

GEOPHYSICAL REPORT ON

TETCHO LAKE AREA

NORTHWEST TERRITORIES

1970

GOVERNMENT PROJECT NO. 551-6-4-70-1



551-6-4-6

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PREPARED BY:

SHELL CANADA LIMITED
WESTERN DIVISION EXPLORATION
CALGARY, ALBERTA



TO ACCOMPANY:

STATEMENT OF EXPENDITURES FOR
SEISMIC SURVEY CONDUCTED BY
CENTENNIAL GEOPHYSICAL, LTD.

FOR

KERR-MCGEE OF CANADA NORTHWEST
LTD.
DURING JANUARY AND FEBRUARY
1970

PART OF SURVEY CARRIED OUT ON
P. & N.G. LEASES 461 TO 467
(LEASE GROUP NO. L-27)
REGISTERED IN THE NAME OF
SHELL CANADA LIMITED

551-6-4-6

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I. INTRODUCTION

In accordance with Section 82 of the Canada Oil and Gas Land Regulations, Shell Canada Limited submits the following report on a seismic program conducted on Petroleum and Natural Gas Leases No. 461 to 467 and on the offsetting Crown lands in the Tetcho Lake area of the Northwest Territories. The program was conducted by Kerr-McGee of Canada Northwest Limited, during January and February 1970, by agreement with Shell Canada Limited.

II. STATISTICAL DATA

1. Mobilization Summary

Line dozing commenced on January 13, 1970 followed by shot hole drills on January 21, 1970.

Recording operations commenced on January 25 and were completed on February 22, 1970.

All equipment prior to this survey was employed in the immediate area. Upon completion the crew moved to an area southeast of Trout River.

2. Production

Total Miles Shot	113.02
Number of Shots	1,235
Number of Stations	1,184 profiles
Days worked	20 recording
Average Daily Production	5.65 miles (59 profiles)
Down Days	4 lack of drilling
	3 on other area jobs

3. Personnel

1 Supervisor	2 Surveyors
1 Party Manager	2 Rodmen

1 Computer/Clerk	1 Mechanic
1 Observer	13 Drillers
1 Senior Observer	13 Drill Helpers
1 Shooter	4 Water Truck Drivers
1 Shooter's Assistant	6 Camp Catering Staff
2 Reel Truck Drivers	12 Dozer Operations Personnel
6 Observers Helpers	

4. Navigation

Survey by Theodolite; reference to old well sites and previous survey maps.

5. Radio Liaison

Communications by single side band five channel radios. Most frequently worked channel was the high frequency (14320) to Edmonton.

III. FIELD PROCEDURES

Recording was done with Geo Space 1590 binary gain instruments. 2,640 foot split spreads were used with single hole drilled every 440 feet. The resultant stack was 600%. The average charge size was 2 pounds at 45 feet. Geophone station intervals were 220 feet.

IV. RESULTS AND INTERPRETATION

Field record quality in general was fair to good. Processing of data was done by GSI in Calgary (Project 601635) and sections were prepared from the deconvoluted field data, flattened on an early reflection. Good reflections were obtained from the Carlson and Jean Marie members of the Devonian as well as the Hume carbonate member.

An isochron map from the Jean Marie to Hume was prepared. No evidence of reef buildups was observed but indications of normal faulting consistent with that observed on the surface were present.