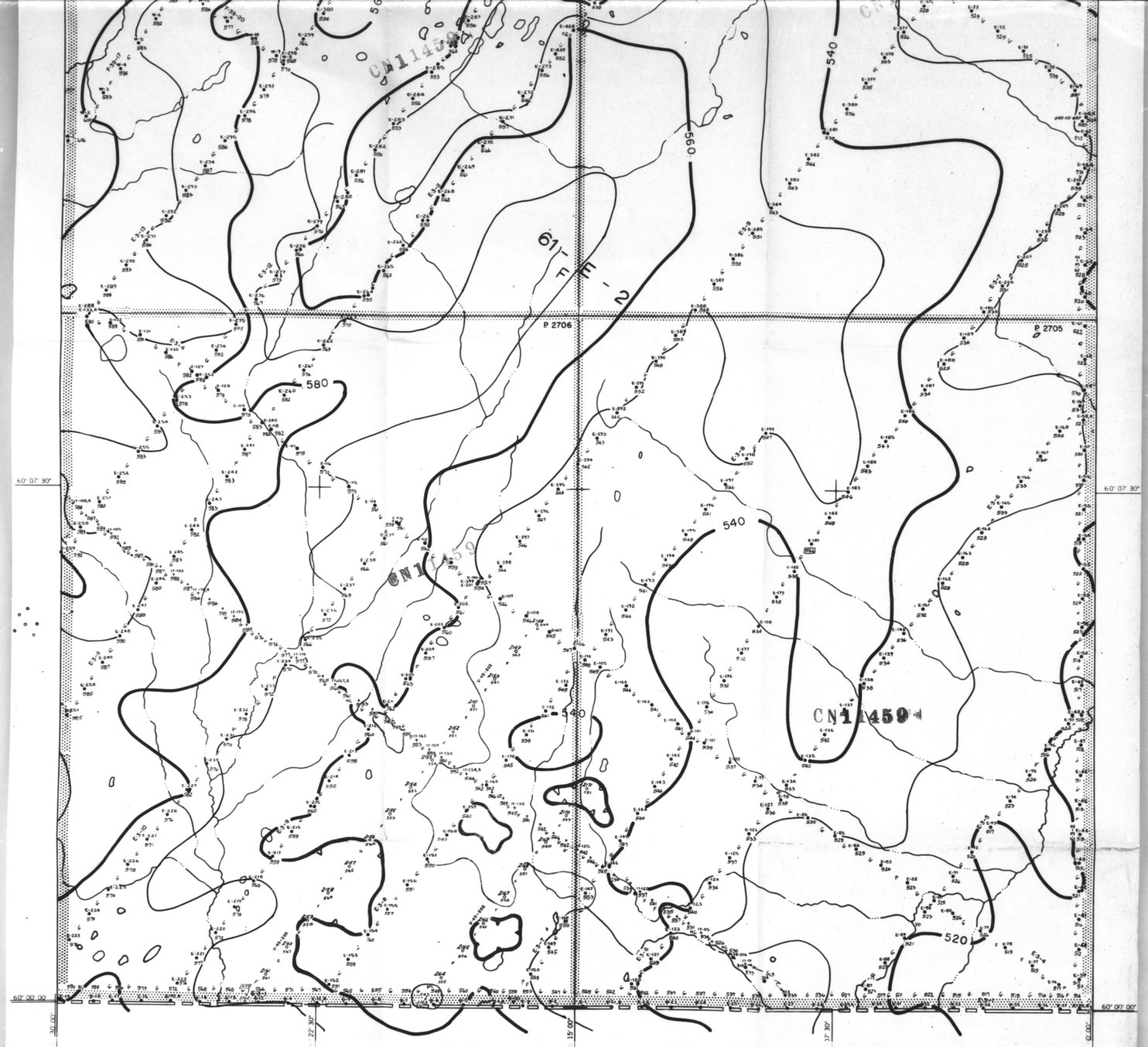
D
Top Devonian

TRAINOR LAKE

CN11459

U-40-108
U-40-109
U-40-110

1 of 2



MAP EVALUATION

Classification considers type, kind of data, amount of detail and density of control.

Classification of geological:

- Well data
- Possible (geophysical data)
- Questionable (no data, geophysical data)
- Interpretive (geophysical data)

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
Jan. 1954 -	Imperial	Imperial	17-III TO 138, 17-139 TO 188
JAN - MAR. 1960	E.C.I. 3	PAN AM	LINES E5-1 to 19
JAN - MAR 1960	W.G.C. F-39	PAN AM	LINES F 98 - A, B, 17, 18
DEC. 1960 - MAR. 1961	U.G.C. U-40	PAN AM	20, 21 LINES U-40 - 104, 106 to 110, 84, 85
MAR. 1962	U.G.C. U-45	PAN AM	LINES U-45 - 202, 203

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
3	Feb. 23/59	W. H. Rollans	WGC F-53	SW Quadrant
3	Feb. 23/59	H.W. Van Uchelen	Pan Am	SW Quadrant
NCD-1D	Apr. 19/60	V.G. Fitzer	E.C.I. 3	Whole Grid
NCD-1D	Apr. 19/60	R.H. Whitt	W.G.C. F-39	NW Quadrant
W-60-32	OCT. 31/60	R.H. WHITT	W.G.C. F-39	WHOLE GRID
W-60-32	OCT. 30/60	V.G. FITZER	E.C.I. 3	SW QUAD
E-61-17	MAY 10/61	J. HARDING	PAN AM	NE QUAD
E-62-28	MAY 17, 1962	J.G. JONES	PAN AM	SW QUAD

This map replaces/supersedes Registration No. _____ dated _____ which is to be destroyed/kept (Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared on this report

Surface

This map checked by _____

Velocity data Inadequate

LEGEND
- Conventional Survey
- C.V.S.
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA Trainor Lake — GRID CM-21/SE

PROVINCE Northwest Territories — SCALE 1"=4000'

HORIZON Top Devonian

TYPE OF MAP Time Structure — CONTOUR INT 10 ms.

SHOT BY U-45 — FOR Pan Am.

INCL DATES MAR. 1962

INTERP BY J.G. JONES — CO AFFIL Pan Am.

REPORT No. E-62-28 — DATE MAY 17, 1962

REMARKS Island River Area

CN11459

GEOLOGICAL INT. — DATE

FROM GEOPH REPORT No (s) — DATED

REMARKS

242

E01200

SURFACE ELEVATION

TROUT LAKE

TROUT LAKE

ISLAND

RIVER

Project 133

Project 132

P.1173

P.1174

P.1155

P.1156

P.1150

P.1149

+1700

+1800

+1900

+2000

+2100

+2200

+2300

1700

Muskeg

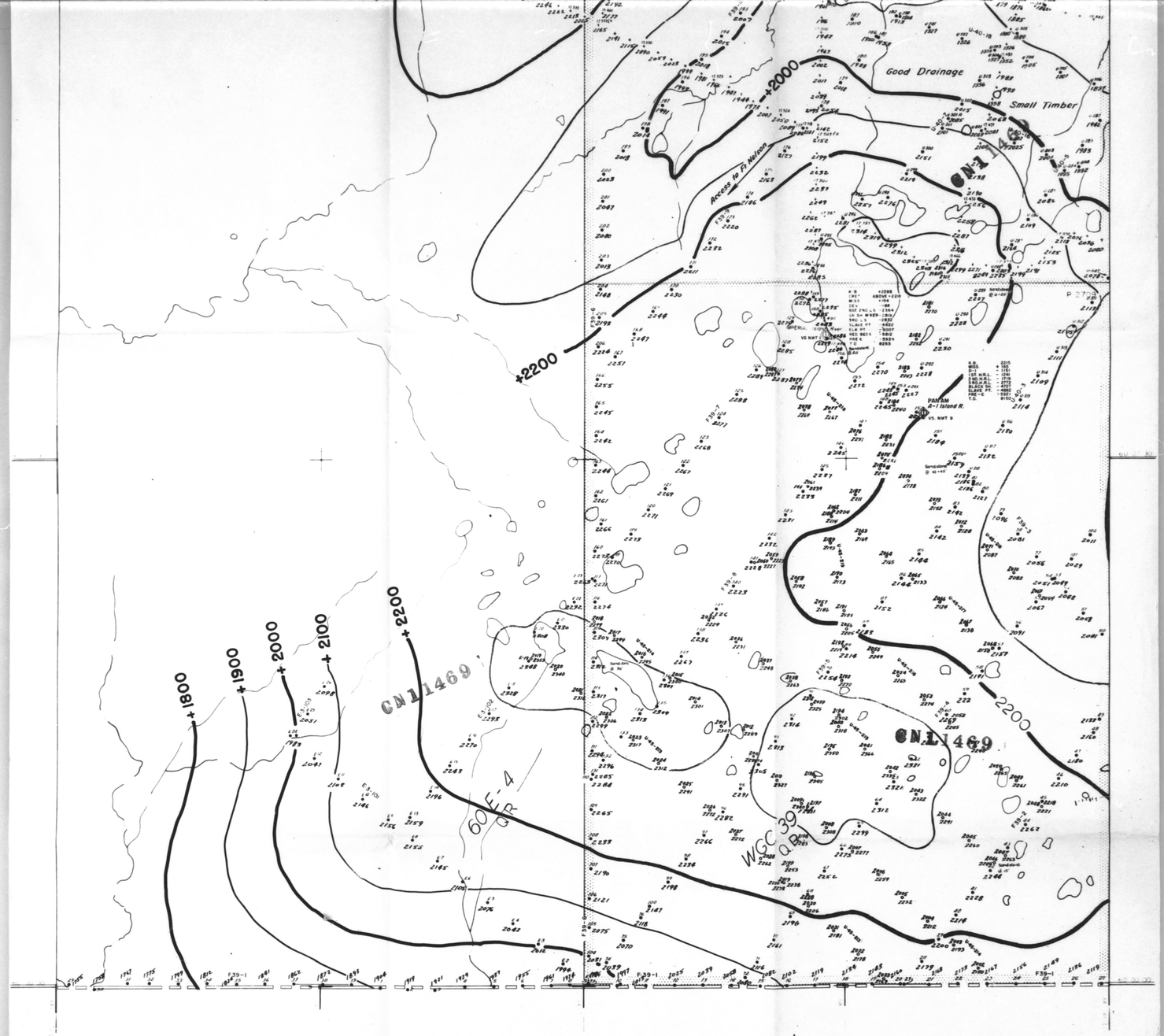
Good Drainage

Small Timber

CAMPS

PAN AM ET AL
A-1N. Island R.

1 of 2



MAP EVALUATION

SHOOTING HISTORY (Not in detail)

NO.	DATE	BY	CREW	LINE NO.	REPORT NO.
JAN. FEB. 1954		IMP. IS & I 7	IMPERIAL		3
JAN. FEB. MAR. 1960		WESTERN F-39	PAN AM	F-1 – F-41	NCO - 10
" " " "		UNITED U-40	PAN AM	U-3, U-4, U-5, U-7, U-41	E-60-27
" " " "		ESSO E-3	PAN AM	E-60, E-62, E-63	E-60-32
JAN. - FEB. 1961		UNITED 60	PAN AM	LINES 4, 6, 8, 9, 10, 12, 16, 17, 18, 20, 22	W-60-32
Feb Mar. 1962		UNITED 45	PAN AM	LINES 218 – 219, 220, 222	E-61-17
					E-62-28

INTERPRETIVE HISTORY

DATE	BY	FOR	APPROX. LOCATION ON MAP
FEB. 23, 1959	W.H. ROLLANS, H.W. VAN DICHELEN	WESTERN 53, PAN AM	121° 05', 60° 15'
APR. 19, 1960	R.H. WHITT, F.T. FOO	WESTERN 39, UNITED 40	SOUTH HALF
SEPT. 30, 1960	J. FRANDSHTON	UNITED	N.W. QUAD.
OCT. 31, 1960	R.H. WHITT	WESTERN	WHOLE GRID
MAY 10, 1961	J. HARDING	PAN AM	N.E. QUAD.
MAY 17, 1962	J.G. JONES	PAN AM	S.E. QUAD.

LEGEND

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA Island River — GRID CM-20/SE
PROVINCE Northwest Territories — SCALE 1" = 4000'
HORIZON Surface
TYPE OF MAP Elevation — CONTOUR INT. 100'
SHOT BY U-45 — FOR Pan Am
SHOOTING DATES FEB. MAR. 1962
INTERPRETED BY J. G. JONES — CO. APPR. Pan Am
REPORT NO. E-62-28 — DATE May 17, 1962
REMARKS Island River Area

GEOLOGICAL INT.
FROM GEOPH. REPORT NO.(S)
REMARKS

CN11469

CN11469

242

121° 22' 30"

121° 15' 00"

121° 07' 30"

121° 00' 00"

61° 00' 00"

60° 52' 30"

60° 45' 00"

POPLAR RIVER

TROUT RIVER

TROUT

340

360

D
TOP OF DEVONIAN
10MS ≅ 45'

TROUT

460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610

U40-18 U40-8 U40-15

340 360 380 400 420 440 460 480 500 520 540

P 2676

60° 37' 30"

CN11479

LAKE

T 133 N

T 132 N

R 18 W

60° 30' 00"

121° 22' 30" 121° 15' 00" 121° 07' 30" 121° 00' 00"

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	SP. AND/OR LINE No's
Mar. 1959	United 40	Pan Am	LINES 9, 12, 14
Mar. 1960	Western 39	Pan Am	LINES 21, 23, 27
JAN.-FEB., 1961	UNITED 40	PAN AM.	LINES 19, 21, 22, 23, 26, 30

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX. LOC. ON MAP
Final	May 29/59	G.E. Longhee	United 40	121°26', 60°35'
NCD-ID	Apr. 19/60	R.H. Whitt	Western 39	121°03', 60°35'
E-60-27	Oct. 15/60	C.J. Frankovitch	United 40	121°28' 60°35'
W-60-32	OCT. 31/60	R.H. WHITT	W.G.C. 39	21°28 60°35
E-61-17	May/10, 1961	J. Harding	Pan Am.	S. E. Quad.

This map replaces/supersedes Registration No. _____ dated _____ which is to be destroyed/kept (Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared this report: Surface

This map checked by _____ Pan Am Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
- Conventional Survey
- C.V.L.
- Synthetic Record
- Computed Velocity

Velocity data inadequate

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
NORTH CANADIAN DISTRICT

AREA: Trout Lake	GRID: OM-20/NE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top of Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Jan.-Feb., 1961	
INTERP BY: J. Harding	CO AFFIL: Pan Am.
REPORT No. E-61-17 Final	DATE May 10, 1961
REMARKS: Island River Area	
CN11479	
GEOLOGICAL INT:	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS	

242

120° 22' 30"
120° 15' 00"
120° 07' 30"
120° 00' 00"
61° 00' 00"
60° 50' 00"
TROUT RIVER
BRIGGS Trout River 4
BRIGGS Trout River 6
BRIGGS Trout River 2
BRIGGS Trout River 3
10
80
71
D
Top Devonian

D
Top Devonian

P. 2682 | P. 2681

60°40' 00"

T 133 N

T 132 N

60° 30' 00"

R14W | R13W | R12W

120° 22' 30" | 120° 15' 00" | 120° 07' 30" | 120° 00' 00"

CN11442

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

——— — ——— Geological data
——————— Reliable Geophysical Data
— — — — Qualitatively Reliable Geophysical data
- - - - - - Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
MARCH, 1960	E.C.L.-3	PAN AM	LINES E-14, E-19
MARCH, 1960	W.G.C. F-39	PAN AM	LINES 4, 5, 8, 22
FEB., 1961	U.G.C. U-40	PAN AM	LINES 100, 102, 103

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
W-60-22	OCT. 31, 1960	R.H. WHITT	W.G.C.	S.W. QUAD.
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	SOUTH QUADS.

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

This map checked by _____
Pan Am. Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP

LEGEND
o Conventional Survey
⊕ C.V.L.
◎ Synthetic Record
X Computed Velocity

Velocity data inadequate

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

AREA: North Trainor Lake	GRID: CM-21/NE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Feb., 1961	
INTERP. BY: J. Harding	CO. AFFIL: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	

CN11442

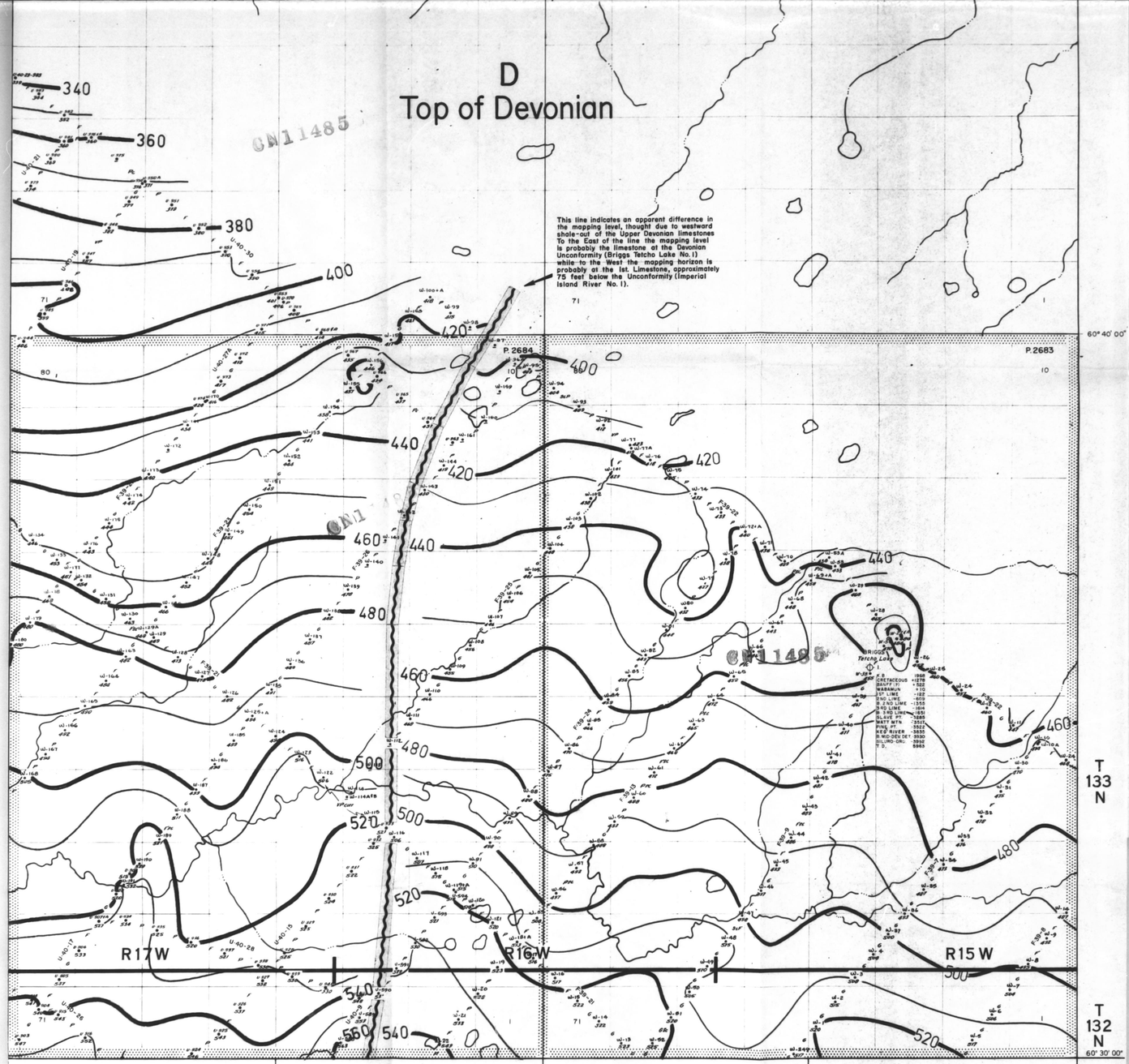
GEOLOGICAL INT: DATE
FROM GEOPH REPORT No.(s) DATED
REMARKS:

E01258

242

120° 52' 30"
120° 45' 00"
120° 37' 30"
120° 30' 00"
61° 00' 00"
60° 50' 00"
80
10
71
1
TROUT
RIVER
BRIGGS
Trout River
5
BRIGGS
Trout River
1
Dip 30° SW
340
360
D
Top of Devonian
GM11485
1 of 2

D
Top of Devonian



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	SP. AND/OR LINE No's
MARCH, 1960	U.S.C. U-40	PAN AM	LINE U-9
MARCH, 1960	W.S.C. F-39	PAN AM	LINES 7-9, 13, 21-27
JAN - FEB., 1961	U.S.C. U-40	PAN AM	LINES 15, 17, 19, 21, 23, 25, 27A, 28, 30

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
W-60-32	OCT. 31, 1960	R. H. WHITT	W. G. C.	SOUTH QUADS
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	S.W. QUAD.

This map replaces/supplements Registration No. _____ dated _____ which is to be destroyed/kept (Refer Instruction) dated _____

Map distribution: ☐ Division ☐ General Office

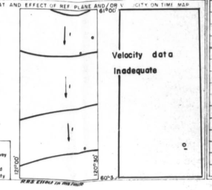
Other maps prepared this report

	Div.	G.O.
Surface	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

This map checked by _____ Pan Am. Geophysicist / Geologist

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VELOCITY PLOT AND EFFECT OF REF. PLANE AND/OR DATUM CUTS ON TIME MAP



PAN AMERICAN PETROLEUM CORPORATION

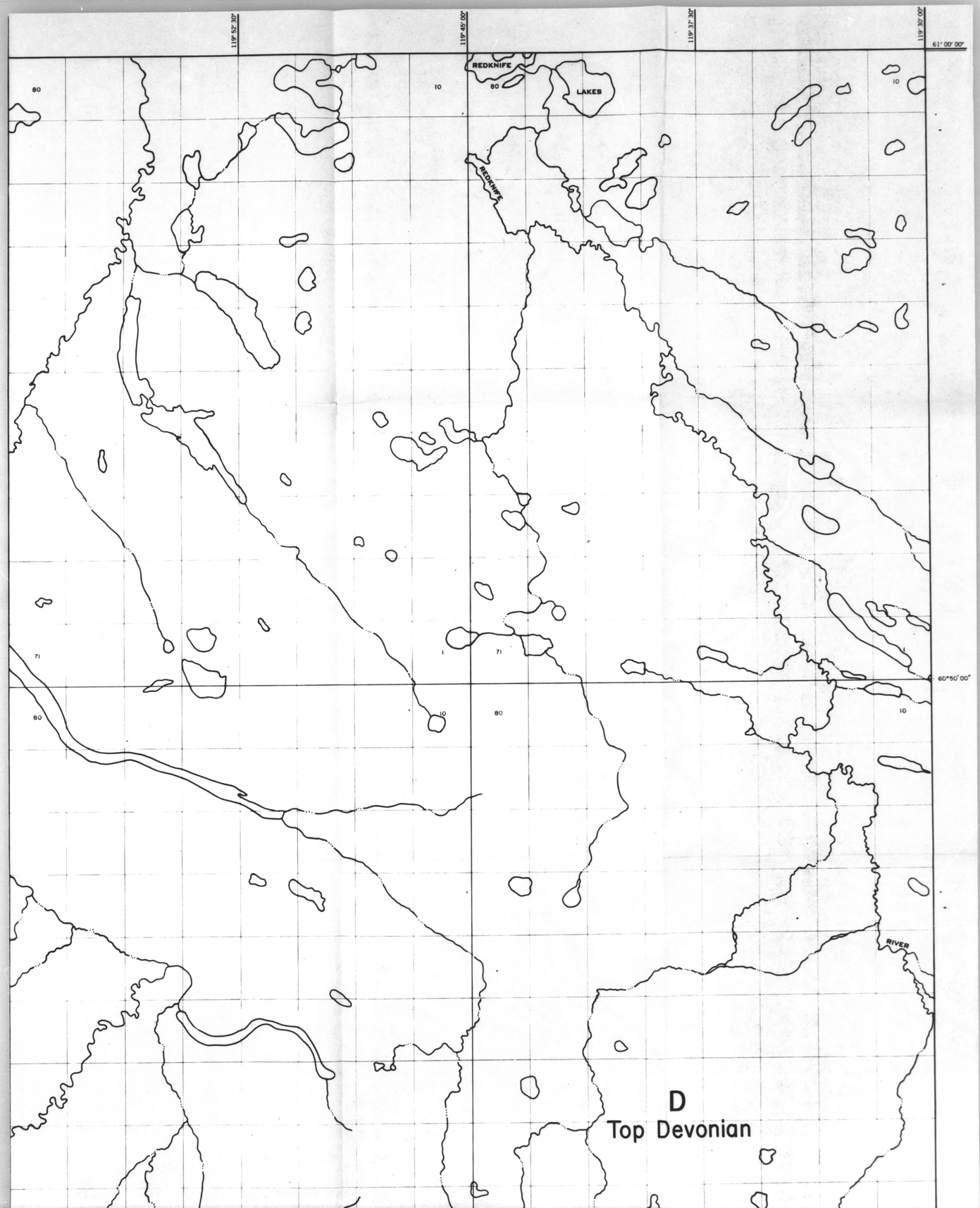
CANADIAN DIVISION

EDMONTON DISTRICT

AREA: North Tetcho Lake	GRID: CM - 21/NW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top of Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Jan. - Feb., 1961	
INTERP BY: J. Harding	CO. AFFIL: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	
GEOLOGICAL INT:	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS	

CN11485

2 of 2


119°52'30"
119°45'00"
119°37'30"
119°30'00"
61°00'00"
60°50'00"
REDKNIFE
LAKES
REDKNIFE
RIVER
80
10
71
D
Top Devonian

1 of 2

D
Top Devonian

60° 40' 00"

P 2680 | P 2679

RIVER

Dip 35/mile

REDKNIFE

320 340 360 380 400 310

U-40-100 U-40-102 U-40-103 U-40-104 U-40-114

CN 144 98 CN 144 99

R11W R10W R9W

T 133 N

T 132 N

60° 30' 00"

119° 52' 30" 119° 45' 00" 119° 37' 30" 119° 30' 00"

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

Geological data
Reliable Geophysical Data
Qualitatively Reliable Geophysical data
Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
FEB., MAR., 1961	U.O.C. U-40	PAN AM.	LINES 101,102-104,113,114

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL.	APPROX. LOC. ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	SOUTH QUADS.

This map replaces/supplements Registration No. _____ dated _____, which is to be destroyed/kept (Refer transmittal dated _____)

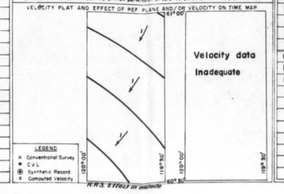
Map distribution: ☐ Division ☐ General Office

Other maps prepared this report

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VELOCITY PLAT AND EFFECT OF REF. PLANE AND/OR VELOCITY ON TIME MAP.



PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION
EDMONTON DISTRICT

AREA:	Red Knife Lakes	GRID	CM-22/NW
PROVINCE:	Northwest Territories	SCALE:	1" = 4000'
HORIZON:	D Top Devonian		
TYPE OF MAP:	Time Structure	CONTOUR INT.	10 ms.
SHOT BY:	U-40	FOR:	Pan Am.
INCL. DATES:	Feb., March, 1961		
INTERP BY:	J. Harding	CO. AFFIL.	Pan Am.
REPORT No.	E-61-17	DATED	May 10, 1961
REMARKS	Island River Area		
GEOLOGICAL INT:		DATE	
FROM GEOPH REPORT No.(s)		DATED	
REMARKS			

242

119° 22' 30"
119° 15' 00"
119° 07' 30"
119° 00' 00"
61° 00' 00"
60° 50' 00"
80
10
80
10
71
1
71
1
80
10
80
10
WILKINSON
Redknife River
1
WILKINSON
Redknife River
2
RIVER
BOUVIER
RIVER

1 of 2

RIVER

REDKNIFE RIVER

P. 2678

KAKIBA

RIVER

D
Top Devonian

60° 40' 00"

CN11451

CN11451

R9W

R8W

R7W

320

U-40-104

T
133
N

T
132
N

60° 30' 00"

119° 22' 30"

119° 15' 00"

119° 07' 30"

119° 00' 00"

MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control, (geophysical or geological).

- Geological data
- Reliable Geophysical Data
- Quantitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
MARCH, 1961	UNITED 40	PAN AM.	LINE 104 (SP's 1290-1234)

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO AFFIL.	APPROX LOC ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	S.W. COR.

This map replaces/supplements Registration No. _____ dated _____, which is to be destroyed/kept
(Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office

Other maps prepared on this report

This map checked by _____
Pan Am. Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF KEY PLANE BED OR VELOCITY ON TIME MAP

LEGEND
- Conventional Survey
- CVL
- Synthetic Record
- Computed Velocity

Velocity data inadequate

PAN AMERICAN PETROLEUM CORPORATION
CANADIAN DIVISION
EDMONTON DISTRICT

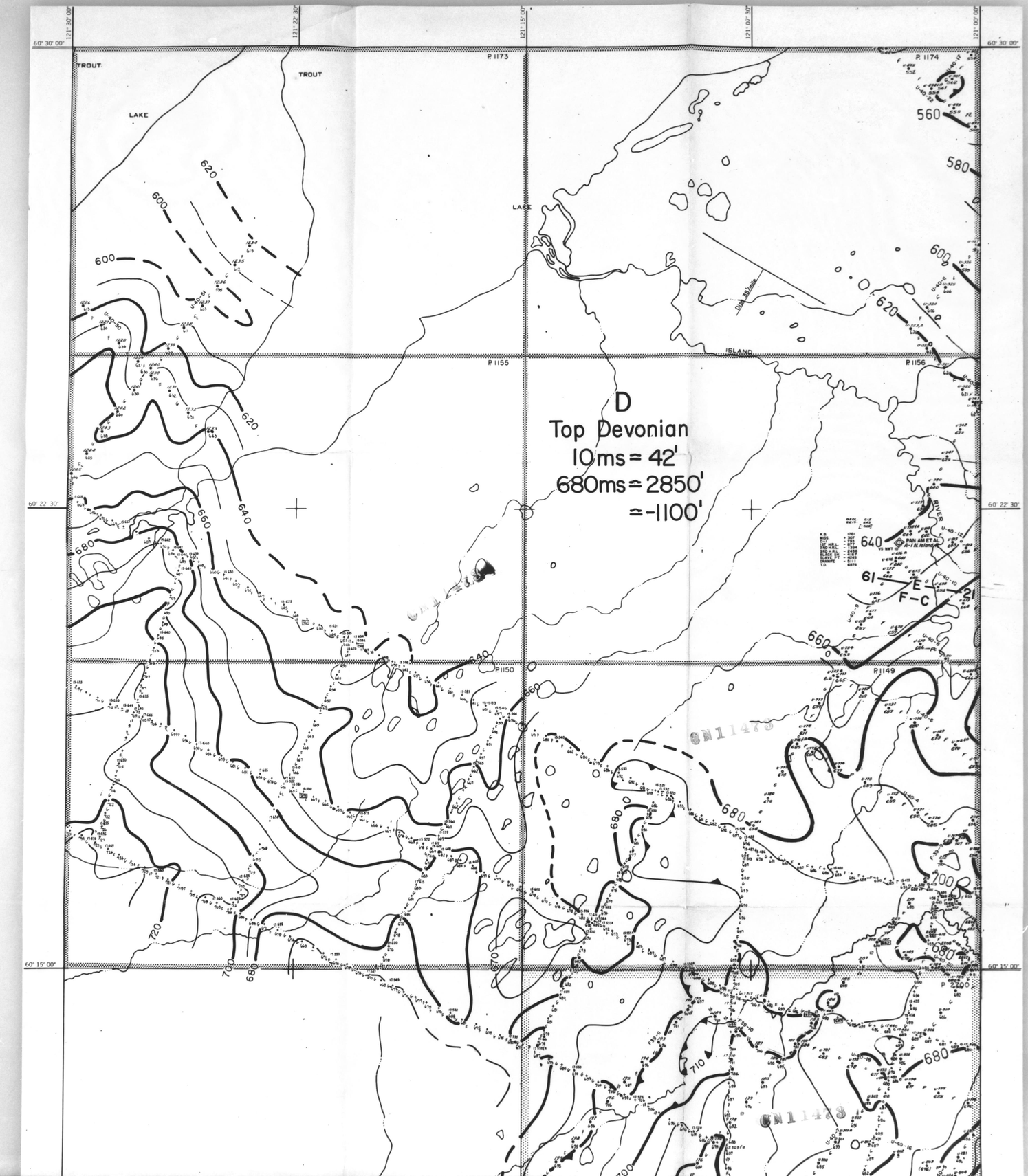
AREA:	West Robbit Lake
GRID:	CM-22/NE
PROVINCE:	Northwest Territories
SCALE:	1 : 4000'
HORIZON:	D Top Devonian
TYPE OF MAP:	Time Structure
CONTOUR INT:	10 ms.
SHOT BY:	U-40
FOR:	Pan Am.
INCL. DATES:	March, 1961
INTERP BY:	J. Harding
CO AFFIL:	Pan Am.
REPORT No.	E-61-17 Final
DATE	May 10, 1961
REMARKS	Island River Area

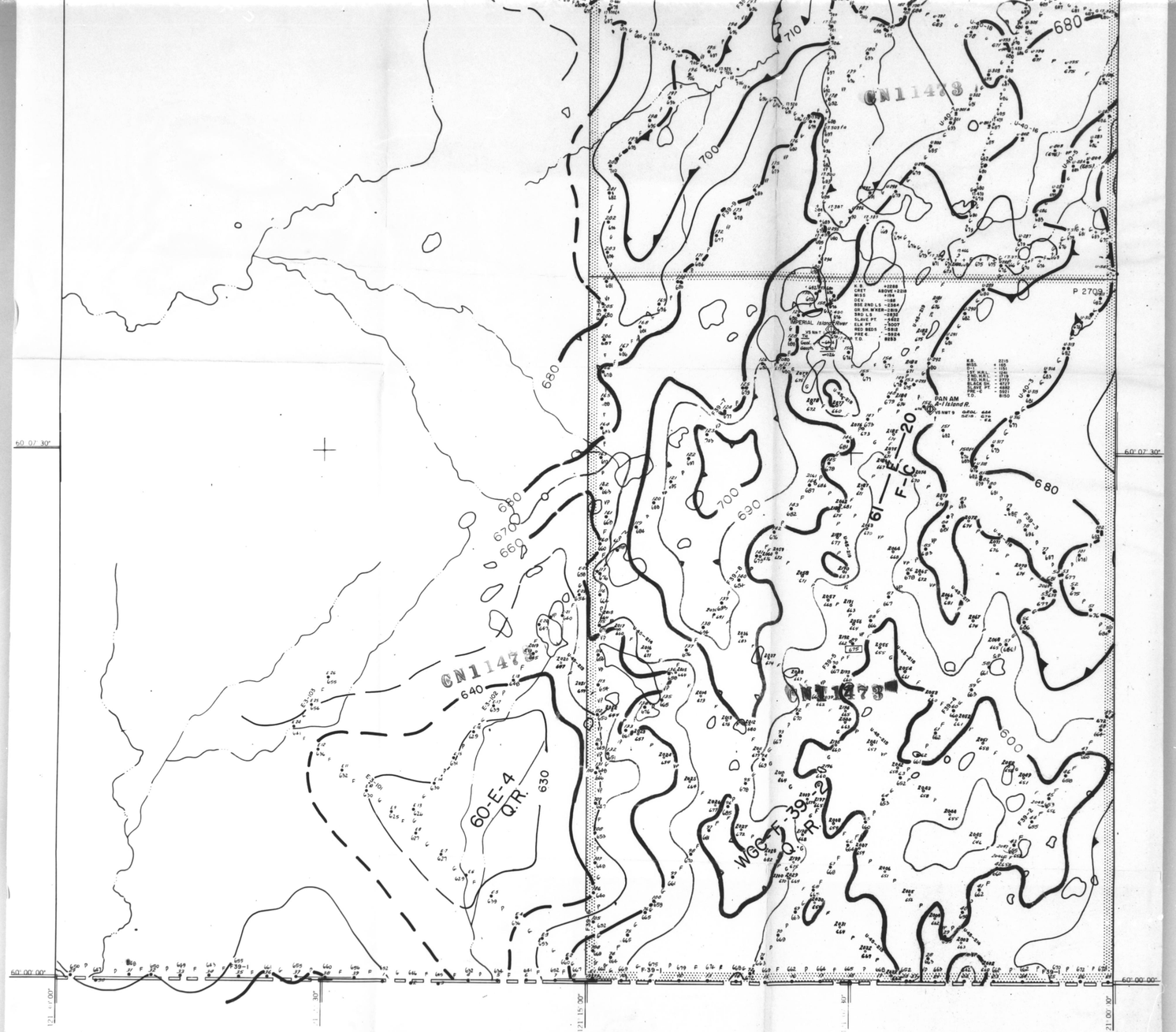
CN11451

GEOLOGICAL INT: _____ DATE _____
FROM GEOPH REPORT No.(s) _____ DATED _____
REMARKS

242

E01201


D
Top Devonian
10ms = 42'
680ms = 2850'
= -1100'
TROUT
LAKE
TROUT
LAKE
ISLAND
RIVER
P.1173
P.1174
P.1155
P.1156
P.1150
P.1149
121° 30' 00"
121° 22' 30"
121° 15' 00"
121° 07' 30"
121° 00' 00"
60° 30' 00"
60° 22' 30"
60° 15' 00"
560
580
600
620
640
660
680
700
710
720
PAN AM ET AL
61-E-21
F-C
GN1147
GN1148



MAP EVALUATION

Qualification considers type of map or play, amount of relief considered critical, quality of data and density of control.

(geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL. DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
JAN. FEB. 1954	IMP. 1587	IMPERIAL	
JAN-MAR 1960	W.G.C. F-39	PAN. AM.	F-39-1-11
" " "	UNITED U-40	" "	U-3,4,5,7,11
" " "	E.G.I. E-3	" "	E-101-103
JAN - FEB. 1961	UNITED 40	PAN. AM.	LINES 5,6,8,9,10,13, 14,15,16,20, 318 - 318, 220, 222
FEB. MAR 1962	UNITED 45	PAN. AM.	

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP.	CO. AFFIL.	APPROX. LOC. ON MAP
9	FEB. 23, 1959	W. H. ROLLANS, H. W. VAN UCHELEN	WESTERN 65, PAN AM	121°05', 60°14'
NCO-10	APR. 19, 1960	R. R. WHITT, F. T. FOO, V. G. FITZER	WESTERN 39, UNITED 40, E.G.I. 3	SOUTH HALF NW QUADRANT
E-60-27	SEPT. 30, 1960	J. FRANKOVITCH	UNITED	N.W. QUAD.
W-60-32	OCT. 31, 1960	R. H. WHITT	WESTERN	WHOLE GRID
E-61-17	MAY 10, 1961	J. HARDING	PAN AM	N. E. QUAD.
E-62-28	MAY 17, 1962	J. G. JONES	PAN AM	S. E. QUAD.

This map replaces/supplements Registration No. _____ dated _____ which is to be destroyed/kept (Refer transmittal dated _____)

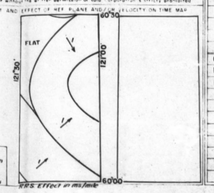
Map distribution: ☐ Division ☐ General Office

Other maps prepared this report: Div. SUB

This map marked by _____ Pan Am Geophysicist / Geologist

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VELOCITY PLOT AND EFFECT OF KEY PLANE AND VELOCITY ON TIME MAP



LEGEND
- ○ Conventional Survey
- ● C.V.I.
- ◎ Synthetic Record
- ⊙ Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA: Island River	GRID CM-20/SE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: Top of Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-45	FOR: Pan Am.
INCL. DATES: Feb. Mar., 1962	
INTERP. BY: J. G. JONES	CO. AFFIL: Pan Am.
REPORT No: E-62-28	DATE: May 17, 1962
REMARKS: Island River Area	

GN11473

GEOLOGICAL INT. IN _____ DATE _____

FROM GEOPH. REPORT No.(s) _____ DATED _____

REMARKS

E01176

242

60° 30' 00"

119° 30' 00"

119° 22' 30"

119° 15' 00"

119° 07' 30"

119° 00' 00"

P 2685

80

10

71

1

320

340

360

U-40-105

U-40-110

CN11488

SHELL-MOBIL
Alexandra
O-6

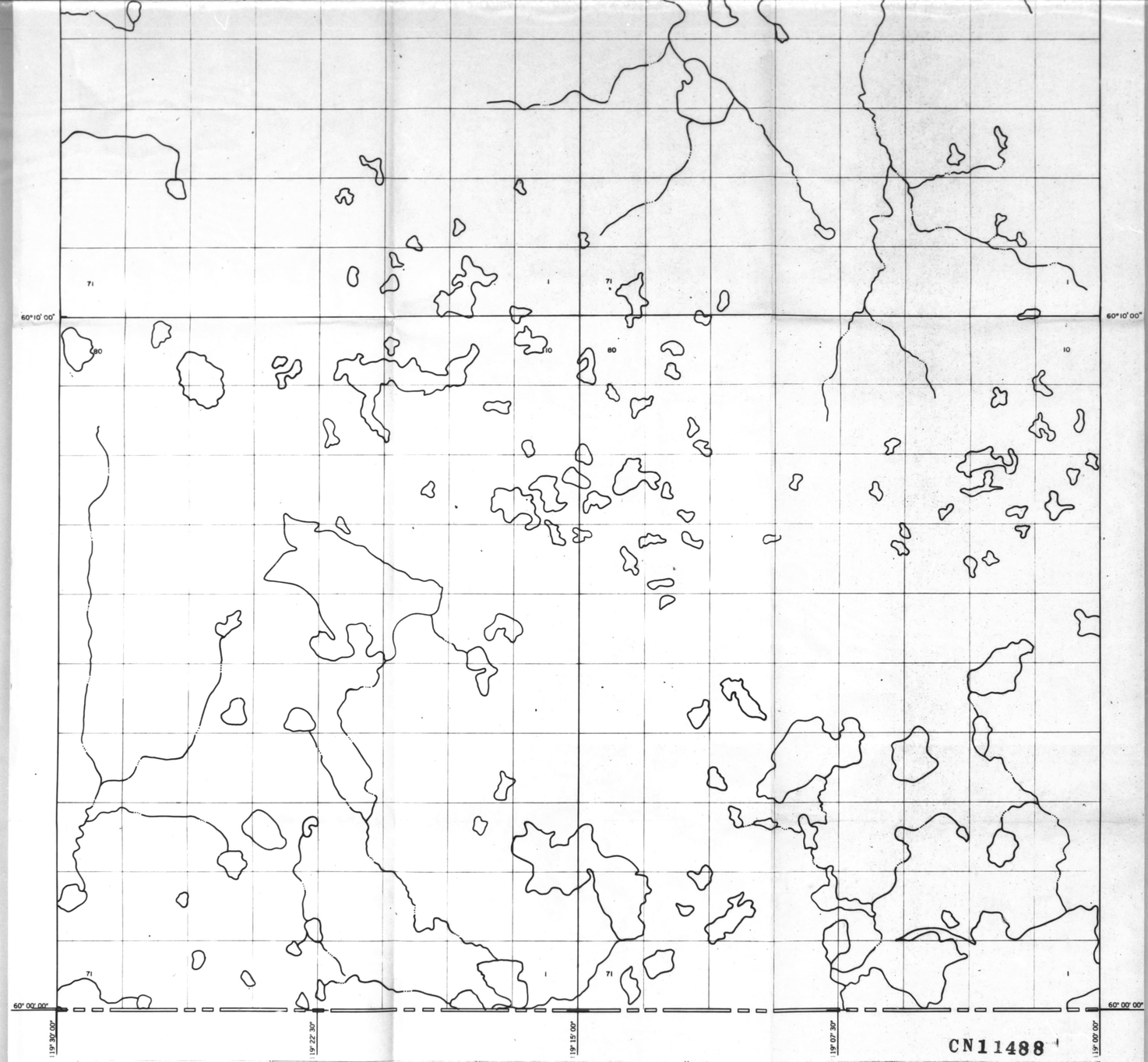
K.B.	+1026
TOP OF DRIFT	+822
BASE	+ 601
ESKIMAW	+ 329
DEVONIAN	+ 307
3RD LIME	- 1055
SLAVE PT.	- 2953
DOLOMITE	- 3253
QUARTZITE	- 3714
T.D.	5451

No tie
(Sonic log only
No check shots)

D
Top Devonian

60° 20' 00"

1 of 2



MAP EVALUATION

Qualification considers type of map or plot, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	S.P. AND/OR LINE No's
DEC., 1960 - MAR., 1961	U-40	PAN AM.	LINES 105 & 107-358-360, 110, 112

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX. LOC. ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	N.W. QUAD

This map replaces/supplements Registration No. ____ dated ____, which is to be destroyed/kept (Refer transmittal dated ____)

Map distribution: ☐ Division ☐ General Office

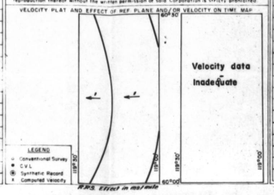
Other maps prepared this report: Surface

	Div.	GO
	☐	☐
	☐	☐
	☐	☐
	☐	☐

This map checked by ____ Pan Am. Geophysicist / Geologist

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VELOCITY PLAT AND EFFECT OF MEF PLANE AND/OR VELOCITY ON TIME MAP



PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

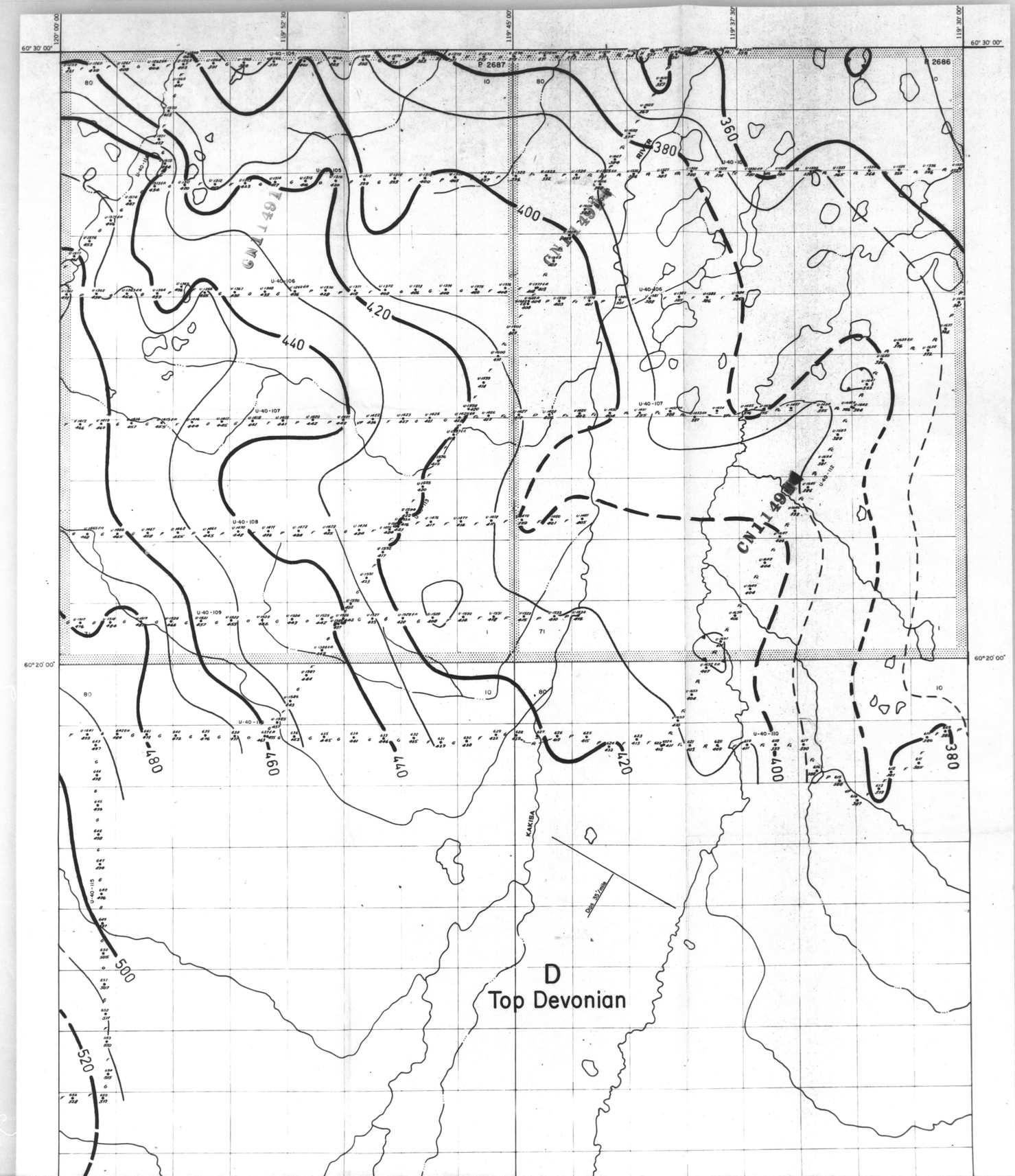
EDMONTON DISTRICT

AREA: East Kakisa River	GRID: CM-22/SE
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Dec, 1960 - March, 1961	
INTERP BY: J. Harding	CO. AFFIL: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	
GEOLOGICAL INT:	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS	

CN11488

242

E01276


120° 00' 00"
119° 52' 30"
119° 45' 00"
119° 37' 30"
119° 30' 00"
60° 30' 00"
60° 20' 00"
P 2687
P 2686
U-40-105
U-40-106
U-40-107
U-40-108
U-40-109
U-40-110
U-40-115
360
380
400
420
440
460
480
500
520
540
560
580
600
CN 1 491
CN 1 492
CN 1 493
KAKIBA
D
Top Devonian

1 of 2

Top Devonian

520

60° 10' 00"

60° 00' 00"

120° 00' 00"

114° 52' 30"

114° 45' 00"

114° 37' 30"

114° 30' 00"

CN11491

MAP EVALUATION

Qualification considers type of map or plot, amount of relief considered critical, quality of data and density of control, (geophysical or geological)

- Geological data
- Reliable Geophysical Data
- Qualitatively Reliable Geophysical data
- Unreliable Geophysical Data

RELIABLE

SHOOTING HISTORY (Not in detail)

INCL DATES	SHOT BY	SHOT FOR	SP AND/OR LINE No's
DEC. 1960 - MAR. 1961	U-40	PAN AM.	LINES 104-110, 112-115

INTERPRETIVE HISTORY

FINAL REPORT No.	DATE	INTERP	CO AFFIL	APPROX LOC ON MAP
E-61-17	MAY 10, 1961	J. HARDING	PAN AM.	NORTH QUADS.

This map replaces/supplements Registration No. _____ dated _____ which is to be destroyed/kept (Refer transmittal dated _____)

Map distribution: ☐ Division ☐ General Office

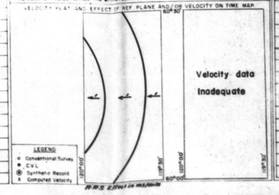
Other maps prepared this report: **Surface**

	SP	SS
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

This map checked by _____ Pan Am. Geophysicist / Geologist

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VELOCITY PLOT AND EFFECT OF DIP PLANE AND/OR VELOCITY ON TIME MAP



LEGEND
- Conventional Survey
- CVL
- Synthetic Record
- Computed Velocity

PAN AMERICAN PETROLEUM CORPORATION

CANADIAN DIVISION

EDMONTON DISTRICT

AREA: Kakisa River	GRID: CM-22/SW
PROVINCE: Northwest Territories	SCALE: 1" = 4000'
HORIZON: D Top Devonian	
TYPE OF MAP: Time Structure	CONTOUR INT. 10 ms.
SHOT BY: U-40	FOR: Pan Am.
INCL. DATES: Dec., 1960 - March, 1961	
INTERP. BY: J. Harding	CO. AFFIL.: Pan Am.
REPORT No. E-61-17 Final	DATE: May 10, 1961
REMARKS: Island River Area	
GEOLOGICAL INT:	DATE
FROM GEOPH REPORT No.(s)	DATED
REMARKS:	

2 of 2

E01268