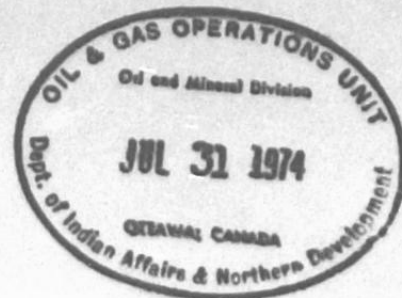


060-06-06-145



REPORT OF GEOPHYSICAL SURVEY

Conducted By

Northern Geophysical Company Ltd.

for

Amoco Canada Petroleum Company Ltd.

During the Period December 19, 1971 to January 16, 1972

In the Carcajou Ridge - Gibson Area of the District of MacKenzie
on Permit Numbers 4381, 4382, 4383, 3476, 3477 and 5232.

Prepared By

C.W. Allison
District Geophysicist

June 29, 1972

Submitted in support of application for credit, see Affidavit made by

_____ of _____

and in accordance with work obligations.

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Locality Map	2
Statistical Data	3
Field Procedures	6
Data Processing	7
Results and Interpretation	8

Surface Elevation Map	In Pocket
Cherty Unit Structure Map	In Pocket

INTRODUCTION

A reflection seismic survey was conducted in the Carcajou Ridge - Gibson area during the winter of 1971 - 1972 by Northern Geophysical Ltd. Party #3 on behalf of Amoco Canada Petroleum Company Ltd.

The survey was conducted in conjunction with agreements respecting permits 3476 and 3477 held by Chevron Standard Ltd. and permits 4381, 4382 and 4383 held by General Crude Oil Company and Trans Ocean Oil Canada Ltd.

STATISTICAL DATA

Dates:

Operations were conducted from December 19, 1971 through December 23, 1971 and from December 28, 1971 through January 16, 1972.

Production:

- 16.4 miles (320 shots) were surveyed to evaluate the lands controlled by General Crude and Trans Ocean;
- 48 miles (575 shots) were surveyed to evaluate the lands controlled by Chevron Standard;
- Average daily production was 2.8 miles/day for 23 days worked.

Equipment (Vehicles):

- 1 Party Manager's vehicle (wheeled)
- 1 Recording vehicle (tracked)
- 2 Cable vehicles (tracked)
- 1 Shooting vehicle (tracked)
- 2 Survey vehicles (tracked)
- 1 Supply vehicle (tracked)
- 1 Camp water vehicle (tracked)
- 5 Drill vehicles (tracked)
- 1 Drill shift vehicle (tracked)
- 1 Mobile camp (3 units) track and sleigh mounted
- 3 Bulldozers

Equipment (Geophysical):

24 Channel PT 800 digital recording instruments
100 Strings of Mark L-10 Hz geophones (9 per string)
25 x 4 Knot sections of line cables

Personnel:

1 Party Manager
1 Computer Clerk
1 Observer
1 Junior Observer
1 Shooter
1 Shooter's Helper
2 Reel truck drivers
4 Recording Helpers
1 Surveyor
1 Surveyor - Computer
1 Rodman
1 Mechanic
1 Supplyman - Mechanic's Helper
1 Supplyman
5 Drillers
5 Drillers' Helpers
1 Cook
1 Camp Attendant

Navigation:

The survey was conducted using theodolites and steel tapes and was tied to the government survey monument on top of Carcajou Ridge.

Conditions:

A later than usual "freeze-up" delayed access to the area.

FIELD PROCEDURES

For Lines CXF 1, 2 and 3:

- Fold: 6
- Group interval: 110'
- Shot Point Interval: 220'
- Symmetric Spreads
- 10 pound charges at 50' except where limestone encountered where 40 pound charges were used.

For Lines CXF 4 and CXG 1-8:

- Fold: 6
- Group Interval: 220'
- Shot Point Interval: 440'
- Symmetric Spreads
- 10 pound charges at 50'

DATA PROCESSING

The data processing was done through the facilities of Amoco Production Company Limited, Tulsa, Oklahoma, U.S.A.

Procedures applied were demultiplex and gain correct, move out and static corrections, filtering, and compositing.

DATA PROCESSING

The data processing was done through the facilities of Amoco Production Company Limited, Tulsa, Oklahoma, U.S.A.

Procedures applied were demultiplex and gain correct, move out and static corrections, filtering, and compositing.

RESULTS AND INTERPRETATION

Reflections from the Kee Scarp, Middle Devonian Carbonate, Cherty Unit, Base of Ordovician Carbonate, and Pre-Cambrian Unconformity could generally be correlated over the area with the exception of the southern end of lines CXG 3, 4, 5 and 6; the northern end of Lines CXF 1, 2 and 3 and all of Line CXF 4 where a deep pocket of low velocity material, including sand, caused a deterioration of data quality.

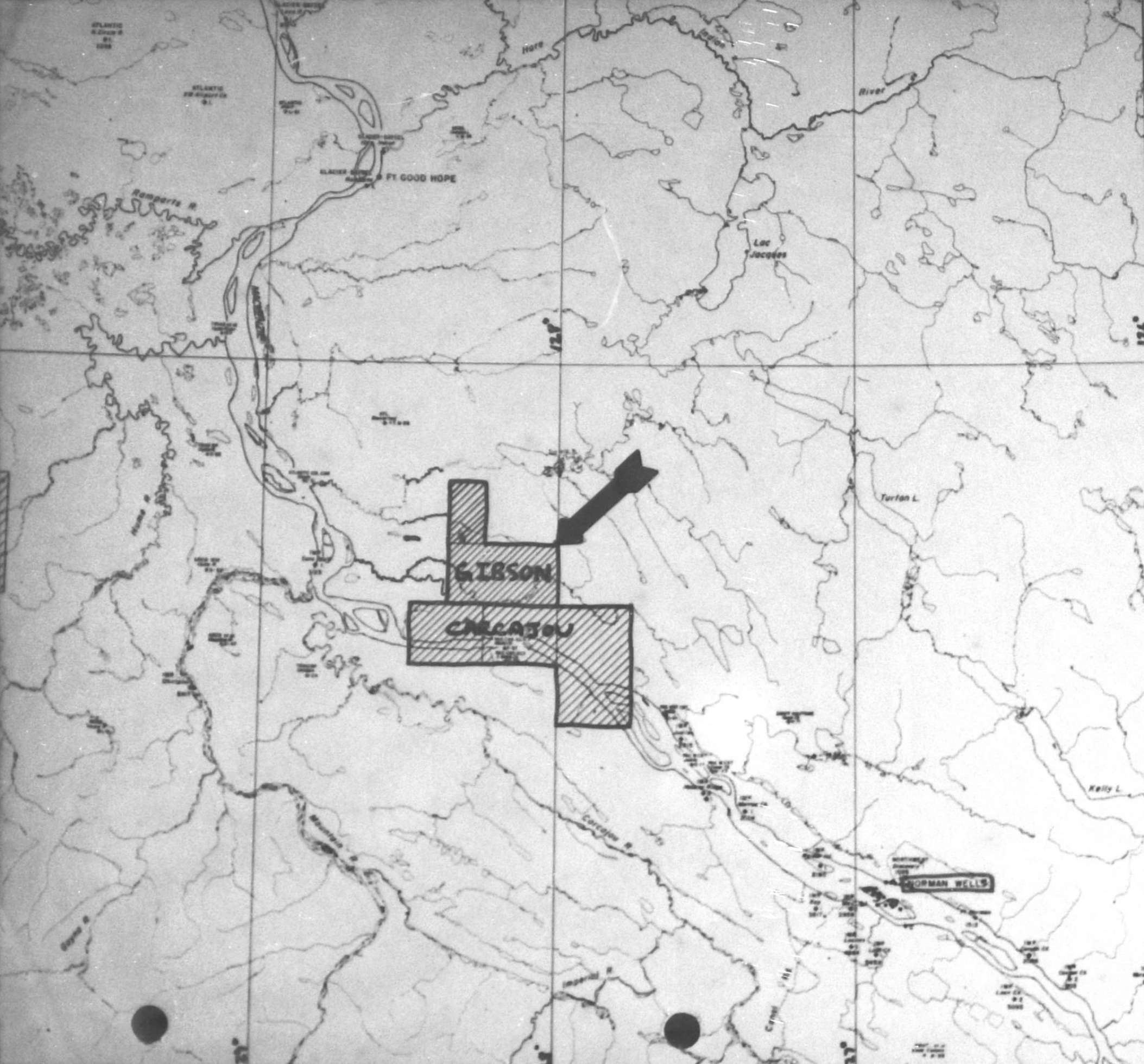
One minor broad uplift was mapped north of Carcajou Ridge on all horizons and this is shown on the enclosed map of the Cherty Unit.

Respectfully submitted,

AMOCO CANADA PETROLEUM COMPANY LTD.



C.W. Allison
District Geophysicist



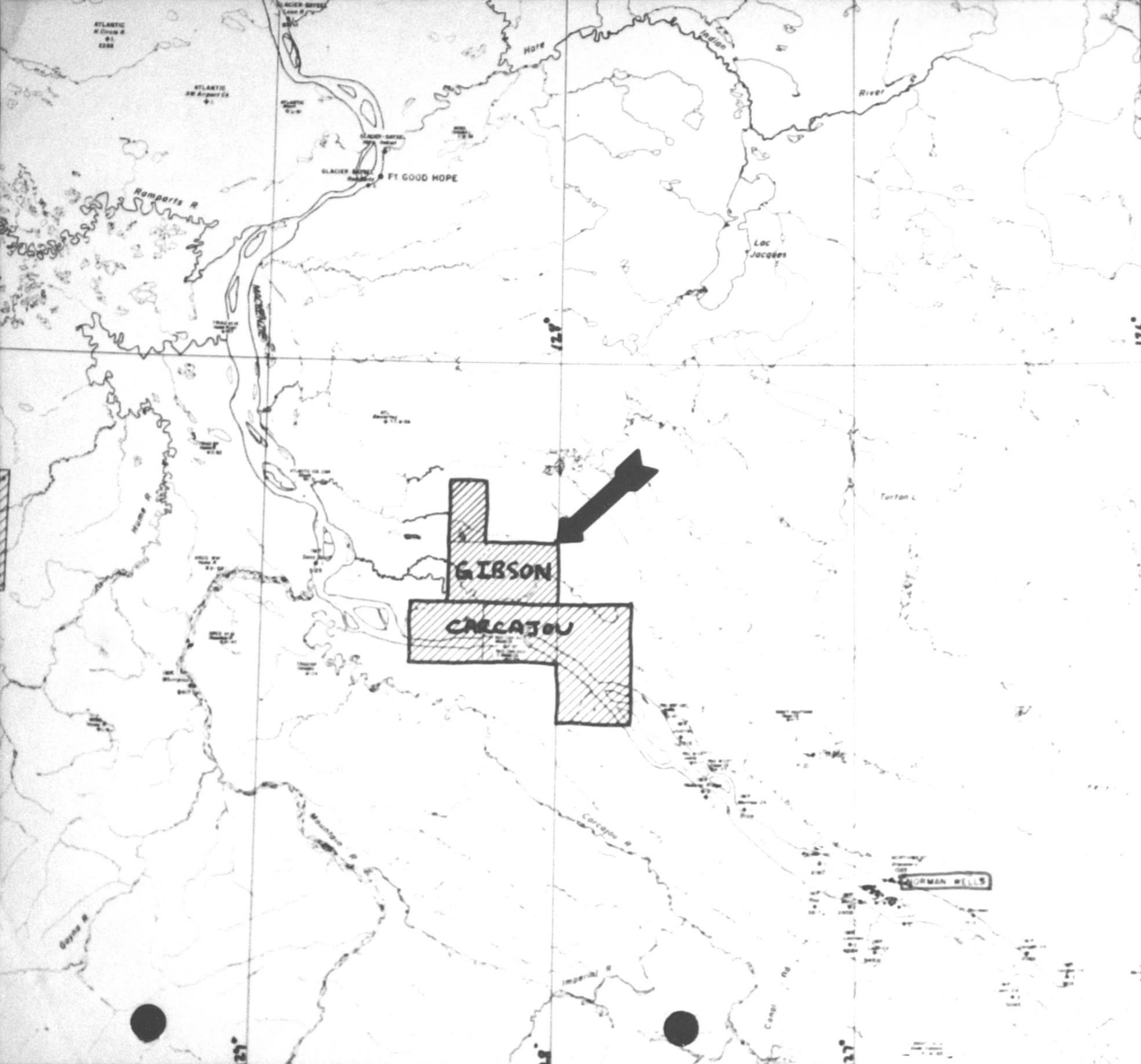
66°00'00"

- 2 -

1" = 64,000' = 12.1 mi.

CN/CW - 1/15

126°



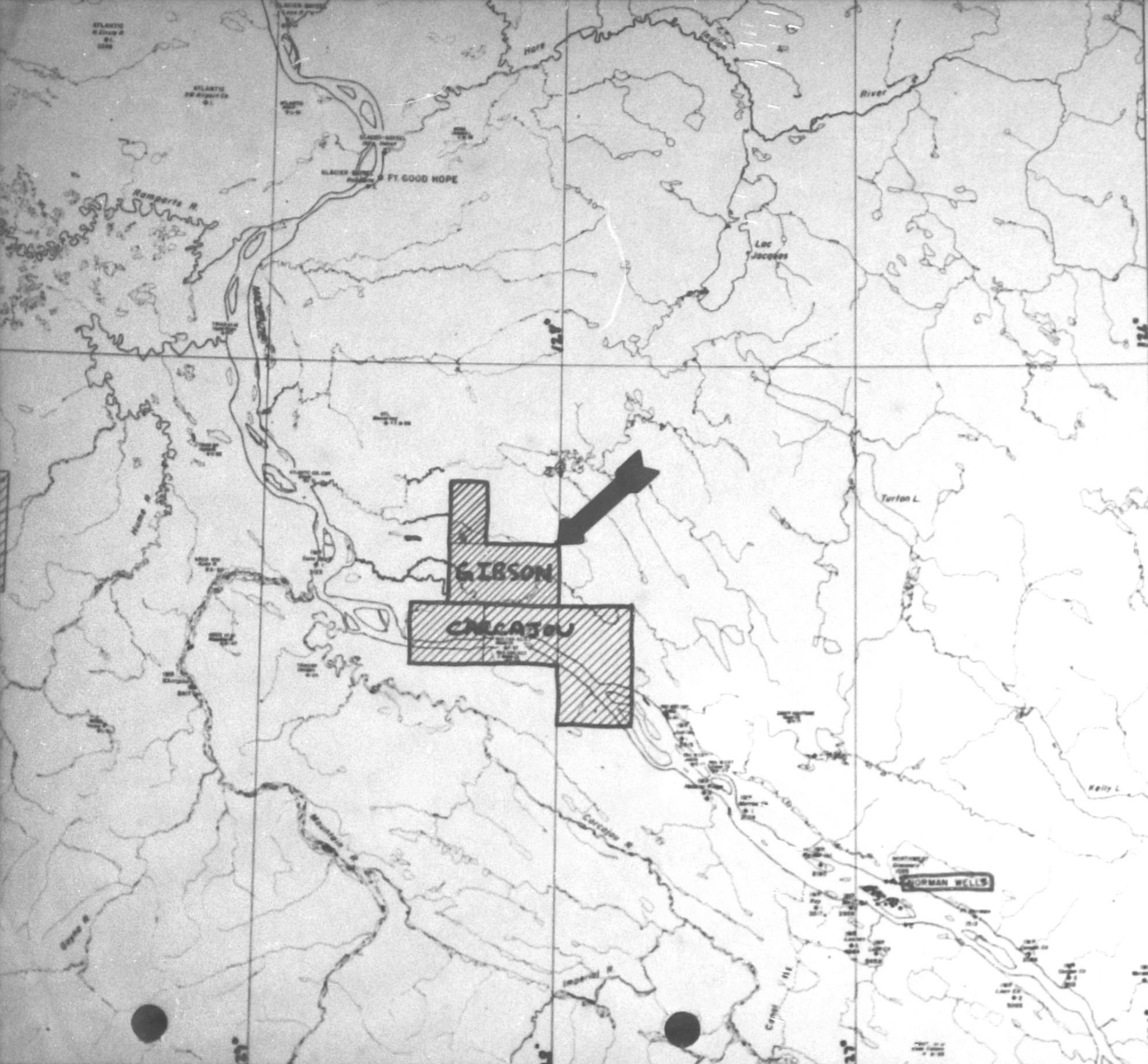
66°00'00"

- 2 -

1" = 64,000' = 12.1 mi.

CN/CW - 1/15

126°



66°00'00"

- 2 -

1" = 64,000' = 12.1 mi.
CN/cw- 1/15

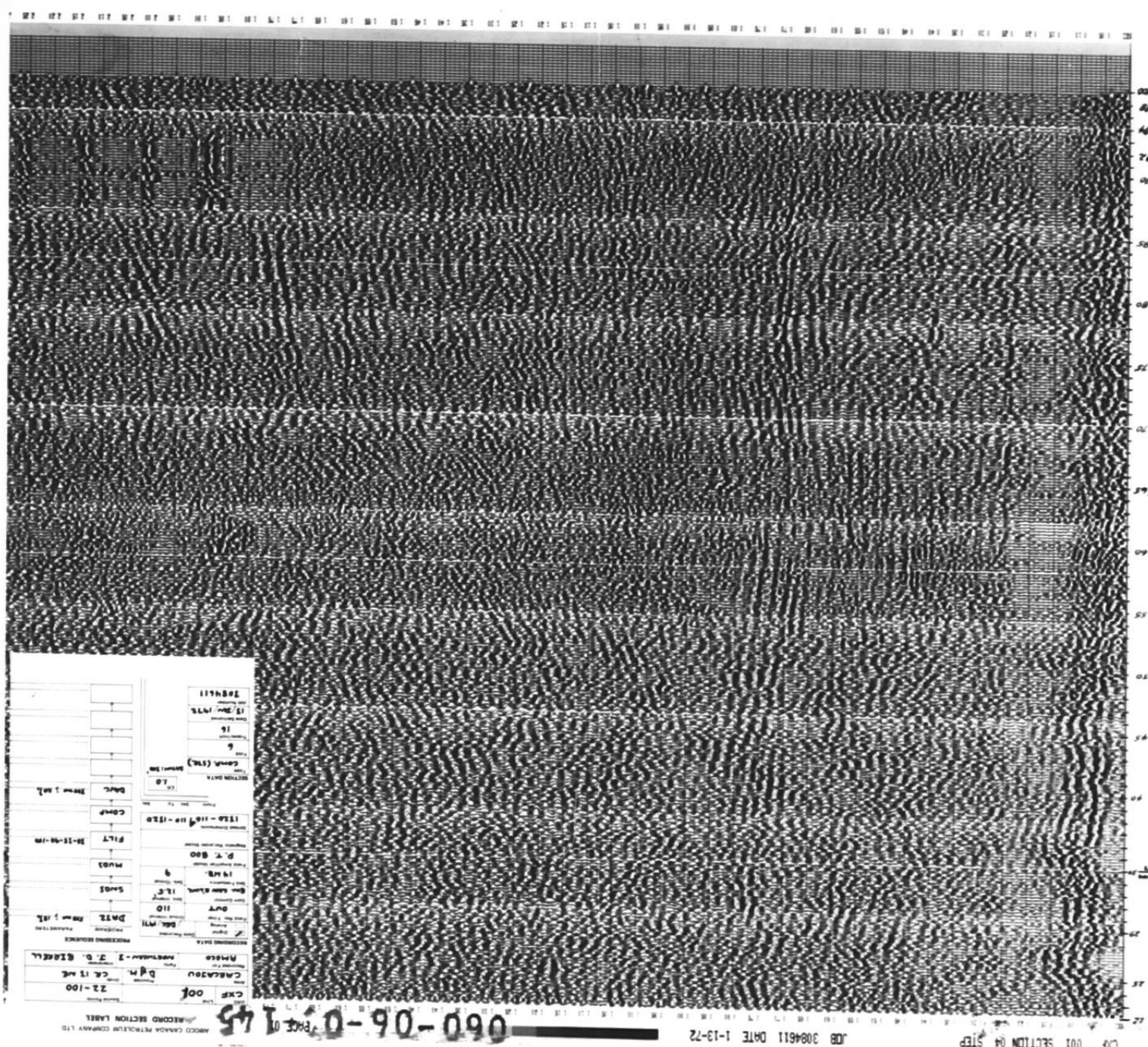
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80 - 26 Avenue S.W. CALGARY 1, ALBERTA
Phone 263 2555

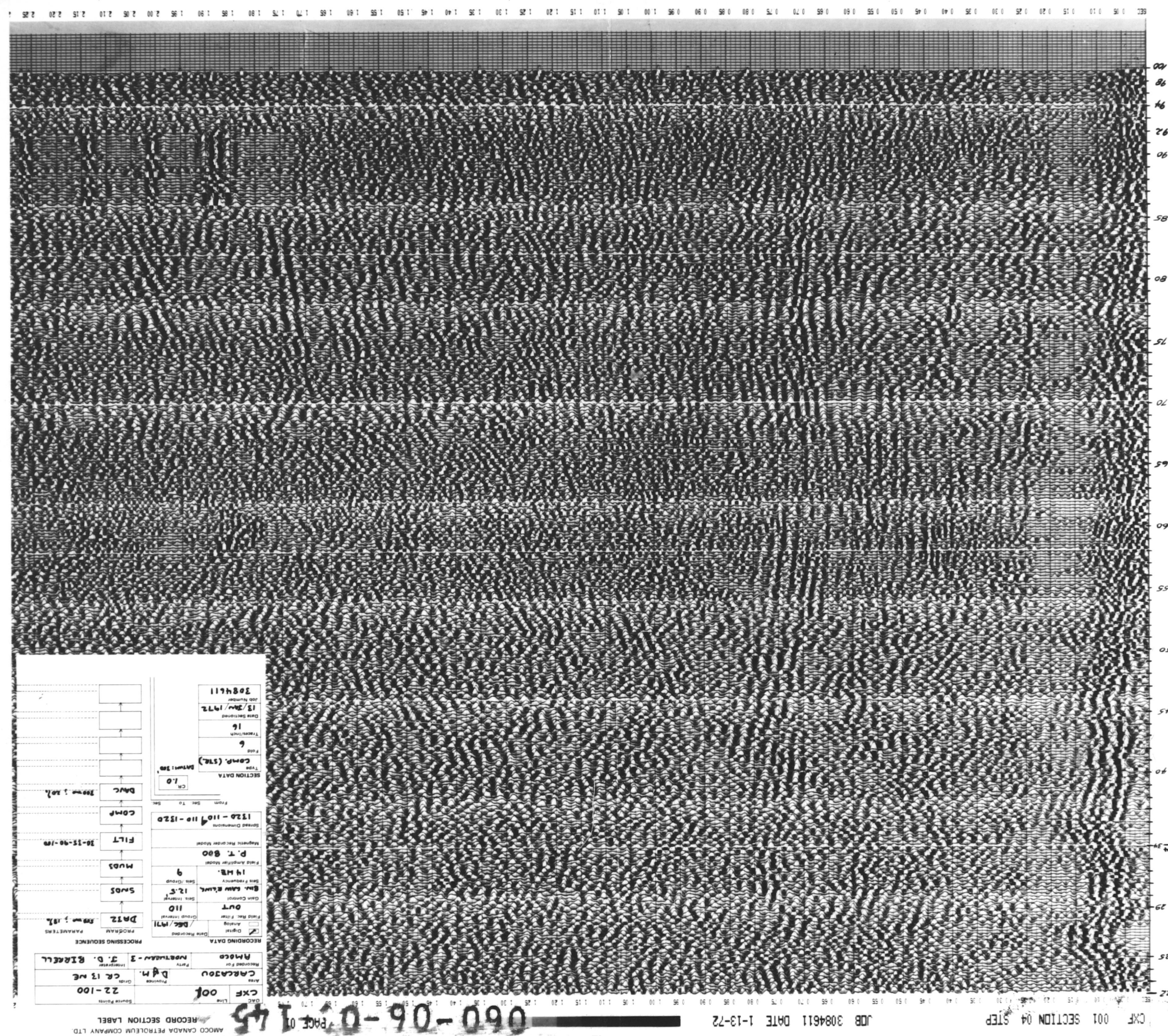
MICROMAT
105 M.M.

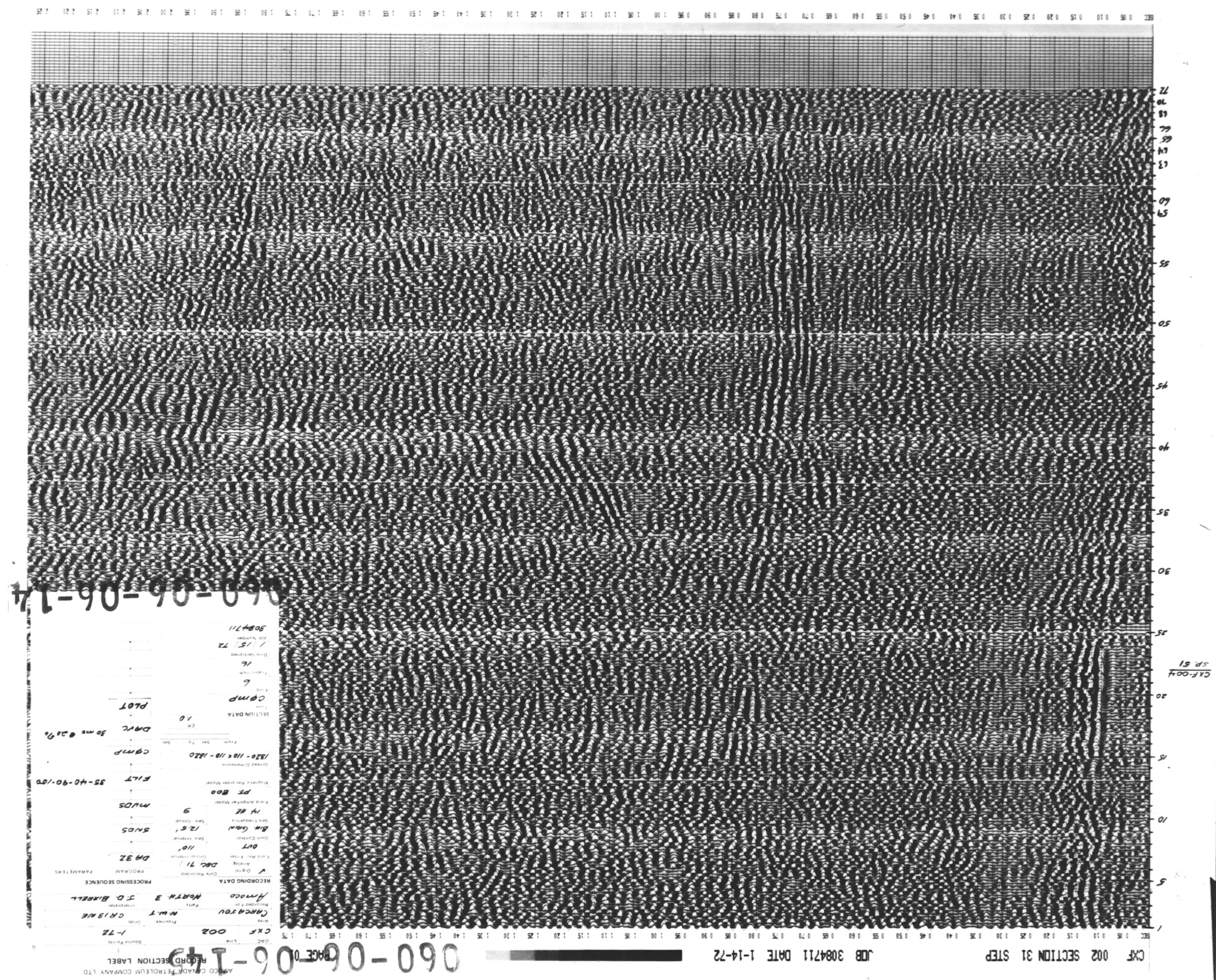
11x

March 1975

060-06-06-145







AMOCO CANADA PETROLEUM COMPANY LTD.

060-0605145

RECORDING LABEL

AMOCO

CXG 003

1-79

GIBSON DIST. DIVACK CR13 NE

AMOCO NORTHERN 3 J.D. BIRRELL

PROVINCE GRIDS

DA 32 15% 500MS

INDX DRIFT CORRECTION

SNDS

MUDS

FILT 25-30 90-100

COMP

DAVC 20% 500

SECTION DATA

TYPE COMPOSITE

STRUCTURE

FOID 6

TRACES/LINE

DATE SECTIONED

JOB NUMBER

DATE

TIME

DEPTH IN FT

WELL LOG

DATE

TIME

DEPTH IN FT

WELL LOG

DATE

TIME

DEPTH IN FT

WELL LOG

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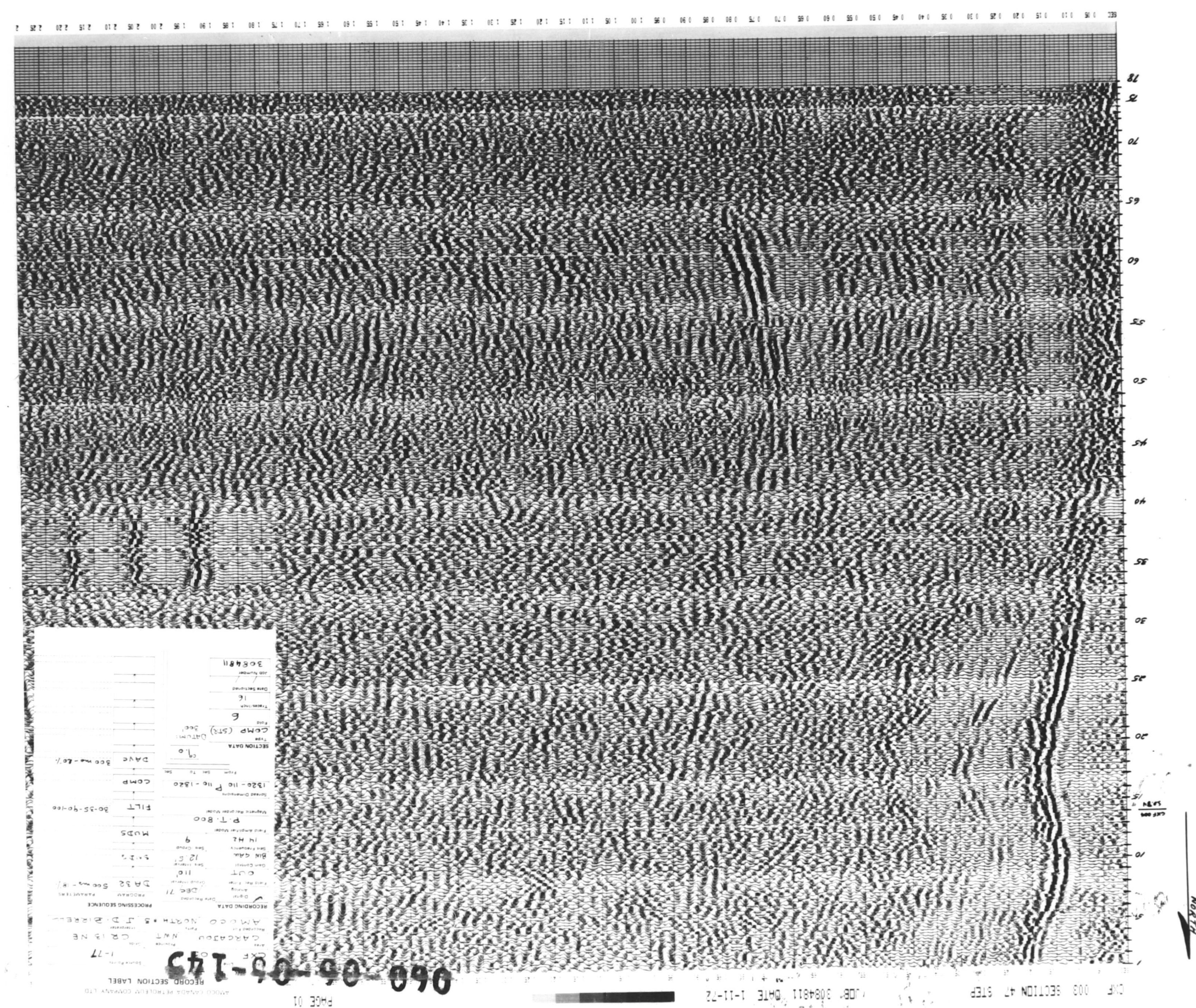
DATE

TIME

DEPTH IN FT

WELL LOG

DATE



AMOCO CANADA PETROLEUM COMPANY LTD.

060-06 REF 08 SEP 81

060-06 REF 08 SEP 81

CXG	Line	004	Source Points	1-81
Area	GIBSON	Grid	CR 13 NE	
Recorded For	DISTRICT	Operator	J.D. BIRRELL	
Party	AMOCO	NORTHERN	3	

RECORDING DATA

Field Rec. Filter	OUT	Group Interval	220'
Gain Control	BINARY	Sat. Interval	12' 5
Sat. Frequency	14 Hz	Sat. Group	9
Field Amplifier Model	PT 800		
Magnetic Recorder Model			

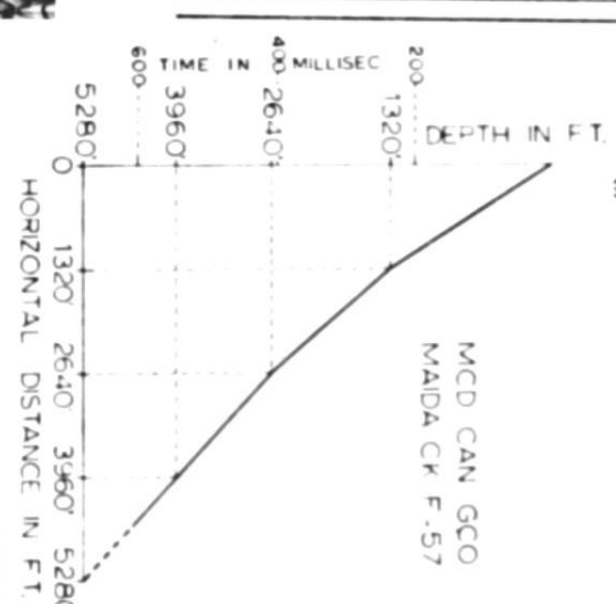
Spread Dimensions
2640-220' 220-2640

From Sec. To Sec.

SECTION DATA

Type Composite	6
Track/Inch	16
Date Sectioned	/
Job Number	/

DATUM 300' a.s.l.
VEL: 11.0'/ms



DAVC 20% 500

FILT 25-30 90-100

MUDS

SNDS

INDX DRIET CORRECTION

PARAMETERS

DA 32 15% 500 MS

PROGRAM

PROCESSING SEQUENCE

DAVC 20% 500

FILT 25-30 90-100

MUDS

SNDS

INDX DRIET CORRECTION

PARAMETERS

DA 32 15% 500 MS

PROGRAM

PROCESSING SEQUENCE

DAVC 20% 500

FILT 25-30 90-100

MUDS

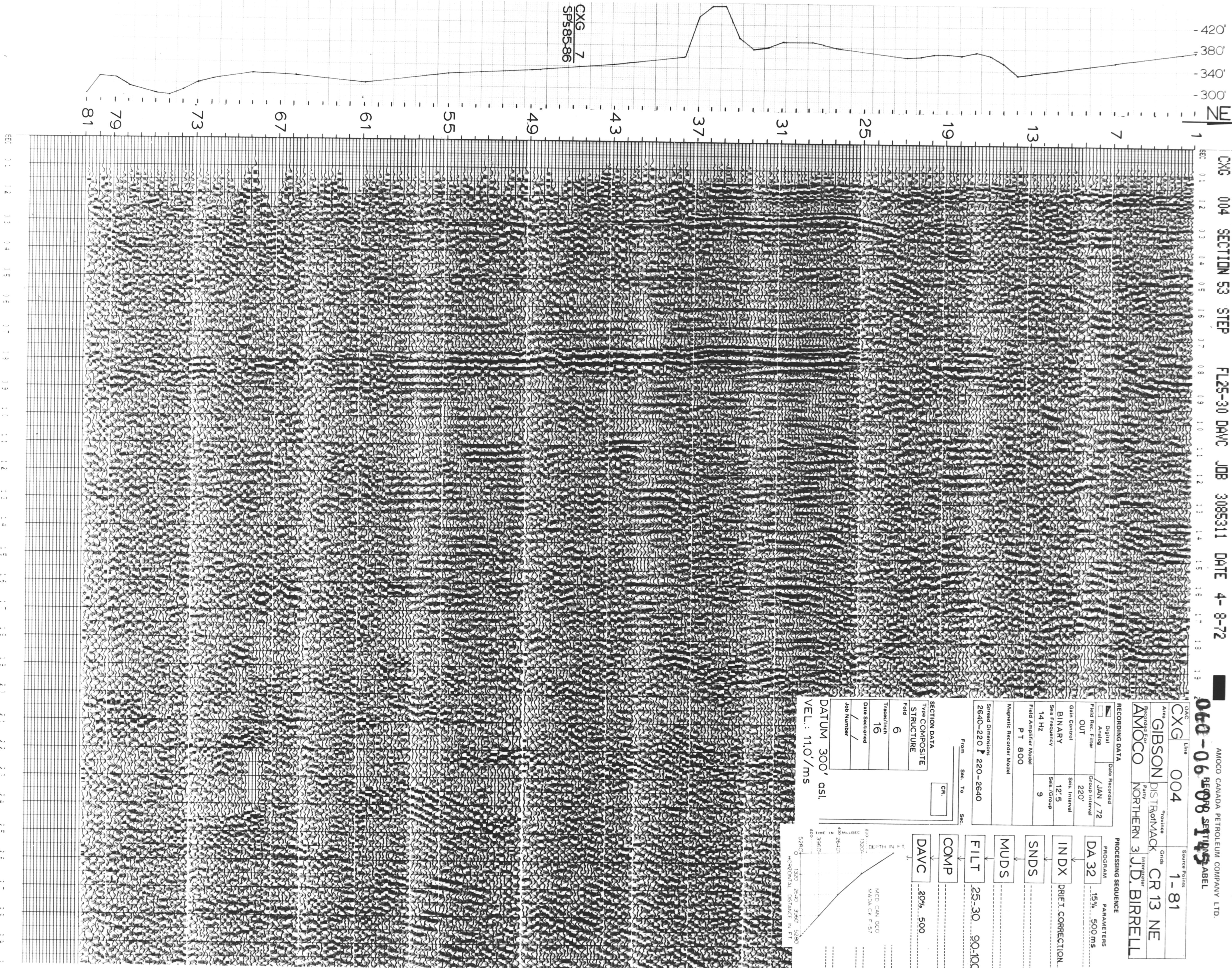
SNDS

INDX DRIET CORRECTION

PARAMETERS

DA 32 15% 500 MS

PROGRAM



CAF 001
10/33/31

CAF 004 SECTION 14 STEP 0 CAF FLO-35 JOB 308491 DATE 2-2-72

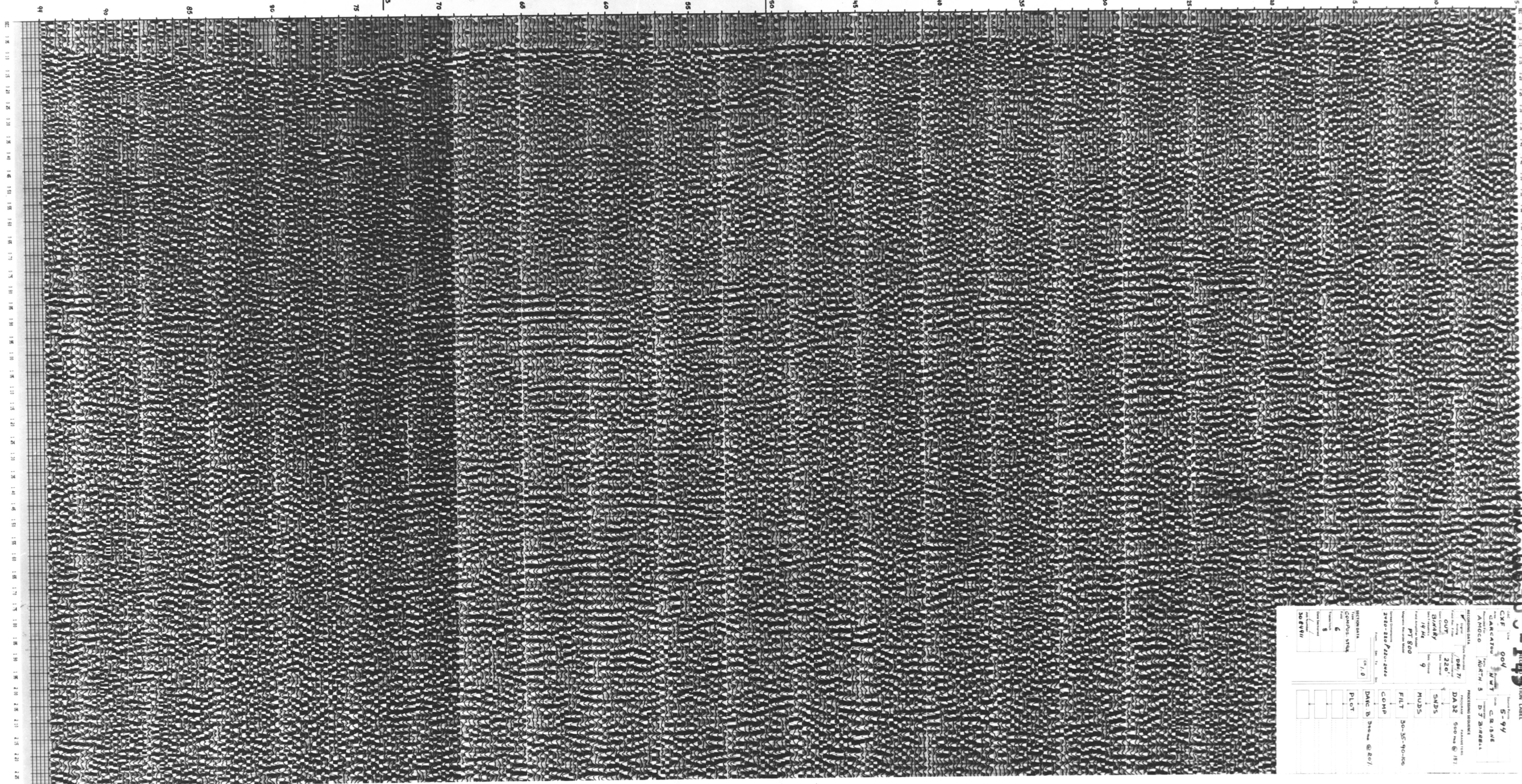
PAGE 01

060-06-10-145

CAF 004	SECTION 14	STEP 0	CAF FLO-35	JOB 308491	DATE 2-2-72
CAF 001	10/33/31				
CAF 002					
CAF 003					
CAF 004					
CAF 005					
CAF 006					
CAF 007					
CAF 008					
CAF 009					
CAF 010					
CAF 011					
CAF 012					
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CAF 094					
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CAF 096					
CAF 097					
CAF 098					
CAF 099					
CAF 100					

CAF 004 50
SP 23/31

CAF 003
SP 15



060-06-06-145
AMOCO CANADA PETROLEUM COMPANY LTD.
RECORD SECTION LABEL

CXG 005 SECTION 53 STEP FL25-30 DAVC JOB 3085411 DATE 4-9-72

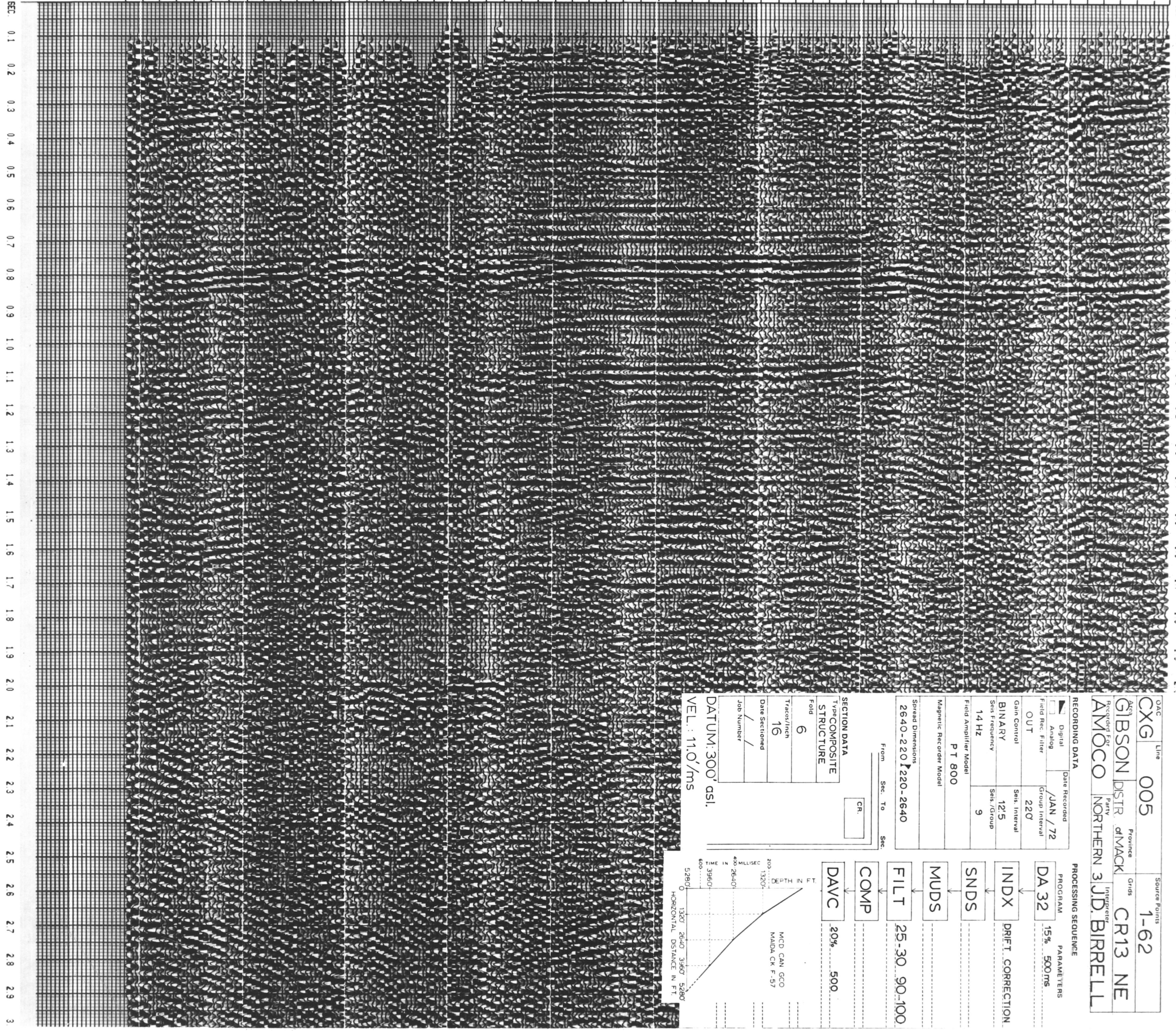
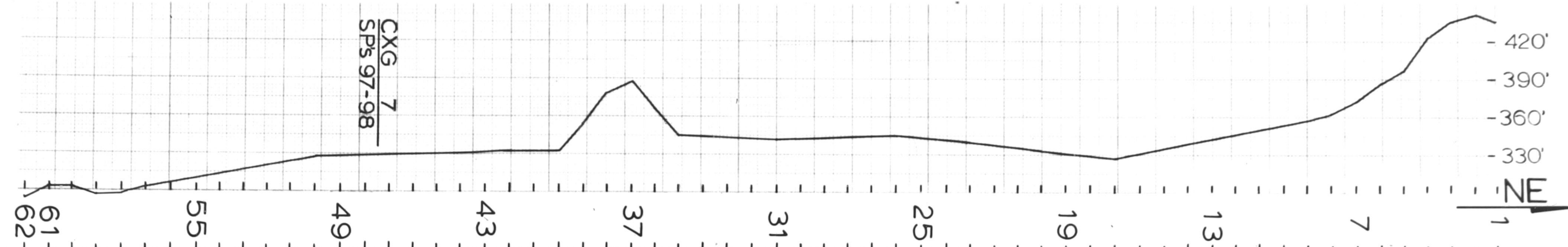
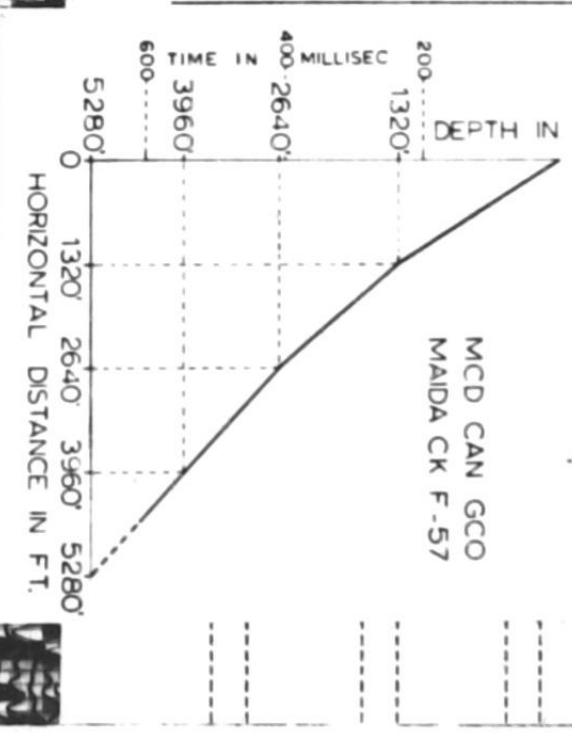
DATE	Line	Source Points
CXG	005	1-62
GIBSON	DISTR	CR13 NE
AMOCO	Party	NORTHERN 3 J.D. BIRRELL

RECORDING DATA	Date Recorded	JAN / 72
Field Rec. Filter	Group Interval	220'
OUT	Gain Control	12.5
BINARY	Gain Interval	14 Hz
14 Hz	Gain Group	9
Field Amplifier Model		PT 800

Spread Dimensions	From	Sec. To	Sec.
26-40-220	220	26-40	

SECTION DATA	CR
TYPE COMPOSITE	
STRUCTURE	
Fold	6
Traces/Inch	16
Date Sectioned	/ /
Job Number	/

PROCESSING SEQUENCE	PARAMETERS
DA 32	15% 500ms
INDX	DRIFT CORRECTION
SNDS	
MUDS	
FILT	25-30 90-100
COMP	
DAVC	20% 500



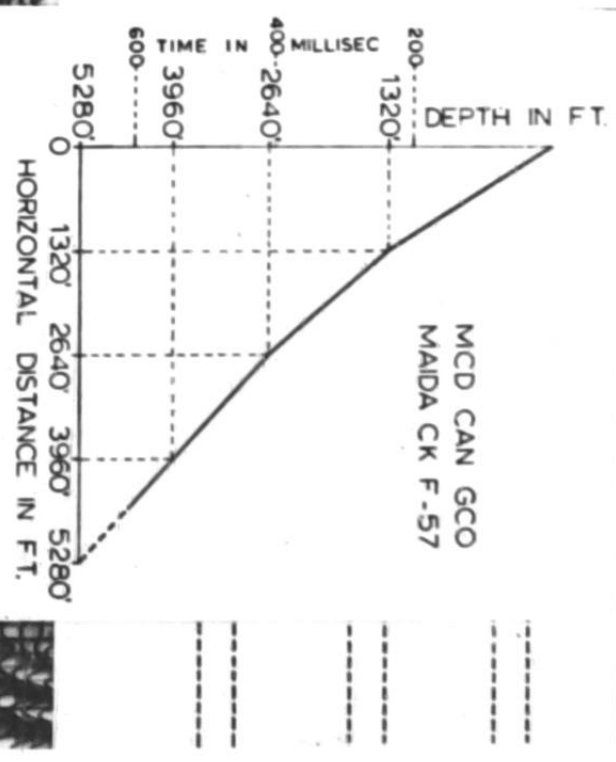
RECORD SECTION LABEL

OAC	CXG	002	SECTION 53	STEP	FL25-30	DAVC	JDB	3085111	DATE	4-8-72
Area	Province	Guide	Project	Operator	Company	Job	Location	Section	Step	Date
GIBSON	DISTRICK	CR 13 NE	AMOCO	NORTHERN 3	J.D. BIRRELL					

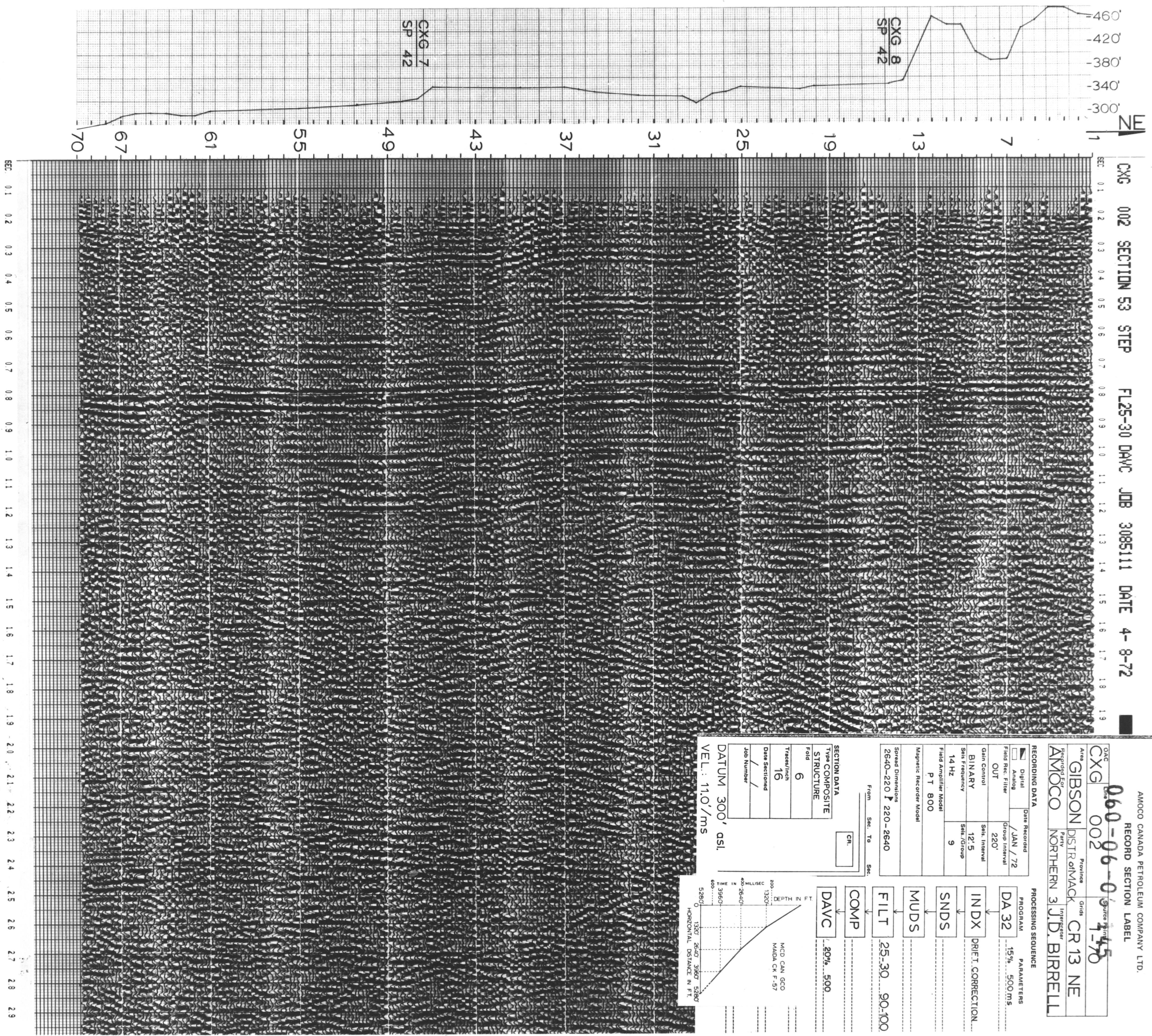
RECORDING DATA	
Field Rec. Filter	OUT
Gain Control	BINARY
Shot Accuracy	14 Hz
Field Amplifier Model	P T 800
Magnetic Resonance Model	
Spread Dimensions	2640-220
From	Sec. To
2640-220	220-2640

SECTION DATA	
Type Composite	STRUCTURE
Fold	6
Traces/Inch	16
Data Sectioned	
Job Number	

DATUM	300' gsl.
VEL.	110'/ms



PROCESSING SEQUENCE	
PROGRAM	DA 32
PARAMETERS	15% 500 MS
INDX	OBT. CORRECTION
SNDS	
MUDS	
FILT	25-30 90-100
COMP	
DAVC	20% 500



Form 1-40

AMOCO CANADA PETROLEUM COMPANY LTD.

RECORD SECTION LABEL

DATE 060-06-06-145 TIME 1-60

WELL NO. CXG 001

PROV. GIBSON DIST. ONT. CR13 NE

LOCALITY AMOCO NORTHERN 3 J.D. BIRRELL

RECORDING DATA

Fluid Rec. Filter OUT

Gain Control BINARY

Shot Frequency 14 Hz

Fluid Amplifier Model PT 800

Magnetic Rec order Model

Spread Dimension 2640-220 / 220-2640

From Sec. To Sec.

SECTION DATA

Type COMPOSITE

Field 6

Trace/inch 16

Date Sectioned

Job Number

DATUM: 300' a.s.l.

VEL.: 11.0 / ms

DEPTH IN FT.

5280 1300 2640 3960 5280

HORIZONTAL DISTANCE IN FT.

MCD CAN GEO

MADA CK F. 57

INDX DRIFT CORRECTION

SNDS

MUDS

FILT 25-30 90-100

COMP

DAVC 20% 500

PROCESSING SEQUENCE

PROGRAM DA 32

PARAMETERS 15% 300ms

220'

12.5

9

2640-220 / 220-2640

CR

CR13 NE

CR13 NE

CR13 NE

CR13 NE

CR13 NE

CR13 NE

060-06-06-145 AMOCO CANADA PETROLEUM COMPANY LTD.
RECORD SECTION LABEL

CXG 008 SECTION 53 STEP FL25-30 DAWC JOB 3085711 DATE 4-8-72
Area GIBSON DISTRICT CR 13 NE
Recorded For Party AMOCO NORTHERN J.D. BIRRELL
Source Points 6-46

RECORDING DATA

Date Recorded	JAN / 72
Field Rec. Filter	OUT
Gain Control	12.5
Seis. Interval	220'
Seis. Frequency	14 Hz
Field Amplifier Model	P1 800
Magnetic Recorder Model	2640-220
Spread Dimensions	220-2640
From Sec. To Sec.	25-30 90-100

SECTION DATA

Type	COMPOSITE
Structure	STRUTURE
Traces/Inch	6
Date Sectioned	16
Job Number	

VEL: 11.0/ms
DATUM 300' gsl.

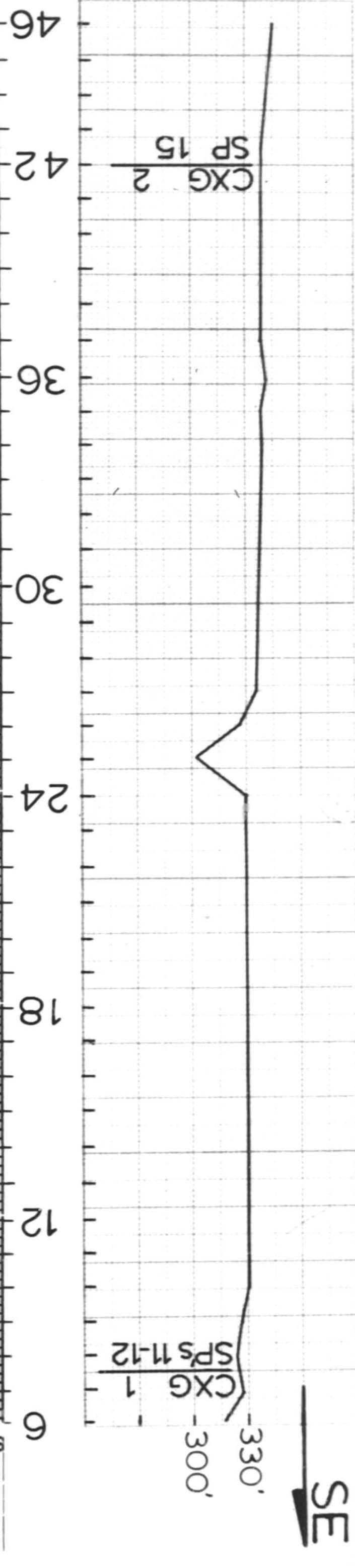
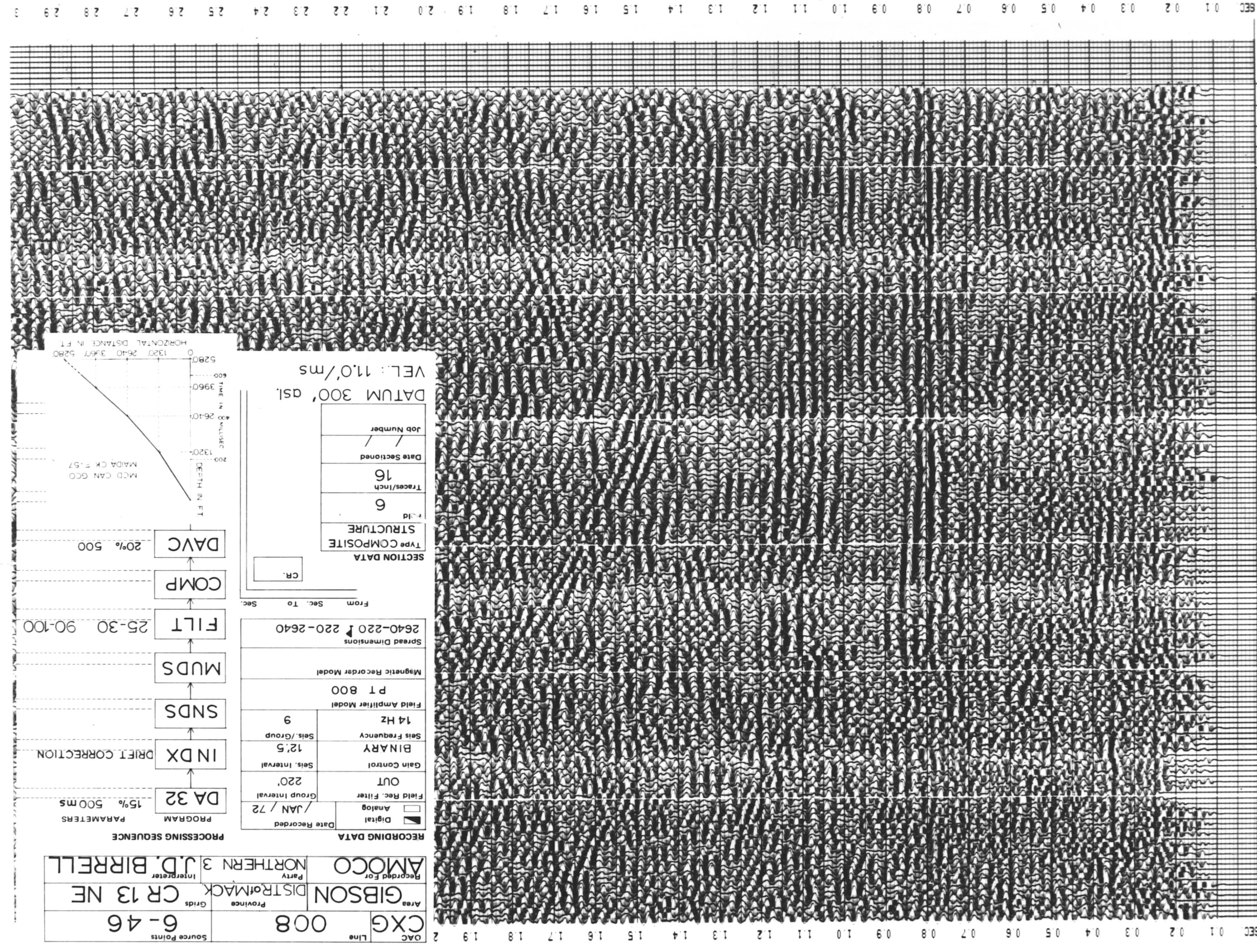
PROCESSING SEQUENCE

PARAMETERS

DA 32	-15%	500 ms
INDX	DRIFT CORRECTION	
SNDS		
MUDS		
FILT	25-30 90-100	
COMP		
DAVC	-20%	500

DEPTH IN FT

HORIZONTAL DISTANCE IN FT





MOBIL OIL CANADA LTD
CALGARY ALBERTA
GREAT BEAR LAKE
C-6-6 PARTY 832
SURFACE ELEVATIONS
APR 1974
SCALE 1:63,360
UTM ZONE 10

057-06-06-085
• C-6-6 Party TO

96-O-S.W.

060-06-03-145

AMOCO CANADA PETROLEUM COMPANY LTD.

RECORD SECTION LABEL

CXG 007 SECTION 53 STEP FL25-30 DAVC JOB 3085611 DATE 4-8-72

SF

330'

300'

270'

CXG 1

SP 44

CXG 2

SP 47

CXG 3

SP 40

CXG 4

SP 46

CXG 5

SP 47, 48

CXG 6

SP 43

Line

CXG

007

Section

53

Step

FL25-30

Job

3085611

Date

4-8-72

Record

SECTION LABEL

DATE

4-8-72

Job

3085611

Date

4-8-72

Record

SECTION LABEL

DATE

4-8-72

Job

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Job

3085611

Date

4-8-72

Record

SECTION LABEL

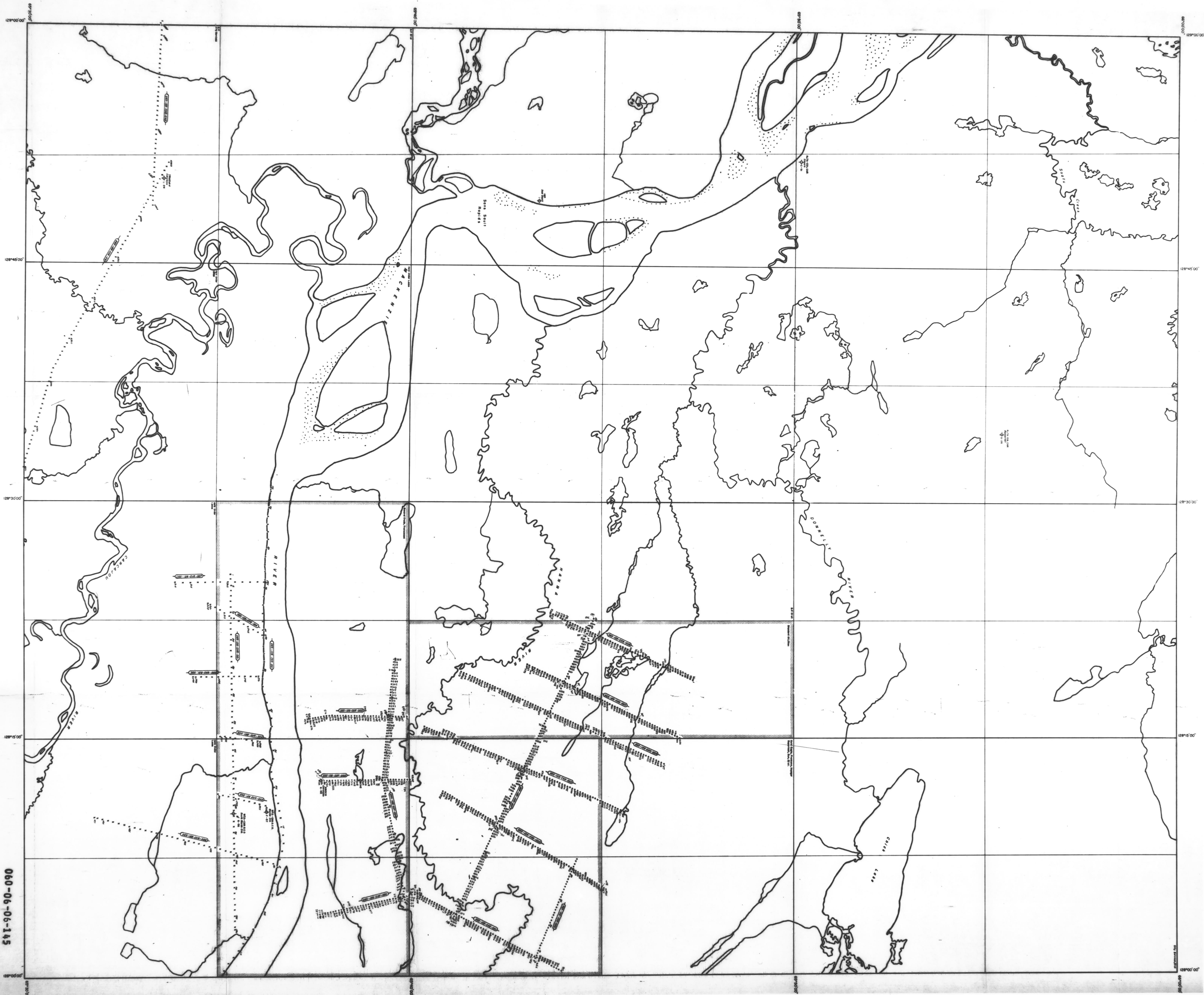
DATE

4-8-72

Job

3085611

Date



060-06-06-145

MAP EVALUATION

Qualification conditions type of map or plot; amount of research conducted; criteria; quality of data and density of control

(geographic or geographic)	
_____	Geometric data {
_____	Relative geographic data
_____	Quasi-relativistic geographic data
_____	Unreliable geographic data

SHOOTING HISTORY (Not in detail)				
INCL. DATES	SHOT BY	SHOT FOR	S.F.A.N.O. LINE No.	
04/01/77	CLONE	BBNA	008 04/74	
7/08/78	F.L.T.1 COMB	TRAIN COMB	019 050	
08/1/78	SCORE	"	018 051 007	
24/1/77	WATERBURY	BAROCCO	019 008 008	
			019 009 004	

INTERPRETIVE HISTORY				
FINAL RECEIPT NO.	DATE	INTERP.	CO. AFFIL.	APPROX. ON BAL.
7437	NOV 10, 1971	T. A. JAMES	IBACCO	COMPLETE
7437	NOV 10, 1972	D. D. BARNETT	IBACCO	95

This may require a statement from Reg. No. _____
which is to be attached near
the top of the report.
Reg. distribution ☐ Circular ☐ Stamp Office
Notes prepared by this report _____

The reg. received by _____
Amount distributed/dispatched _____

AREA	GRID CR 13 NW, NE.
PROVINCE N.W.T.	SCALE 1" = 4,000'
HORIZON	
TYPE OF MAP	SUBSTRATE
CONTROL INT.	
SHOT BY	FOR
NO. DATES	

[illegible]