9229 - N10 - 3E

NORTHCOR ENERGY LTD.

ISLAND RIVER EXPLORATION AGREEMENT

1983 SEISMIC PROGRAM
REPORT TO COGLA

ISLAND RIVER, N.W.T.

Lat: 60°00'00" to 60°25'00" N

Long: 121°00'00" to 121°30'00" W

Program Number:	9229-N10-3E
Operator's Report Name:	Northcor Island River Seismic Program 1983
Type of Survey:	Reflection Seismic
Survey Locality:	Northwest Territories Lat: 60°15'00" N, Long: 121°10'00" W
Year of Field Work:	1983
Operator:	Northcor Energy Ltd., Calgary, Alberta
Prime Contractor:	Sefel Geophysical Ltd.
Exploration Agreement:	Island River Exploration Agreement
Author of Report:	Empress Exploration Consultants
Date of Report:	March, 1984

TABLE OF CONTENTS AND ENCLOSURES

	Page
Introduction	1
Locality Map	2
Statistical Summary	3
Instrumentation & Field Procedures	3
Description of Data Processing	3,4
Synthetic Seismogram	5
Discussion of Sections & Maps	6

ENCLOSURES

Seismic Shot Point Map

Seismic Sections: one pre-fold paper copy
and one film copy for
Lines OSM - 5,6,7

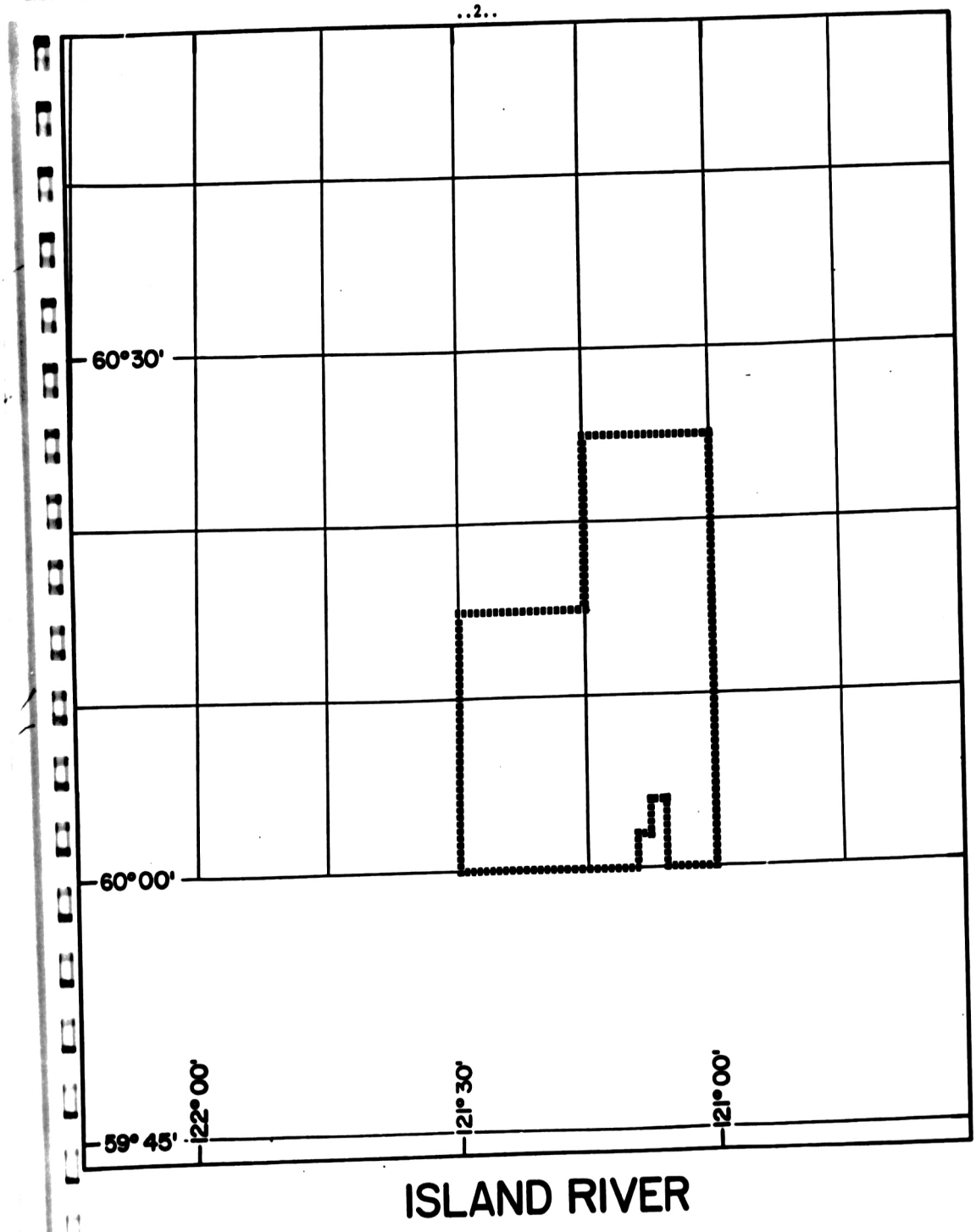
Seismic Maps: one print of Shot Point Map
and one print of Isochronal
Devonian to Slave Point Map

INTRODUCTION

Approximately 46 kilometers of conventional, continuous, 1200% CDP reflection seismic coverage were obtained by modern binary instrumentation employing a 1200m-25m x 25m-1200m split spread; the energy source was dynamite loaded into single in-line holes.

The data were obtained during March and April 1983 to delineate general geological conditions of the Area, especially the Slave Point with the specific purpose to plan intelligently a detailed program for 1984.

To this end, an isochronal Top Devonian to Slave Point Map was constructed; a time structural Slave Point Map was not made as previous studies (by other companies) were based upon sections flattened at the Top of Devonian.



ISLAND RIVER

PROCESSING SEQUENCE

1	DEMULTIPLEX WITH GAIN REMOVAL	
	PROCESSING SAMPLE RATE	2 MS
2	CDP TRACE GATHERS	1200 PERCENT
3	AUTOMATIC GAIN CURVE APPLICATION	
4	INSTRUMENT PHASE COMPENSATION	
5	GEOPHONE PHASE COMPENSATION	
6	SPIKING DECONVOLUTION	
	WINDOW (MINIMUM OFFSET)	300-1300 MS
	(TAPERING WITH OFFSET)	
	OPERATOR LENGTH	60 MS
	PREWHITENING	1 PERCENT
7	WEATHERING STATICS	
	DATUM ELEVATION	700 M ASL
	DATUM VELOCITY	2750 M/SEC
	WEATHERING VELOCITY	610 M/SEC
8	VELOCITY ANALYSIS	
9	NMO AND EDITS	
10	AUTOMATIC RESIDUAL STATICS	
	MAX CORRELATION LAG	+-30 MS
	WINDOW	350-1300 MS
11	COMMON OFFSET STACK	
12	RESIDUAL NMO	
13	AUTOMATIC RESIDUAL STATICS	
	MAX CORRELATION LAG	+-15 MS
	WINDOW	350-950 MS
14	MUTE	
15	STACK	1200 PERCENT
16	WAVE EQUATION MIGRATION	
17	BANDPASS FILTER	
18	EQUALIZATION	
	WINDOW	300-1700 MS
19	FILM DISPLAY	
	POLARITY	NORMAL
		16 TRACE/IN.
		7.5 INCHES/SEC

QC GEOPHYSICIST I.C.S. (INITIALS) DATE JUNE, 1983

FIELD PARAMETERS

SHOT BY	SEFEL GEOPHYSICAL PARTY 506
DATE SHOT	MARCH 1983
SOURCE	DYNAMITE
SOURCE PATTERN	SINGLE HOLE
CHARGE SIZE	2 KG AT 12 M
GEOPHONE TYPE	GEOSPACE
GEOPHONE FREQ	10 HZ
GEOPHONE PATTERN	9 AT 3 M INTERVALS
INSTRUMENTS	MDS-10 96 TRACES
FORMAT	SEG B
RECORDING FILTER	9/18 - 125/72 HZ
RECORD LENGTH	3 SEC
SAMPLE INTERVAL	2 MS
SPREAD GEOMETRY	1200-25-X-25-1200
GROUP INTERVAL	25 M
SHOT POINT INTERVAL	100 M

e) Statistical Summary

Drills mobilized March 30, 1983
Recorders commenced April 3, 1983
Recorders terminated April 6, 1983
Approximately 30 Canadians were involved in the program.
46km of seismic coverage were obtained, no time was lost, and daily production averaged 12km.
Weather conditions were typical for the time of year; the terrain varied from rolling hills to muskeg, with the ground intitially well frozen allowing reasonable maneuverability. However, early break-up prevented the completion of shooting the northeastern half of Line OSM-6.

f) Description of Data Acquisition Equipment and Field Procedures

(see attached section label)

energy source/array: 2kg dynamite charge loaded into a single 12m hole, holes spaced at 100m intervals in line of spread.

detector type/array: 10HZ Geospace geophones using an in-line pattern grouping 9 geophones at 3m intervals constituting a symmetrical split spread 1200m-25m x 25m-1200m with group interval of 25m.

recording system: 96 channel MDS-10 instrumentation employing the SEG-B format recording 3 seconds of data at 2ms sample interval. The recording filter was 9/18 - 125/72HZ.

g) Description of Data Processing

(see attached section label)

1) Seismic Reflection:

- demultiplex with gain recovery, 2ms sample rate
- phase compensation
- spiking deconvolution, 60ms operator, 1% pre-whitening, window of 300 - 1300ms.

1) Seismic Reflection: (continued)

- weathering statics: datum 700m, ASL, weathering velocity 610m/s
- velocity analysis: constant velocity stack every 2½/km
- normal moveout and edits
- automatic residual statics with surface consistent
- mute pattern:

offset	blank time
175 m.	0 ms.
250 m.	250 ms.
450 m.	450 ms.
625 m.	550 ms.
1200 m.	750 ms.

- stack: 1200%
- wave equation migration
- bandpass filter: 12 - 100HZ
- trace equalization: 300 - 1700 ms. window

2) Gravity

not applicable

3) Magnetic

not applicable

h) Seismic Shot Point Map

enclosed

i) one copy pre-fold print and one film copy of processed Sections for Lines OSM-5,6,7

j) Bathymetry

not applicable

k) Interpretive Maps

- isochron of Near Top Devonian to Top of Slave Point

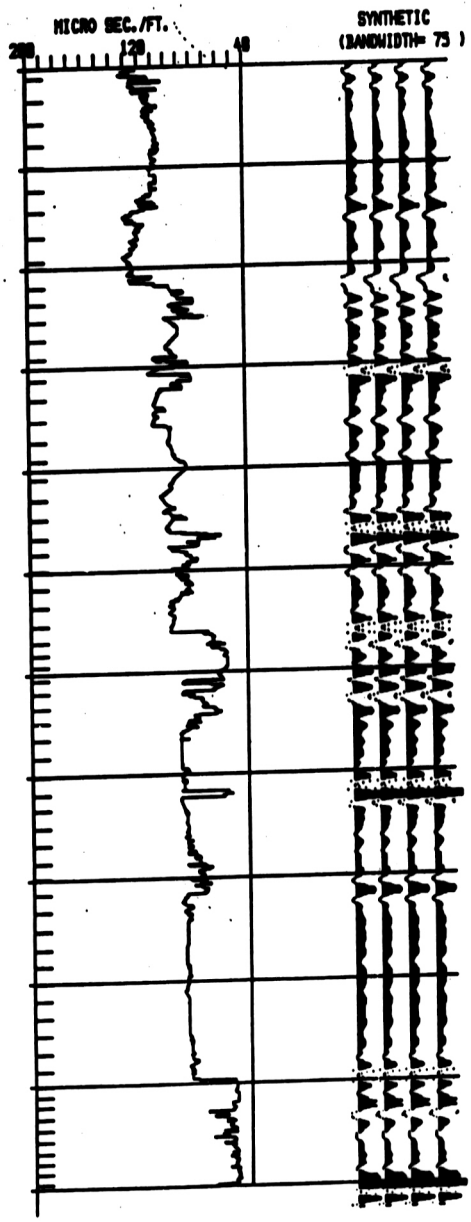
l) Related Interpretive Information

- synthetic seismogram for test M - 5L

SONIC LOG AND SYNTHETIC

WELL NAME	ATKINSON CBP TROUT LAKE H-51
LOCATION	60, 27, 57/ 121, 18, 48
PROV/ST	MAT
1st DEPTH	760
LST DEPTH	7235
KB	1922
SD	0

ISLAND R.



Discussion of Sections and Maps

The sections manufactured were of good quality, the full geological column being well represented by both amplitude and definity. Correlation to the 0 - 72 synthetic seismogram is good.

The Devonian to Slave Point Isochronal Map defines the Slave Point edge satisfactorily. Future work may allow the desired analysis of porosity along this edge, and a Slave Point Structural Map may provide further information.

No conversion to Isopach was deemed necessary.

EMPRESS EXPLORATION CONSULTANTS

per N.E. KLINCK, P. Eng.