

Mobil



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

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)

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,

HM
Marcus L. McLaugherty
Landman
Northern Canada Exploration Area

Attachments

AEB:MLMCL:edg

057-06-06-085



SEISMIC INTERPRETATION REPORT

GREAT BEAR LAKE AREA

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

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



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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GENERAL LOCATION MAP
SURFACE ELEVATION MAPS
SURVEY TRAVERSE MAP

Plate #1
Inside back cover
Inside back cover

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 $66^{\circ} 30'$ to $67^{\circ} 15'$ 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 Mihail 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, come 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 miscue at Great Bear Lake was -22 feet. A correction of plus 22 feet was made 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. J. Kidner

M.V.KIDNER
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. KLANDEN
		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

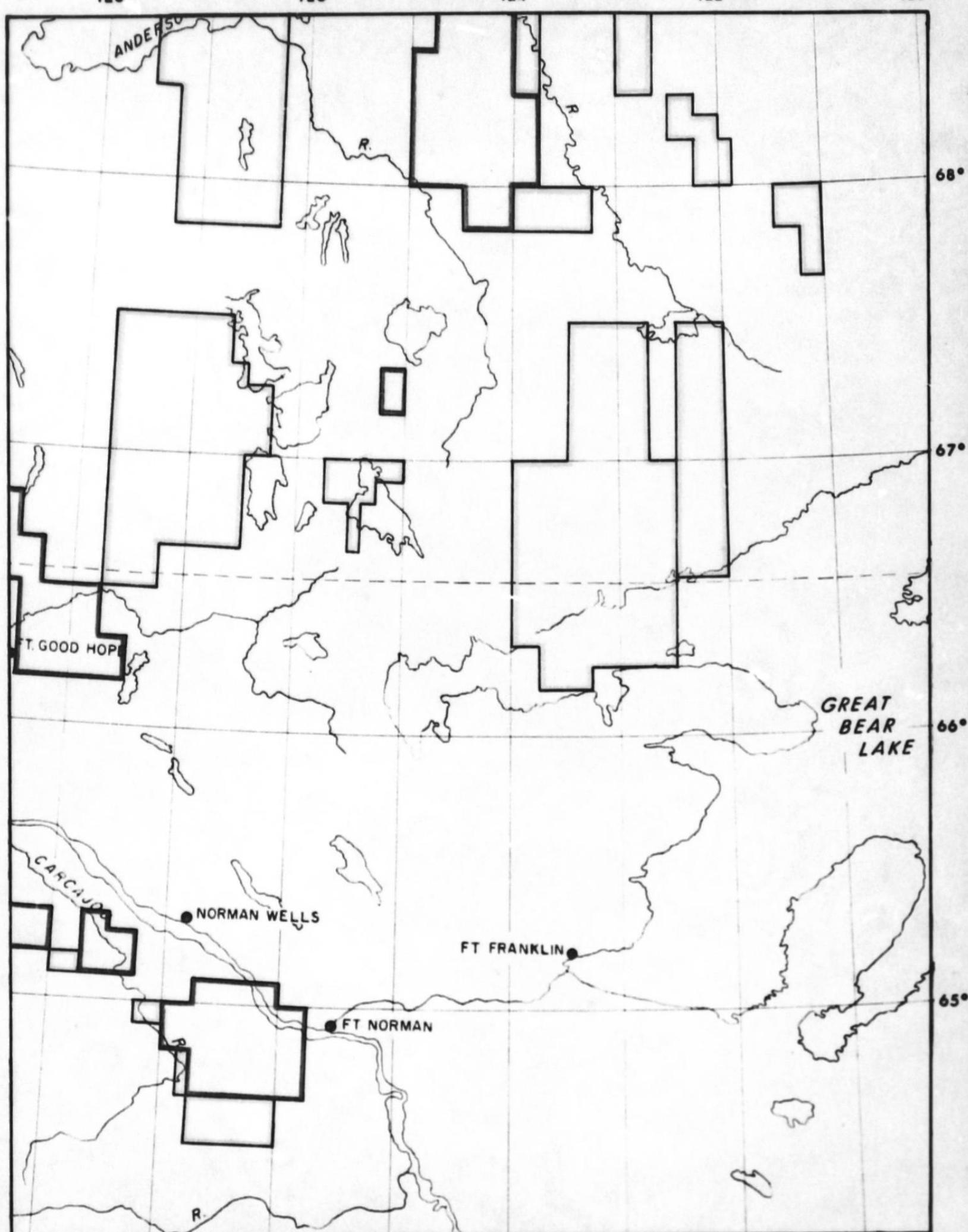
Total Shot Points	2237
Total Miles	211.73
Total Hours	943.25
Total Field Hours	620.0
Total Drive Hours	139.25
Total Move Hours	184.0
Total Days Worked	85
Average Miles Per Day	3.26
Average Shot Points Per Day	34

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



MOBIL OIL CANADA, LTD.
NORTHERN CANADA AREA

GREAT BEAR LAKE AREA

August 1975

11x

MICROMAT 105 MM

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

057-06-06 - 085

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-28
POL. DOWN
SEPT. 17, 1974

DIRECTION <u>E</u>	
MOBIL OIL CANADA, LTD.	
PHOENIX JOB PROCESSING CALGARY	
LINE NO. <u>70-28</u>	
SHOTPOINT <u>2724</u> TO SHOTPOINT <u>2561</u>	
CREW <u>MOC-70 (CGG 582) AREA Northern</u>	
CHARG. NO. <u>219</u> NAME <u>SMITH, ARN (GREGORY)</u>	
PROV. <u>N.W.T</u> LAT. <u></u> LONG. <u></u>	
SECTION TYPE	
RECORDING INFORMATION	
RECORDED FOR <u>Mobil Oil Canada, Ltd.</u>	
DATE RECORDED <u>APRIL 5-6 1974</u>	
TOTAL FOLD <u>4</u> TOTAL TRACES <u>24</u>	
FIELD SYSTEM-DIGITAL <input checked="" type="checkbox"/> X TRACK <input checked="" type="checkbox"/> 9 BPI: DENSITY	
FIELD SYSTEM - OTHER	
INSTRUMENT TYPE <u>DFS III</u>	
RECORD LENGTH <u>2</u> sec. SAMPLE RATE <u>2</u> ms.	
FIELD FILTER	
GAIN CONTROL <input checked="" type="checkbox"/> BINARY <input type="checkbox"/> AGC	
ENERGY SOURCE <input checked="" type="checkbox"/> DYNAMITE <input type="checkbox"/> DINOBES	
<input type="checkbox"/> THUMPER <input type="checkbox"/> OTHER	
<input type="checkbox"/> VIBROSEIS	
SWEEP FREQUENCY	
SWEEP LENGTH	
NO OF SWEEPS	
<input type="checkbox"/> GUN TYPE	
DEPTH	
CAPACITY	
NO OF GUNS	
ENERGY SOURCE SPACING <u>150</u> meters	
TYPE GEOPHONE <u>HS.1 14</u>	
NO. OF GEOPHONES PER GROUP <u>18</u> weighted	
GROUP INTERVAL <u>450</u> meters	
SPREAD CONFIGURATION	
CABLE DEPTH	
SPREAD DIAGRAM <u>W</u>	
1800' 450' 450' 1800' 0 150 300 450 600 750 900 1050 1200 T1 24 T1 3 SP T1 4	
REMARKS	
DISPLAY INFORMATION	
HORIZONTAL SCALE	
SUBSURFACE TRACE SEPARATION <u>11</u> meters	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TYPE	
PLAYBACK DATE	
REMARKS	
TRACE MUTING TWO WAY TIME IN SEC.	
DISTANCE	
NOTE:	
PROCESSING PARAMETERS AND SEQUENCE	
4 - FOLD	
DATE PROCESSED <u>MAY 1974</u>	
PROCESSED SAMPLE RATE <u>2</u> ms	
INPUT FORMAT <u>9</u> TRACK	
DATUM <u>1200</u> VELOCITY TO DATUM <u>7000</u>	
11 BINARY GAIN RESTORATION:	
<input type="checkbox"/> FP DTRIM LENGTH OF WINDOW <u>10</u> sec	
DIVERGENCE <u>V0 = 10</u> ft/sec <u>A = 10</u> ft/sec ²	
12 HORIZONTAL COMPOSITE <u>10</u>	
13 EDIT	
<input type="checkbox"/> TRACE MUTE <u>A</u> DATUM STATICS	
<input type="checkbox"/> MEAN REMOVAL	
14 TRACE EQUALIZATION:	
<input checked="" type="checkbox"/> DTRIM <u>10</u> sec <u>E-D</u> sec	
WINDOW <u>500</u> ms	
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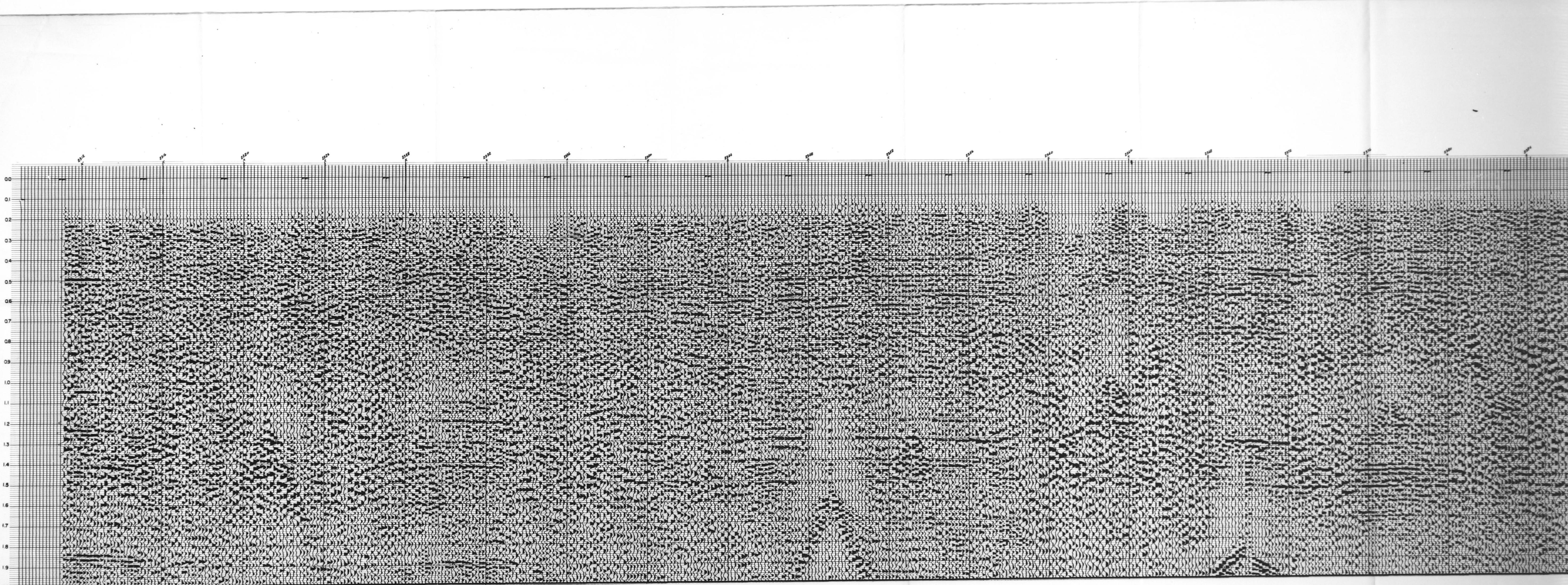
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Phone 263-2555

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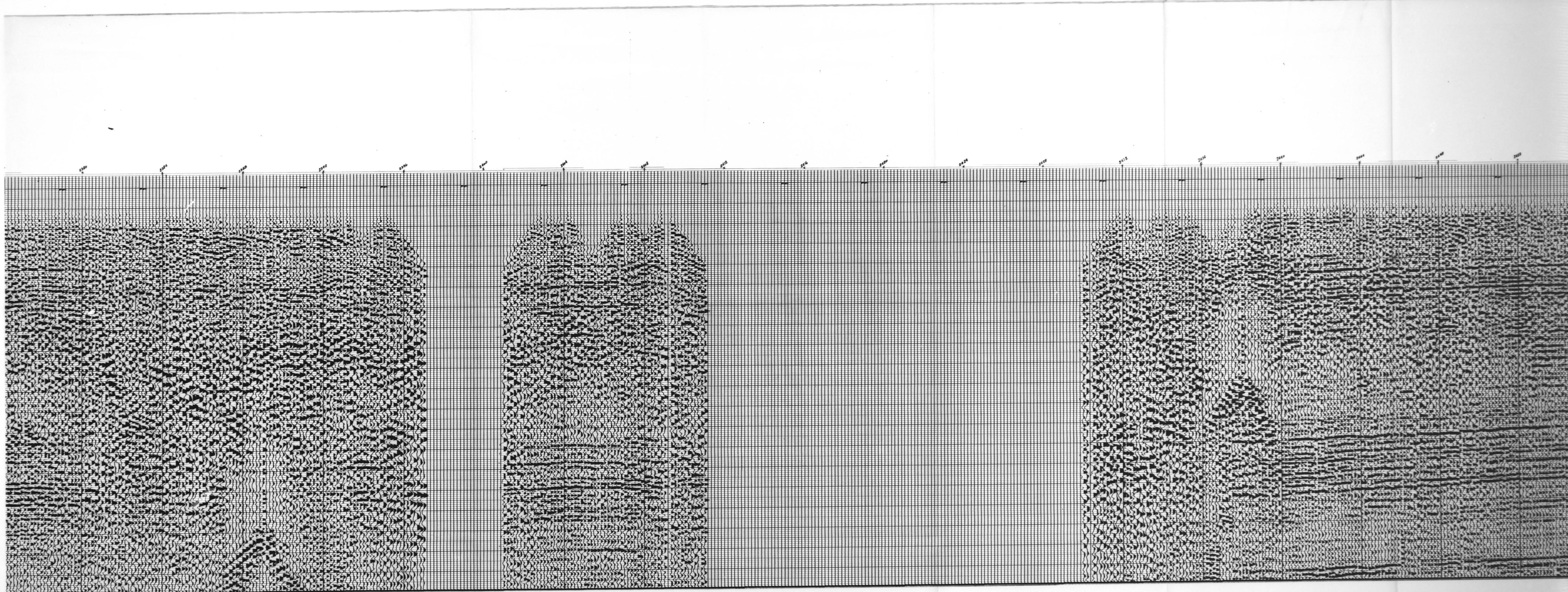
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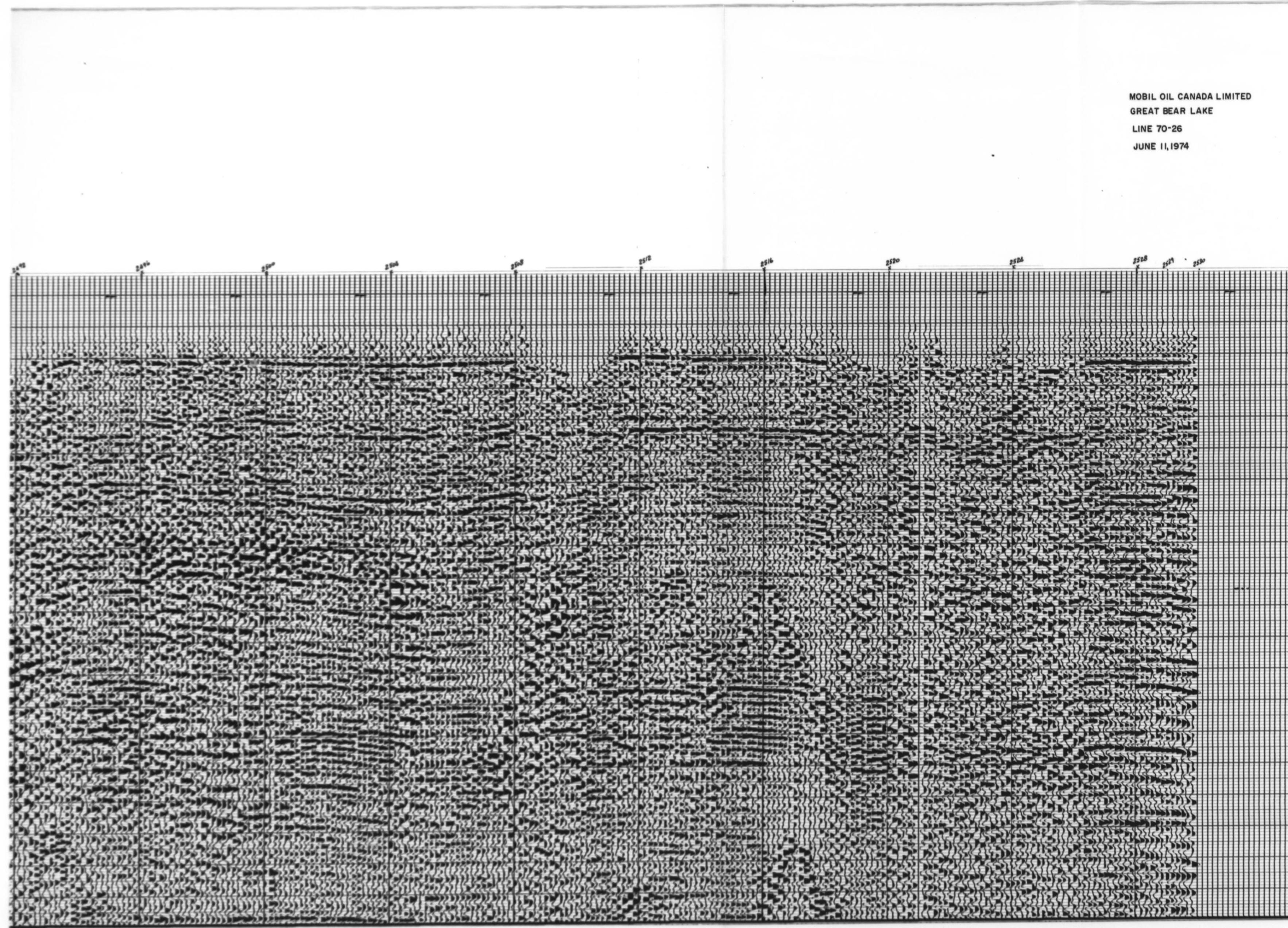
<img alt="A high-resolution seismic reflection profile showing subsurface geological structures. The profile is oriented vertically, with the top representing the surface and the bottom representing increasing depth. The subsurface is divided into several distinct layers, some of which are labeled with depth markers in feet (ft) and meters (m). The labels include 2440, 2452, 2454, 2456, 2460, 2464, 2468, 2472, 2476, 2480, 2484, 2488, 2492, 2496, 2500, 2504, 2508, 2512, 2516, 2520, 2524, 2528, 2532, 2536, 2540, 2544, 2548, 2552, 2556, 2560, 2564, 2568, 2572, 2576, 2580, 2584, 2588, 2592, 2596, 2600, 2604, 2608, 2612, 2616, 2620, 2624, 2628, 2632, 2636, 2640, 2644, 2648, 2652, 2656, 2660, 2664, 2668, 2672, 2676, 2680, 2684, 2688, 2692, 2696, 2700, 2704, 2708, 2712, 2716, 2720, 2724, 2728, 2732, 2736, 2740, 2744, 2748, 2752, 2756, 2760, 2764, 2768, 2772, 2776, 2780, 2784, 2788, 2792, 2796, 2800, 2804, 2808, 2812, 2816, 2820, 2824, 2828, 2832, 2836, 2840, 2844, 2848, 2852, 2856, 2860, 2864, 2868, 2872, 2876, 2880, 2884, 2888, 2892, 2896, 2900, 2904, 2908, 2912, 2916, 2920, 2924, 2928, 2932, 2936, 2940, 2944, 2948, 2952, 2956, 2960, 2964, 2968, 2972, 2976, 2980, 2984, 2988, 2992, 2996, 2998, 3000, 3002, 3004, 3006, 3008, 3010, 3012, 3014, 3016, 3018, 3020, 3022, 3024, 3026, 3028, 3030, 3032, 3034, 3036, 3038, 3040, 3042, 3044, 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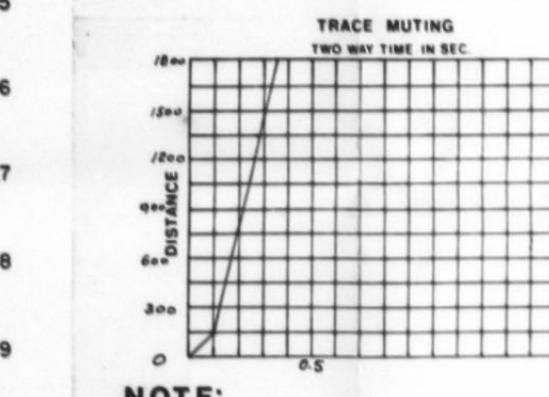
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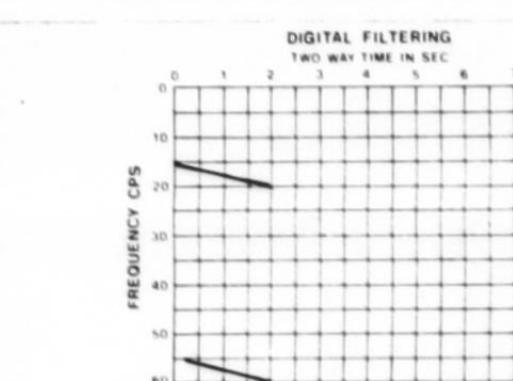
MOBIL OIL CANADA LTD
GREAT BEAR LAKE
LINE 70-26
JUNE 11, 1974

057-06-06-085

LINE NO. 70-26



N



REMARKS 1974 shooting

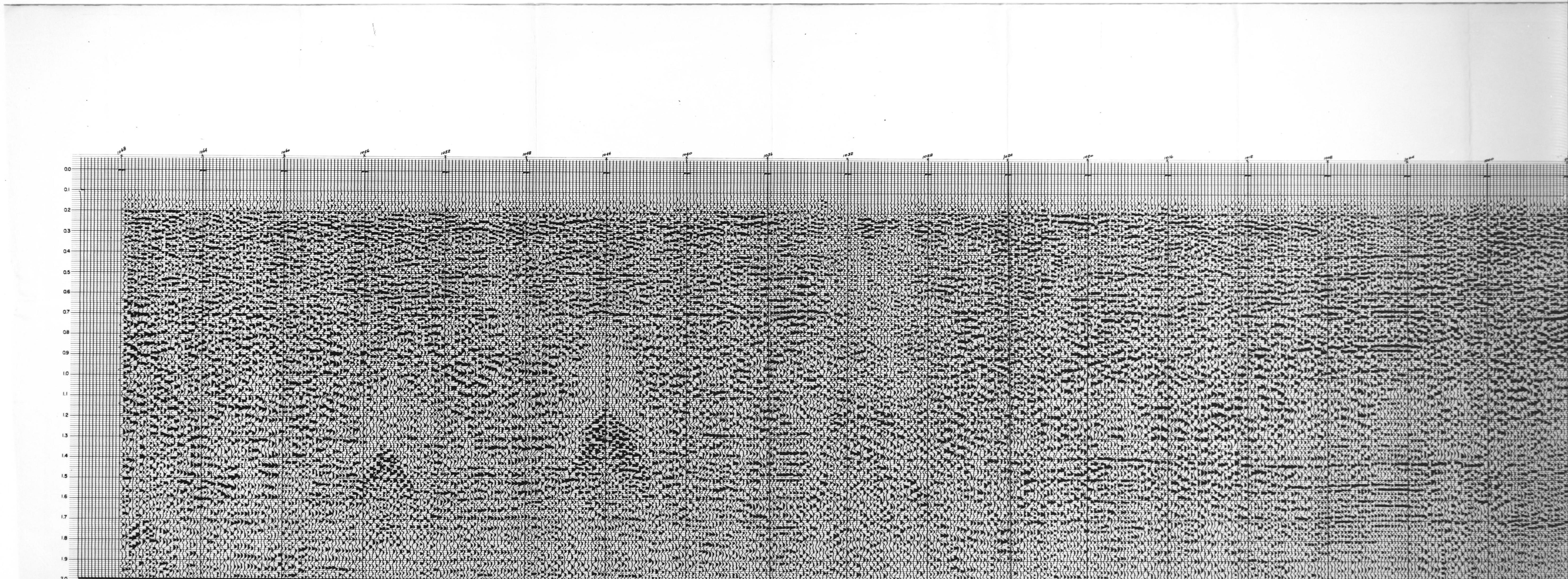
95 August 1975

8F MICROMAT

7F WEST CANADIAN GRAPHIC INDUSTRIES LTD.
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CALGARY 1, ALBERTA
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057-06-06 - 085

11x



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Calgary 1, Alberta
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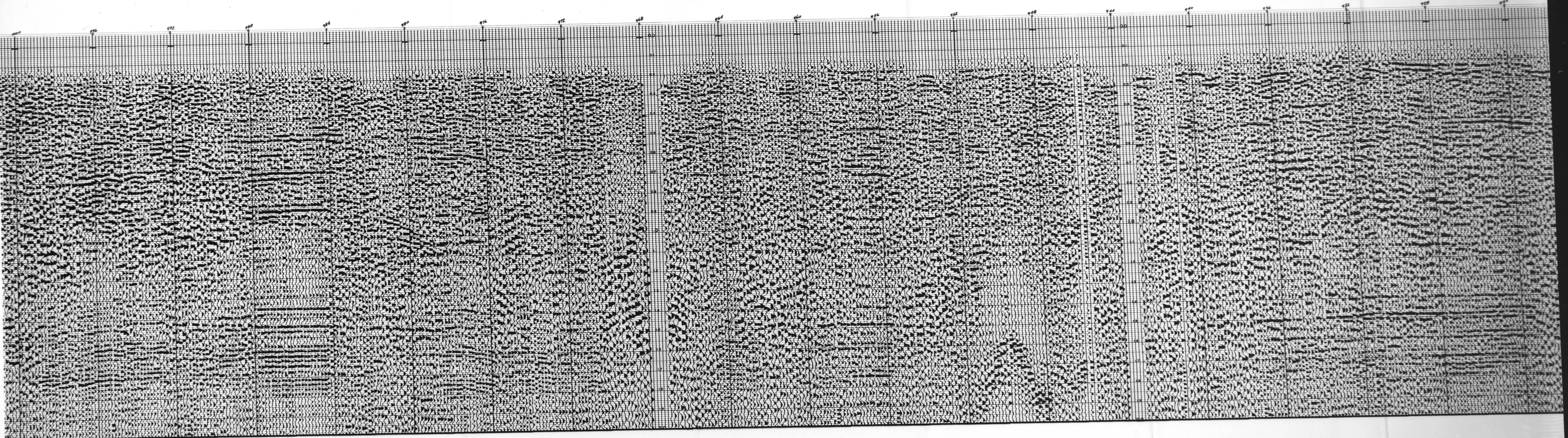
MICROMAT

105 M.M.

August 1975

11X

057-06-06-085



057-06-06-085

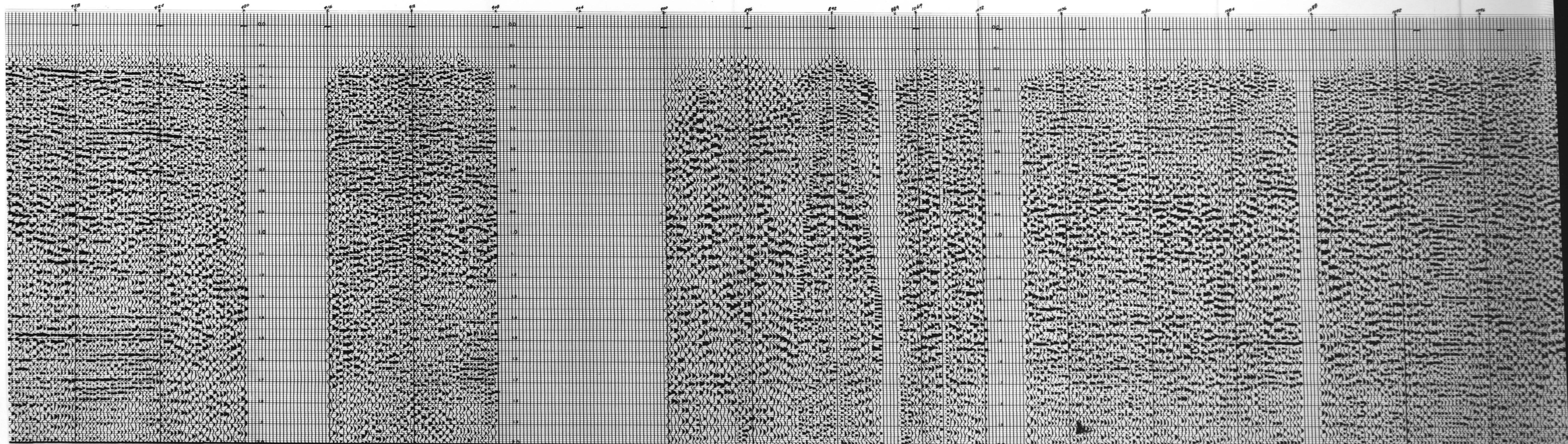
WEST CANADIAN GRAPHIC INDUSTRIES LTD.
NO. 5th Avenue S.W. CALGARY 1, ALBERTA
Phone 265-2355

MICROMAT

105 M.M.

August 1975

11X



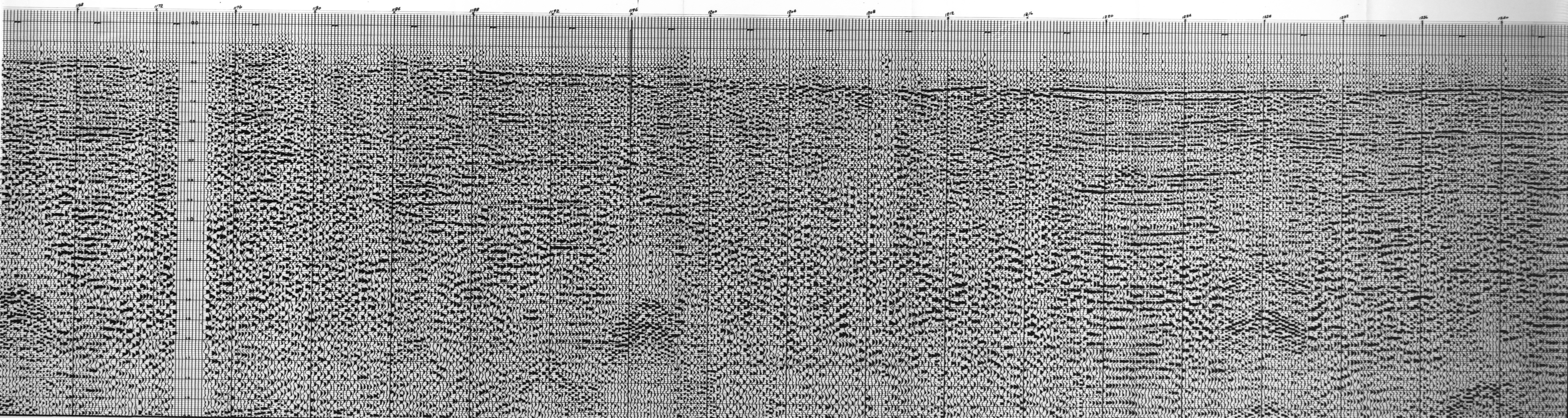
August 1971

11X

MICROMAT

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Phone 263-2555

057-06-06-085



August 1975

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Phone 263-2555

057-06-085

MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-24(E)
JUNE 25, 1974

057-06-06-085

70-20

95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

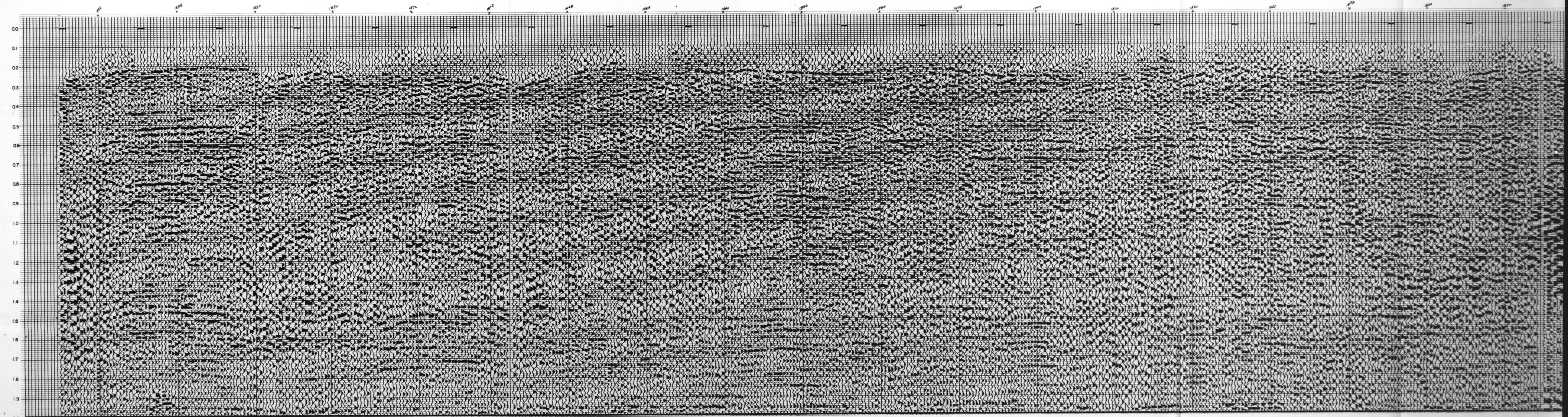
August 1975

11X

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August 1975

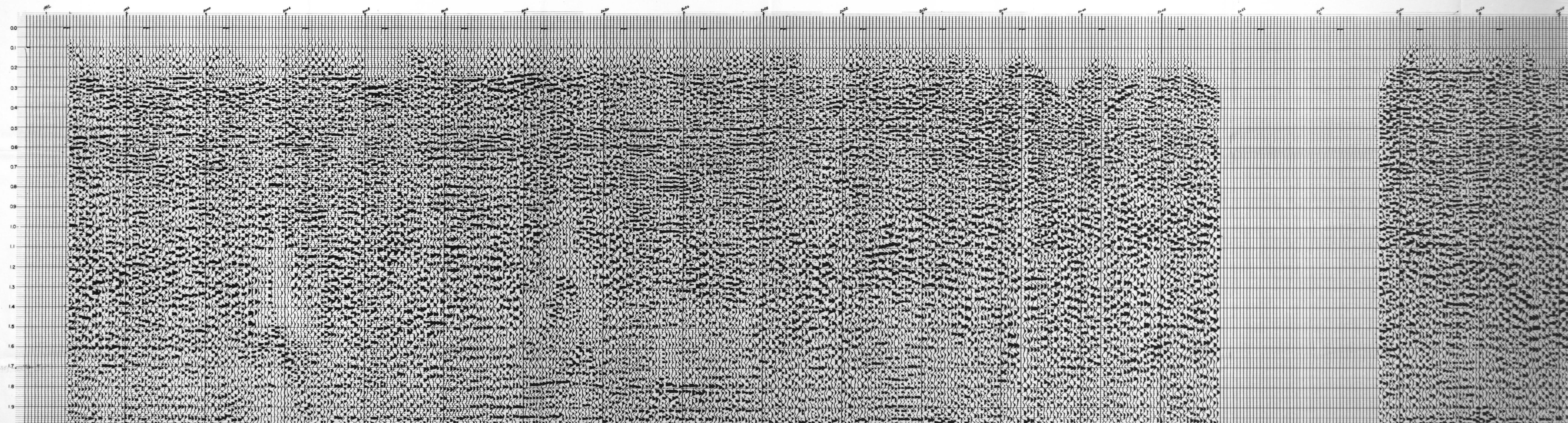
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70-12

August 1975

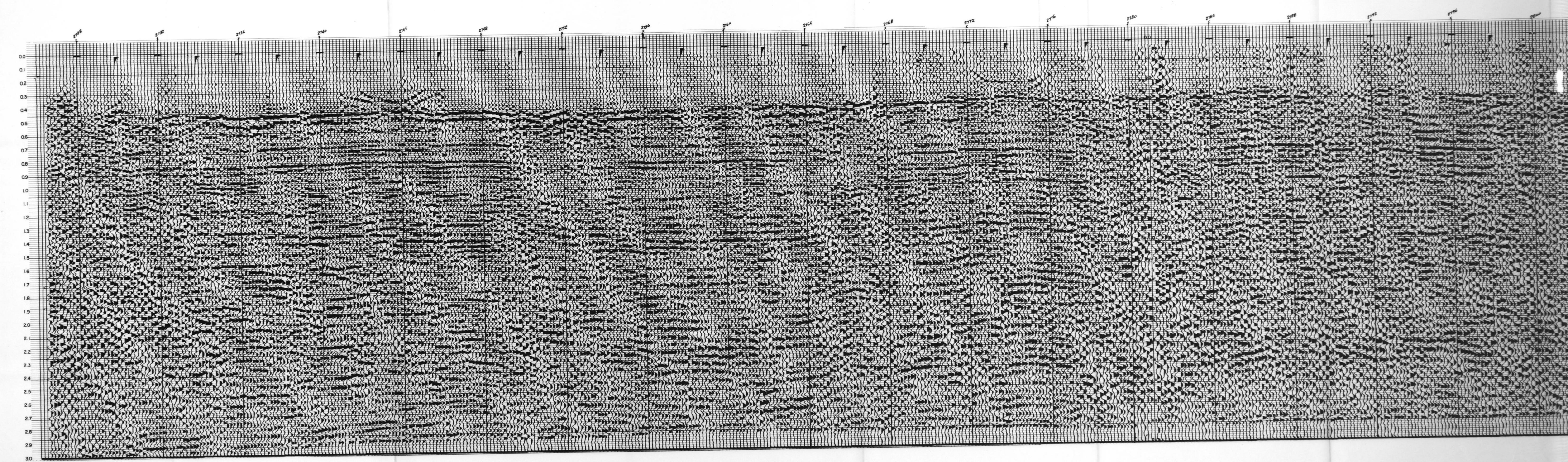
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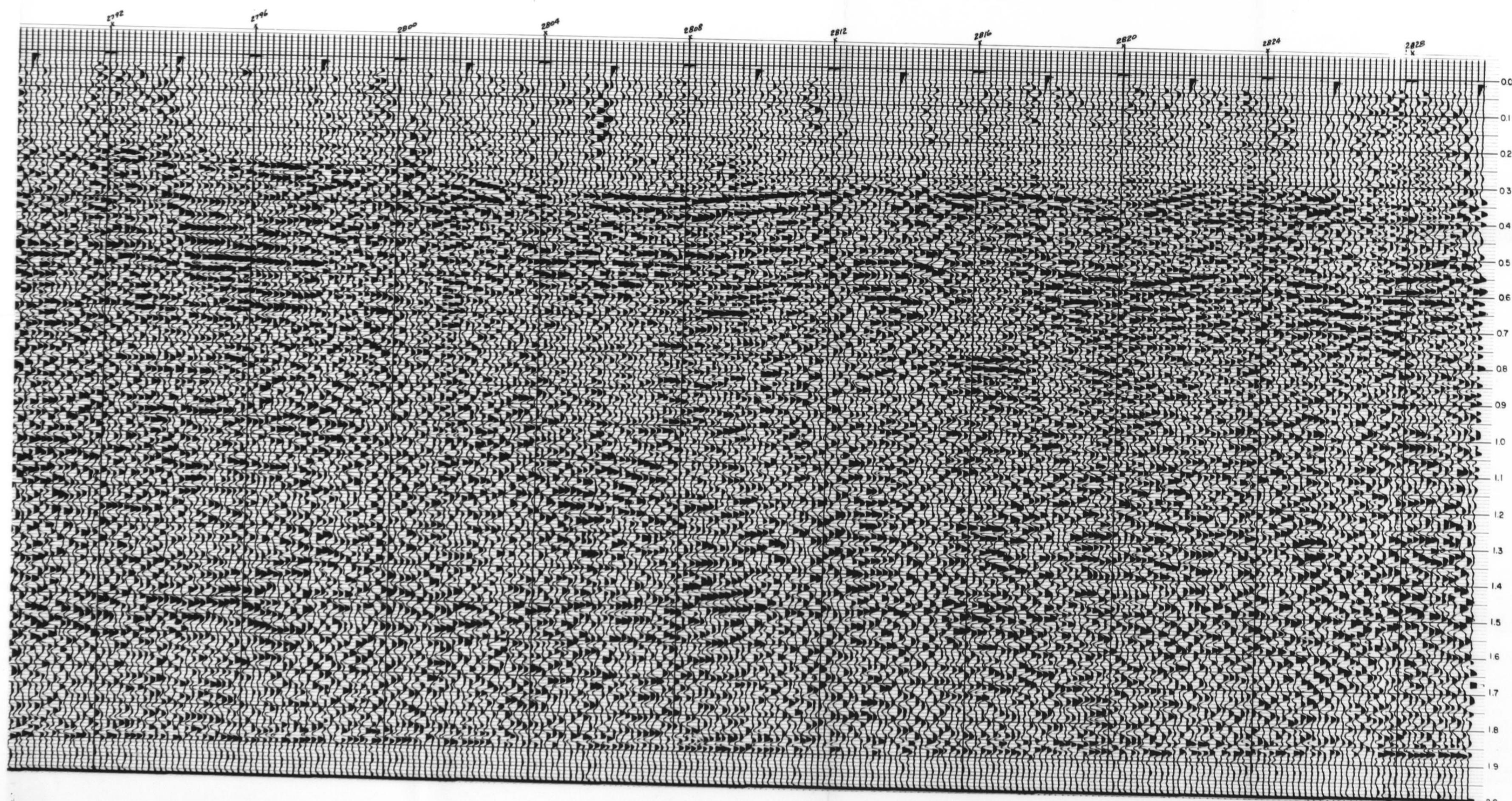
August 1975

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MOBIL OIL CANADA LIMITED
GREAT BEAR LAKE
LINE 70-12 EXT.
JUNE 4, 1974

057-06-06-085

DIRECTION E

MOBIL OIL CANADA, LTD.

PHOENIX JOB PROCESSING

CALGARY

LINE NO. 70-12 Ext

SHOTPOINT 2728 TO SHOTPOINT 2828

CREW MOC-70 (CGG 532) AREA Northern

CHARG. NO. 219 NAME SMITH ARM JOHN

PROV. N.W.T. LAT.

LONG.

SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.

DATE RECORDED April 8-10, 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

FIELD FILTER

LOWCUT dB/octa

HIGHCUT dB/octa

GAIN CONTROL BINARY AGC

ENERGY SOURCE DYNAMITE DINOBES

THUMPER OTHER

VIBROSEIS

SWEEP FREQUENCY

SWEEP LENGTH

NO OF SWEEPS

GUN TYPE

DEPTH

CAPACITY cu. inch

NO OF GUNS

ENERGY SOURCE SPACING 450 ft

TYPE GEOPHONE HSJ 14

NO. OF GEOPHONES PER GROUP 18 weighted

GROUP INTERVAL 150 ft

SPREAD CONFIGURATION

CABLE DEPTH

SPREAD DIAGRAM East

REMARKS

DISPLAY INFORMATION

HORIZONTAL SCALE

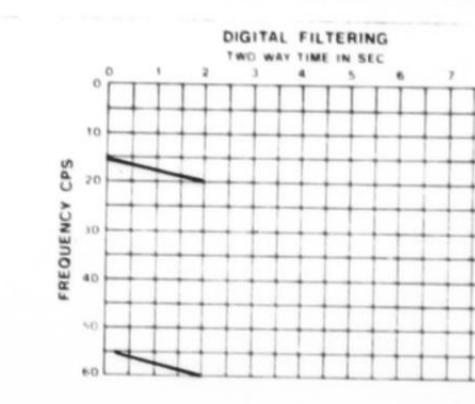
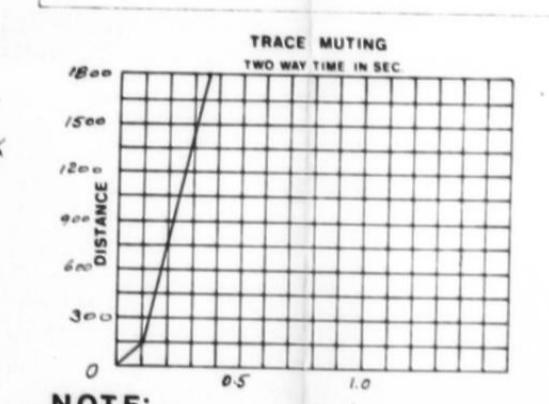
SUBSURFACE TRACE SEPARATION ft meter

MIX YES NO TYPE

PLAYBACK DATE

REMARKS

POD DOWN



FILE NO. 74-31-6

September 1975

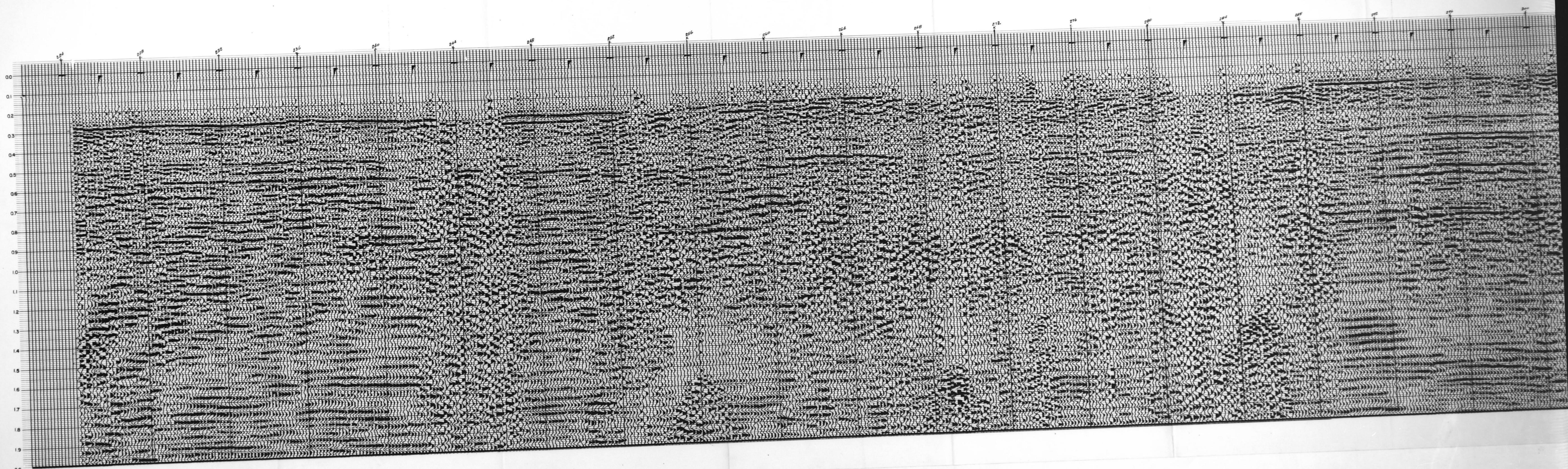
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MICROMAT

105 M.M.

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80 - 3rd Avenue S.W. CALGARY 1, ALBERTA
Phone 263-2555

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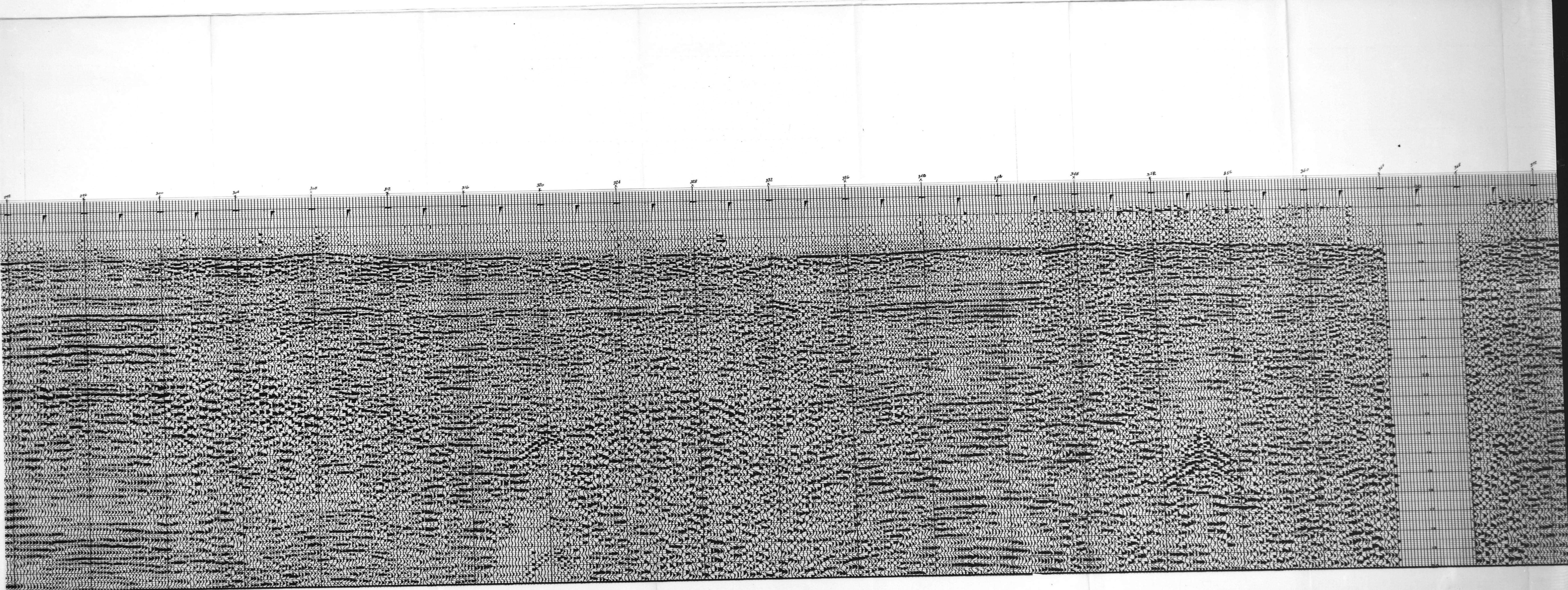
105 M.M.

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CALGARY 1, ALBERTA

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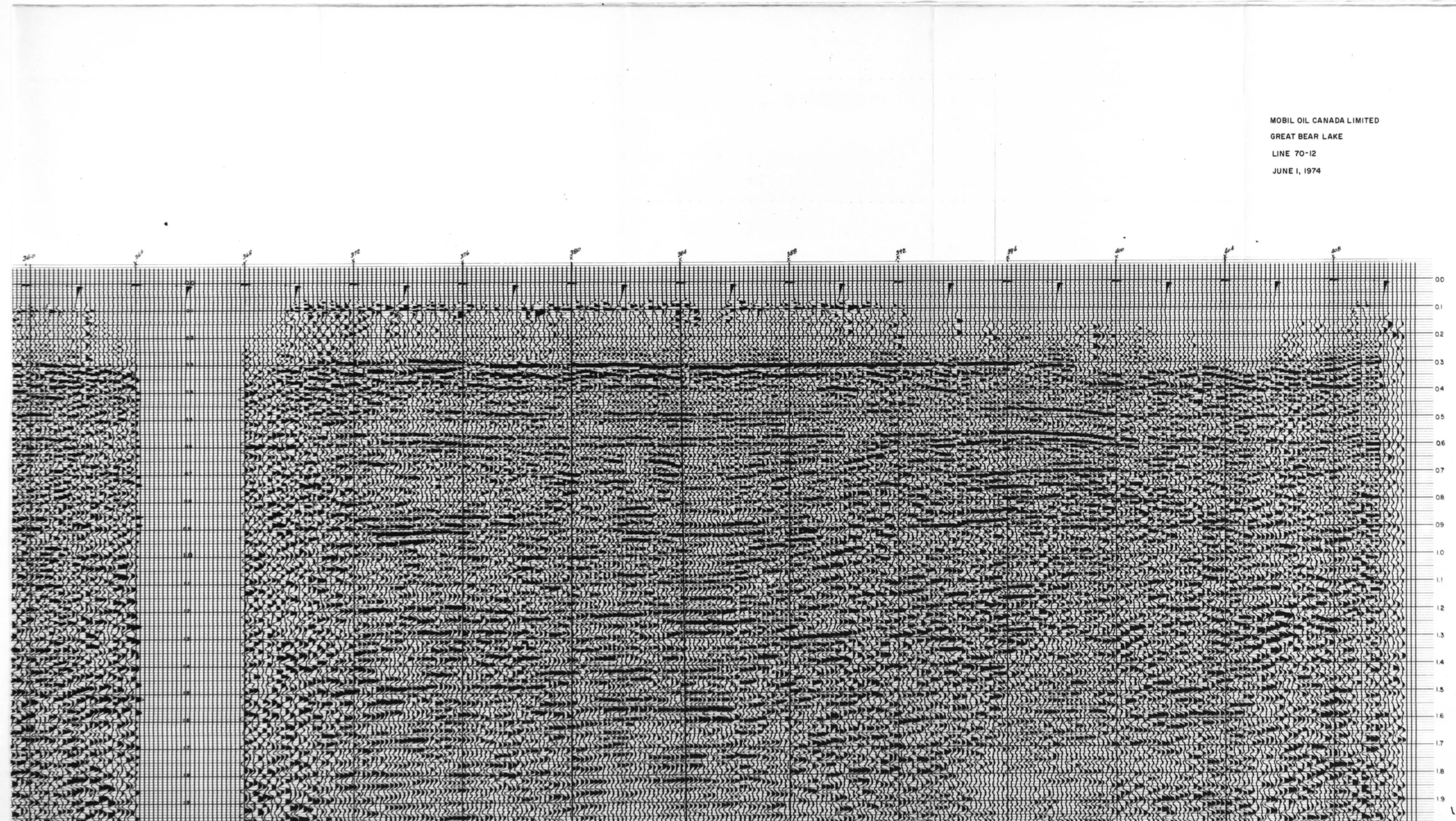
September 1975

11x

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60, 51, 41, 31, 21, 11, 5, 3, 1, CALGARY 1, ALBERTA

057-06-085



057-06-06-085

DIRECTION E

MOBIL OIL CANADA, LTD.
PHOENIX JOB PROCESSING
CALGARY

LINE NO. 70-12
SHOTPOINT 224 TO SHOTPOINT 410
CREW MOC-70 (CAGG 532) AREA Northern
CHARG. NO. 219 NAME SMITH ARM (RENT
PROV. N.W.T. LAT.
LONG.

SECTION TYPE

RECORDING INFORMATION

RECORDED FOR Mobil Oil Canada, Ltd.
DATE RECORDED February 2 - 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 4 sec SAMPLE RATE 2 ms
FIELD FILTER
GAIN CONTROL BINARY AGC
 DYNAMITE DINOBESIS
 THUMPER OTHER
 VIBROSEIS
SWEEP FREQUENCY
SWEEP LENGTH sec
NO. OF SWEEPS
 GUN TYPE
DEPTH ft
CAPACITY cu inches
NO. OF GUNS ft
ENERGY SOURCE SPACING 310 meters
TYPE GEOPHONE HSJ 14
NO. OF GEOPHONES PER GROUP 18 weighted
GROUP INTERVAL 110 meters
SPREAD CONFIGURATION
CABLE DEPTH
SPREAD DIAGRAM East

1320' 110' 110' 1320'
24 13 13 1

REMARKS

DISPLAY INFORMATION

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

TRACE MUTING
TWO WAY TIME IN SEC.

NOTE:

PROCESSING PARAMETERS AND SEQUENCE

4 - FOLD

DATE PROCESSED May, 1974
PROCESSED SAMPLE RATE 2 ms
INPUT FORMAT 9 TRACK
DATUM 1200 VELOCITY TO DATUM 7000

BINARY GAIN RESTORATION
— FF DTRIM LENGTH OF WINDOW sec
— DIVERGENCE Vc = ft/sec A = ft/sec²
 HORIZONTAL COMPOSITE to

EDIT
— TRACE MUTE DATUM STATICS
— MEAN REMOVAL

TRACE EQUALIZATION

<input checked="" type="checkbox"/> DTRIM	100 to 200 sec	10 to 20 sec	
WINDOW	500 ms	WINDOW	ms
SINGLE WINDOW TRIM		SINGLE WINDOW TRIM	
10	sec	10	sec
MULTI-WINDOW TRIM		MULTI-WINDOW TRIM	
10	sec	10	sec
10	sec	10	sec
10	sec	10	sec
10	sec	10	sec
10	sec	10	sec

REMARKS

4 - FOLD GATHER

DECONVOLUTION

<input type="checkbox"/> SINGLE WINDOW SPIKE	SINGLE WINDOW SPIKE
10 sec ms	10 sec ms
MULTI-WINDOW SPIKE	
10 sec ms	10 sec ms
10 sec ms	10 sec ms
10 sec ms	10 sec ms
10 sec ms	10 sec ms
10 sec ms	10 sec ms
SINGLE WINDOW GAPPED	
10 sec ms	10 sec ms
SINGLE WINDOW GAPPED	
10 sec ms	10 sec ms

REMARKS

STATICS METHOD after mute

VELOCITY DETERMINATION Con. vel. analysis

NMO SAMPLE MOVE WAVELET SUMMATION

FILTER TIME DOMAIN FREQ DOMAIN
SINC BANDPASS Hz LENGTH ms
SINC BANDPASS Hz LENGTH ms

TIME VARIANT
TIME ZONE BANDPASS Hz LENGTH ms
10 sec Hz ms

4 - FOLD CDP STACKING SUMMATION OVF CONOP
 SHOTCON II - Shot point numbering

REMARKS
1974 shooting
J.A. Mc DONALD

DIGITAL FILTERING
TWO WAY TIME IN SEC

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September 1975

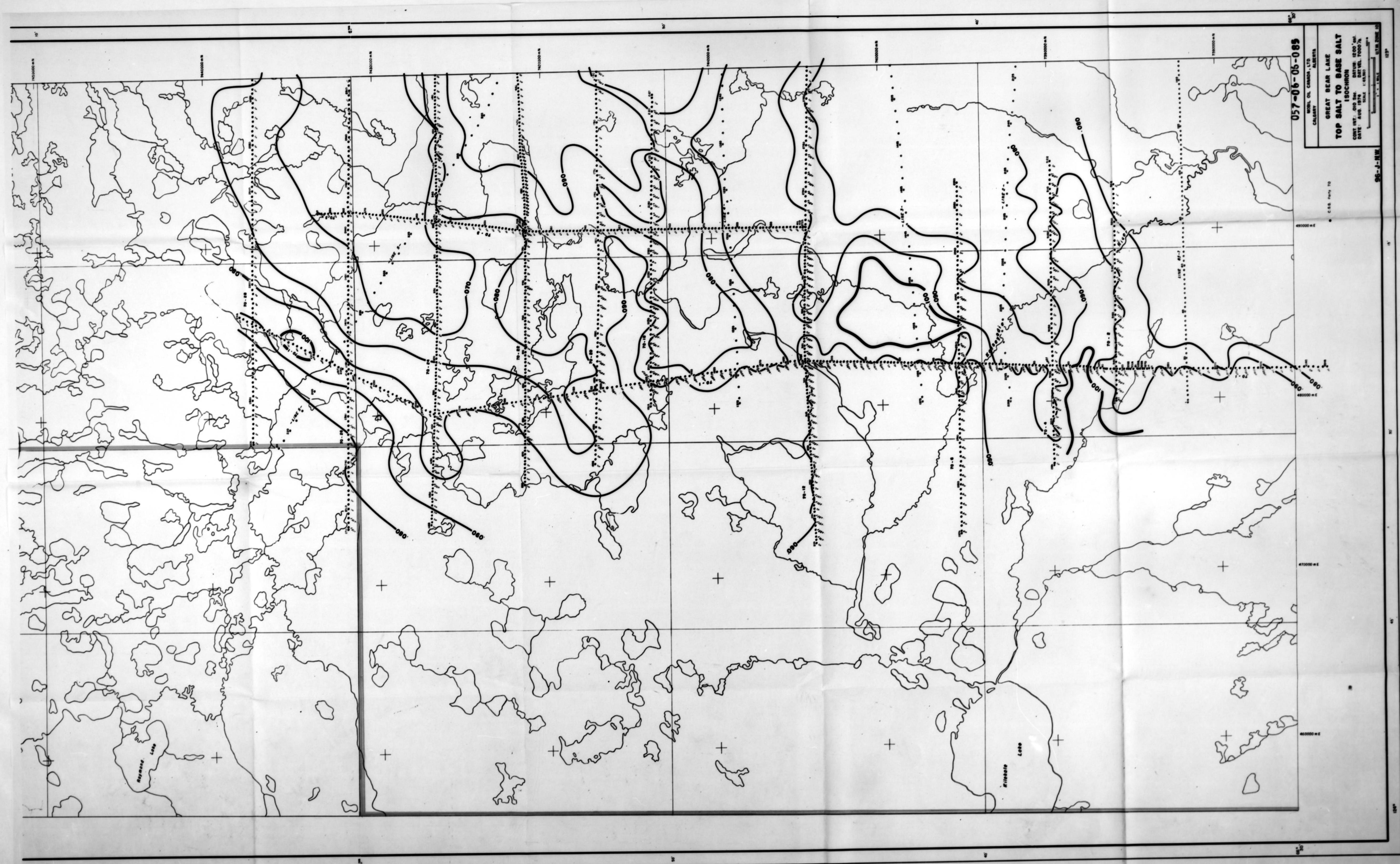
September 1975

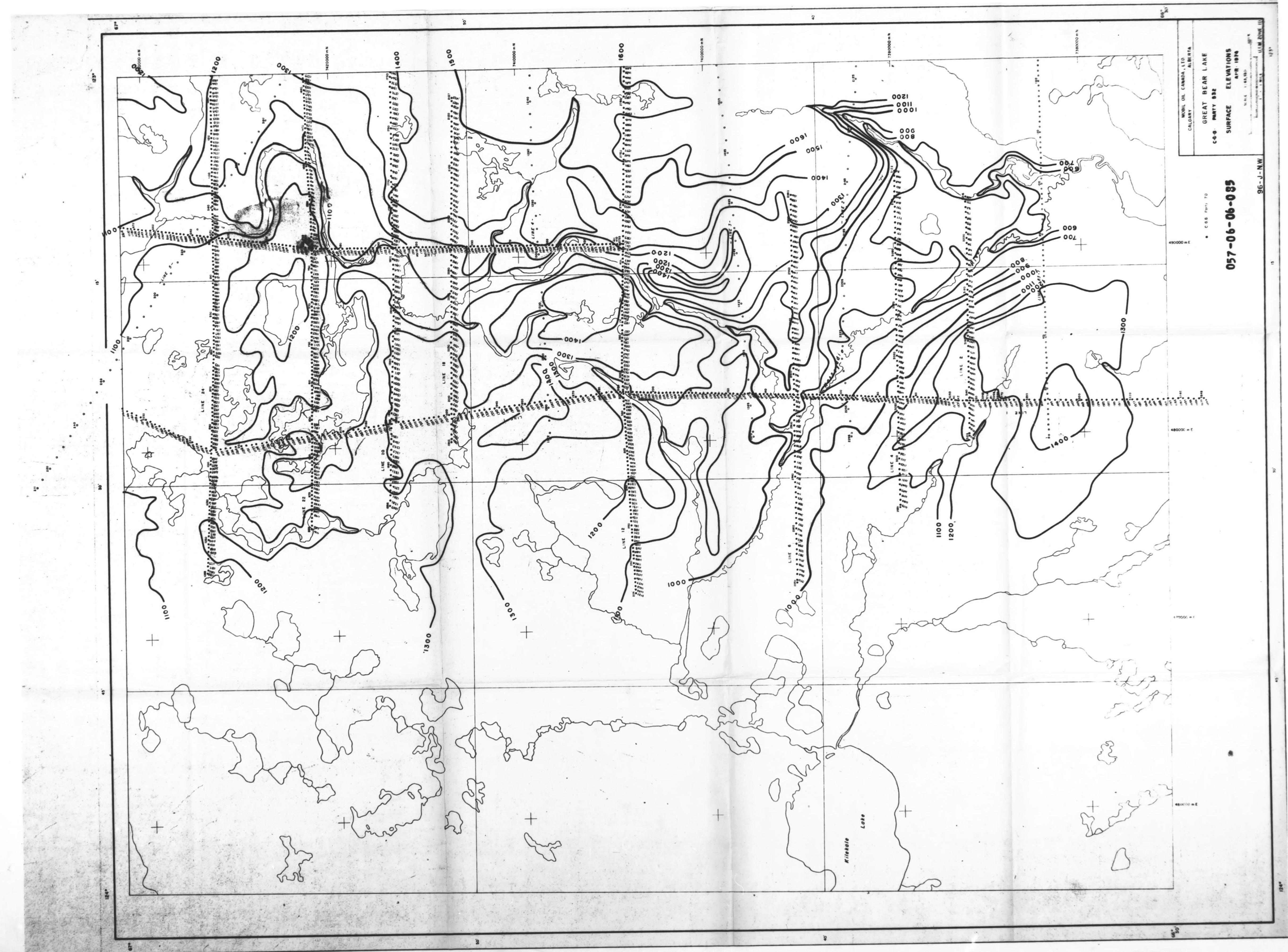
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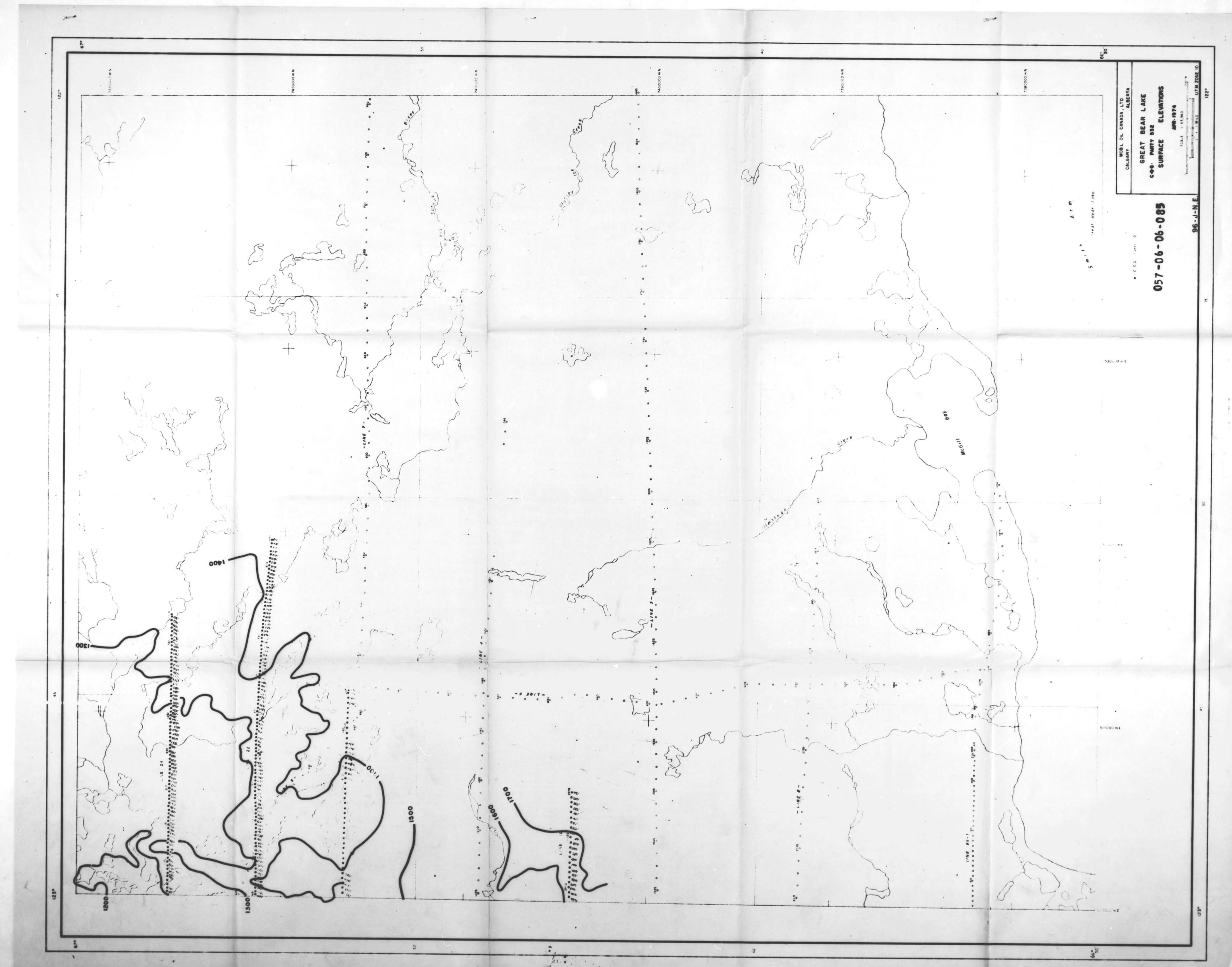
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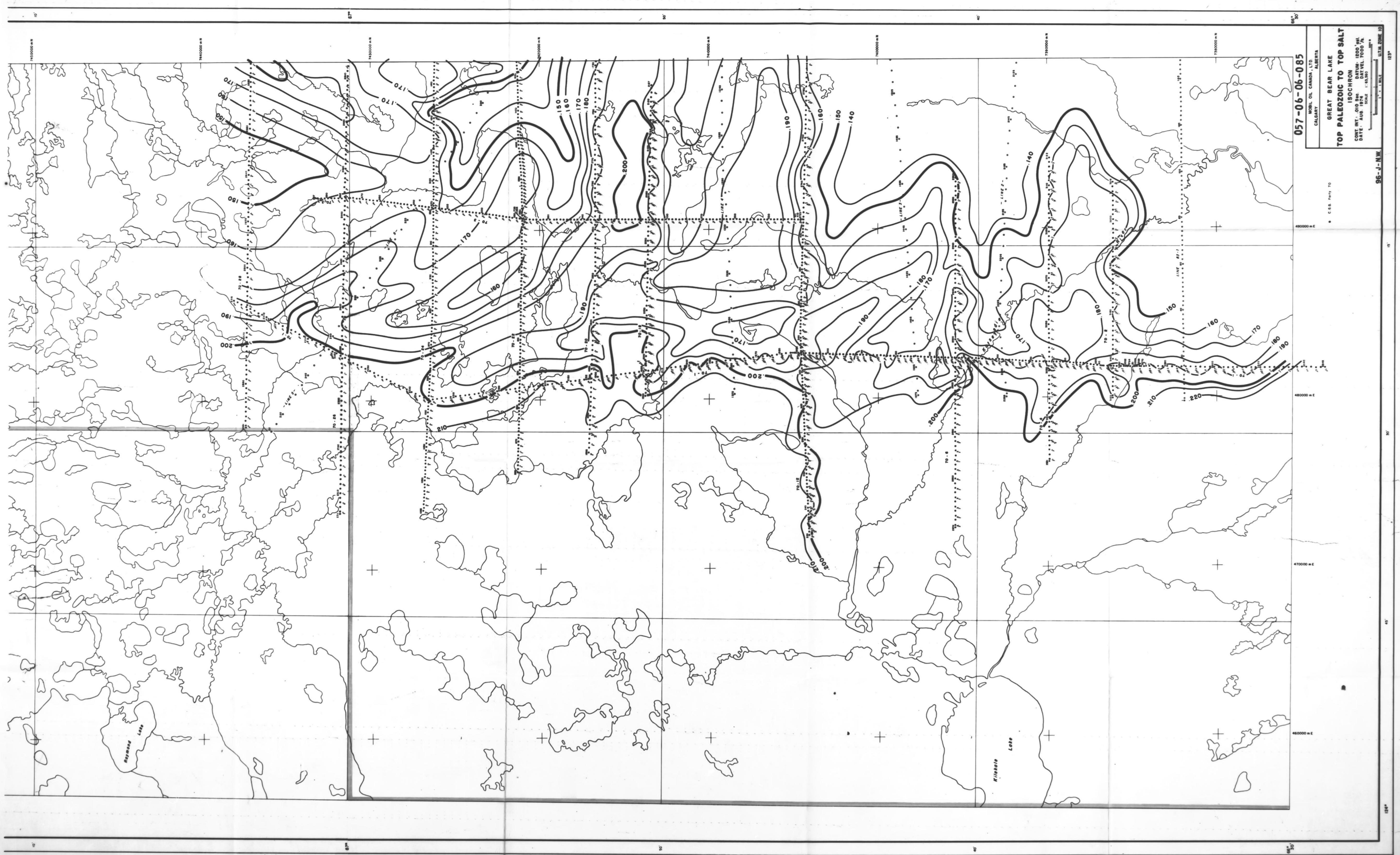
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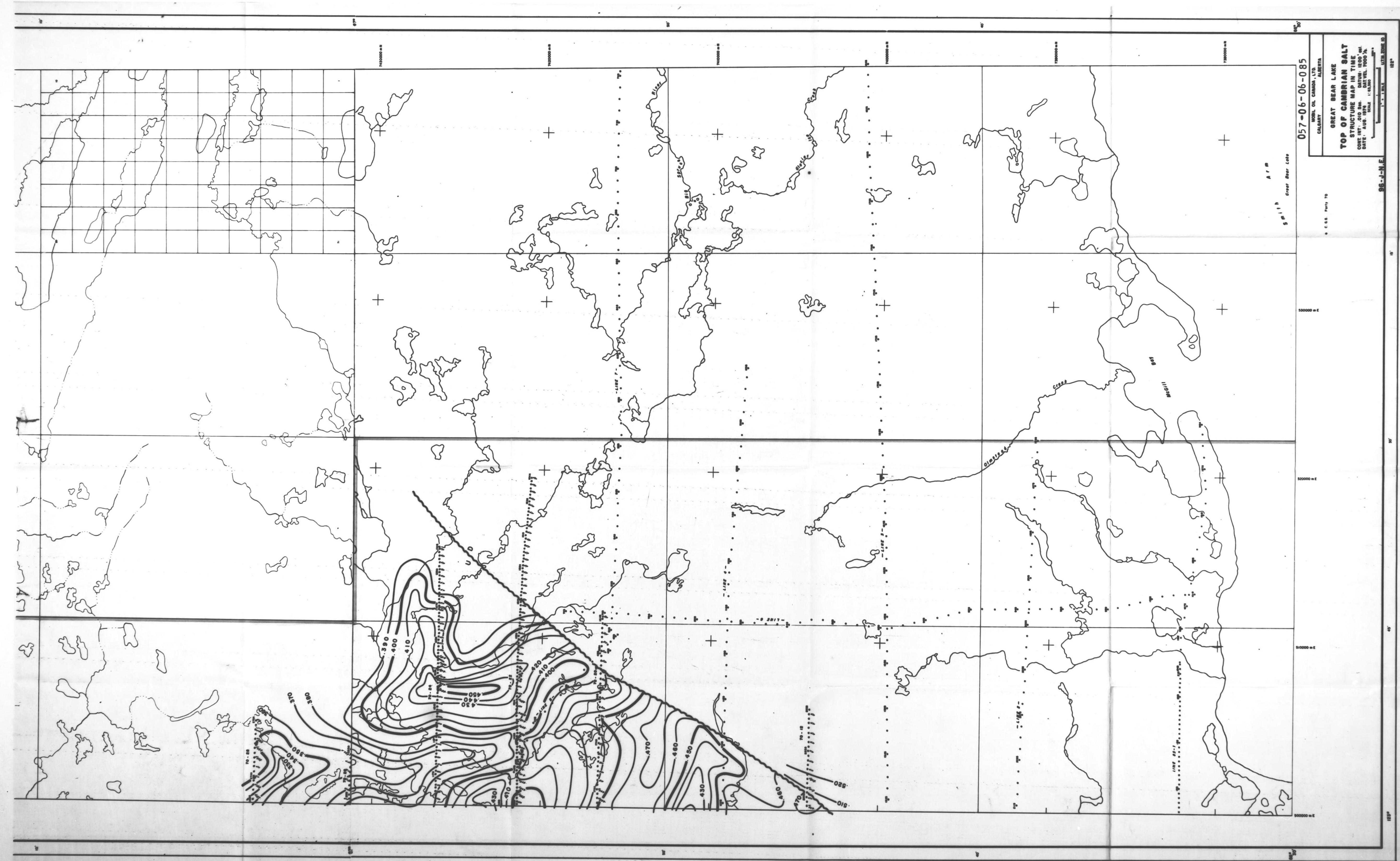
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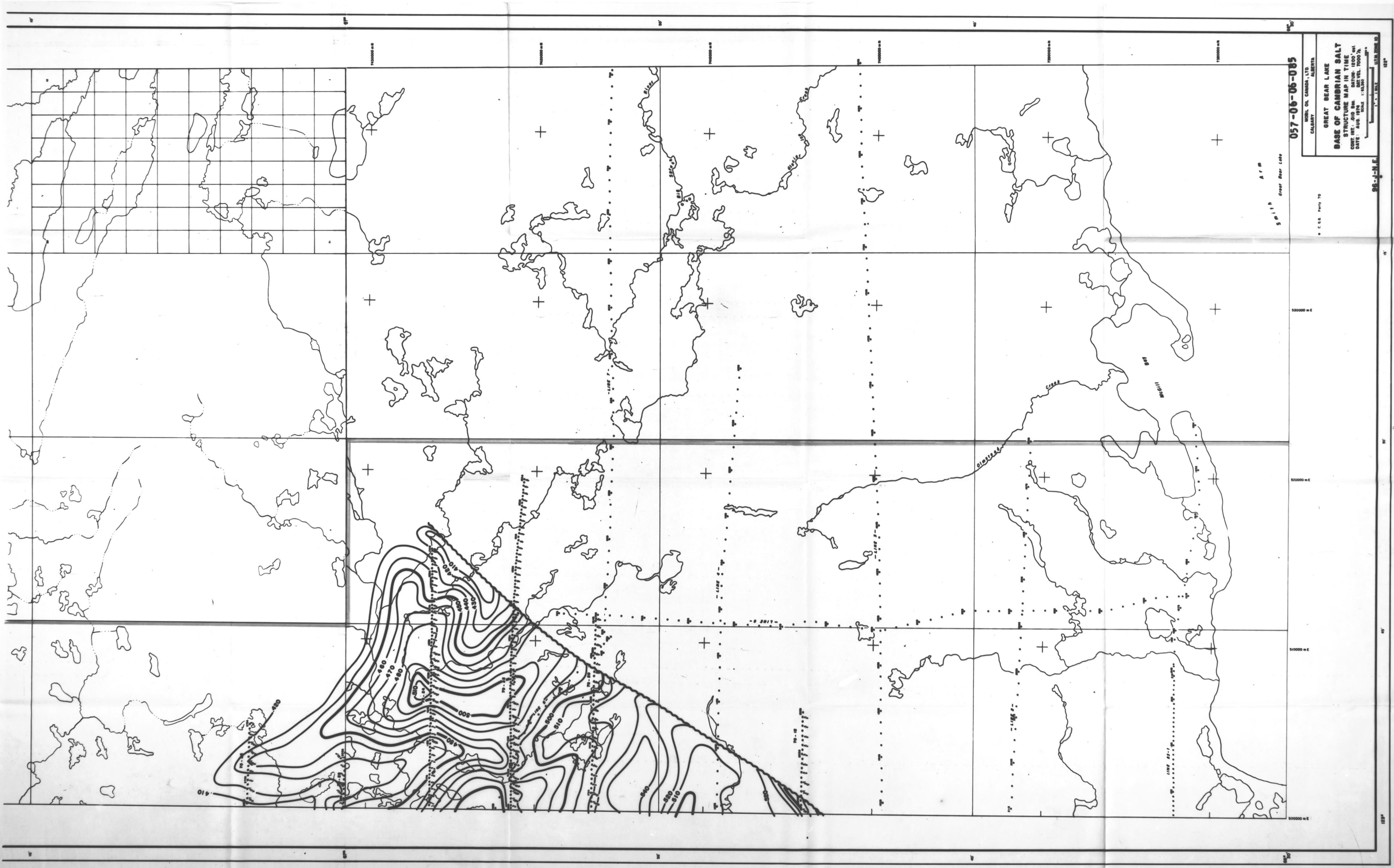
105 M.M.

September 1975

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