

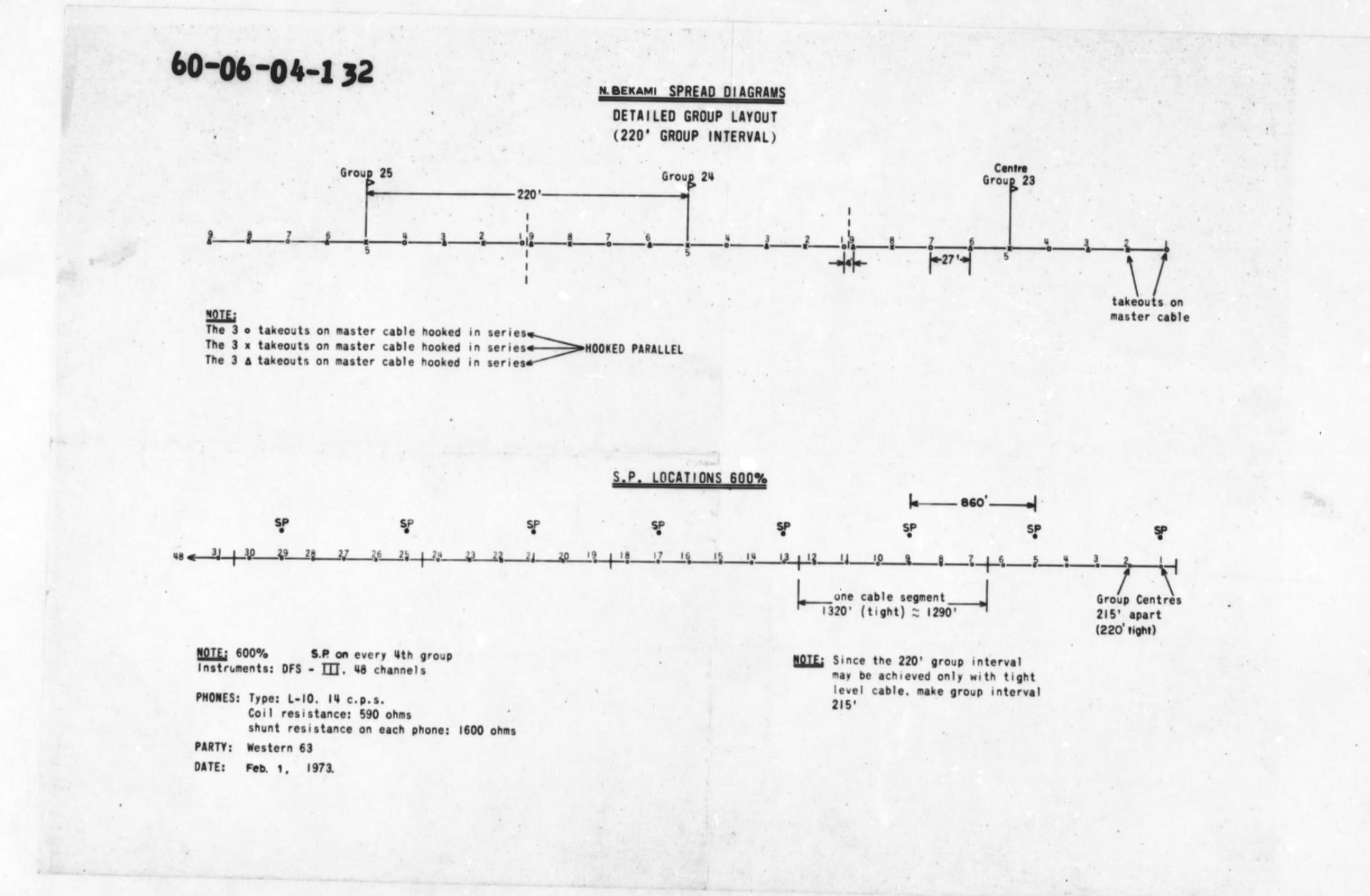
10X August 1974

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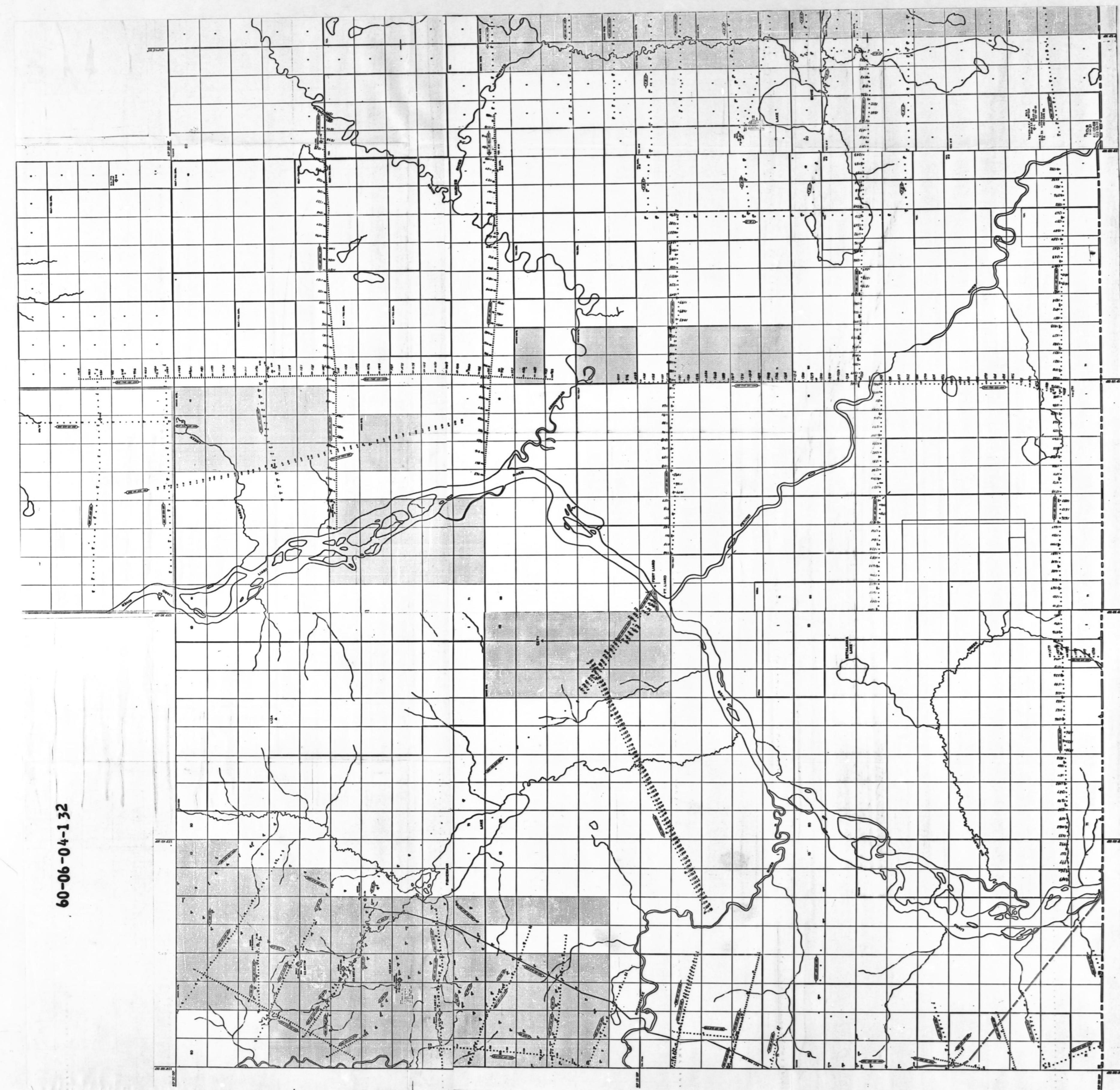
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REPORT OF GEOPHYSICAL SURVEY
REPORT OF SEISMOGRAPH REFLECTION SURVEY

On and Off Federal Permit
Nos. 6275 and 6276

June 12, 1974

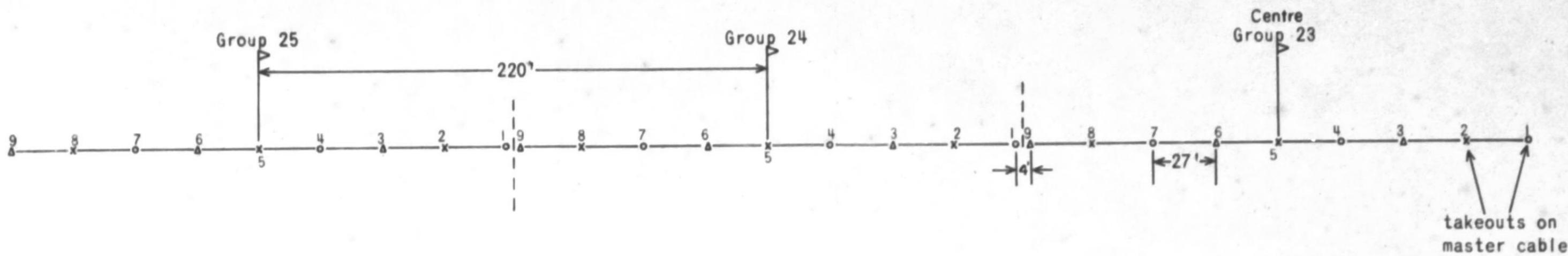
Prepared by: D.E. Birnie
District Geophysicist

Project 60-6-4-13-1

60-06-04-132

N.BEKAMI SPREAD DIAGRAMS

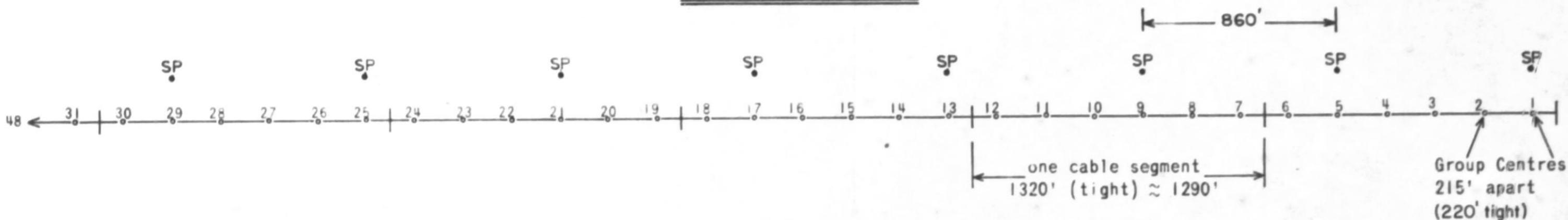
DETAILED GROUP LAYOUT
(220' GROUP INTERVAL)



NOTE:

The 3 o takeouts on master cable hooked in series
The 3 x takeouts on master cable hooked in series
The 3 △ takeouts on master cable hooked in series

S.P. LOCATIONS 600%



NOTE: 600% S.P. on every 4th group
Instruments: DFS -  48 channels

PHONES: Type: L-10. 14 c.p.s.
Coil resistance: 590 ohms
shunt resistance on each phone: 1600 ohms

PARTY: Western 63

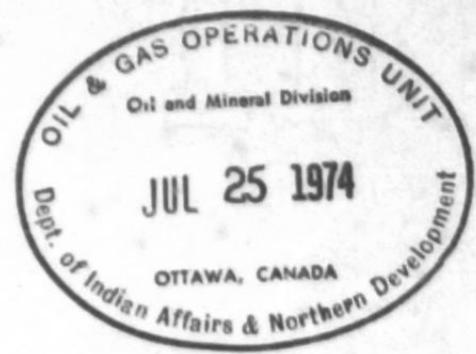
DATE: Feb. 1, 1973.

NOTE: Since the 220' group interval
may be achieved only with tight
level cable, make group interval
215'

Report of Geophysical Survey

Report of Seismograph Reflection Survey

Conducted by



Western Geophysical Company of Canada Ltd.

for

Amoco Canada Petroleum Company Ltd.

February 1, 1973 to March 15, 1973

On and off Federal Permits No. 6275 and 6276

Prepared by

D. E. Birnie

District Geophysicist

June 12, 1974

Submitted in support of application for credit; see affidavit made by

Price Waterhouse & Co. of October 30, 1973 and in
Amoco Canada July 17th 1974
accordance with work obligations under Section 54, Subsection 1(f) of
the Regulations.

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Enclosures in Pocket: Surface Elevations

 Spread Diagram

Top of Mid-Devonian Carbonate Time

Structure Map Registration No.

XC 74-945

Introduction

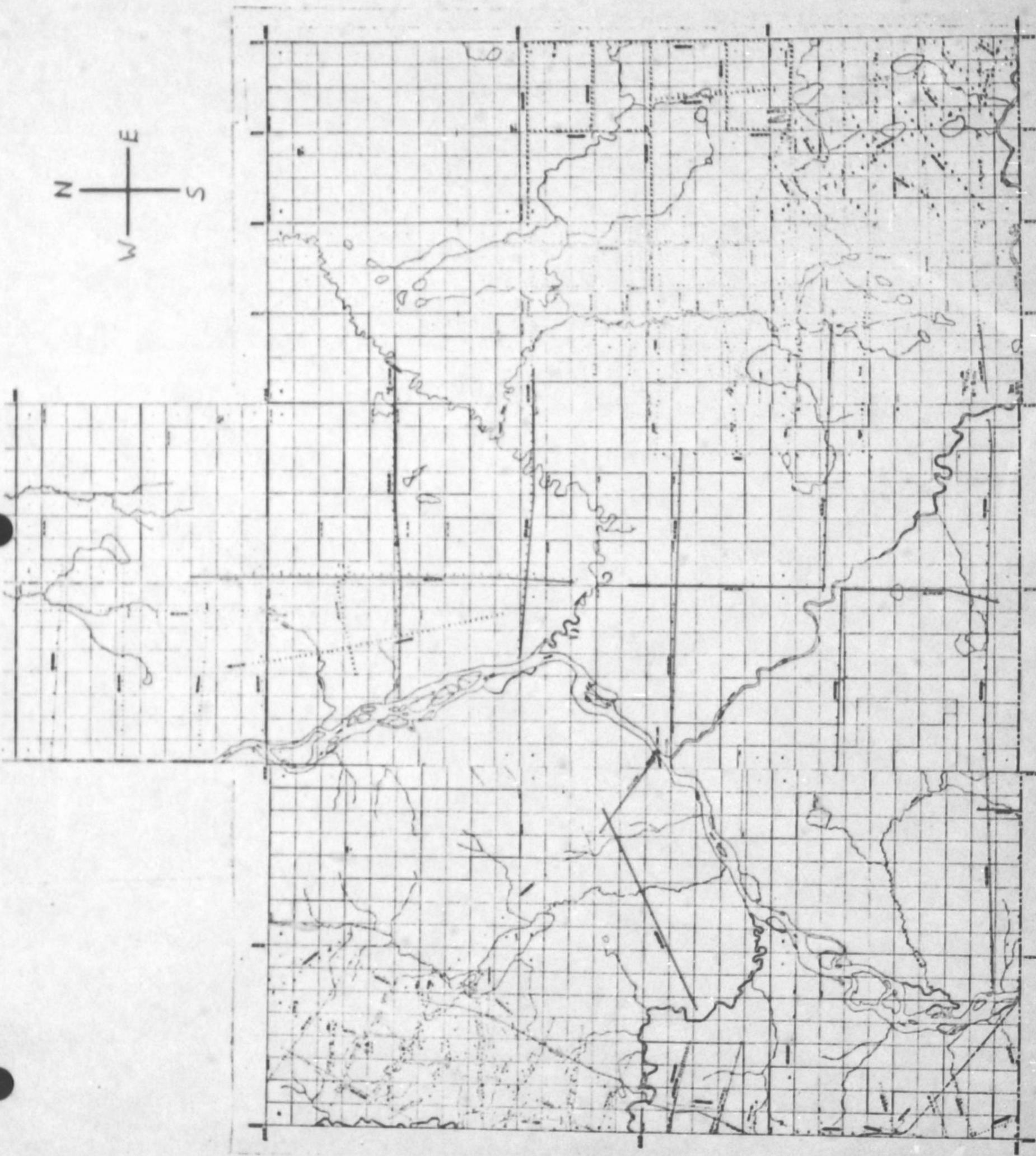
During February and March 1973, a seismic survey was conducted by Western Geophysical Party 63 for Amoco Canada Petroleum Co. Ltd. in the North Bekami Area, Topographic Grid 95B.

The area covered was on and off Federal Permits (N.W.T.) 6275 and 6276 held by Amoco Canada.

A total of 43 days (February 1 to March 15, 1973) was spent by the crew gathering data that was interpreted in Calgary over an estimated period of six months.

Western Geophysical Party 63 was operating under the supervision of Mr. C. M. Larson, Party Manager.

Wheel mounted equipment was used throughout the operation both for technical vehicles and trailer facilities.



Statistical Data**A. Personnel****(1) Recording:****1 Observer****1 Junior Observer****1 Shooter****1 Shooter's Helper****2 Cable Truck Drivers****4 Helpers****1 Surveyor****1 Rodman****Total 12 Men****(2) Drilling:****4 Drillers****4 Driller's Helpers****Total 8 Men****(3) Line Cutting:****5 Bulldozer Operators**

(4) Camp:

1 Party Manager

1 Clerk

1 Mechanic

1 Supply Man

1 Cook

1 Cook's Helper

1 Camp Attendant

Total 7 Men

Grand Total = 32 Men

B. Equipment

1 Kitchen Trailer

1 Utility Trailer

1 Shop Trailer

1 Fuel Storage Trailer

1 Recording Truck

2 Reel and Cable Truck

1 Shooting Truck

2 Survey Trucks

1 Supply Truck

1 Party Manager's Truck

2 Top Drive Drills

2 Conventional Drills

4 Water Trucks

3 Bulldozers D6C

2 Bulldozers D7E

Recording equipment consisted of Western Geophysical DFS-111 48-Trace instruments, 104 conductor cable, and Mark L-10 14LZ geophones.

C. Mobilization Dates and Production

The survey consisted of twelve lines (DHJ-001 to DHJ-010, DHA-001 and DHA-002) for a total of 168 miles. Approximately 1150 shotpoints were drilled.

The recording started February 1, 1973 and was completed March 15, 1973. However, some of the line cutting was done on the two DHA lines as early as January 15, 1973. The average daily production was 3.9 miles.

D. Navigation

A horizontal and vertical survey was run on all lines in the project. This survey was tied to the Ft. Liard bench mark on the west side, and to the BA-Tex. Arrowhead B76 and the Tex-NFA Bovie Lake wells on the east side, plus several stations along the B.C. - N.W.T. border. Wild TIA theodolites were used for surveying.

E. Conditions

No unforeseen operational problems were encountered on the prospect. However, the steep banks of the Petitot and Arrowhead Rivers prevented ties between lines DHJ-010 and DHJ-007, and lines DHJ-007 and DHJ-003, and caused a large gap in the east end of line DHJ-002.

Field Procedure

The area was surveyed by conventional reflection method, using 600% CDP coverage throughout. All DHJ lines were single 65 ft. holes with 25 lb. charge, while the two DHA lines were 55 ft holes with 50 lb. charge. See spread diagram in pocket for detailed information on cable and shotpoint configurations.

Data Processing

Elevation corrections were applied to a +1500 foot datum using a replacement velocity of 11,000 ft./sec. and time-delay corrections due to the presence of near-surface low velocity layer. Trace muting, dynamic corrections and amplitude equalization were applied prior to time and space variant filtering, and stacking. All processing was performed in-house.

Results and Interpretation

Objectives: To determine this regional configuration of the North Bekami Basin, to delineate the primary fault zones, and to define any potential hydrocarbon traps.

Results: The quality of the seismic was generally good, allowing the Mid-Devonian Carbonate reflection to be correlated throughout the prospect. Both the Bekami and Liard Fault Systems were well defined, plus several less significant faults throughout the basin. The Liard

System appears to exist as a thrust at depth, producing an anticlinal feature which may or may not be open to the north.

Conclusions:

The general regional structure has been defined, however, additional seismic control is required to prove the existence of potential hydrocarbon traps.

Respectfully submitted

Amoco Canada Petroleum Co. Ltd.

By: 

D. E. Birnie

District Geophysicist