LIARD

A Report on the
Airborne Electromagnetic, Magnetic and
Ground Geological Surveys

on the

VINES CLAIM GROUPS

Liard Mining Division

Location: Vines Claim Groups - 2 miles south of Cassiar Townsite, 59° 12'00" SW

Report written by: R. A. Emerson, B.A., M.Sc.

Work supervised by: G. Isford, B.Sc., M.Sc.

Claims held by: Totem Minerals Limited,
Stock Exchange Building,
VANCOUVER, B.C.

Work performed by: Lundberg Explorations Ltd.,
96 Eglinton Avenue East,
TORONTO 12, Ontario

104P/4E & 4W, 5W

Airborne work - September 11, 12 and 20

Ground work - September 21 to September 27

285

Lundberg Explorations Ltd.,
363 George St.,
PRINCE GEORGE, B.C.

October 19, 1959

Chief Gold Commissioner,
Department of Mines,
VICTORIA, B.C.

Dear Sir;

Enclosed is a Report on the Airborne Electromagnetic, Magnetic and Ground Geological Surveys of the Vines Claim Group, Liard Mining Division. Three minor deviations from the Department Regulations governing the use of Airborne geophysical surveys as assessment work have been found necessary in this instance, These are as follows:

A. A map scale of 1:25,000 (roughly 1"=.4 miles) has been used rather than 1 inch equals 1000 feet. The best available topographic maps for this region are the National Topographic series published on a scale of 1:250,000. Thus an enlargement of roughly twenty-five times would be necessary to produce the required 1"=1000 foot scale.

B. As can be seen from Map No. 1, it was necessary to alter the uniform one-eighth mile east-west flight line grid owing to the extremely rough topography at the south end of the area. Lines over the southern most claims have been flown on a one-eighth mile grid in a northwest-southeast direction.

C. Altimeter records have not been included. As stated in the report, an altimeter record is kept primarily for interpretation purposes. It is not usually transcribed and therefore is difficult to reproduce.

I trust this report will meet with your satisfaction.

Yours very truly,
LUNDBERG EXPLORATIONS LIMITED

Robert A. Knutson

Robert A. Knutson,
Geologist

Enclosure
RAK:mw

INTRODUCTION

E N C L O S U R E S

Appendix I - Statement of Qualifications of Personnel

Appendix II - Statement of Expenditures

#1 claim Group

Envelope #1 - Flight Records F.L. 1-39 Plan, field 1-36-37-38-39

Envelope #2 - Maps 1 2 3 24

A Report on the

Airborne Electromagnetic, Magnetic and

Ground Geological Surveys of the

VINES CLAIM GROUPS

Liard Mining Division

CASSIAR, B.C.

INTRODUCTION

In October, 1957, a group of fifty mineral claims were staked on the extension of certain silver-lead deposits in the vicinity of Cassiar, B.C. In the course of exploration work in 1958, a sulphide vein was encountered on Lang Creek, Vines claim No. 2. As the overburden cover is heavy throughout the area it was decided to survey the claims with the Rotary-field electromagnetic system. The survey required three flights and these were carried out on September 11, 12 and 20, 1959. A party consisting of a geologist Mr. John Brady and two prospectors, George White and Bert O'Neill undertook to examine several electromagnetic anomalies between September 21 to September 27. In addition, an access road was bulldozed to Vines Group IV from the Cassiar side of Granite Mountain.

Location and Access

The Vines claim Groups are located between 59° 12' and 59° 16' North latitude, 129° 44' and 129° 52' East longitude.in the Liard Mining Division, British Columbia.

The claims are accessible from the north via a recently cohstructed access road along Granite Creek, from the south via an access road constructed along Lang Creek in 1958, from the Stewart Road.

Topography and Surface Conditions

The south end of the claim group lies at an elevation of about 3500 feet increasing to 6000 feet at the north end of the group. Morainal deposits and eskers constitute the Lang Creek valley plain. Outcrops account for less than one percent of land surface and these are mainly found in the creek beds. Coniferous trees such as spruce and jackpine cover most of the valley floor.

GEOLOGICAL CONDITIONS

The area, in general, is made up of slightly altered fine grained sediments. Deformation of the general strike on the mountain north of Lang Creek occurs in places along the creek itself, probably as a result of local folding. No evidence of faulting was noted.

An excellent geological cross section is present in a stream bed on the south face of the mountain.

Observed in this section are, (from younger to older): argillaceous quartzite, shale, (with pyrite nodules) pebbly greywacke.

The stratigraphic sequence is thought to be as follows: Pleistocene--glacial till, sand, talus; Devonian and Mississippian--(Sylvester Group) Limestone (locally crystalline; argillaceous quartzite shale (pyrite nodules), Pebbly greywacke; shale greenish argillaceous limestone; biotitic argillaceous quartzite.

THE GEOPHYSICAL SURVEY

The Survey Method

The Lundberg vertical field airborne magnetometer was used to measure the magnetic variations in the area. This instrument is gyro stablized and has a sensitivity of ±20 gammas.

Electrical conductors were mapped by means of the Two Plane Rotary Field electromagnetic method. This method involves two aircraft flying eight hundred feet apart. The trailing aircraft contains two diagonally mounted coils through which equal 320 cycle current is passed. The current in one is 90 degrees out of phase with the other and this produces the rotary field. The lead aircraft contains the "pickup" coils mounted in a "bird" towed about 100 feet behind, together with the necessary amplification and recording instruments. The magnetometer is located in the

lead aircraft. The Real and Imaginary components of the electromagnetic field are measured.

Altitude is maintained by means of a radio altimeter (APN-Type). The lead aircraft flies about 300 feet above the terrain. The trailing aircraft flies on the same level as the "bird", (i.e., 250 feet to 260 feet). Distance between the two aircraft is maintained by means of a series of flashing lights on the lead aircraft. These lights are coupled to the primary input from the trailing aircraft and therby govern the strength of the primary field at the lead aircraft.

Navigational control is visual and done by an experienced navigator in the lead aircraft. Fiducial marks on the records correspond with those on the map. Map No. 104P--the McDame sheet of the National Topographic Series was used forthis survey. This map was enlarged to 1:50,000 or 5 times the original scale. Flight lines were flown in an east-west direction roughly one-eighth mile apart. Owing to the extremely rugged terrain at the south end of the claim group, it was necessary to fly this portion of the group in a northwest-southeast direction.

Anomalies encountered with the E.M. method occur midway between the two aircraft. This instrumental lag is corrected for in plotting the processed profiles and is dependent on the ground speed of the aircraft between the individual fiducial marks. Magnetic response is instantaneous, thus no lag occurs in the magnetic charts.

The Results of the Survey

Three maps Nos. 1, 2 and 3 drawn to a scale of 1:25,000 and one map, No. 4 drawn to a scale of one inch equals 1320 feet accompany this report.

Map No. 1 - shows the location of the flight lines. Line numbers are shown at the ends of the lines. Fiducial marks are shown as circles on the lines.

Map No. 2 - shows an interpretation of the results of the magnetic survey.

Map No. 3 - shows an interpretation of the results of the electromagnetic survey.

Map No. 4 - shows the results of the geological survey of the claim group.

Five strong conductive trends were encountered on the Vines claim group. These have been designated as Zone A, B, C, D and E. In addition, several minor zones were also mapped but these are not thought to be significant. The strongest conductors have an intensity greater than 25 percent of the primary field. However, the ground investigation indicates that these anomalies (i.e., Zones A, B, C and E) are caused by graphitic argillite or shale beds. As the argillite and shale often contain pyrite it is possible that this mineral is partially responsible for the high conductivity.

Zone D, however, coincides with a sulphide vein found last year in the bed of Lang Creek. The apparent width of this vein is three feet. The vein occurs on the north side of the creek and although it appears to be conformable with the attitude of the argillaceous limestone host rock, no evidence except the conductive zone is found south of the creek.

Scattered "pockets" of azurite-malachite up to one foot in diameter are scattered infrequently throughout the country rock in the immediate area of the vein. Tremolite stringers cut the zone normal to the vein indicating metamorphism after deposition of the sulphides. The following minerals are present in the vein: pyrite-marcasite, chalcopyrite--less than one percent (azurite-malachite), pyrrhotite--less than one percent, sphalerite--less than one percent, tremolite.

The magnetic results show little or no coincidence with the electromagnetic results. This is thought to further evidence that the conductivity is caused by the pyritic-graphitic argillite and shale.

CONCLUSIONS

While it is possible thatother causes are also responsible, the presence of large bodies of graphitic-pyritic argillite and shale in the vicinity of the more intense electromagnetic indications, suggest that these

are responsible for the anomalies. However, the coincidence of Zone D with sulphide vein is encouraging and warrant further detail work. This indication should be surveyed electrically on the ground to determine the full extent of the zone and the sulphide vein.

Respectfully Submitted,

LUNDBERG EXPLORATIONS LIMITED

Robert A. Knutson,

R. A. Knutson,

Geologist

PRINCE GEORGE, B.C.

October 14, 1959

Statement of Qualifications of Personnel

(a) The airborne survey was done under the supervision of George Isford, B.Sc., M.Sc. Mr. Isford is a graduate in Physics from the University of Manitoba and received a Masters degree from the same institution in 1952.

(b) Airborne navigation was done by Mr. Isford and Harvey Brown. Mr. Brown has been engaged in airborne work with Lundberg Explorations for the past ten years.

(c) Instrumental operation was performed by Howard Ingram. Mr. Ingram is a Licenced Electrician (Ontario) and has been engaged in this work for the past six months.

(d) Ground geological work was carried out by John Brady B.Sc. Mr. Brady received his degree in Engineering Geology from the Michigan College of Mining at Houghton, Michigan in 1957.

(e) The report was prepared by R. A. Knutson, B.A., M.Sc. Mr. Knutson received a degree in Geological Sciences from Queen's University, Kingston and a masters degree from the University of Manitoba.

(d) Supervision of transcribing, plotting and draughting was done by Carl Erickson, Field Manager for Lundberg Explorations, Prince George, B. C.

Respectfully submitted,

LUNDBERG EXPLORATIONS LIMITED

C. Erickson

Carl Erickson,
Field Manager

PRINCE GEORGE, B.C.

September 16, 1959

Appendix #11

An Affidavit of Evidence of Expenditure Incurred

(a) Assessment work to be applied to Vines Claim Groups Nos. 1 to 1V comprising a total of fifty mineral claims.

(b) Total number of line miles flown and recorded over claim groups and adjoining area - 148 miles.

(c) Cost of survey, 148 miles of profile @$18 per mile-

=$2,664.00

This cost is made up as follows:

	$
Flying - September 11, 12 and 20, 1959	
7½ hrs. CF-GOA @$125 per hour.....	937.50
7½ hrs. CF-JGB @$125 per hour.....	937.50
Instrument Operator - H. Ingram 3 days @$35 per day.	105.00
Navigator - H. Brown 3 days @$35 per day.....	105.00
Editing - H. Brown 3 days @$35 per day.....	105.00
Transcribing - M. Whatley 4 days @$15 per day.....	60.00
Plotting - L. Hyslop 7 days @$15 per day.....	105.00
Interpretation - R. Knutson 4 days @$35 per day...	140.00
Interpretation - G. Isford 2 days @$35 per day....	70.00
Drafting - L. Hyslop 4 days @$15 per day.....	60.00
Maps - enlargement - printing.....	39.00
TOTAL	$ 2,664.00

NOTE: The dates for the past flight services follow subsequent to the flight dates.

..2

(d) Construction of approximately ½ mile of access road as shown on map attached to copy of statement for $1,280. This work was performed August 14 to September 29, 1959 by W. C. Storie under the supervision of James Crowe, Mining Engineer.

(e) Ground Work - Geology and prospecting performed on No. 1 Claim Group.

	$
September 21 to September 27, 1959 —	
J. Brady, Geologist 7 days @$50 per day.....	350.00
G. White, Prospector 7 days @$15 per day.....	105.00
B. O'Neil, Prospector 7 days @$15 per day.....	105.00
Transportation, B.C.-Yukon Air Service.....	334.00
Maintenance of crew 21 man days @$10 per day.....	210.00
TOTAL	$ 1,154.00

Resume of costs of assessment work to be applied to Vines Claim Groups 1 to 1V inclusive.

	$
Airborne Geophysical Survey	2,664.00
Road Construction	1,280.00
Ground Work, Geology and Prospecting	1,154.00
TOTAL	$ 5,098.00

Respectfully submitted,

LUNDBERG EXPLORATIONS LIMITED

C. Erickson

Carl Erickson,

Field Manager

PRINCE GEORGE, B.C.
September 16, 1959

STATEMENT

aug 14 to Sept 29 1959

Mr William J. Storie

Cassiar - B C

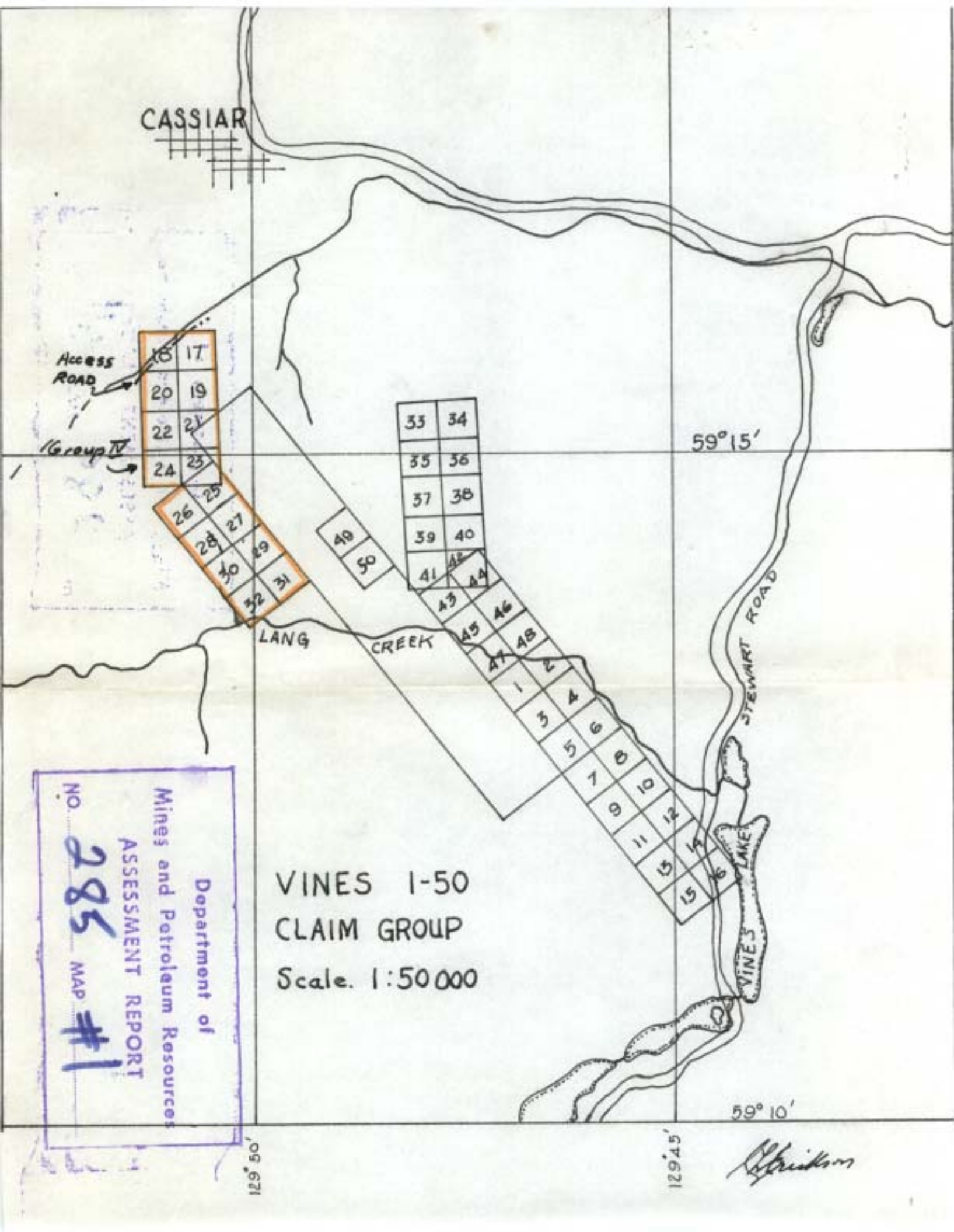
In Account With Lundberg Exploration Ltd.

Road construction D. Zone

TERMS: Power wagon and D4 Cat

Use of Power Wagon from aug 14 to aug 27 inc per day		$15-00		$150-00
D4 Cat. $10 per hour.		113 hrs		$1130-00
Total $1280-00				$1280-00

James Brown



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AIRBORNE SURVEY
MAGNETOMETER
VINES GROUP

Horiz. Scale - 1:50,000

Fl. No. 1-39 Date Sept. 12

Approved By: [signature]
Chief Engr.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #2

Vertical Scale (Gamma)
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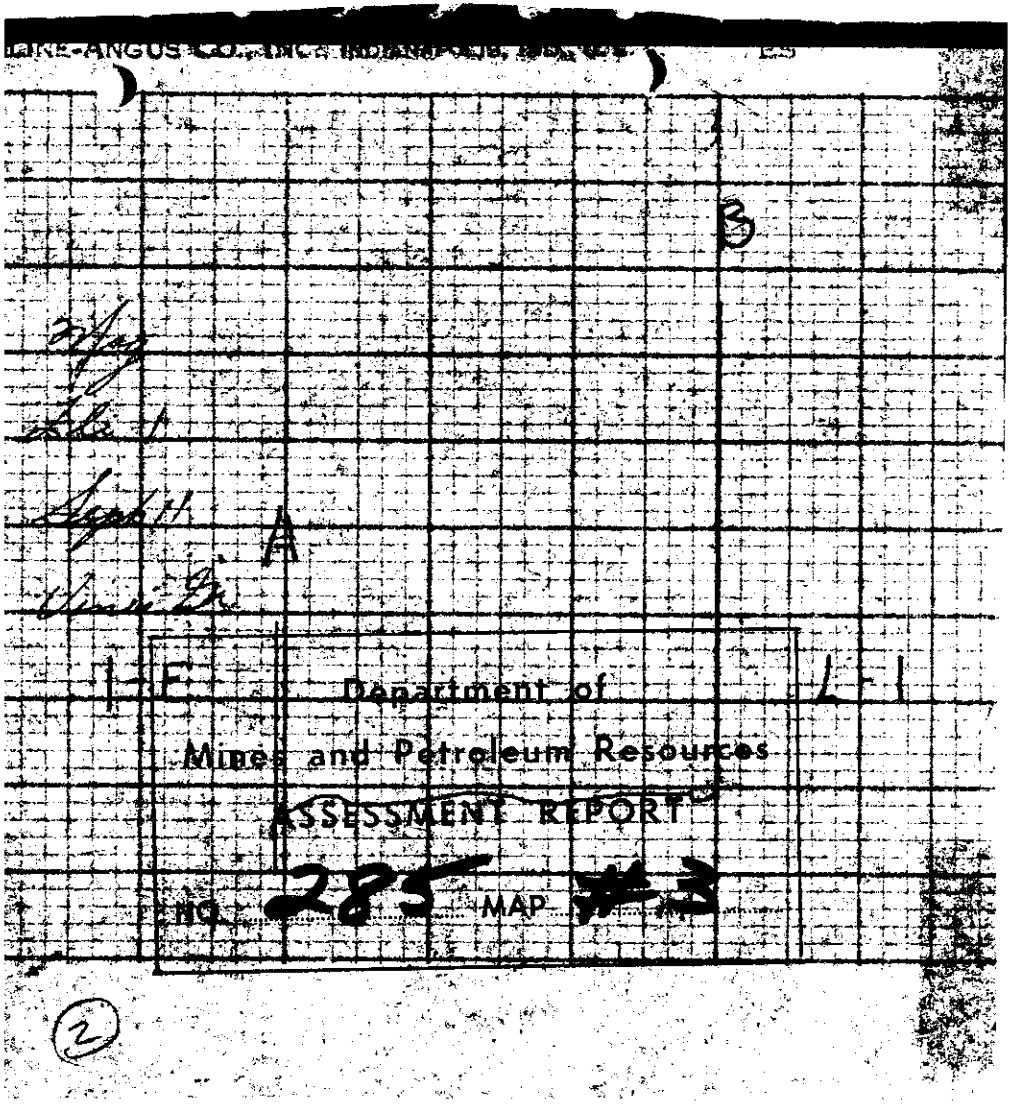
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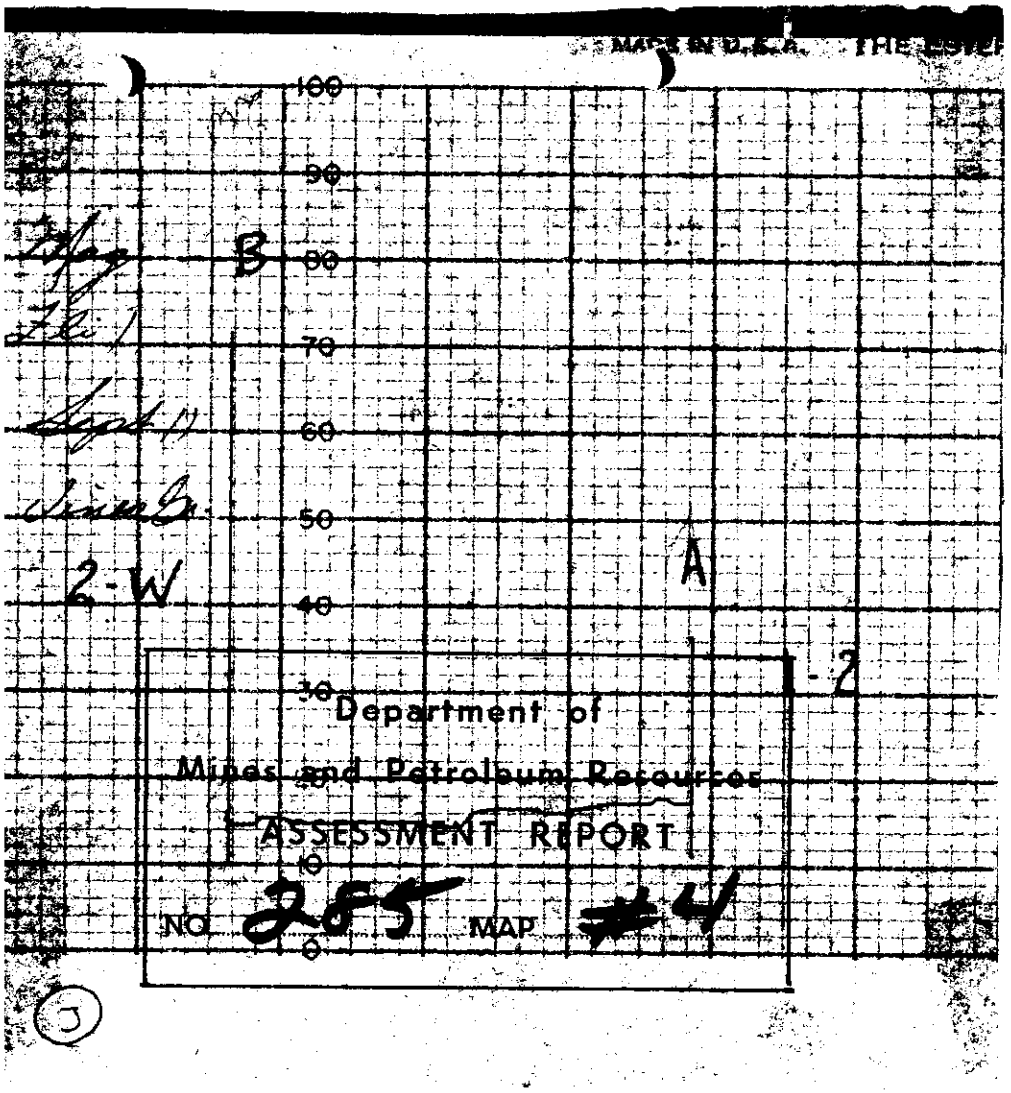
ASSESSMENT REPORT
NO. 285 MAP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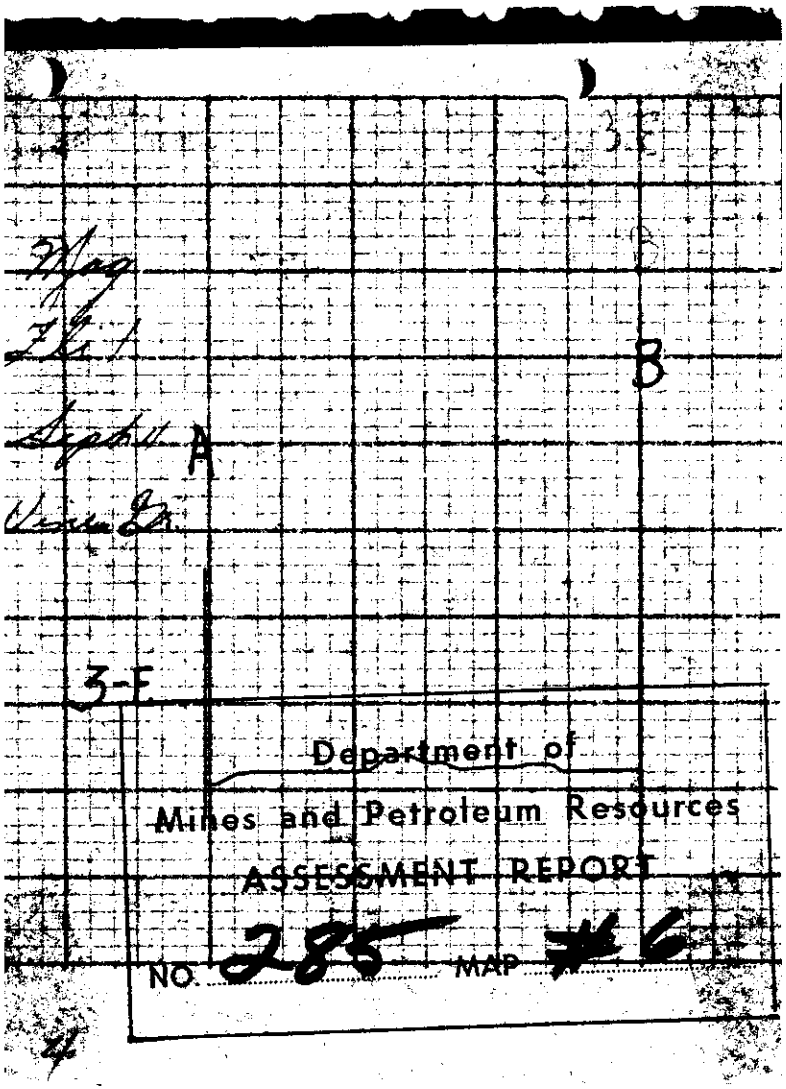
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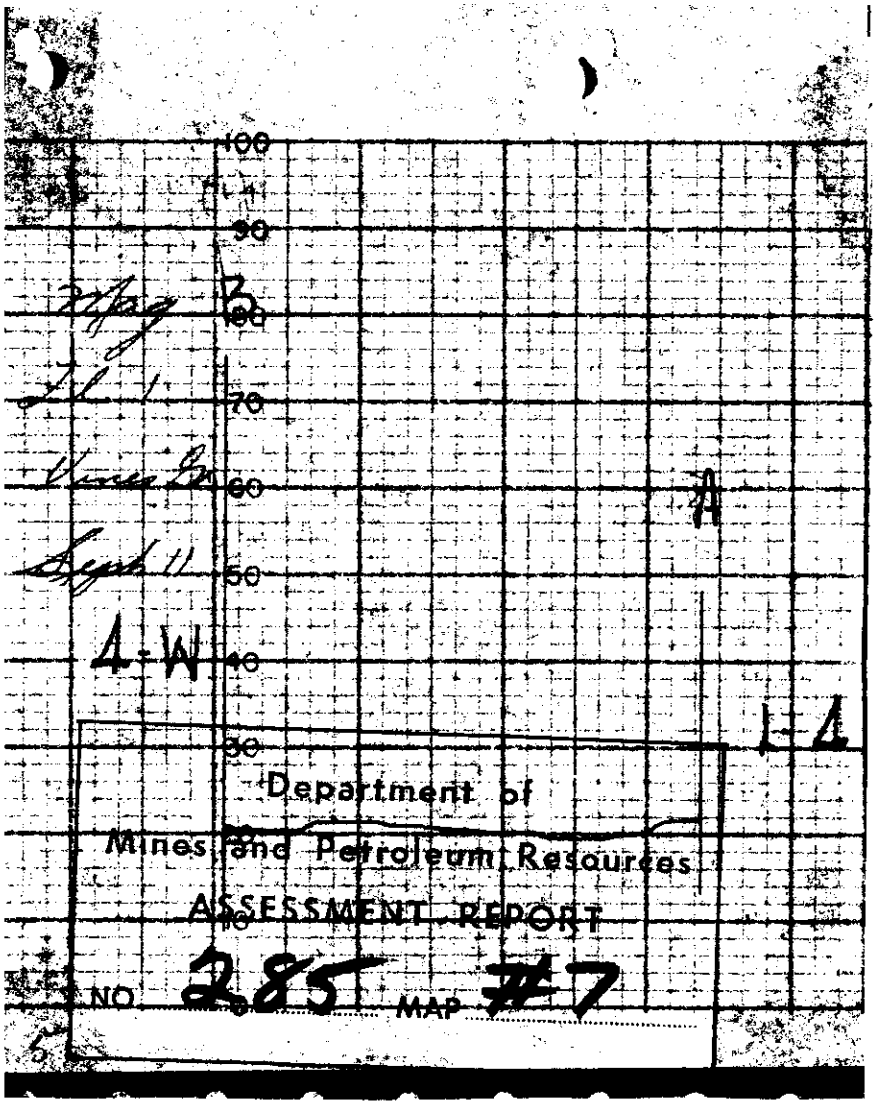
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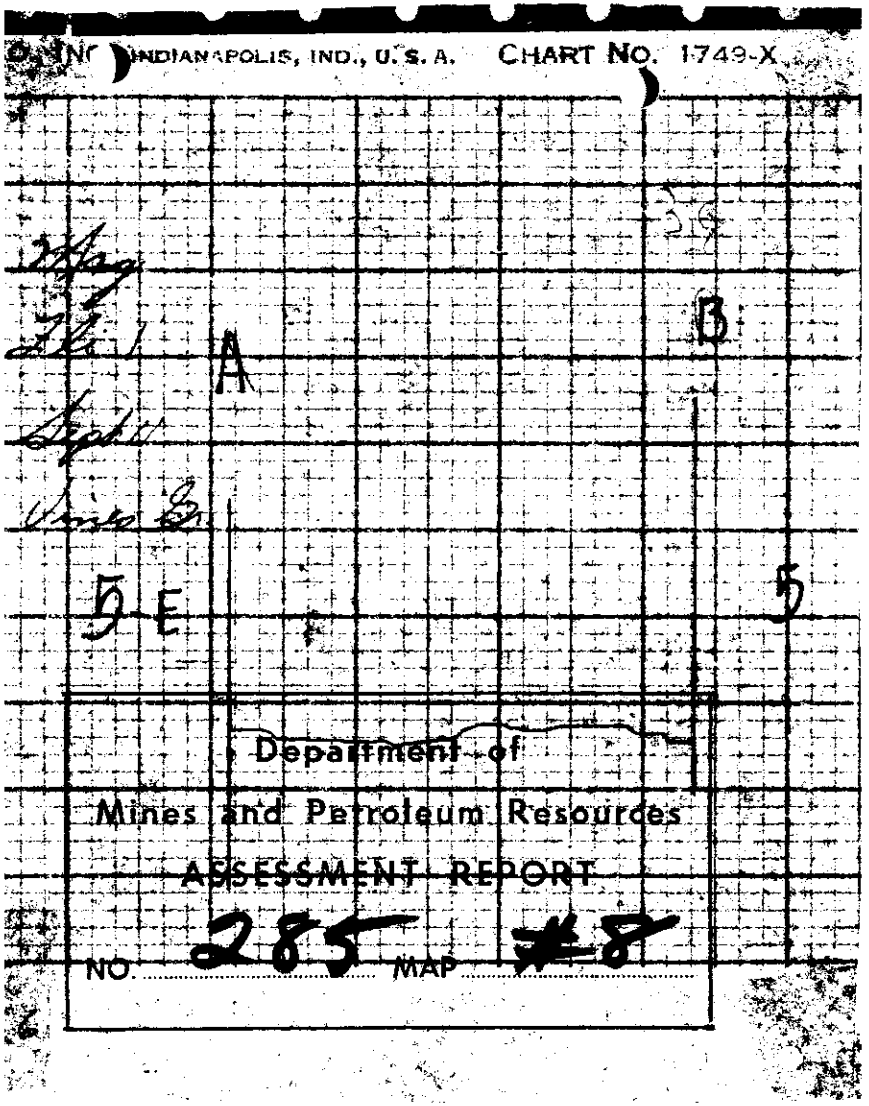
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Mines and Petroleum Resources
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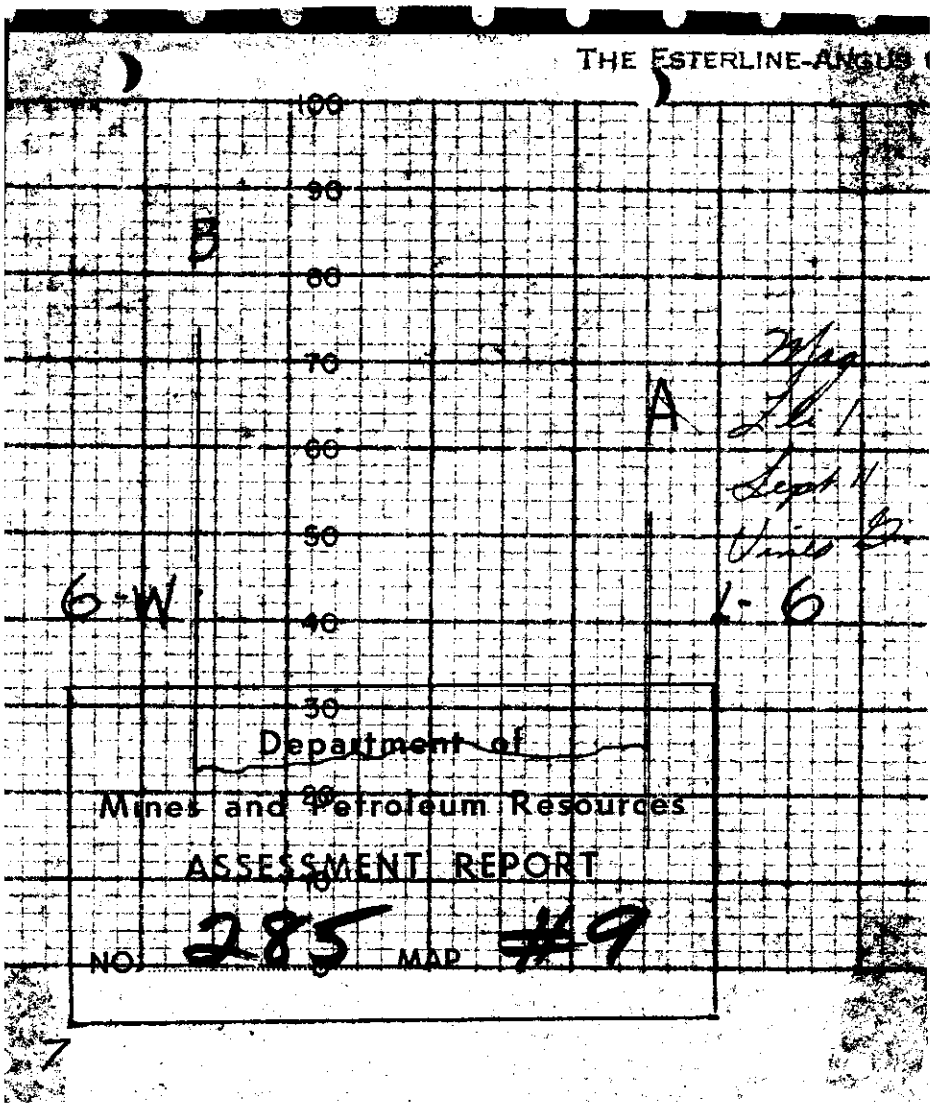
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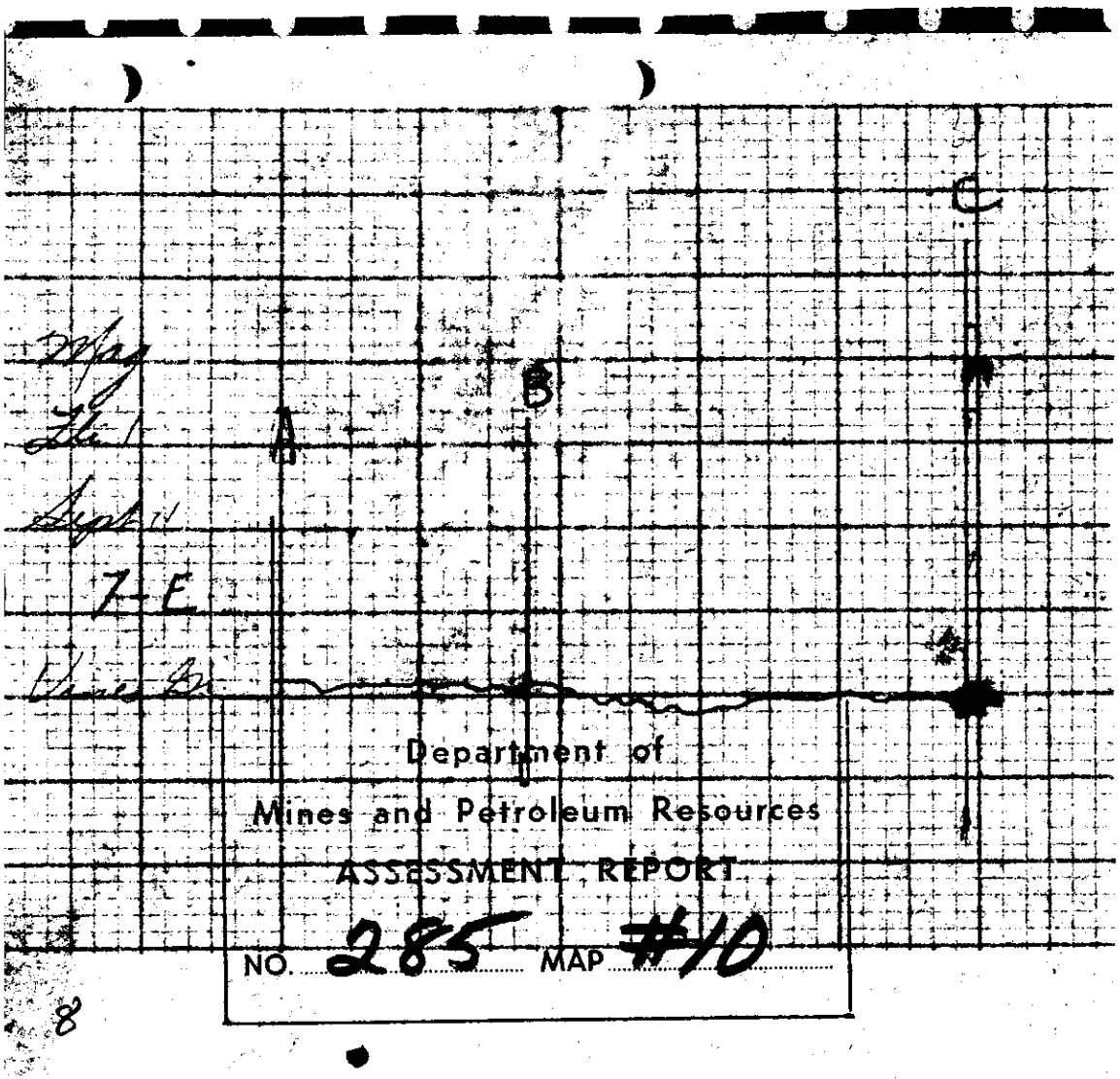
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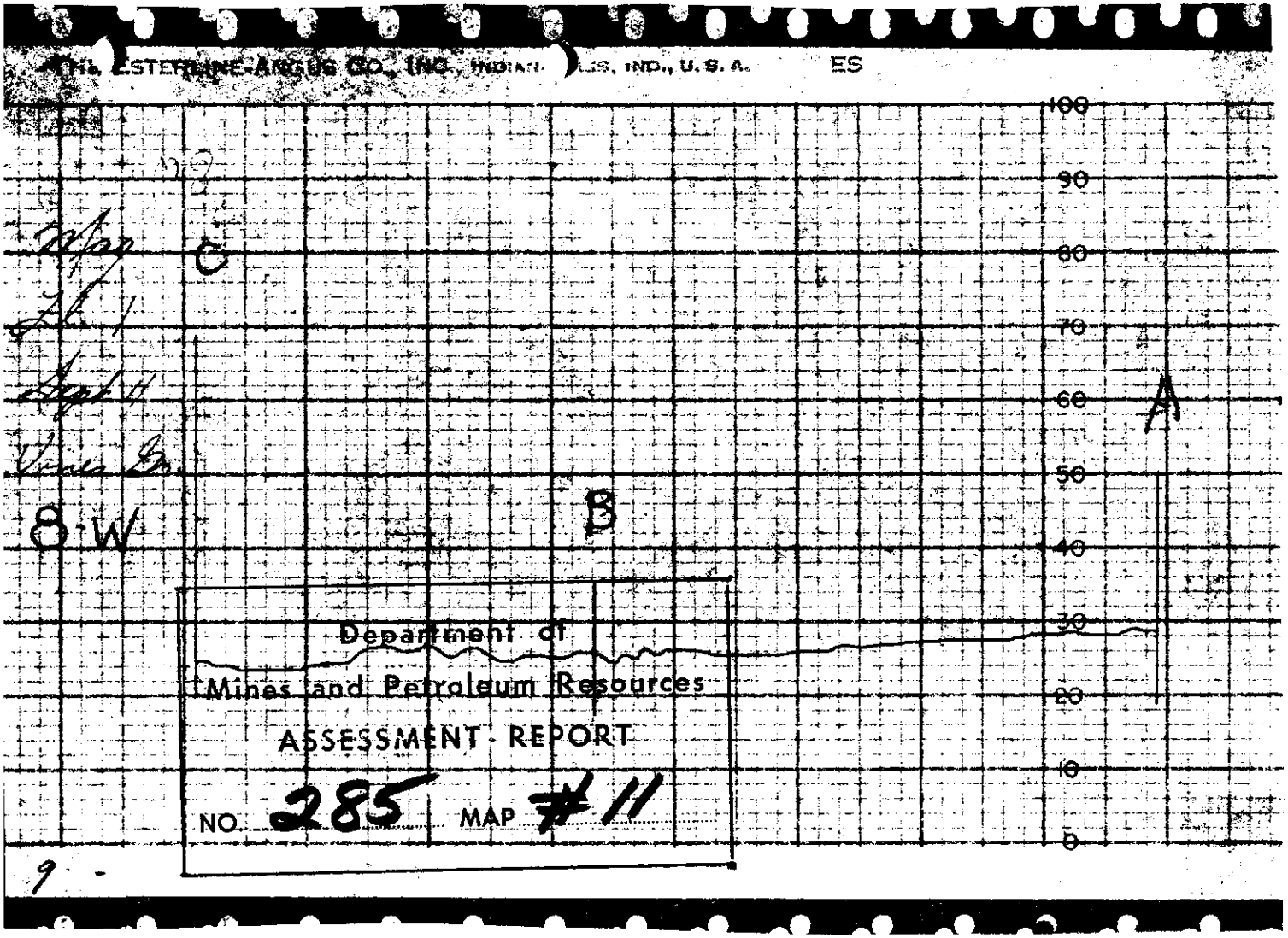
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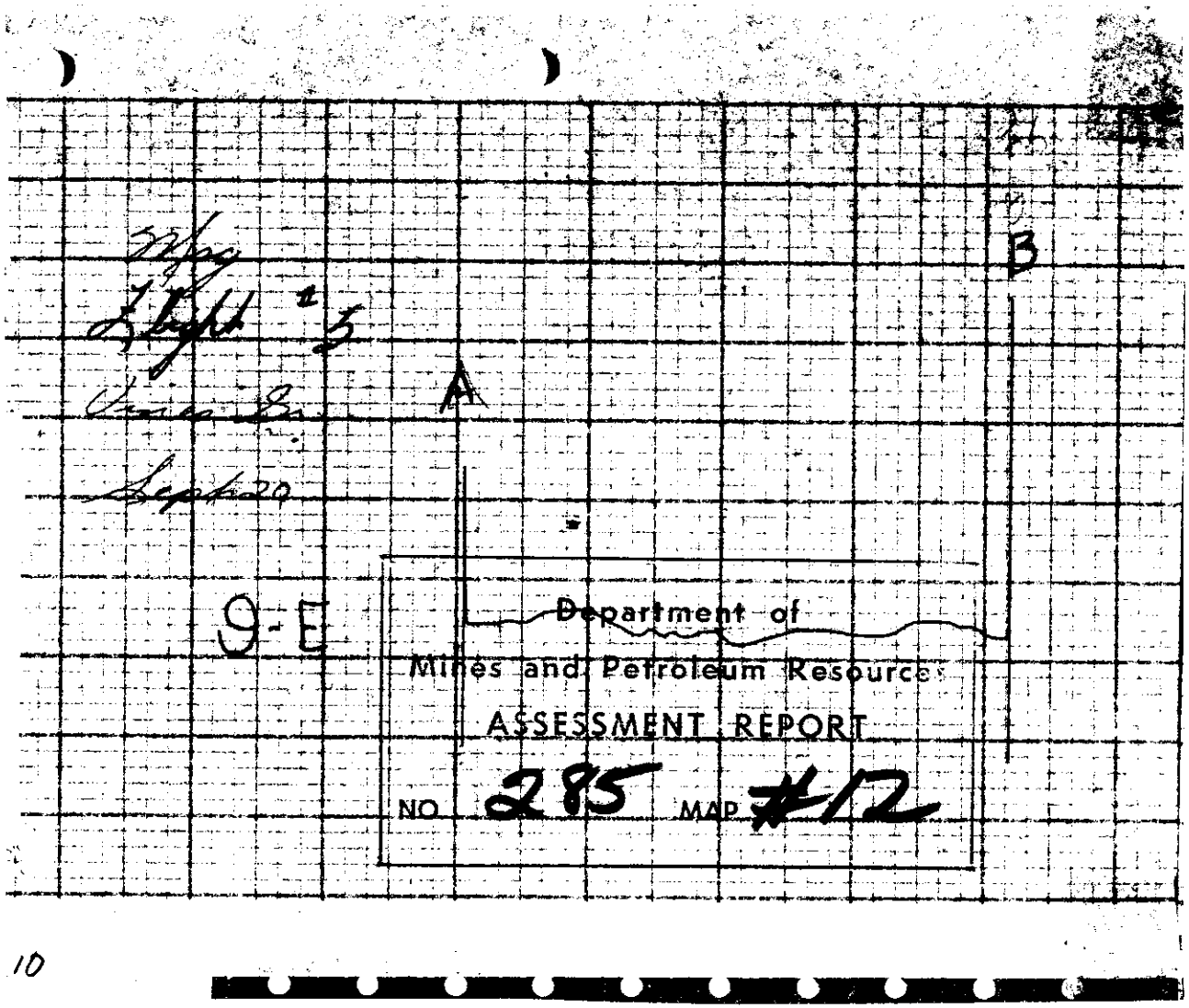
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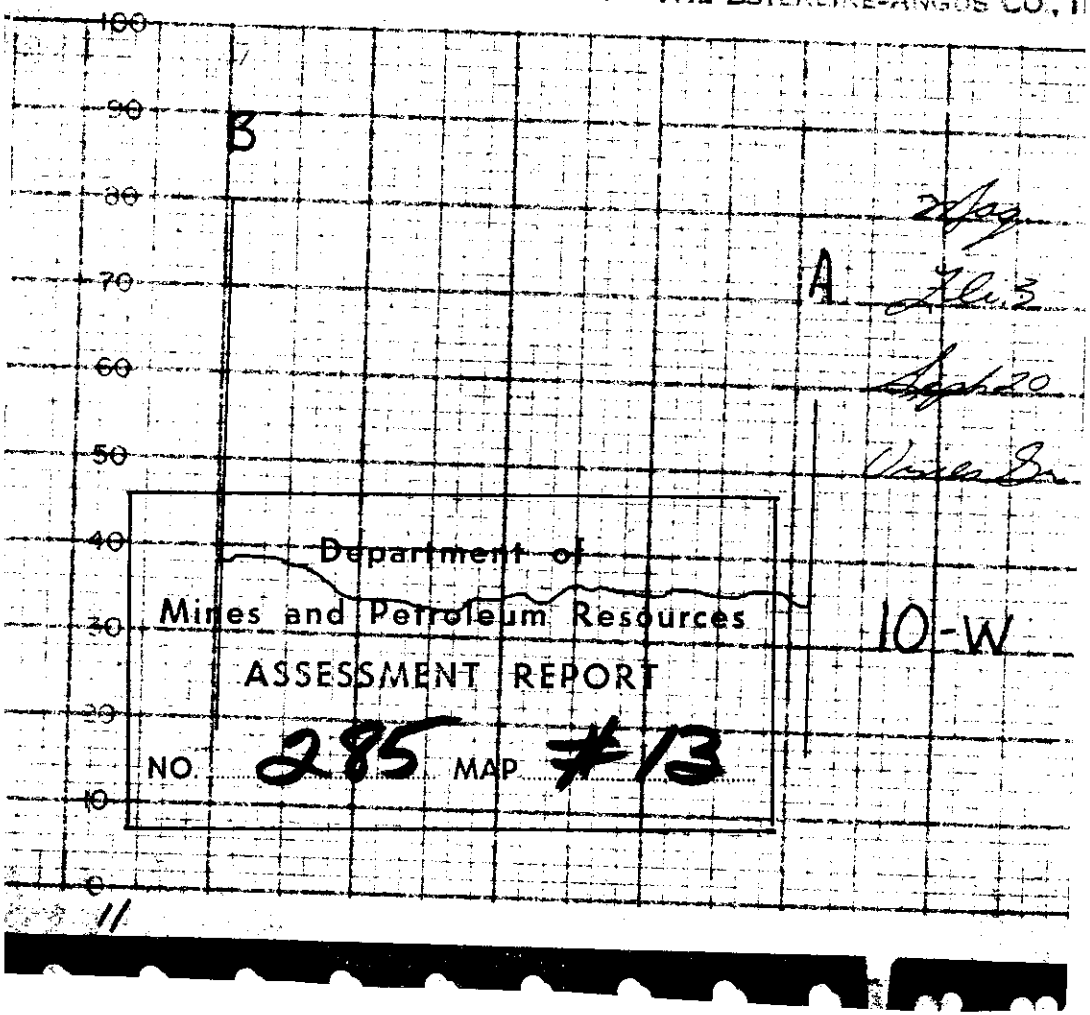
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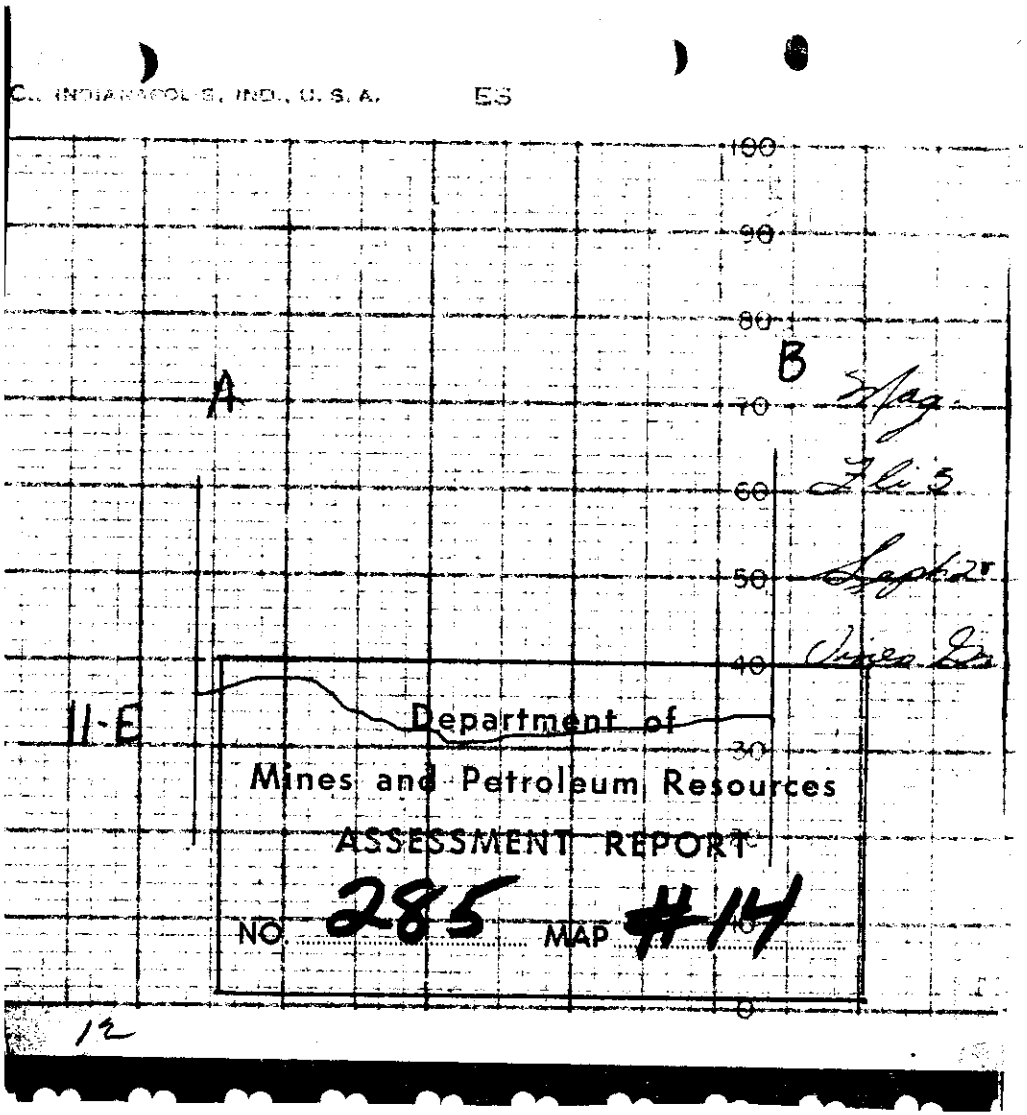
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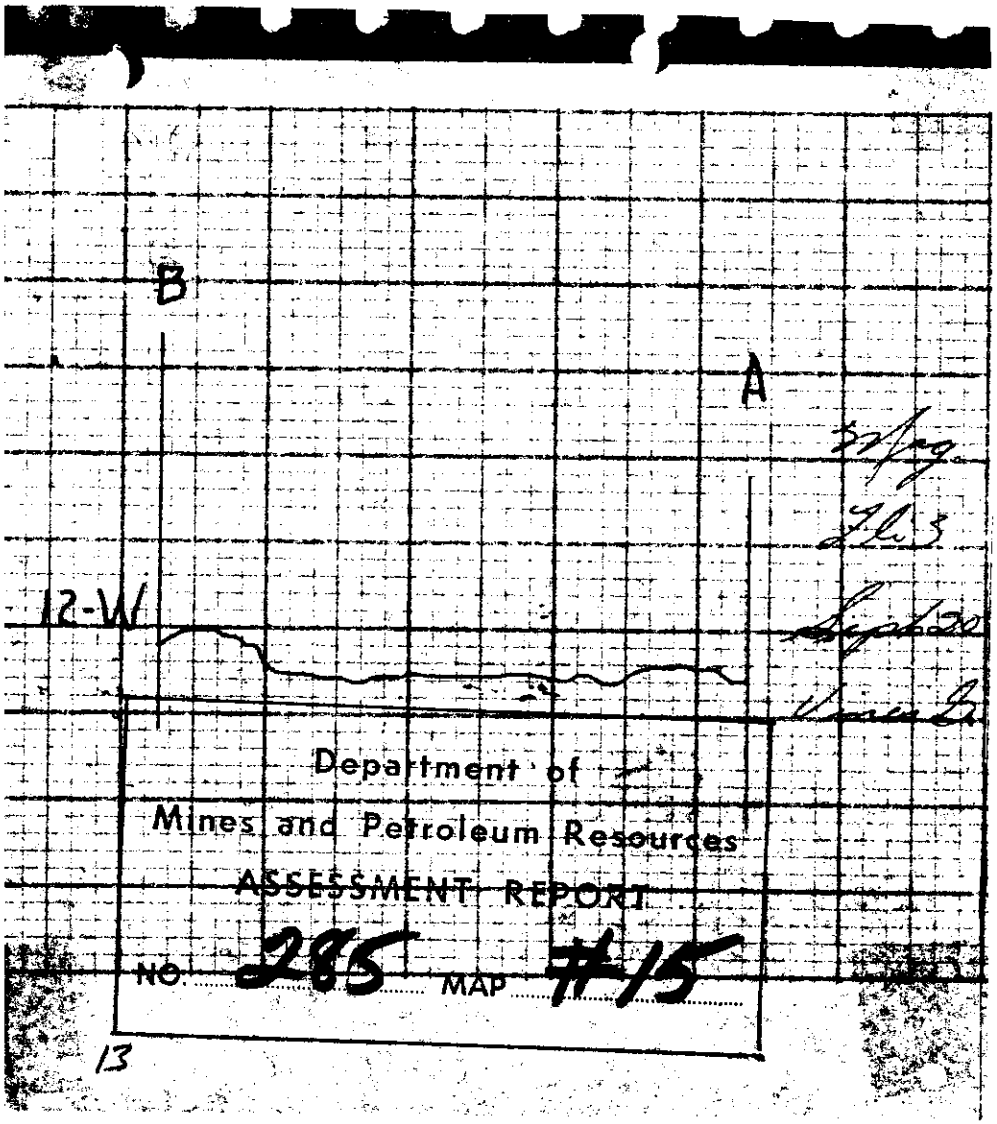
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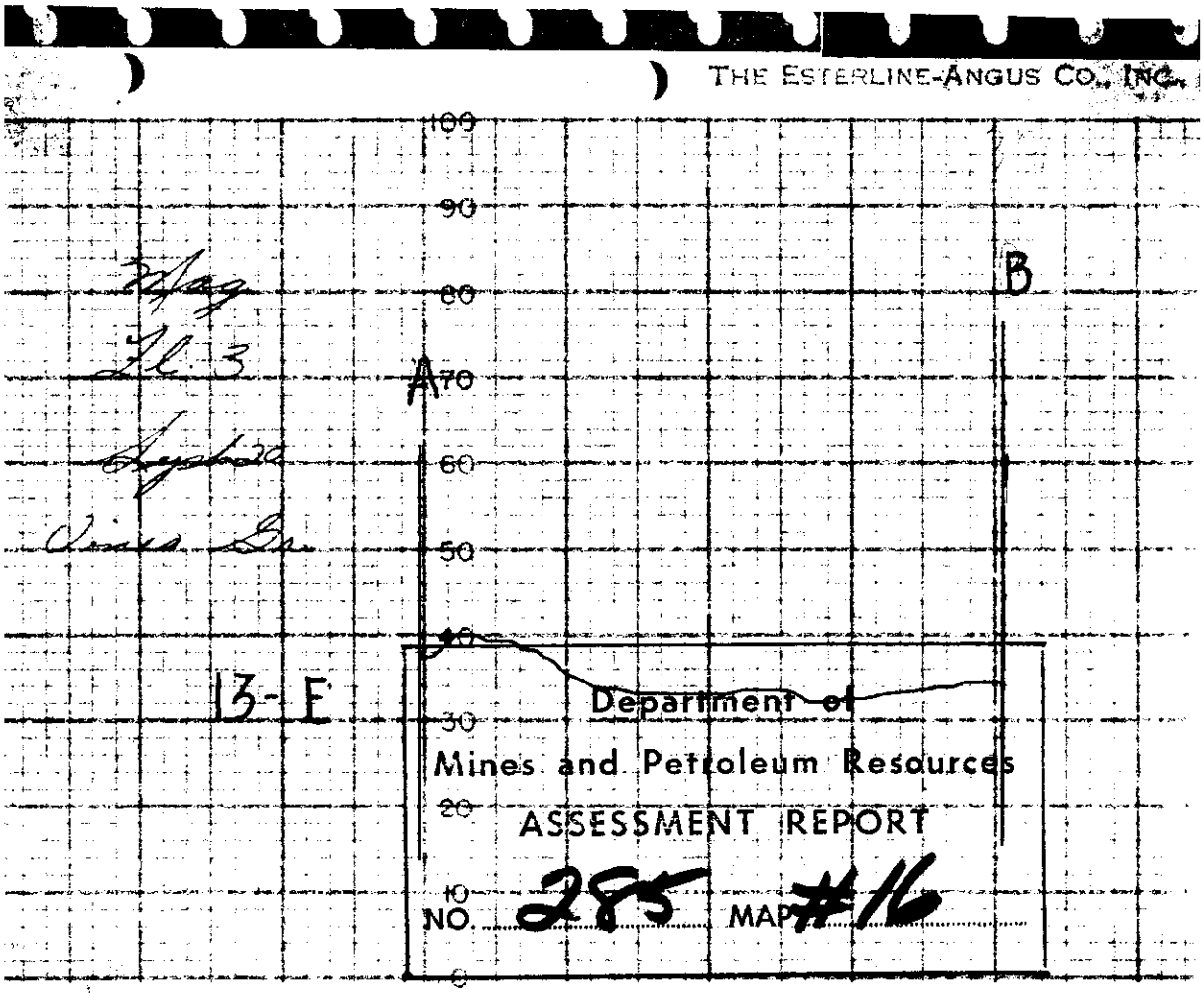
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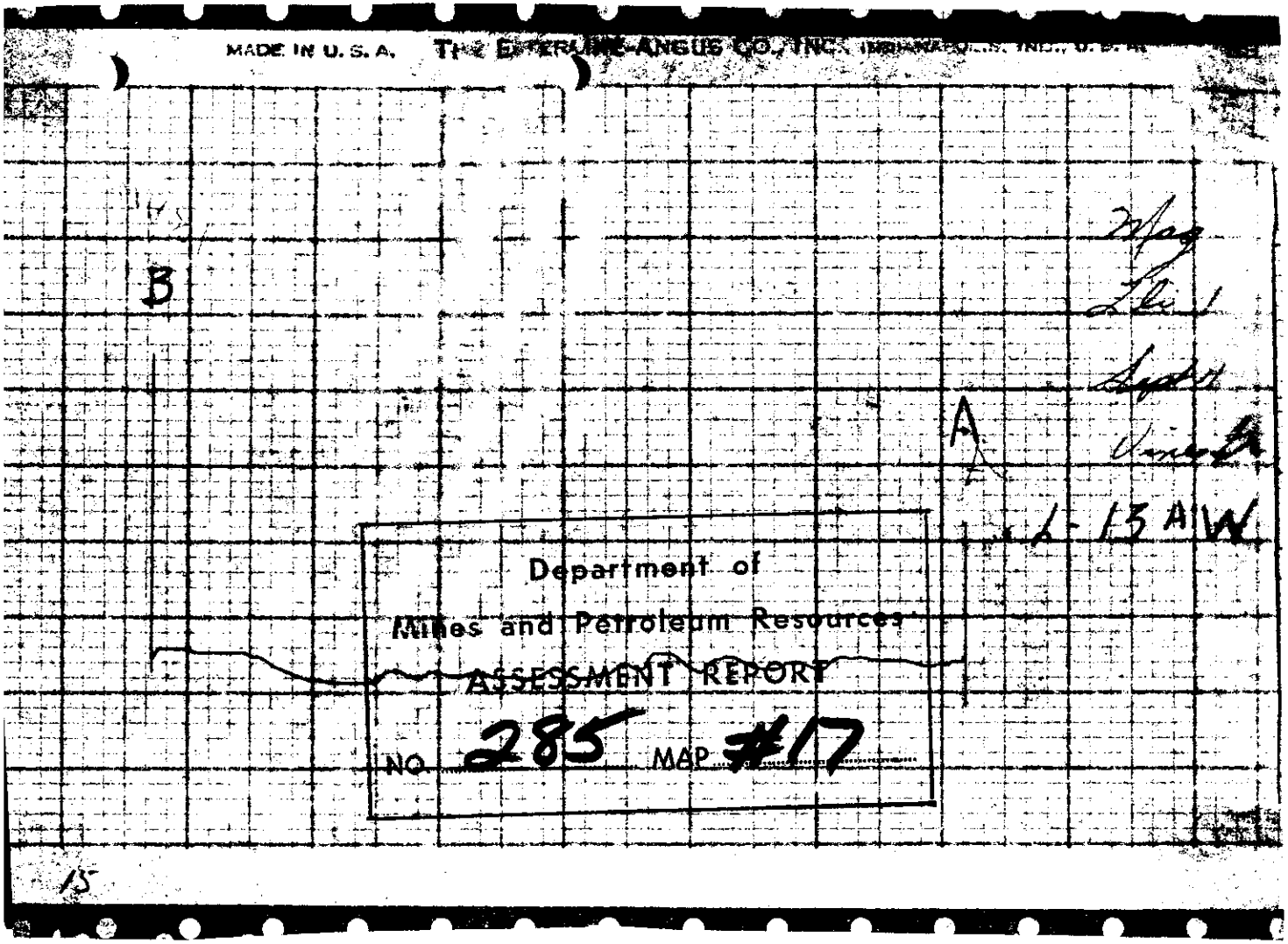
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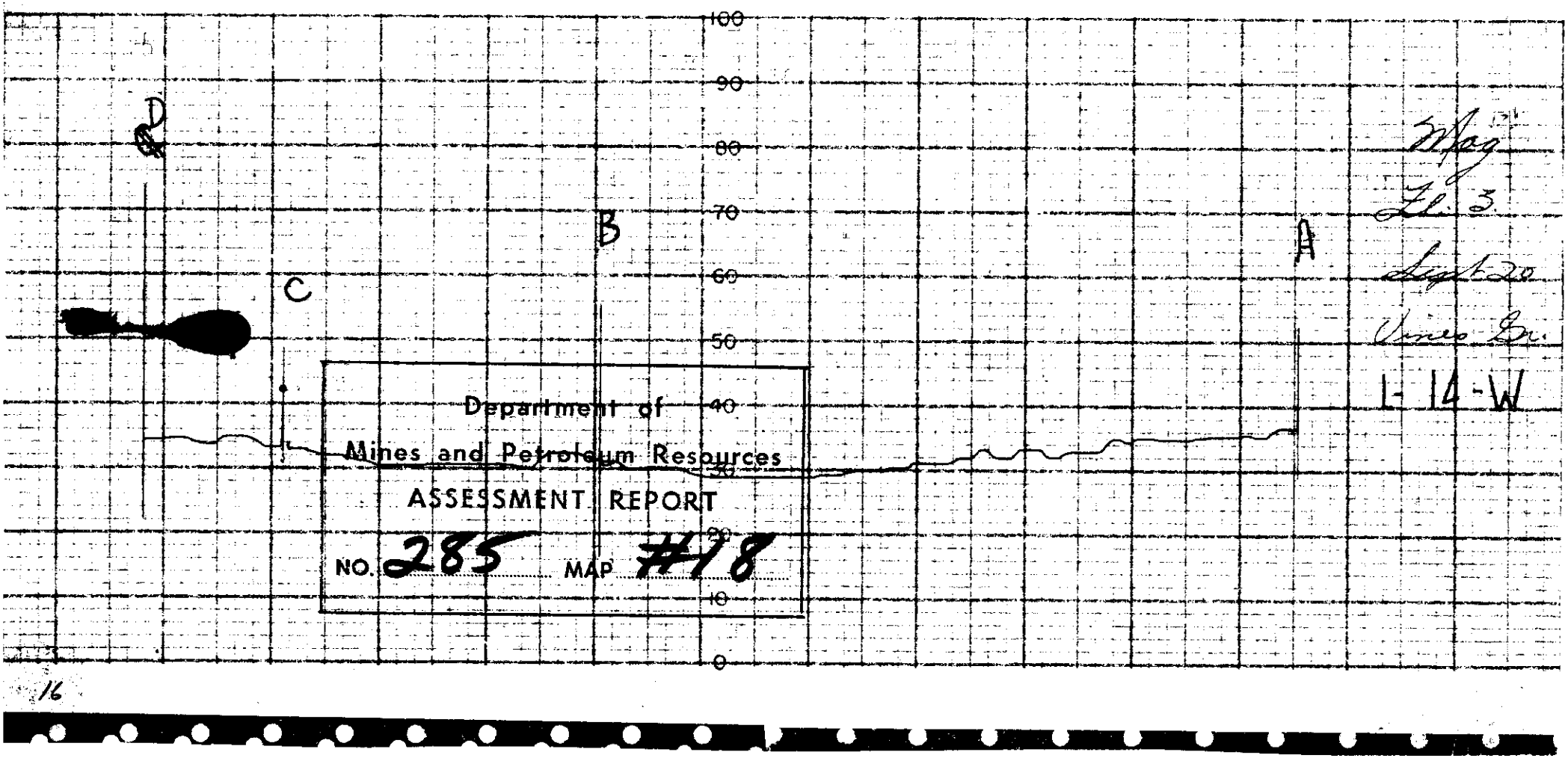

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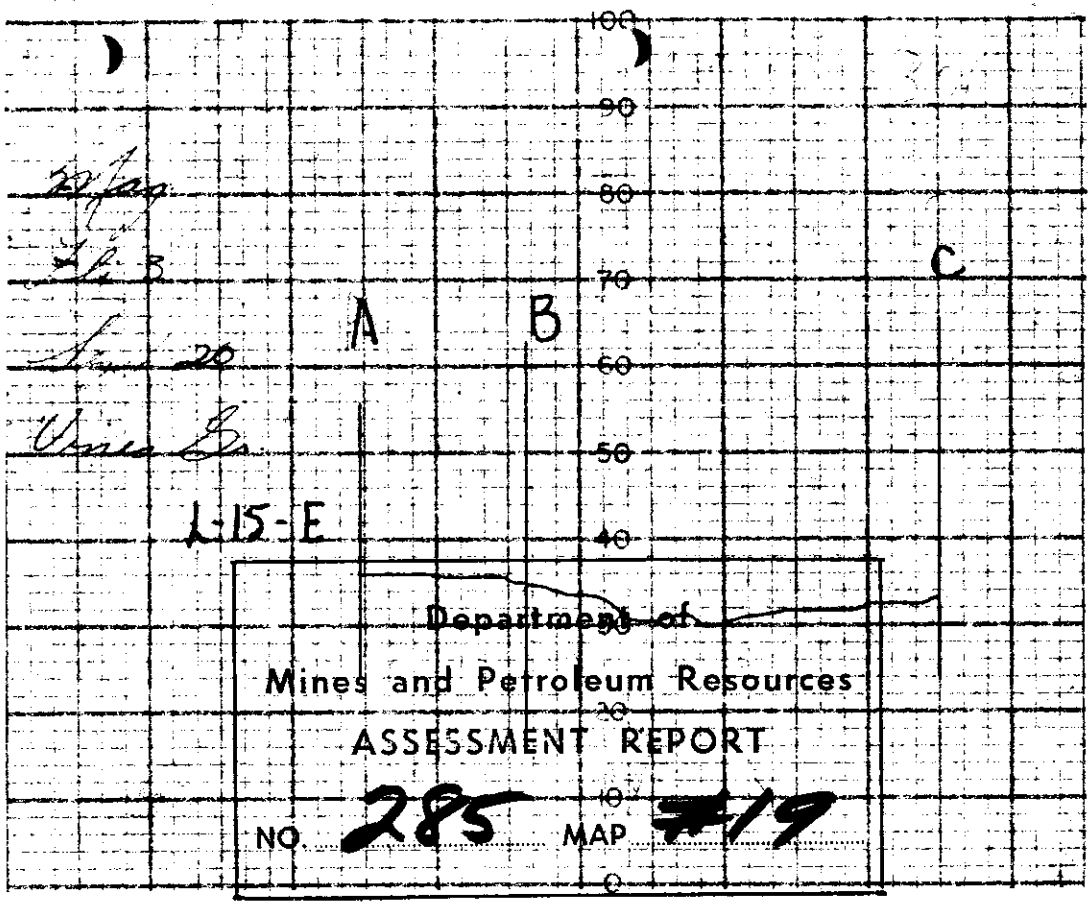
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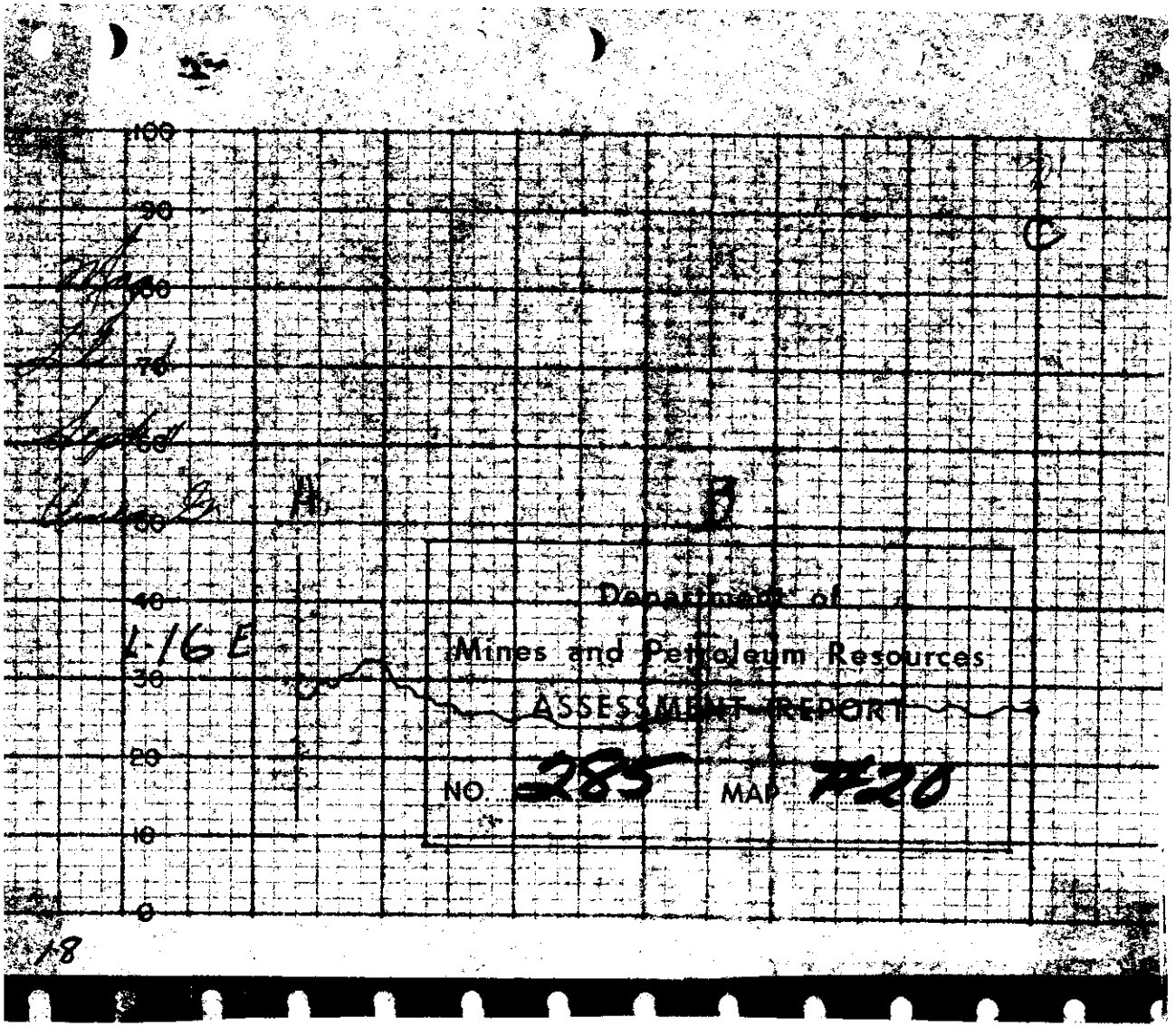
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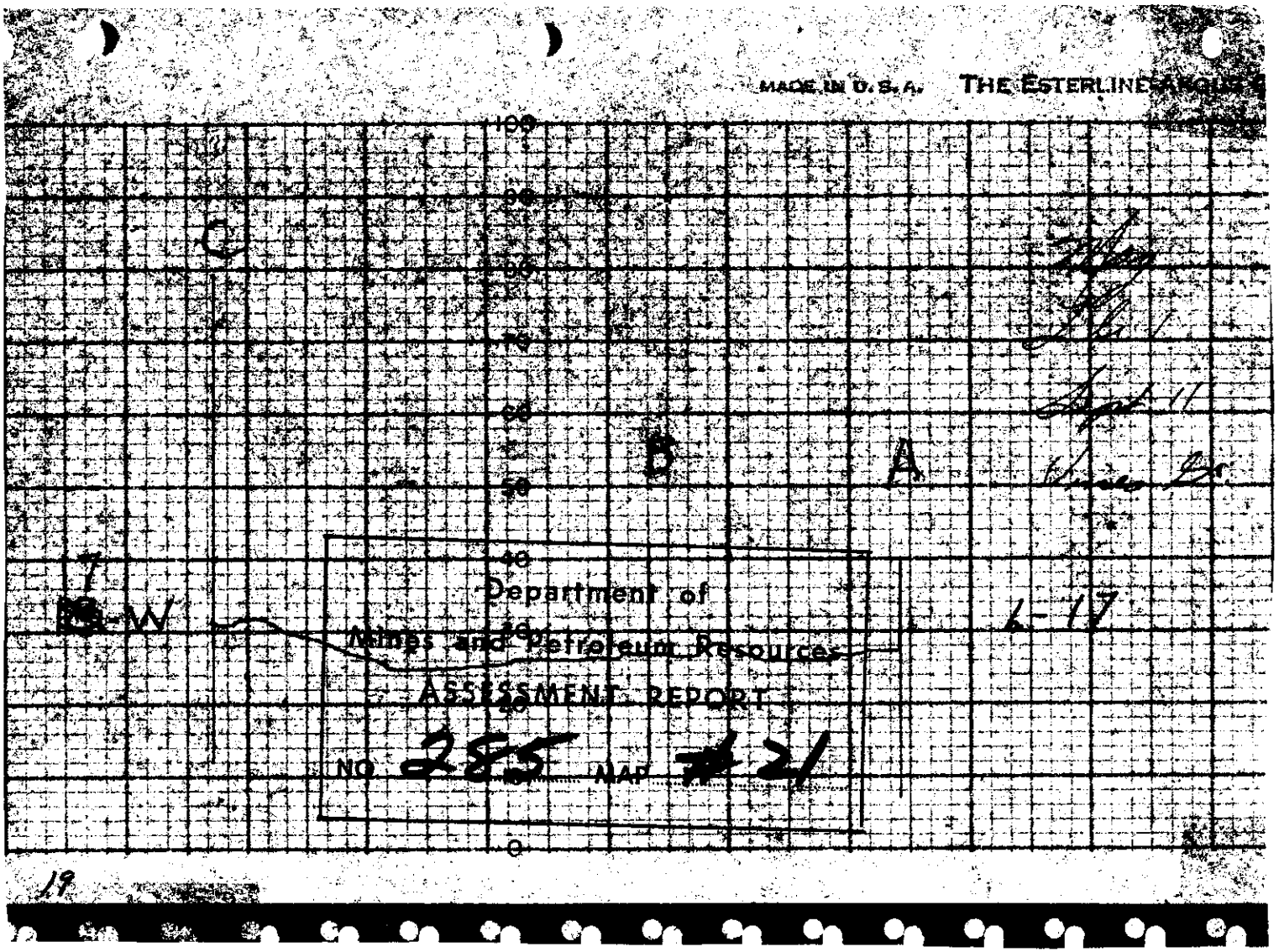
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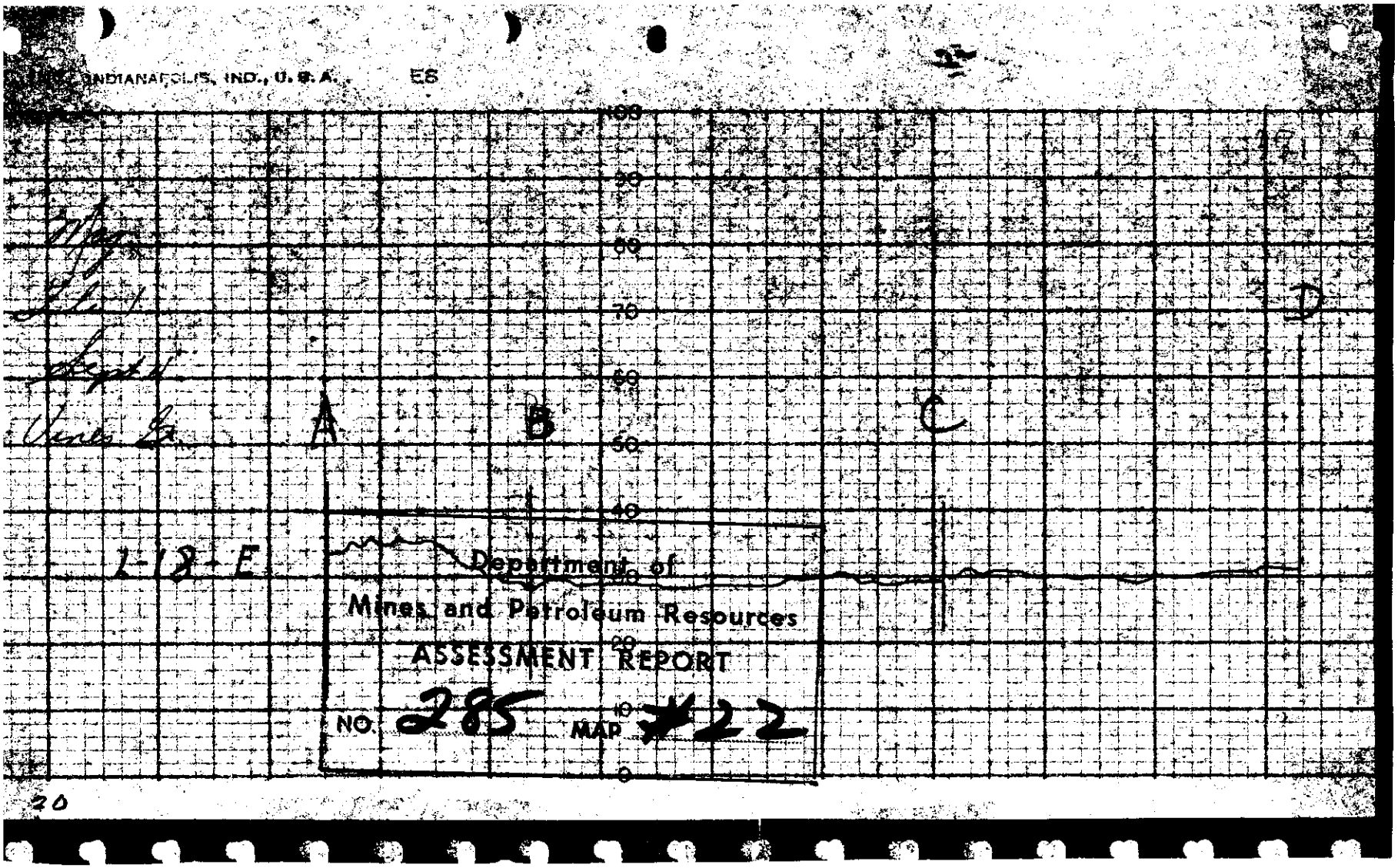
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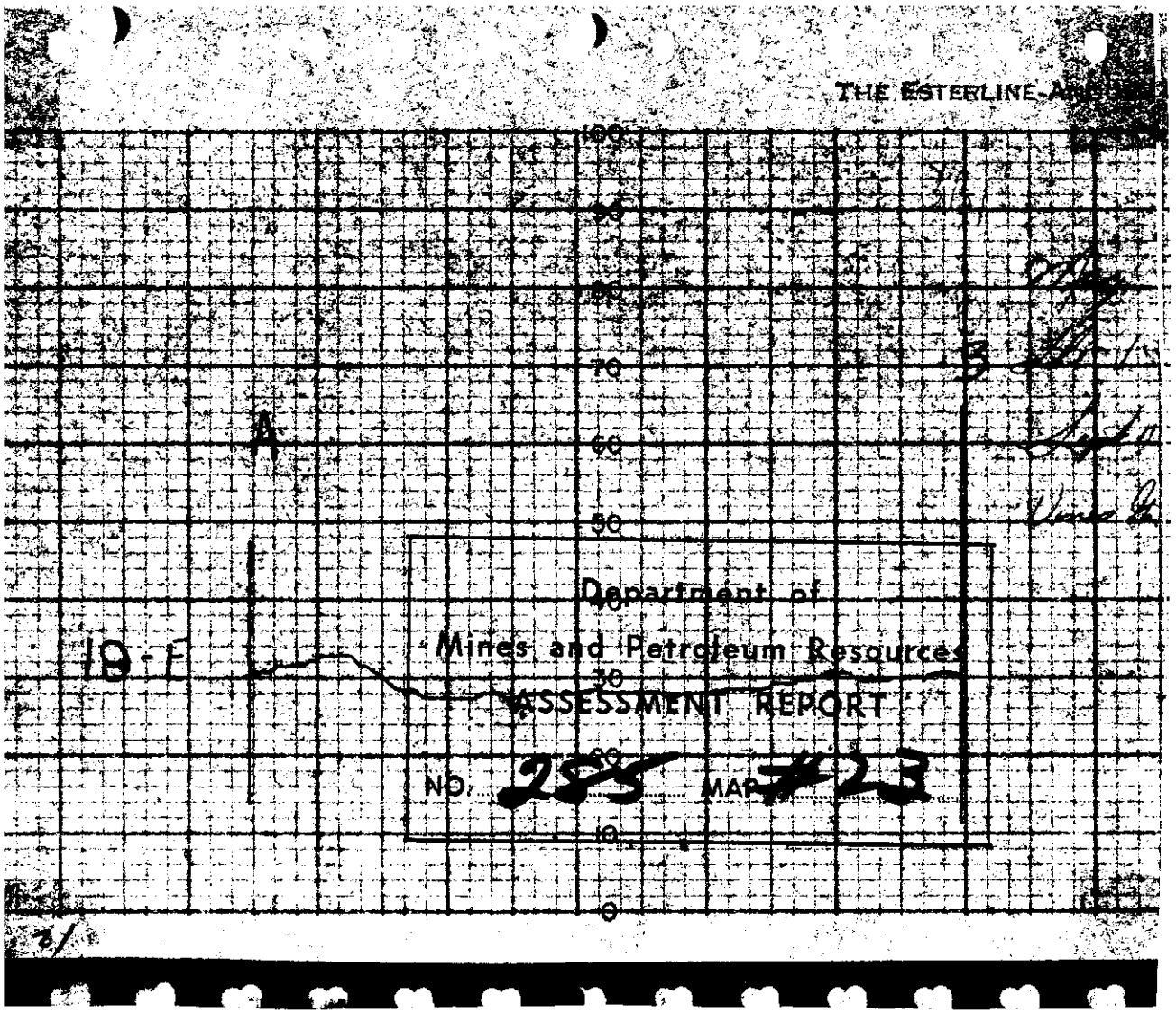
MAP #22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ASSESSMENT REPORT
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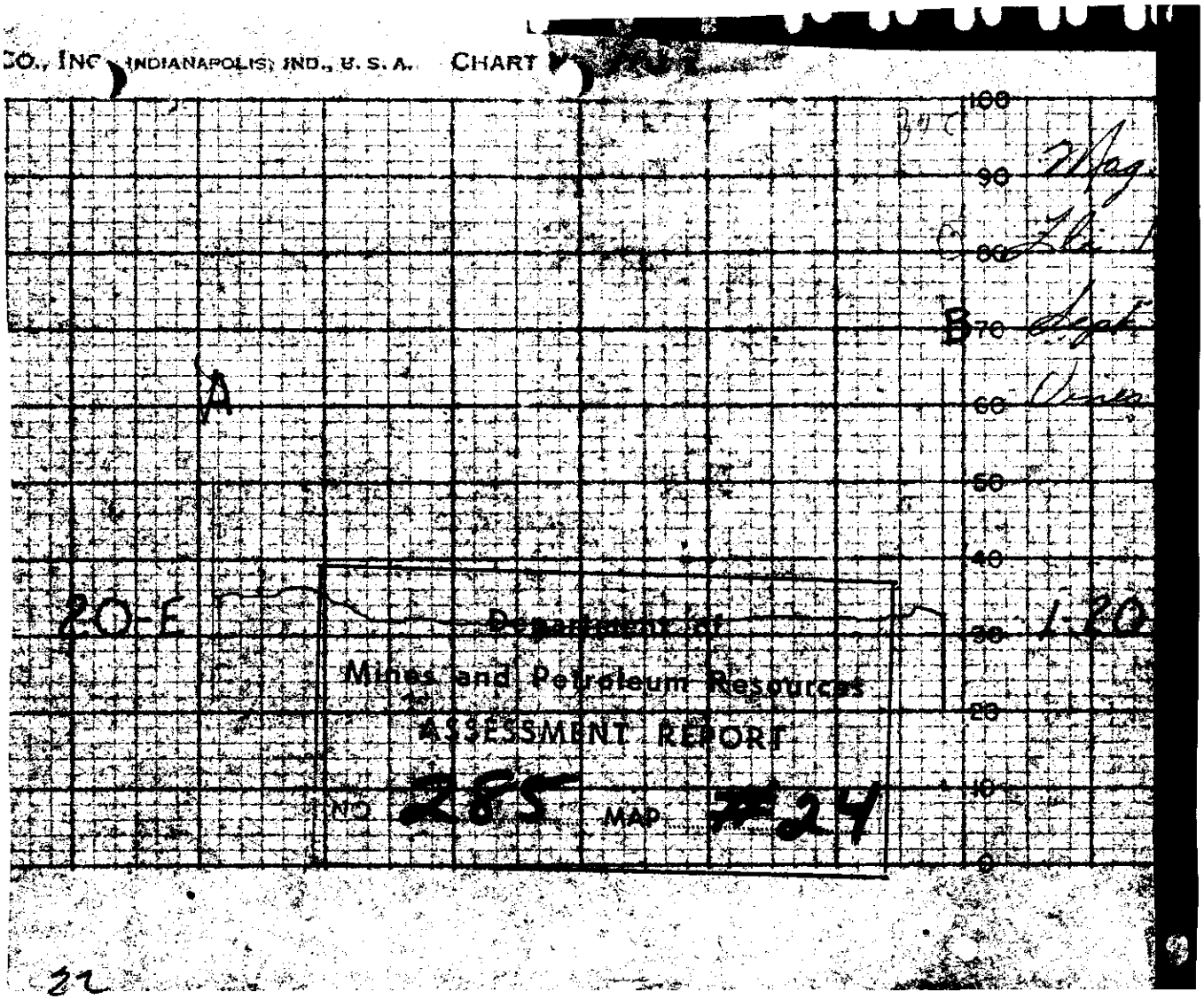
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ASSESSMENT REPORT
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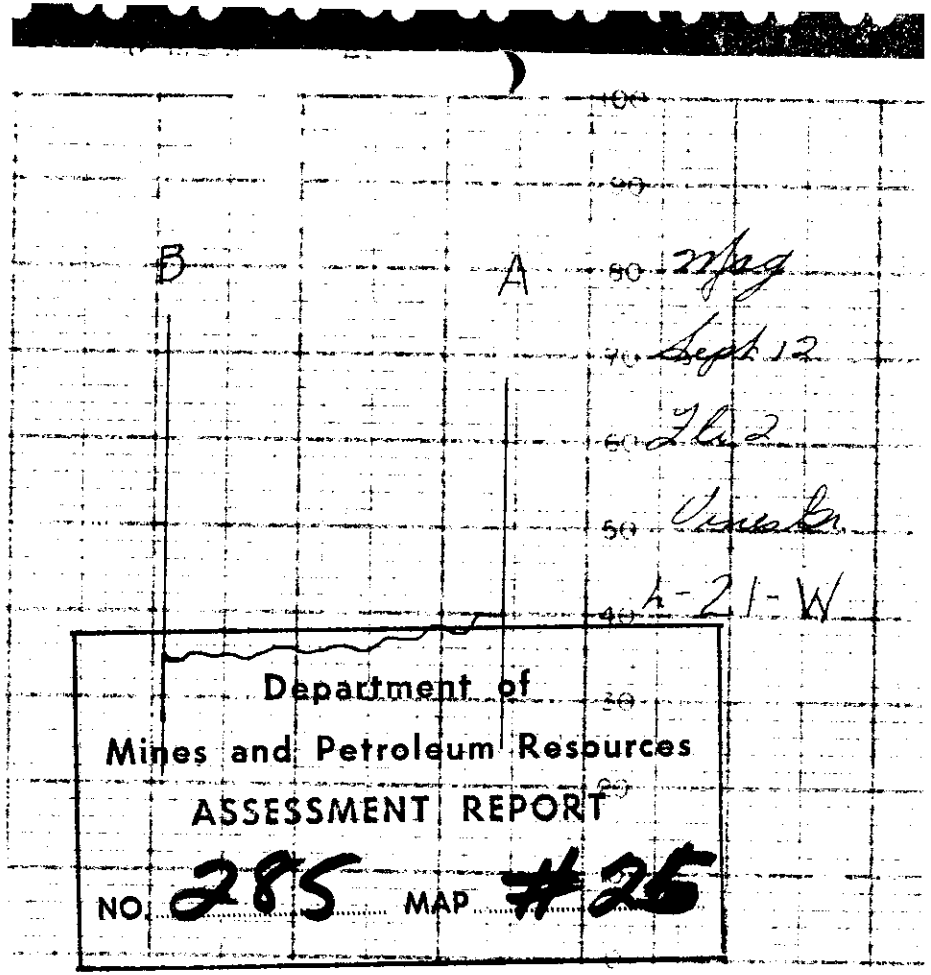
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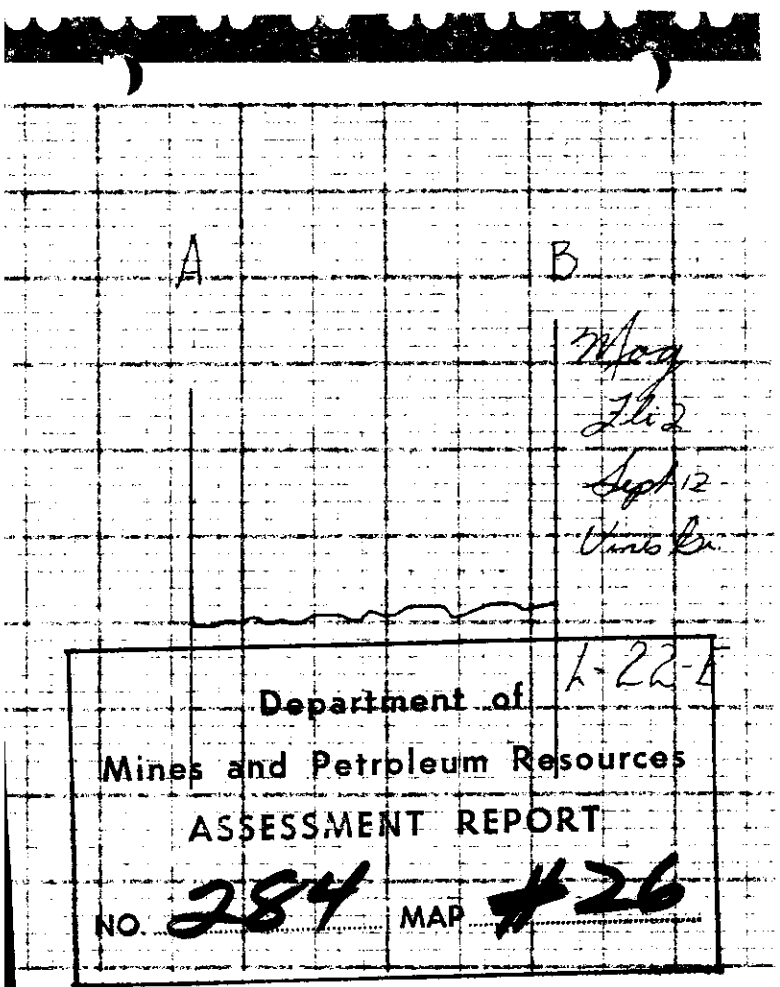
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #25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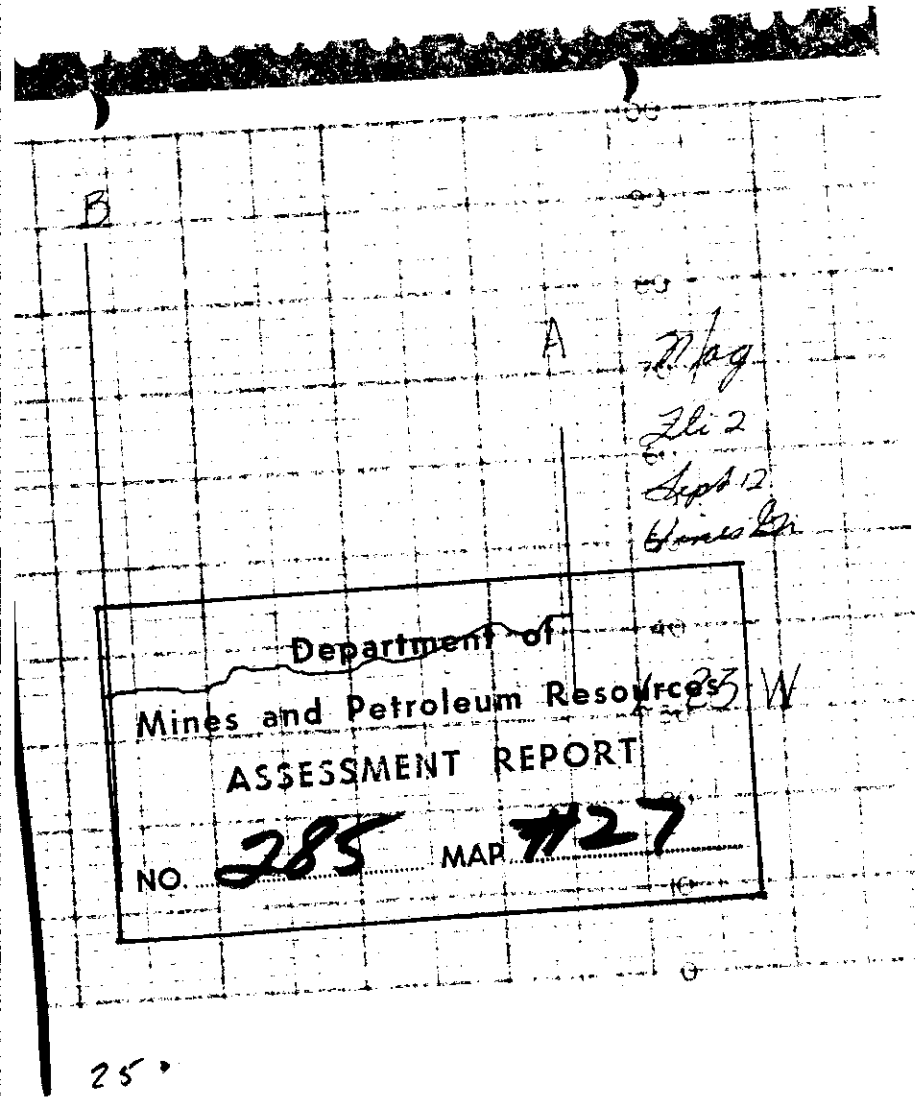
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 284 MAP #26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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285
MAP #27
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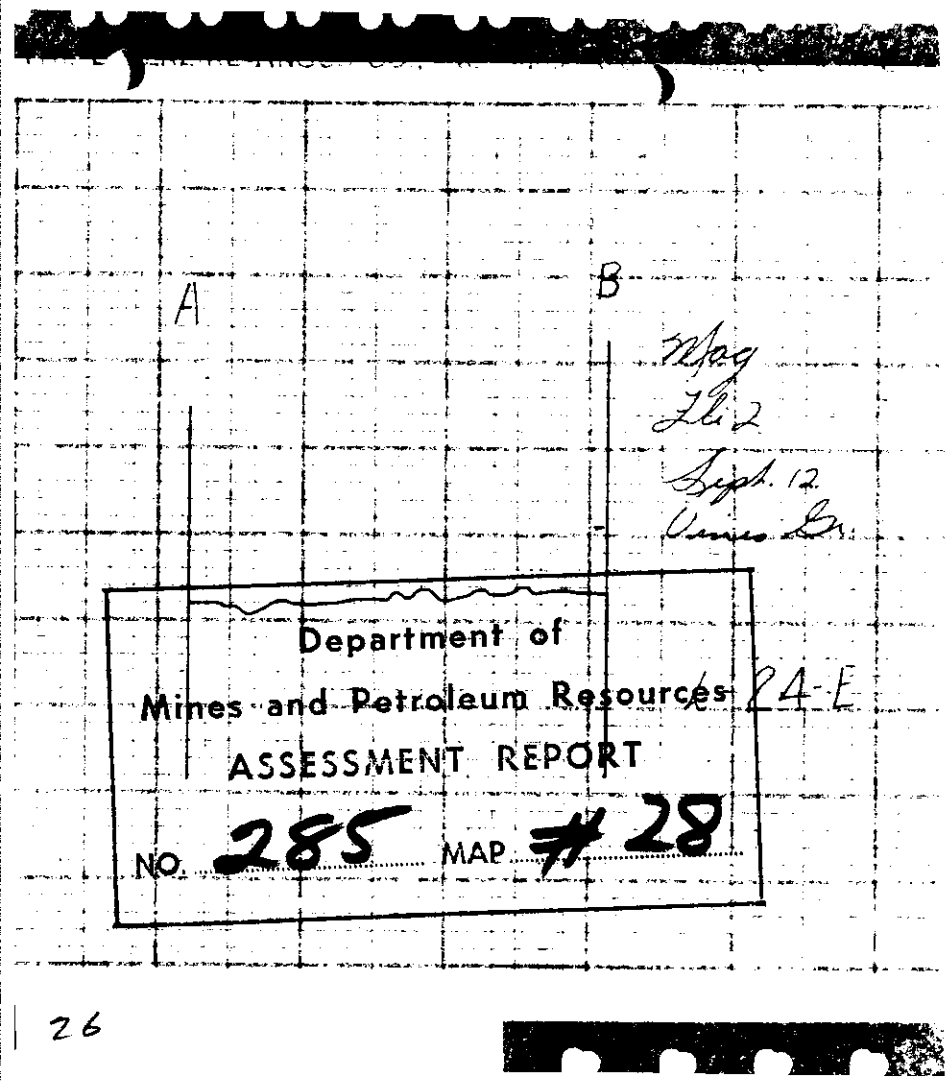
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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #28
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Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 285 MAP #29

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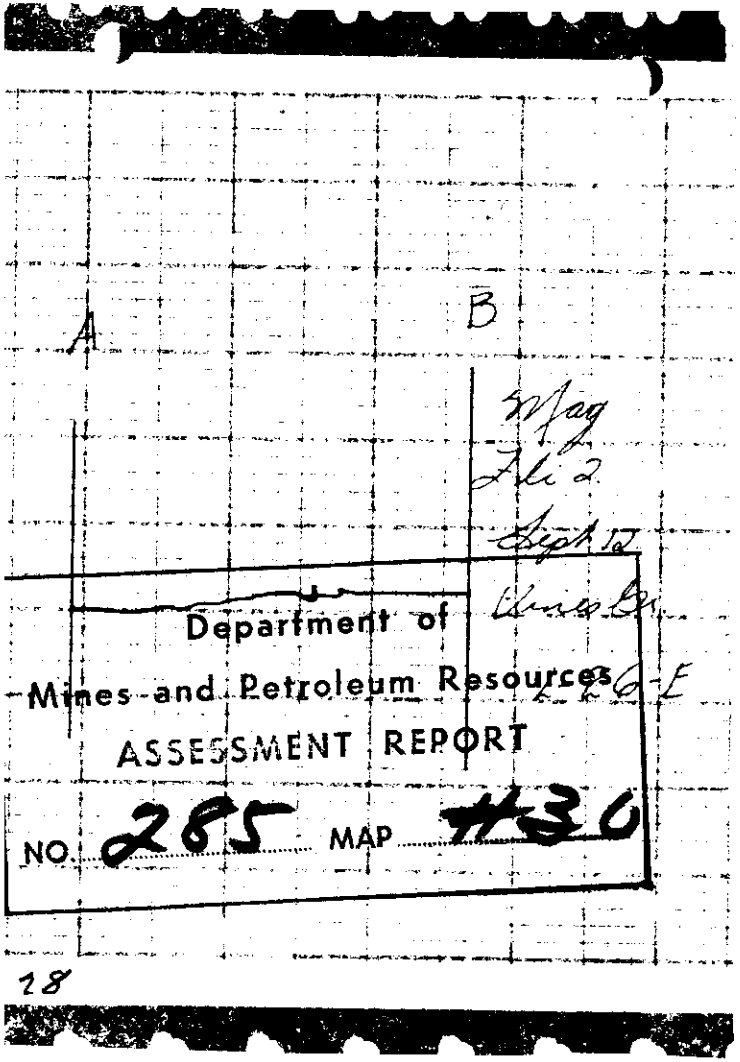
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Mines and Petroleum Resources
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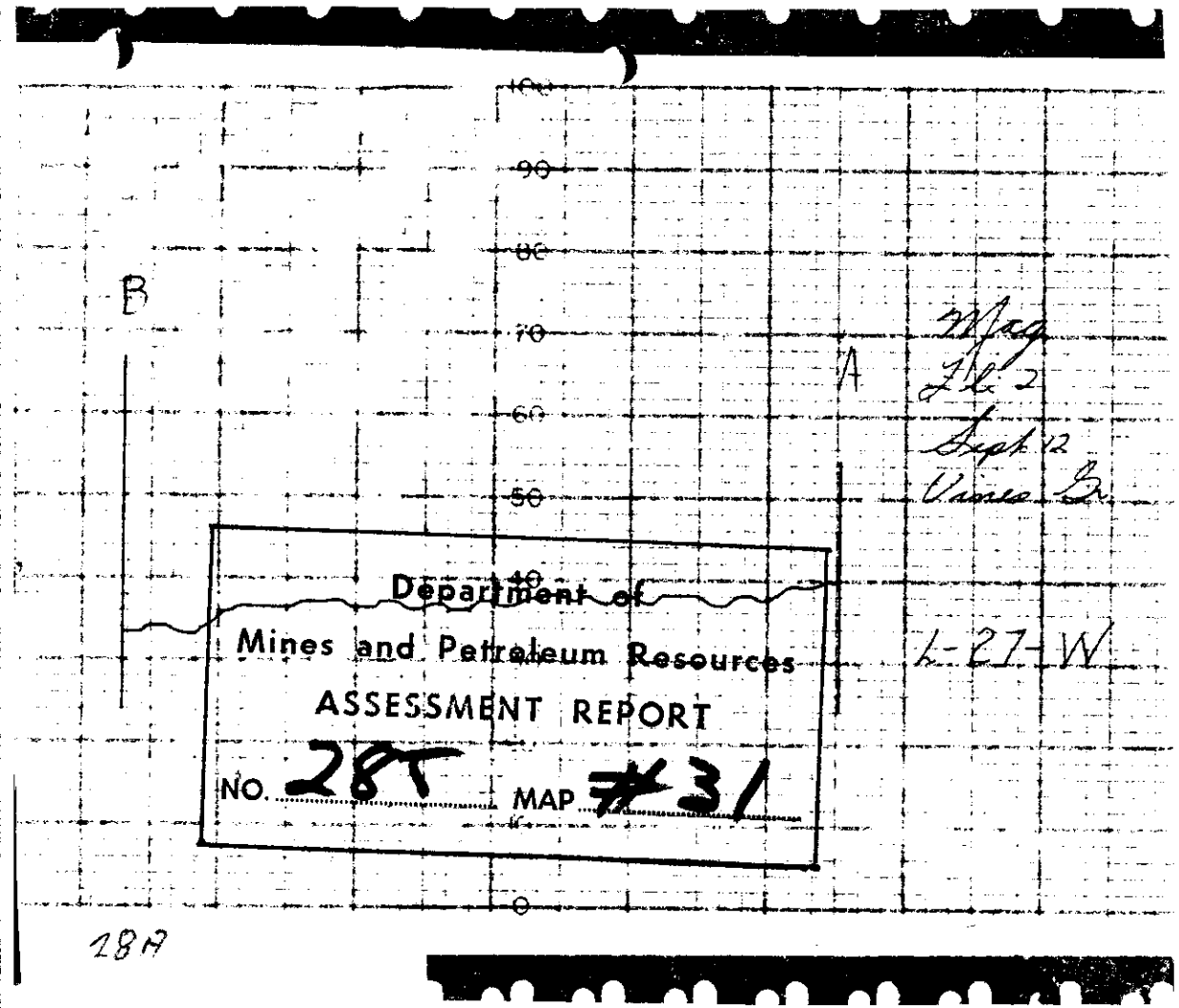
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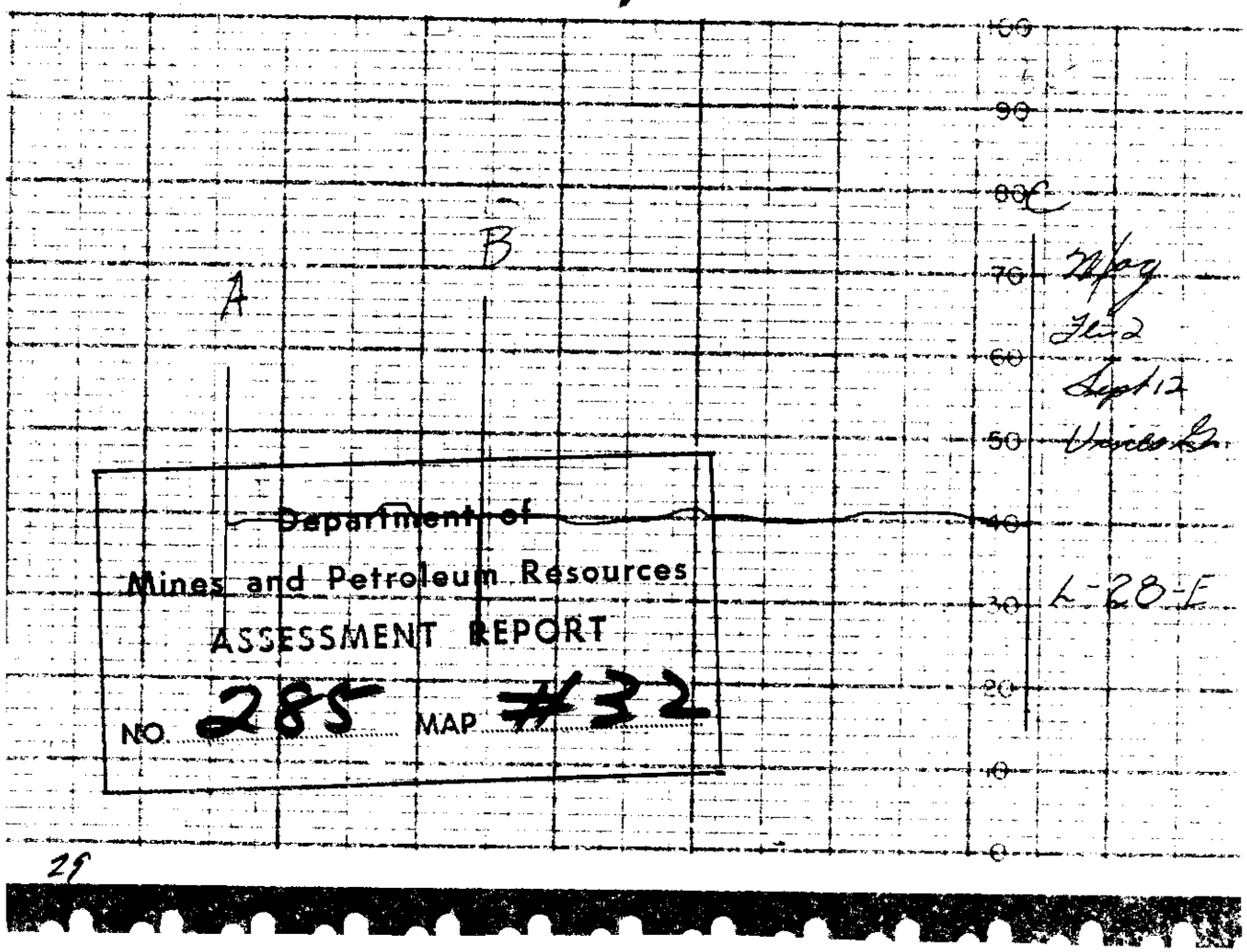
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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #32
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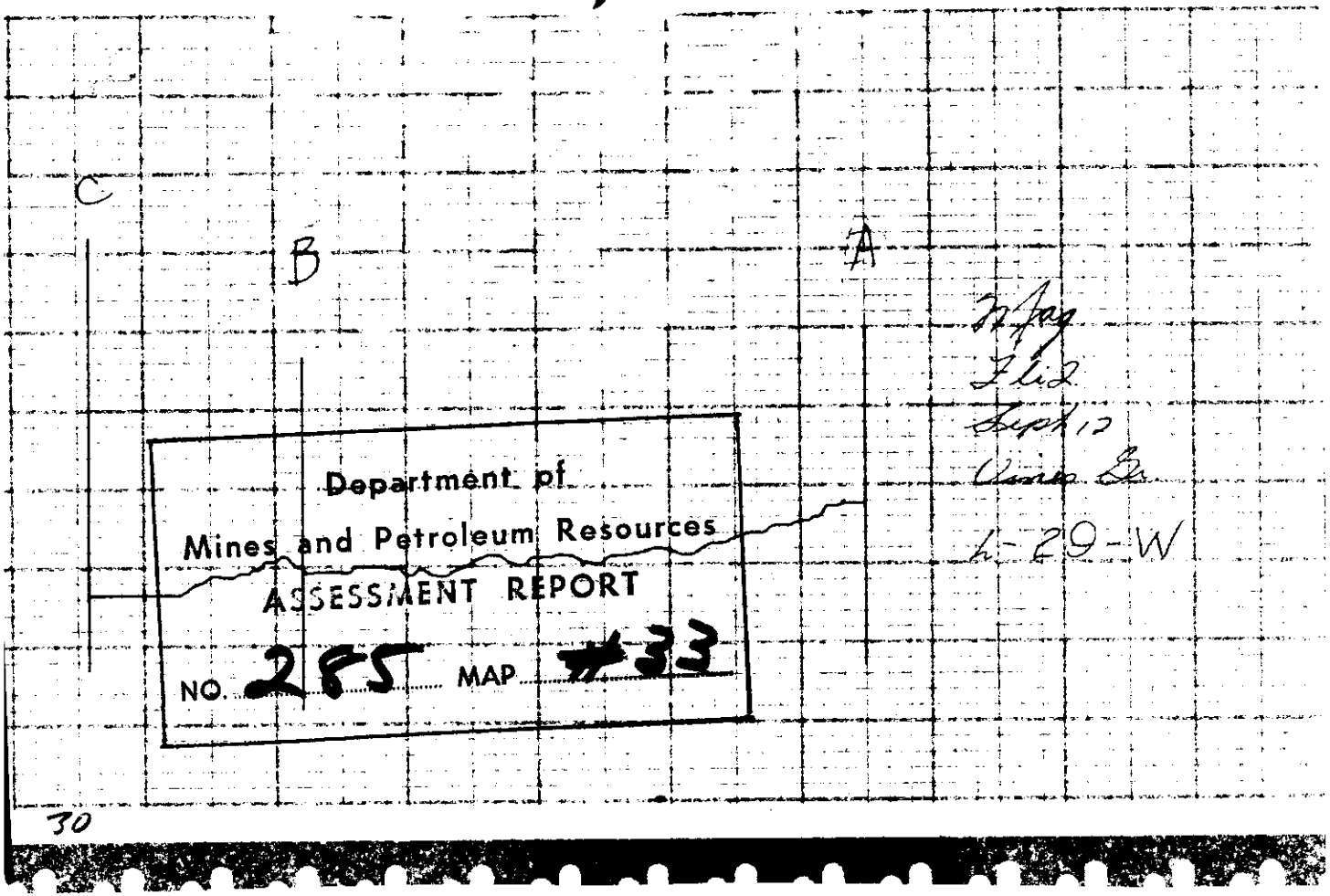
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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #33
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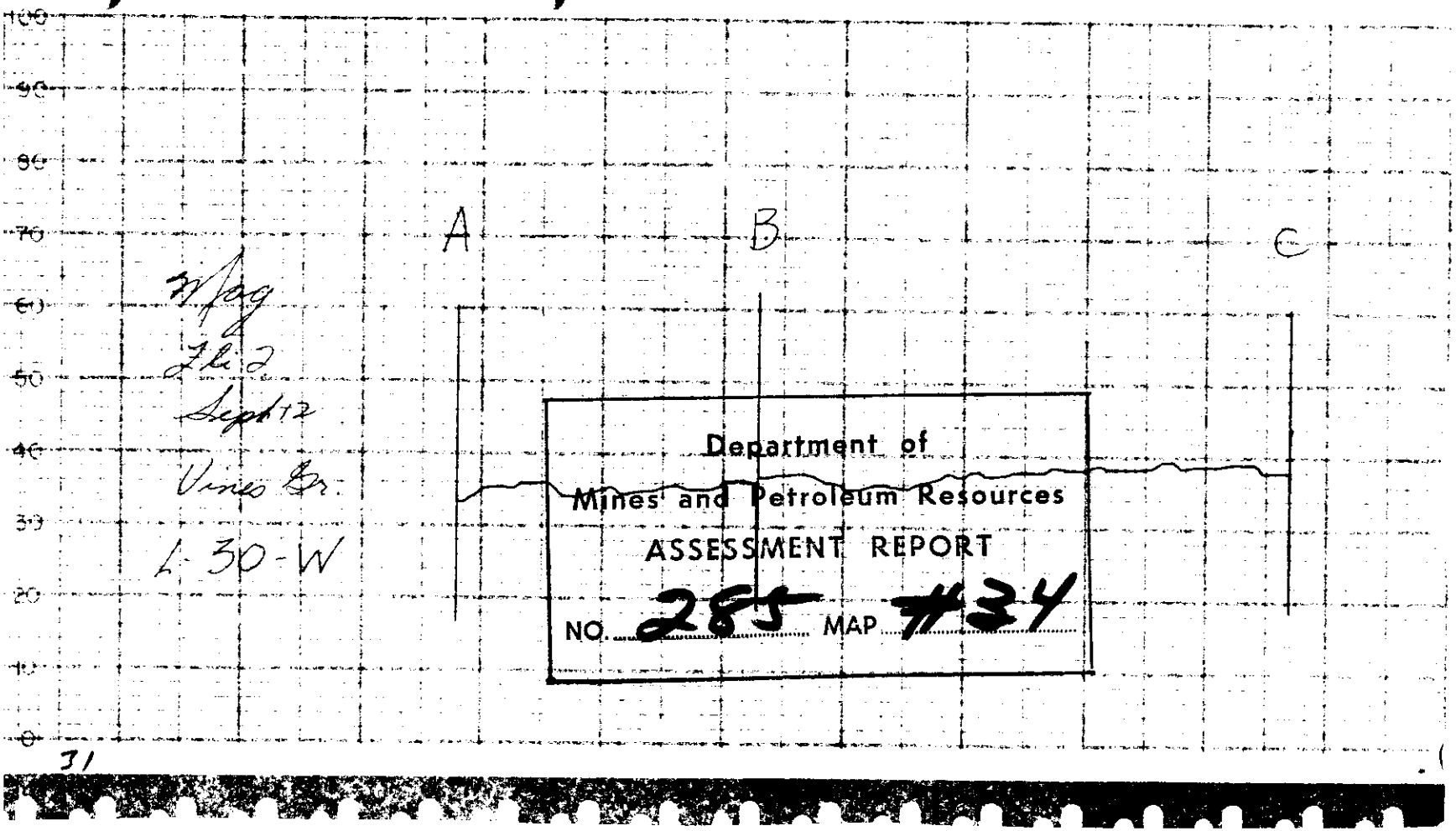
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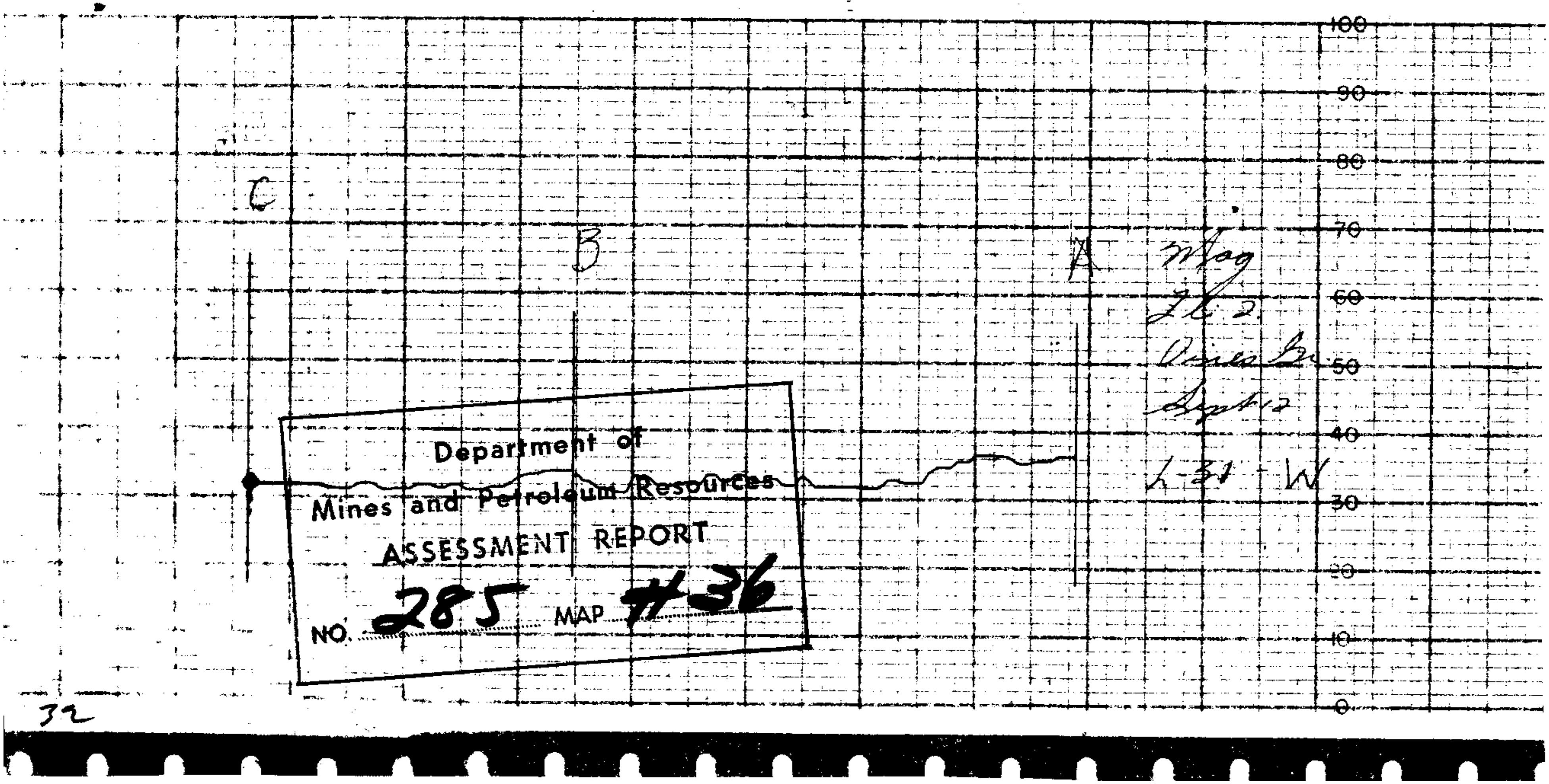
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #34

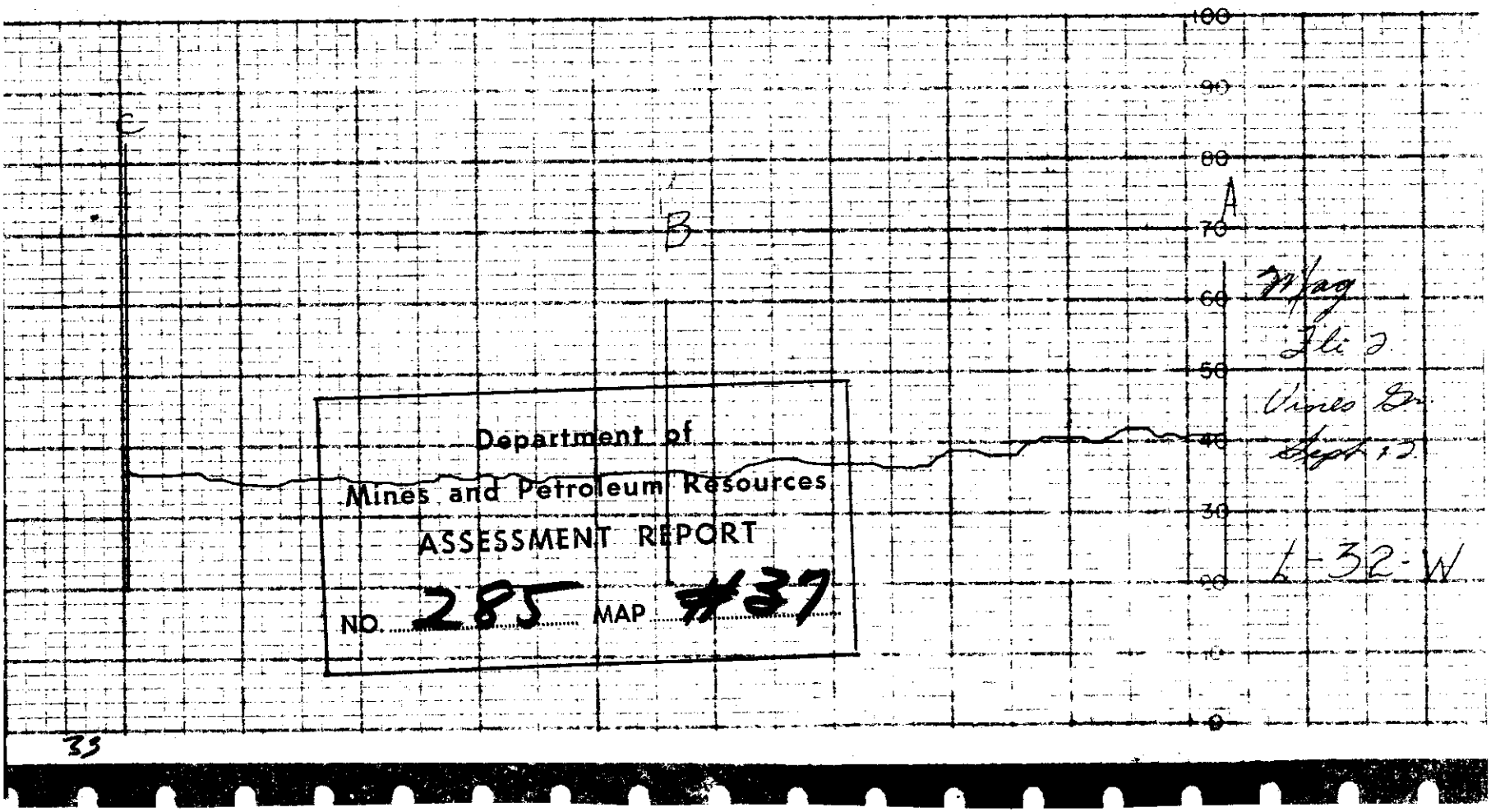


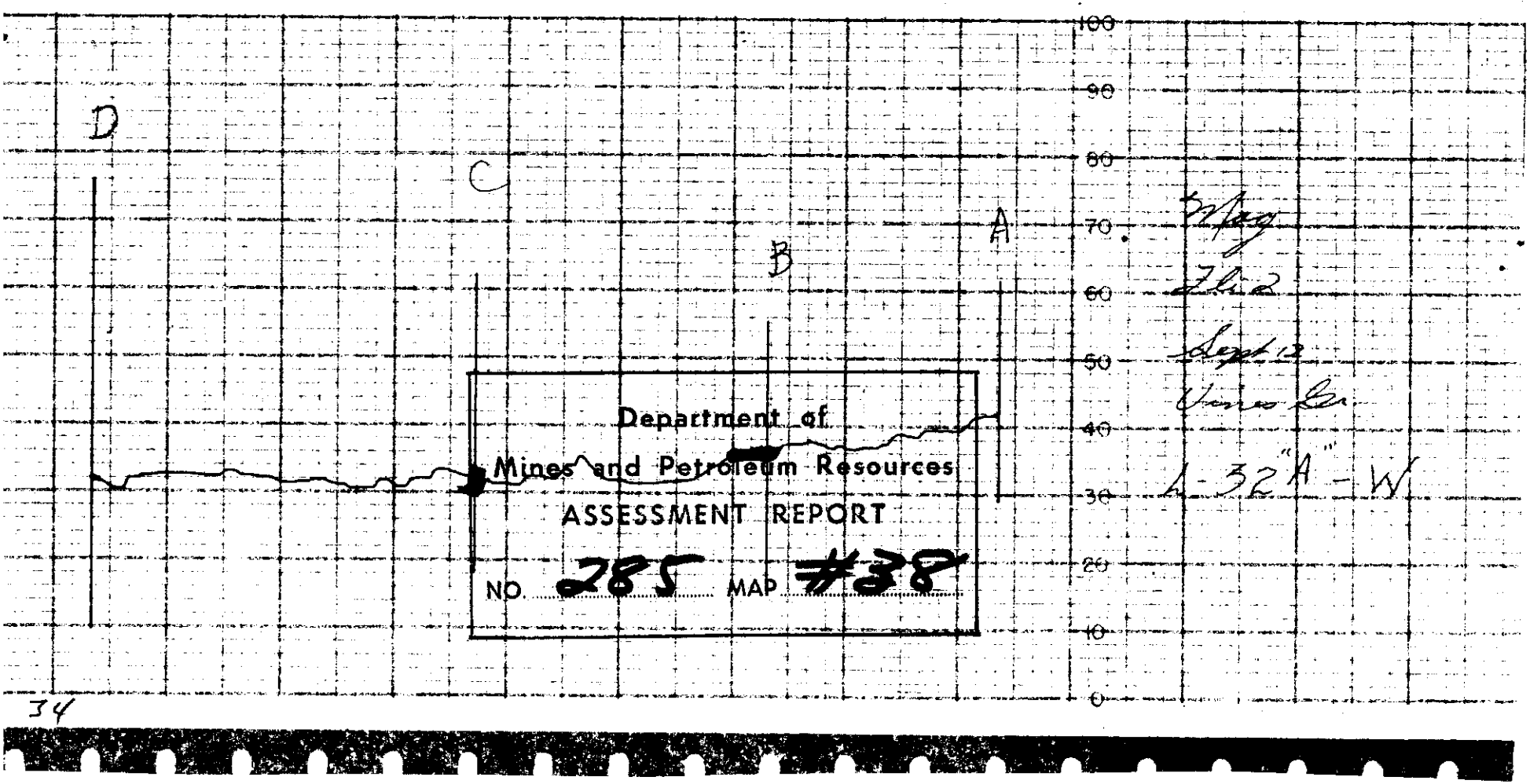
Department of Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 285 MAP #36

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A. ES

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Department of
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ASSESSMENT REPORT
NO. 285 MAP #38
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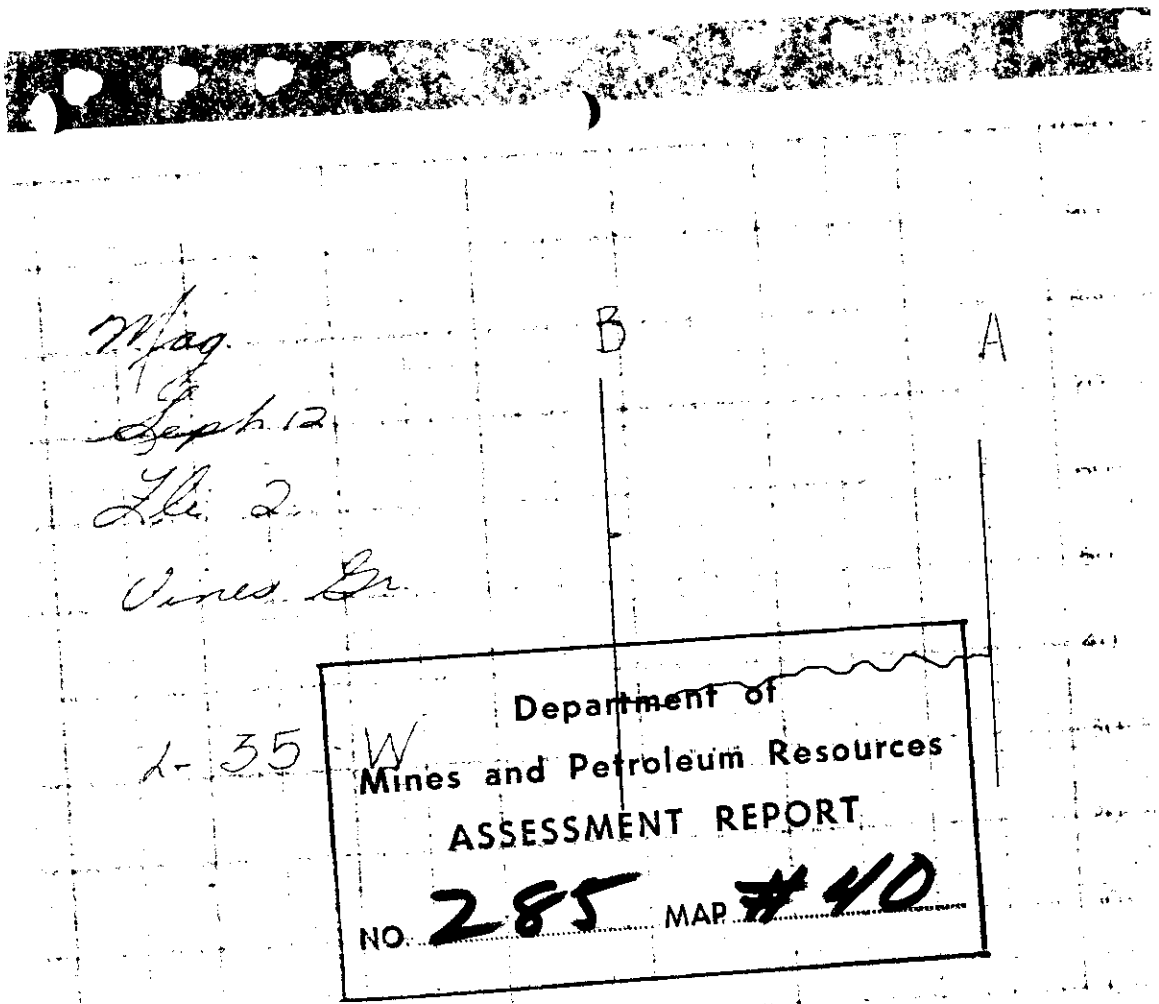
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 285 MAP #39

35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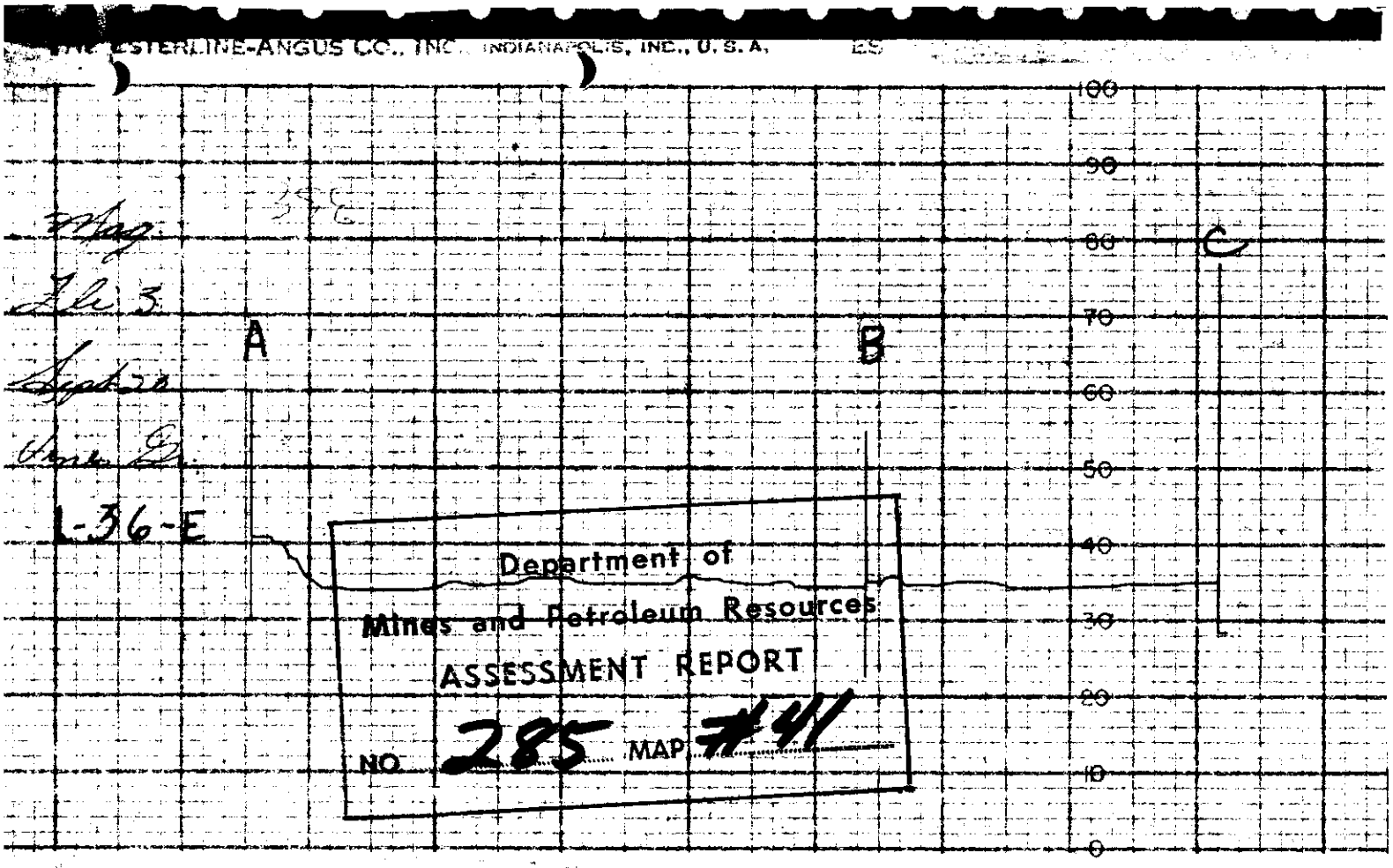
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #40


STERLINE-ANGUS CO., INC. INDIANAPOLIS, IND., U. S. A.
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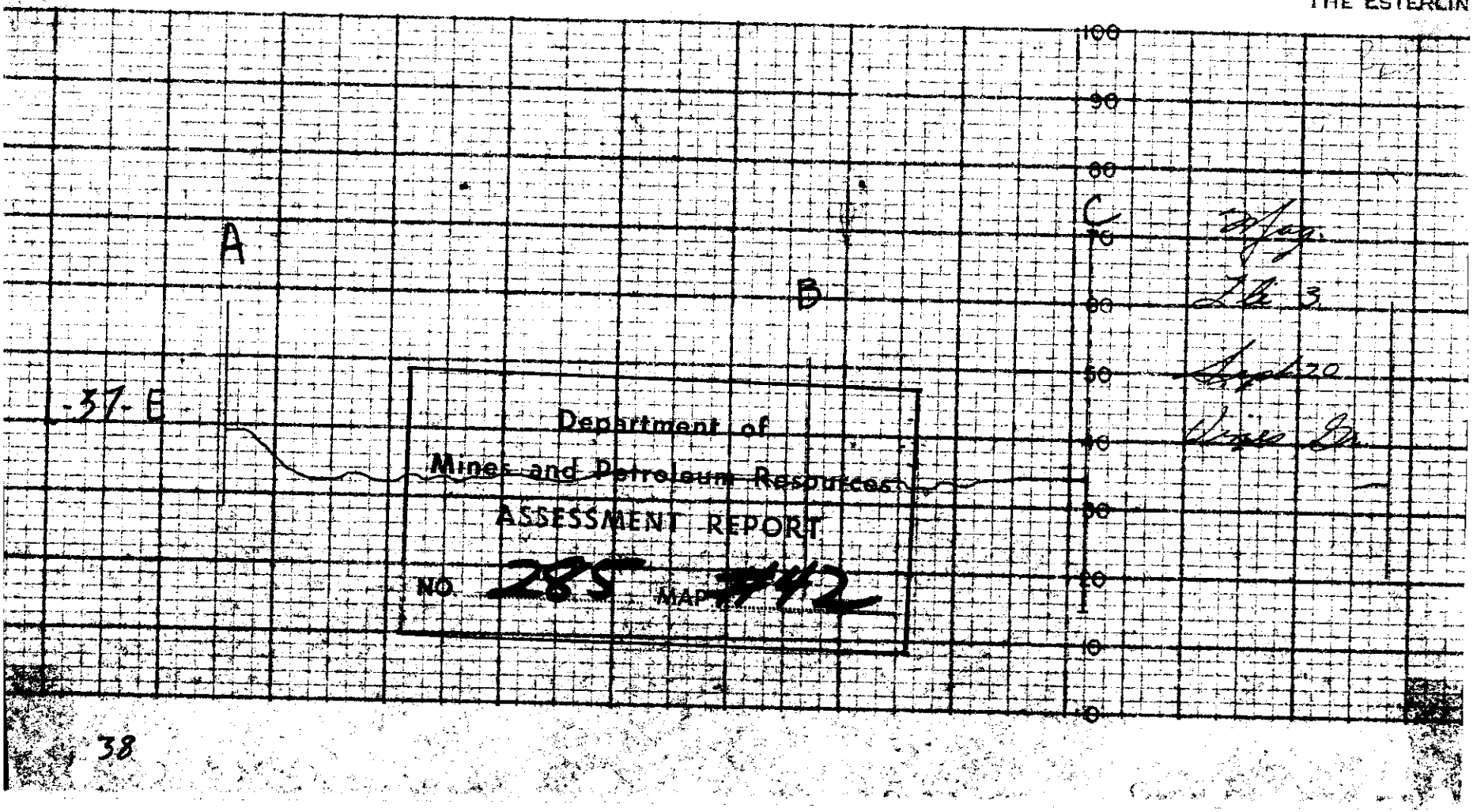
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #41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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #42
38

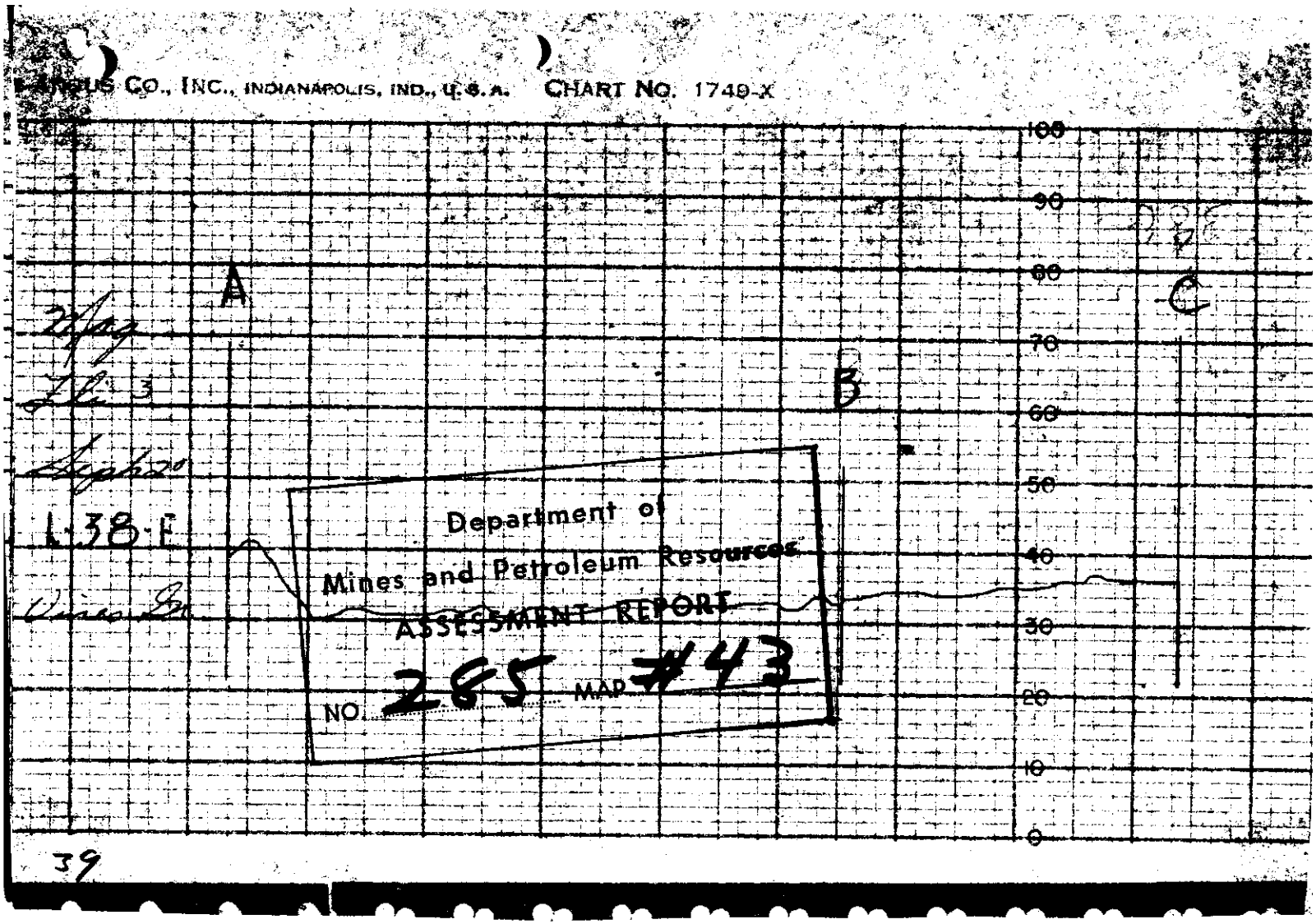
CHART NO. 1749-X
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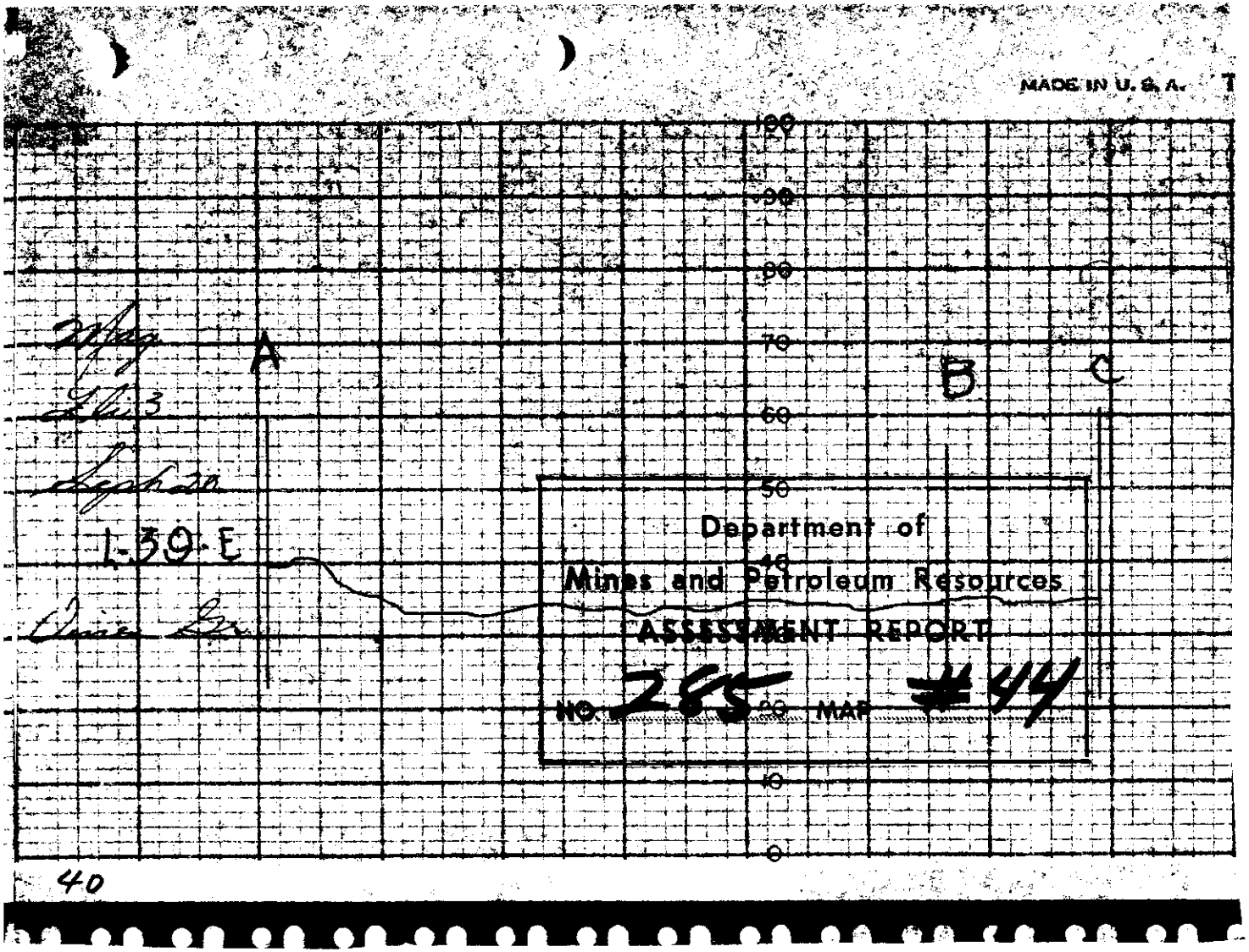
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #43
39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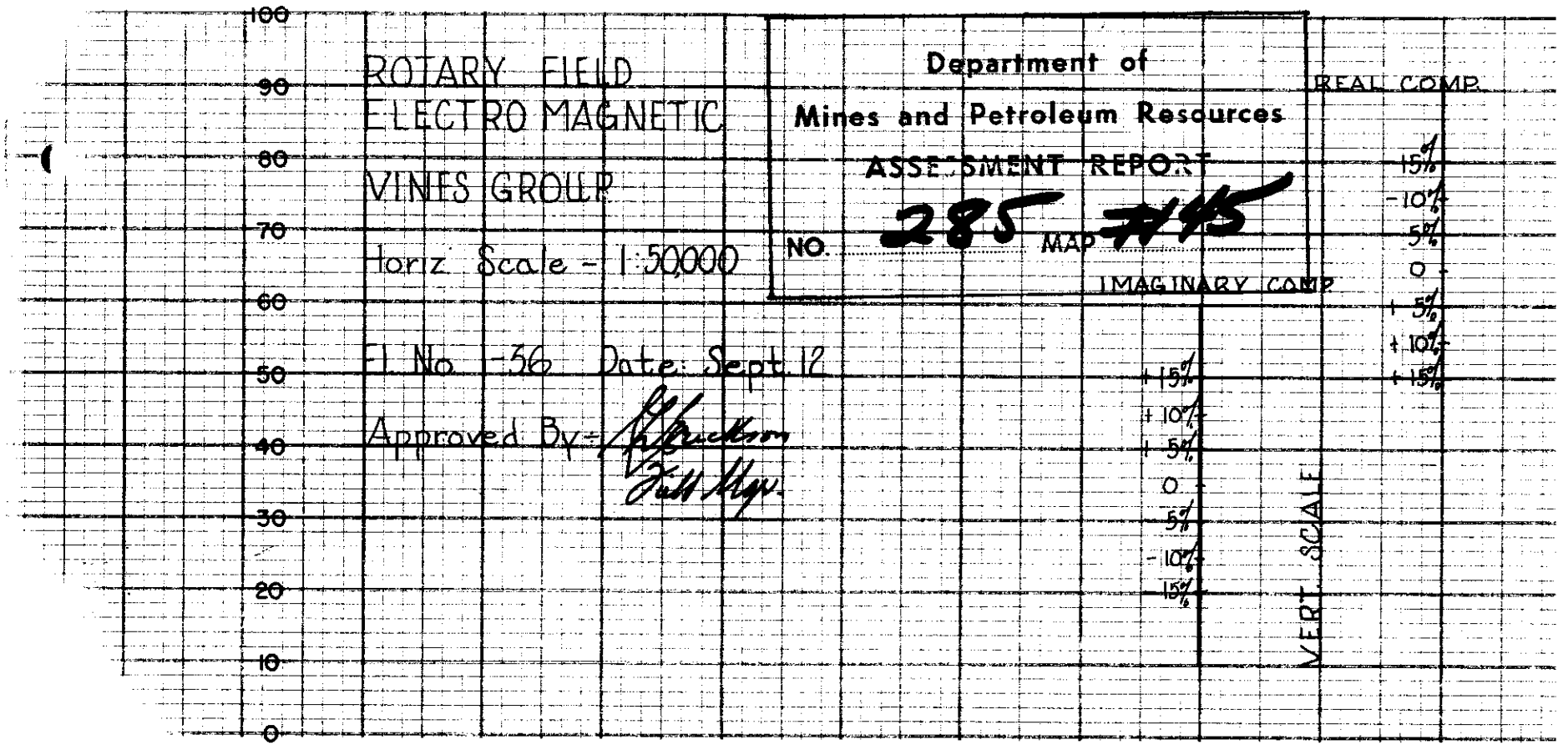
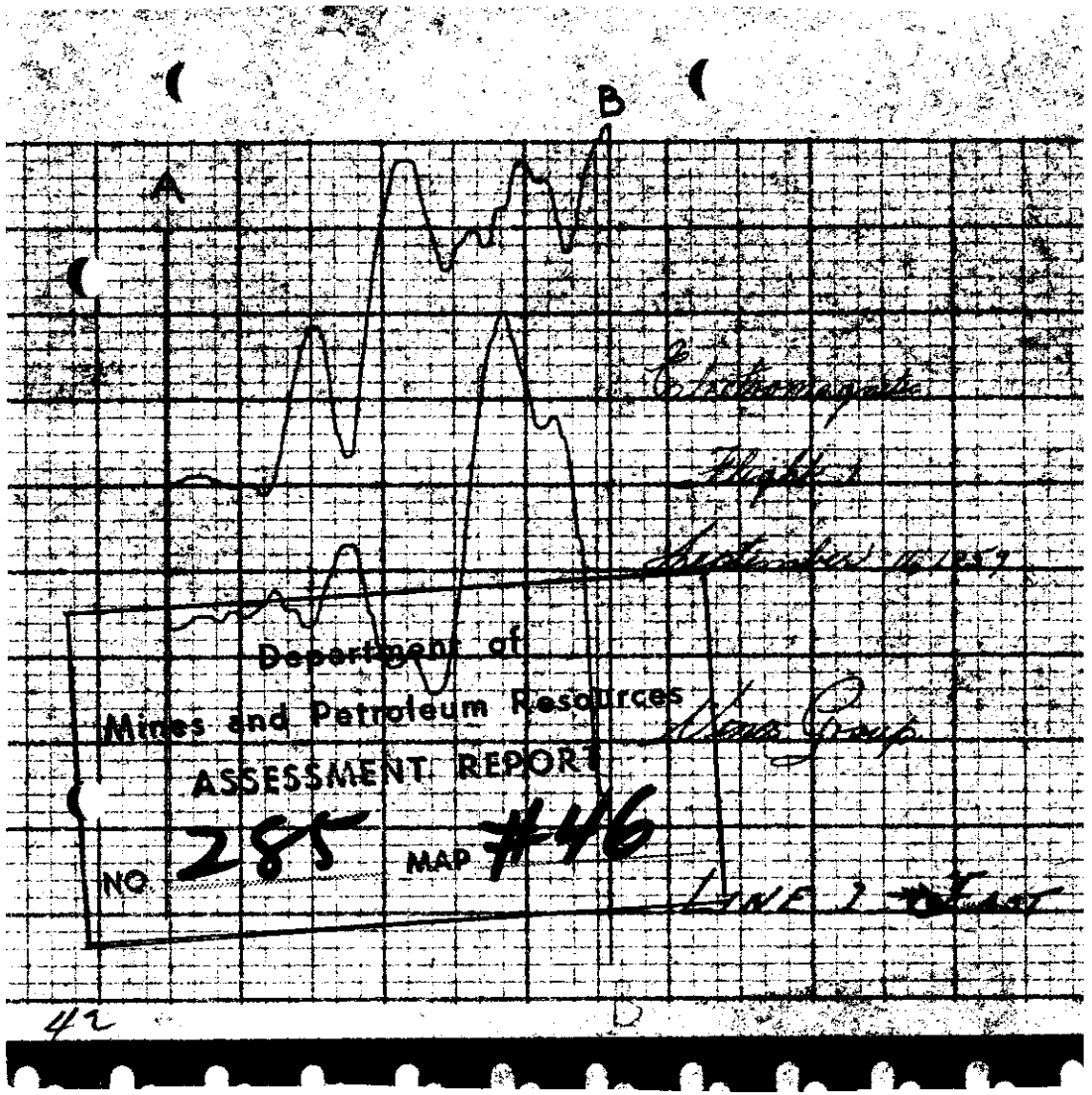
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #44
40

THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A. CHART NO. 1749-X

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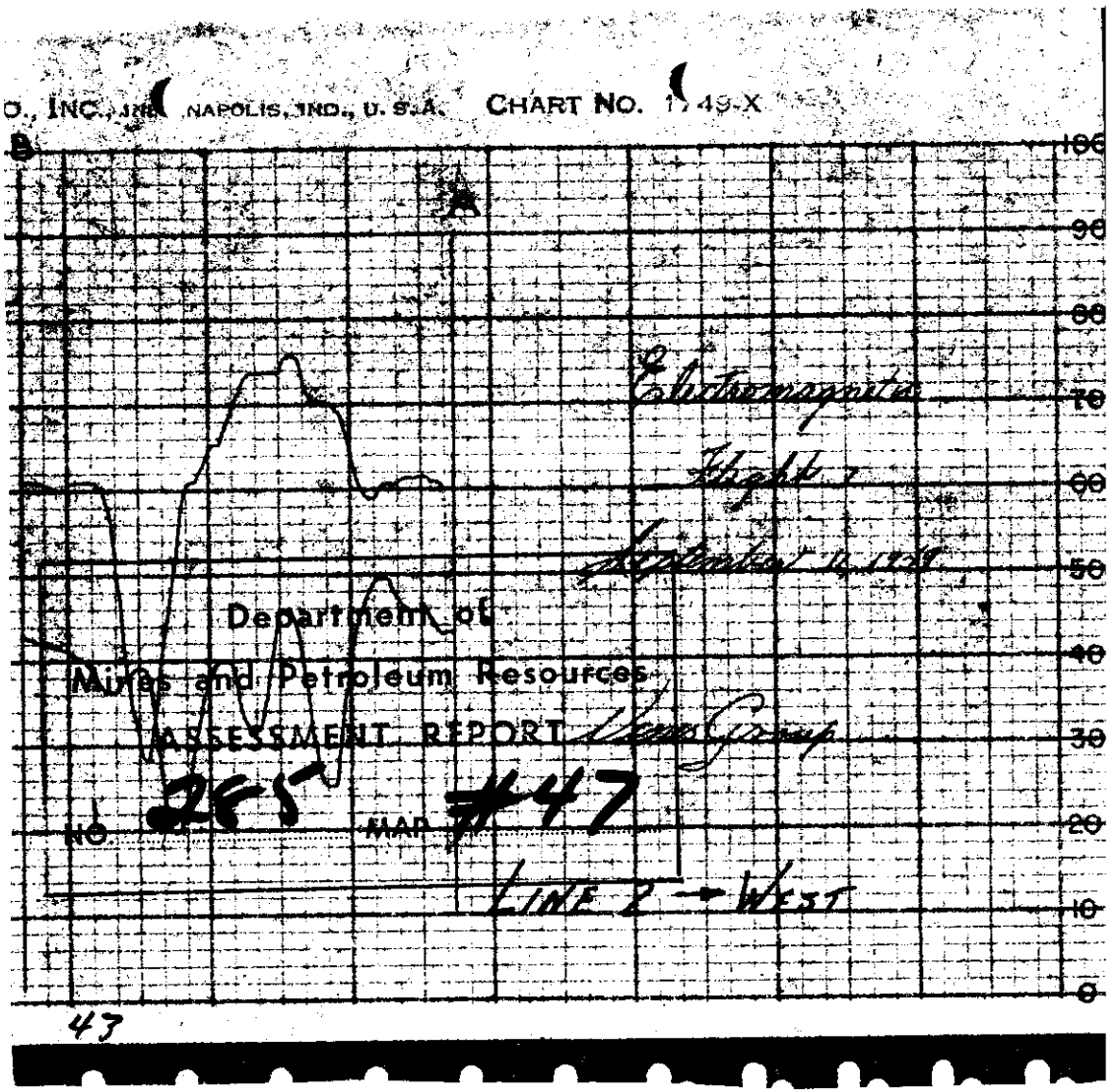
Electromagnetic
Flight 1
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285
MAP #46
Line 2 East
42


INC., INDIANAPOLIS, IND., U. S. A. CHART NO. 1249-X
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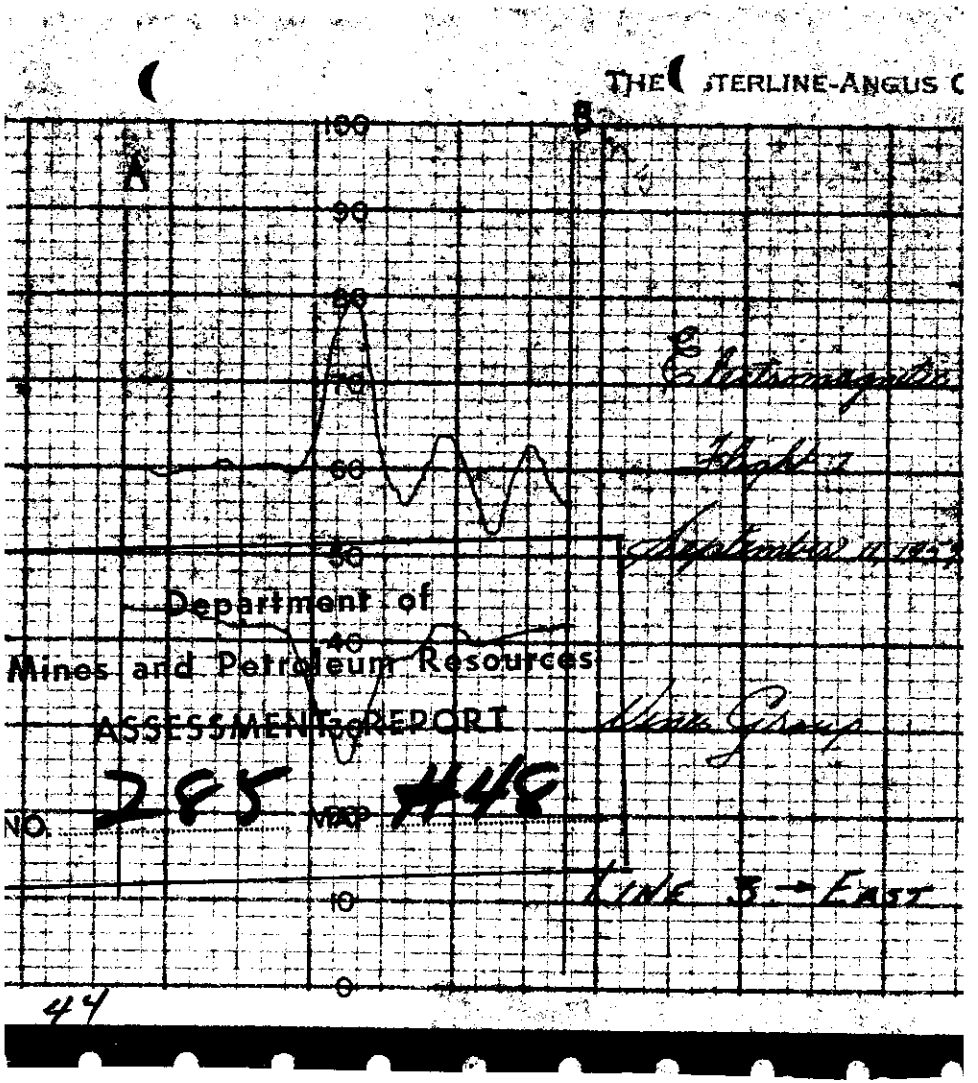
Electromagnetic
Flight 7
September 9, 1988
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 265
MAP #47
LINE 2 → West
43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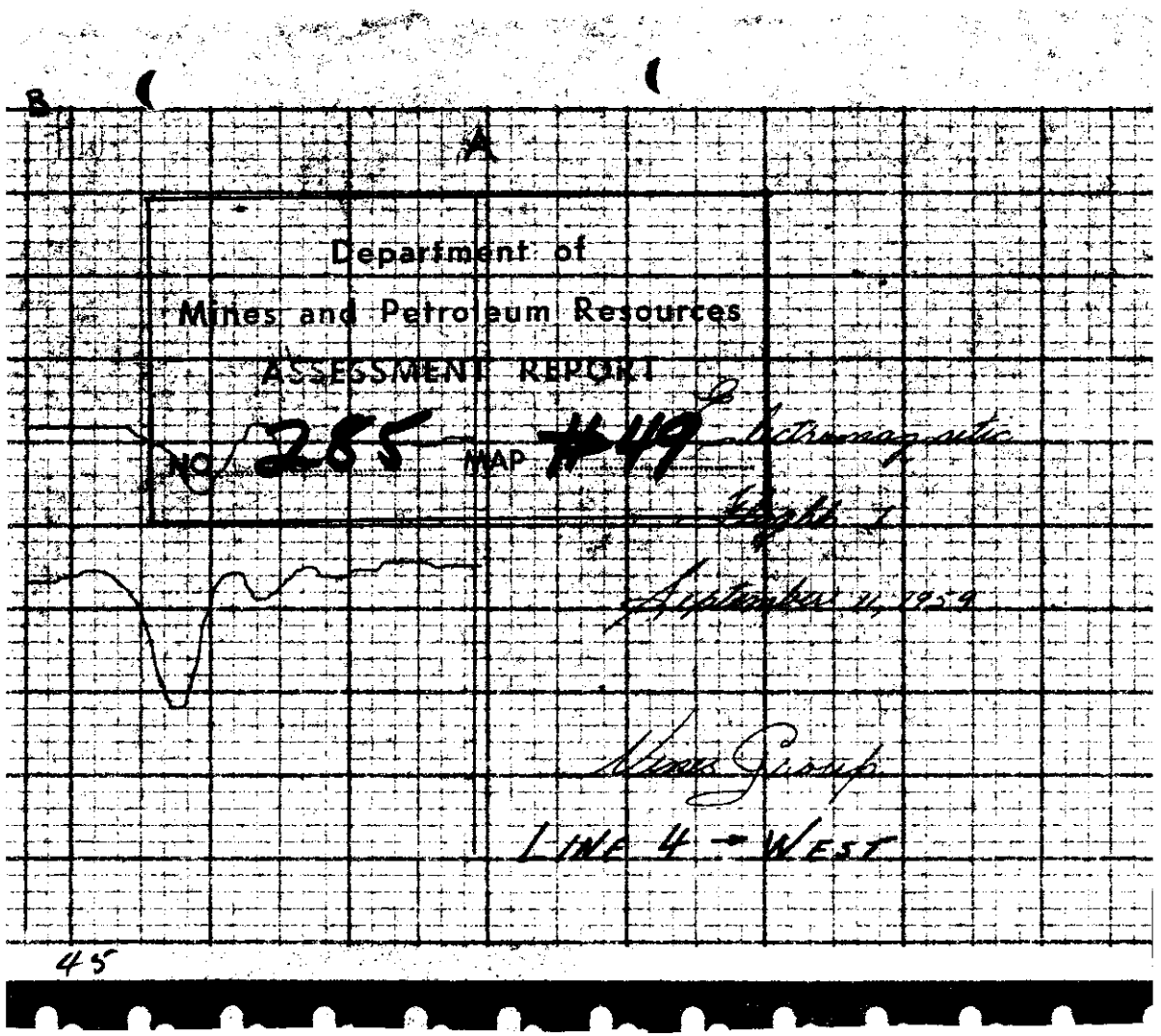
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #48
44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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 265 MAP #49
Electromagnetic
Profile
September 11, 1979
Line 4 - West
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INC., INDIANAPOLIS, IND., U.S.A.
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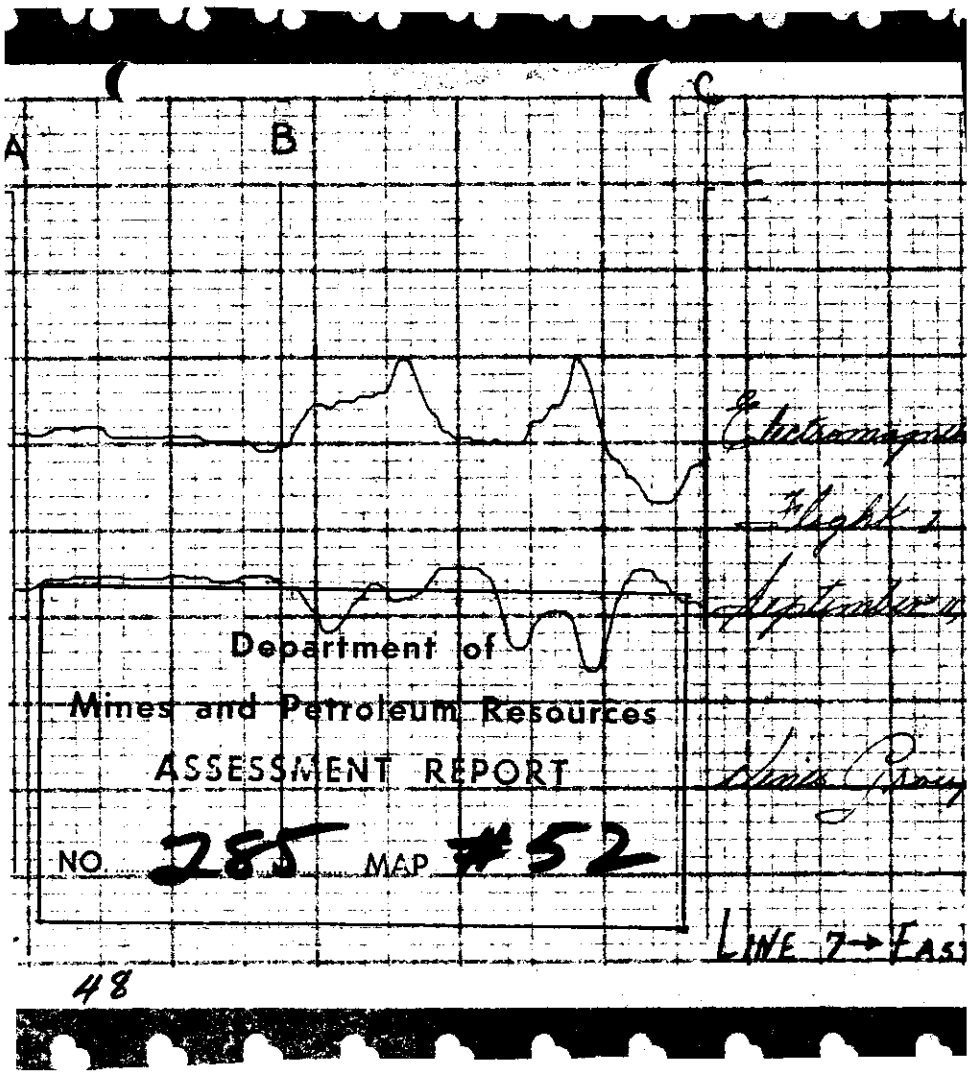
Department of Natural Resources
Mines and Petroleum
ASSESSMENT REPORT
Electromagnetic
Flight
September 11, 1979
Line Group
LINE 5 → LAST
46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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #52
LINE 7→EAS
48

MADE IN U.S.A. THE ESTERLINE-ANGUS CO
Line 0+00 West
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2257 MAP #5
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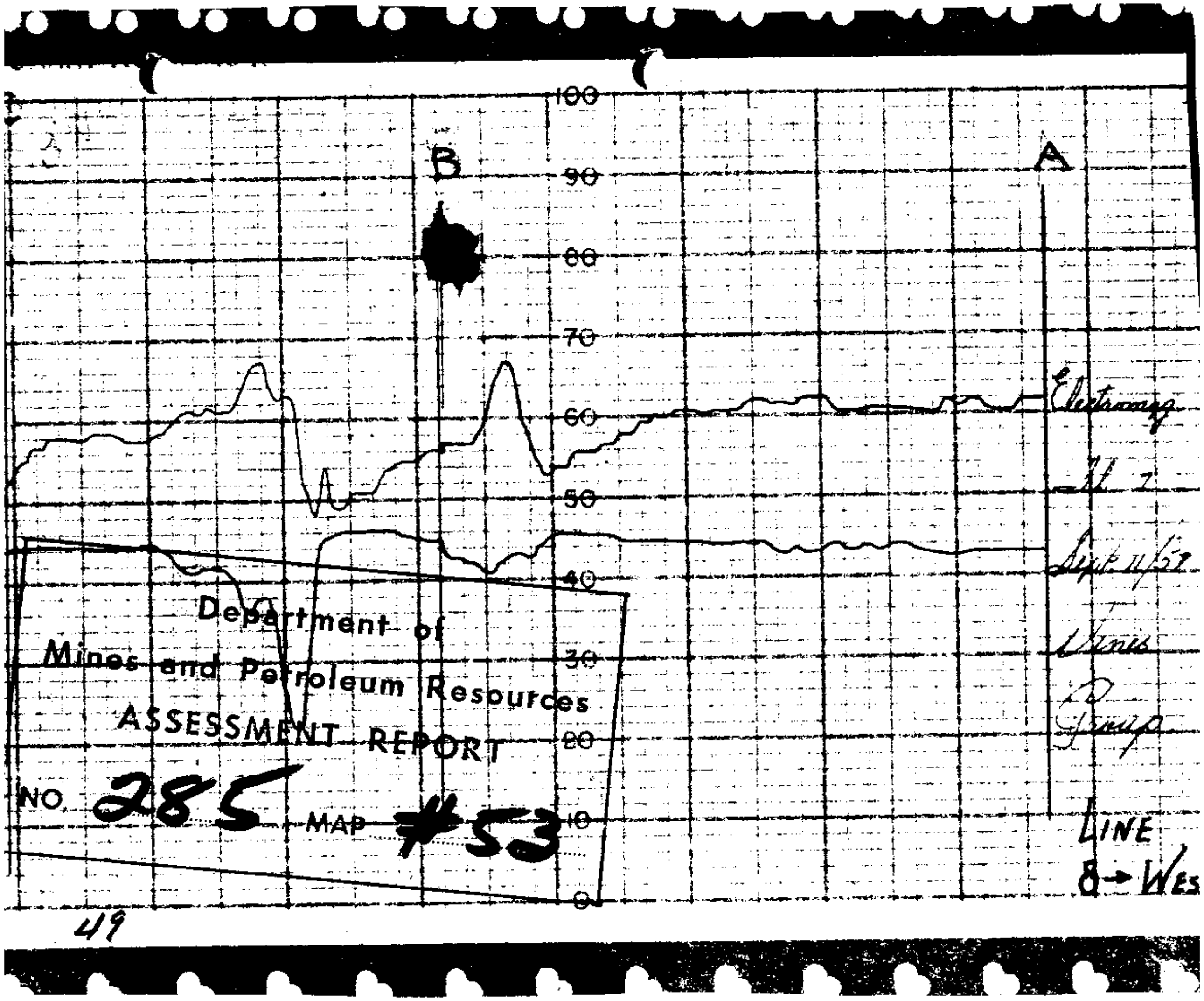
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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #53
LINE
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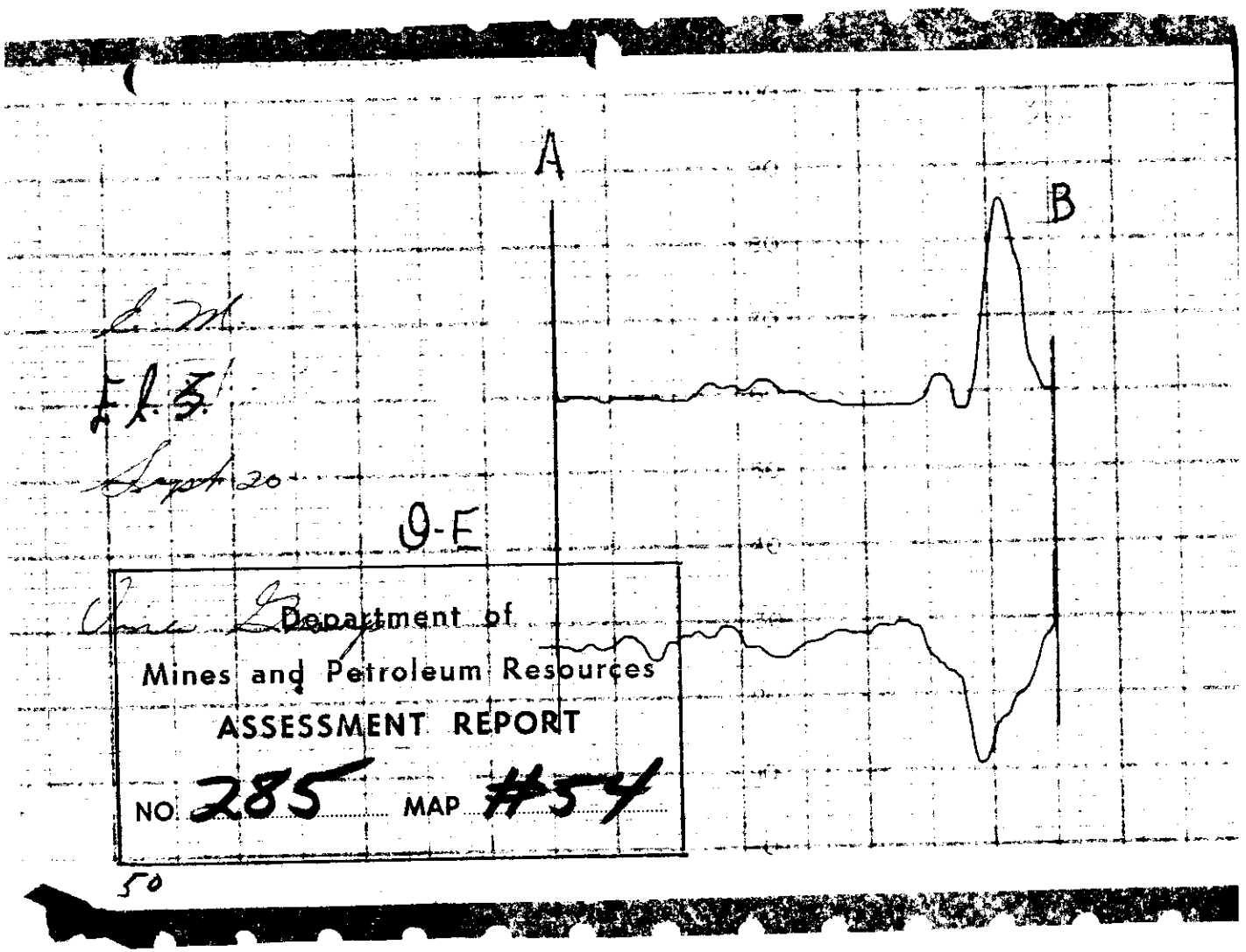
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F.L.S.
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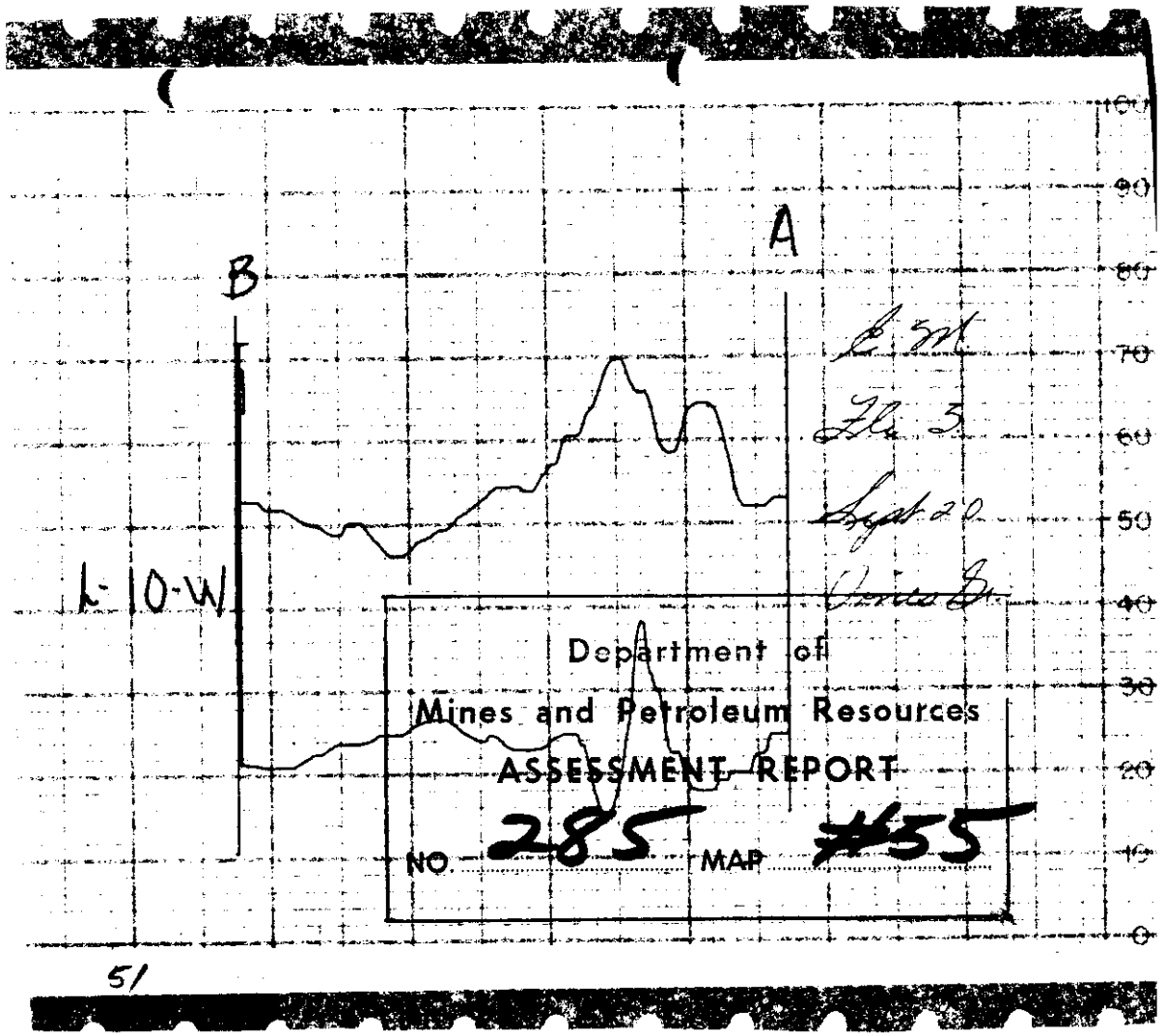
9-E
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #54
50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L-10-W
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #55
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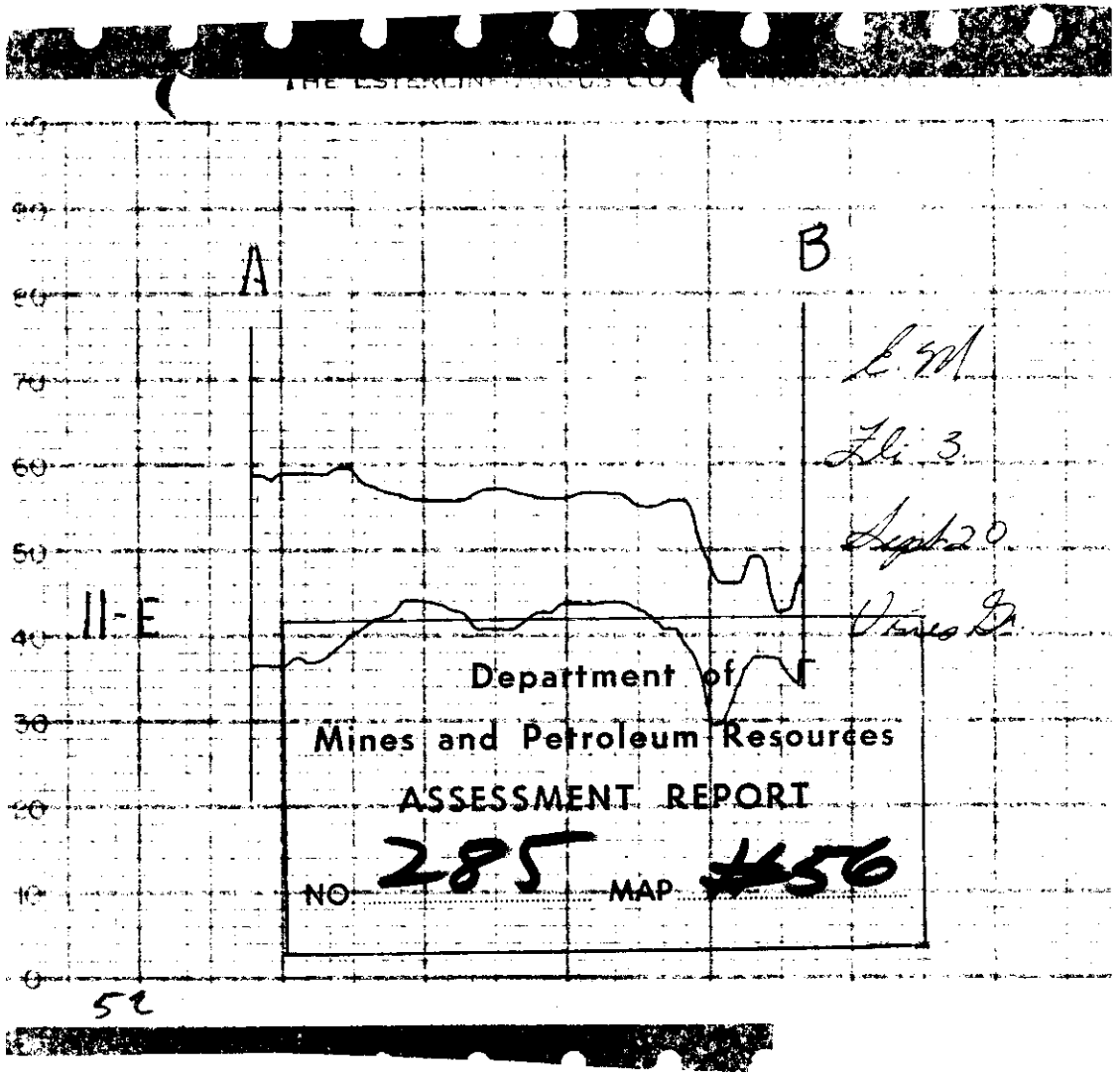
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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO 285 MAP #456
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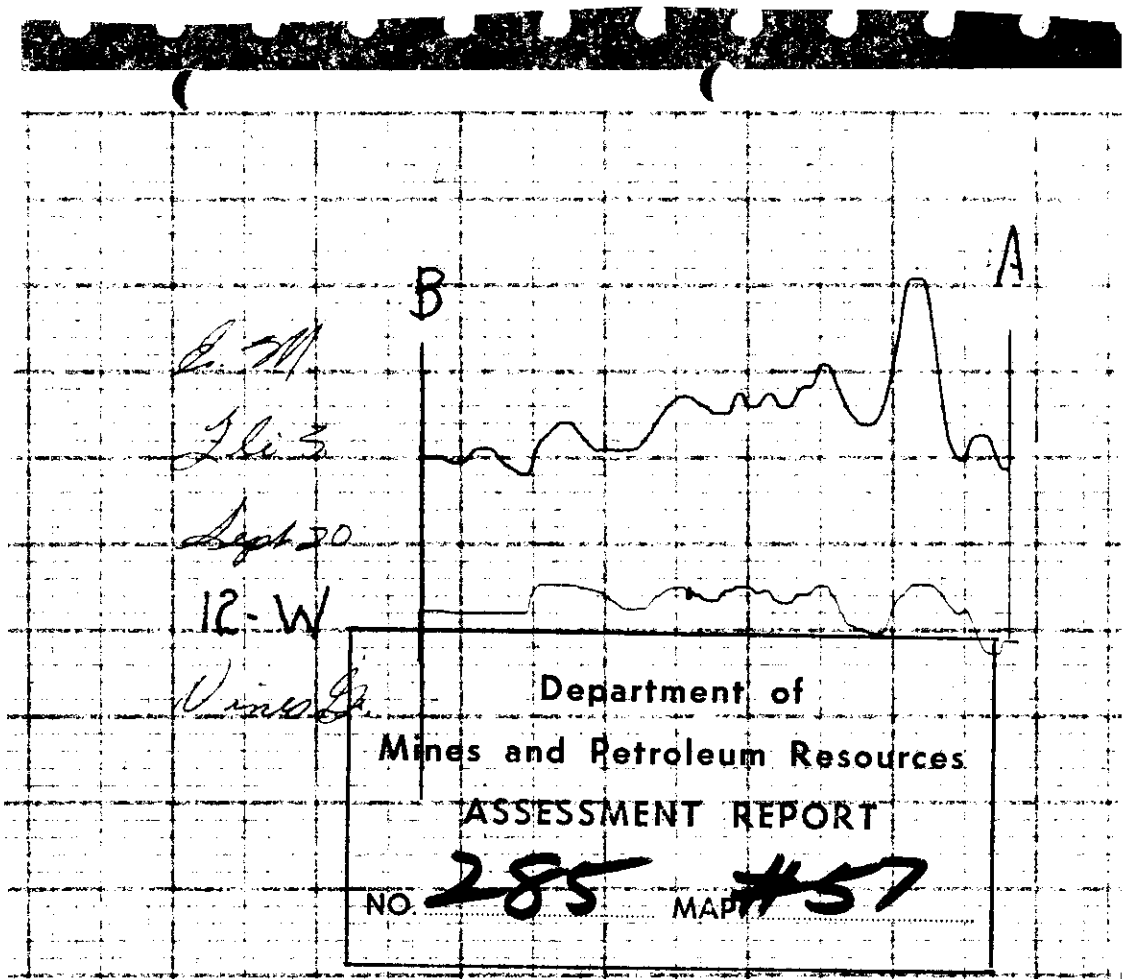
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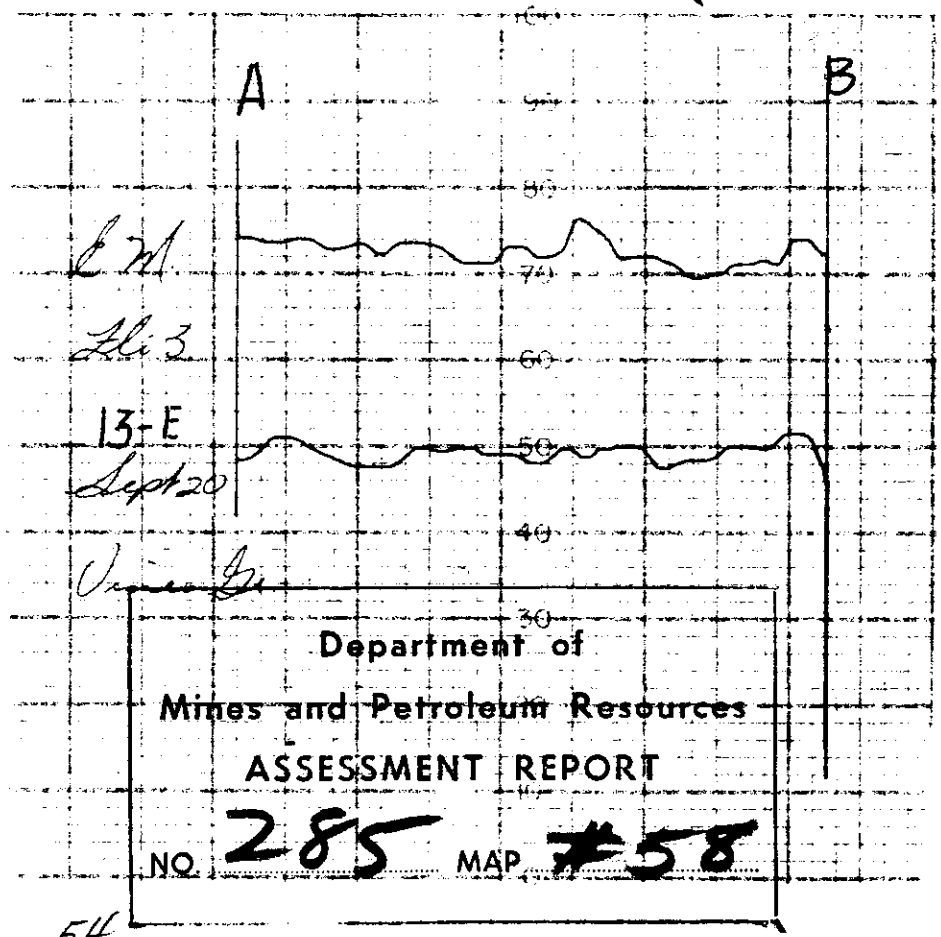
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285
MAP #57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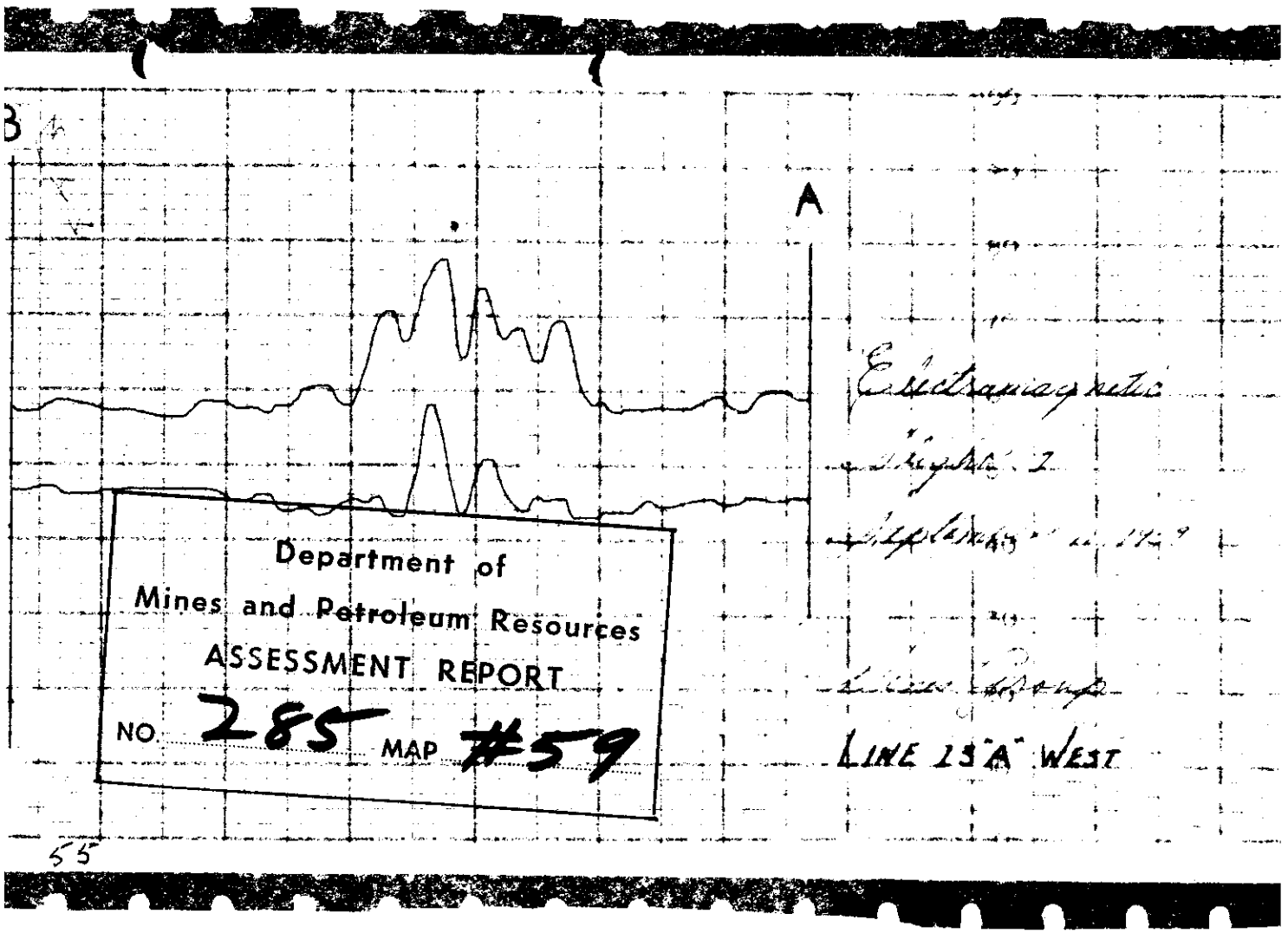
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #58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Electromagnetic
LINE 13"A" WEST
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #59
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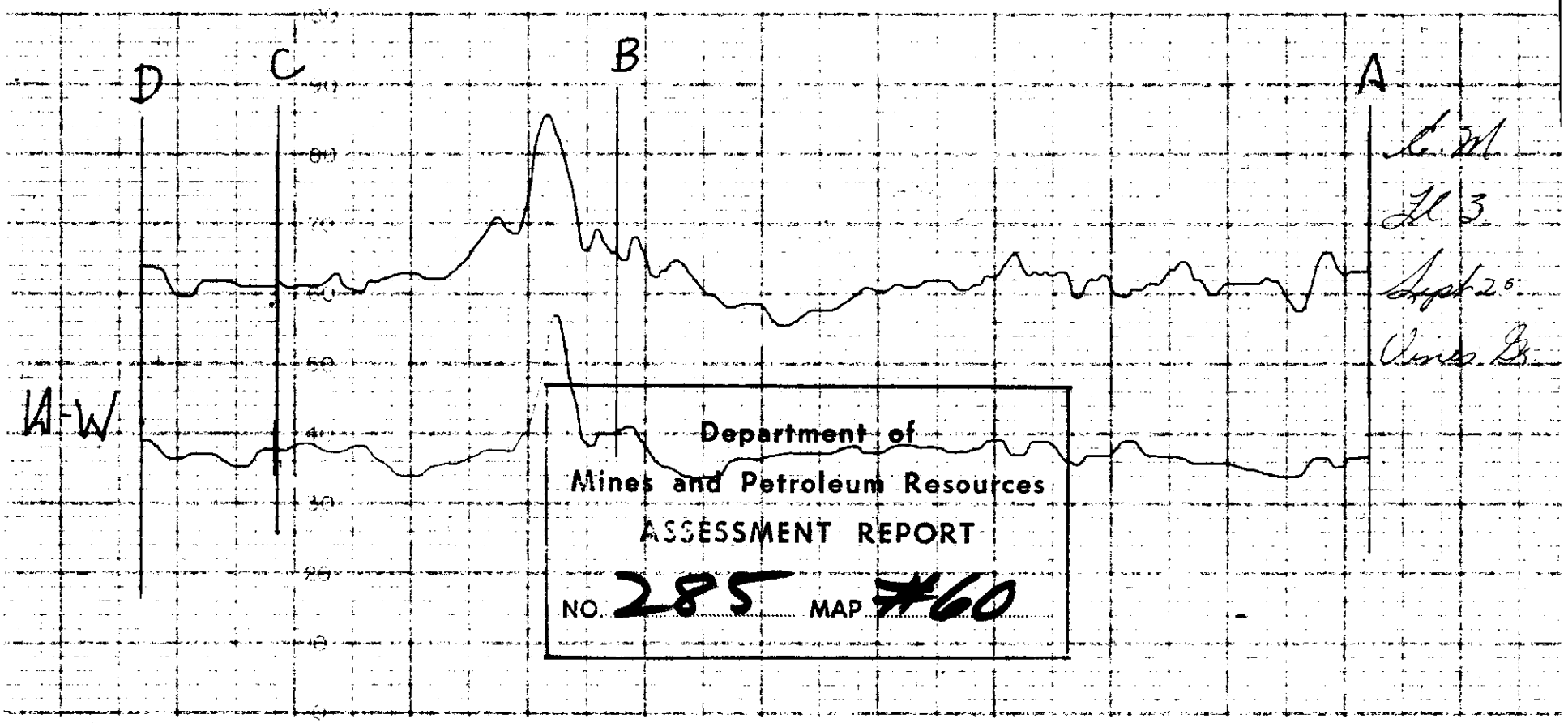
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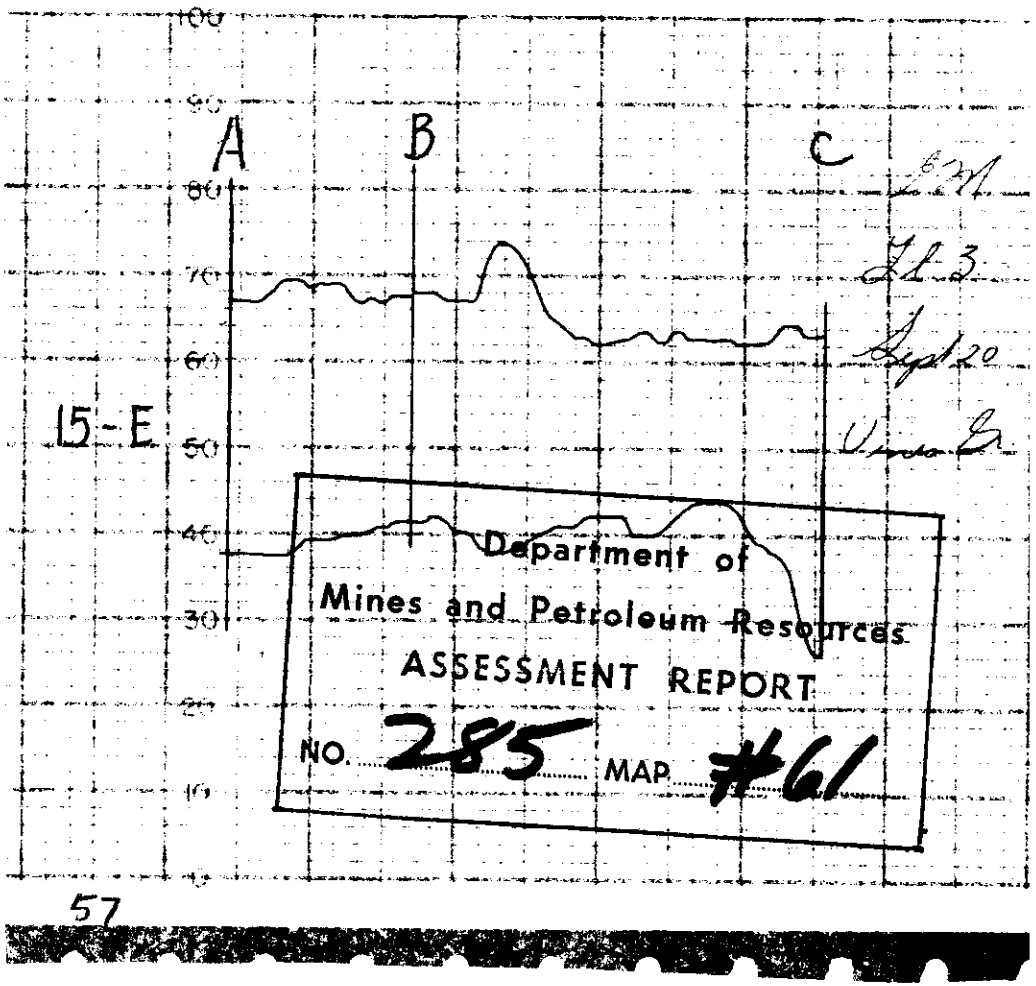
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #60

56


THE ESTERLINE ANGUS CO INC
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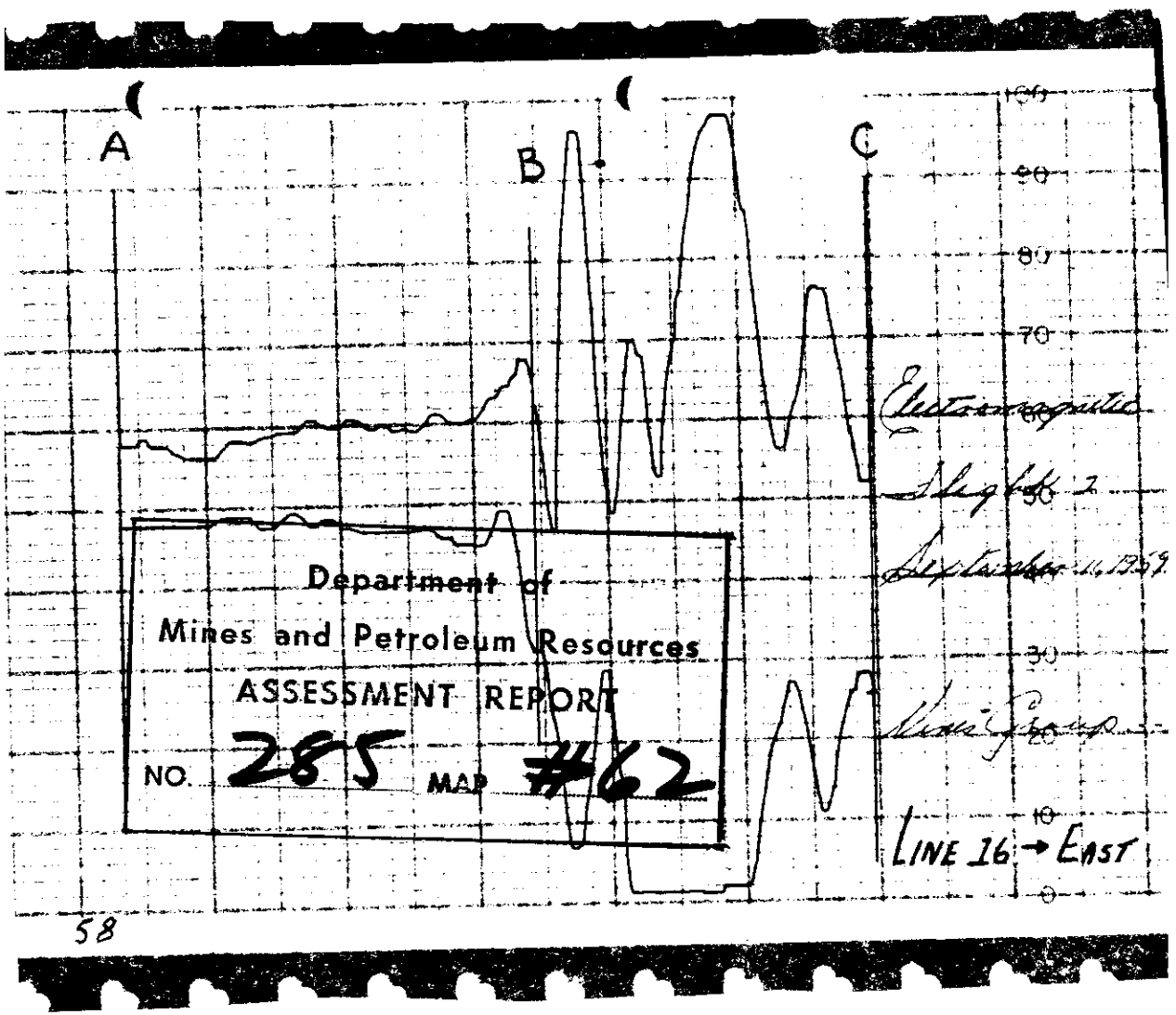
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #61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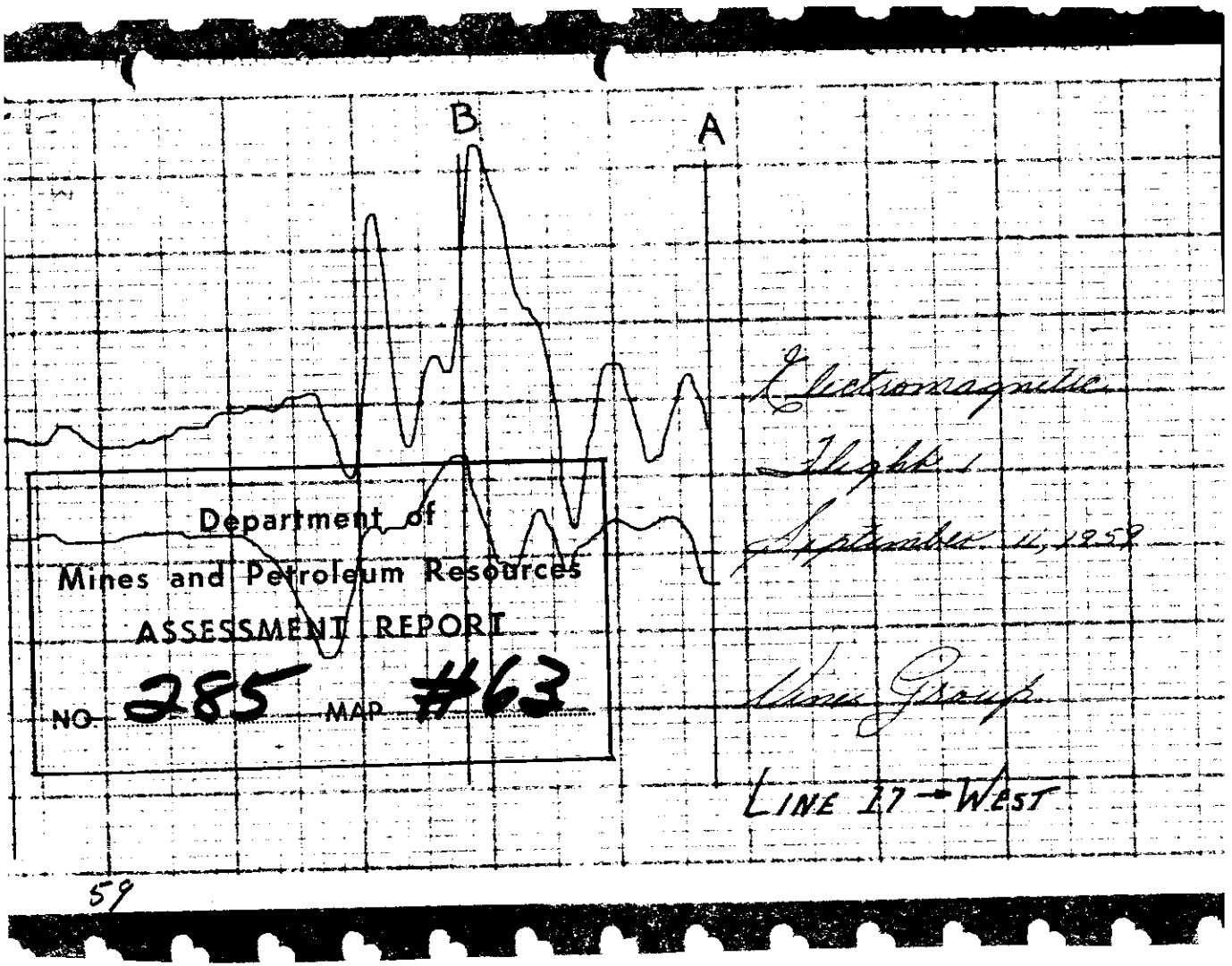
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #62
LINE 16 → East
58


B
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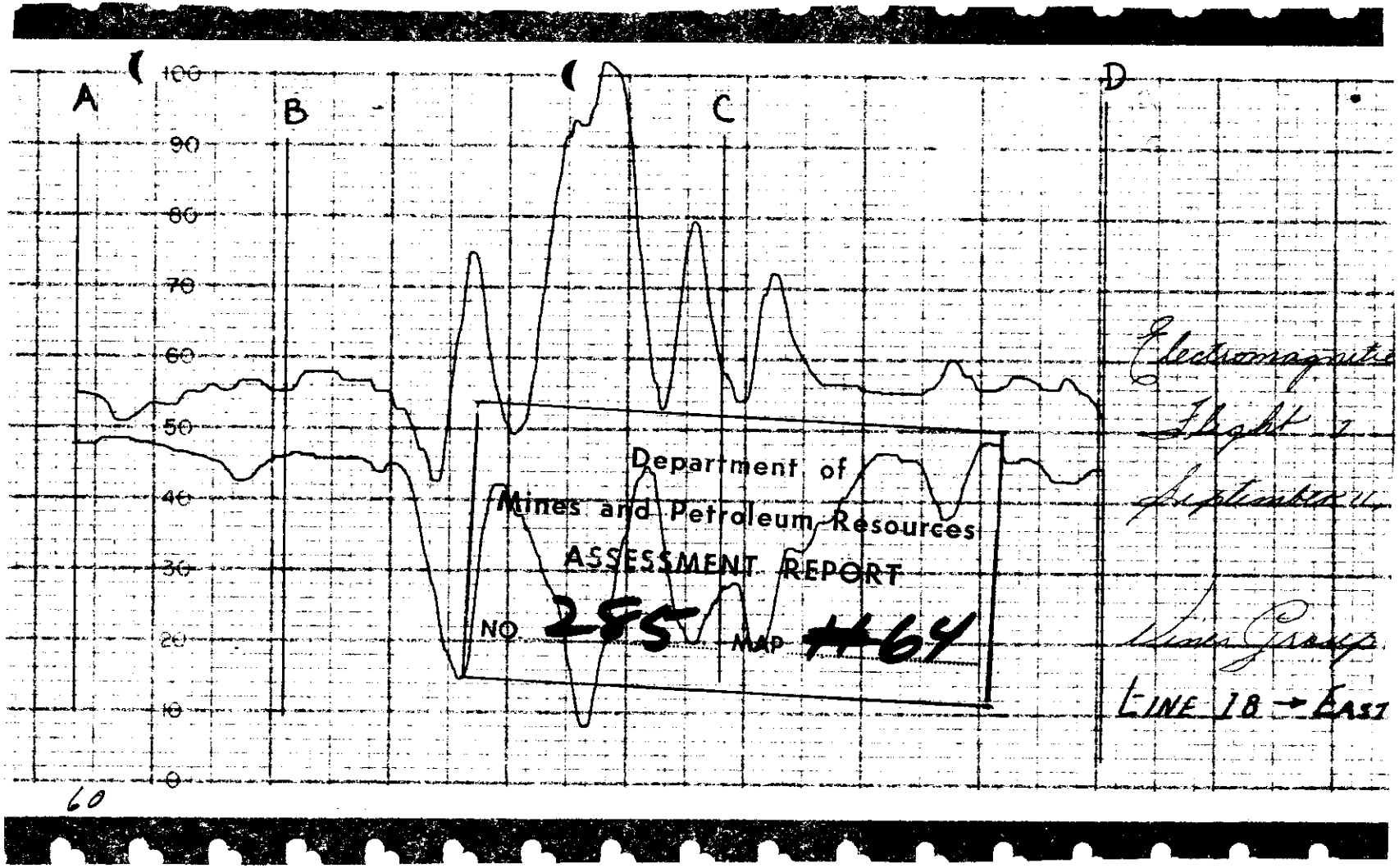
Electromagnetic
Flight
September 4, 1959
Mine Group
LINE 17 - West
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #63
59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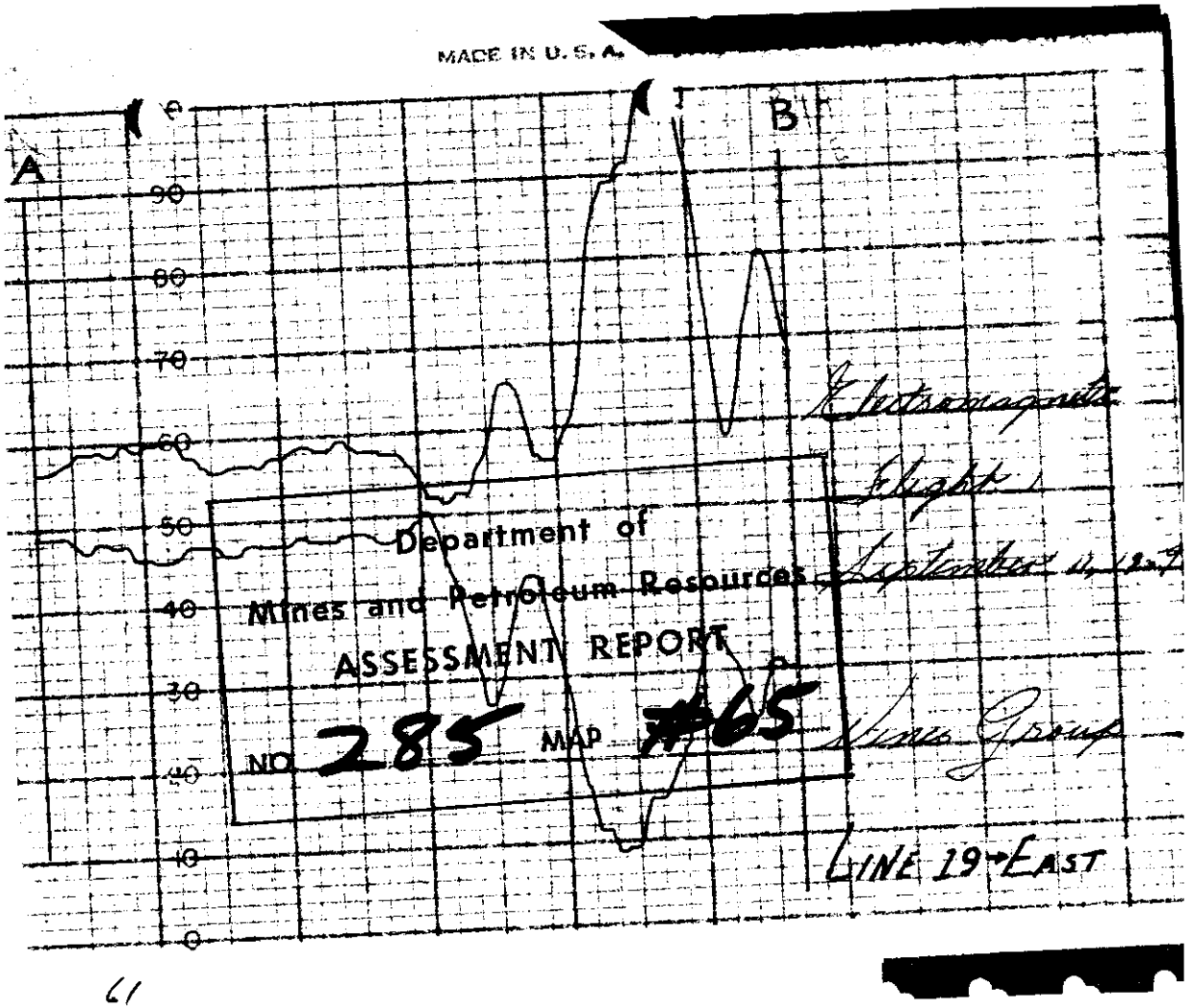
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #64
Electromagnetic
Flight
Superimposed
Line Groups
LINE 18 → EAST
60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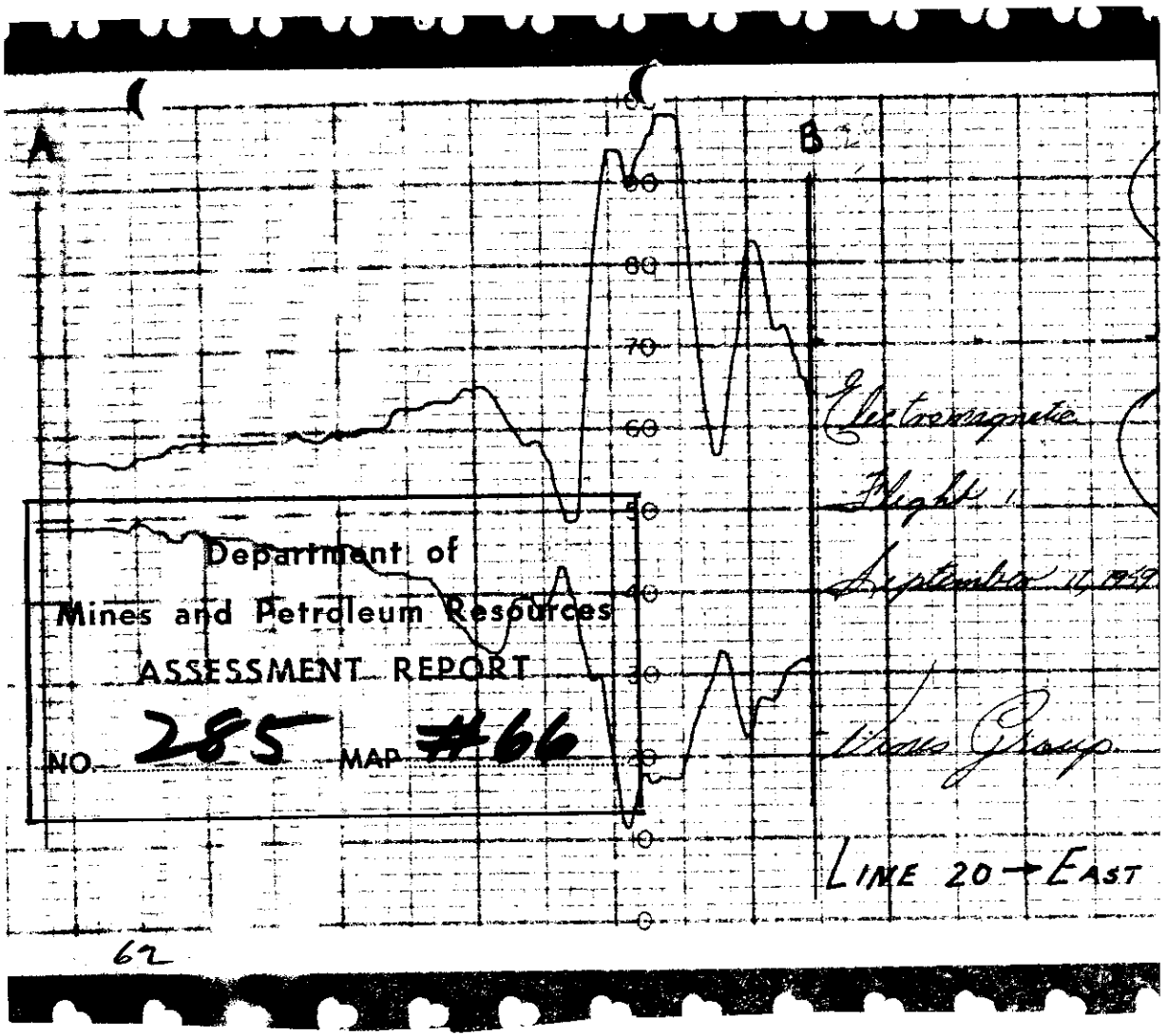
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #65
Electromagnetic
Flight
September
Lines Group
LINE 19 - EAST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Electromagnetic
Flight 1
September 17, 1959
Line Group
LINE 20 → EAST
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #66
62

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 285 MAP 63

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2655 MAP
A
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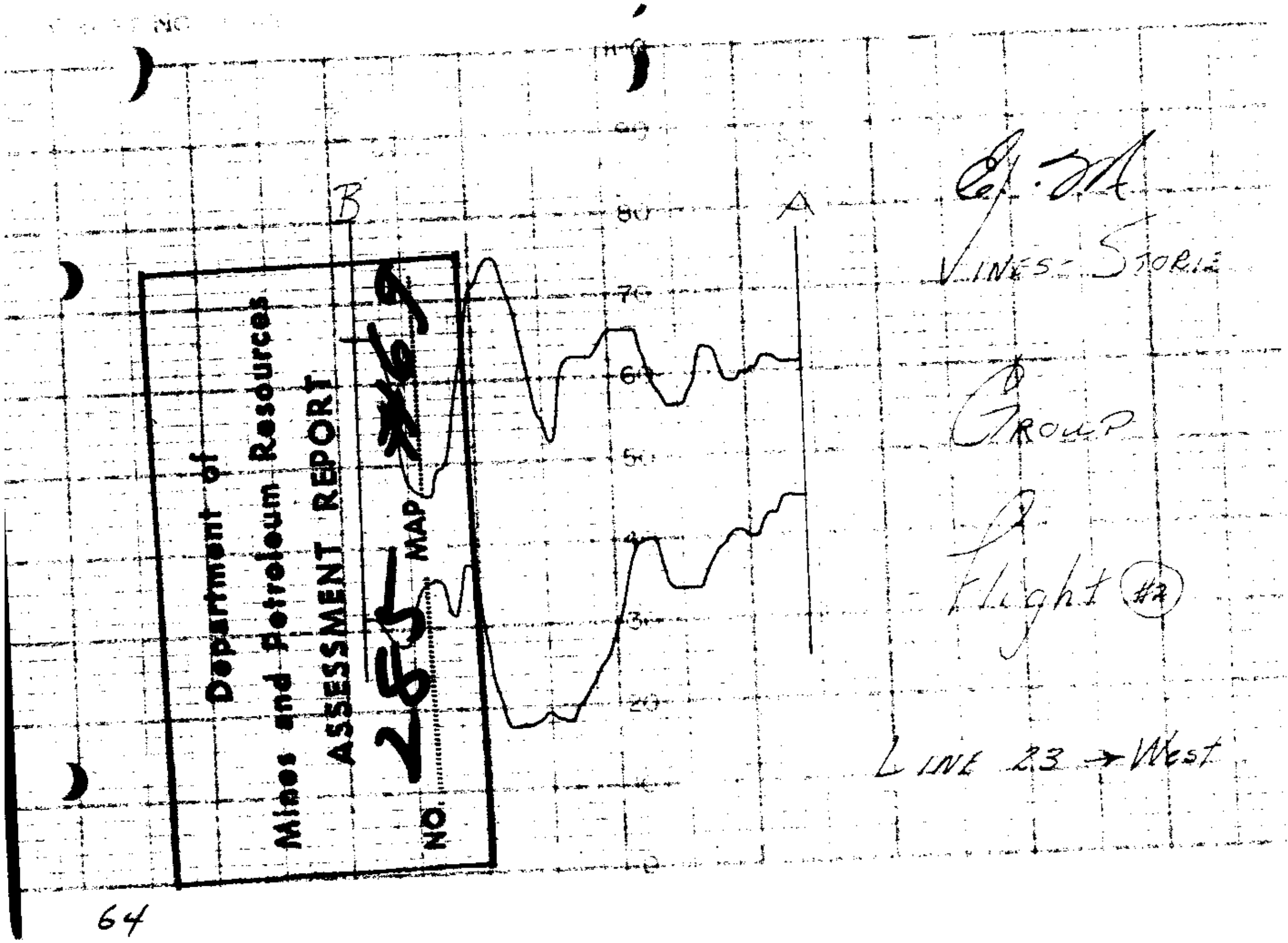
L. 22N.
VINES + STOKE
GROUP
Right (#2)
LINE → 22 → EAST

63A


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 265 MAP #69
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VINES-STORIE
GROUP
Flight #2
LINE 23 → West
64

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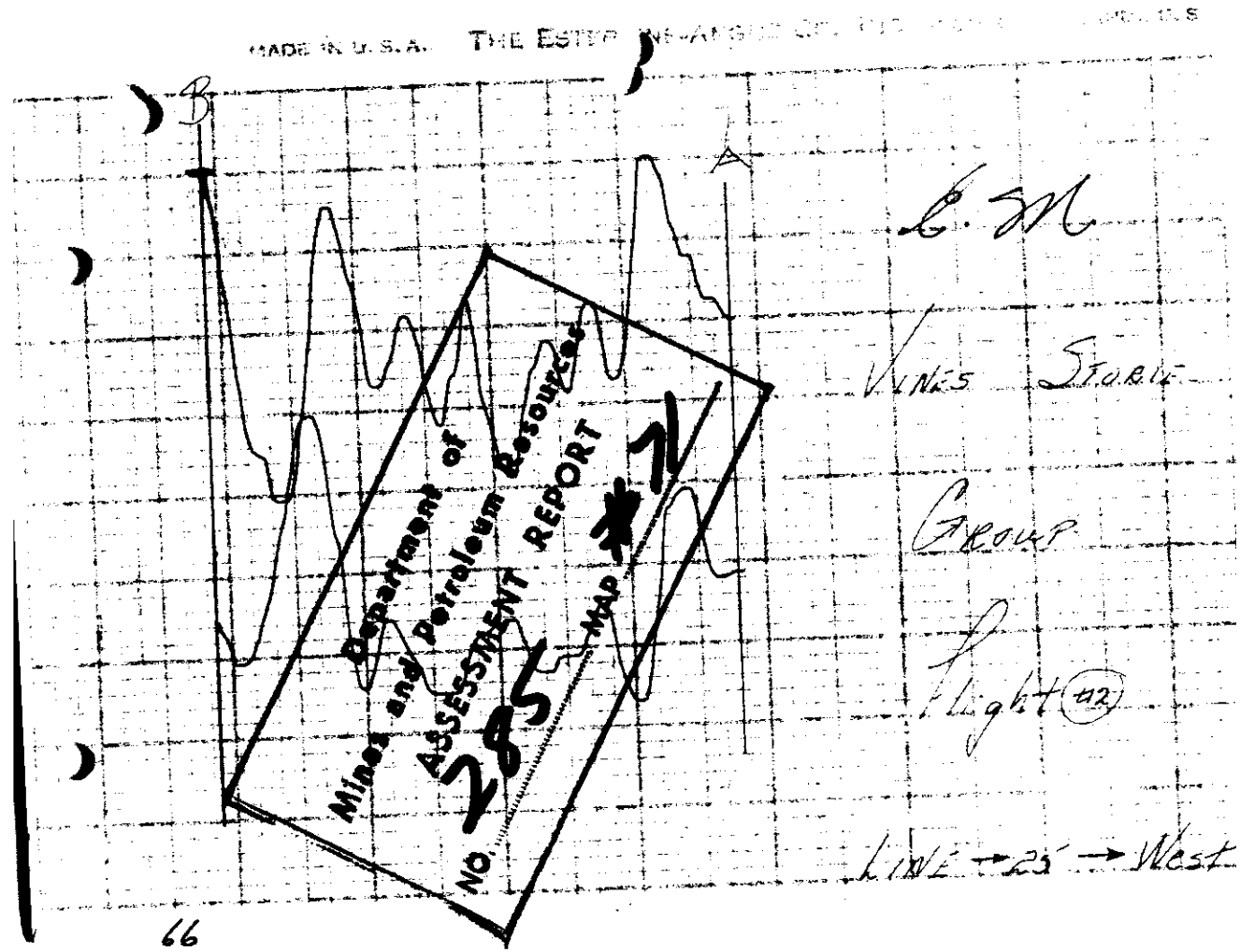
Department of Resources
Mines and Petroleum REPORT
ASSESSMENT
2851
MAP
NO.
Line 24 → East
65



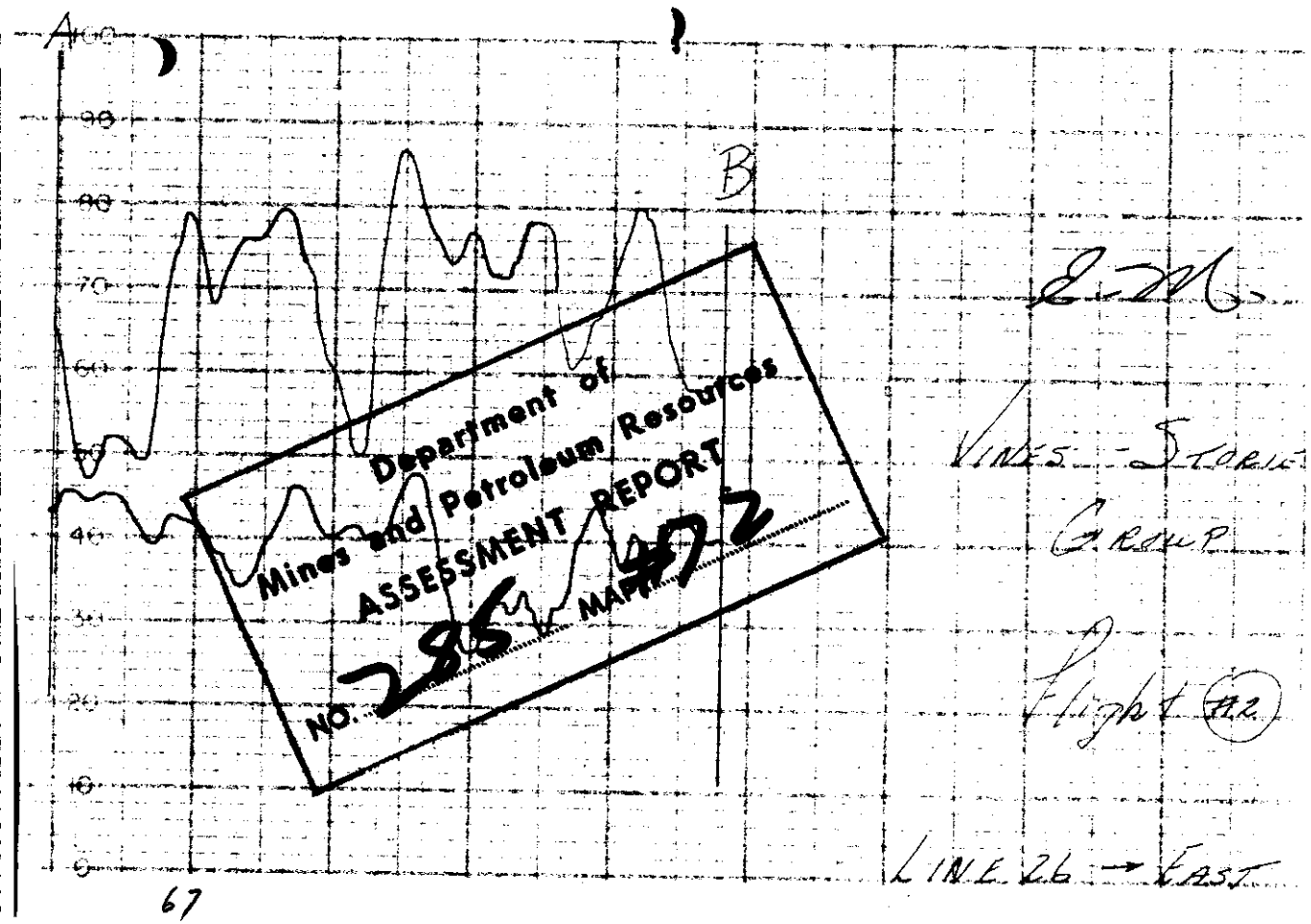
E. M.

Vines Stake

Group

Flight (42)

Line → 25 → West



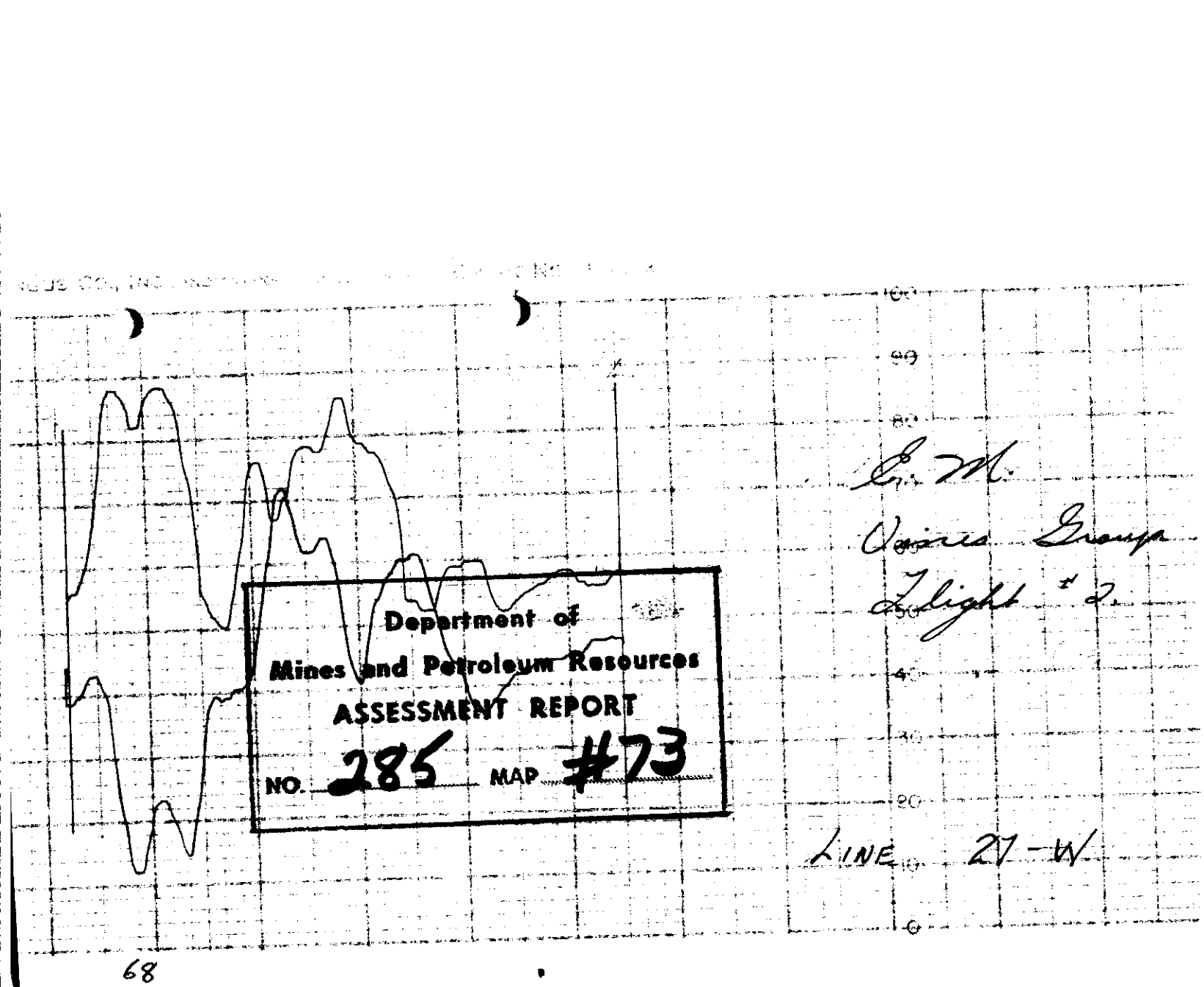
E-W

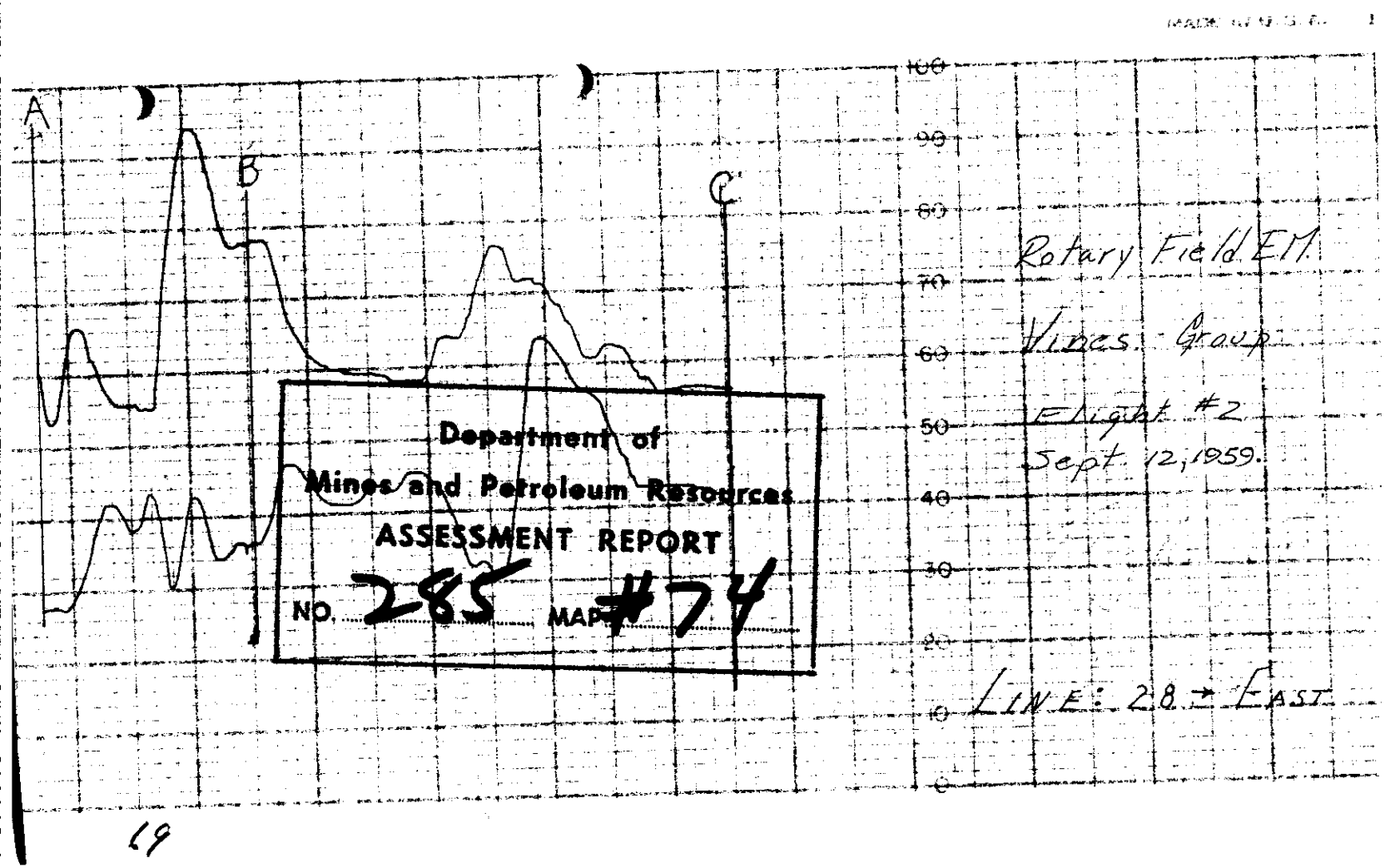
VINES - STORIE

GROUP

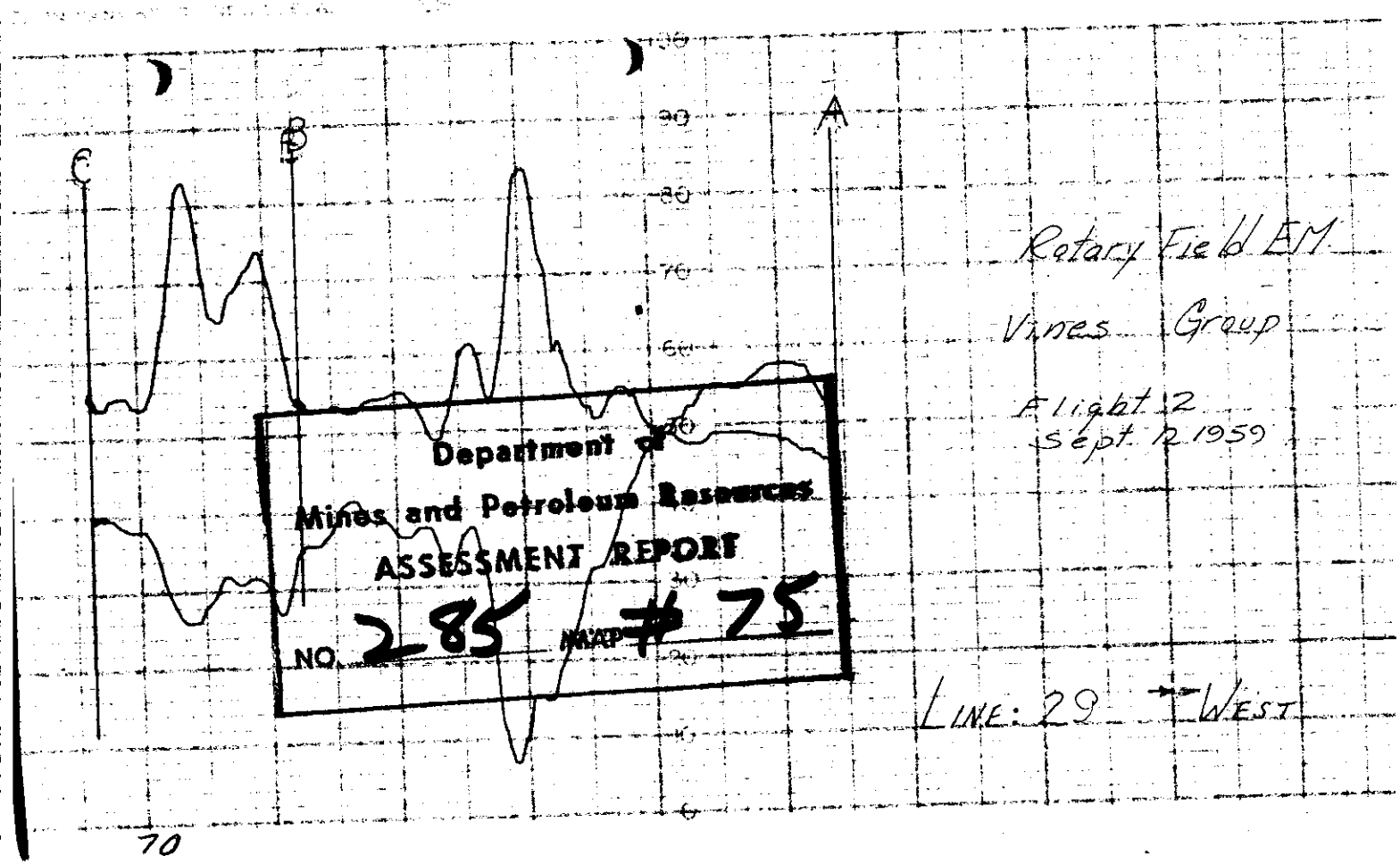
Flight #2

LINE 26 → EAST


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #73
E. M.
Coaxial Group
Flight # 2.
LINE 27-W


A
B
C
100
90
80
70
60
50
40
30
20
10
0
Rotary Field EM.
Hines Group
Flight #2
Sept. 12, 1959.
LINE: 28 → EAST
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #74

69



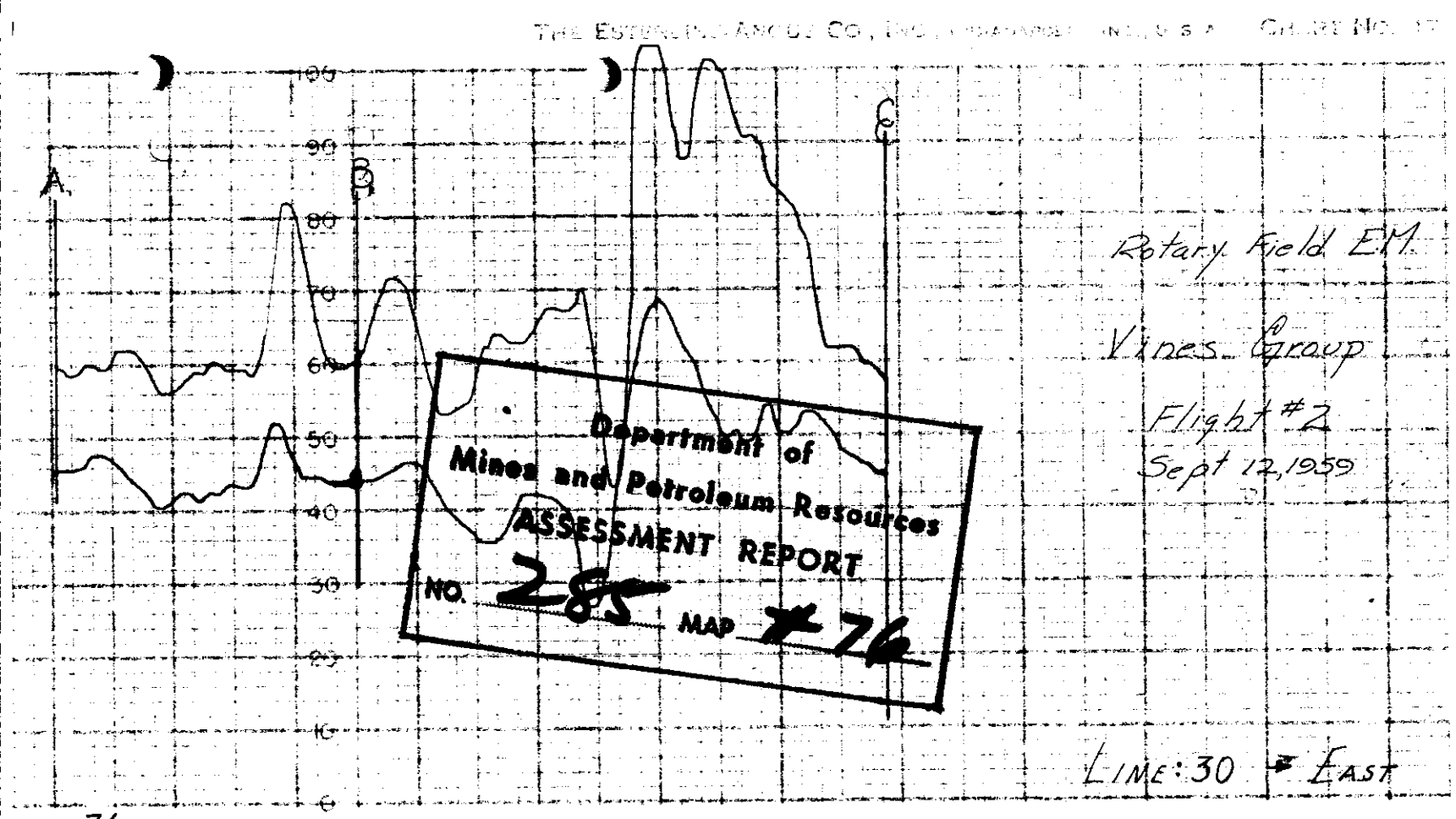
Rotary Field EM

Vines Group

Flight 2

Sept 2 1959

LINE: 29 → WEST



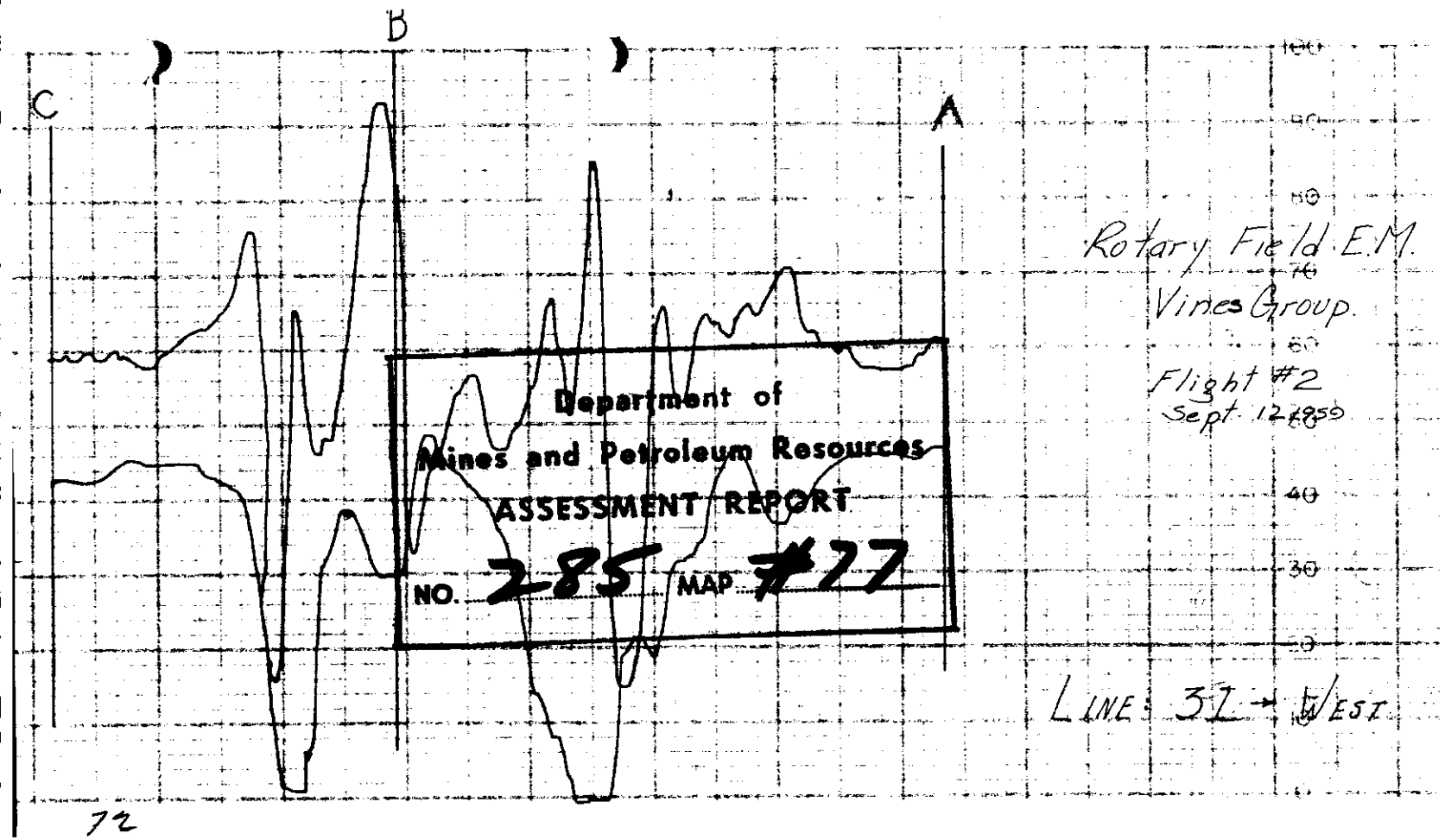
Rotary Field EM.

Vines Group

Flight #2

Sept 12, 1959

LINE: 30 → EAST


B
C
A
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #27
Rotary Field E.M.
Vines Group.
Flight #2
Sept. 12, 1959
LINE 31 → WEST
72

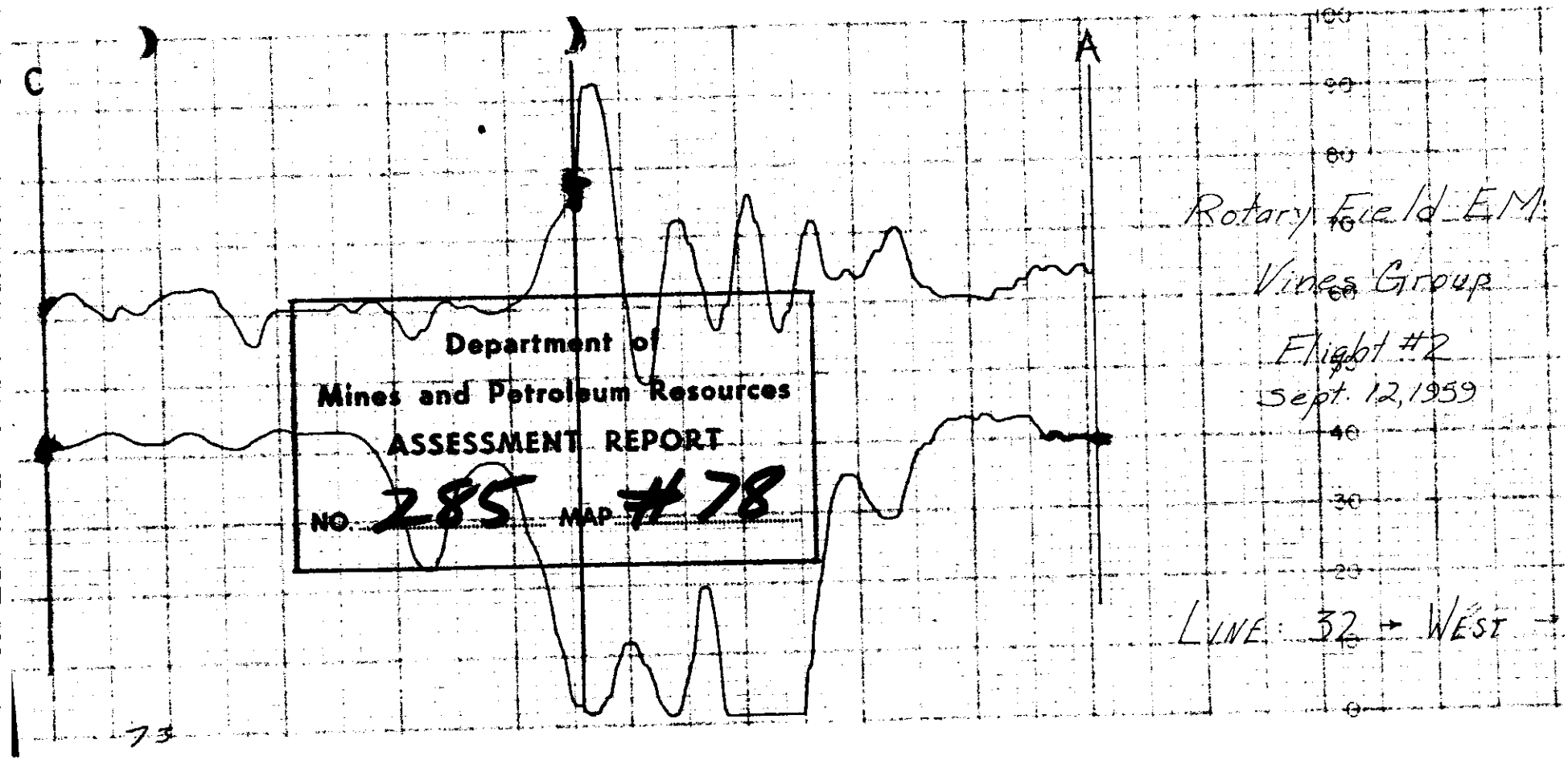
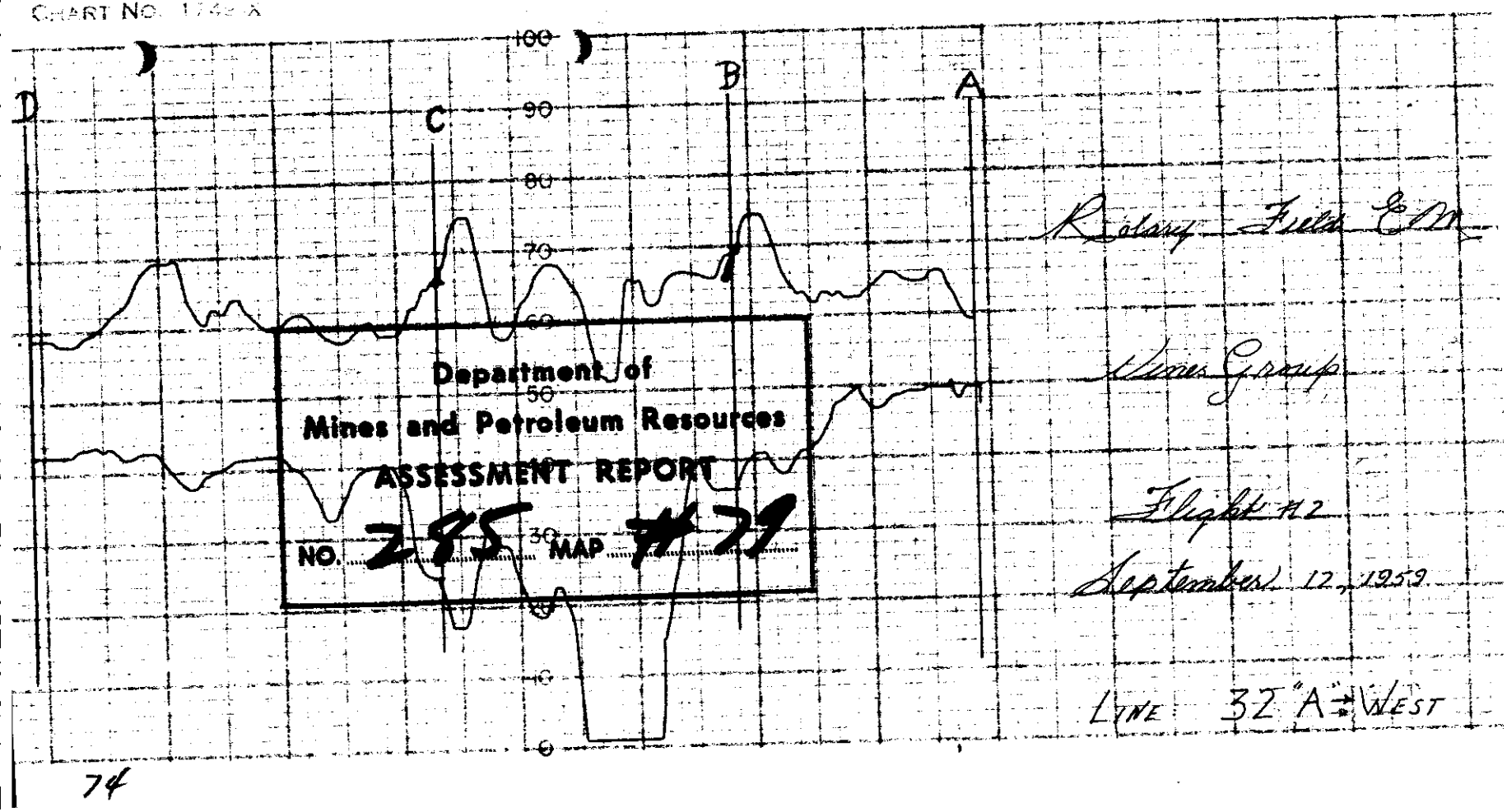

C
A
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #78
Rotary Field EM.
Vines Group
Flight #2
Sept. 12, 1959
LINE: 32 → WEST →
73

CHART NO. 1746 A



Kelsey Field E&M

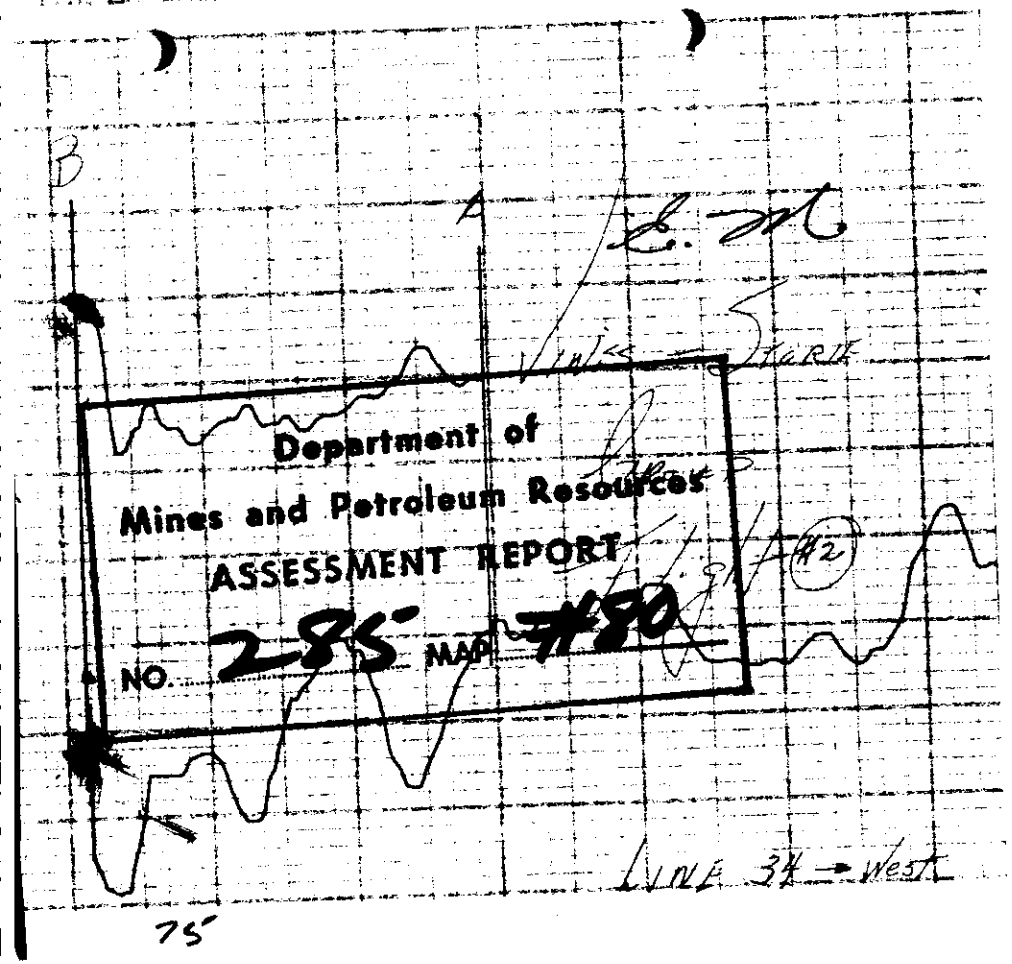
Mines Group

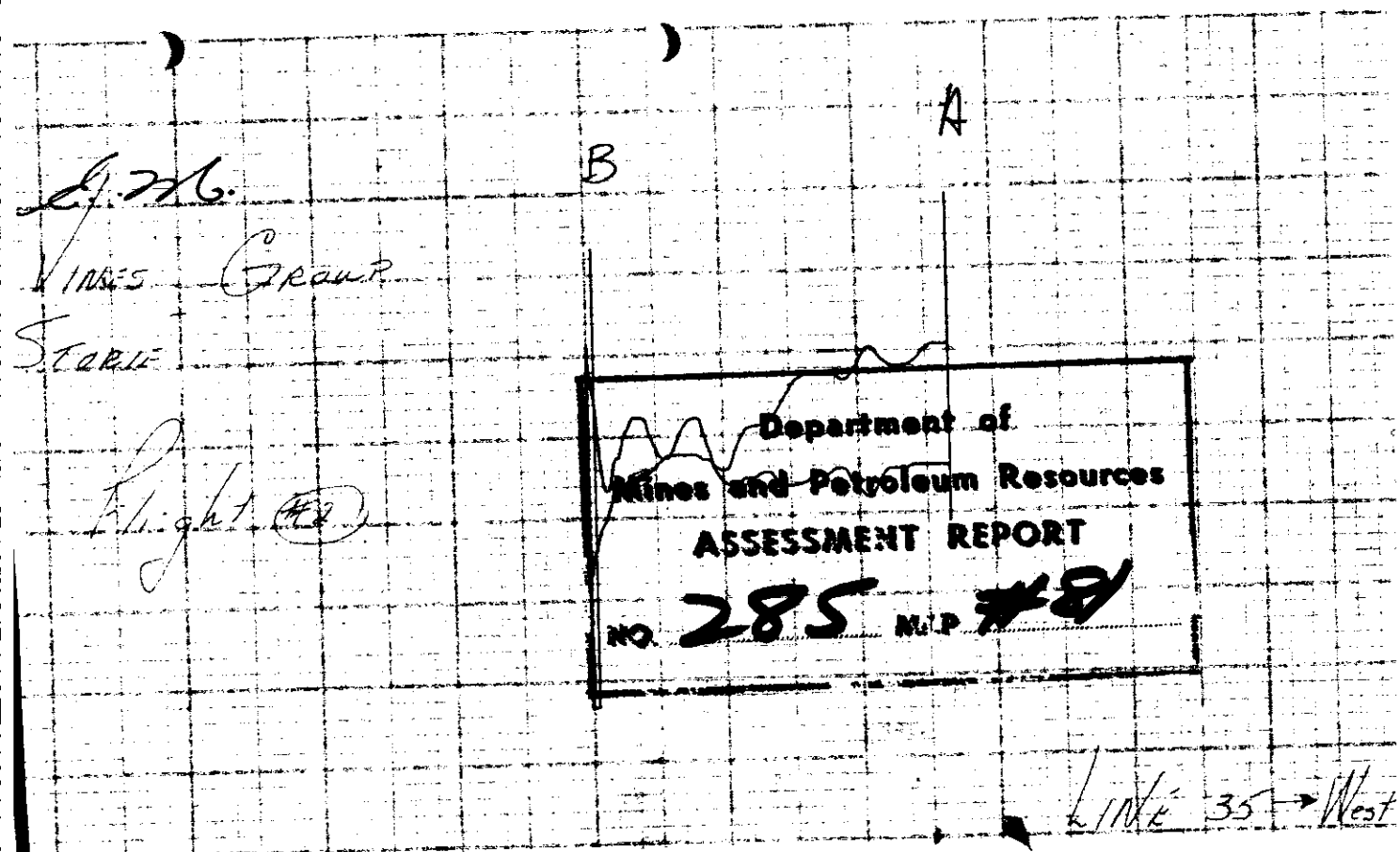
Flight #2

September 12, 1959

LINE 32 "A" WEST

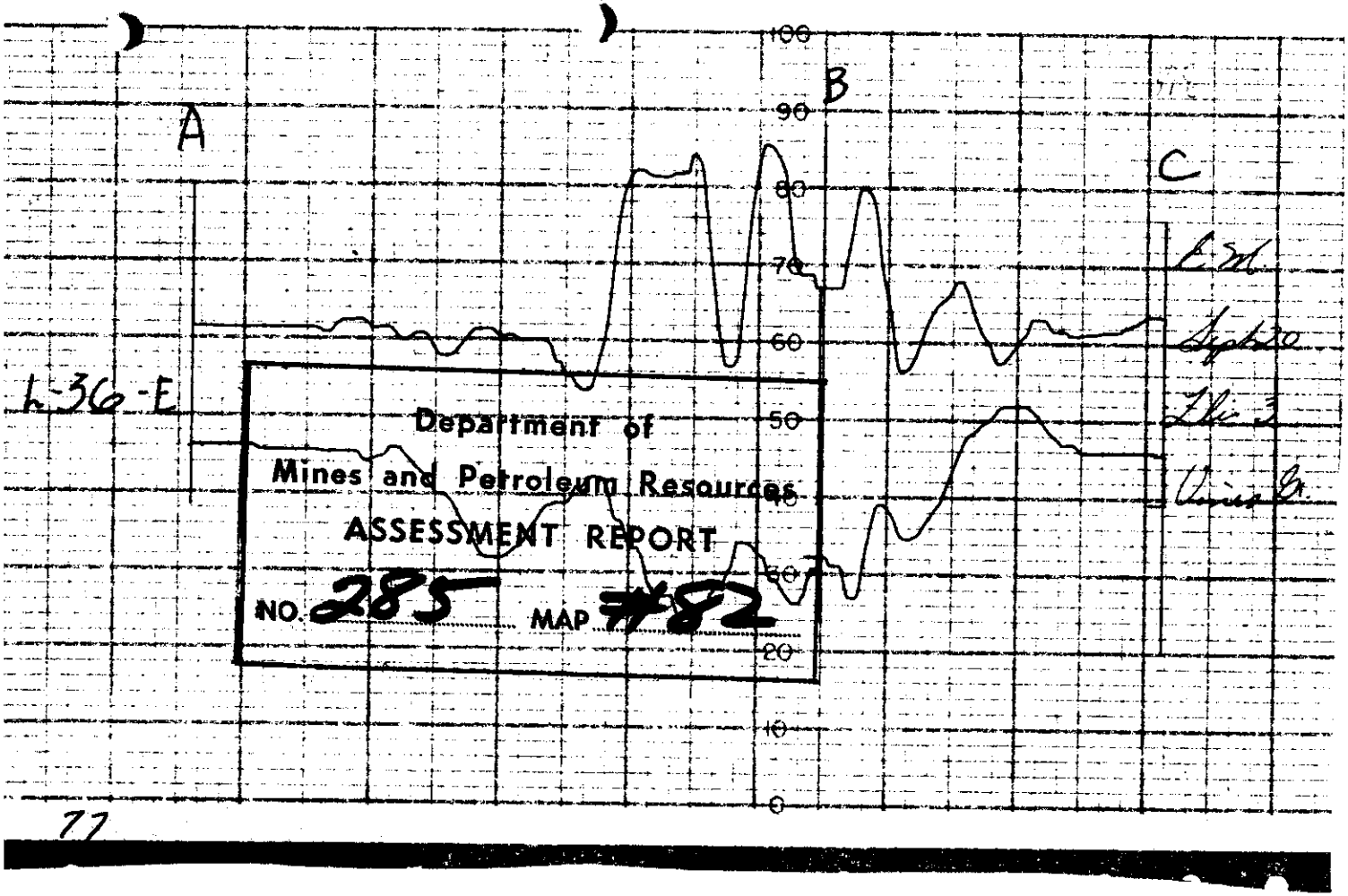
74



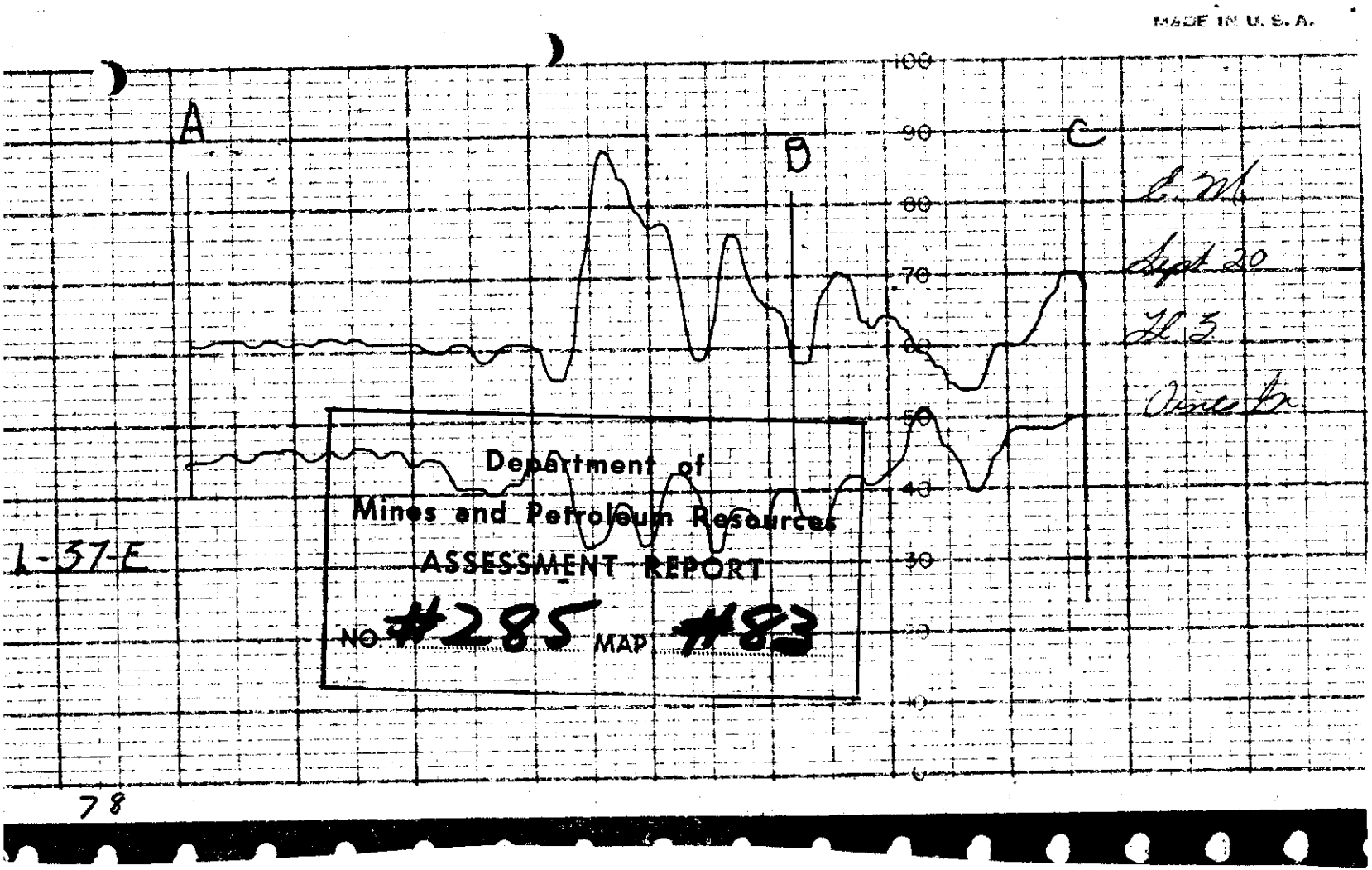

A
B
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 M.I.P.
LINE 35 → West

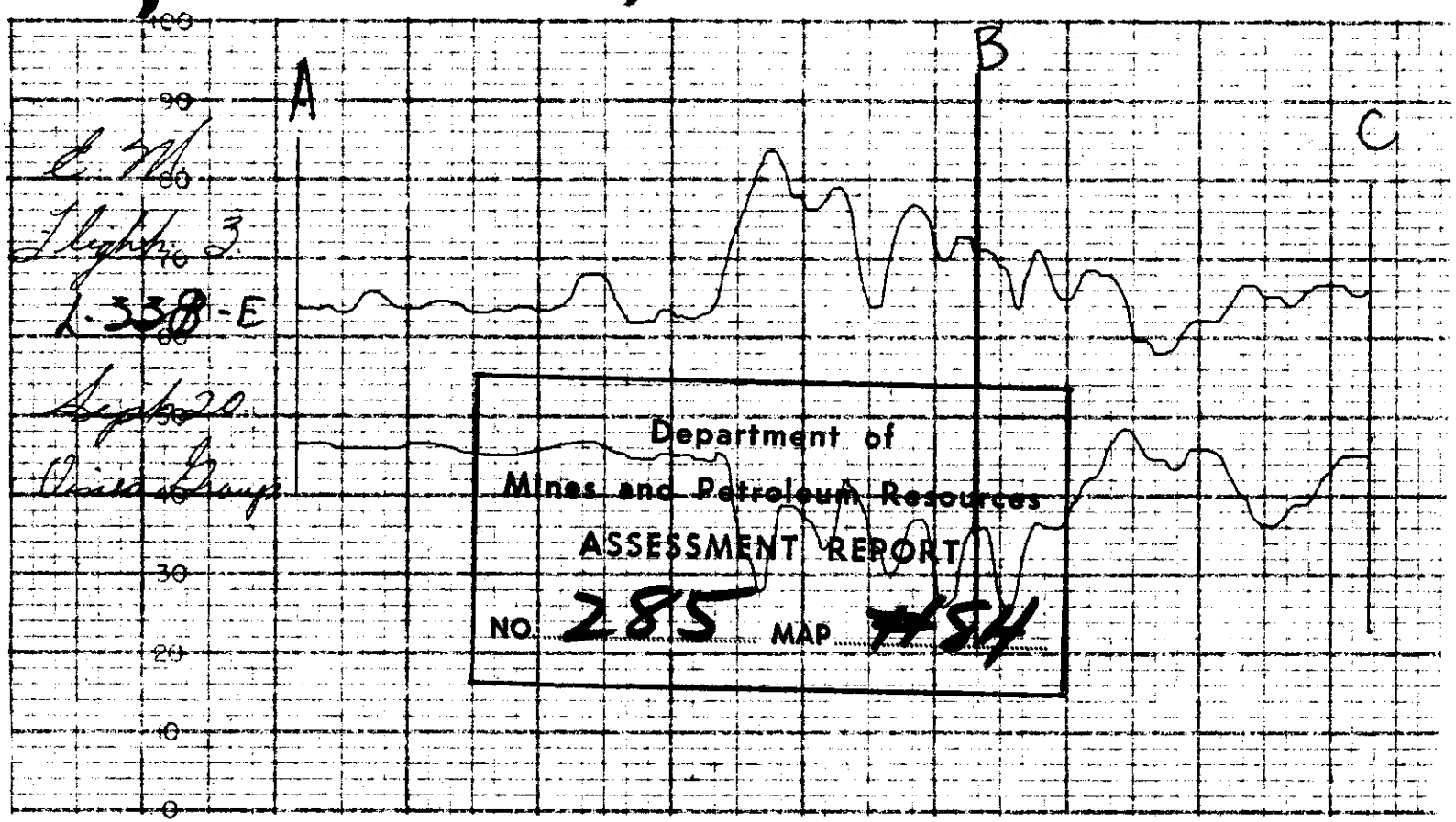
76

POLIS, IND., U.S.A. CHART NO. 12 10 X



77


MADE IN U.S.A.
A
B
C
100
90
80
70
60
50
40
30
20
10
0
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. #285 MAP #83
L-37-E
78


A
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C
100
90
80
70
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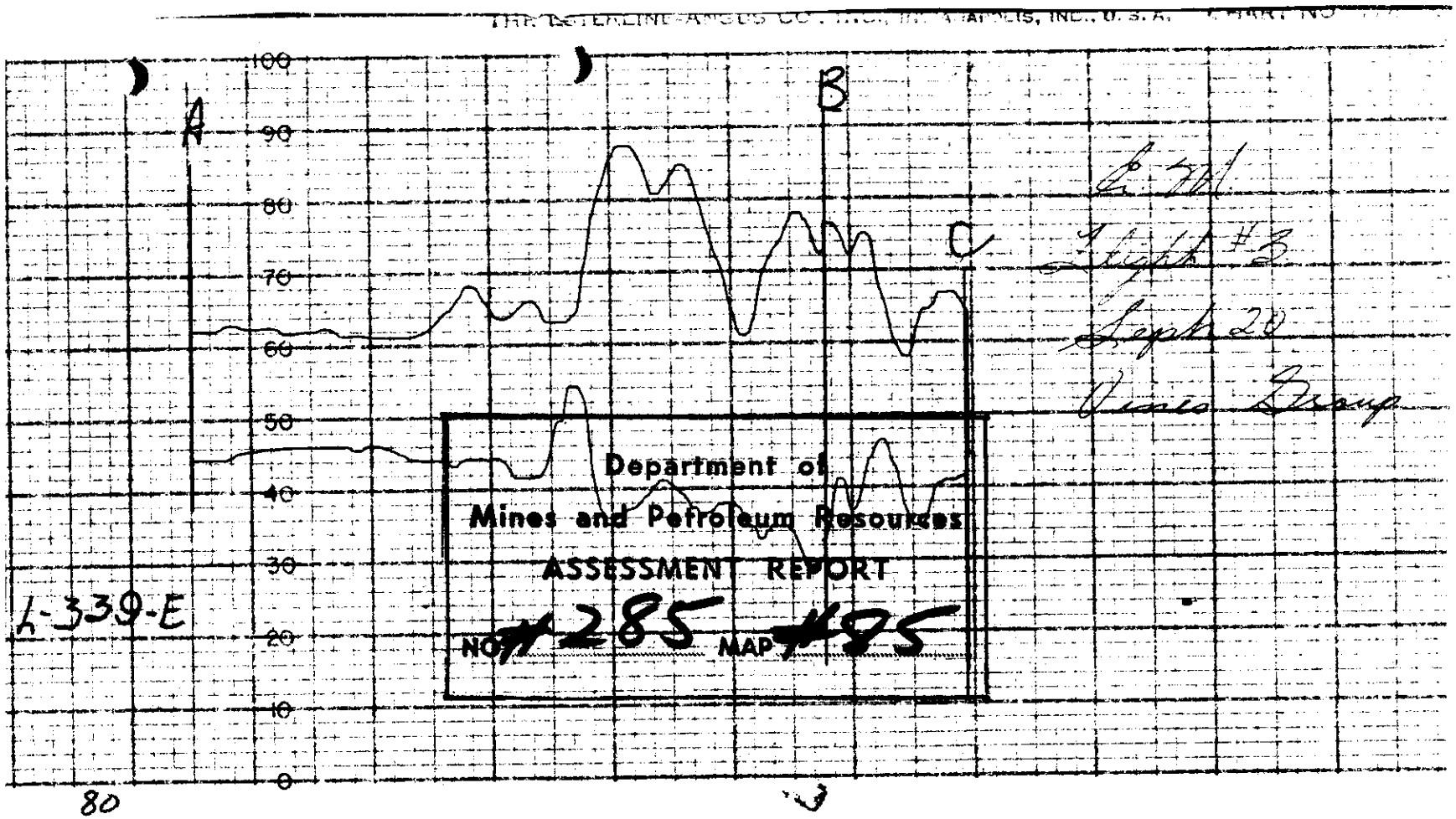
50
40
30
20
10
0
0
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #854

79


A
B
C
100
90
80
70
60
50
40
30
20
10
0
80
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP 85
L-339-E

Note. Mag & EM profiles on file in Victoria.

-FIDUCIAL MARKS
23-LINE NUMBERS

MAP SHOWIN
THE LOCATION OF FI
ON THE
VINES CLAIM
LIARD MINING
CASSIAR
FOR
TOTEM MINERAL
SCALE · 1" = 100

TO ACCOMPANY RE
LUNDBERG EXPLORATI
PRINCE GEORG
Oct. 1959

-e. Mag & EM profiles
= on file in Victoria.

-⊙- - FIDUCIAL MARKS
⊙— 23-LINE NUMBERS

MAP SHOWING
THE LOCATION OF FLIGHT LINES
ON THE
VINES CLAIM GROUP
LIARD MINING DIVISION
CASSIAR, B.C.
FOR
TOTEM MINERALS LIMITED
SCALE · 1" = 1000 ft.

TO ACCOMPANY REPORT BY
LUNDBERG EXPLORATIONS LIMITED
PRINCE GEORGE B.C.
Oct. 1959

285

MAP No. 1

59°15'

4000

5000

3500

6000

5000

4500

4500

5000

STEWART ROAD

LANG LAKE

VINES L.

N

285

ISODYNAMIC LINES OF VERTICAL MAGNETIC INTENSITY

MAP SHOWING

AN INTERPRETATION OF AEROMAGNETIC RESULTS

ON THE

VINES CLAIM GROUP

LIARD MINING DIVISION

CASSIAR, B.C.

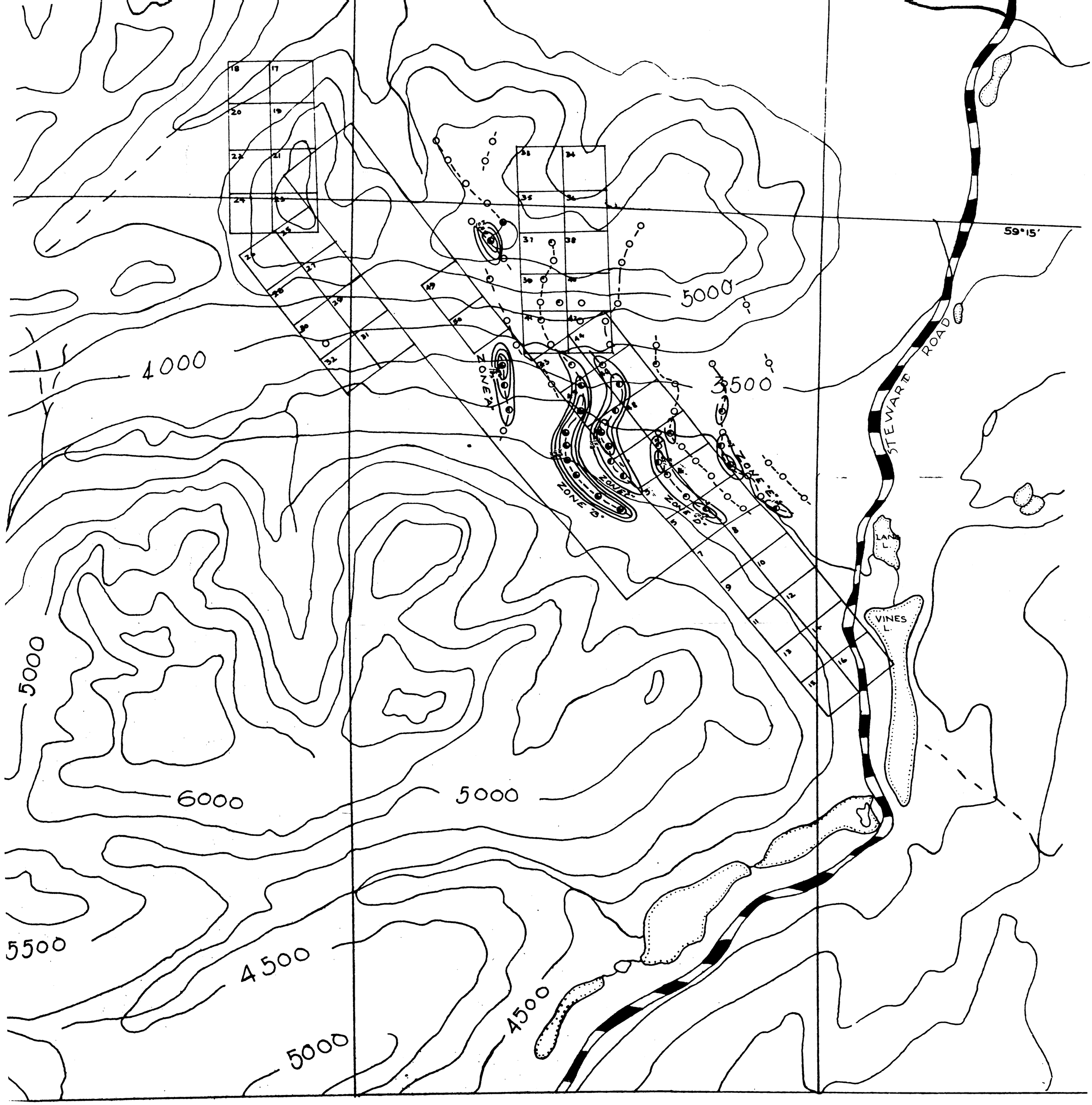
FOR

TOTEM MINERALS LIMITED

SCALE 1" = ¼ MILE

TO ACCOMPANY REPORT BY
LUNDBERG EXPLORATIONS LIMITED
PRINCE GEORGE B.C.
Oct. 1959

MAP No. 2



285

LEGEND

REAL COMP. VALUES

- ○ - 5%
- ◔ - 10%
- ◑ - 15%
- ◕ - 20%
- ● - 25%
- ANOMALOUS TRENDS
- ANOMALOUS ZONES

METHOD: TWO AIRCRAFT-ROTARY FIELD EM. SYSTEM.

MAP SHOWING

AN INTERPRETATION OF ELECTROMAGNETIC RESULTS

ON THE

VINES CLAIM GROUP

LIARD MINING DIVISION

CASSIAR B.C.

FOR

TOTEM MINERALS LIMITED

SCALE - 1" = ¼ MILE

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PRINCE GEORGE B.C.
Oct 1959

MAP No. 3

LEGEND

PLEISTOCENE

the rest 5 — GLACIAL TILL, SAND, TALUS

DEVONIAN & MISSISSIPPIAN (SYLVESTER GROUP)

4 — LIMESTONE (LOCALLY CRYSTALLINE)

3 — ARGILLACEOUS QUARTZITE, SHALE (PYRITE NODULES), PEBBLY GREYWACKE

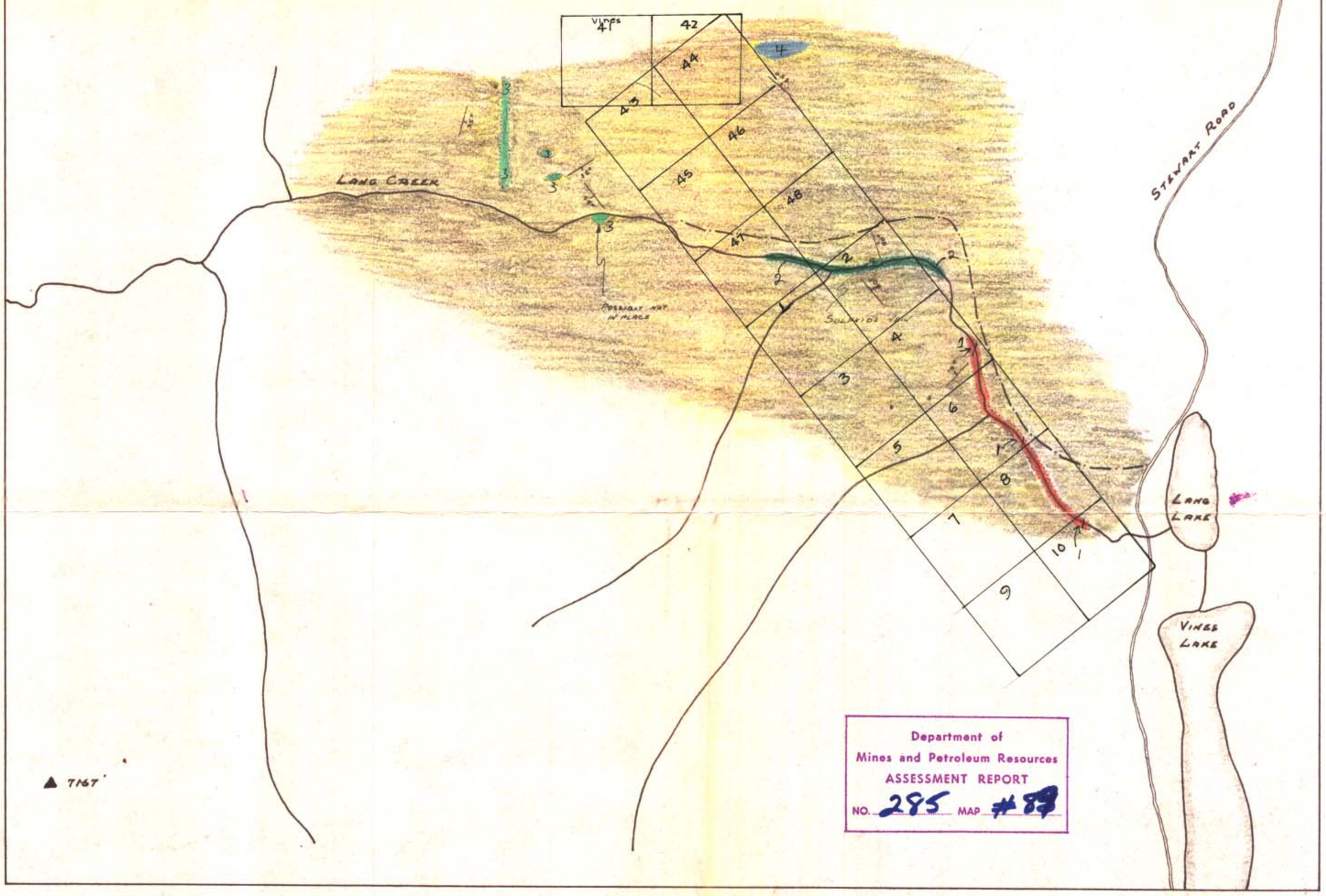
2 — SHALE, GREENISH ARGILLACEOUS LIMESTONE

1 — BIOTITIC ARGILLACEOUS QUARTZITE

·—·— DIAMOND-DRILL ROAD

CONTACT BETWEEN OVERBURDEN & OUTCROP

30° — ATTITUDE OF BEDDING



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 285 MAP #8

LANG CREEK ABEM GROUND EXAMINATION
VINES CLAIM GROUP, LIARD M.D.
SCALE: 1" = ¼ MILE

SEPT. 26, 1959

S. M. BRADY.

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MAP No. 4

To Accompany Report by
LUNDBERG EXPLORATIONS LTD.
PRINCE GEORGE B.C.
Oct. 1959.