Mobil

OIL & GAS OPERATIONS UNIT
Oil and Mineral Division
JUL 10 1975
OTTAWA, CANADA
Dept. of Indian Affairs & Northern Development

D. I. A. N. D.
OTTAWA
COPY

057-06-06-085

REPORT ON THE 1974 SEISMIC SURVEY
GREAT BEAR LAKE AREA
PROJECT NO. 57-6-6-74-1

G.V. SEVERSON
NORTHERN CANADA AREA
JUNE 1975

8708 (1-69)

July 3, 1975

Dr. H. W. Woodward,
Assistant Director,
Oil and Mineral Division,
Northern Natural Resources
and Environment Branch,
Department of Indian and
Northern Affairs,
13th Floor, Centennial Tower,
400 Laurier Avenue W.,
OTTAWA, Ontario,
K1A 0H4

057-06-06-085

Attention: Mr. S. A. Kanik

CONVENTIONAL SEISMIC PROGRAM-1974
GREAT BEAR LAKE AREA, N.W.T.
PROJECT NO. 57-6-6-74-1

Dear Sir:

Mobil Oil Canada, Ltd. herewith forward the following reports and data pertaining to our 1974 Seismic Program on our Great Bear Permit Block:

I Operations Report by CGG (3 copies)
Each folder contains:
1. Report by CGG
2. Surface Evaluation Maps 1" = 4 mile (4 sheets)
3. Survey Traverse Maps 1" = 4 mile (4 sheets)

II Geophysical Report by Mobil (3 copies)
Each folder contains:
1. Geophysical Report entitled:
Report on the 1974 Seismic Survey, Great Bear Lake Area
2. Structure Map in Time on Top of Paleozoic
3. Structure Map in Time on Top of Cambrian Salt
4. Structure Map in Time on Base of Cambrian Salt
5. Isochron Map Top Paleozoic to Top of Salt
6. Isochron Map Top of Salt to Base of Salt
(all maps are in the scale of 1" - 1 mile and consist of 2 sheets, each)

8708 (1-69)

III Seismic Record Sections (1 set of 15 sections, full scale)

Line Number	File Number
70-01	74-31-4
70-01 (Ext. South)	74-31-8
70-01 (North)	74-31-9
70-02	74-31-3
70-03	74-70-2
70-04	74-31-2
70-06	74-31-7
70-12	74-31-5
70-12 (Extension)	74-31-6
70-18	74-43-1
70-20	74-70-1
70-22 (East & West)	74-43-3
70-24 (East & West)	74-43-4
70-26	74-43-2
70-28	74-70-3

Yours very truly,

Marcus L. McLafferty
Landman
Northern Canada Exploration Area

MLMc

AEB:MLMCL:dg

Attachments

057-06-06-085

OIL & GAS OPERATIONS UNIT
Oil and Mineral Division
JUL 10 1975
OTTAWA, CANADA
Dept. of Indian Affairs & Northern Development

SEISMIC INTERPRETATION REPORT

GREAT BEAR LAKE AREA

D.I.A.N.D.
OTTAWA
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Project No.	57-6-6-74-1
Operator or Permittee	- Mobil Oil Canada, Ltd.
Prime Contractor	- Compagnie Generale de Geophysique
Year	- 1974
Author	- G. V. Severson
Date	- June 1975

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MAPS ATTACHED

1. Structure on Top of Paleozoic
2. Structure on Top of Cambrian Salt
3. Structure on Base of Cambrian Salt
4. Isochron Map Top Paleozoic to Top Salt
5. Isochron Map Top Salt to Base Salt

INTRODUCTION

This report presents the results of Mobil's 1974 Seismic Program on our Great Bear Permit Block in the Northwest Territories. The 211 mile program was recorded by Compagnie Generale de Geophysique during January 5 to April 22, 1974, using a dynamite source. The program was a follow-up to a previous 160 mile seismic program which had been done in the same area during the 1971-72 winter season by Western Geophysical using a vibrator source.

FIELD SEISMIC OPERATIONS

A dynamite energy source was used for obtaining seismic information by Compagnie Generale de Geophysique. It provided better information than the vibrator source used by Western Geophysical in the winter of 71-72 in this area.

The seismic energy was received by an 18 geophone sinc. It was designed to attenuate ground noise with wave numbers less than 7.0×10^{-3}.

A 400% seismic coverage program utilizing a 1320-0-1320 bilateral spread was the original field procedure. However, an increase in productivity became necessary and the bilateral spread was increased to 1800-0-1800.

More details on the field operation are contained in the report submitted by Compagnie Generale de Geophysique.

PROCESSING

All seismic sections were processed by Mobil personnel in Mobil's Calgary office. The production processing sequence is shown on the Leader sheets at the end of each seismic section. Field and final stacked tapes are on file with Mobil Oil Canada, Ltd. in Calgary, Alberta.

INTERPRETATION

Seismic sections were interpreted to produce structure and isochron maps of the Great Bear Block. The structure maps are identified as the following geological horizons:

1. Top of Paleozoic Carbonates
2. Top of Cambrian Salt
3. Base of Cambrian Salt

The following isochron maps were made:

1. Top of Paleozoic to Top of Cambrian Salt
2. Top of Cambrian Salt to Base of Cambrian Salt

The seismic events that have been interpreted to produce the structure maps were assigned geological ages from

regional geological information. Geological identification was also extrapolated from the Arco Lost Hills Lake F-62 well which is located 25 miles south of Smith Arm. The Sonic log from this well exhibits good velocity contrast at the Tops of Paleozoic carbonates and Cambrian Salt as well as the Base of the Cambrian Salt. Since there is no direct correlation by seismic from a well location to the Great Bear Block, the seismic character becomes important in identifying geological ages with seismic events.

The structure map on top of Paleozoic carbonates indicates two structural provinces in the Great Bear Block.

1. a structural low trending northeast and occupying the southeast portion of the mapped area,
2. a broad plateau with gently undulating folds covering the northwest portion of the area.

The southeast portion of the block is structurally low and is controlled by northeast trending faults. Deformation of Paleozoic sediments is greater in this low region than elsewhere on the block. Farther to the east Proterozoic and Paleozoic formations are faulted up and are found to outcrop in the Coronation Hills and the Coppermine Arch.

The northwest portion of the Great Bear Block is interpreted to be a broad plateau region. It has gently undulating folds with a northwest strike of the structural axis. This interpretation of strike direction was determined in the southern portion of the block where seismic quality is considered to be best. This strike direction is assumed to continue northward throughout the plateau region.

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057-06-06-035

OIL & GAS OPERATIONS UNIT
Oil and Mineral Division
JUL 10 1975
OTTAWA, CANADA
Dept. of Indian Affairs & Northern Development

REPORT ON THE REFLECTION SEISMOGRAPH SURVEY
GREAT BEAR LAKE AREA
NORTHWEST TERRITORIES

D. I. A. N. D.
OTTAWA
COPY

PERMIT No. N73B631

JAN. 5, 1974 to APRIL 22, 1974

for

MOBIL OIL CANADA, LTD.

Report By:

M.V.EIDSNESS - OPERATIONS MANAGER

COMPAGNIE GENERALE DE GEOPHYSIQUE

CALGARY, ALBERTA

JUNE, 1974

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CHAPTER I

Summary

1.1 INTRODUCTION

A geophysical survey was conducted in the Great Bear Lake Area of the Northwest Territories for Mobil Oil Canada, Limited, by C.G.G. Party No. 401-45-32, Mobil Party No. 70. The surveyed area is located approximately 150 miles north and east of Norman Wells, between 66° 30' to 67° 15' North Latitude and 122° to 124° West Longitude.

The survey was conducted between January 5th and April 22nd, 1974, utilizing track mounted equipment.

Shot hole drilling was subcontracted to Elgin Exploration Ltd. and Kenaston Drilling (Arctic) Ltd. A self-propelled track mounted camp supplied by C.G.G. and complementary sleeping and storage units rented from King Construction were used to house the crew personnel.

Catering was subcontracted to Foothills Catering of Calgary.

Bulldozing equipment and camp were subcontracted to King Construction of Grimshaw.

The crew was Party Managed initially by John Tarnowski who was replaced mid-way through the survey by A. Valliere, and supervised by M.L.H. Utas.

1.2 OBJECTIVES

The purpose of the survey was to obtain reconnaissance reflection seismic coverage within the assigned areas to delineate subsurface anomalies which may be suitable for the accumulation of hydrocarbons.

The total program shot was 211 miles of 400% C.D.P. coverage, consisting of 131 miles utilizing a spread of 1800-0-1800, and 80 miles employing 1320-0-1320 split spreads

CHAPTER II

2.1 RESULTS AND RECOMMENDATIONS

The quality of the records ranged from poor to good over the area.

A stacking diagram was completed in the field office and transmitted to Mobil along with the tapes, observers reports and elevations. No interpretation of the data was conducted by C.G.G.

Drilling conditions in the eastern portion of the area are very difficult due to the presence of sand and gravel. These holes, when drilled with air, cave in and are impossible to load.

If further work is contemplated in the area it is recommended that combination air/water drills be utilized. This will enable the use of mud to wall the holes and facilitate the loading of the powder to the desired depth.

Consideration should be given to providing two camps, a survey-drill crew camp and a recording crew camp, which would decrease drive time for both crew components. Sufficient advance planning is necessary to negotiate the subcontracting of all third party services.

CHAPTER III

Field Operations

3.1 GENERAL INFORMATION

An advance crew of four men were sent to Norman Wells on December 16th to install the instruments and prepare the equipment for the move to the working area. These men returned to Calgary on December 21, 1973.

On December 27th and 28th, 1973, an advance crew and supplies were flown by the Mobil DC-3 to Norman Wells to begin the move, but due to flooding on Oscar Creek the dozers were unable to open three miles of access and the crew did not leave Norman Wells until January 5, 1974.

Two dozers left Norman Wells on December 21, 1973 to open access to the program area via the Pan Cana road and the Oscar Creek crossing. Approximately twenty miles north of Norman Wells a flooded area was encountered and further progress at this time was impossible. Forestry approval was granted to cut a detour around this flooded area but this detour would have required approximately twenty miles of cutting. It was decided to push as much snow as possible onto the cut trail and let it freeze. This and the crossing at Oscar Creek were completed by January 4th and the remainder of the crew and equipment left Norman Wells on January 5th, 1974. The move was completed in fourteen days with a minimum of problems. The first camp site was on a lake shore near the south end of Line 1.

The line cutting operation began on January 20th, followed by the drills on January 21st. The crew started shooting on January 22nd.

The last shot was recorded on April 19th. Equipment was moved and stock piled at a pre-selected demobilization site on the north side of Great Bear Lake on April 20th. The men were flown to Calgary on April 21st and 22nd by Mobil's F-27 aircraft.

3.2 TERRAIN

The surface is composed mostly of clay, sand and gravel. Forest cover in the area is generally light and consists predominantly of spruce with stands of willow in the low lying areas.

The area is covered with numerous lakes. The major drainage is through the Katseyedie River which flows in a southerly direction and drains into Great Bear Lake. The western portion of the prospect consists of gently rolling hills. The terrain in the eastern part is extremely rough with very abrupt elevation changes. Elevations range from 500 ft. a.s.l. in the southern portion of the prospect to 1700 ft. a.s.l. in the east central region.

3.3 COMMUNICATIONS

A Marconi Model SSB radio equipped with 5281.5, 9365.5, 6773.0, 1652.0 CNT Ft. Nelson, 509.0 and 5222.5 frequencies was supplied for communication with Service North expediting service in Norman Wells and C.N.T. radio in Ft. Nelson. Reception to Ft. Nelson was very poor, therefore messages were relayed through the answering service in Norman Wells.

A UHF air to ground radio operating on a frequency of 122.9 KC and a non-directional beacon with a frequency of 352 KC supplied by C.G.G., were used for communication with and navigation of the supply aircrafts.

3.4 LOGISTIC SUPPORT

The air support from Calgary to Norman Wells and air strips on lakes in the working area was provided by the Mobil DC-3 until late January when this aircraft was replaced by Mobil's F-27. Upon commencement of operations a weekly supply run for personnel, catering supplies and spare parts was set up for each Thursday from Calgary to Norman Wells or air strips constructed on lakes in the area. On occasion additional trips were made to supply parts urgently required to enhance the operation.

A DC-3 aircraft was chartered from Northwest Territorial Airways Ltd. from Yellowknife directly to Mobil Oil to ferry fuel and supplies from Norman Wells to the work site. This aircraft was originally equipped with skis which were removed when ice thickness was found to be sufficient for a D6C dozer to construct air strips on the lakes.

3.5 CAMP

A 32 man, self propelled track mounted fold out camp was provided by C.G.G. This camp consisted of; 1 kitchen/diner/sleeper, 1 utility/sleeper, 1 office/sleeper and 1 power/work shop. Two power plants with a combined capacity of 50 KW were used to supply electricity to the camp. A 7½ KW combination welder-power plant was rented as a standby unit. To complement this track camp, a 10 x 40 sleigh mounted sleeper and a 10 x 26 storage unit were rented from Kings Construction. A sleigh mounted dynamite and cap storage was rented from Explosives Ltd. Two fuel sloops with a total capacity of 5000 gallons were rented from Kings Construction for storing fuel for the seismic crew and drills.

During camp moves the track camp was left folded out and moved with relative ease. The remainder of the camp units were towed with as many dozers as were required, depending upon terrain.

3.6 SURVEYING

Several star shots were taken throughout the area to establish horizontal control. An elevation from the lake at the first camp site was used as a basis for vertical control. At the completion of the survey the vertical control was extended to Great Bear Lake. The mistie at Great Bear Lake was -22 feet. A correction of plus 22 feet was make to all elevations on the surface elevation map. All vertical ties on the C.G.G. work are within 3.5 feet of closure.

A survey traverse and surface elevation map were constructed in Calgary at the completion of the program and accompany this report.

3.7 BULLDOZING

Two D7E and two D6C dozers were subcontracted from Kings Construction, Grimshaw Ltd. to cut and clear line, doze air strips on the lakes, haul fuel and assist in camp moves. A camp and 2500 gallon fuel storage was supplied by the dozer contractor. To complement the main camp a fuel haul sleeper with another 500 gallon storage was provided for accomodation for personnel while hauling fuel from the lake to the dozers and seismic camp.

3.8 DRILLING

Four track mounted air drills were subcontracted from Kenaston Drilling (Arctic) Ltd. and two from Elgin Exploration Ltd. to perform the drilling operations.

Drilling conditions in the western portion of the area are generally good where clay and boulders are encountered. Drilling conditions in the eastern portion of the area are very difficult due to the presence of approximately 30 feet of sand and gravel. The holes drilled in this material cave in and are impossible to load.

Due to extremely cold weather during the months of January and February as well as negligence in maintenance of the Kenaston Drills, the production was very poor, until the last month of operations when a full time drill push was stationed in camp.

The average drilling rate for the program was 34.29 feet per field hour.

The rate of production increased considerably during March and April when the weather moderated and the program was changed to eliminate sand and gravel digging.

3.9 RECORDING

The recording system used on this crew consisted of a 9 track, 24 trace DFS III Binary Gain Amplifier System, in conjuction with a Geospace Model 1800 Electrostatic Camera, and S.I.E. patch panel and roll-a-long switch.

A remote control firing system OPC-1B & SPC-1B was installed in the operators and shooters units respectively. The time break was transmitted by two VHF transceivers manufactured by Canadian Motorola Electronics Limited. The uphole time was transmitted to the recorder through one of the channels of the seismic cable.

Geospace geophones, type HSJ Model L1 14HZ supplied by Mobil Oil Canada, Ltd., were employed on this prospect. The geophone pattern consisted of 18 per trace in a weighted array, spaced over 170 feet. The cables, supplied by C.G.G. consisted of 20 elements of 40 pairs of conductor cables, with 6 take-outs per element spaced at 165 feet. A shot point pattern of one hole with an interval of 330 feet between shot points and utilizing a 1320-0-1320 ft. spread was used to record 80 miles of 400% C.D.P. data. One hundred and thirty one miles of program was recorded with shot points spaced at 450 feet with an 1800-0-1800 ft. split spread. Spread length was increased to reduce the number of holes per mile and increase recording production. Preliminary tests were conducted using 5 and 10 lb. charges at a depth of 40-45 ft. To ensure sufficient energy was obtained, a 10 lb. charge was selected. When the spread was increased to 1800-0-1800 the charge was increased to 20 lbs. All field monitor records were shot and recorded on tape using an 18-18-124 HZ filter.

A total of 85 working days were required to shoot 212 miles of program for an average production of 3.26 miles per day.

3.10 CONCLUSIONS

The sand and gravel conditions in the eastern portion of the area contributed to the low drilling production and the necessity to shut down the recording crew for a total of 15 days during the month of February 1974. An attempt was made to inject liquid mud into the circulating system of the drills but this was not successful. An experienced driller was sent to the crew to evaluate the drilling conditions and reported that every effort possible was being made by the drillers on site and it was impossible to drill this formation with air.

After discussion with Mobil Oil supervisors it was decided to try and locate drills equipped with mud pumps. Ice measurements were taken on several lakes and sufficient ice was found on Great Bear Lake to land the Hercules aircraft. Suitable drilling

equipment could not be located at his time, therefore the plan was abandoned.

Much pressure was exerted on the owner of Kenaston Drilling to supply a full time drill foreman and mechanic, and to upgrade his drilling personnel. This pressure brought some results and the drilling production increased significantly during the last six weeks of the survey.

When the recording crew returned from the 15 day shut down period the drills were approximately twenty miles ahead. The camp continued to move with the drills, which resulted in excessive drive time for the recording crew. This condition prevailed for approximately two weeks.

If further work in the area is contemplated, consideration should be given to providing a drill camp independant from the recording camp. This would allow less drive time for both drills and recording crew.

It would also be advisable to employ air/water combination drills. A minimum of six drills is advised, with capabilities for operating double shifts if necessary.

Respectfully submitted

COMPAGNIE GENERALE DE GEOPHYSIQUE

M. V. Eidsness

M.V.EIDSNESS
Operations Manager

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Respectfully submitted

COMPAGNIE GENERALE DE GEOPHYSIQUE

M.V. Eidsness

M.V.EIDSNESS
Operations Manager

3.11 PERSONNEL ROSTER

1	Supervisor	M.L.H. UTAS
1	Party Manager	J.A. TARNOWSKI
		A. VALLIERE
1	Clerk-Computer	M. MOSSMAN
1	Senior Observer	L. NOBERT
1	Junior Observer	H. FOLKHARD
1	Shooter	W. KLANTEN
		D. MEADOWS
		J. PAULSON
2	Surveyors	G. MARTIN
		C. PAUL
		R. LaBELLE
		W. McKAY
1	Mechanic	H. SWARTZ
		L. DOUD
6	Recording Helpers	
2	Line Unit Drivers	
2	Rodmen	

STATISTICAL SUMMARY

Starting Date: January 5, 1974

Completion Date: April 22, 1974

RECORDING

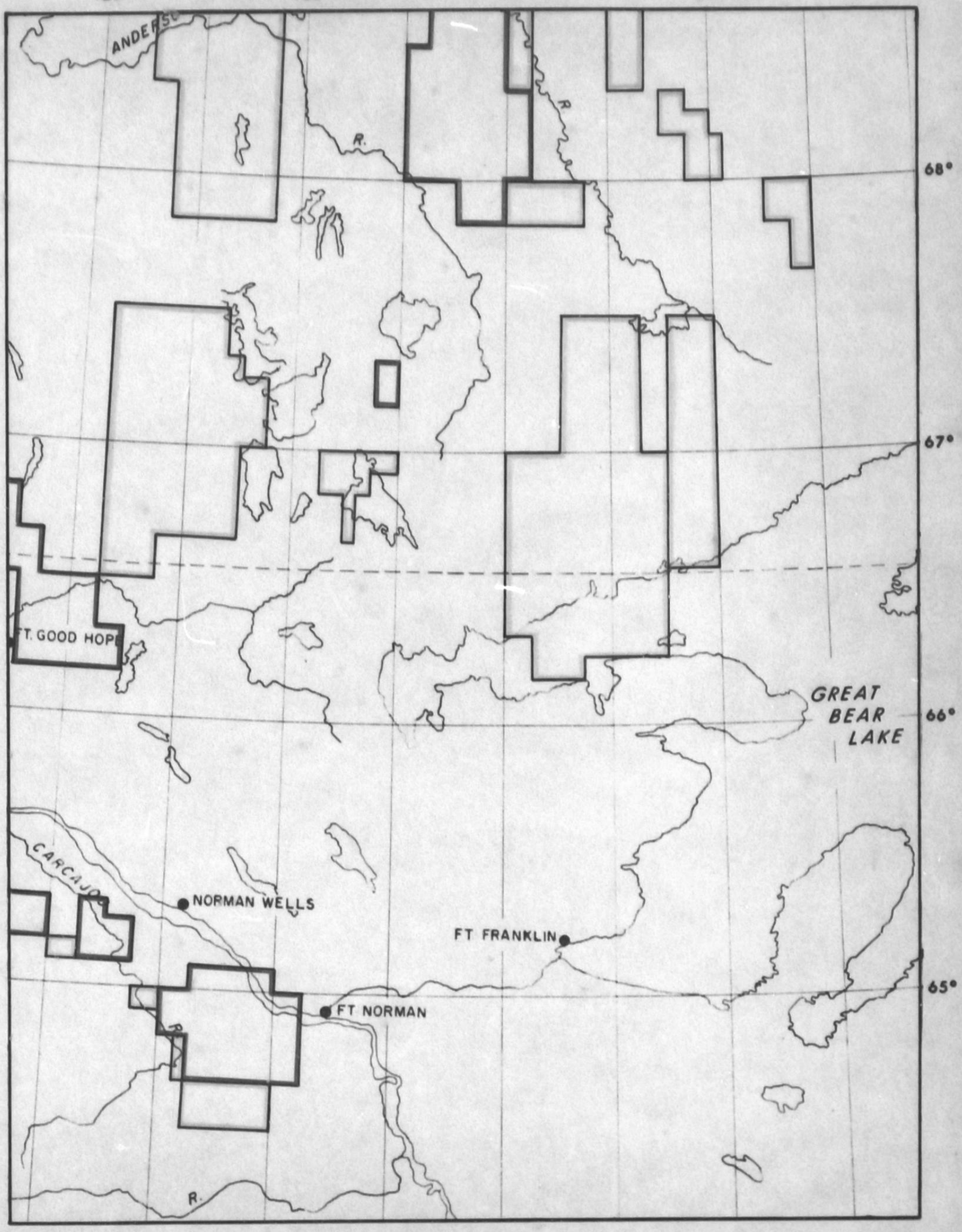
Total Shot Points	2237
Total Miles	211.73
Total Hours	943.25
Total Field Hours	620.0
Total Drive Hours	139.25
Total Move Hours	184.0
Total Days Worked	85
Average Miles Per Day	3.26
Average Shot Points Per Day	34

DRILLS

No. of Drills	6
Total Drilling Hours	3132.75
Total Drive Hours	1268
Total Move Hours	883
Total Hours	5283.75
Total Footage	107,434
Average Footage Per Hour	34.29
Total Holes Drilled (includes holes not loaded)	2377

BULLDOZERS

No. of Bulldozers	4
Total Miles Cut	254
Total Move Hours	1520
Total Field Hours	7077
Total Hours	8587



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NORTHERN CANADA AREA

GREAT BEAR LAKE AREA

32 MI.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2353

MICROMAT
105 M.M.

11x

September 1975

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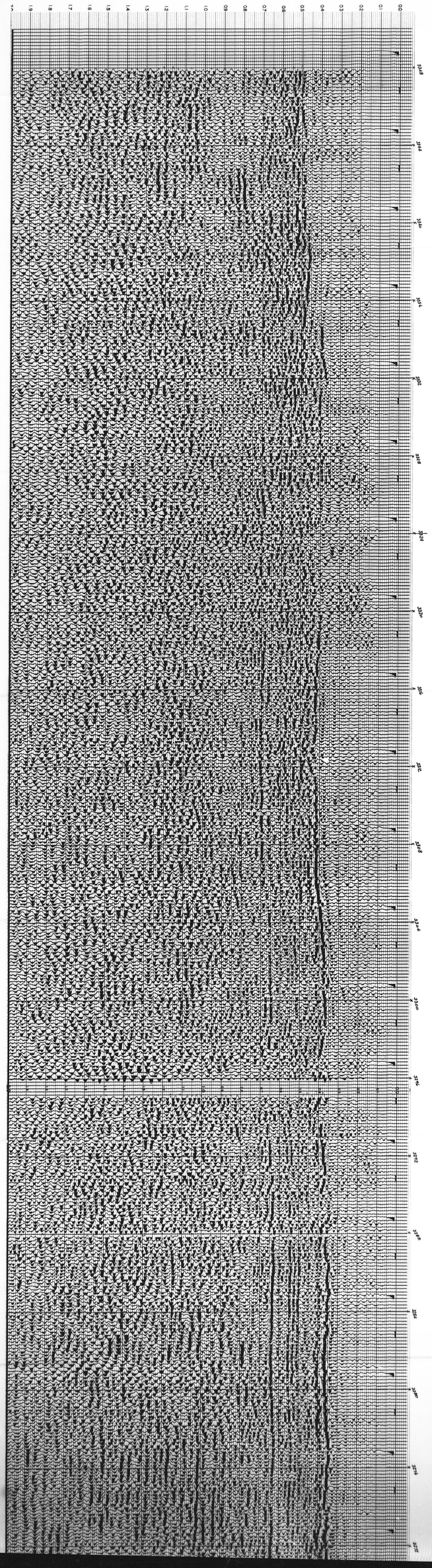
September 1975



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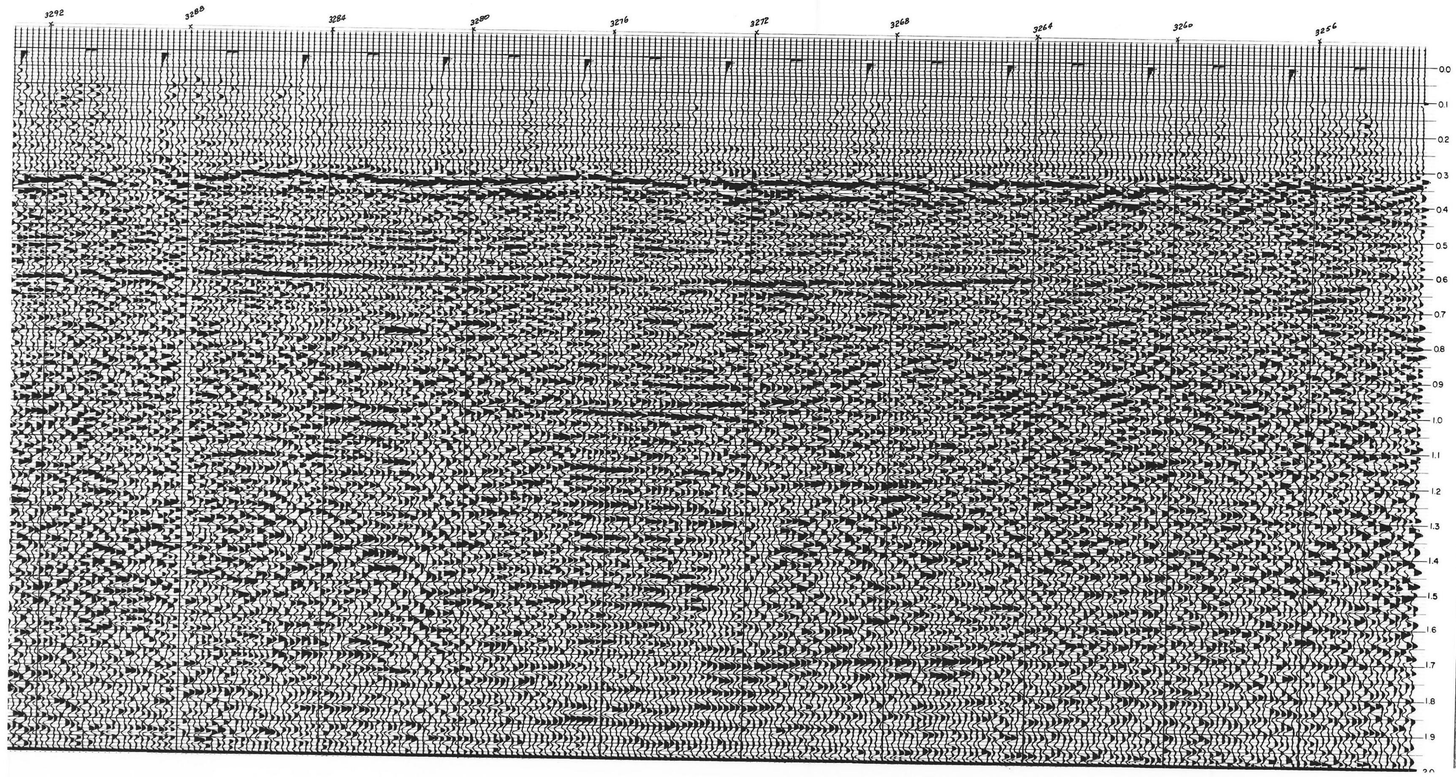
MOBIL OIL CANADA LIMITED

GREAT BEAR LAKE

LINE 70-01 S.EXT.

JUNE 4, 1974



DIRECTION 8

MOBIL OIL CANADA, LTD.

PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-01 S. Ext.
SHOTPOINT 3253 TO SHOTPOINT 3148
CREW Mobil-Co Geophysical AREA Northern
CHARG. NO. 219 NAME SMITH ARM (Great Bear Lake)
PROV. Alberta LAT. LONG.
SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED March 18-19, 1974
TOTAL FOLD 5 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL X TRACK B.P.I. DENSITY
FIELD SYSTEM OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH 2 sec. SAMPLE RATE 2 ms.
FIELD FILTER LOWCUT 18 db/octave HIGHCUT 125 db/octave
GAIN CONTROL [X] BINARY [ ] AGC
ENERGY SOURCE [X] DYNAMITE [ ] DINOSEIS [ ] THUMPER [ ] OTHER [ ] VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec.
NO. OF SWEEPS
[ ] GUN TYPE
DEPTH ft.
CAPACITY cu. inches
NO. OF GUNS
ENERGY SOURCE SPACING 450 ft. meters
TYPE GEOPHONE HS3 14
NO. OF GEOPHONES PER GROUP 18 weighted
GROUP INTERVAL 150 ft. meters
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM South

1800' 150' 150' 1800'
ft. 1 12 13 24 ft.

REMARKS

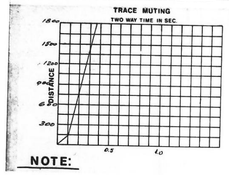
DISPLAY INFORMATION

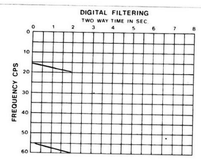
HORIZONTAL SCALE
SUBSURFACE TRACE SEPARATION ft. meters
MIX [X] YES [ ] NO TYPE
PLAYBACK DATE
REMARKS Pol. South

PROCESSING PARAMETERS AND SEQUENCE

[X] -FOLD
DATE PROCESSED May, 1974
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT 9 -TRACK
DATUM 1800 VELOCITY TO DATUM 14000
[ ] BINARY GAIN RESTORATION:
F.P. DTRIM LENGTH OF WINDOW sec.
DIVERGENCE V=0 ft./sec. A= ft./sec.²
[ ] HORIZONTAL COMPOSITE to
[X] EDIT
[X] TRACE MUTE [X] DATUM STATICS
MEAN REMOVAL
[X] TRACE EQUALIZATION:
[X] DTRIM (X) DTRIM
WINDOW 2.0 sec. WINDOW ms.
SINGLE WINDOW TRIM to sec. SINGLE WINDOW TRIM to sec.
MULTI-WINDOW TRIM to sec. MULTI-WINDOW TRIM to sec.
REMARKS
[X] 5 -FOLD GATHER
[X] DECONVOLUTION (X)
[X] SINGLE WINDOW 'SPIKE' 1.0 sec. 32 ms. (X) SINGLE WINDOW 'SPIKE' ms.
MULTI-WINDOW 'SPIKE' to sec. ms. MULTI-WINDOW 'SPIKE' to sec. ms.
SINGLE WINDOW 'GAPPED' to sec. ms. SINGLE WINDOW 'GAPPED' to sec. ms.
REMARKS
[ ] STATICS METHOD after mute
[ ] VELOCITY DETERMINATION Dynamic, vel. analy.
[ ] NMO: [X] SAMPLE MOVE WAVELET SUMMATION
[X] FILTER TIME DOMAIN 2 FREQ DOMAIN
(X) SINC: BANDPASS 20-60 hz. LENGTH ms.
( ) SINC: BANDPASS hz. LENGTH ms.
( ) TIME VARIANT: TIME ZONE BANDPASS LENGTH
to sec. hz. ms.
[ ] 5 -FOLD CDP STACKING: SUMMATION OVF COMOP
[X] CDP2 - static cor. shift wndw. - stat
[X] SHOT2000 - shot point numbering
REMARKS 1974 shooting
Ref. Pol.
J.A. MAC DONALD

LINE NO. 70-01 EXT. South
FILE No. 74-31-8





NOTE:

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September 1975
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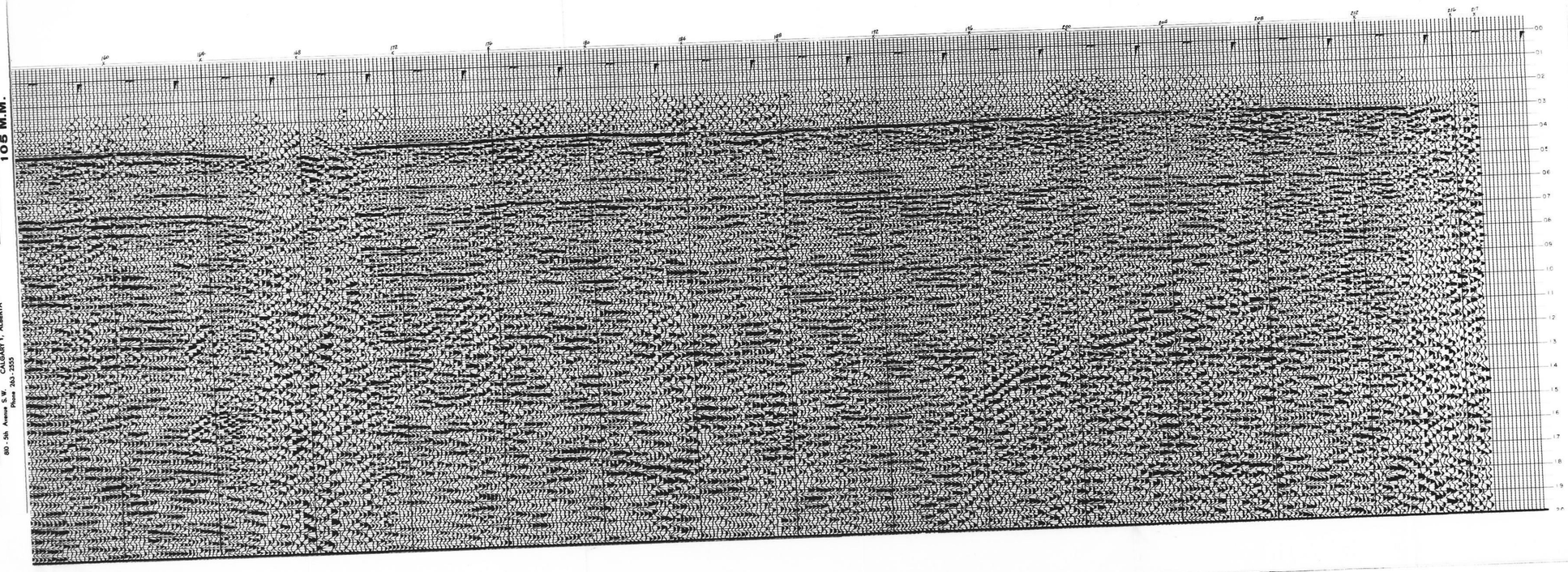
057-06-06-085

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-01
JUNE 1, 1974



057-06-06-085

DIRECTION

MOBIL OIL CANADA, LTD.
PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-01
SHOTPOINT
CREW 1974-75 Conv. Vibs
CHARG NO. 219
PROV.
SECTION TYPE

TO SHOTPOINT 217
AREA Northern
NAME Smith Arm (Great Bear)
LAT
LONG

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada Ltd.
DATE RECORDED 1974-5-1 - 1974
TOTAL FOLD 6 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL 2 TRACK 7 B.P.I. DENSITY
FIELD SYSTEM - OTHER Geo 18
INSTRUMENT TYPE DFS-III
RECORD LENGTH sec. SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 10 db/octave HIGHCUT 100 db/octave
GAIN CONTROL ☒ BINARY ☐ AGC
ENERGY SOURCE ☒ DYNAMITE ☐ DINOSEIS ☐ THUMPER ☐ OTHER
☐ VIBROSEIS SWEEP FREQUENCY sec. SWEEP LENGTH sec. NO. OF SWEEPS
☐ GUN TYPE CAPACITY cu. inches NO. OF GUNS
ENERGY SOURCE SPACING 110 metres
TYPE GEOPHONE
NO. OF GEOPHONES PER GROUP 15 weighted
GROUP INTERVAL 110 metres
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM
110' 110' 1320'
REMARKS GPS Vibs (Mobil)

DISPLAY INFORMATION

HORIZONTAL SCALE 1" metres
SUBSURFACE TRACE SEPARATION
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS Nonproc. Replays

PROCESSING PARAMETERS AND SEQUENCE

FOLD
DATE PROCESSED Nov. 1976
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT 9 TRACK
DATUM 1000 VELOCITY TO DATUM 1000
1 BINARY GAIN RESTORATION
FP STORE LENGTH OF WINDOW sec.
DIVERGENCE MP FT/SEC A= FT/SEC
2 HORIZONTAL COMPOSITE TP
3 EDIT
TRACE MUTE
MEAN REMOVAL
4 TRACE EQUALIZATION
DTRIM
WINDOW TR sec.
SINGLE WINDOW TRIM
MULTI-WINDOW TRIM
REMARKS
5 FOLD GATHER
6 DECONVOLUTION
SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED
REMARKS after mute
7 STATICS METHOD
8 VELOCITY DETERMINATION Conv. Vel. stack
SPACING
9 NMO SAMPLE MOVE WAVELET SUMMATION
10 FILTER TIME DOMAIN X FREQ. DOMAIN
SINC BANDPASS Hz LENGTH sec.
TIME VARIANT
11 FOLD CDP STACKING SUMMATION CNT CONCP
12 POST CDP Numbering
13
14
15
REMARKS
1974 shooting
L.A. McDONALD

LINE NO. 70-01
FILE NO. 74-31-4

TRACE MUTING
TWO WAY TIME IN SEC.
DISTANCE

DIGITAL FILTERING
TWO WAY TIME IN SEC.
FREQUENCY CPS

NOTE:

1972
1968
1964
1960
1956
1952
1948
1944
1940
1936
1932
1928
1924
1920
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9

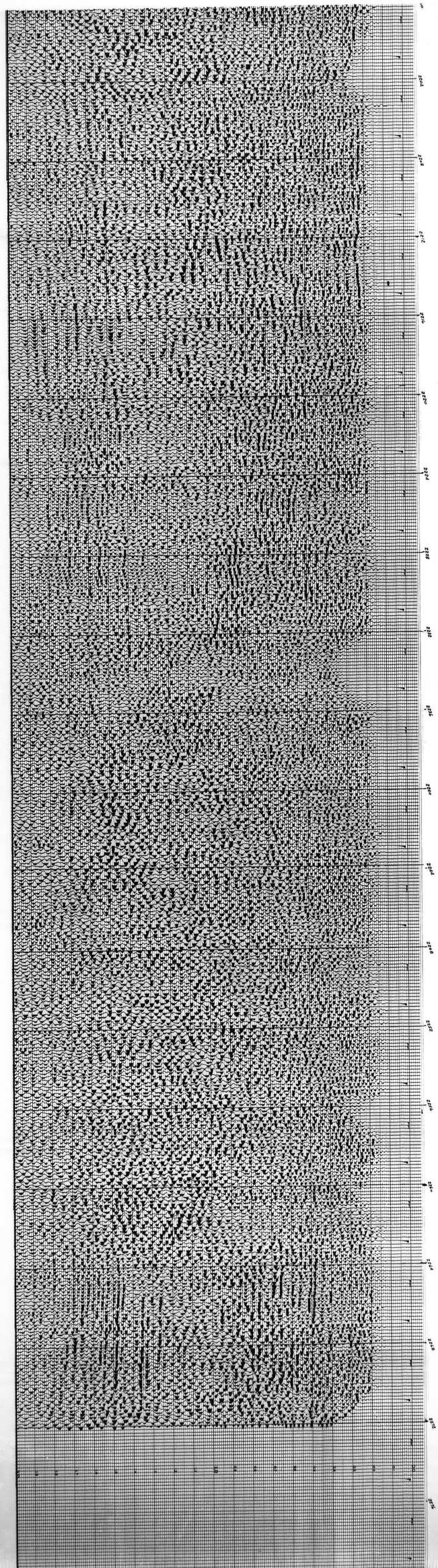
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



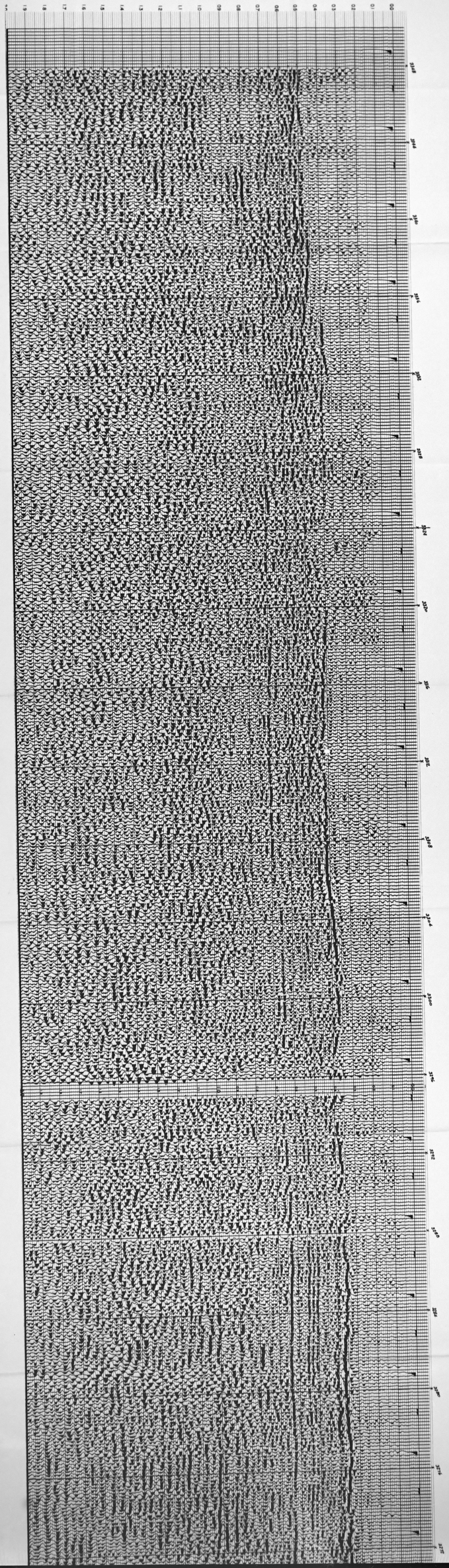
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



70-01 ext

70-01 north

September 1975

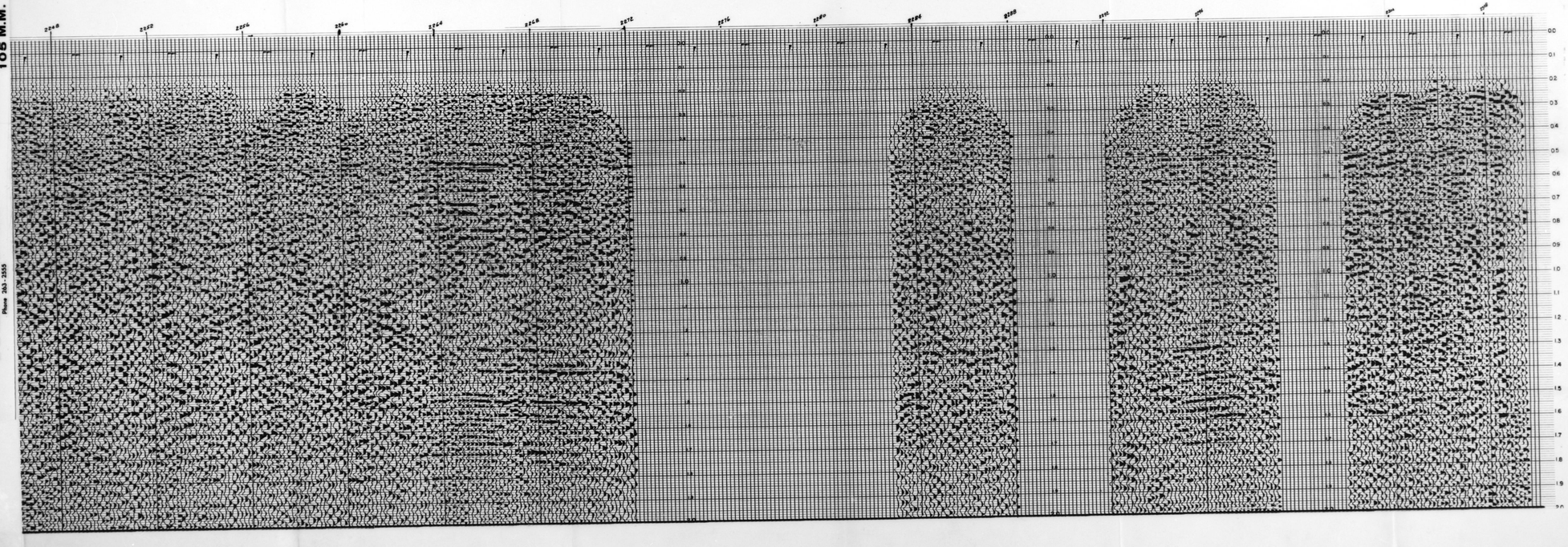
11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-3253

057-06-06-085

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-01-N. EXT.
JUNE 8, 1974



DIRECTION

MOBIL OIL CANADA, LTD.
PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-01 EXT. NORTH
SHOTPOINT 2249 TO SHOTPOINT 2308
CREW MOBIL GRAPHICS AREA NWT/YUKON
CHARG. NO. 219 NAME SMITH AND GREENING
PROV. N.W.T. LAT.
LONG.
SECTION TYPE

RECORDING INFORMATION

RECORDED FOR MOBIL OIL CANADA, LTD.
DATE RECORDED NOV. 7-11, 1974
TOTAL FOLD 24 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL 24 TRACK BPI DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH sec. SAMPLE RATE ms
FIELD FILTER LOWCUT Hz db/octave
HIGHCUT Hz db/octave
GAIN CONTROL ☑ BINARY ☐ AGC
ENERGY SOURCE ☑ DYNAMITE ☐ DINOSEIS
☐ THUMPER ☐ OTHER
☐ VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO. OF SWEEPS
GUN TYPE
DEPTH m
CAPACITY cu. inches
NO. OF GUNS
ENERGY SOURCE SPACING 330 metres
TYPE GEOPHONE 14
NO. OF GEOPHONES PER GROUP 10 weighted
GROUP INTERVAL 110 metres
SPREAD CONFIGURATION
CABLE DEPTH m
SPREAD DIAGRAM
REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE in.
SUBSURFACE TRACE SEPARATION metres
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS

PROCESSING PARAMETERS AND SEQUENCE

FOLD
DATE PROCESSED NOV., 1974
PROCESSED SAMPLE RATE ms
INPUT FORMAT TRACK
DATUM VELOCITY TO DATUM
1 BINARY GAIN RESTORATION
T-V STRIM LENGTH OF WINDOW ms
DIVERGENCE Hz/... Ft/sec Hz/... Ft/sec
2 HORIZONTAL COMPOSITE
3 EDIT
TRACE MUTE DATUM STATICS
MEAN REMOVAL
4 TRACE EQUALIZATION
STRIM STRIM
WINDOW ms WINDOW ms
SINGLE WINDOW TRIM SINGLE WINDOW TRIM
MULTI-WINDOW TRIM MULTI-WINDOW TRIM
REMARKS
5 FOLD GATHER
6 DECONVOLUTION
SINGLE WINDOW SPIKE SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED SINGLE WINDOW GAPPED
REMARKS
7 STATICS METHOD after note
8 VELOCITY DETERMINATION con. vel. analysis
SPACING
9 NMO SAMPLE MOVE WAVELET SUMMATION
10 FILTER TIME DOMAIN FREQ. DOMAIN
SINC BANDPASS LENGTH ms
SINC BANDPASS LENGTH ms
TIME VARIANT BANDPASS LENGTH
TIME ZONE ms ms
ms ms ms ms
ms ms ms ms
ms ms ms ms
11 FOLD CDP STACKING SUMMATION OVF COMP
12 Velocity analysis filtered
13 Stack (AB of various velocities, one ms
14 FXDX - stack 15-min. data undr a stack
15 FXDX - stack post-summing
16
REMARKS
interpolating
J.A. MCDONALD

DIRECTION

TRACE MUTING
TWO WAY TIME IN SEC.
Amplitude
0
0.5

DIGITAL FILTERING
TWO WAY TIME IN SEC.
FREQUENCY CPS

NOTE:

LINE NO. 70-01 NORTH
FILE NO. 74-31-9

057-06-06-085

August 1975

11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W.
CALGARY 1, ALBERTA
Phone 263-2303

057-06-06-085

August 1975

11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
880 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2323

057-06-06-085

August 1975

11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

057-06-06-085

August 1975

11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2535

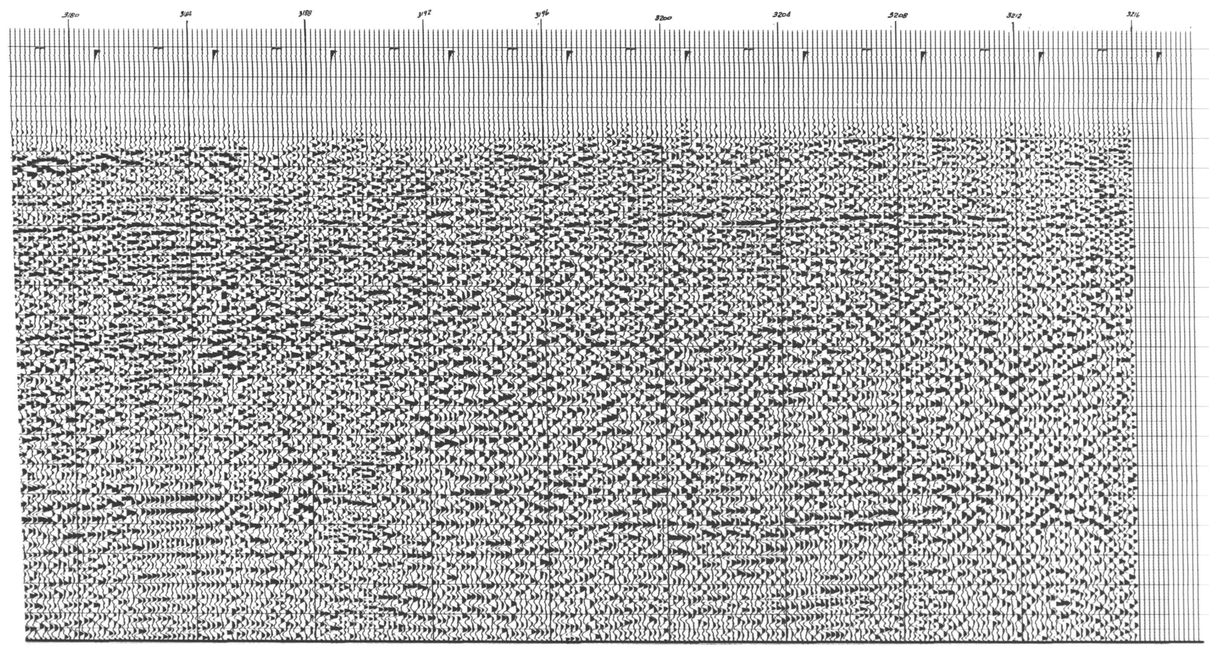
057-06-06-085

September 1975
11x
MICROMAT
105 M.M.
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W.
CALGARY 1, ALBERTA
Phone 263 2353
057-06-06-085

057-06-06-085

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-02
MAY 29, 1974

POLARITY - DOWN



DIRECTION E

MOBIL OIL CANADA, LTD.

PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-02
SHOTPOINT 3128 TO SHOTPOINT 3216
CREW Mobil Canada AREA Northern
CHARG NO. 219 NAME Mobil New Brunswick
PROV. N.W.T. LAT.
LONG.
SECTION TYPE Field

RECORDING INFORMATION

RECORDED FOR
DATE RECORDED Aug. 1974
TOTAL FOLD TOTAL TRACES
FIELD SYSTEM-DIGITAL TRACK BPI DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE
RECORD LENGTH 2 sec SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 8 cycles HIGHCUT 64 cycles
GAIN CONTROL ☐ BINARY ☐ AGC
ENERGY SOURCE ☐ DYNAMITE ☐ DINOSEIS ☐ THUMPER ☐ OTHER
☐ VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO. OF SWEEPS
☐ GUN TYPE
DEPTH
CAPACITY cu. inches
NO. OF GUNS
ENERGY SOURCE SPACING 220 yards
TYPE GEOPHONE
NO. OF GEOPHONES PER GROUP 24 No.
GROUP INTERVAL 110 yards
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM
REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE
SUBSURFACE TRACE SEPARATION 55 yards
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS

PROCESSING PARAMETERS AND SEQUENCE

FOLD
DATE PROCESSED
PROCESSED SAMPLE RATE ms
INPUT FORMAT TRACK
DATUM VELOCITY TO DATUM
☐ BINARY GAIN RESTORATION
F.P. DTRIM LENGTH OF WINDOW sec
DIVERGENCE 1.0 F sec 4 F sec
☐ HORIZONTAL COMPOSITE
☐ EDIT
TRACE MUTE DATUM STATICS
MEAN REMOVAL
☐ TRACE EQUALIZATION
DTRIM DTRIM
WINDOW sec WINDOW sec
SINGLE WINDOW TRIM SINGLE WINDOW TRIM
MULTI-WINDOW TRIM MULTI-WINDOW TRIM
REMARKS
FOLD GATHER
☐ DECONVOLUTION
SINGLE WINDOW SPIKE SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED SINGLE WINDOW GAPPED
REMARKS
☐ STATICS METHOD
☐ VELOCITY DETERMINATION Refraction Hand Picking
SPACING
NMO SAMPLE MOVE WAVELET SUMMATION
☐ FILTER TIME DOMAIN FREQ DOMAIN
SINC BANDPASS 8-64 LENGTH 512 ms
SINC BANDPASS Hz LENGTH ms
TIME VARIANT
TIME ZONE BANDPASS LENGTH
☐ FOLD CDP STACKING SUMMATION DVT COMOP
☐ Trace Mixing Filtered
☐ Trace Equalization Inst. Amp. Gains
☐ Static Shifts
☐ Surface Consistent Corrections
REMARKS Velocity Scan
Velocity Filter
Mute
Time Scale

LINE NO. 70-02
FILE No. 74-31-3

TRACE MUTING
MID WAY TIME (IN SEC)
DISTANCE

DIGITAL FILTERING
MID WAY TIME (IN SEC)
FREQUENCY (CPS)

NOTE:

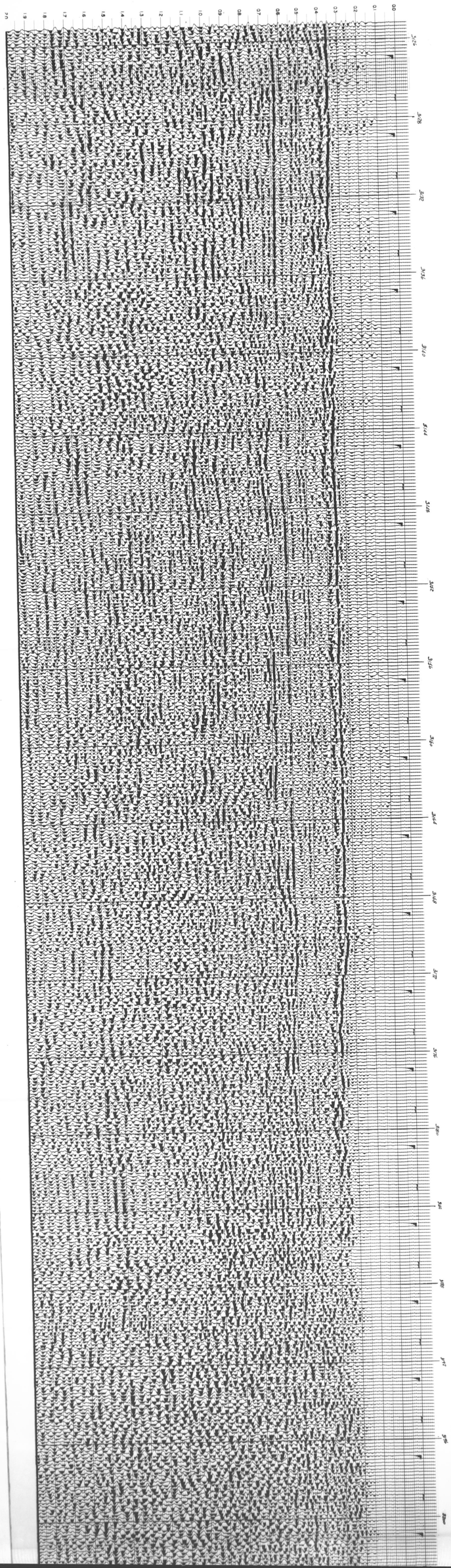
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



September 1975
11x
MICROMAT
105 M.M.
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2353

057-06-06-085

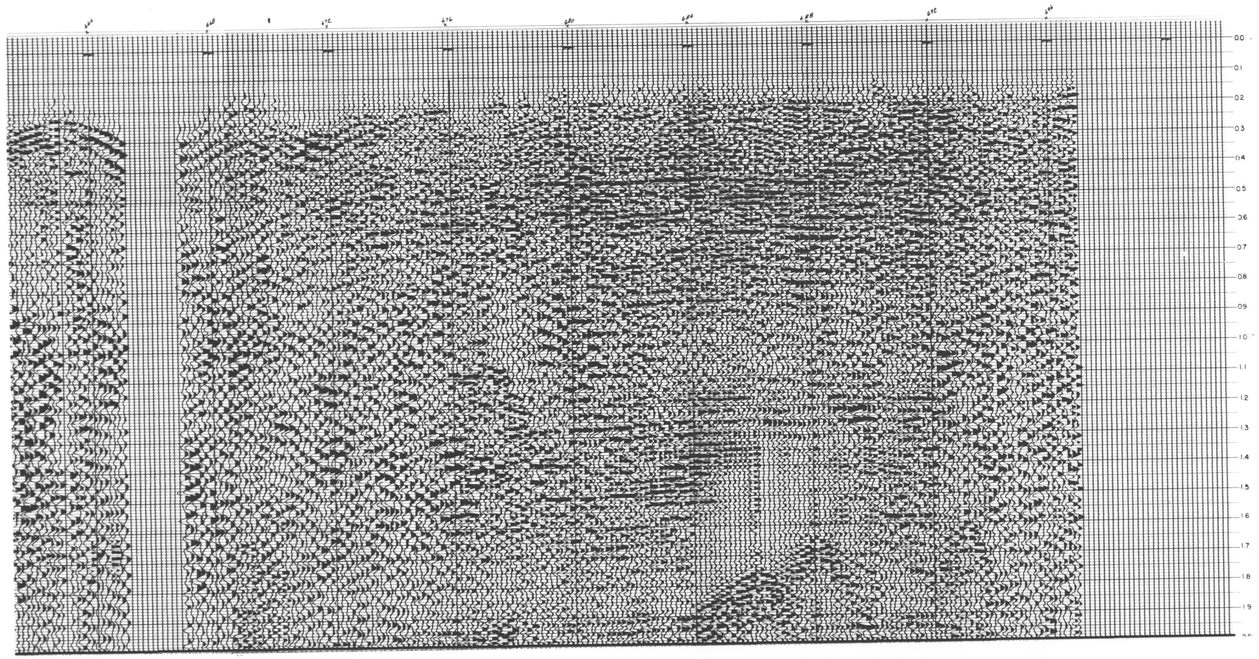
MOBIL OIL CANADA LIMITED

GREAT BEAR LAKE

LINE 70-03

POL. - DOWN

SEPT. 17, 1974



DIRECTION N

MOBIL OIL CANADA, LTD.

PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-03
SHOTPOINT 411 TO SHOTPOINT 697
CREW Mobil Canada AREA Northern
CHARG NO. 219 NAME Swift and Great Lake
PROV. N.W.T. LAT. LONG.
SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED Feb. '74 - March 6 '74
TOTAL FOLD 8 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL Z TRACK ☰ B.P.I. DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH 5 sec. SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 15 db/octave HIGHCUT 108 db/octave
GAIN CONTROL ☐ BINARY ☐ AGC
ENERGY SOURCE ☑ DYNAMITE ☐ VIBROSEIS ☐ THUMPER ☐ OTHER
☐ VIBROSEIS SWEEP FREQUENCY SWEEP LENGTH sec NO. OF SWEEPS
☐ GUN TYPE DEPTH ft CAPACITY cu. inches NO. OF GUNS
ENERGY SOURCE SPACING 330 (100) metres
TYPE GEOPHONE HS7
NO. OF GEOPHONES PER GROUP 6 in straight
GROUP INTERVAL 110 (33) metres
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM N
REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE
SUBSURFACE TRACE SEPARATION ft metres
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS

PROCESSING PARAMETERS AND SEQUENCE

☐ FOLD
DATE PROCESSED Mar. 1976
PROCESSED SAMPLE RATE ms
INPUT FORMAT TRACK
DATUM VELOCITY TO DATUM
☐ BINARY GAIN RESTORATION
F.P. DTRIM LENGTH OF WINDOW sec
DIVERGENCE P.I. sec P.I. sec
☐ HORIZONTAL COMPOSITE to
☐ EDIT
TRACE MUTE DATUM STATICS
MEAN REMOVAL
☑ TRACE EQUALIZATION
X DTRIM DTRIM
SINGLE WINDOW TRIM SINGLE WINDOW TRIM
MULTI-WINDOW TRIM MULTI-WINDOW TRIM
REMARKS
☐ FOLD GATHER
☑ DECONVOLUTION
X SINGLE WINDOW SPIKE SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED SINGLE WINDOW GAPPED
REMARKS
☐ STATICS METHOD
☐ VELOCITY DETERMINATION SPACING
☑ NMO X SAMPLE MOVE WAVELET SUMMATION
☑ FILTER TIME DOMAIN X FREQ DOMAIN
☑ BWC BANDPASS 15-70 Hz LENGTH 7.12 ms
☑ BWC BANDPASS Hz LENGTH ms
☑ TIME VARIANT TIME ZONE BANDPASS LENGTH
☑ FOLD CDP STACKING SUMMATION OVF CONCP
☑ POST SMILE Zone SHOT HOLE & AFTER
☑ BOTTOM SHOT POINT RENDERING
REMARKS
INTERPOLATING
2.5 MS DONAR

TRACE MUTING
TWO WAY TIME IN SEC
DISTANCE

DIGITAL FILTERING
TWO WAY TIME IN SEC
FREQUENCY CPS

NOTE:

LINE NO. 70-03

FILE NO. 74-79-2

057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263 - 2555

MICROMAT
105 M.M.

11x September 1975

057-06-06-085

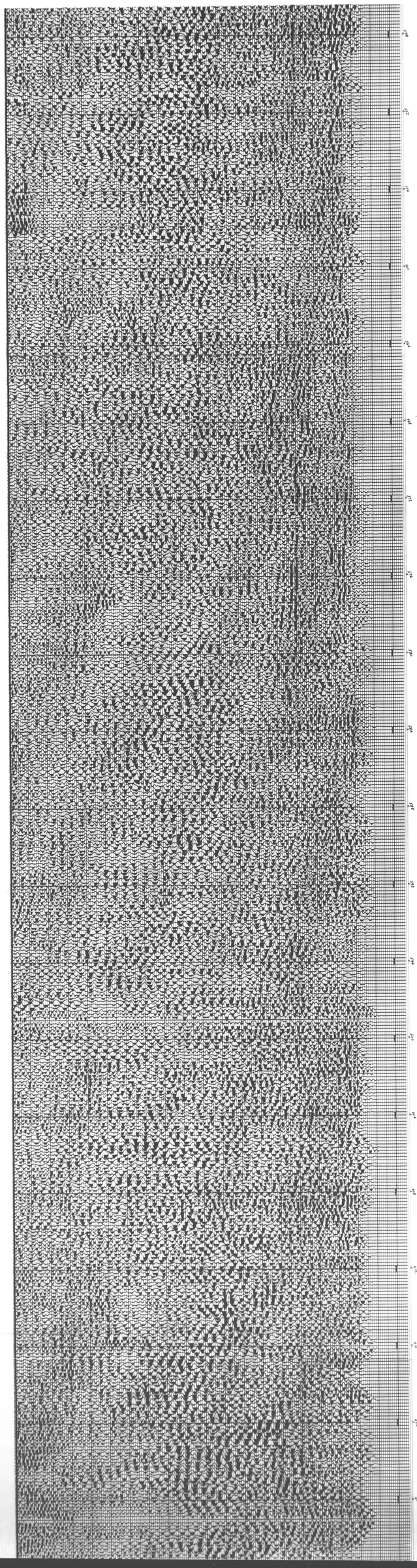
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
801 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



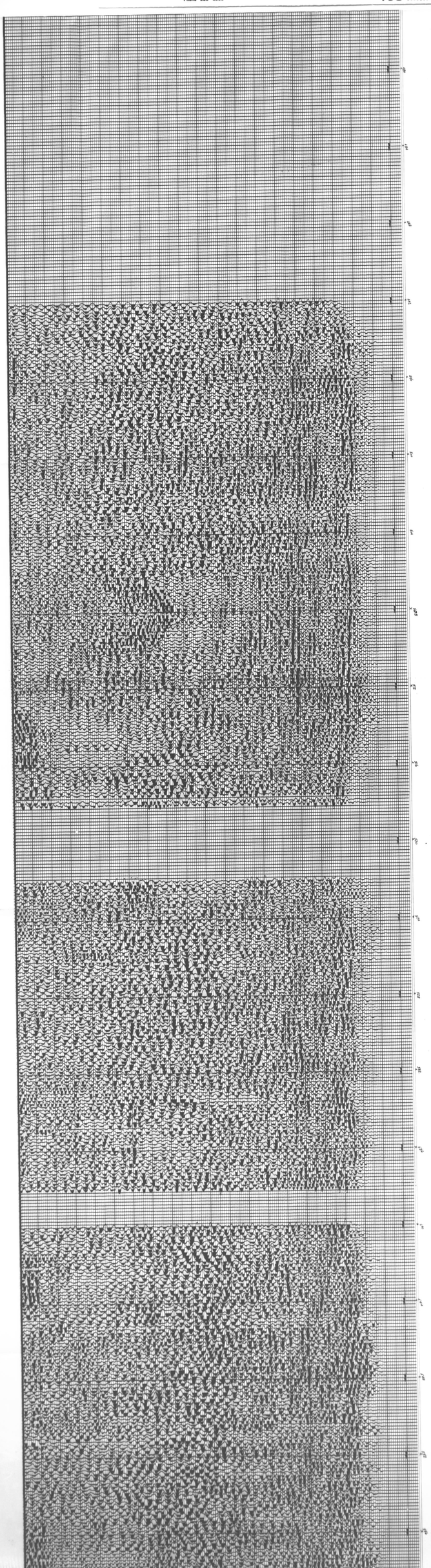
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

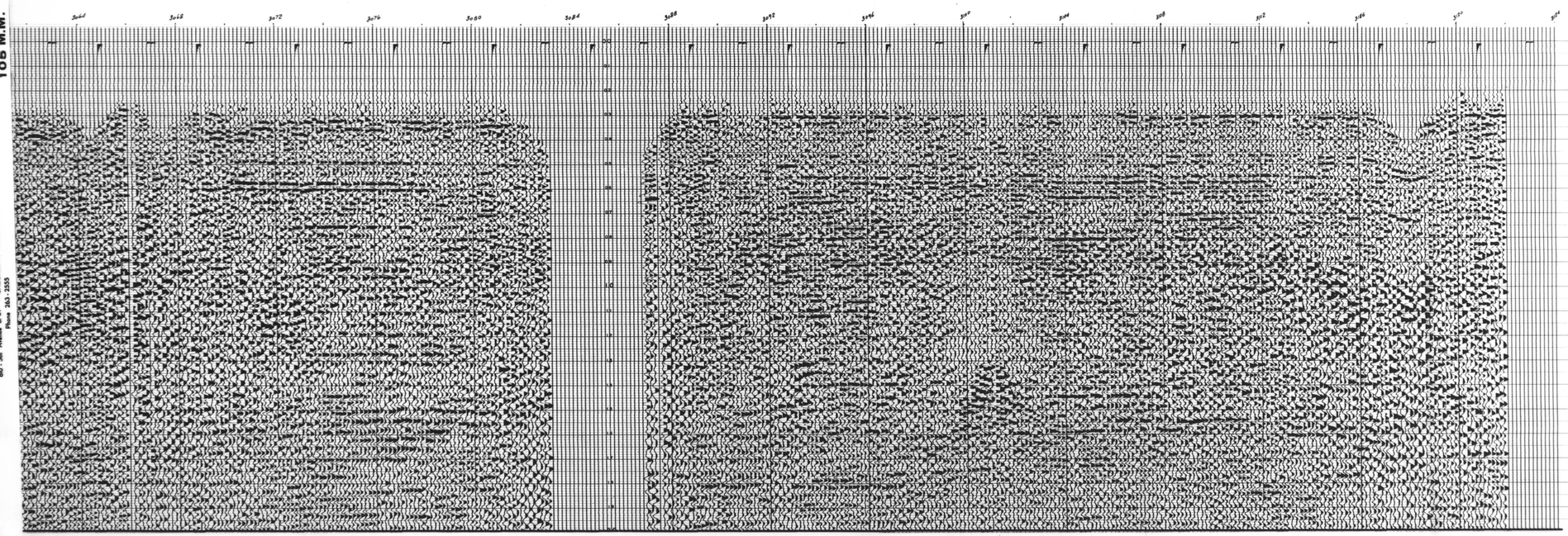
September 1975

057-06-06-085

MICROMAT
105 M.M.
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
801 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2353
11x
September 1975
057-06-06-085

MOBIL OIL CANADA LIMITED
GREAT BEAR
LINE 70-04
MAY 29, 1974

ROL-DOWN
(REVERSE)



DIRECTION E

MOBIL OIL CANADA, LTD.
PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-04
SHOTPOINT 3001 TO SHOTPOINT 3127
CREW MOC-12 (Con-Sta) AREA Northern
CHARG. NO. 210 NAME Smith Arm (Great Bear)
PROV. N.W.T. LAT
LONG
SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED April 1974
TOTAL FOLD TOTAL TRACES 24
FIELD SYSTEM-DIGITAL TRACK B.P.I. DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH sec SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 10 Hz HIGHCUT 125 Hz
GAIN CONTROL ☐ BINARY ☐ AGC
ENERGY SOURCE ☐ DYNAMITE ☐ DINOSEIS ☐ THUMPER ☐ OTHER ☐ VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO OF SWEEPS
☐ GUN TYPE
DEPTH ft
CAPACITY cu. inches
NO OF GUNS
ENERGY SOURCE SPACING 150 ft
TYPE GEOPHONE HS-1 14
NO. OF GEOPHONES PER GROUP 18 weighted
GROUP INTERVAL 150 ft
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM
1800 150 150 1800
24 12 12 24
REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE
SUBSURFACE TRACE SEPARATION ft/meters
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS

PROCESSING PARAMETERS AND SEQUENCE
S—FOLD

DATE PROCESSED May 1976
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT TRACK
DATUM 1000 VELOCITY TO DATUM 10,000
1 BINARY GAIN RESTORATION
F.P. STRIM LENGTH OF WINDOW sec
DIVERGENCE 1st ft/sec 2nd ft/sec
2 HORIZONTAL COMPOSITE to
3 EDIT
A TRACE MUTE B DATUM STATICS
MEAN REMOVAL
4 TRACE EQUALIZATION
A STRIM to sec SINGLE WINDOW TRIM
MULTI-WINDOW TRIM
B STRIM to sec SINGLE WINDOW TRIM
MULTI-WINDOW TRIM
REMARKS
5 —FOLD GATHER
6 DECONVOLUTION
A SINGLE WINDOW SPIKE MULTI-WINDOW SPIKE
B SINGLE WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED
REMARKS
7 STATICS METHOD Steve Hale
8 VELOCITY DETERMINATION Constant vel. analysis SPACING
9 NMO A SAMPLE MOVE WAVELET SUMMATION
10 FILTER TIME DOMAIN FREQ. DOMAIN
A SINC BANDPASS 10-70 Hz LENGTH 2000 ms
B SINC BANDPASS Hz LENGTH ms
TIME DOMAIN BANDPASS LENGTH
11 A —FOLD CDP STACKING SUMMATION OVF COMOP
12 velocity analysis filtered
13 data - stack is rev. shot weld a stack
14 SHOTPOIN - Shot point numbering
15
16
REMARKS Rol Down (Reverse)
1974/05/29
J.A. McDONALD

LINE NO. 70-04 FILE NO. 74-31-2

TRACE MUTING
TWO WAY TIME IN SEC
1900 1650 1500 1350 600 450 300 150 0
DISTANCE
.1 .2 .3 .4

DIGITAL FILTERING
TWO WAY TIME IN SEC
.0 .1 .2 .3 .4
50 40 30 20 10 0
FREQUENCY CPS

NOTE:

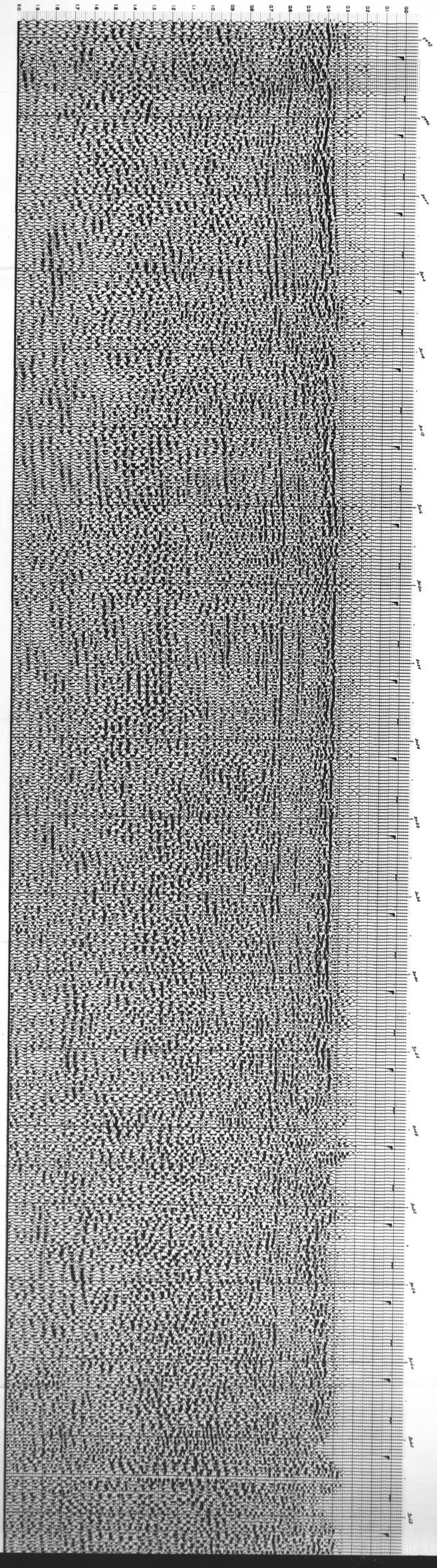
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



September 1975
11x
MICROMAT
105 M.M.
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

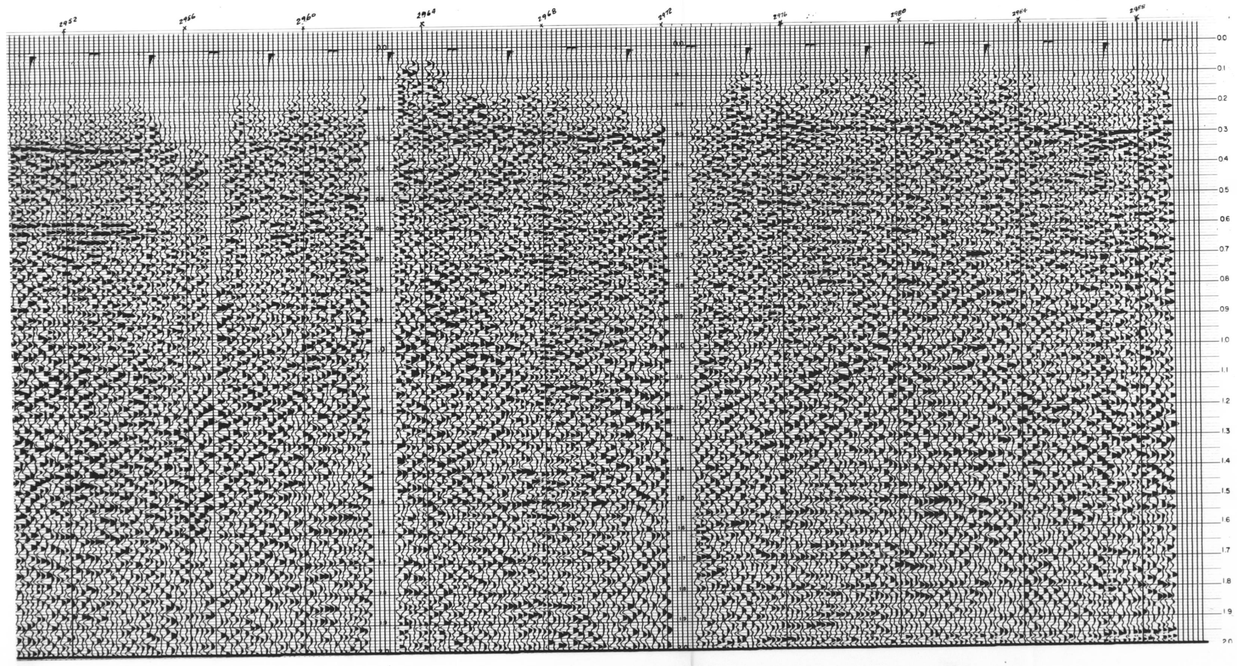
MOBIL OIL CANADA LIMITED

GREAT BEAR LAKE

LINE 70-06

JUNE 4,1974

057-06-06-085



DIRECTION

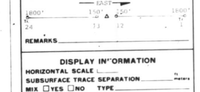
MOBIL OIL CANADA, LTD.
PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-06
SHOTPOINT 2441 TO SHOTPOINT 2488
CREW Mobil Can/Sp AREA Northern
CHARG. NO. 219 NAME Smith and Martz
PROV. LAT.
LONG.

SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED April 5-7, 1974
TOTAL FOLD 4 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL ✓ TRACK B.P.I. DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH sec. SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 10 HZ/octave
HIGHCUT 125 HZ/octave
GAIN CONTROL ☑ BINARY ☐ AGC
ENERGY SOURCE ☑ DYNAMITE ☐ DINOSEIS
☐ THUMPER ☐ OTHER
☐ VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO. OF SWEEPS
☐ GUN TYPE
DEPTH ft
CAPACITY cu. inches
NO. OF GUNS
ENERGY SOURCE SPACING 220 meters
TYPE GEOPHONE SM-14
NO. OF GEOPHONES PER GROUP 18 weighted
GROUP INTERVAL 110 ft meters
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM



REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE
SUBSURFACE TRACE SEPARATION ft meters
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS Pol. Dmw

PROCESSING PARAMETERS AND SEQUENCE

24 -FOLD
DATE PROCESSED
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT TRACK
DATUM 2000 VELOCITY TO DATUM
☑ 1 BINARY GAIN RESTORATION
FF STRIM LENGTH OF WINDOW sec.
DIVERGENCE Vel. ft./sec. Al. ft./sec.
☐ 2 HORIZONTAL COMPOSITE ft
☑ 3 EDIT
TRACE MUTE DATUM STATICS
MEAN REMOVAL
☑ 4 TRACE EQUALIZATION
DTRIM DTRIM
WINDOW to sec. WINDOW to sec.
SINGLE WINDOW TRIM SINGLE WINDOW TRIM
MULTI-WINDOW TRIM MULTI-WINDOW TRIM
REMARKS
☑ 5 -FOLD GATHER
☑ 6 DECONVOLUTION
SINGLE WINDOW SPIKE SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED SINGLE WINDOW GAPPED
REMARKS
☑ 7 STATICS METHOD Trace Pick
☑ 8 VELOCITY DETERMINATION
SPACING
☑ 9 NMO SAMPLE MOVE WAVELET SUMMATION
☑ 10 FILTER TIME DOMAIN FREQ. DOMAIN
SINC BANDPASS 10 - 50 Hz LENGTH ms
SINC BANDPASS Hz LENGTH ms
TIME VARIANT
TIME ZONE BANDPASS LENGTH
to sec. Hz ms
to sec. Hz ms
to sec. Hz ms
to sec. Hz ms
☑ 11 FOLD CDP STACKING SUMMATION OVF CONCIP
☑ 12 DATUM STATICS
☑ 13 DATUM STATICS
☑ 14 DATUM STATICS
REMARKS Pol. Pol.
J.A. McDONALD

TRACE MUTING
TWO WAY TIME IN SEC.
DISTANCE
18 km
12 km
9 km
6 km
3 km
0
2.5

DIGITAL FILTERING
TWO WAY TIME IN SEC.
FREQUENCY CPS
0
10
20
30
40
50
60

NOTE:

LINE NO. 70-06

FILE NO. 74-31-7

057-06-06-085

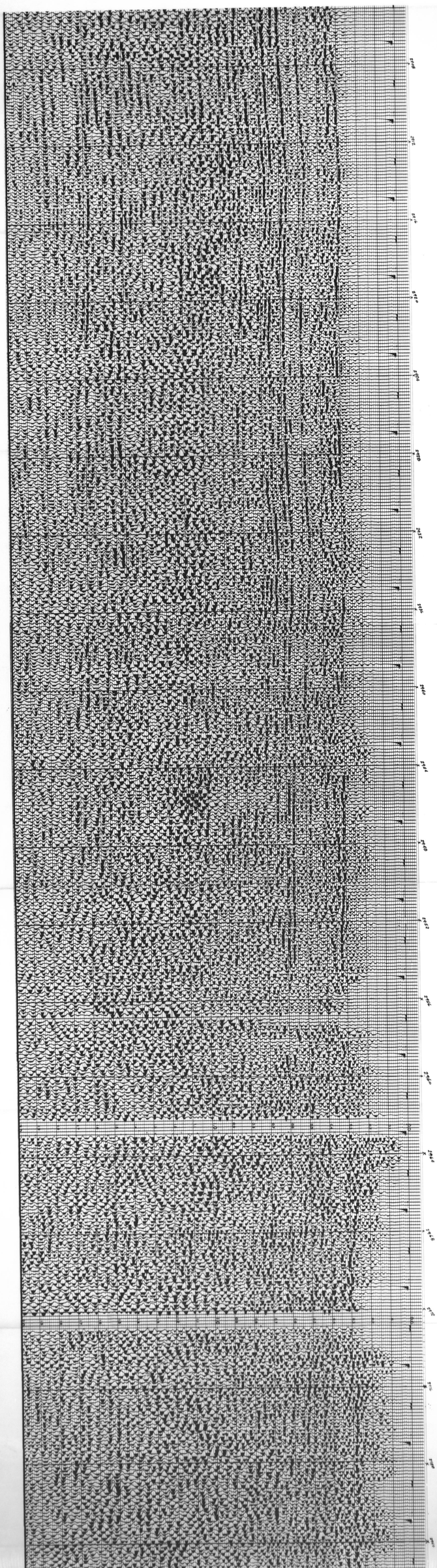
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2355

MICROMAT
105 M.M.

11x

September 1975



MOBIL OI
GREAT K
LINE 7
JUNE 4

September 1975

11x

MICROMAT
105 M.M.

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

057-06-06-085

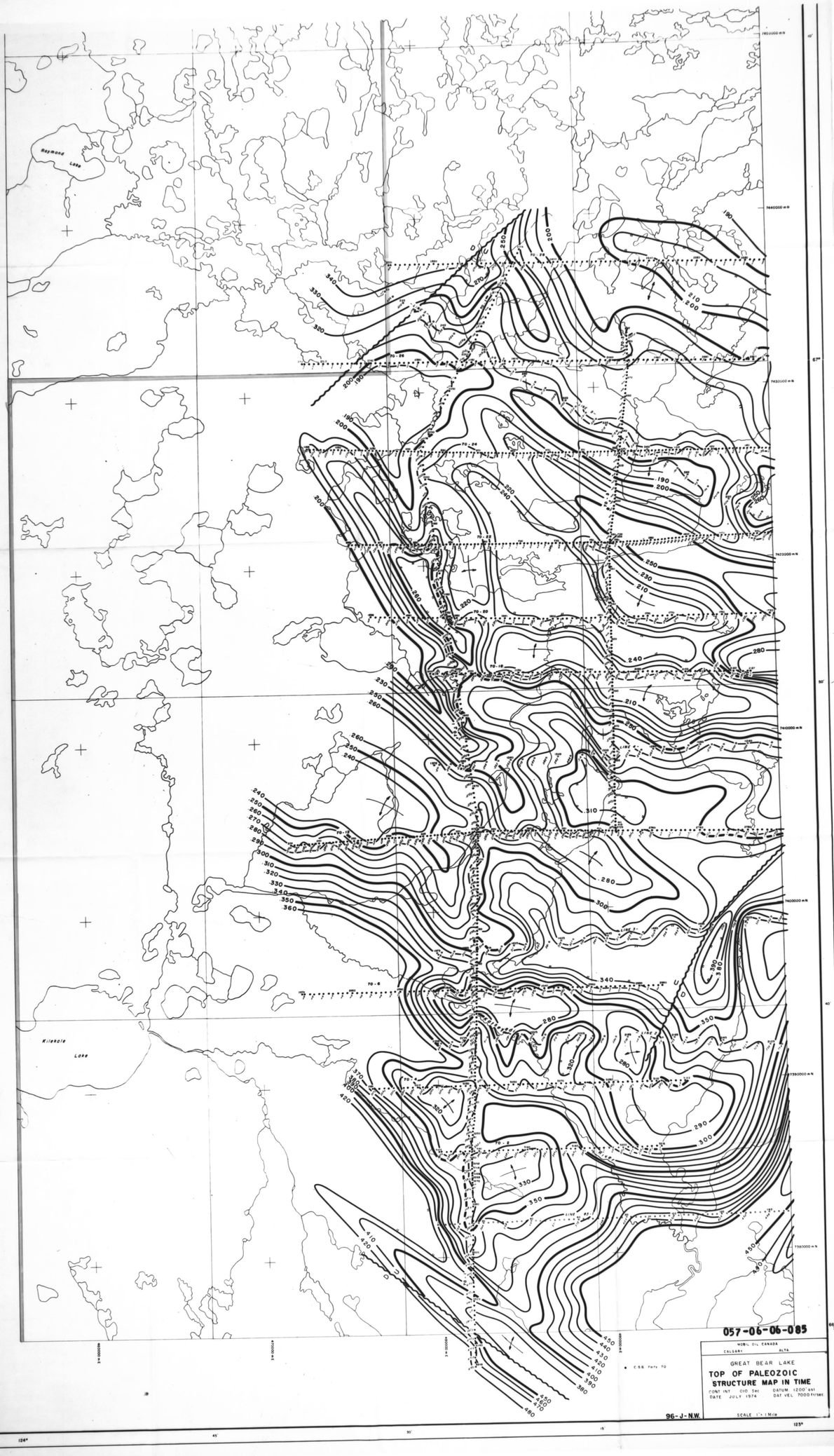
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MICROMAT
105 M.M.

11x

September 1975



WEST CANADIAN GRAPHIC INDUSTRIES LTD.
602 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555
MICROMAT
105 M.M.
11x
September 1975
057-06-06-085

MICROMAT
105 M.M.
11x
September 1975
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
69 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2553
057-06-06-085

MICROMAT
105 M.M.
September 1975
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
60 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

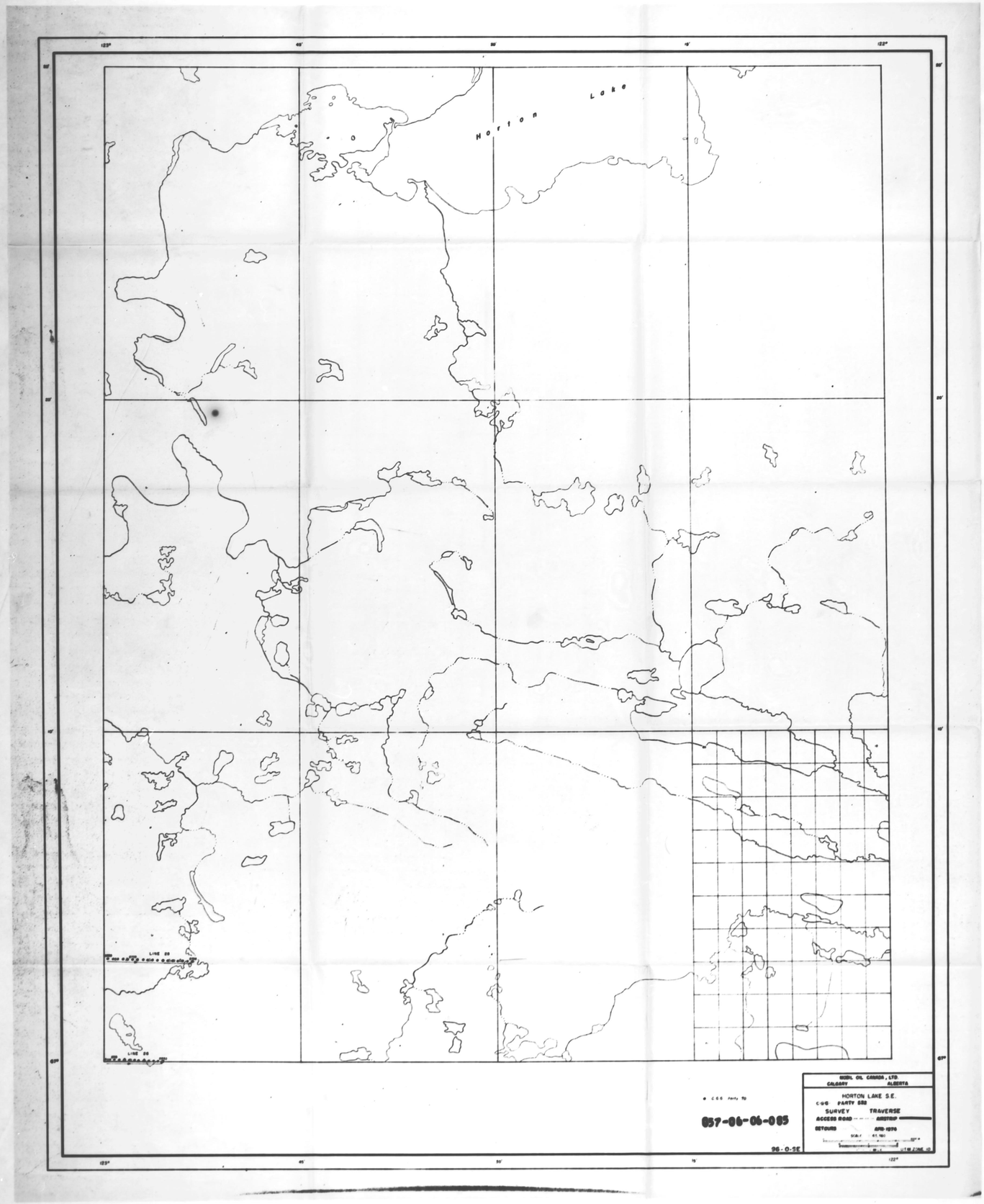
057-06-06-085

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
60 - 2th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2559

MICROMAT
105 M.M.

11x

September 1975



MICROMAT
105 M.M.
11x
September 1975
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
60 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2550

WEST CANADIAN GRAPHIC INDUSTRIES LTD.
810 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263 - 2555

MICROMAT
105 M.M.

11x

September 1975

057-06-06-085

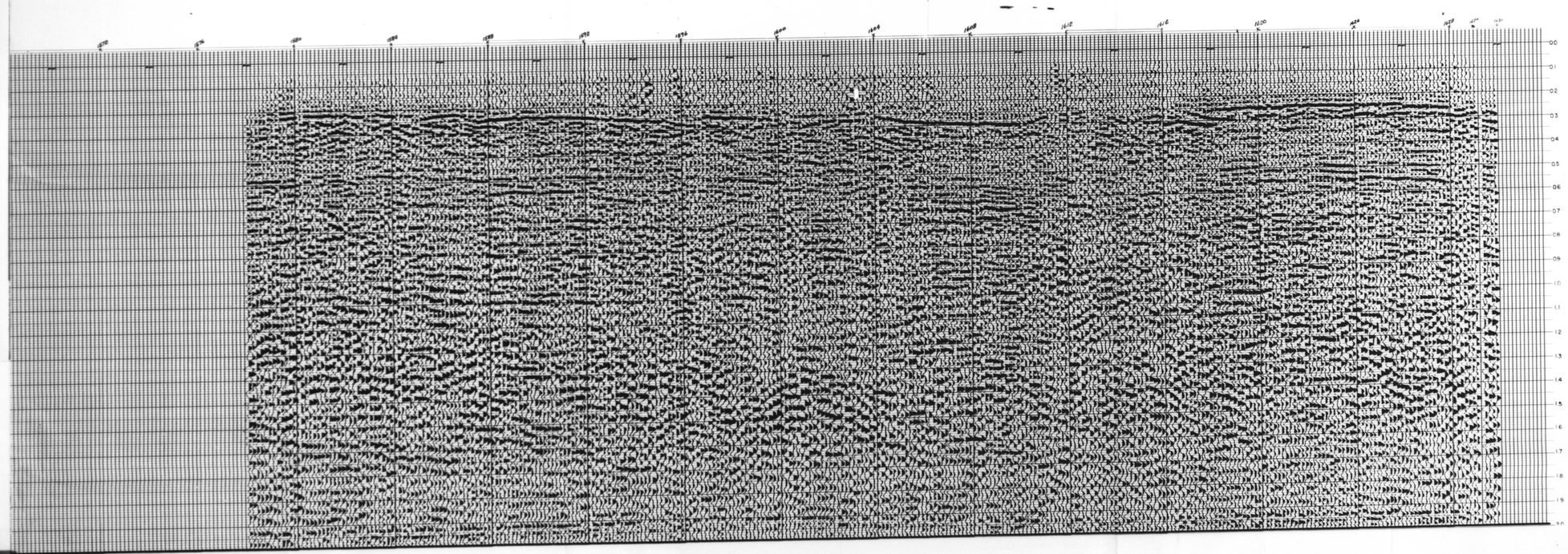
WESTERN GEOPHYSICAL CANADA LTD.
CALGARY, ALBERTA
GREAT BEAR LAKE
C-B-P-AMPHIBIAN
SURVEY
TRAVERSE
ACCESS ROAD ---- AIR STRIP
DETOURS: TRUE AZIMUTHS
APRIL 1974
Scale 1:250,000
Numbers in parenthesis are UTM ZONE 10
057-06-06-085
96-J-N.E.
LINE 24
LINE 23
LINE 22
LINE 21
LINE 20
LINE 19
LINE 18
LINE 17
LINE 16
LINE 15
LINE 14
LINE 13
LINE 12
LINE 11
LINE 10
LINE 9
LINE 8
LINE 7
LINE 6
LINE 5
LINE 4
LINE 3
LINE 2
LINE 1
Great Bear Lake
MACKAY
BAY
Dismal Creek
Dismal Creek
Dismal Creek

70-22

August 1975
11x
MICROMAT
105 M.M.
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
80 - 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-22E
JUNE 22, 1974

057-06-06-085



DIRECTION EAST

MOBIL OIL CANADA, LTD.

PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-22
SHOTPOINT 1232 TO SHOTPOINT 1628
CREW. Mobil Canada AREA Norman Wells
CHARG. NO. 219 NAME Smith Arm (Great Bear)
PROV. LAT. LONG.
SECTION TYPE Structure

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED February 28-March 13, '74
TOTAL FOLD 6 TOTAL TRACES 24
FIELD SYSTEM-DIGITAL ☒ TRACK ☐ B.P.I. DENSITY
FIELD SYSTEM - OTHER
INSTRUMENT TYPE DFS III
RECORD LENGTH 2 sec SAMPLE RATE 2 ms
FIELD FILTER LOWCUT 10 ☐ db/octave
HIGHCUT 100 db/octave
GAIN CONTROL ☐ BINARY ☐ AGC
ENERGY SOURCE ☐ DYNAMITE ☐ DINOSEIS
☐ THUMPER ☐ OTHER
☐ VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO. OF SWEEPS
☐ GUN TYPE
DEPTH ft
CAPACITY cu. inches
NO. OF GUNS
ENERGY SOURCE SPACING 110 (feet)
TYPE GEOPHONE
NO. OF GEOPHONES PER GROUP 6 (single)
GROUP INTERVAL 110 (feet)
SPREAD CONFIGURATION
CABLE DEPTH 12 (12)
SPREAD DIAGRAM
1120' 110 10' 110 1130'
1 11 12
REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE 1" = 1 inch
SUBSURFACE TRACE SEPARATION 55 meters
MIX ☐ YES ☐ NO TYPE
PLAYBACK DATE
REMARKS Line shot in two parts as follows:
Part 1 - E - SP's 1232-1628 Shot to West.
Part 2 - E - SP's 1232-1628 Shot to East.
Polarity Down

PROCESSING PARAMETERS AND SEQUENCE

1 - FOLD
DATE PROCESSED 1974
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT 1 - TRACK
DATUM VELOCITY TO DATUM
☐ BINARY GAIN RESTORATION
F.P. DTRIM LENGTH OF WINDOW sec
DIVERGENCE t= ft/sec A= ft/sec²
☐ HORIZONTAL COMPOSITE
☒ EDIT
TRACE MUTE ☒ DATUM STATICS
MEAN REMOVAL
☒ TRACE EQUALIZATION
☒ DTRIM ☐ DTRIM
WINDOW ms WINDOW ms
SINGLE WINDOW TRIM SINGLE WINDOW TRIM
MULTI-WINDOW TRIM MULTI-WINDOW TRIM
REMARKS
☒ 1 - FOLD GATHER
☒ DECONVOLUTION
SINGLE WINDOW SPIKE SINGLE WINDOW SPIKE
MULTI-WINDOW SPIKE MULTI-WINDOW SPIKE
SINGLE WINDOW GAPPED SINGLE WINDOW GAPPED
REMARKS
☒ STATICS METHOD Trace mute
☒ VELOCITY DETERMINATION Dynamic velocity
☒ NMO SAMPLE MOVE WAVELET SUMMATION
☒ FILTER TIME DOMAIN FREQ. DOMAIN
BINC BANDPASS LENGTH ms
BINC BANDPASS LENGTH ms
TIME VARIANT
TIME ZONE BANDPASS LENGTH
☒ FOLD CDP STACKING SUMMATION OVF CONOP
☒ Trace mute to zero
☒ Apply - resize to 16 bits, scale & clip
☒ Approx. - shot point normalize
REMARKS
Interpolating
J.A. McDONALD

LINE NO. 70-22EW FILE NO. 74-43-3

TRACE MUTING
TWO WAY TIME IN SEC
DISTANCE

DIGITAL FILTERING
TWO WAY TIME IN SEC
FREQUENCY CPS

NOTE:

057-06-06-085