

TECHNICAL PROVISIONS
OF
SPECIFICATIONS
FOR

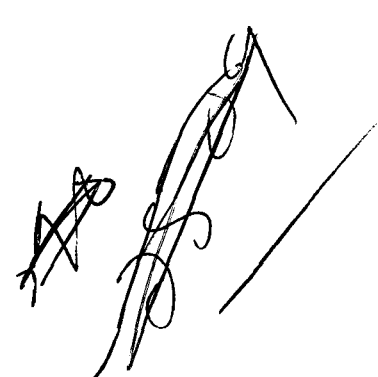
HAINES-FAIRBANKS POL PIPELINE RIGHT-OF-WAY BRUSH CONTROL

PIPELINE MILEPOST 42.5 THROUGH 337.5

PROJECT NO. 20-69

PETROLEUM DISTRIBUTION OFFICE
UNITED STATES ARMY, ALASKA SUPPORT COMMAND
FORT RICHARDSON, ALASKA

15-03-001-1200-69



214
8-1

INDEX
TO
TECHNICAL PROVISIONS
FOR

HAINES-FAIRBANKS POL PIPELINE RIGHT-OF-WAY BRUSH CONTROL
PIPELINE MILEPOST 42.5 THROUGH 337.5

| <u>TS</u> | <u>TITLE</u> | <u>PAGE</u> |
|-----------|-----------------------------------|-------------|
| 01 | SCOPE | 1 |
| 02 | LOCATION OF THE WORK | 1 |
| 03 | DESCRIPTION OF AREA TO BE SPRAYED | 1 |
| 04 | GENERAL | 1 |
| 05 | CONTRACTOR RESPONSIBILITY | 1,2 |
| 06 | MATERIALS | 2,3 |
| 07 | MIXING RATIO | 3,4 |
| 08 | APPLICATION RATE | 4 |
| 09 | APPLICATION EQUIPMENT | 4,5 |
| 10 | GENERAL OPERATING CONDITIONS | 5 |
| 11 | INSPECTION | 5 |
| 12 | SAFETY PRECAUTIONS | 5,6 |
| 13 | PAYMENT | 6 |

TECHNICAL SPECIFICATIONS FOR BRUSH CONTROL
ALONG PIPELINE RIGHT-OF-WAY
FROM HAINES TO FAIRBANKS

TS-01 SCOPE: The work covered by this specification consists of furnishing all labor, equipment, appliances, and performing all operations in connection with the aircraft application of liquid herbicides for vegetation control in strict accordance with scheduled provisions and subject to the terms and conditions of the contract.

TS-02 LOCATION OF THE WORK: The pipeline right-of-way for this project extends from the north boundary of Canada, pipeline milepost 337.5 to the south boundary of Canada, pipeline mile post 42.5, approximately 295 miles. The route follows along the Alaska Highway, (see attached drawing No. 000-000-169).

TS-03 DESCRIPTION OF AREA TO BE SPRAYED: The existing pipeline right-of-way wherein this treatment shall be applied is 50' wide. The center 40' of this ~~road~~ right-of-way is to be treated within the areas designated in TS-04 and TS-05.

TS-04 GENERAL: Pipeline right-of-way from the north Canadian Border to Haines, Alaska is to be aerial sprayed to a width of 40 feet. Maximum allowance for wind drift not to exceed 5 feet on either side of the center 40 feet of the 50 foot wide right-of-way. The areas to be sprayed are as follows:

- a. Starting at pipeline milepost 42.5 to pipeline milepost 51.0 (approximately 8.5 miles).
- b. From pipeline milepost 64.0 to pipeline milepost 149.0 (approximately 85 miles).
- c. From pipeline milepost 152.0 to pipeline milepost 186.0 (approximately 34 miles).
- d. From pipeline milepost 191.0 to pipeline milepost 337.5 (approximately 146.5 miles).

The total distance to be aerial sprayed is 274 miles. Each pipeline mile is marked with a 3' x 5' sign; yellow background with black letters.

TS-05 CONTRACTOR RESPONSIBILITY:

- a. Aerial spraying shall be limited to those areas within the 50 foot right-of-way, and not closer than 500 feet of any building site, stream, lake, cleared area, surrounding settlements, homesteads and pump stations.

b. The contractor shall have adequate liability insurance as provided in general provisions to protect the Government (Dept. of Army) against any and all claims, including crop damage, forest timber damage (private or government owned adjacent to the pipeline right-of-way) that may arise as a result of the contractor's operations beyond the limits specified above.

c. The contractor will be responsible for selecting helicopter landing locations, and locations for filling spray tanks, mixing chemicals or loading equipment. Pipeline pumping station areas may be utilized by the contractor for storage of materials, equipment mobilizing areas and heliports, providing permission is first obtained by the contractor from the Station Foreman. Pipeline pumping stations are located near Beaver Creek approximately at pipeline milepost 323.8, Donjek River approximately at pipeline milepost 248.0, Destruction Bay approximately at pipeline milepost 208.0, Haines Junction approximately at pipeline milepost 158.0, Blanchard River approximately at pipeline milepost 87.0, Canadian Border approximately at pipeline milepost 47.3 and Haines Terminal, Haines, Alaska pipeline milepost 0.0.

d. The contractor will coordinate his flight procedures with other scheduled or non-scheduled aircraft operations within the area for safety purposes. This will include coordination with the inspection crew that flies the pipeline frequently.

TS-06 MATERIALS:

a. All herbicide chemicals and particulating agent including water shall be furnished by the contractor. Water shall be clear and free from foreign material that could clog spray nozzles. Water from hot springs or other sources that contain high dissolved salts will not be permitted for use. The chemical to be used shall be picloram and 2,4-D with chemical analysis as follows:

Active Ingredients

4-amino - 3, 5, 6 - trichloropicolinic acid as the triisopropanolamine salt-----10.2%

2, 4 dichlorophenoxyacetic acid as the triisopropanolamine salt--39.6%

Inert Ingredients-----50.2%

Acid Equivalents

4 - amino - 3, 5, 6 - trichloropicolinic acid----- 5.7%

2, 4-dichlorophenoxyacetic acid----- 21.2%

b. A consistency test funnel approved by the chemical manufacturer and a stop watch with a sweep second hand will be furnished by the contractor.

c. The chemicals (herbicide) sufficient to treat the areas shown on the drawing shall be delivered to the jobsite in sealed containers, each fully labeled and bearing the name and trademark of the producer. Secure storage for chemicals will be provided by the contractor as required. A certified statement in duplicate from the vendor furnishing the chemicals as to acid equivalent and/or percentage of ingredients content per gallon shall be furnished the Contracting Officer prior to use of the chemicals. The certificates shall appear on/or with the duplicates of the invoices for the chemicals and additives. After the empty containers have been accounted for by the contracting officer, they will be disposed of as follows:

(1) Sealed and returned to the manufacturer or supplier.

(2) Buried in a sanitary fill with at least 2' of soil cover and where water will not carry residue into stream channels or as directed by the contracting officer.

(3) Burning of containers is not permissible as fumes/or smoke from the herbicides could do extensive damage.

TS-07 MIXING RATIO: The formulation shall be proportioned and mixed at the rate of 3 gallons of herbicide to 12 gallons of water plus a particulating agent.

a. Mixing Directions: To prepare 100 gallons of spray, mix 20 gallons of picloram, -2, 4-D, specified in para TS-06, with 20 gallons of water with vigorous mechanical agitation. Continue agitation and distribute approximately 12 pounds of the manufacturers approved particulating agent into the solution and then add the remaining 60 gallons of water. Allow swelling to continue for 20 minutes following mixing before spraying. Note: The contractor will follow the manufacturers instruction manual for using the particulating agent with this herbicide for further mixing instructions.

b. Tests will be made of each batch of herbicide mixture using the funnel tester. (See para TS-06). The time in seconds required for the funnel to empty for mixtures, applied with helicopters from the air, will have a funnel consistency reading of 45 to 85 seconds.

c. Any spray material discarded or rejected after mixing and before application shall be disposed of by burial or other manner

approved by the contracting officer. Materials discarded or spilled shall not be in a location where streams or lakes would be contaminated, drift of fumes would damage crops or timber, or where material could leach downward through the soil and kill vegetation through the roots.

TS-08 APPLICATION RATE: The formulation specified in paragraph TS-06 when mixed with water and particulating agent shall give a total application rate of 15 gallons per surface acre. This shall be applied at the rate of 72.75 gallons per mile.

TS-09 APPLICATION EQUIPMENT:

a. Helicopter: Application shall be made from a fully outfitted helicopter with a minimum gross payload of 560 pounds of spray material.

b. Spray Equipment:

(1) The spray equipment shall be boom-type with nozzles capable of applying the chemical-water particulating agent mixture uniformly on the vegetation being sprayed. Spray booms should be at least 1-1/4 inch outside diameter with a maximum wall thickness of .065 inch.

(2) The spray nozzles shall provide positive cut-off action, automatically, when spray pumps are cut off from the cockpit.

(3) The spray boom shall be mounted on the forward edge of the helicopter skid gear to eliminate vortex swirl of chemical spray and to utilize maximum down-wash of the rotary wing. The system should be calibrated with the particulated spray, using methods sufficiently accurate to establish desired swath width, distribution and coverage within the swath and volume per acre.

(4) Spray droplets shall be as coarse as possible, approximately 2,000 u. (microns), to minimize drift and still obtain coverage. Spray equipment shall be operated with no more than 20 pounds per square inch pressure at the end of the boom. Remote pressure gages should tap directly off the end of the boom.

(5) Hose and hose connections shall be made of such materials and so constructed as to eliminate all possible leakage. Mechanical agitators will be provided to keep the materials in suspension.

(6) The Government reserves the right to inspect the equipment proposed for use by any bidder prior to making award under this invitation to determine that the bidder has proper and adequate equipment for performance of the covenants of any contract resulting from this invitation.

c. General: All equipment shall be certified by the Federal Aviation Agency.

TS-10 GENERAL OPERATING CONDITIONS: Spraying shall be accomplished within established local, state and Federal Regulations pertaining to aircraft operations and herbicide spraying operations.

a. Flight speed during spraying shall not exceed 25 miles per hour.

b. Wind Velocity: No spraying shall be done when wind speed exceeds 5 miles per hour. However, every effort will be made to accomplish spraying during calms with wind velocities below the maximum to prevent drift.

c. Altitude of Flight: Spraying shall be accomplished at not to exceed 2 feet above the canopy of the trees on either side of the pipeline right-of-way.

d. Spraying Operations: The designated areas shall be given two primary treatments by flying the right-of-way twice--one-half the spray volume being applied in one direction and the other half in the opposite direction. However, the contractor shall return approximately four weeks after completion of the primary treatment and spray any areas missed or insufficiently sprayed, as determined by the Contracting Officer, at no additional cost to the Government.

e. Time of Application: Application will not be authorized during rainstorms or within 18 hours of predicted heavy torrential rain. Spraying should be completed on any area at least 6 hours before light rainfall occurs. It will be the contractor's responsibility to follow weather information closely each day by radio or other means. Contractor shall proceed with spraying as soon as trees and brush on right-of-way are in full foliage and only during periods of rapid growth. Spray will not be applied when foliage is wet. The contracting officer's representative, Petroleum Distribution Office, shall be notified 72 hours in advance of spraying operation.

TS-11 INSPECTION: Inspection will be made to determine the coverage by use of 2 rows of splatter cards 50' apart and placed 5 feet apart horizontally in the row. In the event sufficient coverage is not evident the Government reserves the right to direct the Contractor to increase or decrease the flow rate per mile and require additional tests as determined necessary.

TS-12 SAFETY PRECAUTIONS: The contractor shall observe all appropriate safety precautions as required by certified labels on the containers.

Extreme precautions shall be used to prevent drift damage to areas as mentioned in TS-05. Spray mixtures with particulating agent are slippery. Accumulation of the mixture or the dry product on steps, walks, roadways, or equipment, should be immediately washed away with water to remove the hazard of such slippery surfaces.

TS-13 PAYMENT: The contractor shall be paid on a unit price per mile sprayed distance as defined in paragraph TS-04, a, b, c, and d.

SCHEDULE OF BID ITEMS

HELICOPTER AERIAL SPRAY

1. The contractor shall furnish all plant, labor, equipment, supplies, appliances, materials, transportation and perform all work, including work of an incidental nature for the aerial herbicide spraying of the pipeline right-of-way in Alaska in strict accordance with the technical specification, and subject to the terms and conditions of the contract.

| | <u>Unit</u> | <u>Est</u> | <u>Unit</u> | <u>Price</u> |
|------------------------|-------------|-----------------|--------------|--------------------|
| | <u>Mile</u> | <u>Quantity</u> | <u>Price</u> | <u>Extension *</u> |
| Aerial herbicide spray | Mile | 274.5 | | |

2. The work shall commence within 15 days after notice to proceed and be completed within 30 days. Forty feet of the fifty foot right-of-way from Pipeline Milepost 42.5 through Pipeline Milepost 337.5 is to be sprayed, reference specifications TS-04.

* To correspond with TS-13

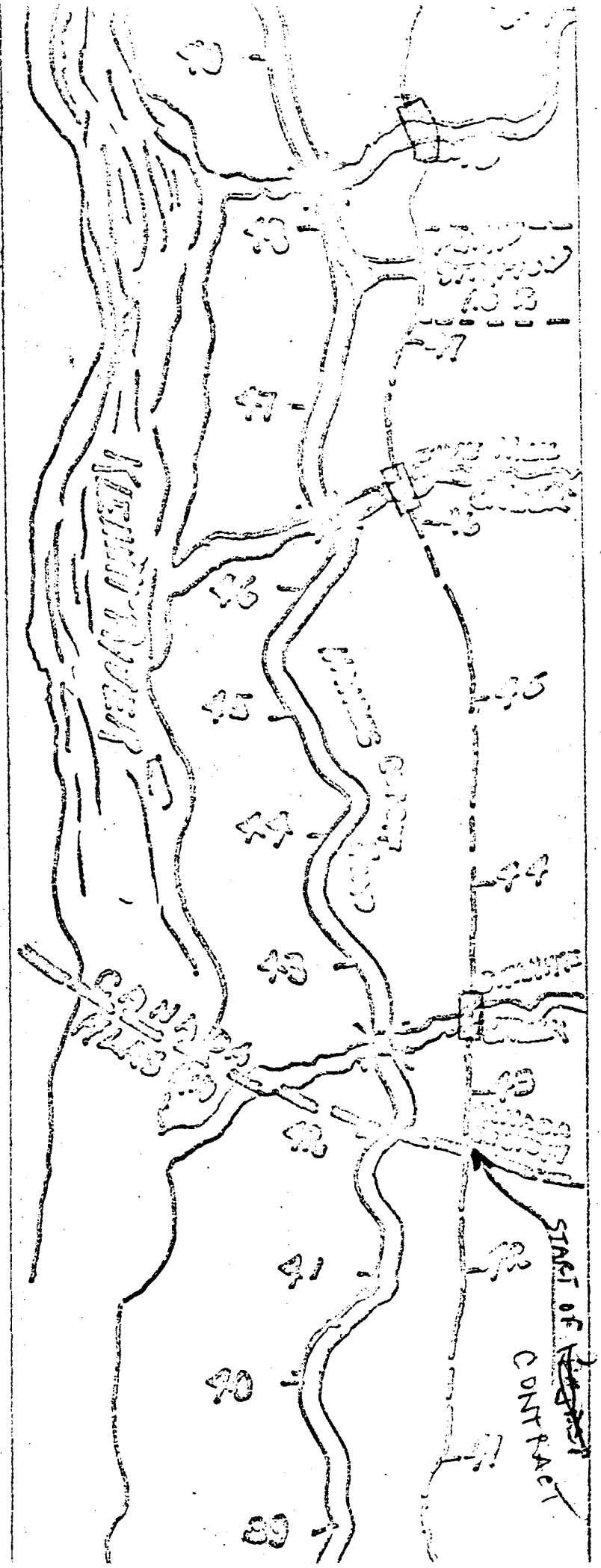
* 4/85 acres per mile 40' wide

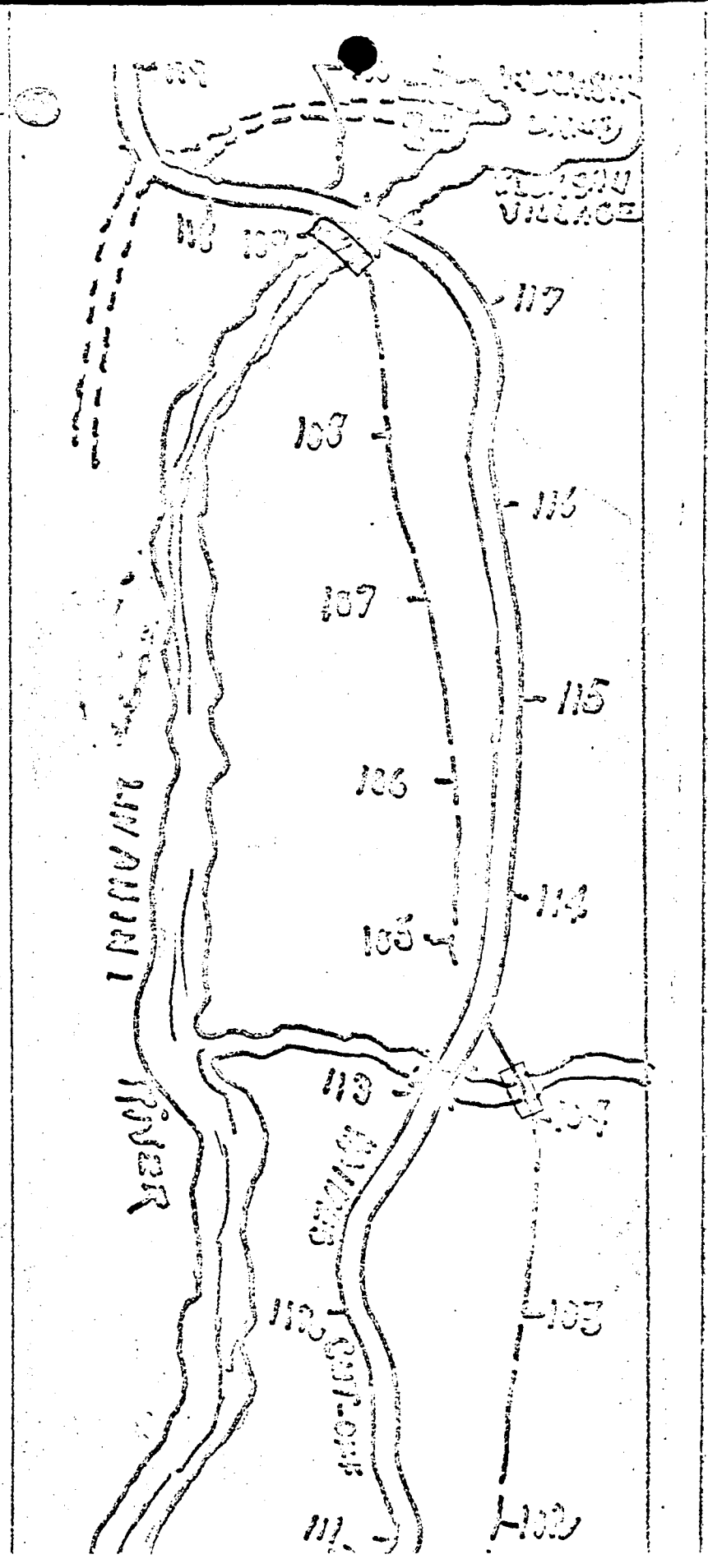
PIPELINE STRIP MAP

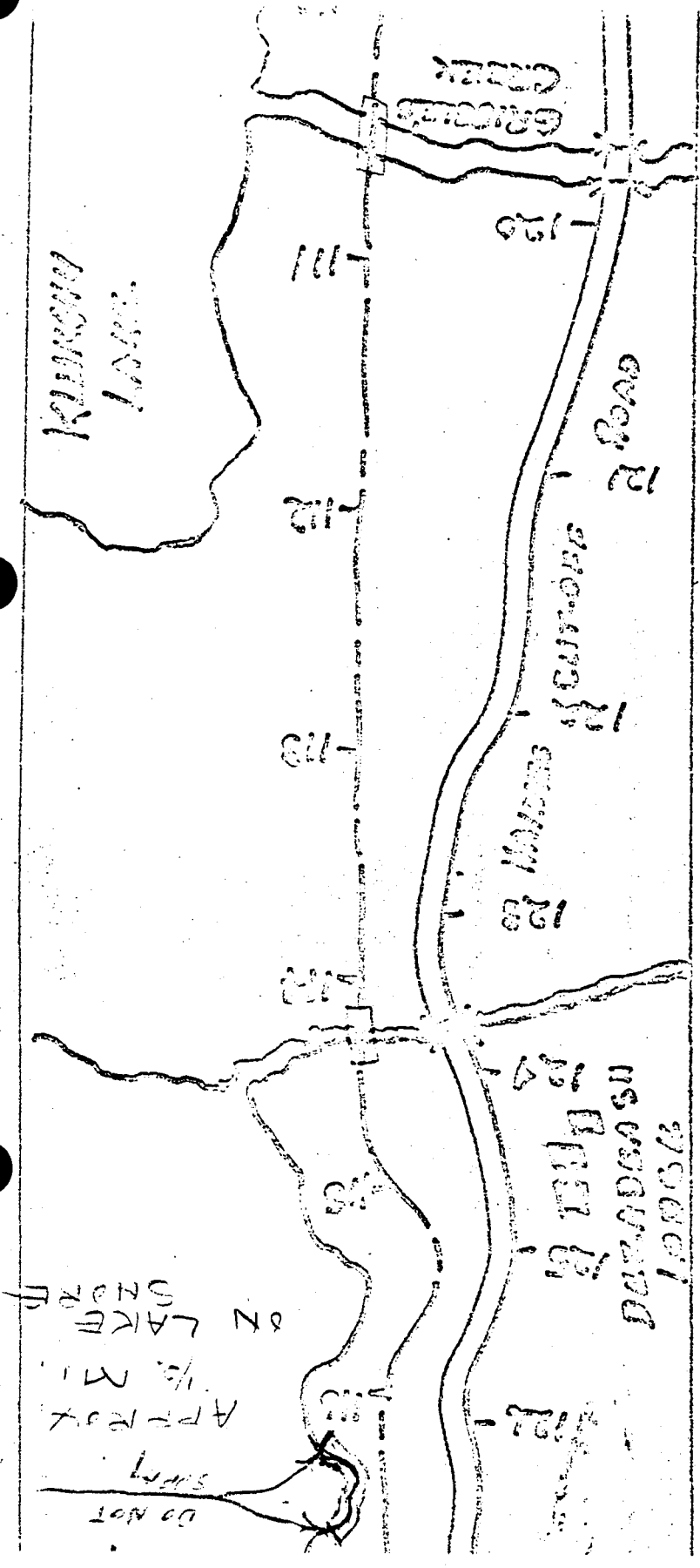


100'

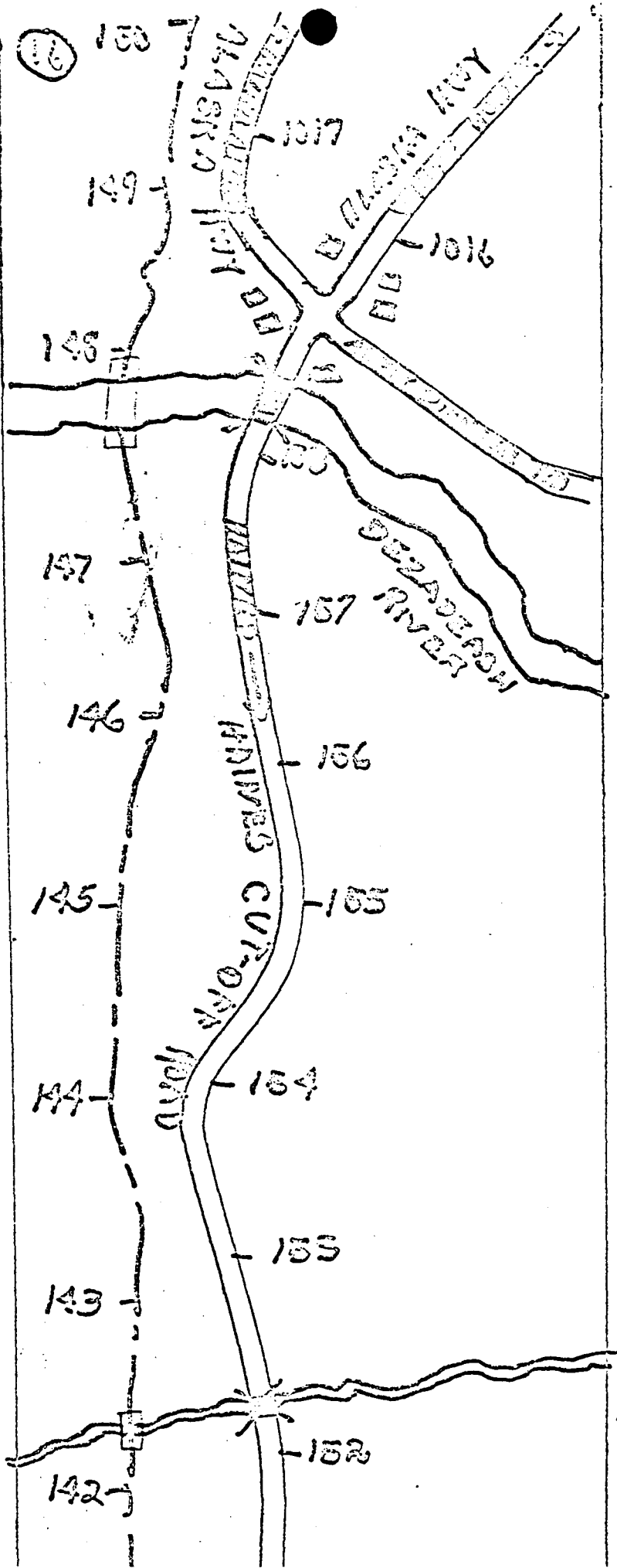
~~500'~~ EACH SIDE OF RIVERS
AND STREAMS NOT TO BE
SPRAYED







Cut 200



CWS

