Initials: AW

File Name: 37592

Commodity: Ag As Au Cu Mo Pb Zn

Country: USA

State/Province: NEVADA

County: NYE

Project: SMOKY

Date: 1981

Title/Subject: PAPER ON "FACTORS TO CONSIDER IN MINING OPERATING PLANS"

Notes:

#____Oversize Doc(s) ___1___Assay Data ____Log(s)

Map Scale:_____

T: 012N 013N

R: 044E 045E

S: _____

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
TOIYABE NATIONAL FOREST
Tonopah, Nevada

RECEIVED
SHARON STEEL CORP.
MINING DIVISION
MAR 02 1981
2810 EXPLORATION DEPT.

February 24, 1981

Mr. Gaylon Hansen, Exploration Manager
USSRAM Exploration Co.
136 E. South Temple
19th Floor UCB
Salt Lake City, UT 84111

Dear Mr. Hansen;

Last year you filed an operating plan with the Tonopah District for the Molly and Mey Claims. We have anticipated that you will probably file another plan this year, and have enclosed a blank form for your use. You may return the completed plan to our office in person or by mail. It will help us immeasurably if you return the operating plan at least one month before starting work so we may evaluate the project and visit the site if necessary.

Also enclosed is "Factors to Consider in Mining Operating Plans." This paper lists guidelines that the Forest Service uses in evaluating mining projects and operating plans. By following these guidelines, you can minimize soil erosion and reduce impacts on watershed, range and timber values. We hope you will refer to this paper when putting together your next operating plan.

If you have any questions, please do not hesitate to call.

Sincerely,

Jan A. Ford
for G. GLADE QUILTER
District Ranger

Enclosure

ENVIRONMENTAL PROTECTION MEASURES - Describe measures to be taken to protect surface resources and reclaim the disturbed areas.

NOTE: Operations, including access, shall be conducted so as to minimize adverse environmental impacts on National Forest surface resources.

PERIOD OF OPERATION - Period or periods during which operations, including road work, and use will take place.

Road Work: /Other Operations:

OPERATOR'S NAME (Print or type) ADDRESS TELEPHONE NUMBER

SUBMITTED BY AND DATE:

FOREST SERVICE EVALUATION

NOTICE TO OPERATORS:

(1) Approval of this operating plan does not constitute certification of ownership to any person named as owner herein.

(2) Approval of this operating plan does not constitute recognition of the validity of any mining claims named herein, or of any mining claim now or hereafter covered by this plan.

This operation would cause a significant disturbance of surface resources? Yes ☐ No ☐

The information provided is sufficient to constitute a basic operating plan?
Yes ☐ No ☐ and an operating plan must be prepared and submitted to this office.

A special-use permit is required? Yes ☐ No ☐

☐ A bond in the amount of _____ in the form of cash or surety to assure reclamation as described under "Environmental Protection Measures" and item 2 of the Evaluation and Report of Notice is required.

☐ No bond is required.

(3) Antiquities Act of 1906 (P.L. 59-209).

NOTE: "That any person who shall appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department by the Government having jurisdiction over the lands on which said antiquities are situated, shall, upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court."

(4) Approval of an operating plan does not constitute permission of the Secretary so as to relieve the operator from criminal prosecution under the Antiquities Act.

Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

NOTICE OF INTENTION
TO OPERATE
OR
BASIC OPERATING PLAN
[redacted]
Ref. Act of June 4, 1897
[redacted]
30 CFR 252
FSM 2830

a. National Forest	b. Ranger District	c. Drainage
TOIYABE	TONOPAH	
d. State	e. County/Counties	f. Mining District
NEVADA	NYE	

g. Type of Claim or Claims
Lode ☐ Placer ☐
Mill Site ☐ Tunnel Site ☐

h. Operation
New ☐
Continuing ☐
Reactivating ☐

FOREST SERVICE USE

Forest Service
Region & Unit No. _____
2830 _____
Date Rec'd _____

NOTE: (INSTRUCTIONS TO OPERATORS. Please complete in as much detail as possible. Use maps and sketches where appropriate. Additional sheets can be used if necessary. Completed information should be furnished to District Ranger's office.) To the extent authorized by law this information will be held confidential. As an agency of the Federal Government, the Forest Service is required to comply with the Freedom of Information Act.

NOTICE OF INTENTION TO OPERATE.

Notice is hereby given that the undersigned intends to conduct prospecting, mining, or milling operations, etc., on the claim(s) and/or unclaimed federal lands as indicated below.

NAME OF CLAIMS ON WHICH OPERATIONS WILL BE CONDUCTED	NAME OF OWNER AND ADDRESS	LOCATION Section	LOCATION Township	LOCATION Range	LOCATION Date
UNCLAIMED LANDS ON WHICH OPERATIONS WILL BE CONDUCTED:					

ACCESS - Describe the type and standard of the proposed means of access and the means of transportation to be used (such as 4-wheel drive vehicle, tractor, pickup, etc.). Furnish a map showing the proposed route of access and relationship to claims or unclaimed lands noted above.
NOTE: Construction, reconstruction, or restoration of a road as a means of access across National Forest System lands or unpatented mining claims will be authorized separately by issuance of a special-use permit. (If an operating plan is required, it must be approved in writing by the authorized officer prior to the issuance of the special-use permit.)

PROPOSED OPERATION (Describe proposed surface disturbing activities, such as backhoe, trenching, drill road construction, tunnel site development, settling ponds, bulldozer exploration, etc.) Furnish a map showing location of proposed operations and relationship to claims or unclaimed lands noted above.
NOTE: Work roads within the claims will be covered by the Operating Plan.

Forest Service
Region & Unit No. _____

2850 _____

Date Rec'd _____

INSPECTION AND COMPLIANCE RECORD

Access Road	Operation	Date	Inspector	Remarks

EVALUATION AND REPORT OF NOTICE (to be completed by Forest Service)

Forest Service
Region & Unit No. _____

2350 _____

Date Rec'd _____

1. Review of location and land status. (Assure that location described is proper and lands are/were open to mineral entry. Status check should identify withdrawals, special uses, and acquired lands, etc.)

2. Surface resource consideration. (Describe affect of proposed operation on surface resources both on and off claim(s), and additional reclamation measures required if any. Identify cultural or historic resources known to exist in area. If an operator uncovers objects which may be protected under the Antiquities Act or the National Historic Preservation Act, the operator will immediately notify the authorized officer and conduct operations in such a manner as to not injure or destroy objects until the authorized officer has made a determination.)

3. Operation plan decision. (Where modest prospecting and exploration activities are anticipated, this form may suffice as an operating plan.)

4. Bond requirement. (Bond requirement should be based on probable cost of reclamation of surface resources. Include sufficient information to support bond request.)
Remarks:

$_____ Bond Required

5. Special-use permit. (Describe type and terms of special-use permits.)

Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

FACTORS TO CONSIDER
IN MINING OPERATING PLANS

A. ROADS

1. Preferably located on upper 1/3 of a slope. This is where the least erosion occurs. The most erosion will occur on the lower 1/3 of a slope.

2. Preferably located on south-facing slopes. North-facing slopes receive more shade and precipitation, increasing chances for erosion to occur. Roads on north-facing slopes will be open for a shorter time during the year due to greater snow accumulation.

3. Either water bars or a rolling grade will decrease erosion potential.

4. Gradient of the roads: little measurable erosion occurs up to a 4% gradient. Greater than 4%, erosion hazard increases geometrically.

5. Excessive cuts and fills increase erosion hazards.

6. The steeper gradient of the road, the closer spaced the water bars should be.

7. The outside burm on the road should be leveled and pushed to the outside to prevent water from running down the roadbed.

8. Roads should be kept out of stream bottoms as much as possible.

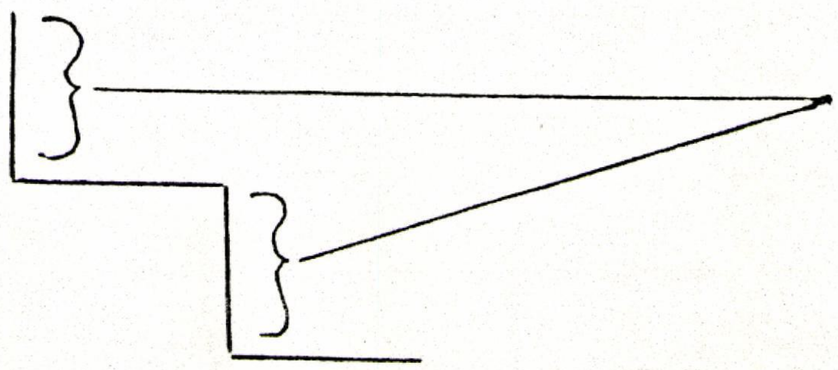
9. Roads crossing streams should be kept at right angles to the stream, should be down to bedrock and rip-rapped.

B. TRENCHING AND SMALL OPEN PITS

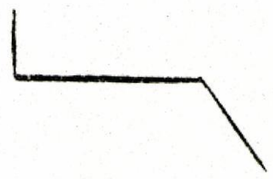
1. Trenching should be on the contour to avoid excessive soil erosion and gullying.

2. Headwalls should not exceed 10 feet.

3. Trenches and pits deeper than 10 feet should be stepped off in 10 foot increments.



4. The downhill side of a trench or pit should be knocked down to avoid water collection.



5. For extensively large or deep trenches and pits, topsoil should be saved and they should be filled in.

C. ADIT OR PORTAL CONSTRUCTION

1. Shaft or adit entrances should have adequate safeguards (i.e. signs or fences) for public safety.

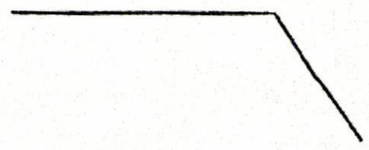
2. Precautions should be taken to prevent toxic waters from tunnels and shafts from escaping and getting into nearby water systems.

D. DRILL HOLES AND DRILL PAD CONSTRUCTION

1. Cap drill holes upon completion.

2. Bury residues and muck from drilling.

3. Drill pads should be constructed to avoid water collecting on the site. Surface should be leveled and the downhill side of the drill pad should be knocked off.



E. CRITICAL AREAS

Operating plan proposals in the following areas will require a detailed on-site inspection by a Forest officer prior to approval of an operating plan.

1. Stream bottoms and meadows.

2. Proposed Arc Dome Wilderness Area.

3. Visible from a well-traveled road:
Highway 6, 376, 82 and the poleline road to Gabbs.

4. Mount Jefferson Research Natural Area.

5. Road closure areas.

6. Georges Canyon archaeological area.

7. McCann Canyon geological area.

F. GENERAL

1. No structures whether permanent or temporary will be constructed without Forest Service approval.

2. Reclamation bonds can be required on any mineral operation conducted on unpatented lands administered by the Forest Service. If work projects are completed under the previously mentioned guidelines, most of the reclamation specifications will be met. Seeding with specified seed mixtures will be required on most disturbed areas.

3. Trees uprooted during road building or mining activities will be piled. Operators will notify the Forest Service as to location and number of piles so arrangements can be made for disposal (burning).

4. Most operations, especially those proposed in undisturbed areas will require an archaeological and threatened and endangered plant clearance.

5. Any dam construction, water diversion or use will have to be approved by the State Engineer.

State Engineer
Division of Water Resources
Department of Conservation and
Natural Resources
Capitol Complex
201 S. Fall
Carson City, Nevada 89710

6. Operations may not begin until formal approval is given.

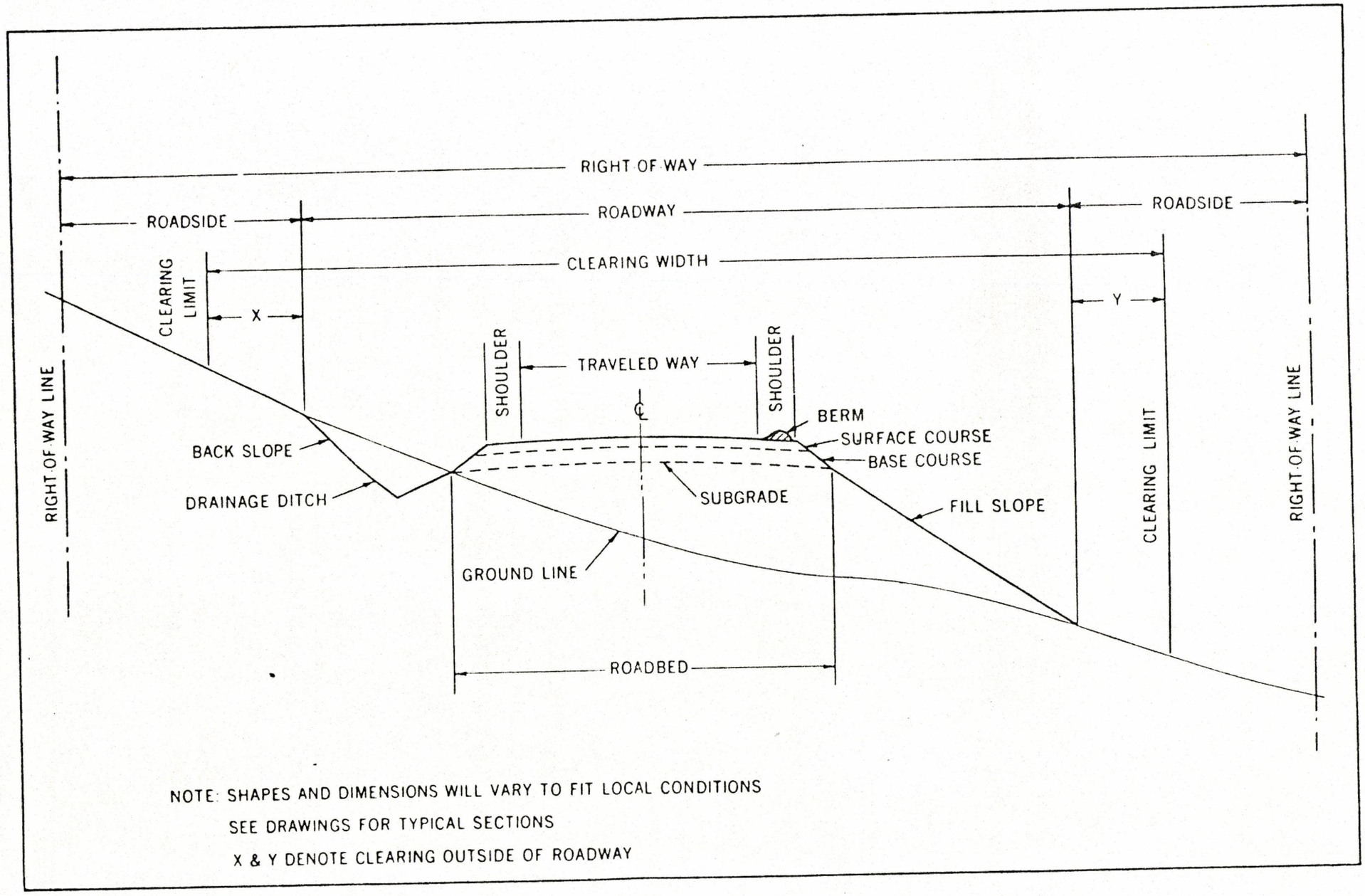
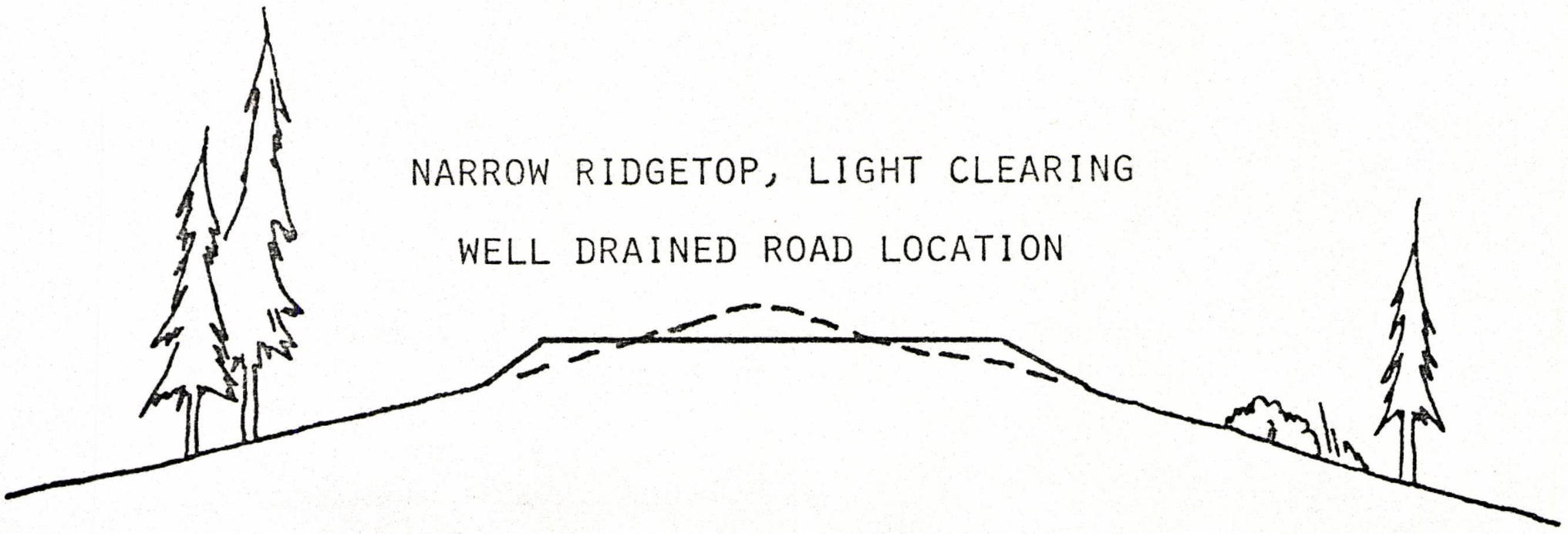
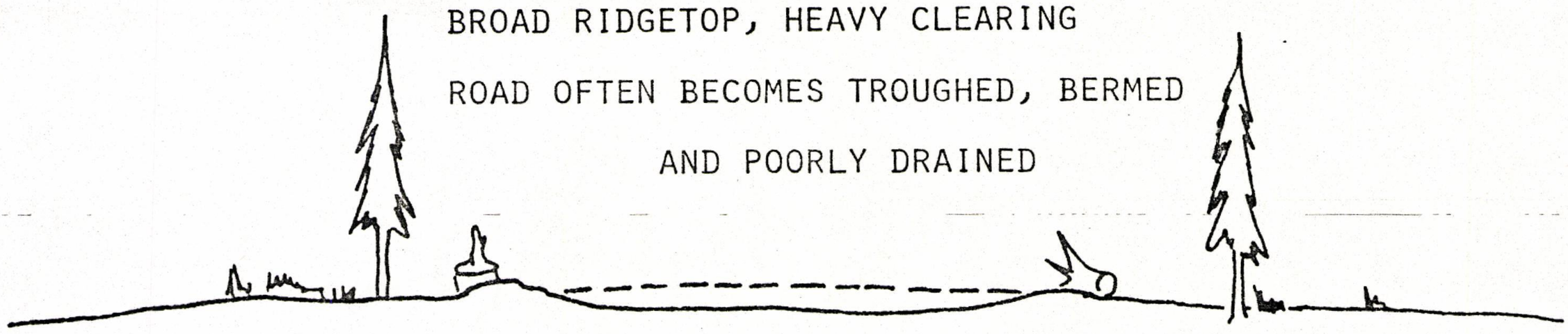
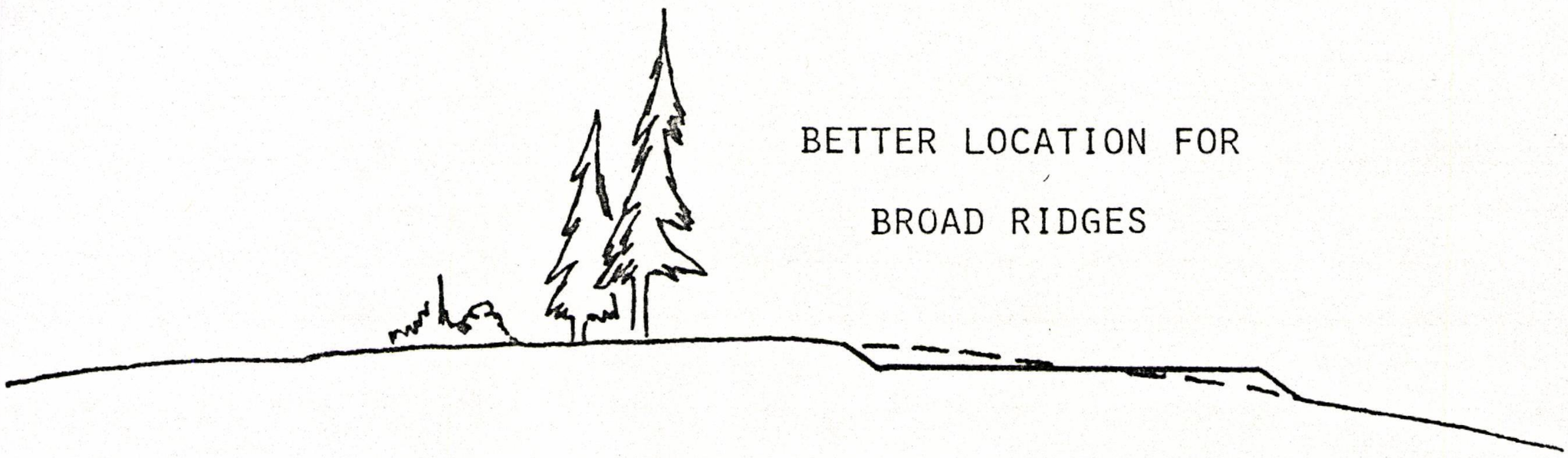


Figure 1: Illustration of Road Structure Terms







THE LOWER ILLUSTRATION IS GENERALLY THE BEST LOCATION UNLESS THE AREA IS OPEN ENOUGH AND SMOOTH ENOUGH SO THAT HAULING CAN BE DONE WITHOUT ANY EARTHWORK.

Figure 19: Ridgetop Temporary Road Locations

Roads that must cross alluvial fans should be placed: (1) at the apex of the fan, (2) well up on the fan or (3) across the flat land below the fan (see Figure 21).

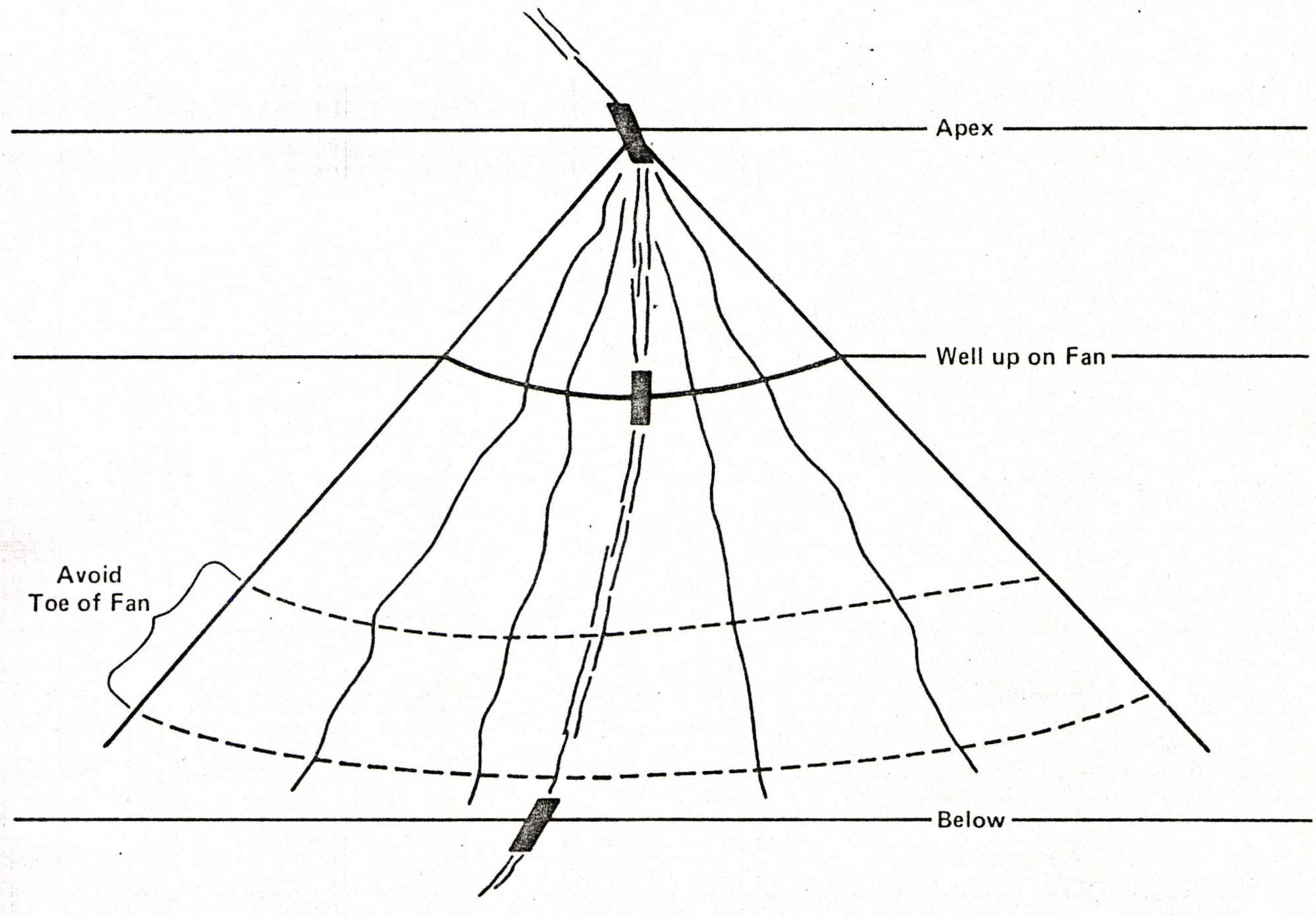


Figure 21: Alternatives for Proper Road Locations on an Alluvial Fan.

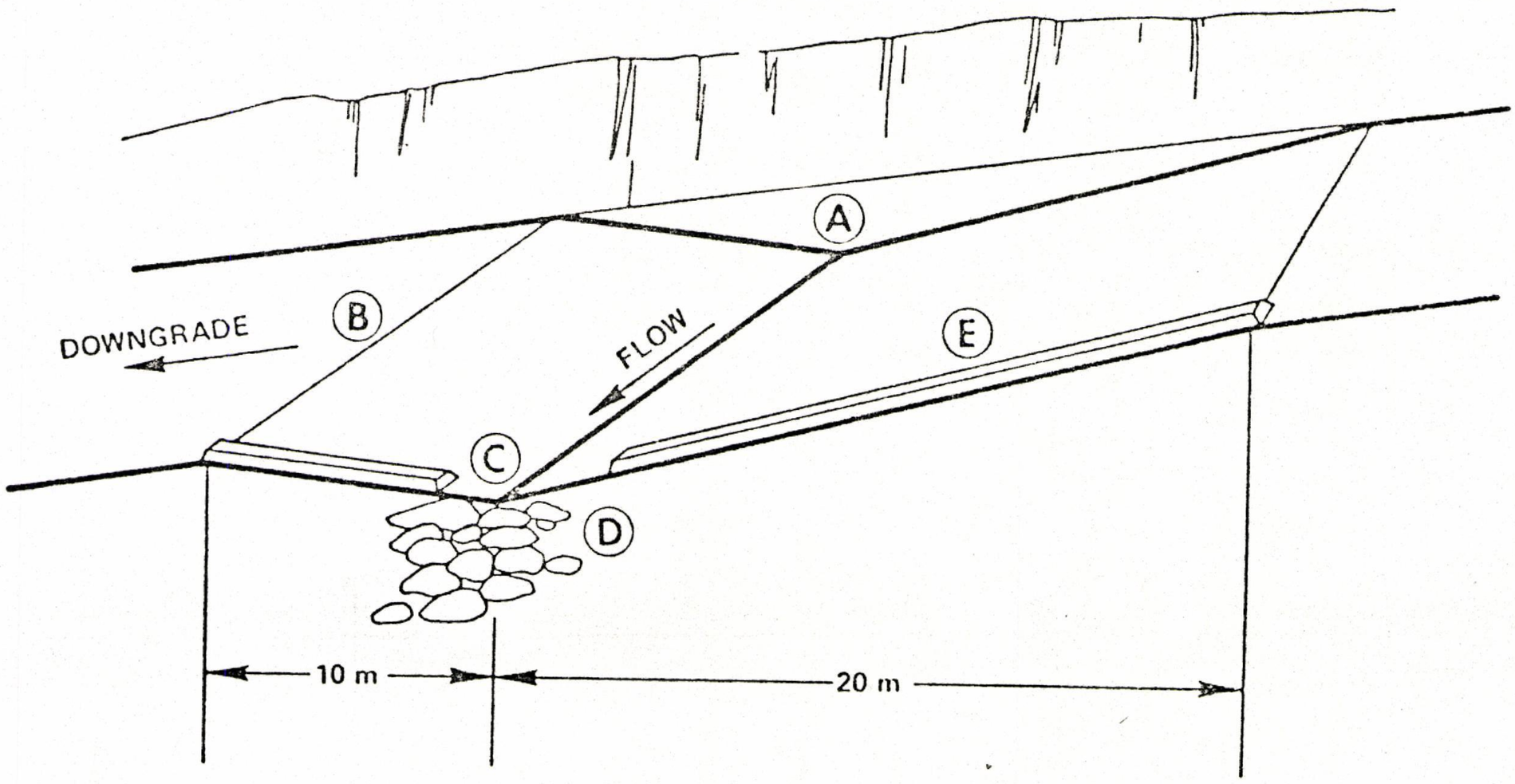


Figure 31: Design of outsloped dips for forest roads. A to C, slope about 4 to 2 inches to assure lateral flow; B, no material accumulated at this point - may require surfacing to prevent cutting; D, provide rock riprap to prevent erosion; E, berm to confine outflow to 1.5 foot wide spillway.

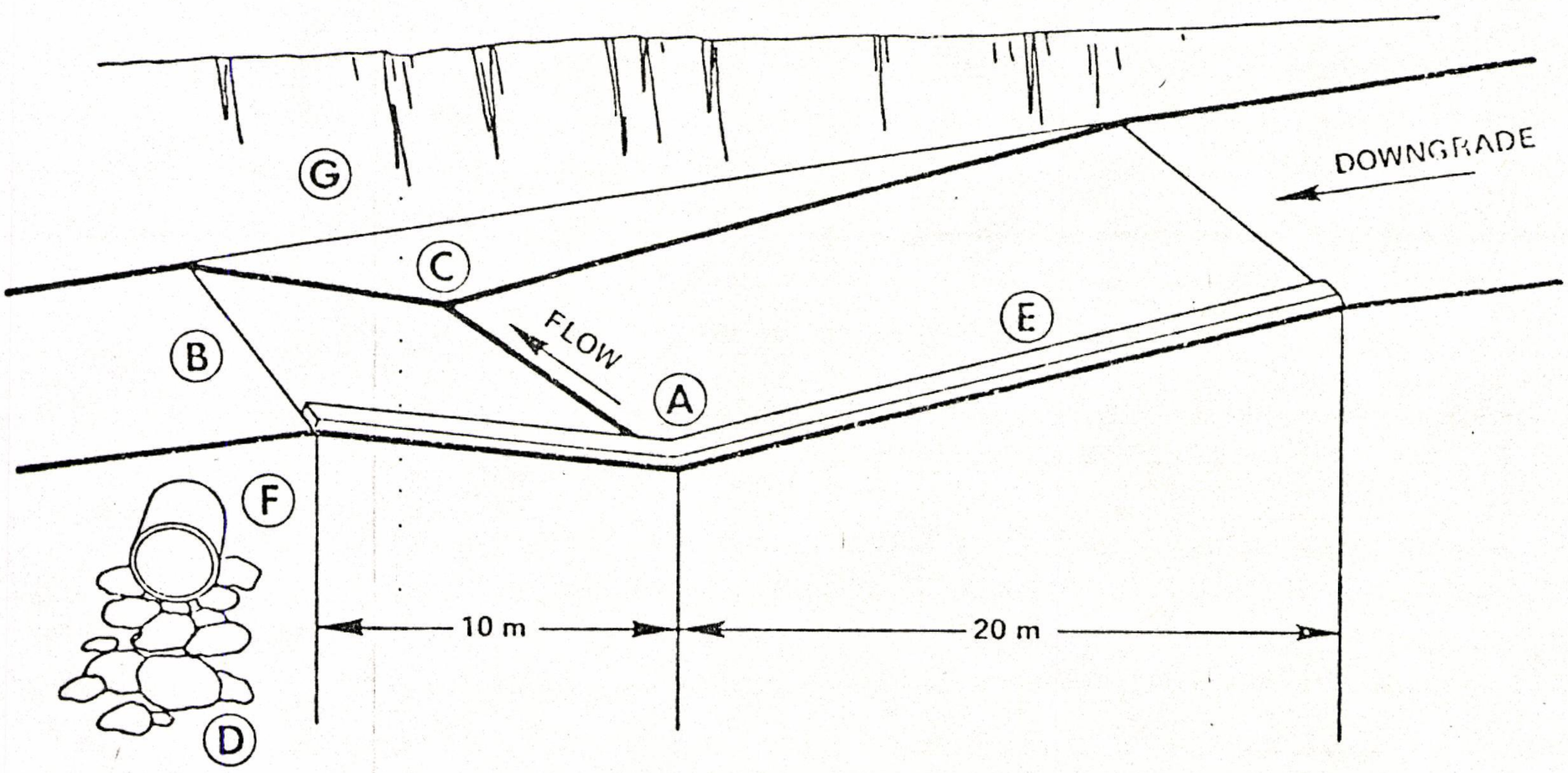


Figure 32: Design of insloped dips for forest roads. A to C, slope about 4 to 2 inches to assure lateral flow; B, no material accumulated at this point - may require surfacing to prevent cutting; D, provide rock riprap to prevent erosion; E, berm to prevent overflow; F, culvert to carry water beneath road; G, widen for ditch and pipe inlet.

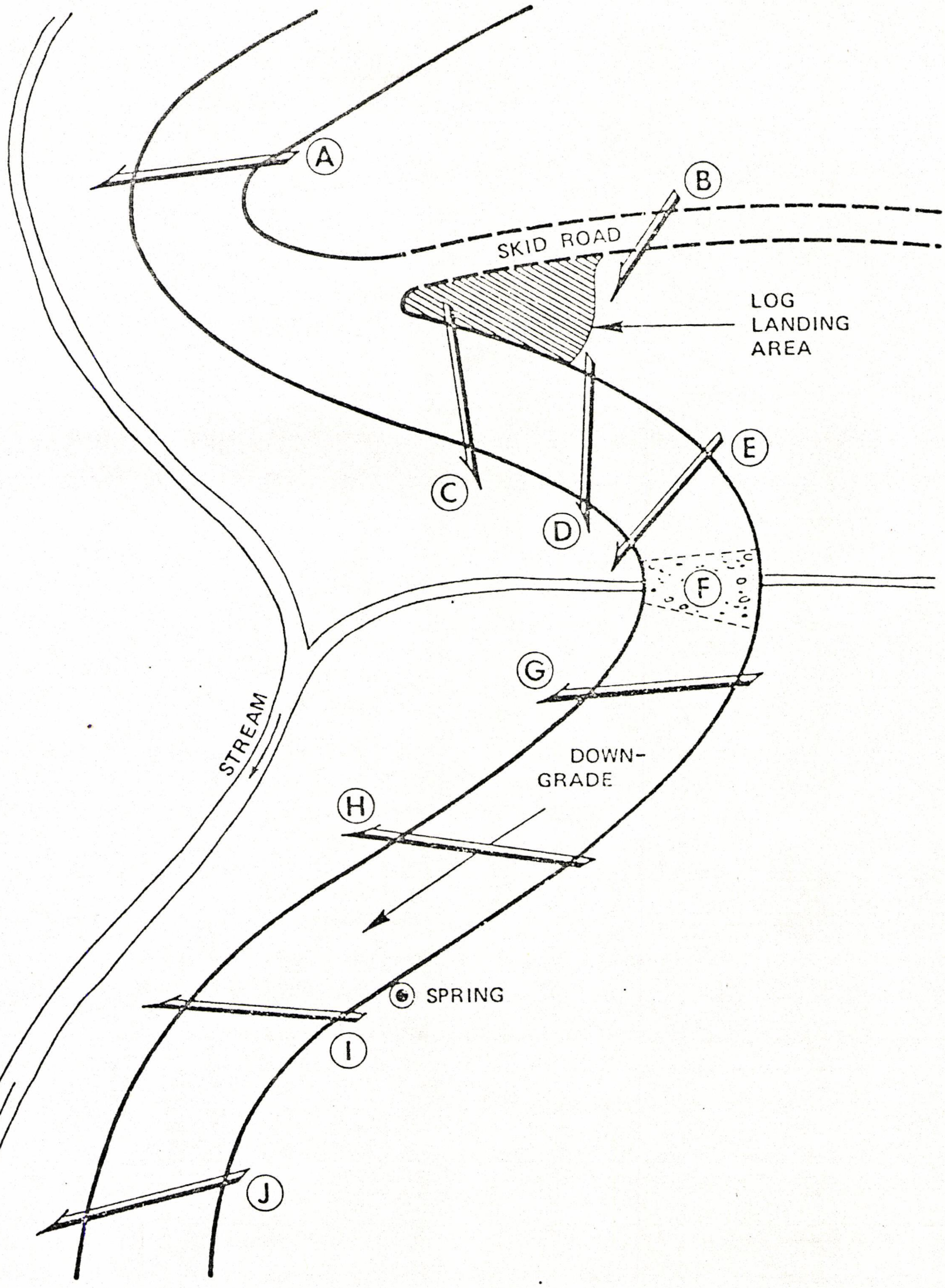


Figure 33: Guides for locating cross drains. Several locations require cross drains independent of spacing guides. A and J, divert water from ridges; A, B, and C, cross drain above and below junction; C and D, locate drains below log landing areas; D and H, drains located with regular spacing; E, drains above incurve to prevent bank cutting and keep road surface water from entering draw; F, ford or culvert in dip; G, drain below incurve to prevent water from from coursing down road; I, drains below seeps and springs.

C6.601 - Diagrams and Specifications for Machine Cross-Ditch Construction. (12/71)

Cross ditches are designated by _____.

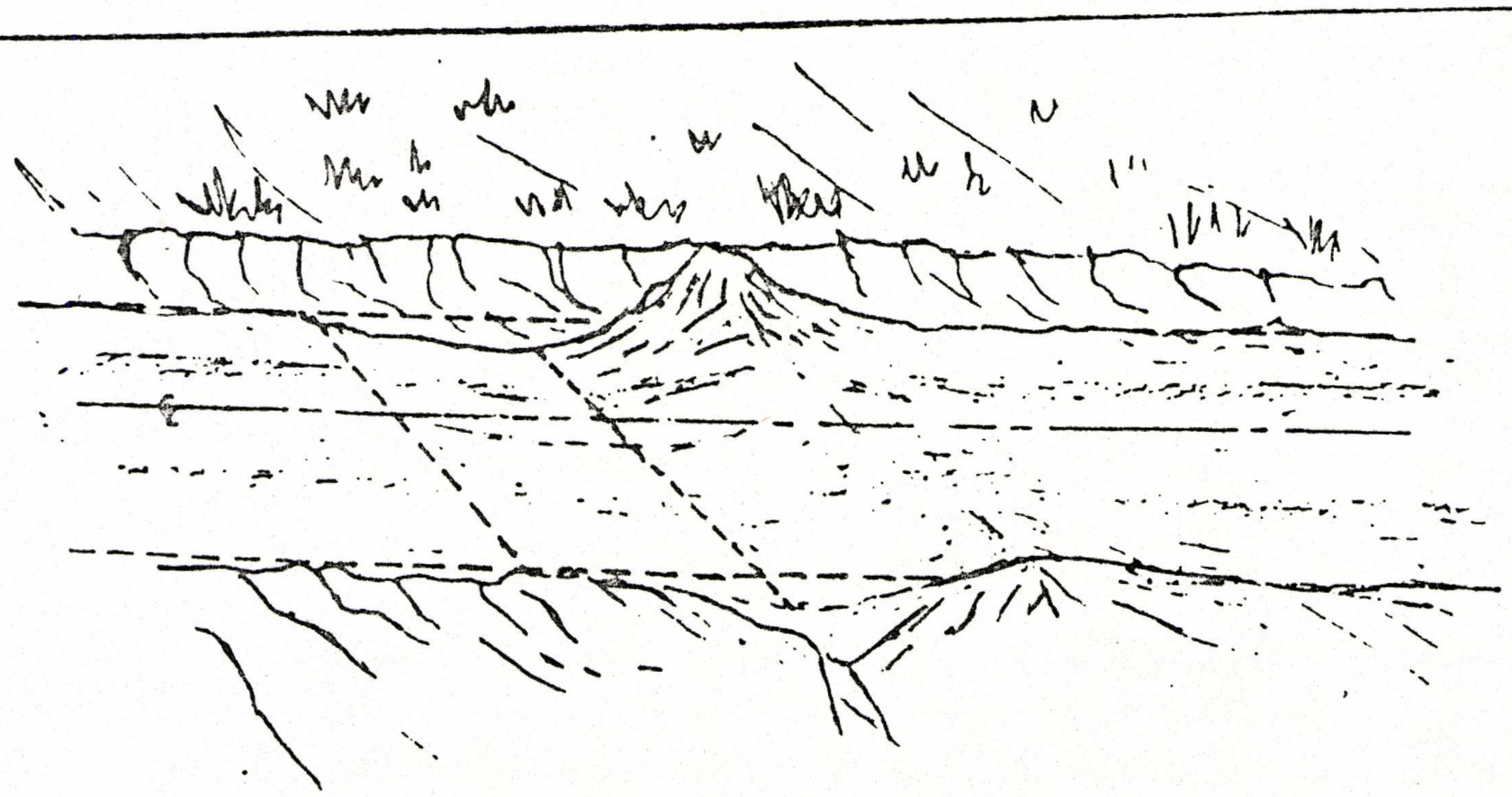
SPECIFICATIONS

1. Cross ditches shall slope diagonally out and downgrade at a minimum angle of 60 degrees with the centerline of the road. The ditch shall be tied securely to the upper bank.

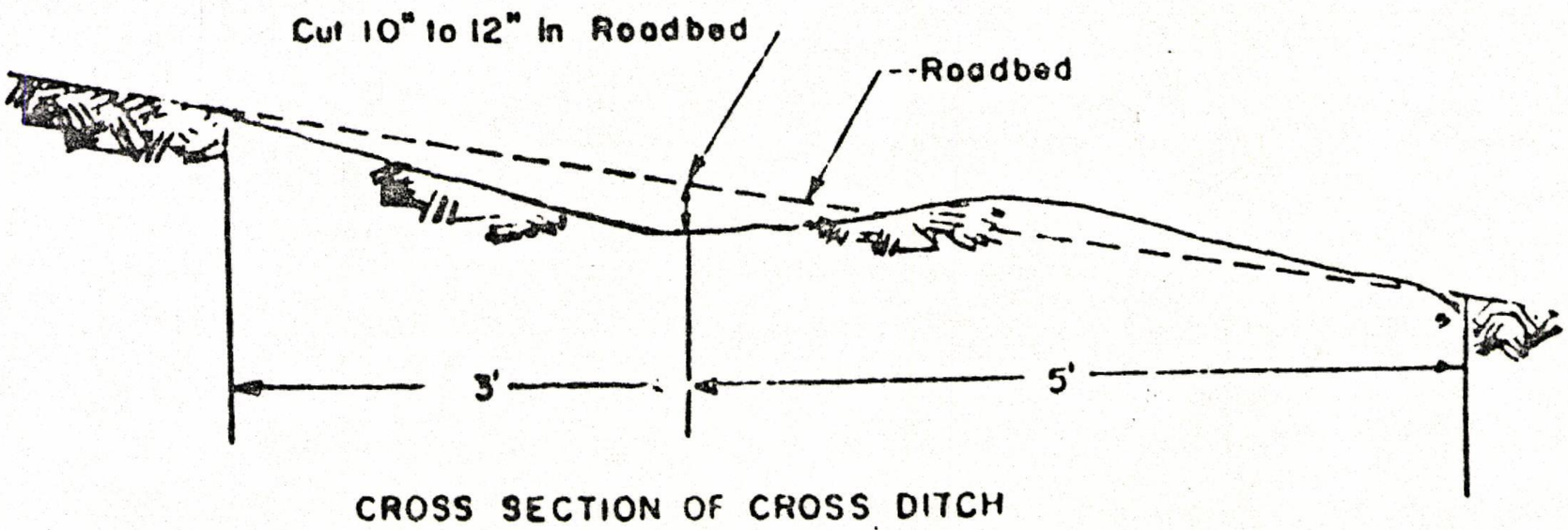
2. The ditch shall be bulldozed or cut with a grader blade into the roadbed to a depth of at least six inches at the upper roadbank and sloped to a depth of at least 12 inches on the road shoulder.

3. Excavated material will be scattered below the ditch so that no dike or barrier is noticeable.

DIAGRAMS



VIEW OF COMPLETED CROSS DITCH



CROSS SECTION OF CROSS DITCH

ENVIRONMENTAL PROTECTION MEASURES - Describe measures to be taken to protect surface resources and reclaim the disturbed areas.

NOTE: Operations, including access, shall be conducted so as to minimize adverse environmental impacts on National Forest surface resources.

PERIOD OF OPERATION - Period or periods during which operations, including road work, and use will take place.

Road Work: /Other Operations:

OPERATOR'S NAME (Print or type) ADDRESS TELEPHONE NUMBER

SUBMITTED BY AND DATE:

FOREST SERVICE EVALUATION

NOTICE TO OPERATORS:

(1) Approval of this operating plan does not constitute certification of ownership to any person named as owner herein.

(2) Approval of this operating plan does not constitute recognition of the validity of any mining claims named herein, or of any mining claim now or hereafter covered by this plan.

This operation would cause a significant disturbance of surface resources? Yes ☐ No ☐

The information provided is sufficient to constitute a basic operating plan?
Yes ☐ No ☐ and an operating plan must be prepared and submitted to this office.

A special-use permit is required? Yes ☐ No ☐

☐ A bond in the amount of _____ in the form of cash or surety to assure reclamation as described under "Environmental Protection Measures" and item 2 of the Evaluation and Report of Notice is required.

☐ No bond is required.

(3) Antiquities Act of 1906 (P.L. 59-209).

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Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

NOTICE OF INTENTION
TO OPERATE
OR
BASIC OPERATING PLAN
FOR
[redacted]
Ref. Act of June 4, 1897
[redacted]
30 CFR 252
FSH 2850

a. National Forest	b. Ranger District	c. Drainage
TOIYABE	TONOPAH	
d. State	e. County/Counties	f. Mining District
NEVADA	NYE	

g. Type of Claim or Claims
Lode ☐ Placer ☐
Mill Site ☐ Tunnel Site ☐

h. Operation
New ☐
Continuing ☐
Reactivating ☐

FOREST SERVICE USE

Forest Service
Region & Unit No. _____
2850 _____
Date Rec'd _____

NOTE: (INSTRUCTIONS TO OPERATORS. Please complete in as much detail as possible. Use maps and sketches where appropriate. Additional sheets can be used if necessary. Completed information should be furnished to District Ranger's office.) To the extent authorized by law this information will be held confidential. As an agency of the Federal Government, the Forest Service is required to comply with the Freedom of Information Act.

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		Section	Township	Range	Date
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Forest Service
Region & Unit No. _____

2850 _____

Date Rec'd _____

INSPECTION AND COMPLIANCE RECORD

Access Road	Operation	Date	Inspector	Remarks

EVALUATION AND REPORT OF NOTICE (to be completed by Forest Service)

Forest Service
Region & Unit No. _____

2350 _____

Date Rec'd _____

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Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

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IN MINING OPERATING PLANS

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1. Preferably located on upper 1/3 of a slope. This is where the least erosion occurs. The most erosion will occur on the lower 1/3 of a slope.

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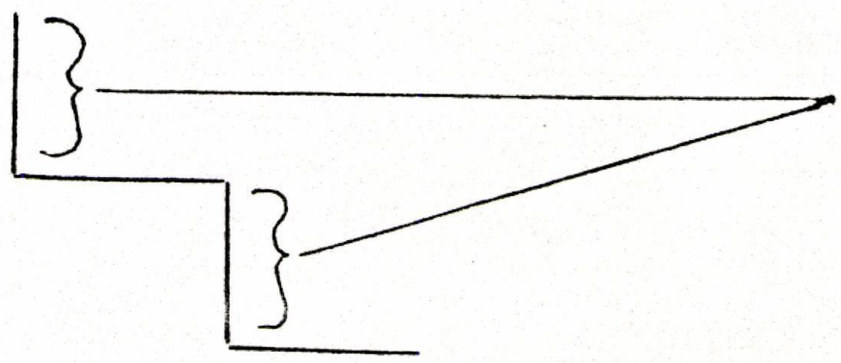

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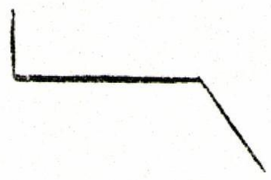

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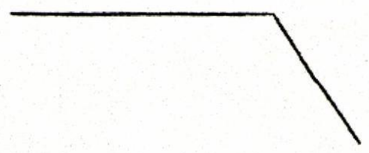

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State Engineer
Division of Water Resources
Department of Conservation and
Natural Resources
Capitol Complex
201 S. Fall
Carson City, Nevada 89710

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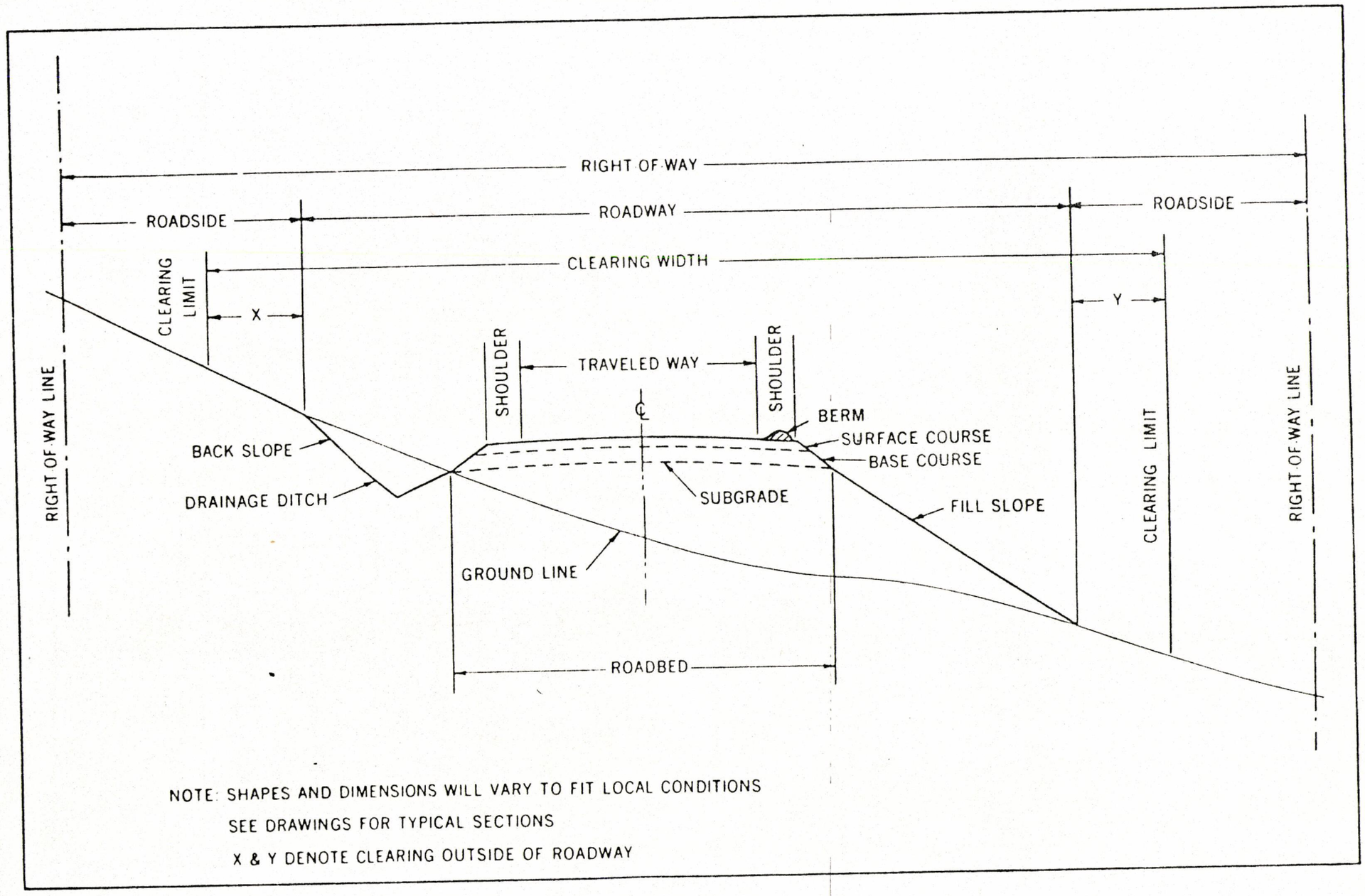
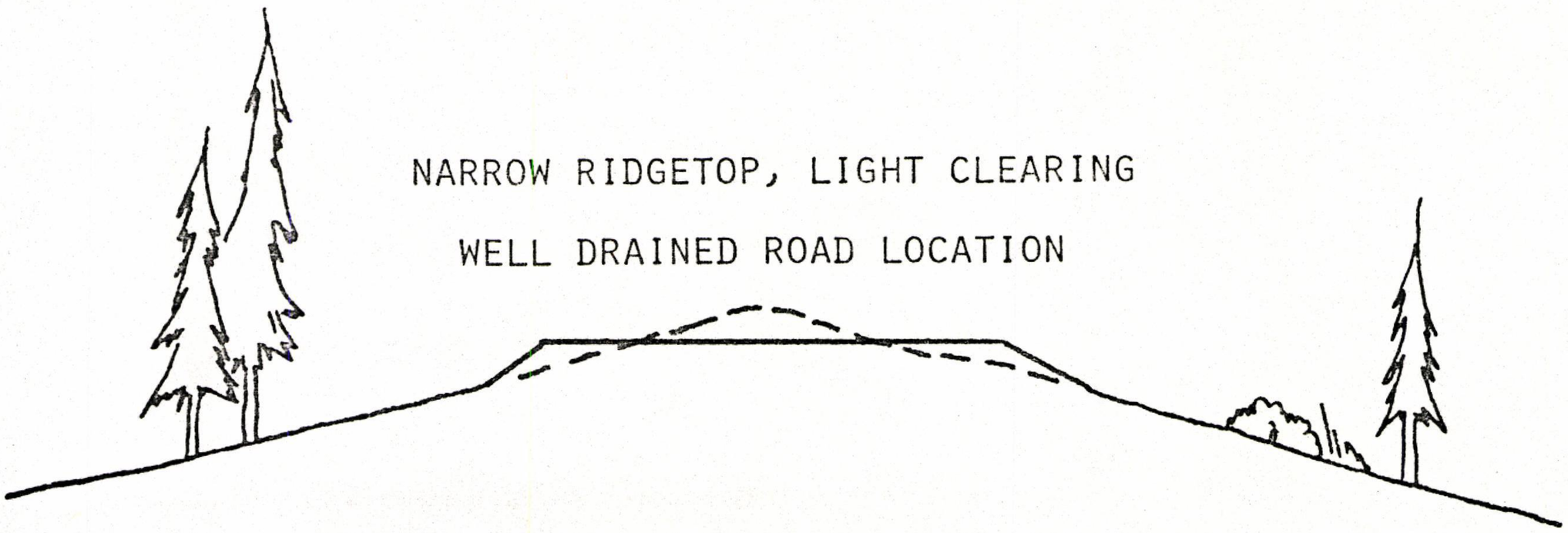
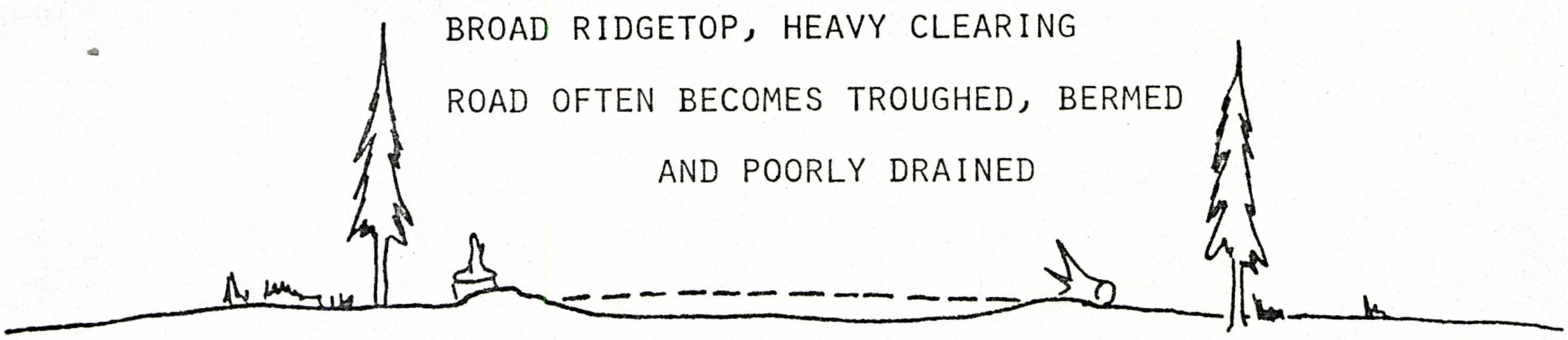
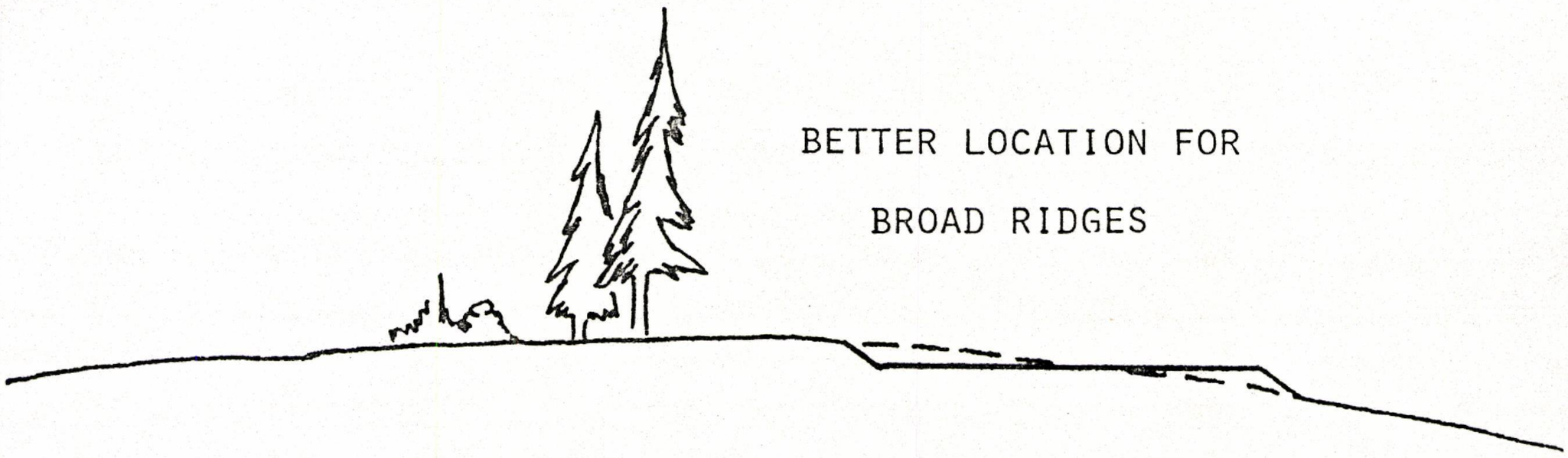


NOTE: SHAPES AND DIMENSIONS WILL VARY TO FIT LOCAL CONDITIONS
SEE DRAWINGS FOR TYPICAL SECTIONS
X & Y DENOTE CLEARING OUTSIDE OF ROADWAY

Figure 1: Illustration of Road Structure Terms







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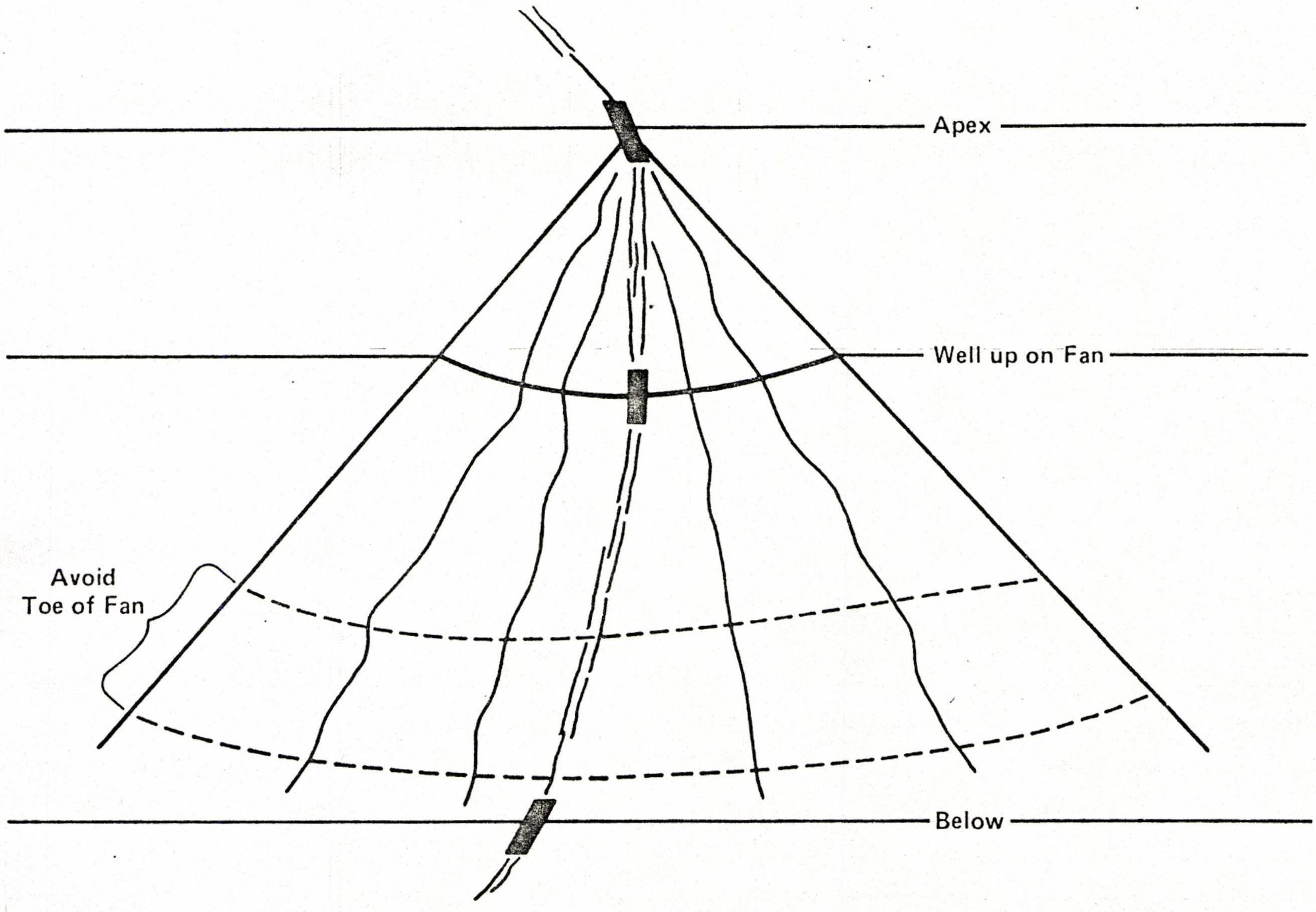
Roads that must cross alluvial fans should be placed: (1) at the apex of the fan, (2) well up on the fan or (3) across the flat land below the fan (see Figure 21).



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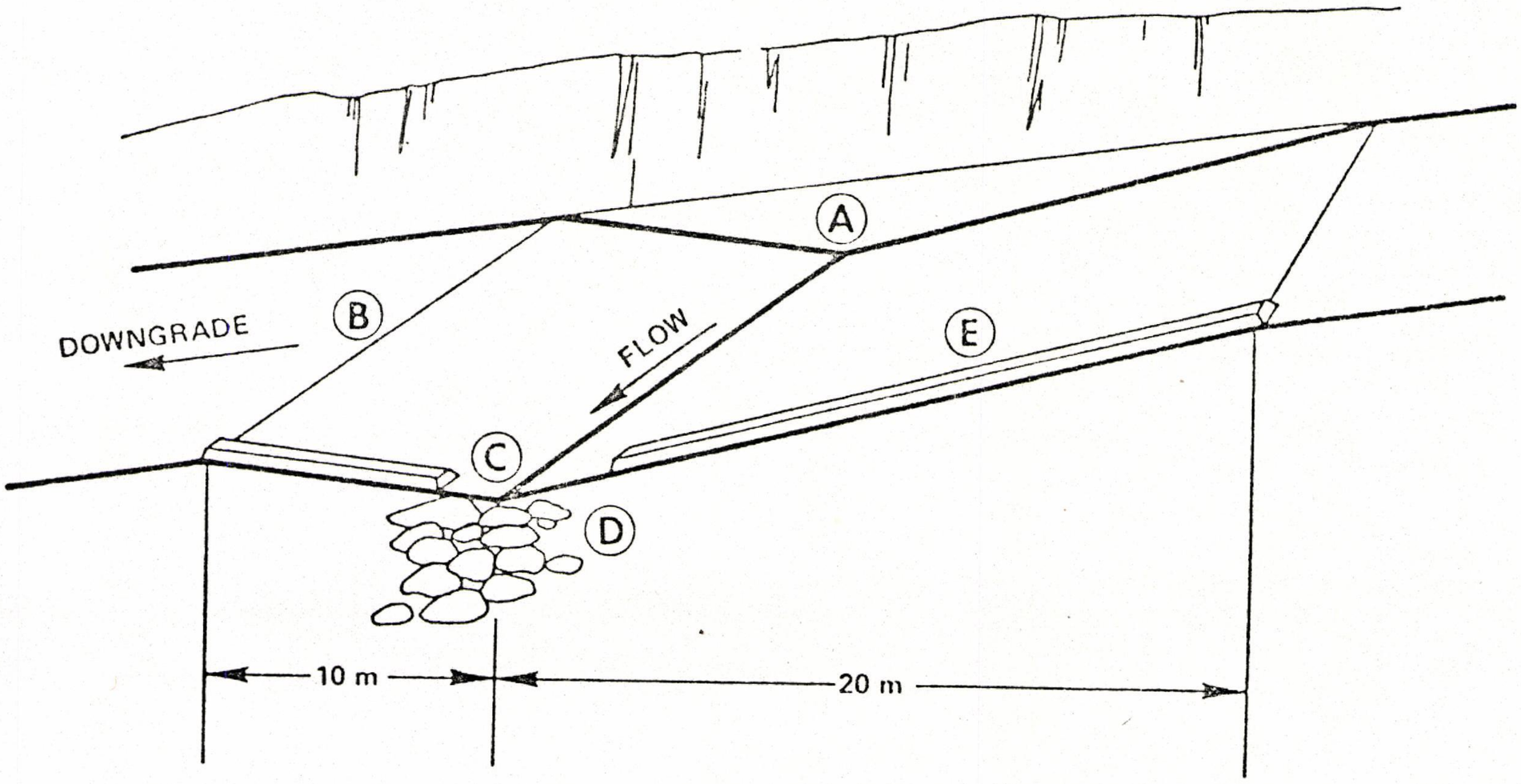
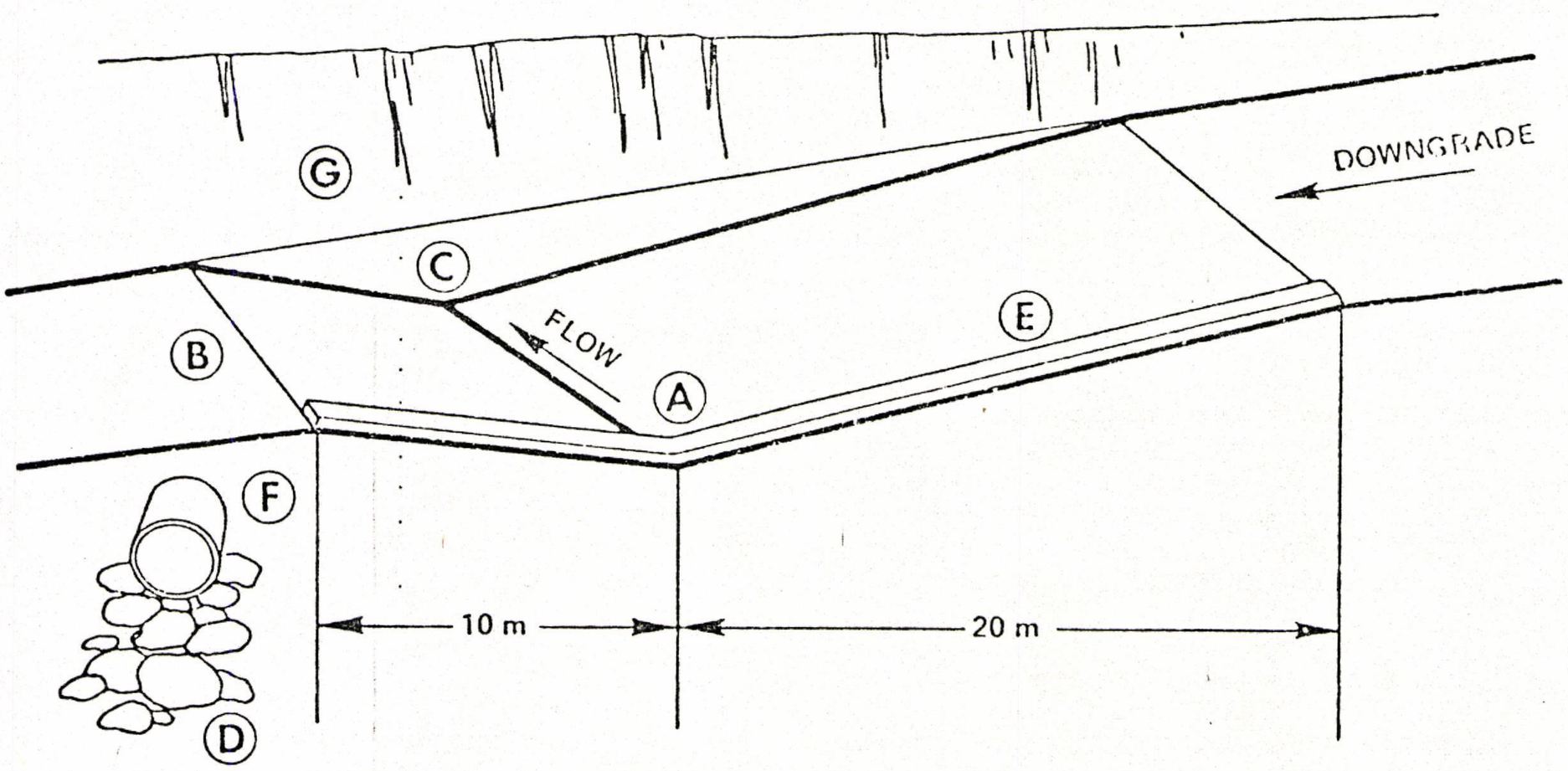


Figure 31: Design of outsloped dips for forest roads. A to C, slope about 4 to 2 inches to assure lateral flow; B, no material accumulated at this point - may require surfacing to prevent cutting; D, provide rock riprap to prevent erosion; E, berm to confine outflow to 1.5 foot wide spillway.



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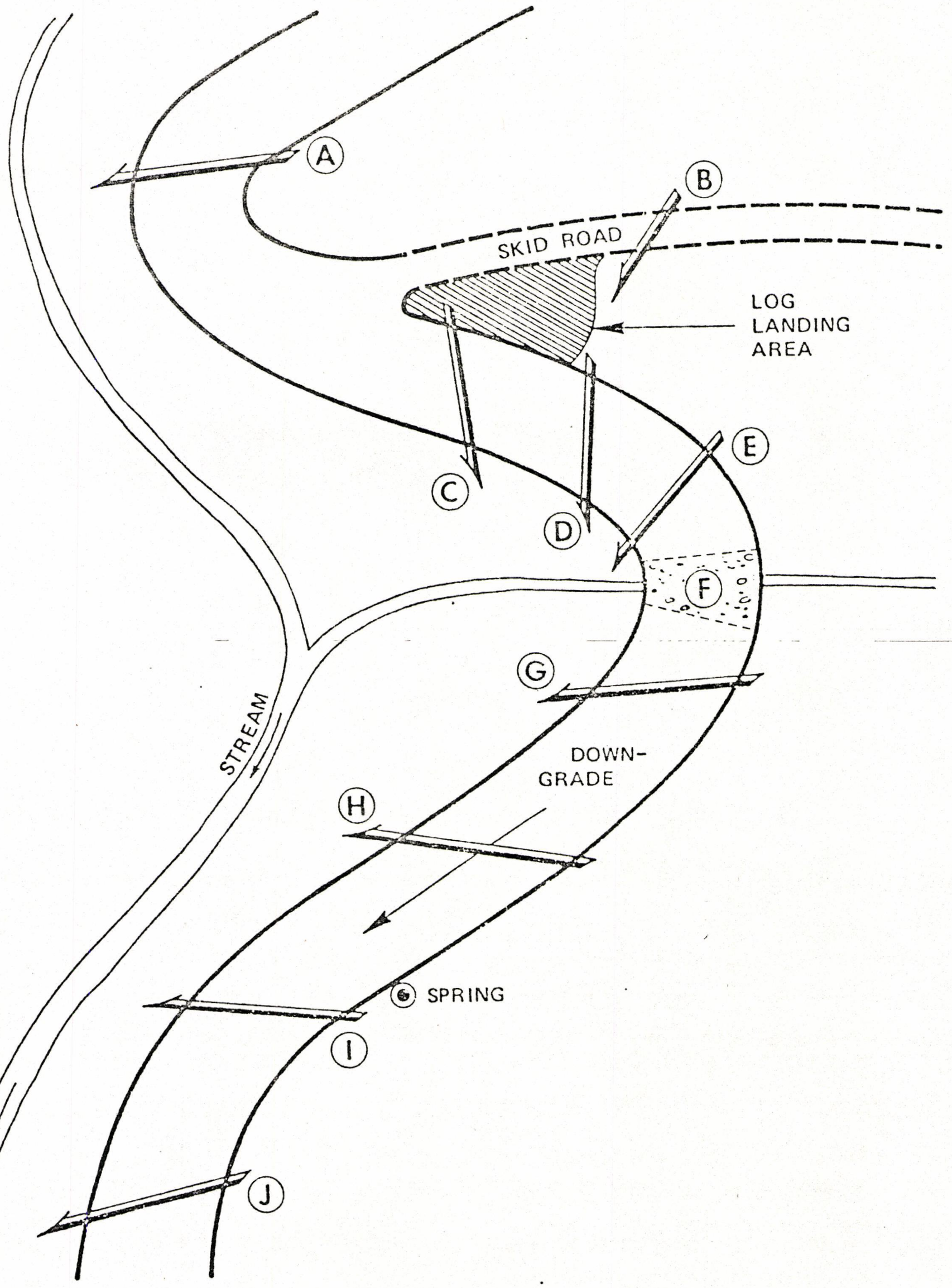

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C6.601f - Diagrams and Specifications for Machine Cross-Ditch Construction. (12/71)

Cross ditches are designated by _____.

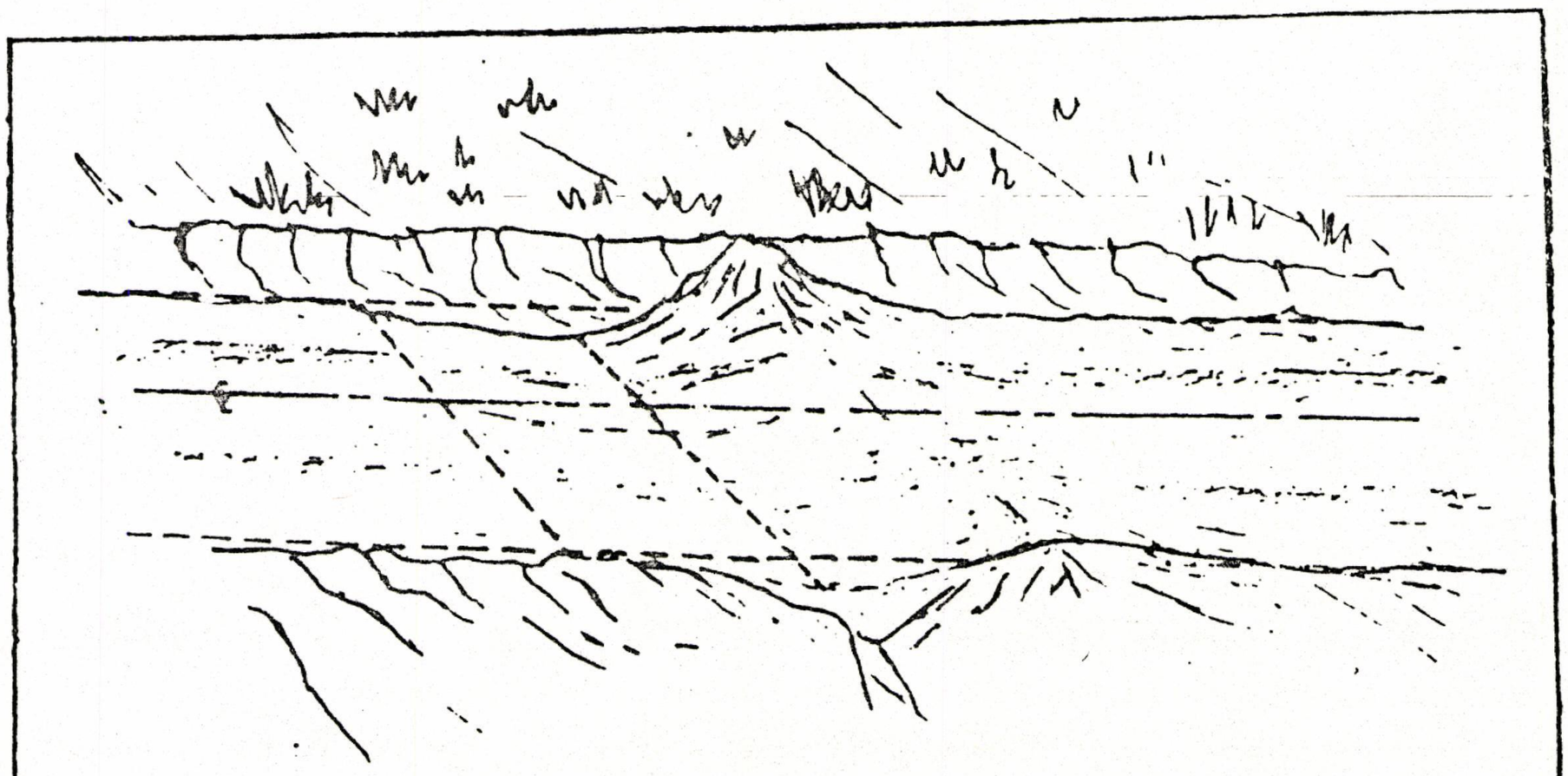
SPECIFICATIONS

1. Cross ditches shall slope diagonally out and downgrade at a minimum angle of 60 degrees with the centerline of the road. The ditch shall be tied securely to the upper bank.

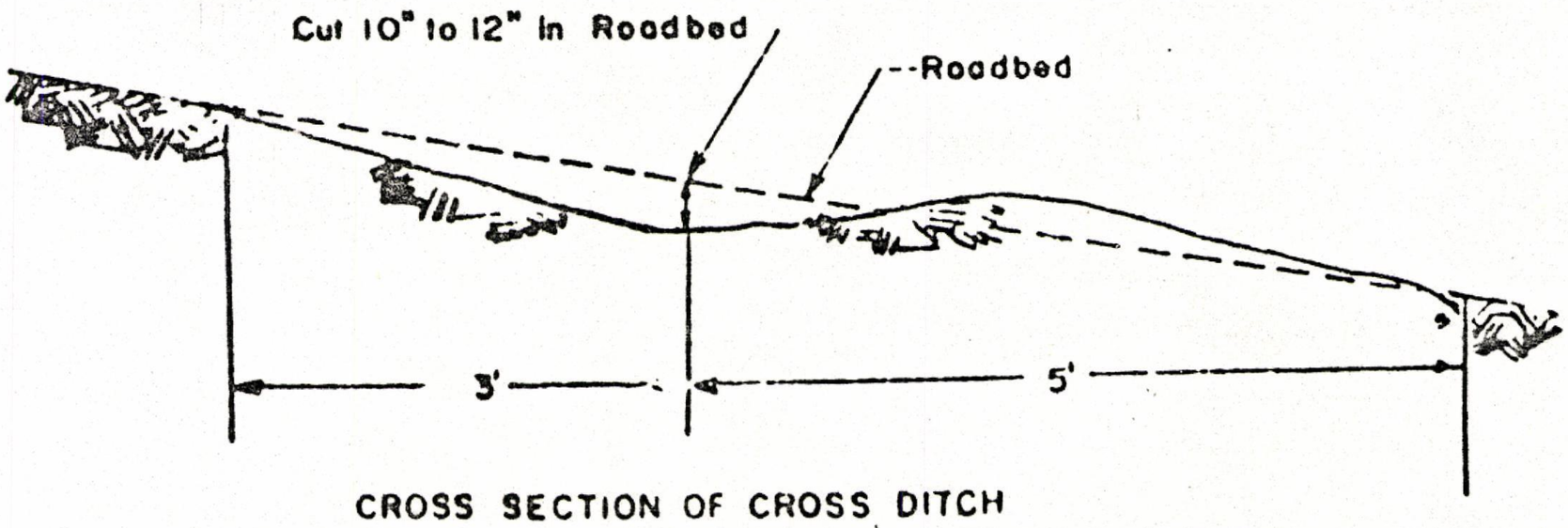
2. The ditch shall be bulldozed or cut with a grader blade into the roadbed to a depth of at least six inches at the upper roadbank and sloped to a depth of at least 12 inches on the road shoulder.

3. Excavated material will be scattered below the ditch so that no dike or barrier is noticeable.

DIAGRAMS



VIEW OF COMPLETED CROSS DITCH



CROSS SECTION OF CROSS DITCH

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
TOIYABE NATIONAL FOREST
Tonopah, Nevada

RECEIVED
SHARON STEEL CORP.
MINING DIVISION
MAR 02 1981
EXPLORATION DEPT.

2810
February 24, 1981

Mr. Gaylon Hansen, Exploration Manager
USSRAM Exploration Co.
136 E. South Temple
19th Floor UCB
Salt Lake City, UT 84111

Dear Mr. Hansen;

Last year you filed an operating plan with the Tonopah District for the Molly and Mey Claims. We have anticipated that you will probably file another plan this year, and have enclosed a blank form for your use. You may return the completed plan to our office in person or by mail. It will help us immeasurably if you return the operating plan at least one month before starting work so we may evaluate the project and visit the site if necessary.

Also enclosed is "Factors to Consider in Mining Operating Plans." This paper lists guidelines that the Forest Service uses in evaluating mining projects and operating plans. By following these guidelines, you can minimize soil erosion and reduce impacts on watershed, range and timber values. We hope you will refer to this paper when putting together your next operating plan.

If you have any questions, please do not hesitate to call.

Sincerely,

Jan A. Ford
for

G. GLADE QUILTER
District Ranger

Enclosure

6200-11 (1/69)

NOTICE OF INTENTION
TO OPERATE
OR
BASIC OPERATING PLAN
FOR
[redacted]
Ref. Act of June 4, 1897
[redacted]
30 CFR 252
FSM 2830

a. National Forest	b. Ranger District	c. Drainage
TOIYABE	TONOPAH	
d. State	e. County/Counties	f. Mining District
NEVADA	NYE	

g. Type of Claim or Claims
Lode ☐ Placer ☐
Mill Site ☐ Tunnel Site ☐

h. Operation
New ☐
Continuing ☐
Reactivating ☐

FOREST SERVICE USE

Forest Service
Region & Unit No.
2830
Date Rec'd

NOTE: (INSTRUCTIONS TO OPERATORS. Please complete in as much detail as possible. Use maps and sketches where appropriate. Additional sheets can be used if necessary. Completed information should be furnished to District Ranger's office.) To the extent authorized by law this information will be held confidential. As an agency of the Federal Government, the Forest Service is required to comply with the Freedom of Information Act.

NOTICE OF INTENTION TO OPERATE.

Notice is hereby given that the undersigned intends to conduct prospecting, mining, or milling operations, etc., on the claim(s) and/or unclaimed federal lands as indicated below.

NAME OF CLAIMS ON WHICH OPERATIONS WILL BE CONDUCTED	NAME OF OWNER AND ADDRESS	LOCATION Section	LOCATION Township	LOCATION Range	LOCATION Date
UNCLAIMED LANDS ON WHICH OPERATIONS WILL BE CONDUCTED:					

ACCESS - Describe the type and standard of the proposed means of access and the means of transportation to be used (such as 4-wheel drive vehicle, tractor, pickup, etc.). Furnish a map showing the proposed route of access and relationship to claims or unclaimed lands noted above.
NOTE: Construction, reconstruction, or restoration of a road as a means of access across National Forest System lands or unpatented mining claims will be authorized separately by issuance of a special-use permit. (If an operating plan is required, it must be approved in writing by the authorized officer prior to the issuance of the special-use permit.)

PROPOSED OPERATION (Describe proposed surface disturbing activities, such as backhoe, trenching, drill road construction, tunnel site development, settling ponds, bulldozer exploration, etc.) Furnish a map showing location of proposed operations and relationship to claims or unclaimed lands noted above.
NOTE: Work roads within the claims will be covered by the Operating Plan.

ENVIRONMENTAL PROTECTION MEASURES - Describe measures to be taken to protect surface resources and reclaim the disturbed areas.
NOTE: Operations, including access, shall be conducted so as to minimize adverse environmental impacts on National Forest surface resources.

PERIOD OF OPERATION - Period or periods during which operations, including road work, and use will take place.

Road Work: /Other Operations:

OPERATOR'S NAME (Print or type) ADDRESS TELEPHONE NUMBER

SUBMITTED BY AND DATE:

FOREST SERVICE EVALUATION

NOTICE TO OPERATORS:

(1) Approval of this operating plan does not constitute certification of ownership to any person named as owner herein.

(2) Approval of this operating plan does not constitute recognition of the validity of any mining claims named herein, or of any mining claim now or hereafter covered by this plan.

This operation would cause a significant disturbance of surface resources? Yes ☐ No ☐

The information provided is sufficient to constitute a basic operating plan?
Yes ☐ No ☐ and an operating plan must be prepared and submitted to this office.

A special-use permit is required? Yes ☐ No ☐

☐ A bond in the amount of _____ in the form of cash or surety to assure reclamation as described under "Environmental Protection Measures" and item 2 of the Evaluation and Report of Notice is required.

☐ No bond is required.

(3) Antiquities Act of 1906 (P.L. 59-209).
NOTE: "That any person who shall appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department by the Government having jurisdiction over the lands on which said antiquities are situated, shall, upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court."

(4) Approval of an operating plan does not constitute permission of the Secretary so as to relieve the operator from criminal prosecution under the Antiquities Act.

Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

EVALUATION AND REPORT OF NOTICE (to be completed by Forest Service)

Forest Service
Region & Unit No. _____

2350 _____

Date Rec'd _____

1. Review of location and land status. (Assure that location described is proper and lands are/were open to mineral entry. Status check should identify withdrawals, special uses, and acquired lands, etc.)

2. Surface resource consideration. (Describe affect of proposed operation on surface resources both on and off claim(s), and additional reclamation measures required if any. Identify cultural or historic resources known to exist in area. If an operator uncovers objects which may be protected under the Antiquities Act or the National Historic Preservation Act, the operator will immediately notify the authorized officer and conduct operations in such a manner as to not injure or destroy objects until the authorized officer has made a determination.)

3. Operation plan decision. (Where modest prospecting and exploration activities are anticipated, this form may suffice as an operating plan.)

4. Bond requirement. (Bond requirement should be based on probable cost of reclamation of surface resources. Include sufficient information to support bond request.)
Remarks:

$_____ Bond Required

5. Special-use permit. (Describe type and terms of special-use permits.)

Evaluated by:	Date:	Signature:	Title:
Approved by (Authorized Officer):	Date:	Signature:	Title:

Forest Service
Region & Unit No. _____

2850 _____

Date Rec'd _____

INSPECTION AND COMPLIANCE RECORD

Access Road	Operation	Date	Inspector	Remarks

FACTORS TO CONSIDER IN MINING OPERATING PLANS

A. ROADS

1. Preferably located on upper 1/3 of a slope. This is where the least erosion occurs. The most erosion will occur on the lower 1/3 of a slope.

2. Preferably located on south-facing slopes. North-facing slopes receive more shade and precipitation, increasing chances for erosion to occur. Roads on north-facing slopes will be open for a shorter time during the year due to greater snow accumulation.

3. Either water bars or a rolling grade will decrease erosion potential.

4. Gradient of the roads: little measurable erosion occurs up to a 4% gradient. Greater than 4%, erosion hazard increases geometrically.

5. Excessive cuts and fills increase erosion hazards.

6. The steeper gradient of the road, the closer spaced the water bars should be.

7. The outside burm on the road should be leveled and pushed to the outside to prevent water from running down the roadbed.

8. Roads should be kept out of stream bottoms as much as possible.

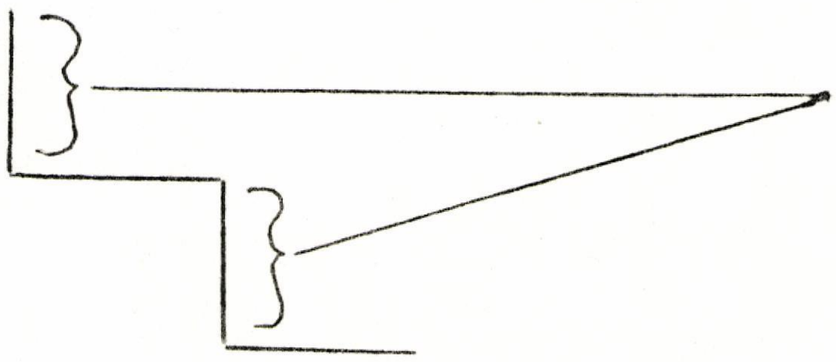
9. Roads crossing streams should be kept at right angles to the stream, should be down to bedrock and rip-rapped.

B. TRENCHING AND SMALL OPEN PITS

1. Trenching should be on the contour to avoid excessive soil erosion and gullying.

2. Headwalls should not exceed 10 feet.

3. Trenches and pits deeper than 10 feet should be stepped off in 10 foot increments.



4. The downhill side of a trench or pit should be knocked down to avoid water collection.

5. For extensively large or deep trenches and pits, topsoil should be saved and they should be filled in.

C. ADIT OR PORTAL CONSTRUCTION

1. Shaft or adit entrances should have adequate safeguards (i.e. signs or fences) for public safety.

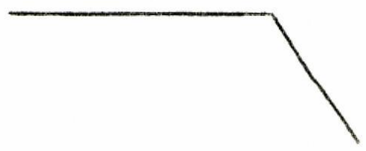
2. Precautions should be taken to prevent toxic waters from tunnels and shafts from escaping and getting into nearby water systems.

D. DRILL HOLES AND DRILL PAD CONSTRUCTION

1. Cap drill holes upon completion.

2. Bury residues and muck from drilling.

3. Drill pads should be constructed to avoid water collecting on the site. Surface should be leveled and the downhill side of the drill pad should be knocked off.



E. CRITICAL AREAS

Operating plan proposals in the following areas will require a detailed on-site inspection by a Forest officer prior to approval of an operating plan.

1. Stream bottoms and meadows.

2. Proposed Arc Dome Wilderness Area.

3. Visible from a well-traveled road:
Highway 6, 376, 82 and the poleline road to Gabbs.

4. Mount Jefferson Research Natural Area.

5. Road closure areas.

6. Georges Canyon archaeological area.

7. McCann Canyon geological area.

F. GENERAL

1. No structures whether permanent or temporary will be constructed without Forest Service approval.

2. Reclamation bonds can be required on any mineral operation conducted on unpatented lands administered by the Forest Service. If work projects are completed under the previously mentioned guidelines, most of the reclamation specifications will be met. Seeding with specified seed mixtures will be required on most disturbed areas.

3. Trees uprooted during road building or mining activities will be piled. Operators will notify the Forest Service as to location and number of piles so arrangements can be made for disposal (burning).

4. Most operations, especially those proposed in undisturbed areas will require an archaeological and threatened and endangered plant clearance.

5. Any dam construction, water diversion or use will have to be approved by the State Engineer.

State Engineer
Division of Water Resources
Department of Conservation and
Natural Resources
Capitol Complex
201 S. Fall
Carson City, Nevada 89710

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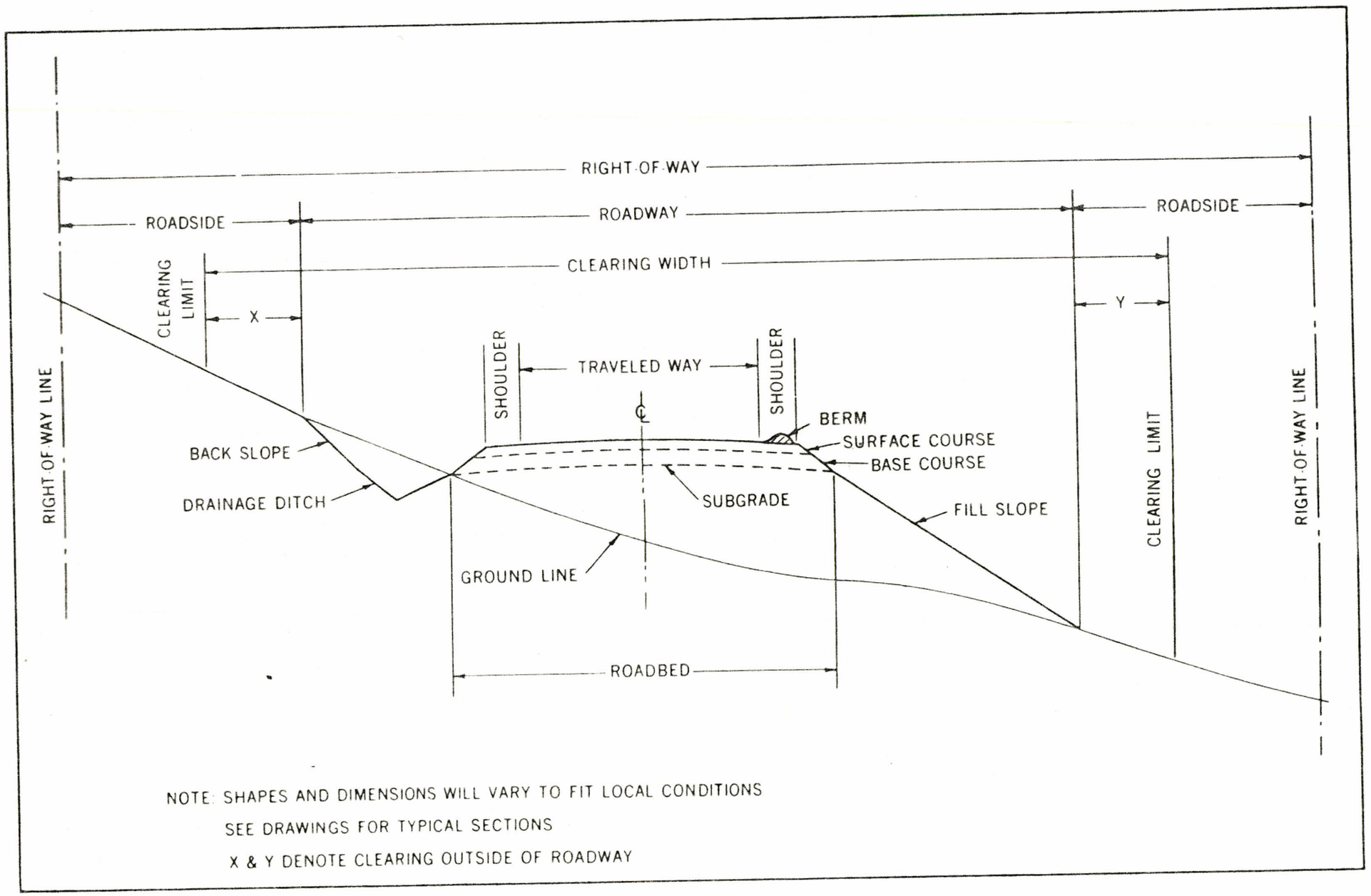

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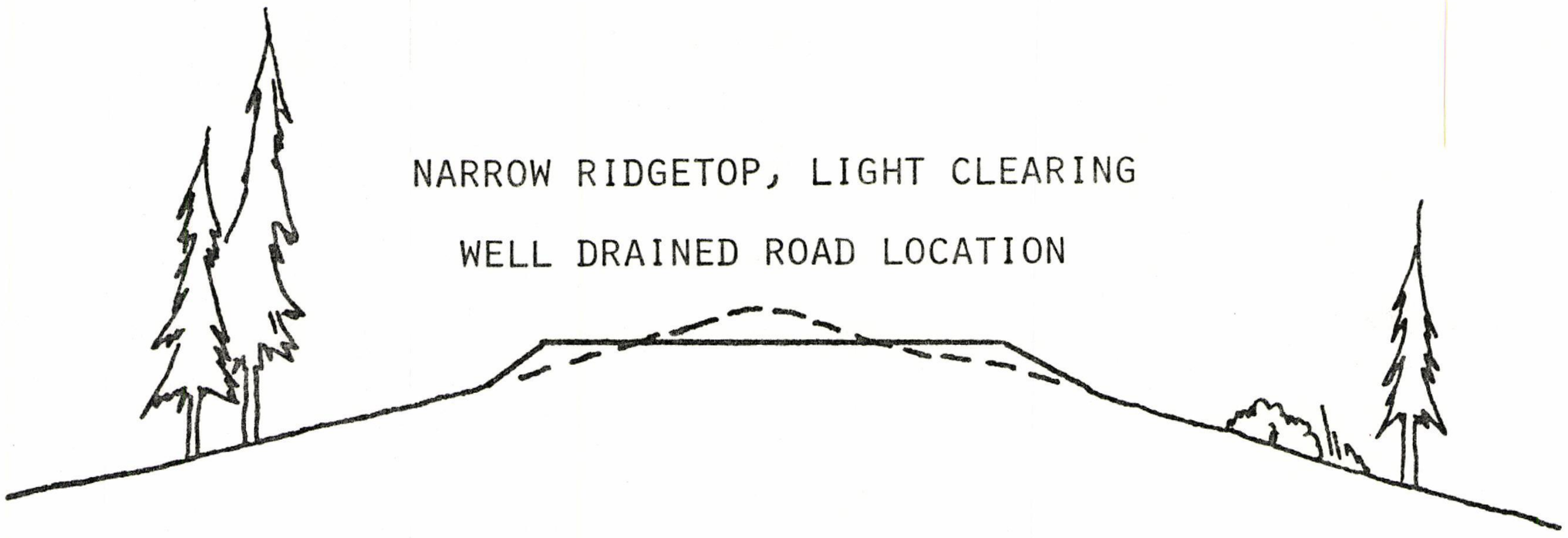

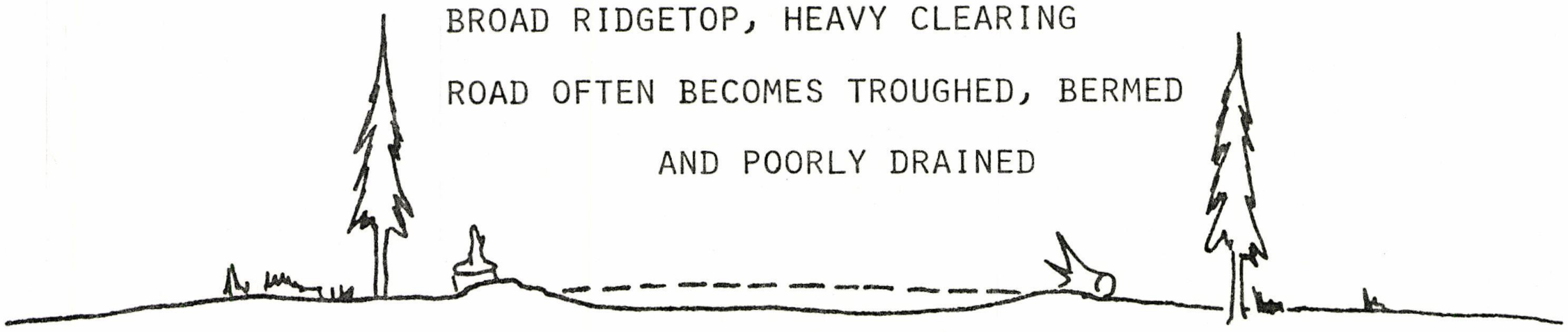

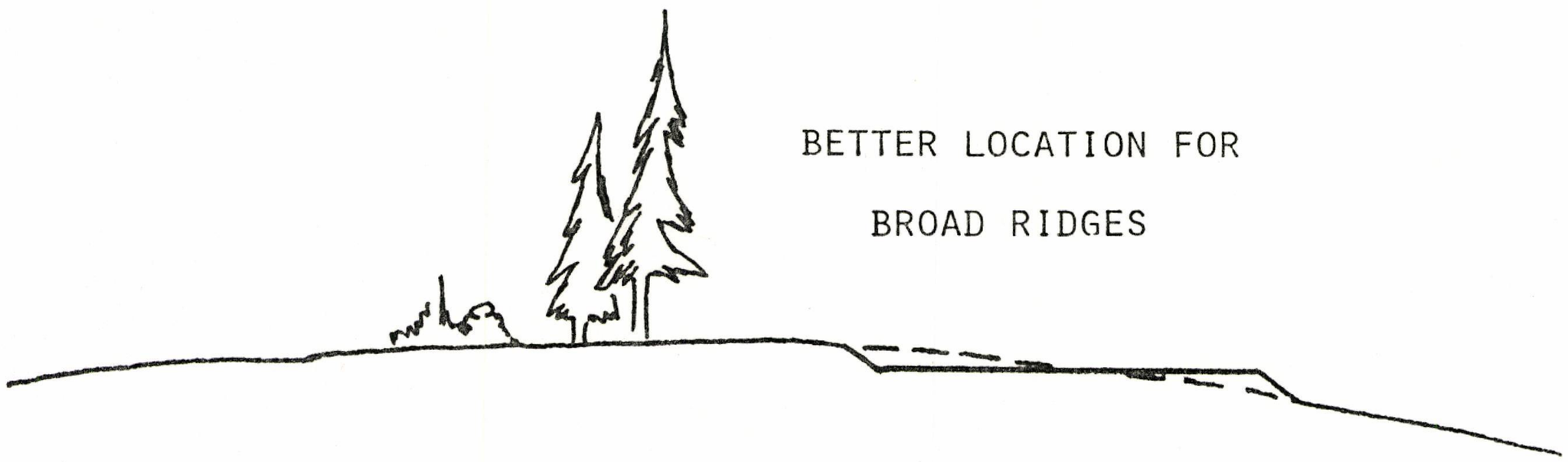

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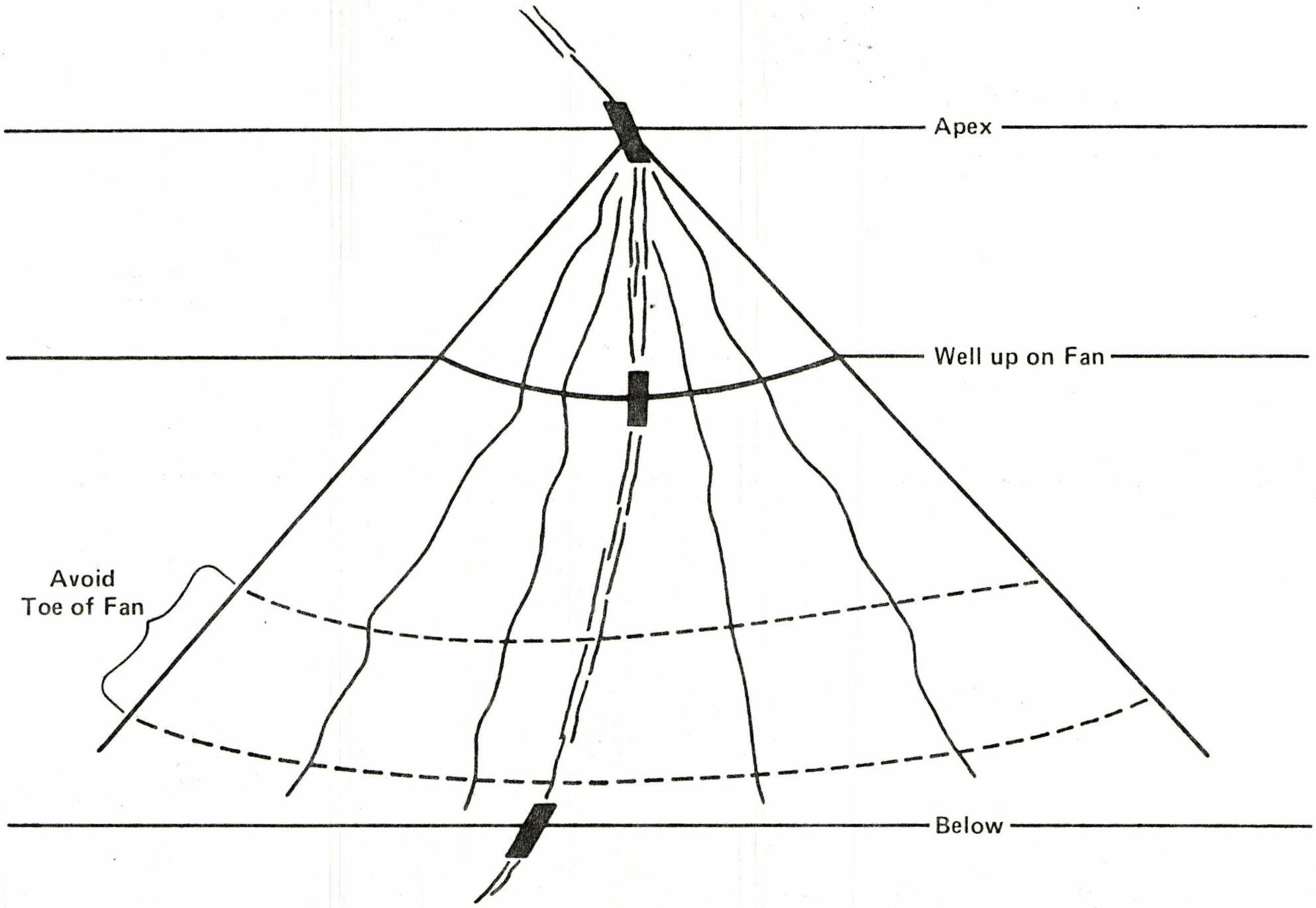

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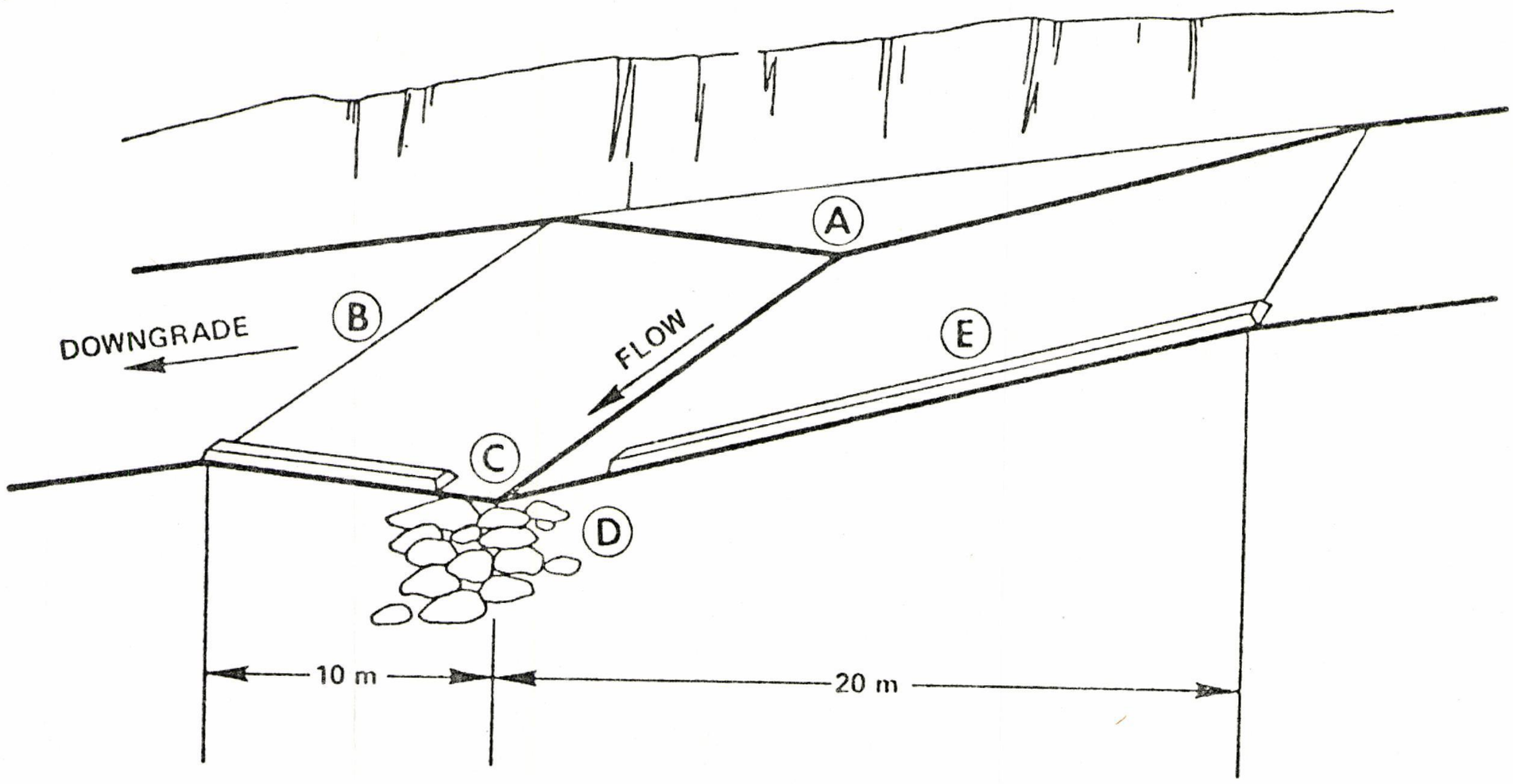

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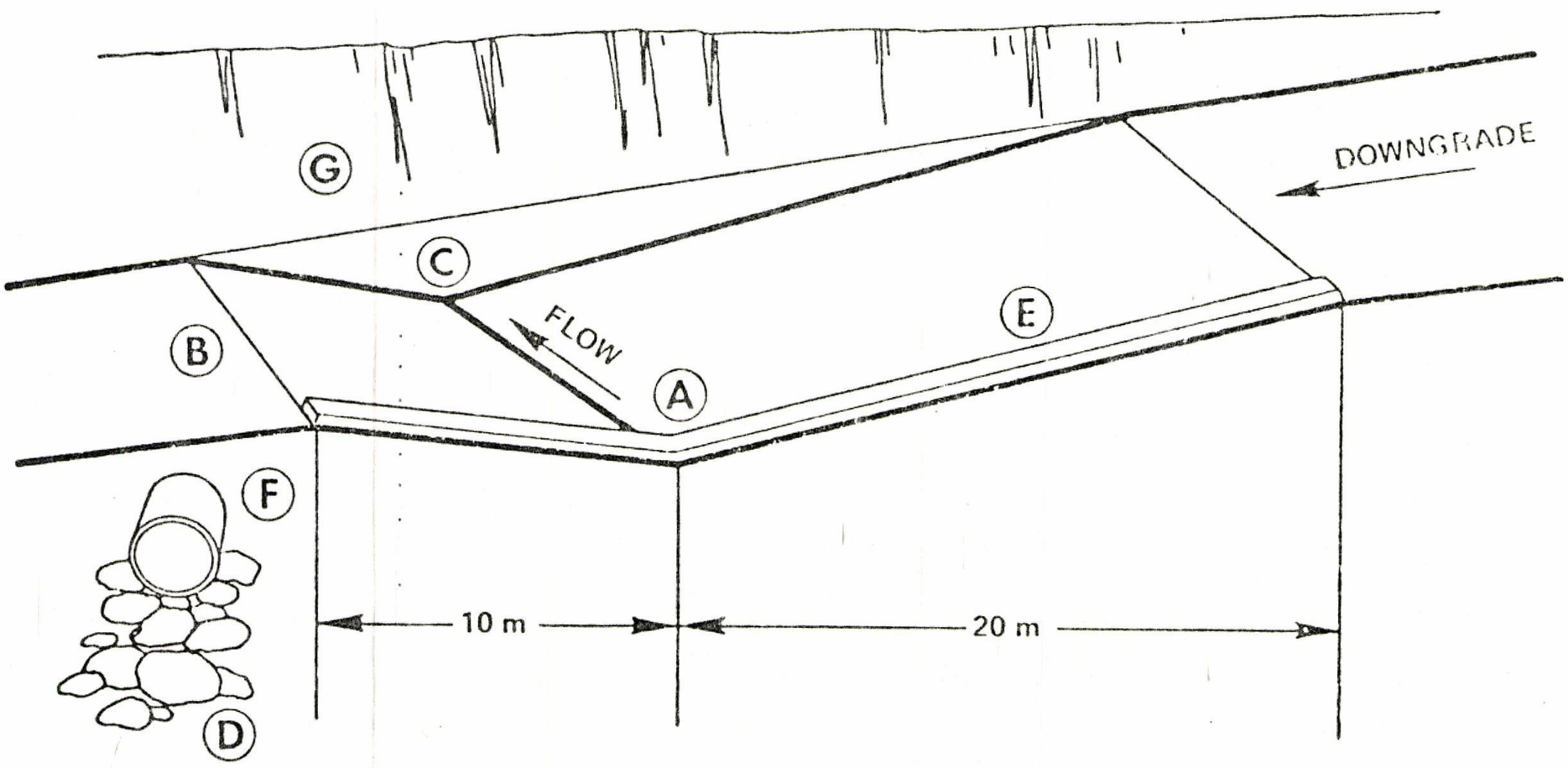

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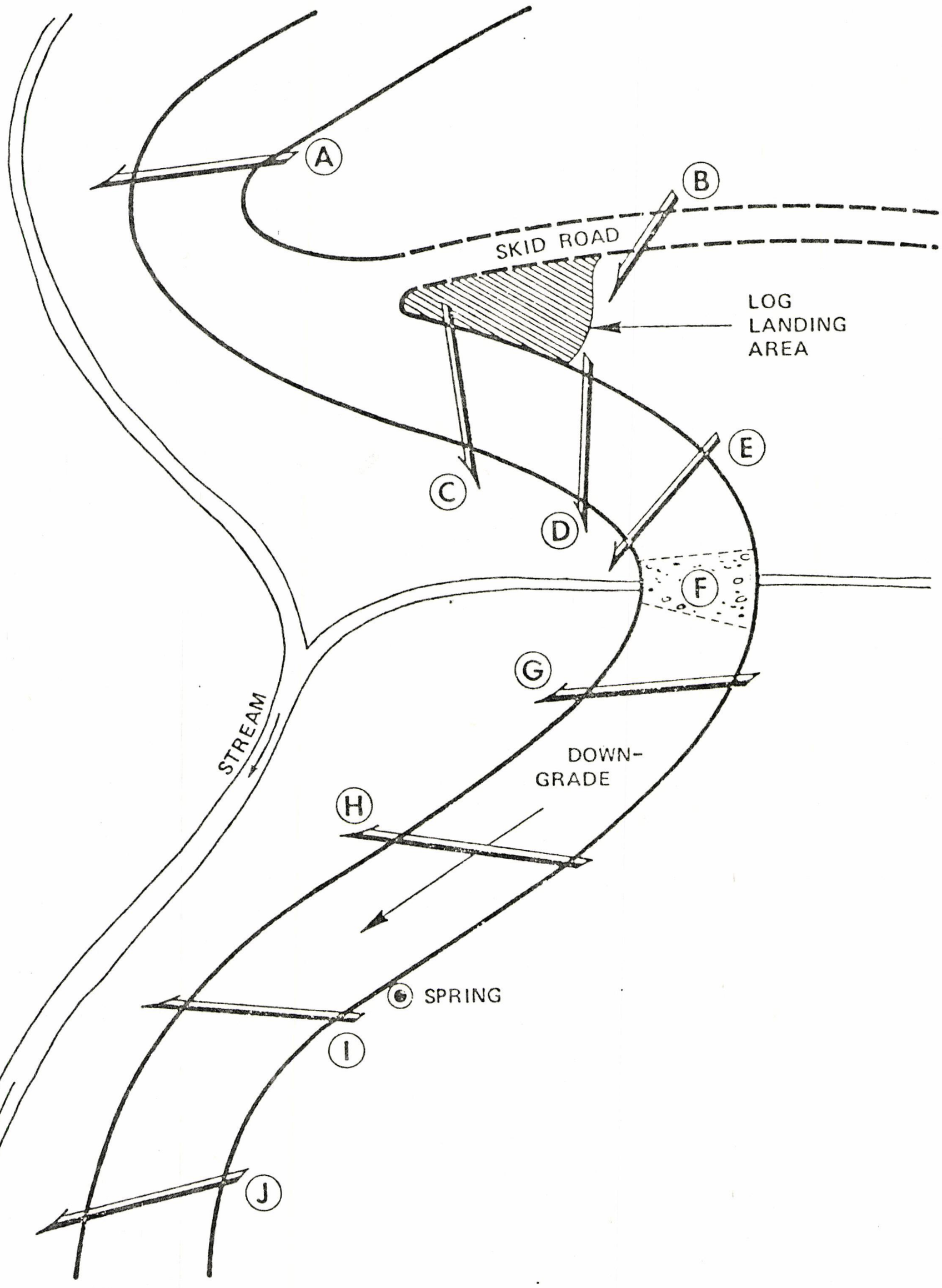

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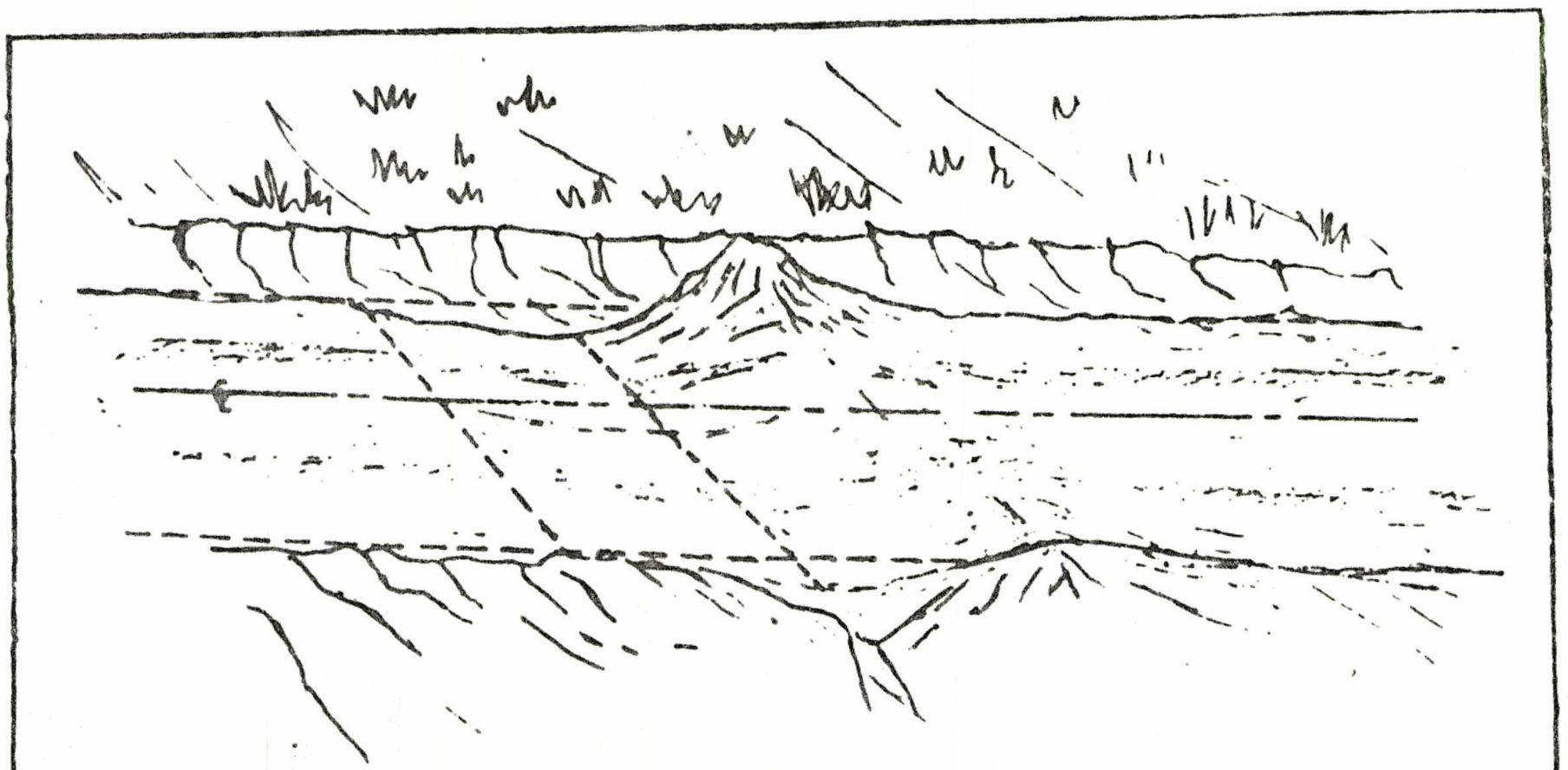

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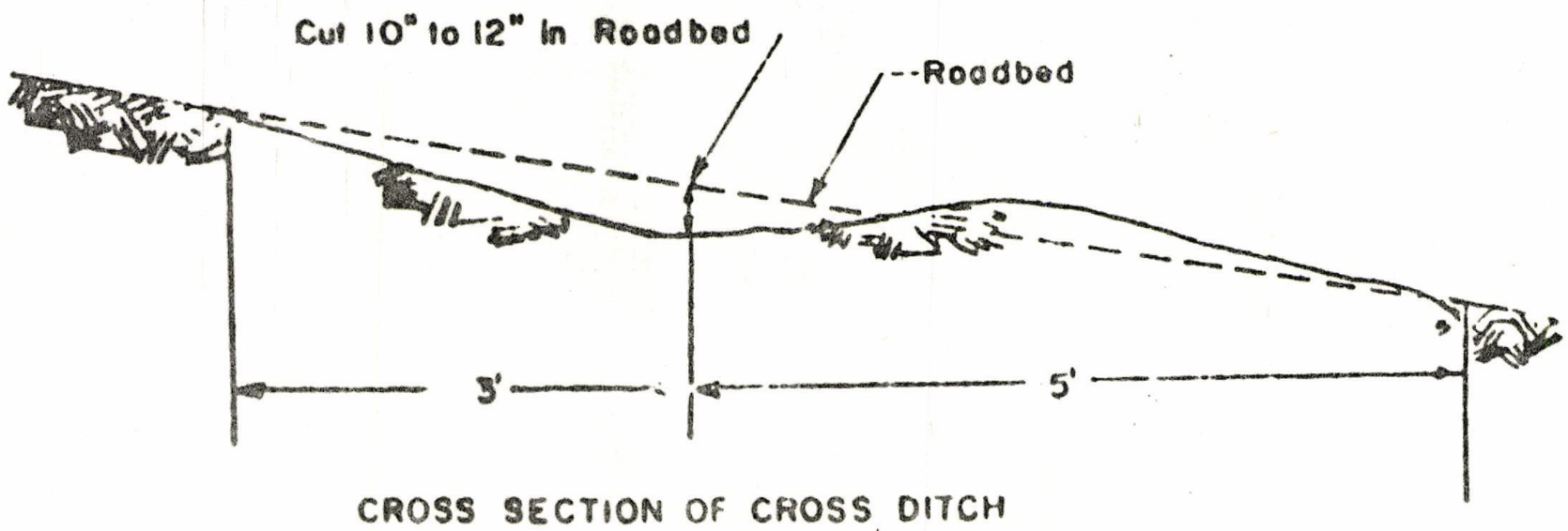

CROSS SECTION OF CROSS DITCH

UNITED STATES DEPARTMENT OF AGRICULTURE
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Tonopah, Nevada

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MAR 02 1981
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February 24, 1981

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Sincerely,

for Jan A. Ford

G. GLADE QUILTER
District Ranger

Enclosure

6200-11 (1/69)

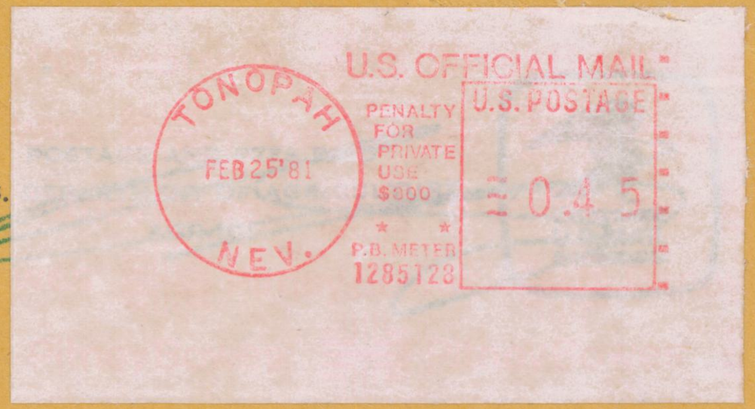
TOIYABE NATIONAL FOREST

DISTRICT RANGER
U. S. Forest Service
P. O. BOX 989
TONOPAH, NEVADA 89049

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

U. S.

AN EQUAL OPPORTUNITY EMPLOYER



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