Tox (889)

036101
Shaughnessy No.

Date out of EAB: 20 SEP 1983

Initials: RM

To: Mountfort
Product Manager #23
Registration Division (TS-767)

From: Carolyn K. Offutt, Chief Carolyn Offutt
Environmental Processes and Guidelines Section
Exposure Assessment Branch, HED (TS-769)

Attached please find the EAB review of...

Reg./File No.: 1471-70

Chemical: Trifluralin

Type Product: Herbicide

Product Name: TREFLAN

Company Name: Elanco

Submission Purpose: progress report - field monitoring study

ZBB Code: 3(c)(5)

ACTION CODE: 436

Date In: 8/8/83

EFB # 3478

Date Completed: 8/31/83

TAIS (level II)	Days
47	.3

Deferrals To:

X Ecological Effects Branch

____ Residue Chemistry Branch

____ Toxicology Branch

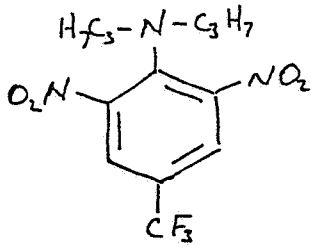
Trifluralin

I. Introduction:

Elanco is submitting an eleven-month report on an ecological effects field monitoring study with trifluralin. This report and study is in response to the Trifluralin Data Call-in Notice.

II. Chemical/Physical Data:

Trade Name: TREFLAN 4 MTF
Common Name: Trifluralin
Structure:



III. Discussion:

This eleven-month report provides information on the selection of the sites, the application of the pesticide, and the initial population sampling of the ponds.

The selection and characterization of the watersheds was conducted by Dr. David B. Beasley of Purdue University, West Lafayette, IN. The watersheds are numbers 51 and 56. See attached list of prioritized sites. These two sites met all the specifications set by the Data Call-In and the approved protocol:

Slopes 5 to 10°C; max. 10-30%
Drainage into a catchment pond; basin: pond ratio 10:1 to 25:1
Similar geological, hydrological, and biological characteristics
Treatable site - at least 60% of total basin
Pond with year-round fish population

Site 51 is 2 mi E of Trafalgar IN and 0.75 m N of Indiana route 252. Site 56 is 0.5 mi N of Indiana route 252 and 0.75 mi W of U.S. route 31. Maps of the two sites are attached.

General Description of the Study Sites

	Site No. 51	Site No. 56
Watershed size	39 acres	63 acres
Treated area	81%	60%
Pond size	3 acres	3 acres
Soil types	Miami(MtC3, MnB2) Crosby (CrA)	Miami (MnB2, MnE) Crosby (CrA) Crosby-Miami (CsB2)
County	Johnson	Johnson
Township	Neneveh	Blue River
Owner	Jeff Ward/ Carl Sleighter	Wayne Roach

The information sheets on pesticide application provided in the report are appended to this report.

IV. Conclusion

The selection and characterization of the sites and application of the pesticide appears to satisfy the needs of Exposure Assessment Branch to monitor trifluralin runoff into ponds. We defer to Ecological Effects Branch on the animal population studies.

Robert W. Holst, Ph.D.
Exposure Assessment Branch

Table 1. Prioritized List of Watersheds

No.	Watershed No.	County	Quad	Survey Sheet	Township	Sec	Area -ac-	Avg. Slp. -%-	Max. Slp. -%-
1	42	Jennings	Deputy	53	Marion	23	71.0	2.6	9-12
2	62	Morgan	Mooresville-West	8	Monroe	5	48.1	2.6	15-20
3	33	Jennings	Hayden	28	Center	5	67.6**	3.8**	10-15
4	71	Morgan	Cope	31	Green	11	57.5**	2.8**	8-10
5	56	Johnson	Franklin	35	Blue River	7	63.1**	2.7**	12-15
6	51	Johnson	Franklin & Trafalgar	33	Nineveh	5	39.4**	4.3**	25-30
7*	37	Jennings	Chestnut Ridge & Hayden	37	Spencer	21	128.1	1.5	12-15
8*	37a	Jennings	Chestnut Ridge	37	Spencer	21	16.8	1.7	12-15
9*	20	Bartholomew	Hartsville	24	Clifty	4	71.4	1.6	5-6
10*	21	Bartholomew	Hartsville & Grammer	24	Clifty	4	101.6	1.3	5-6
11	2	Bartholomew	Hope	11	Haw Creek	17	34.1	2.3	5-6
12	54	Johnson	Franklin & Trafalgar	33	Nineveh	7	78.3	2.1	12-15
13	65	Morgan	Mooresville-East	9	Brown	5	50.4	1.7	14-18
14	43	Jennings	Deputy	53	Marion	24	57.0	1.7	6-8
15	50	Johnson	Franklin & Trafalgar	33	Nineveh	5	72.2	1.5	7-9

*Watersheds 7-8 and 9-10 are nested.

**These values arrived at through simulation study (a more thorough characterization).

Site 51

T4N PROJECT

TREFLAN 4MTF Application on the Cark Sleighter Farm

TREFLAN 4MTF applied June 8, 1983

31 acres treated

TREFLAN applied in tank mix combination with Lexone 4L

TREFLAN rate 1 lb a.i./A

Lexone rate 0.5 lb. a.i./A

Application Technique: Big A with 55 ft. boom width

Nozzles: TKSS 20 flood type, 60 inch spacing on the boom

Application Speed: 15 mph

Carrier: Water at 20 gallons/acre

Soil Texture: Variable from medium to fine

Incorporation Device: First pass with an Allis Chalmers 26 ft. wide field cultivator with 3 rows of C shanks and overlapping shovels with a Kasco harrow pulled in tandem with the field cultivator. Incorporation equipment pulled at 6 mph, operated at 3 to 4 inches deep.

Second pass with an Allis Chalmers 20 ft. wide tandem disc equipped with 24 inch diameter blades on a 9 inch spacing pulled at 6 mph, operated 4 inches deep.

Planter: John Deere Max-Emerge 7000; 30 inch row spacing with a planting depth of 1 to 1-1/4 inches seeding 50 lbs/A.

Seed Source: Pioneer 3481 planted June 8, 1983

Weather at Application: Clear, 75°F, wind, west-northwest at 3-7 mph

Site 51

T4N PROJECT

TREFLAN 4MTF Application On The Jeff Ward Farm

TREFLAN 4MTF applied on June 9, 1983

Approximately 30 acres treated

TREFLAN applied in tank mix combination with Lexone 4L

TREFLAN rate 1 lb a.i./A

Lexone rate 0.5 lb. a.i./A

Application Technique: Big A with 55 ft. boom width

Nozzles: TKSS 20 flood type, 60 inch spacing on the boom

Application Speed: 15 mph

Carrier: Water at 20 gallong/acre

Soil Texture: Variable from medium to fine

Incorporation Device: First pass with an International Harvester 21 ft. tandem disc equipped with 20 inch blades on a 9 in spacing operated at a speed of 5-1/2 mph at a depth of 3-4 inches.

Second pass with a Midwest spring tooth harrow operated at 6 mph, 2-3 inch depth

Planter: International Harvester Cyclo Airflow planter with 30 inch row spacing planting to a depth of 1-1/4 inches. Seeding rate of 50 lbs/A

Seed Source: Pioneer 3981 planted June 10, 1983

Weather at Application: Clear, 85°F, wind calm

Site 56

T4N PROJECT

Lasso 4EC Application On The Wayne Roach Farm

Lasso 4EC applied on May 31, 1983

Approximately 39.1 acres treated

Lasso applied in tank mix combination with Lexone 4L

Lasso rate 2.5 lb a.i./A

Lexone at 0.5 lb a.i./A

Application Technique: Big A with 55 ft. boom width

Nozzles: TKSS 20 flood type, 60 inch spacing on the boom

Application Speed: 15 mph

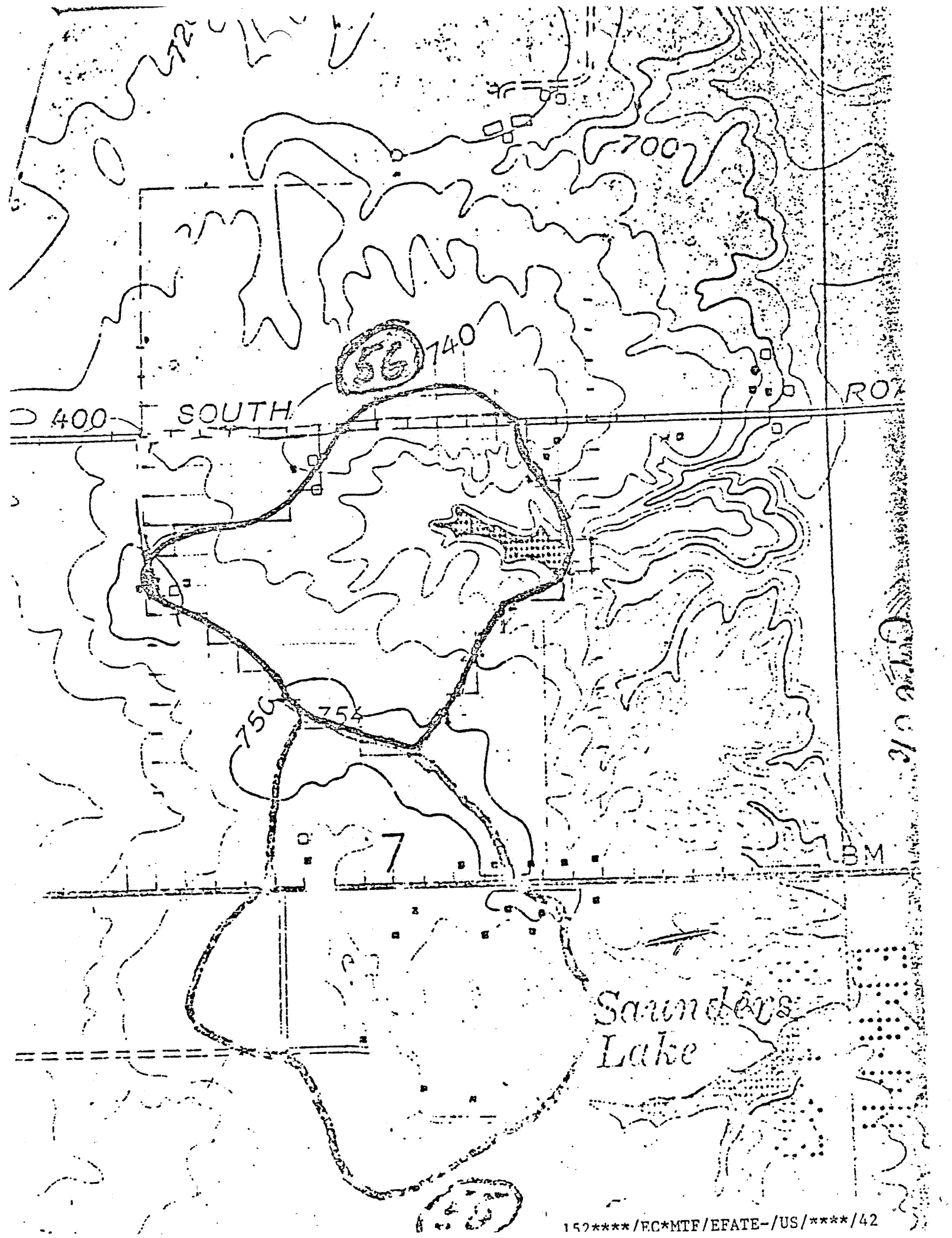
Carrier: Water at 20 gallons/acre

Soil Texture: Variable from medium to fine

Incorporation Device: Tandem disc equipped with 21 inch blades in 9 inch spacing operated at a speed of 5-1/2 to 6 mph at a depth of 3 inches.

Seed Source: Stewarts soybean seed

Weather at Application: Clear, 79°F, wind calm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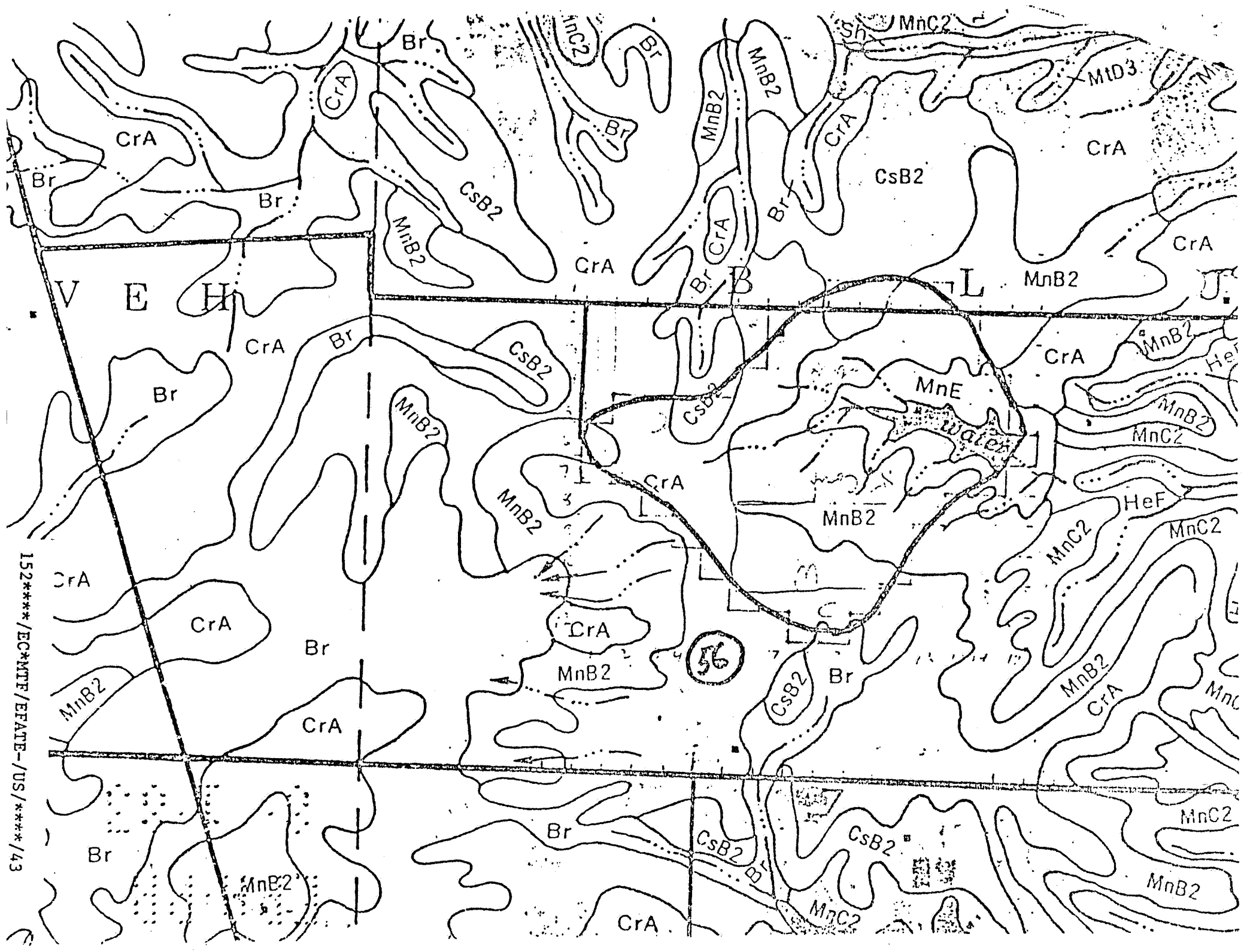

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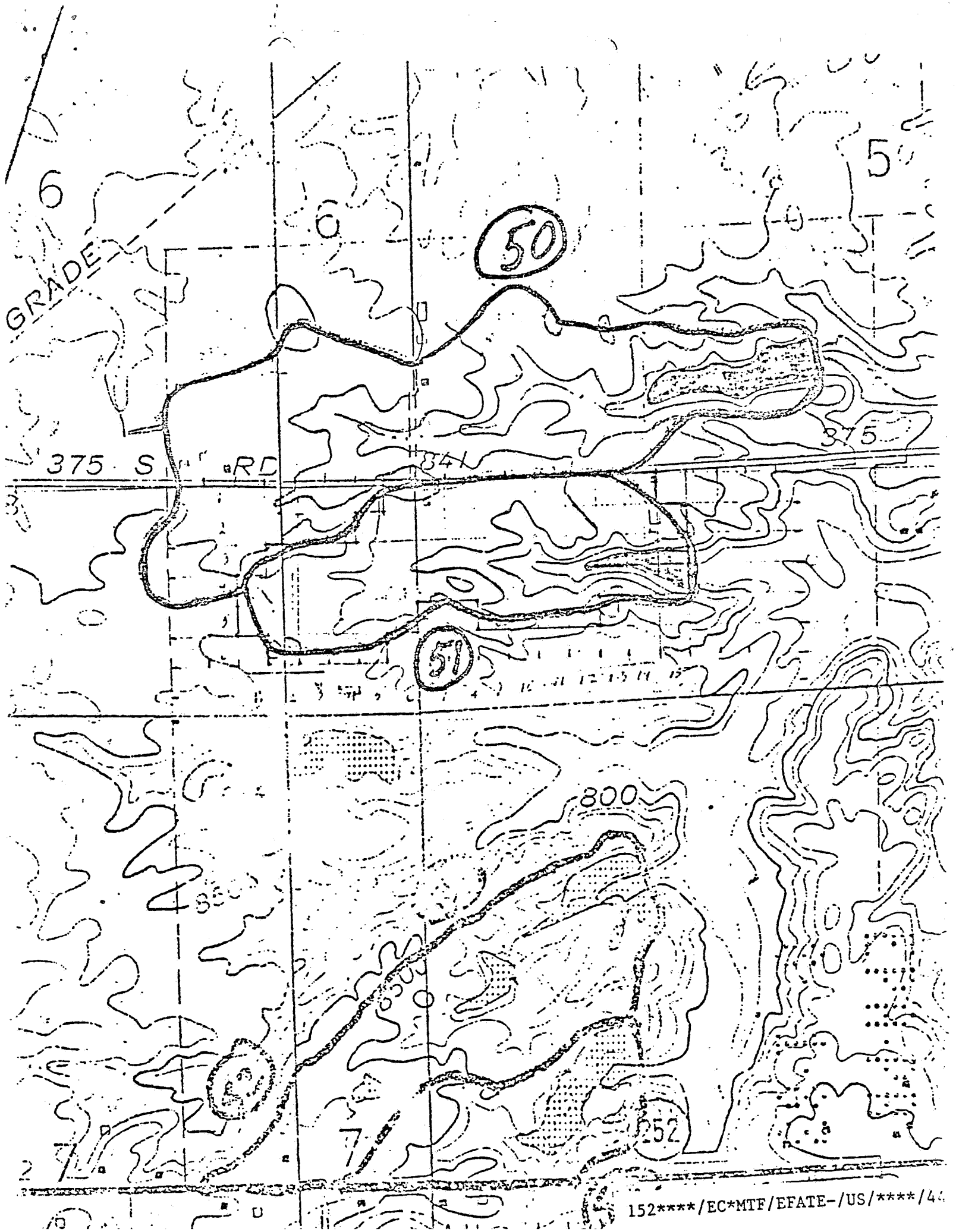
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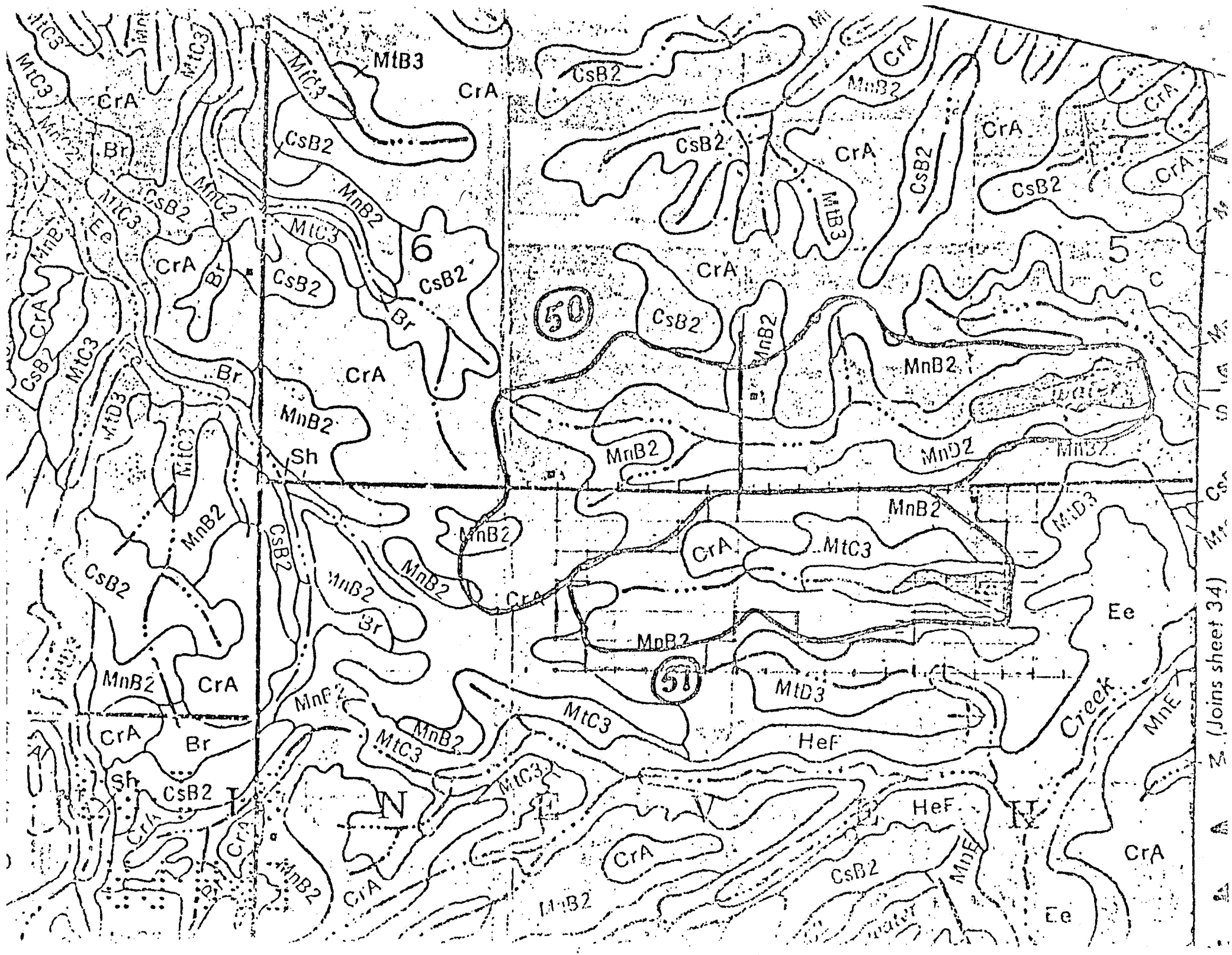
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