

210

WINTER 1995 NETLA PROGRAM

FINAL PLAN REPORT

on the

**PROPRIETARY HELIPORTABLE DYNAMITE SEISMIC SURVEY
in
NETLA AREA
N.W.T.**

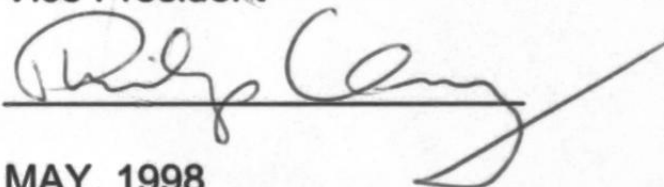
**PROGRAM #9229-B059-001E
LUP N95B340**

by

B.F.R. GEOPHYSICAL CONSULTANTS LTD.

Duration:
Contractor:
Author:

January through April 1995
Geco Prakla
Philip D. Gregory,
Vice President

A handwritten signature in dark ink, appearing to read 'Philip Gregory', is written over a horizontal line. A long, sweeping diagonal stroke extends from the end of the signature towards the bottom right of the page.

Date:

MAY, 1998

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INTRODUCTION

B.F.R. Geophysical Consultants Ltd. specializes in speculative seismic programs in foothills and frontier areas of Canada. With the lifting of the exploration moratorium in the Ft. Liard area we perceived an opportunity to establish the beginnings of a modern high quality regional grid of seismic .

While B.F.R. shot non-exclusive data it was found to be effective and efficient to shoot proprietary work for our clients. This proved to be beneficial for all parties involved.

STATISTICAL SUMMARY

Significant Dates:

Commencement:	February 14, 1995
Start Production:	N/A
Termination:	March 19, 1995

Number of Technical Personnel: 13

Number of Non-Technical Personnel: 36

Type and Number of Equipment Used:

- 1 Air conditioned Recording Cabin mounted on an F700 4x4. Separate diesel driven 17 kVA generator supplying power for air conditioning and instrumentation.
- 1 Party Manager Unit - F250 4 x 4
- 2 Line Units - F350 4 x 4
- 2 Transport units - F700 4 x 4 (or equivalent)
- 1 Support Unit - F250 4 x 4
- 1 Mechanical Unit - F250 4 x 4
- 2 Personnel Carrier
- 1 Battery Charging Unit
- 2 Honda A.T.V. Quads

Statistical Summary con't.

Production Data:

Total Distance Surveyed: 30.6 km

Time Lost: Some time was lost due to weather conditions

Daily Production:

Feb. 27 09.1

Mar. 01 08.2

Mar. 04 10.1

Mar. 06 3.2

Total Kms: 30.60km

Summary of Conditions Pertaining to Weather and Terrain:

Very little alpine, with mostly treed and thick underbrush proved to be favorable terrain.

Very agreeable weather conditions with some high winds and rain.

Summary of Factors Which Caused Down Time:

Advanced crew was shut down for 2.2 days due to high wind and rain.

DATA ACQUISITION EQUIPMENT and FIELD PROCEDURES

Positioning & Survey Systems:

Conventional survey methods were used on all lines. The process involved traversing along the line and surveying in the shot points and receiver stations. Heights were surveyed using trigometric leveling. Error tolerances were within 10m horizontally and 1m vertically. Survey computations were reduced using the Nad 27 datum. UTM values are for Zone 10 using a CM of -123° W longitude.

Control was established using GPS to densify existing Federal government markers.

Repeatability is + or - 10m horizontally and + or - 1m vertically using permit tags to re-establish.

Parameters of Energy Source:	Vibroiseis
Source Array:	4 Inline centered on half station, over 30m
Detector Equipment:	12 Geophones/String 1.6m Geophone Spacing Sensor SM4 14Hz Geophone Type
Detector Array:	12 Geophones over 20m
Recording System:	I/O System II SEG-D
Recording Parameters:	
Shot Interval:	100 m
Station Interval:	20 m
Channels:	300
Sweep:	10-100Hz, 12 seconds, 8 sweeps

Data Acquisition con't

Far Offsets: 3010m

Near Offsets: 10m

GEOPHYSICAL DATA PROCESSING

FOR SEISMIC REFLECTION DATA:

Gain Recovery:

Bandpass Filter: 3Hz to 120 Hz

Mute Pattern:

Type of Deconvolution: Adaptive 5 Component

- Operator Length : 80 ms
- Prewhitening : 0.1 PCT
- Design Window:
 - * 350-1900 ms @ offset 0 m
 - * 1800 - 2200 ms @ offset 3010 m

Type of Velocity Analysis: Standard

Distance Between Analysis: 250m

Picking Method: Semblance

STATIC CORRECTION METHOD PARAMETERS:

Statics	Elevation
Structural Datum:	600 Meters ASL
Replacement Velocity	2850m/s
Statics Residual (1st pass)	
Automatic Residual Statics Window	Surface Consistent 0-3000ms
Statics Residual (2nd pass)	
Automatic Residual Statics Window	Surface Consistent 400-1600ms
Trim Statics	
Window	300-2100ms @ 0m offset 2000-2100 ms @ 3100m offset

Geophysical Data Processing cont'd.

MIGRATION METHOD PARAMETERS:

85% Theoretical Velocities

- 85% of Stacking Velocities
- minus 90 Degree Angle

TIME AMPLITUDE DISPLAY METHOD:

Trace Equalization:

Length of Scaling Operation:

Application of Scaling Operations:

Film Display:

Percent of CDP Stack

700-1800ms

Mean Window

7.5 inches/sec

30 traces/inch

3000

WINTER 1995 NETLA PROGRAM

LIST OF LINES AND KILOMETERS SHOT PER LINE

95-01

21.00 km

95-02

9.60 km

TOTAL

30.60 KM

ENCLOSURES

LINES 95-01, 95-02

REPRODUCIBLES

- 2 Shot Point Map
- 6 Migrated Stack Normal Polarity Section

PAPER

- 2 Shot Point Maps
- 6 Migrated Stack Normal Polarity Sections