

KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 9.3.93  
 OBSERVER Kuennen  
 DISTRICT Fortine  
 SALE Zeller Cr.  
 Unit No. 11 21A  
356-01-057

CUTTING METHOD clipper/hand  
 SKIDDING METHOD machine  
 HAZARD TREATMENT not done  
 SILVICULTURAL TREATMENT LTM  
 OPERATION PERIOD Winter 92-93

COMPACTION(Heavy): 5

COMPACTION(Light) 315

UNDISTURBED 260

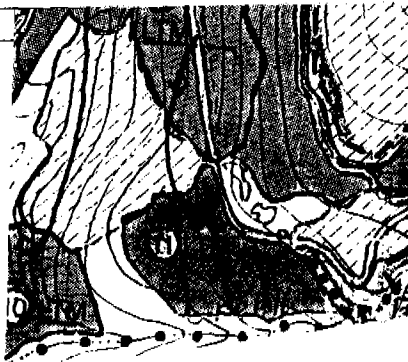
DISPLACED

EXCAVATED SKID TRAIL

SMZ

COMMENTS Several of heavy + light are from old activities. 1st transect on eastern part of unit. No ash cap. Three transects run. Good looking operation!

| AMOUNT OF DISTURBANCE   | No. of Paces |          | Per-cent     |          | SECT |
|-------------------------|--------------|----------|--------------|----------|------|
|                         | No. of Paces | Per-cent | No. of Paces | Per-cent |      |
| Heavy disturbance       | 5            | 1        |              |          |      |
| Light, mod. disturbance | 315          | 54       |              |          |      |
| Undisturbed             | 260          | 45       |              |          |      |
| TOTAL                   | 580          | 100      |              |          |      |
| Displaced               | 0            | 0        |              |          |      |



COMPACTION(Heavy) - any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.

COMPACTION(Light) - any other area not included in heavy COMPACTION or UNDISTURBED.

UNDISTURBED - no signs of any machinery or skidding activity.

DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.

SMZ - include within transect if within harvest unit.

















08/26/1993

Troy - Arbo Fire Salvage

Unit 4

45002175

KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE DATA FORM

DATE 8.26.93

CUTTING METHOD clipper

OBSERVER L. Kuennen

SKIDDING METHOD tractor

DISTRICT Troy

HAZARD TREATMENT spot pile, 15 Ton

SALE Arbo Fire Salvage  
Unit No. 4 31A  
450-02-175

SILVICULTURAL TREATMENT CC w/R/ plant

OPERATION PERIOD Summer 93 July-Aug.

COMPACTION (Heavy)  | 30  
 29

COMPACTION (Light)  | 82  
 110

UNDISTURBED  | 133  
 127

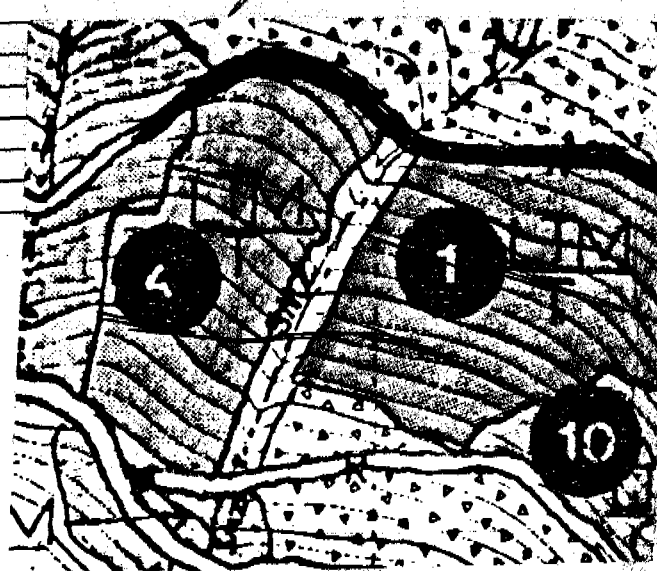
DISPLACED  | 20

EXCAVATED SKID TRAIL

SMZ  |  30/30

COMMENTS Landing area should be ripped; better waterbars on landing.  
Unit boundary marked to water course. Heavy marking in (SMZ) channel  
banks. Two drainages w/ 60-70' of each other - separate into 1 & 4.

| AMOUNT OF DISTURBANCE   | Unit 4       |            | SECT         |          |
|-------------------------|--------------|------------|--------------|----------|
|                         | No. of Paces | Per-cent   | No. of Paces | Per-cent |
| Heavy disturbance       | 59           | 12         |              |          |
| Light, mod. disturbance | 192          | 38         |              |          |
| Undisturbed             | 260          | 50         |              |          |
| <b>TOTAL</b>            | <b>511</b>   | <b>100</b> |              |          |
| Displaced               | 20           | 4          |              |          |



COMPACTION (Heavy) - any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
COMPACTION (Light) - any other area not included in heavy COMPACTION or UNDISTURBED.  
UNDISTURBED - no signs of any machinery or skidding activity.  
DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.  
SMZ - include within transect if within harvest unit.



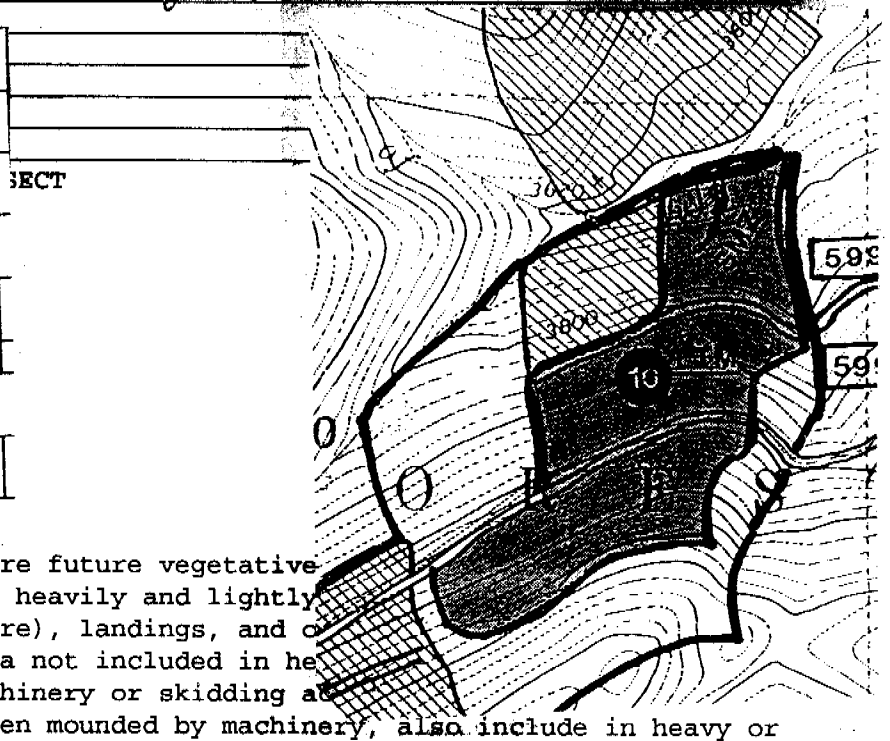
KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 6-7-93 CUTTING METHOD Hand  
 OBSERVER Moeller + Kuennen SKIDDING METHOD FMC on snow roads  
 DISTRICT Troy HAZARD TREATMENT \_\_\_\_\_  
 SALE Ten Left Fire Salvage SILVICULTURAL TREATMENT \_\_\_\_\_  
 Unit No. 10 86A OPERATION PERIOD Winter 92-93

*Fourth of July Salvage 402-02-127*  
*No Organic mat 402-03-149*  
 Heavy - 1  
 COMPACTED (Heavy) |||||  
 w/ winter trail  
 COMPACTION (Light) ||||| 26  
||||| 20  
 w/ diff or new mass  
 UNDISTURBED ||||| 92  
||||| 98  
 DISPLACED ||||| 21  
||||| 21  
 EXCAVATED SKID TRAIL \_\_\_\_\_  
 SMZ \_\_\_\_\_

COMMENTS *Old growth overstory - hot fire removed most of O.M.*  
*Winter snow roads - using small amounts of surface soil*  
*to help pack the snow roads!!*  
*Rock ||||| Large amounts of organic on trail (plantable)*

| AMOUNT OF DISTURBANCE   | Unit 10      |          | No. of Paces | Per-cent |
|-------------------------|--------------|----------|--------------|----------|
|                         | No. of Paces | Per-cent |              |          |
| Heavy disturbance       | 1            | 0        |              |          |
| Light, mod. disturbance | 46           | 20       |              |          |
| Undisturbed             | 190          | 80       |              |          |
| TOTAL                   | 237          |          |              |          |
| Displaced               | 42           | 18       |              |          |



COMPACTION (Heavy) - any place where future vegetative impacted, i.e., skid trails (both heavily and lightly compaction related to soil moisture), landings, and other areas.  
COMPACTION (Light) - any other area not included in heavy compaction.  
UNDISTURBED - no signs of any machinery or skidding activity.  
DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.  
SMZ - include within transect if within harvest unit.



KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 6.7.93 CUTTING METHOD Hand  
 OBSERVER Moeller-Kuennen SKIDDING METHOD Rubber tire  
 DISTRICT Troy HAZARD TREATMENT \_\_\_\_\_  
 SALE Fourth-Cyclone Fire Salvage SILVICULTURAL TREATMENT \_\_\_\_\_  
 Unit No. (91) + ~~11~~  
402-01-126 -128 46 Acres OPERATION PERIOD summer '92?

COMPACTION (Heavy) |||||  
 COMPACTION (Light) |||||  
 UNDISTURBED |||||  
 DISPLACED |||||  
 EXCAVATED SKID TRAIL \_\_\_\_\_  
 SMZ No duff |||||

COMMENTS One transect crossing the middle of the unit, parallel to the road. Very hot - most of organics gone.  
Rock-1

| AMOUNT OF DISTURBANCE   | Unit 9       |          |
|-------------------------|--------------|----------|
|                         | No. of Paces | Per-cent |
| Heavy disturbance       | 35           | 14       |
| Light, mod. disturbance | 80           | 32       |
| Undisturbed             | 135          | 54       |
| TOTAL                   | 250          | 100      |
| Displaced               | 70           | 28       |

ERN OF TRANSECT



**COMPACTION (Heavy)** - any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
**COMPACTION (Light)** - any other area not included in heavy COMPACTION or UNDISTURBED.  
**UNDISTURBED** - no signs of any machinery or skidding activity.  
**DISPLACED** - any place soil has been mounded by machinery, also include in heavy or light compaction.  
**SMZ** - include within transect if within harvest unit.









08/25/1993  
 Libby - Butler Didit  
 Unit 4A  
 56503045

**KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM**

DATE 8.25.93 CUTTING METHOD Hand  
 OBSERVER L. Kuennen SKIDDING METHOD tractor  
 DISTRICT Fisher River HAZARD TREATMENT underburn  
 SALE Butler Didit SILVICULTURAL TREATMENT Seed tree  
Unit No. 4A above rd OPERATION PERIOD August '93  
615-03-045 7 Acres

COMPACTION (Heavy)        25

COMPACTION (Light)        102

UNDISTURBED              206

DISPLACED \_\_\_\_\_

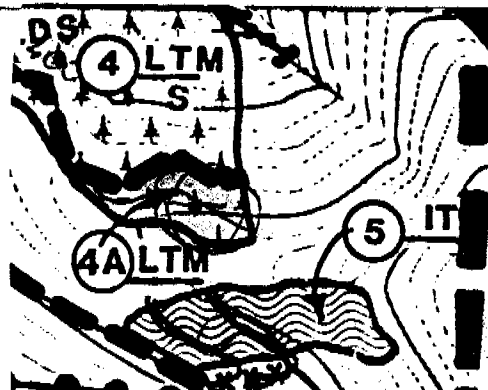
EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ \_\_\_\_\_

COMMENTS Thin ash mantle. DF/Libo.

No hazard abatement completed yet! Small size of unit probably contributed to higher heavy disturbance.

| AMOUNT OF DISTURBANCE   | Unit 4A      |          |              |          |
|-------------------------|--------------|----------|--------------|----------|
|                         | No. of Paces | Per-cent | No. of Paces | Per-cent |
| Heavy disturbance       | 25           | 8        |              |          |
| Light, mod. disturbance | 102          | 30       |              |          |
| Undisturbed             | 206          | 62       |              |          |
| TOTAL                   | 333          | 100      |              |          |
| Displaced               | 0            | 0        |              |          |



COMPACTION (Heavy) - any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
COMPACTION (Light) - any other area not included in heavy COMPACTION or UNDISTURBED.  
UNDISTURBED - no signs of any machinery or skidding activity.  
DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.  
SMZ - include within transect if within harvest unit.



KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 8.25.93  
 OBSERVER L. Kuennen  
 DISTRICT Fisher River  
 SALE Butler Dedit  
 Unit No. 6 & 5

CUTTING METHOD Clipped  
 SKIDDING METHOD skiddy  
 HAZARD TREATMENT 5 - Limb + Lap  
6 - Broadcast burn  
 SILVICULTURAL TREATMENT 5 - Sanitation Salvage  
6 - CC w/ reserves  
 OPERATION PERIOD 6 - September August (5)

5 615-03-047

6 615-03-048

6 - 12 Acres  
 5 - 8 Acres

#6 COMPACTION (Heavy)

#5   
 #6 COMPACTION (Light)

#5

#6 UNDISTURBED

#5

DISPLACED

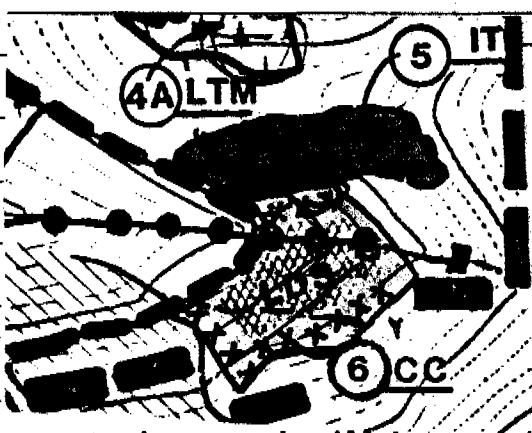
#5  #6

EXCAVATED SKID TRAIL

SMZ

COMMENTS Unit 6 on both sides of protected draw (~30 wide avoided other than one designated crossing). This unit skidded during tree time. Western part of unit DF/Phma. LT 302. Northernly aspect - probably manage like DF/Euro, but one small area have one with one Gt, one SAF + one E.S. Thin ash soil mantle. Steep ground combined with wrong machinery contributed to high "heavy" disturbance

|                            | Unit 5       |           | Unit 6       |           |              |           |
|----------------------------|--------------|-----------|--------------|-----------|--------------|-----------|
|                            | No. of Paces | Per- cent | No. of Paces | Per- cent | No. of Paces | Per- cent |
| heavy dis-<br>bance        | 20           | 17        | 28           | 8         |              |           |
| light, mod.<br>disturbance | 46           | 40        | 172          | 50        |              |           |
| Undisturbed                | 50           | 43        | 142          | 42        |              |           |
| TOTAL                      | 116          |           | 342          |           |              |           |



|           |    |    |    |   |  |  |
|-----------|----|----|----|---|--|--|
| Displaced | 20 | 17 | 10 | 3 |  |  |
|-----------|----|----|----|---|--|--|

vegetative growth will be significantly and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
**COMPACTION (Light)** - any other area not included in heavy COMPACTION or UNDISTURBED.  
**UNDISTURBED** - no signs of any machinery or skidding activity.  
**DISPLACED** - any place soil has been mounded by machinery, also include in heavy or light compaction.  
**SMZ** - include within transect if within harvest unit.



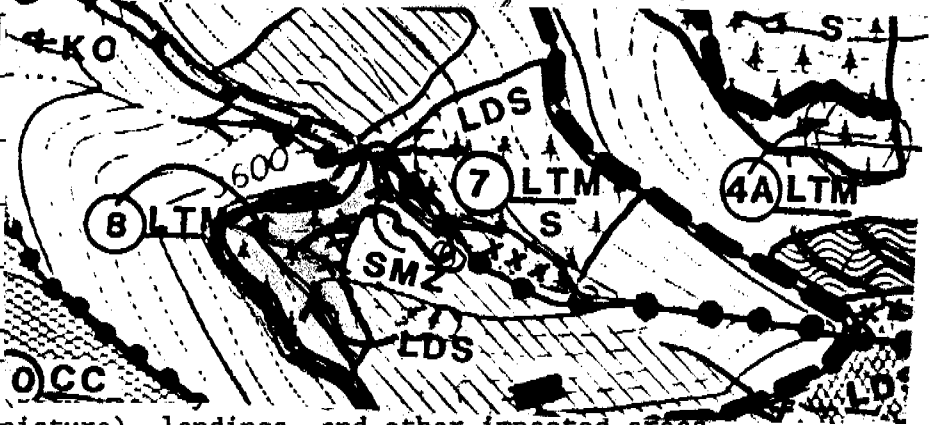
KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 8.25.93 CUTTING METHOD Hand  
 OBSERVER L. Kuennen SKIDDING METHOD Tractor  
 DISTRICT Fisher River HAZARD TREATMENT Underburn  
 SALE Butler Dedit SILVICULTURAL TREATMENT Seed tree  
 Unit No. 8  
DF/Phma 615-03-050 OPERATION PERIOD August  
11 Acres

COMPACTION (Heavy)    32  
 COMPACTION (Light)       95  
 UNDISTURBED       125  
 DISPLACED \_\_\_\_\_  
 EXCAVATED SKID TRAIL \_\_\_\_\_  
 SMZ \_\_\_\_\_

COMMENTS Burning not complete yet.  
Knapweed scattered on old skid trails (10+ years old)  
Land types (soil) combination of 303 + 302. Outcrops exposed on  
south, especially along ridge, lot of angular rocks in soil. Original  
waterbars put in poorly - look like w/ rubber tire skidder blades.  
All they / we were doing was channeling water to next waterbar.  
Extra / pulaski work helped a lot.  
 \* Roads - drive through dips look great - did a good job. Looks  
like hauling occurred on very wet roads. Why not water bars on  
first two miles of road??

| AMOUNT OF DISTURBANCE   | Unit 8       |          |              |          |
|-------------------------|--------------|----------|--------------|----------|
|                         | No. of Paces | Per-cent | No. of Paces | Per-cent |
| Heavy disturbance       | 32           | 13       |              |          |
| Light, mod. disturbance | 95           | 37       |              |          |
| Undisturbed             | 125          | 50       |              |          |
| TOTAL                   | 252          | 100      |              |          |



|           |   |   |  |  |
|-----------|---|---|--|--|
| Displaced | 0 | 0 |  |  |
|-----------|---|---|--|--|

... (disture), landings, and other impacted areas.  
 ... area not included in heavy COMPACTION or UNDISTURBED.  
 ... machinery or skidding activity.

... why place soil has been mounded by machinery, also include in heavy or light compaction.  
 SMZ - include within transect if within harvest unit.



KOOTENAI NATIONAL FOREST  
 SOIL DISTURBANCE DATA FORM

DATE 9.24.93  
 OBSERVER L. Kuennen  
 DISTRICT Fisher River  
 SALE Smoke Cr. P.C.  
 Unit No. B 23A  
625-03-002

CUTTING METHOD Hand  
 SKIDDING METHOD Tractor  
 HAZARD TREATMENT Proposed jachpot  
 SILVICULTURAL TREATMENT 1/2 liberation 1/2 shelterwood  
 OPERATION PERIOD Winter 92-93 on snow

COMPACTION (Heavy)       \_\_\_\_\_ 44

COMPACTION (Light)                      \_\_\_\_\_ 277

UNDISTURBED  \_\_\_\_\_ 600

DISPLACED     \_\_\_\_\_ 50

EXCAVATED SKID TRAIL \_\_\_\_\_

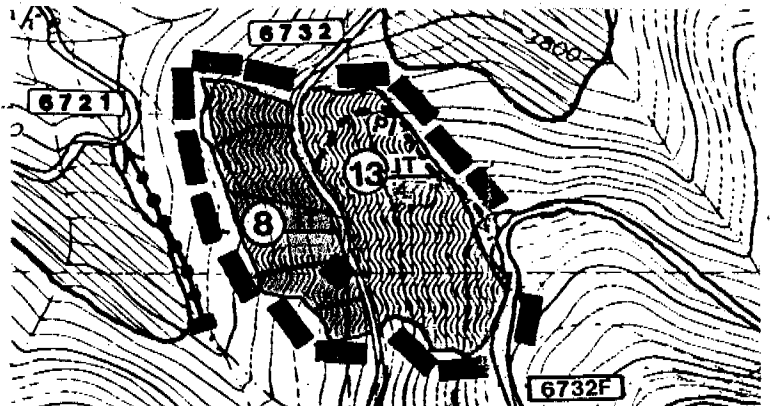
SMZ \_\_\_\_\_

COMMENTS \_\_\_\_\_

Excavated trails roughly horizontal. Dont appear to have been necessary. Ran transects up + down hill to avoid paralleling excavations.

| AMOUNT OF DISTURBANCE   | No. of Paces | Per- cent | No. of Paces | Per- cent |
|-------------------------|--------------|-----------|--------------|-----------|
| Heavy dis- bance        | 44           | 5         |              |           |
| Light, mod. disturbance | 277          | 30        |              |           |
| Undisturbed             | 600          | 65        |              |           |
| TOTAL                   | 921          | 100       |              |           |

|           |    |   |  |  |
|-----------|----|---|--|--|
| Displaced | 50 | 5 |  |  |
|-----------|----|---|--|--|



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COMPACTION (Light) - any other area not included in heavy COMPACTION or UNDISTURBED.

UNDISTURBED - no signs of any machinery or skidding activity.

DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.

SMZ - include within transect if within harvest unit.





57502020 62502020  
 DATE 9.24.93  
 OBSERVER L. Kuennen  
 DISTRICT Fisher River  
 SALE Smoke Cr. P.C.  
 Unit No. 9 16A  
625-02-020

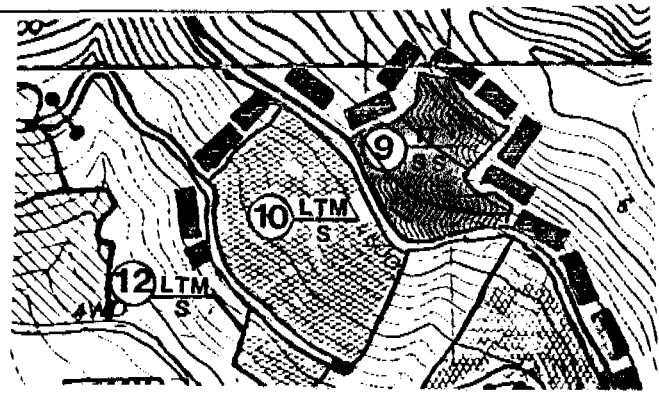
CUTTING METHOD Hand  
 SKIDDING METHOD FMC  
 HAZARD TREATMENT none  
 SILVICULTURAL TREATMENT Sanitation Salvage  
 OPERATION PERIOD Early-mid Sept. 1993

|                      |  |     |
|----------------------|--|-----|
| COMPACTION (Heavy)   |  | 2   |
| COMPACTION (Light)   |  | 420 |
| UNDISTURBED          |  | 430 |
| DISPLACED            |  | 120 |
| EXCAVATED SKID TRAIL |  |     |
| SMZ                  |  |     |

COMMENTS Started on SE side of unit towards NE corner adjacent to upper end of talus outside of unit.  
2nd transect ~ middle of unit. Includes some of steeper area.

6732E - pipe ~.2 mile above - also surface drainage going off at this point crossing along side pipe. Post crane through 1,000-2000' above this. Located in SW 5.75 miles on Smoke Cr. Rd.

| AMOUNT OF DISTURBANCE      | No. of Paces | Per- cent | No. of Paces | Per- cent |
|----------------------------|--------------|-----------|--------------|-----------|
| Heavy dis-<br>bance        | 2            | 1         |              |           |
| Light, mod.<br>disturbance | 420          | 49        |              |           |
| Undisturbed                | 430          | 50        |              |           |
| TOTAL                      | 852          | 100       |              |           |



|           |     |    |  |  |
|-----------|-----|----|--|--|
| Displaced | 120 | 14 |  |  |
|-----------|-----|----|--|--|

the vegetative growth will be significantly and lightly used depending on amount of windings, and other impacted areas. included in heavy COMPACTION or UNDISTURBED.

UNDISTURBED - no signs of any machinery or skidding activity.  
DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.  
SMZ - include within transect if within harvest unit.



11202036  
KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE MONITORING FORM

236 = Unit 11

DATE: July 8, 1993  
SECTOR: Khennan  
SITE: Rexford  
LEAS.A.: North Fork  
INITIALS: 236 Acres: 39  
CUTTING METHOD: clipper/hand  
SKIDDING METHOD: dispersed / dedicated  
If tractor: dispersed / dedicated  
HAZARD TREATMENT: BB  
SILVICULTURAL TRMT: ST seed cut  
OPERATION PERIOD: July/Aug 89  
Aspect: |  
Elevation: |

COMPACTION (Heavy) \_\_\_\_\_

COMPACTION (Light) Walk-through

UNDISTURBED \_\_\_\_\_

DISPLACED \_\_\_\_\_

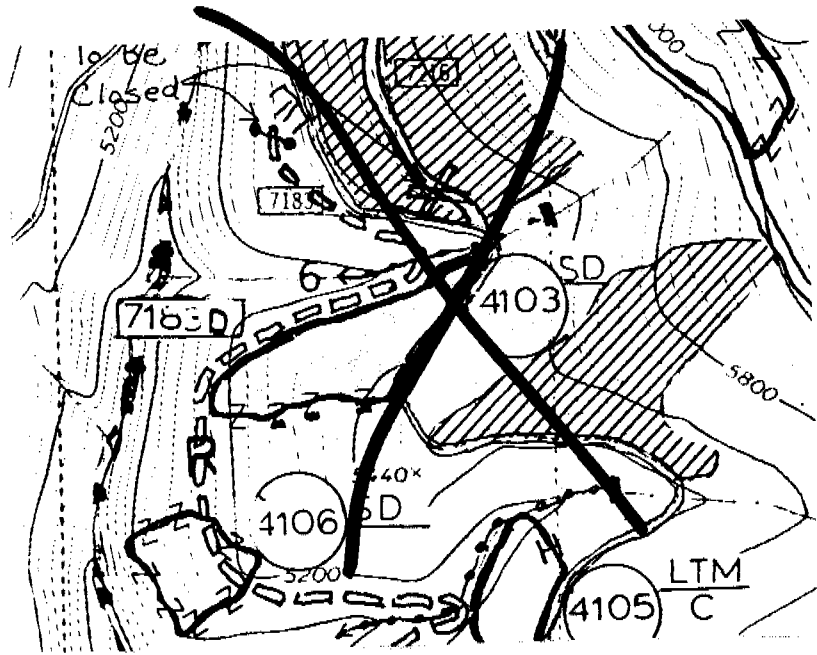
EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ ROCK \_\_\_\_\_

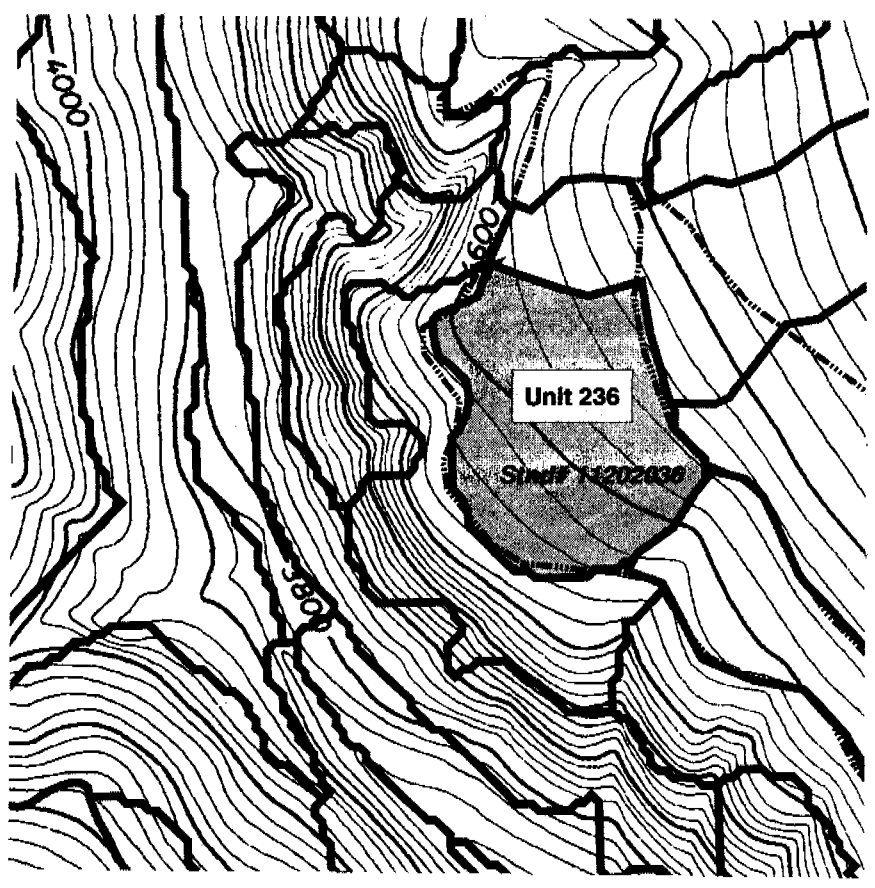
COMMENTS (Include soil, geology, organic debris, other pertinent info)  
This unit was part of a District Fire + Fuels Review  
From the soil + water resource view the unit looks good.  
Very difficult to leave non-fire tolerant spp + get them to  
survive w/o clearing around base. Protection should  
be done by hand or operator.

SHAPE OF UNIT AND PATTERN OF TRANSECT \_\_\_\_\_

**ACTION (Heavy)** - Any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
**COMPACTION (Light)** - Any other area not included in heavy COMPACTION or UNDISTURBED.  
**UNDISTURBED** - No signs of any machinery or skidding activity.  
**DISPLACED** - Any place soil has been mounded by machinery, also include in heavy or light compaction.  
**SMZ** - Include within transect if within harvest unit.



not correct map  
(stained) AK 7/5/03



~~11104013~~ 11104013 nk 403  
KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE MONITORING FORM

4103 = Unit 16

DATE July 8, 1993 CUTTING METHOD clipper  
SECTOR Krummen SKIDDING METHOD RTS  
TRACTOR Redford If tractor: dispersed dedicated  
LEADER A. North Fork HAZARD TREATMENT BB  
UNIT # 4103 Acres 40 3/8 SILVICULTURAL TRMT CC  
T. 413 nk 117103 OPERATION PERIOD July/Aug '89  
Aspect |  
Elevation |

COMPACTION (Heavy) \_\_\_\_\_  
COMPACTION (Light) \_\_\_\_\_

Walk-through

UNDISTURBED \_\_\_\_\_

DISPLACED \_\_\_\_\_

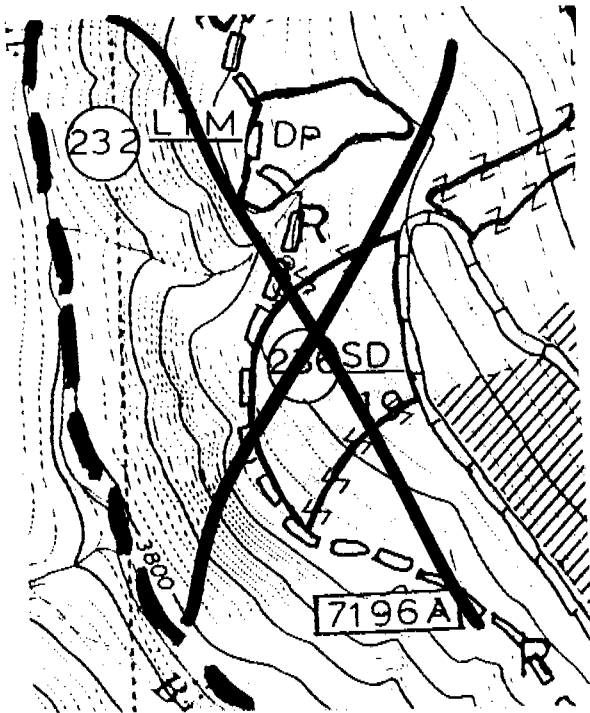
EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ ROCK \_\_\_\_\_

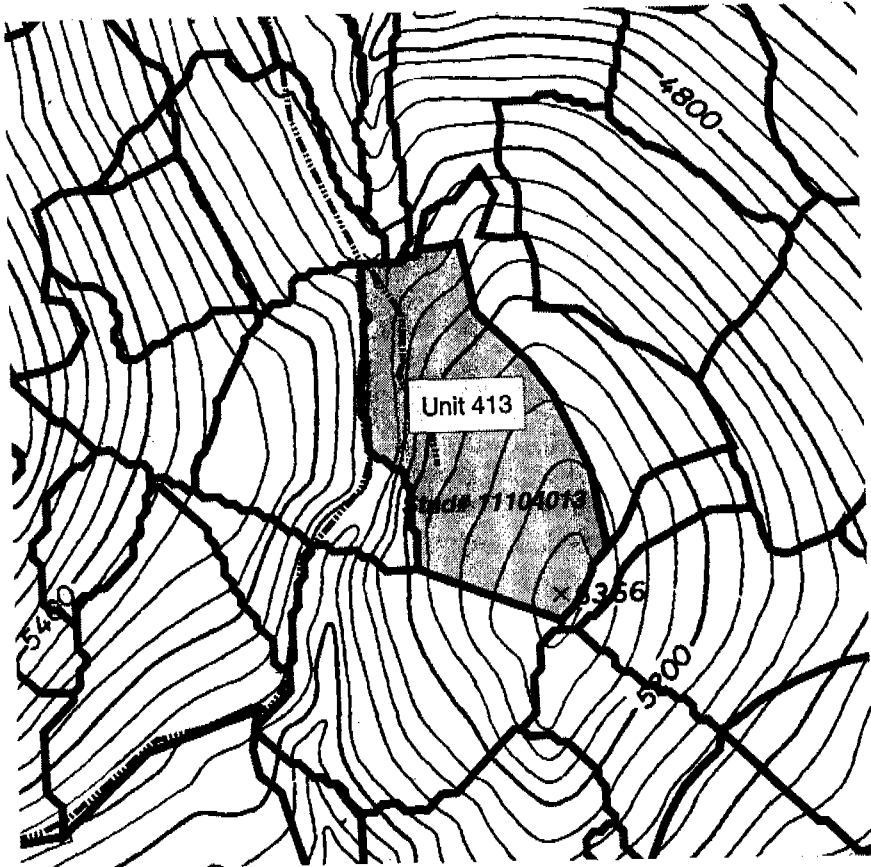
COMMENTS (Include soil, geology, organic debris, other pertinent info)  
This unit was part of a Forest Fire + Fuels Review  
lots of fuel remnants around E.S. + SAF. leave trees  
will kill all of these unless fuel removed.  
Unit looks good from soil + water stand point

SHAPE OF UNIT AND PATTERN OF TRANSECT \_\_\_\_\_

COMPACTION (Heavy) - Any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
COMPACTION (Light) - Any other area not included in heavy COMPACTION or UNDISTURBED.  
UNDISTURBED - No signs of any machinery or skidding activity.  
DISPLACED - Any place soil has been mounded by machinery, also include in heavy or light compaction.  
SMZ - Include within transect if within harvest unit.



(stand)  
for correct map  
nk 7/7103





11805073

KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE MONITORING FORM

118-3-73

DATE: July 8, 1993  
SECTOR: Kootenai  
STRIP: Rexford  
LEASING: Holdup Gulch  
INITIALS: 10 Acres 83  
I.T.: 312  
Slope: 23%  
Location:  
CUTTING METHOD: clipper  
SKIDDING METHOD: RTS  
If tractor: dispersed dedicated  
HAZARD TREATMENT: underburn completed 9-10-91  
SILVICULTURAL TRMT: SW/UB + meth/plant  
OPERATION PERIOD: 3/1991  
Aspect: NW  
Elevation: 3100'

COMPACTION (Heavy)

Walk-Through

COMPACTION (Light)

UNDISTURBED

DISPLACED

EXCAVATED SKID TRAIL

BMZ ROCK

COMMENTS (Include soil, geology, organic debris, other pertinent info)

This unit was part of a District Fire & Fuels Review  
Leave tree mortality low - probably due to light rain prior  
to burn. Size of PP live trees less than on Unit 12.  
From soil & water standpoint unit looks good.

SHAPE OF UNIT AND PATTERN OF TRANSECT

COMPACTION (Heavy) - Any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
COMPACTION (Light) - Any other area not included in heavy COMPACTION or UNDISTURBED.  
UNDISTURBED - No signs of any machinery or skidding activity.  
DISPLACED - Any place soil has been mounded by machinery, also include in heavy or light compaction.  
BMZ - Include within transect if within harvest unit.

11803072  
KOOTENAI NATIONAL FOREST

118.3-72 SOIL DISTURBANCE MONITORING FORM

DATE: July 8, 1993  
 OPERATOR: J. Kienner  
 LOCATION: Rexford  
 S.A.: Holdup Gulch  
 UNIT #: 12 Acres 34  
 I.T.: 324  
 LOCATION: 2370  
 CUTTING METHOD: chipper  
 SKIDDING METHOD: RTS  
 If tractor: dispersed dedicated  
 HAZARD TREATMENT: underburn 9-2-91  
 SILVICULTURAL TRMT: SW/UB + mech/plant  
 OPERATION PERIOD: 3/1991  
 Aspect: N  
 Elevation: 3500'

COMPACTED (Heavy) \_\_\_\_\_

COMPACTED (Light) Walk-through

UNDISTURBED \_\_\_\_\_

DISPLACED \_\_\_\_\_

EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ/ROCK \_\_\_\_\_

COMMENTS (Include soil, geology, organic debris, other pertinent info)  
This unit was part of a Forest Fire & Fuels Review.  
Lots of leaves & pine needles. Too much fuel around base of  
tree. Lots of heat around base of tree -- roots killed 3" into  
soil.

SHAPE OF UNIT AND PATTERN OF TRANSECT \_\_\_\_\_

**COMPACTED (Heavy)** - Any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
**COMPACTED (Light)** - Any other area not included in heavy COMPACTED or UNDISTURBED.  
**UNDISTURBED** - No signs of any machinery or skidding activity.  
**DISPLACED** - Any place soil has been mounded by machinery, also include in heavy or light compaction.  
**SMZ** - Include within transect if within harvest unit.



11101018

07/23/1993  
Rexford - Good Creek Pest Control  
Unit 20  
11101018

KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE MONITORING FORM

DATE July 23, 1993 CUTTING METHOD chipper  
 DISTRICT Rexford SKIDDING METHOD RTS  
 A/E/S.A. Good Creek PC. If tractor: dispersed  dedicated   
 Unit # 20 Acres 33 HAZARD TREATMENT BB 196  
 H.T. SAF/cum (571) SILVICULTURAL TRMT CC - remove all PP leave all others  
 Slope 10 - 3.5% OPERATION PERIOD July 1993  
 Location upper Aspect southwesterly  
 Elevation 4600

COMPACTION (Heavy) \_\_\_\_\_  
Walk-through

COMPACTION (Light) \_\_\_\_\_  
UNDISTURBED \_\_\_\_\_

DISPLACED \_\_\_\_\_

EXCAVATED SKID TRAIL \_\_\_\_\_  
SMZ/ROCK \_\_\_\_\_

COMMENTS (Include soil, geology, organic debris, other pertinent info)  
This was part of a field trip between FS + industry.  
Soil moisture was greater than 18%. The area is upper  
and C<sub>2</sub> where the soils remain wet a long time. Operations  
were on-going but late spring rains were making it  
difficult to operate under 18% soil moisture.  
All the skid trails were definitely compacted. Cannot  
keep slash on trail when ground "shaking".

\* Accompanied by Gerald Jensen, Bob Seidel, Keith Cloney, Jack Hagle, Randy Peterson, Mike + Charles Newton  
 SHAPE OF UNIT AND PATTERN OF TRANSECT \_\_\_\_\_

**COMPACTION (Heavy)** - Any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.  
**COMPACTION (Light)** - Any other area not included in heavy COMPACTION or UNDISTURBED.  
**UNDISTURBED** - No signs of any machinery or skidding activity.  
**DISPLACED** - Any place soil has been mounded by machinery, also include in heavy or light compaction.  
**SMZ** - Include within transect if within harvest unit.



05/20/1993  
Three Rivers - East Basin  
Unit 25 & 26  
42902150 / 42902209

KOOTENAI NATIONAL FOREST  
SOIL IMPACT DATA FORM

25. BW - Seed cut  
Campfire '93 burn '94

26 { Seed Tree NR;  
unintentional burn '93

DATE May 20, 1993

OBSERVER Kuennen-Shera

Tractor shided

DISTRICT Three Rivers

SALE E. Basin UNIT # 26+25

25. 429 02 150 30 Acres

~~05 209~~ different

26. 429 02-149 stand to

west of

drawn

map -

also 32.A

by itself

uk 7/7/03

Walk Through

le 5600  
HS - IN  
HT 571

COMPACTION HEAVY

COMPACTION LIGHT

UNDISTURBED

DISPLACED

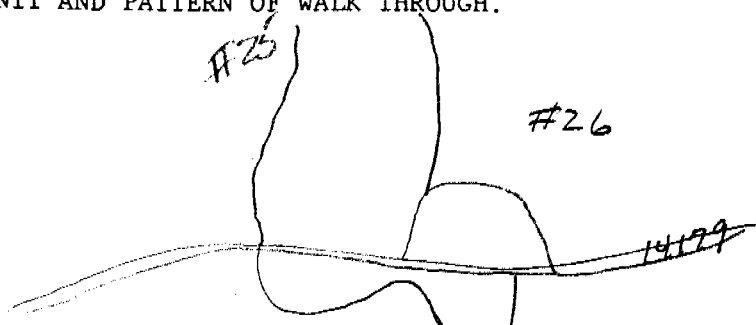
EXCAVATED SKID TRAIL

SMZ

COMMENTS

Generally the unit looks good! Some of the  
skid track more displacement than is desired.  
Waterbars poorly constructed in some cases.

SHAPE OF UNIT AND PATTERN OF WALK THROUGH.





KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE DATA FORM

DATE 6-7-93

CUTTING METHOD Hand clipper

OBSERVER Kuennen

SKIDDING METHOD RTS

DISTRICT Three Rivers

HAZARD ABATEMENT none

SALE Fourth Cyclone Fire S.  
Unit No. 1, 7, 7A, 23B  
46

SILVICULTURAL CC or CC w/ reserves

OPERATION PERIOD 1999 summer

COMPACTION(Heavy) Walk through

COMPACTION (Light) \_\_\_\_\_

UNDISTURBED \_\_\_\_\_

DISPLACED \_\_\_\_\_

EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ/ROCK \_\_\_\_\_

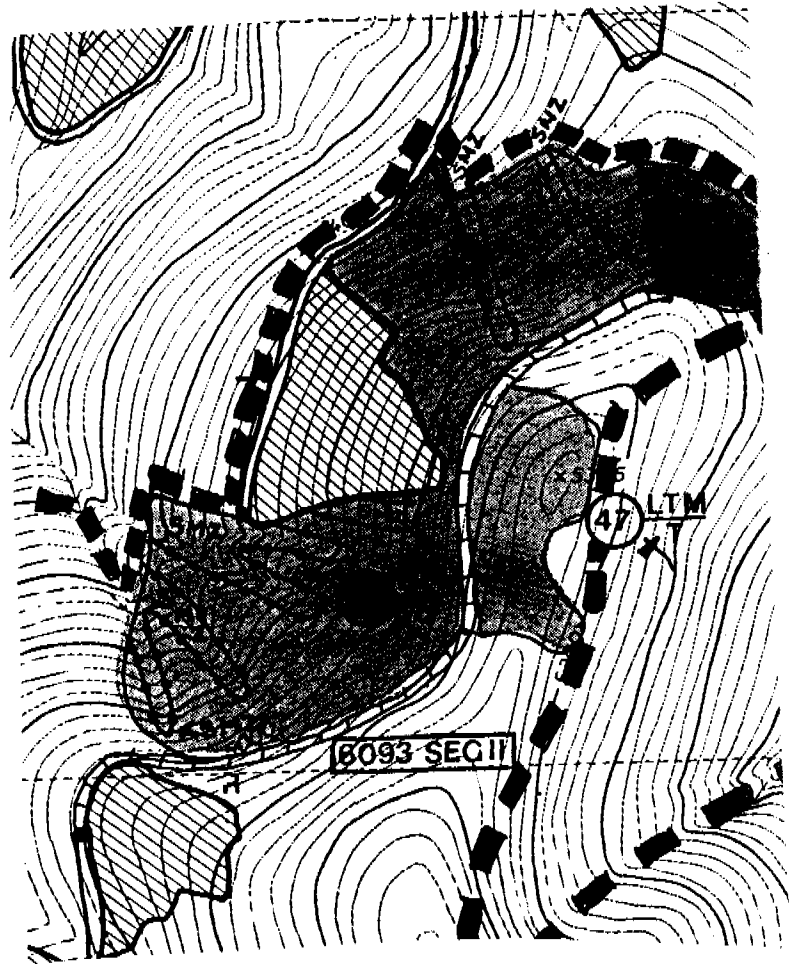
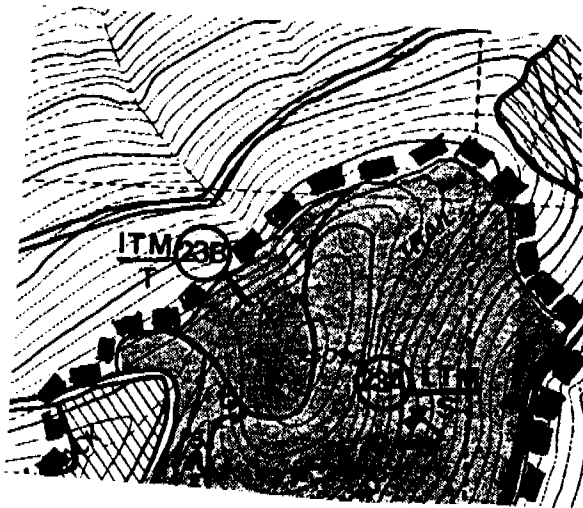
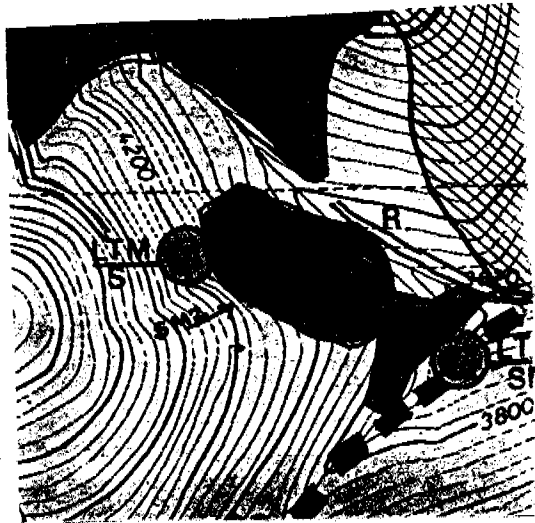
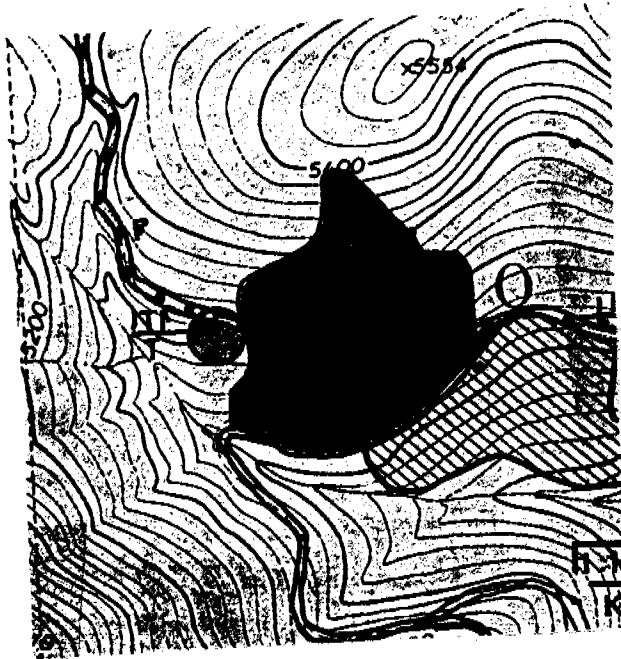
COMMENTS \_\_\_\_\_

- Unit 1 40201137, <sup>38</sup> clearcut, 10 Acres, 1994
- Unit 7 40201143, clearcut, 19 Acres, 1994 } 22 Acres
- 40202126, clearcut, 3 Acres, 1994 } 22 Acres
- Unit 7A 40201144, CC w/ reserve, 27 Acres, 1994 } 2 Acres
- "      40202128, CC w/ reserve, 6 Acres, 1994 } 2 Acres
- Unit 23B 40301170, CC w/ reserve, 10 Acres, 1994 } 16 Acres
- "      40402159, CC w/ reserve, 6 Acres, 1994 } 16 Acres
- Unit ~~7~~ 46 40301177, clearcut, 119 Acres, 1994 } <sup>166</sup> 27 Acres
- "      40301140, clearcut, 18 Acres, 1994 } 27 Acres

Shape of Unit and Pattern of Transect

46

80 Acres



DATE 5.21.93

OBSERVER Kenneth Crawford - Jimeno <sup>wk 2/03</sup>

DISTRICT Libby

SALE Blue-Rice UNIT # 17 + 21 <sup>514-01-011 29A</sup> <sup>514-02-032 28A</sup>

Handfelled  
Tractor skidded

Walk Through subsequent to '92 transects.

COMPACTION HEAVY

COMPACTION LIGHT

UNDISTURBED

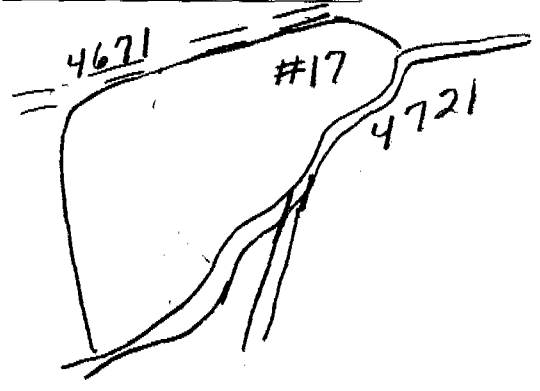
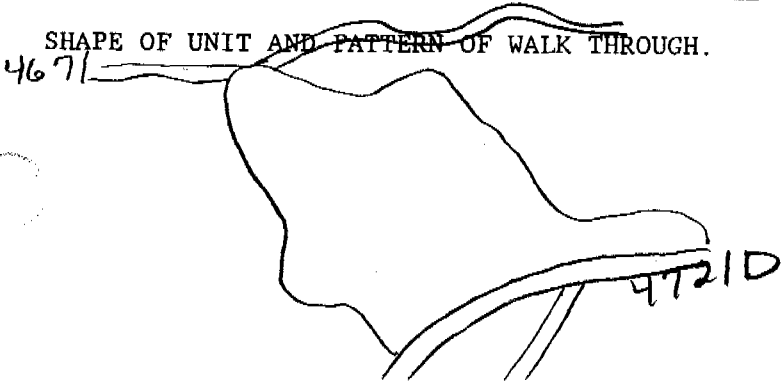
DISPLACED

EXCAVATED SKID TRAIL

SMZ

COMMENTS Somewhat heavy on the skidding. Some previous skidding had occurred in Unit 17. Steep pitch along draw - excessive displacement. Too much displacement w/ fire lines. Appears skidding occurred when soils too wet.

SHAPE OF UNIT AND PATTERN OF WALK THROUGH.







KOOTENAI NATIONAL FOREST  
SOIL IMPACT DATA FORM

DATE June 1, 1993 Tractor skidded  
OBSERVER Kuennen - Farmer - Johnson Doser piled  
DISTRICT Fisher River  
SALE Homesteader UNIT # 27 <sup>640-02-027</sup> <sub>18</sub> 59002027  
*Walk through subsequent to '92 transects.*

COMPACTION HEAVY

COMPACTION LIGHT

UNDISTURBED

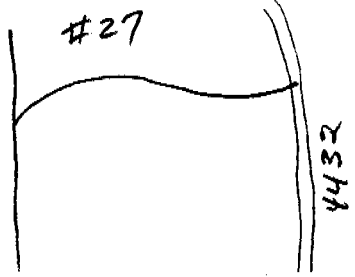
DISPLACED

EXCAVATED SKID TRAIL

SMZ

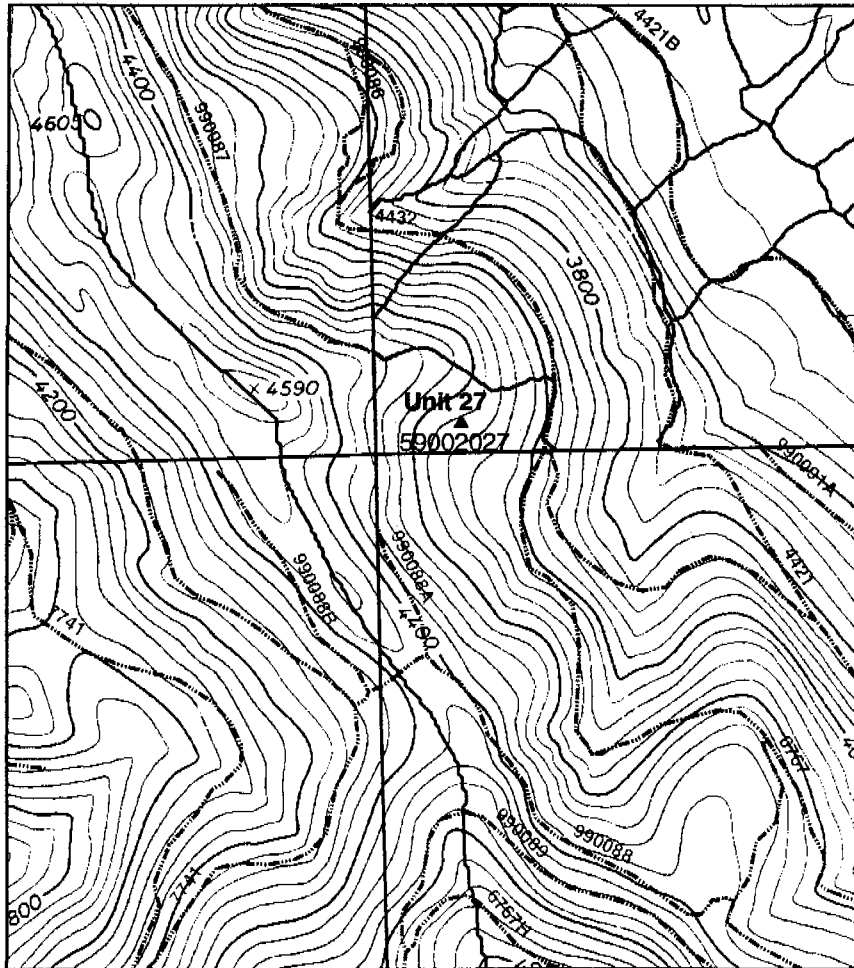
COMMENTS *Very obvious the impact of tractor piling, "Heavy" percentage increased dramatically as result of piling. Lower end of unit w/o piling is very acceptable*

SHAPE OF UNIT AND PATTERN OF WALK THROUGH.



TRANSECT SUMMARY FORM

|   | Transect 1 |   | Transect 2 |   | Transect 3 |   | Transect 4 |   | Transect 5 |   | TOTALS |   |
|---|------------|---|------------|---|------------|---|------------|---|------------|---|--------|---|
|   | Pts.       | % | Pts.       | % | Pts.       | % | Pts.       | % | Pts.       | % | Pts.   | % |
| D<br>i<br>s<br>t<br>u<br>r<br>b<br>e<br>d |            |   |            |   |            |   |            |   |            |   |        |   |
| HEAVY                                     |            |   |            |   |            |   |            |   |            |   |        |   |
| LIGHT                                     |            |   |            |   |            |   |            |   |            |   |        |   |
| UNDISTURB                                 |            |   |            |   |            |   |            |   |            |   |        |   |
| TOTALS                                    |            |   |            |   |            |   |            |   |            |   |        |   |
| DISPLACED                                 |            |   |            |   |            |   |            |   |            |   |        |   |
| EROSION                                   |            |   |            |   |            |   |            |   |            |   |        |   |
| PUDDLED                                   |            |   |            |   |            |   |            |   |            |   |        |   |
| SMZ                                       |            |   |            |   |            |   |            |   |            |   |        |   |
| ROCK                                      |            |   |            |   |            |   |            |   |            |   |        |   |
| BURN PILES                                |            |   |            |   |            |   |            |   |            |   |        |   |



7/18/04

57103076 ne 11/1/93  
~~51703076~~

08/02/1993  
Fisher River - Cow Creek Pest Control  
Unit 12 & 12A  
51703076

KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE DATA FORM

DATE 8.2.93

CUTTING METHOD hand

OBSERVER Kulman

SKIDDING METHOD Tractor

DISTRICT Fisher River

HAZARD ABATEMENT underatory 1997

SALE Cow Cr. P.C.  
Unit No. 12 + 12A

SILVICULTURAL St. Seed Cut

Walk through  
COMPACTION (Heavy)

OPERATION PERIOD 1993 Summer

COMPACTION (Light)

UNDISTURBED

DISPLACED

EXCAVATED SKID TRAIL

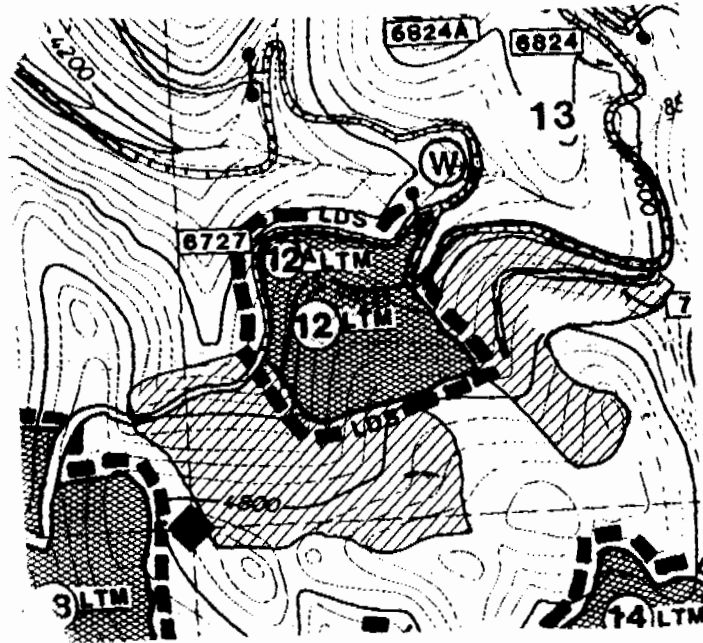
SMZ/ROCK

COMMENTS

12 - 22A

12A - 10A

Shape of Unit and Pattern of Transect



592.7-43  
12 acres

KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE DATA FORM

H. T. - 660 elev. - 4300'  
Slope - 16%  
Asp - SW

DATE 8.2.93

CUTTING METHOD cc/SP/Burn piles

OBSERVER Kuennen-Hennessey

SKIDDING METHOD Tractor

DISTRICT Fisher River

HAZARD TREATMENT Grapple pile 193  
Burn GP - 10/94

SALE Cow Cr. P.C.  
Unit No. 29

SILVICULTURAL TREATMENT cc/SP Mech / Plant

OPERATION PERIOD 6/1990

Walk through

COMPACTION(Heavy) \_\_\_\_\_

COMPACTION(Light) \_\_\_\_\_

UNDISTURBED \_\_\_\_\_

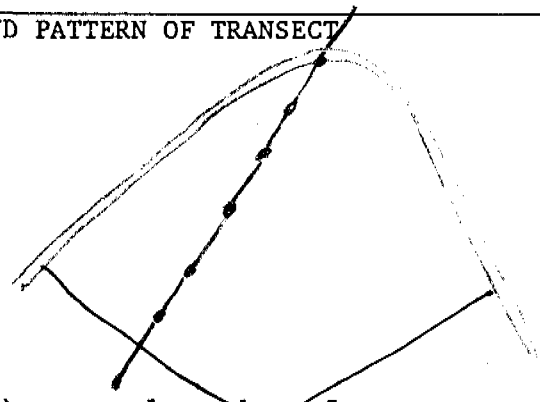
DISPLACED \_\_\_\_\_

EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ \_\_\_\_\_

COMMENTS Spalling looks very good. Very gentle topography.  
Excavator piling looks good. Several other units w/ j  
unit that are of concern w/ piling. Need to stay away from.

SHAPE OF UNIT AND PATTERN OF TRANSECT



COMPACTION(Heavy) - any place where future vegetative growth will be significantly impacted, i.e., skid trails (both heavily and lightly used depending on amount of compaction related to soil moisture), landings, and other impacted areas.

COMPACTION(Light) - any other area not included in heavy COMPACTION or UNDISTURBED.

UNDISTURBED - no signs of any machinery or skidding activity.

DISPLACED - any place soil has been mounded by machinery, also include in heavy or light compaction.

SMZ - include within transect if within harvest unit.

TRANSECT SUMMARY FORM

|             | Transect 1 |   | Transect 2 |   | Transect 3 |   | Transect 4 |   | Transect 5 |   | TOTALS |   |
|-------------|------------|---|------------|---|------------|---|------------|---|------------|---|--------|---|
|             | Pts.       | % | Pts.       | % | Pts.       | % | Pts.       | % | Pts.       | % | Pts.   | % |
| D HEAVY     |            |   |            |   |            |   |            |   |            |   |        |   |
| i           |            |   |            |   |            |   |            |   |            |   |        |   |
| s LIGHT     |            |   |            |   |            |   |            |   |            |   |        |   |
| t           |            |   |            |   |            |   |            |   |            |   |        |   |
| u UNDISTURB |            |   |            |   |            |   |            |   |            |   |        |   |
| r           |            |   |            |   |            |   |            |   |            |   |        |   |
| b           |            |   |            |   |            |   |            |   |            |   |        |   |
| TOTALS      |            |   |            |   |            |   |            |   |            |   |        |   |
| DISPLACED   |            |   |            |   |            |   |            |   |            |   |        |   |
| EROSION     |            |   |            |   |            |   |            |   |            |   |        |   |
| PUDDLED     |            |   |            |   |            |   |            |   |            |   |        |   |
| SMZ         |            |   |            |   |            |   |            |   |            |   |        |   |
| ROCK        |            |   |            |   |            |   |            |   |            |   |        |   |
| BURN PILES  |            |   |            |   |            |   |            |   |            |   |        |   |



KOOTENAI NATIONAL FOREST  
SOIL DISTURBANCE DATA FORM

H.T. - 250  
Slope - 23%  
Asp. - S  
elev. - 5100'

568-6-06

DATE 9.7.93

CUTTING METHOD Hand

OBSERVER Quensen McBride

SKIDDING METHOD Tractor

DISTRICT Fisher River

HAZARD TREATMENT Broadcast Burn - 5/1995

SALE Cody -  
Unit No. 6 29 Acres

SILVICULTURAL TREATMENT CCRes/BcB/Plant

OPERATION PERIOD Summer '93

*Walk through*

COMPACTION(Heavy) \_\_\_\_\_

COMPACTION(Light) \_\_\_\_\_

UNDISTURBED \_\_\_\_\_

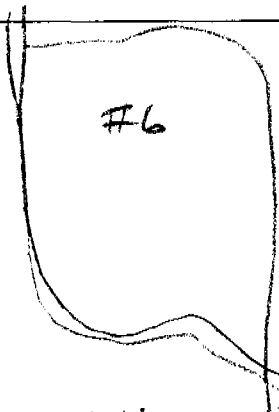
DISPLACED \_\_\_\_\_

EXCAVATED SKID TRAIL \_\_\_\_\_

SMZ \_\_\_\_\_

COMMENTS *Ground very broken - creating a lot of displacement. Very difficult to establish a skidding pattern. In general, the unit looks good, but there is too much displacement in some areas.*

SHAPE OF UNIT AND PATTERN OF TRANSECT



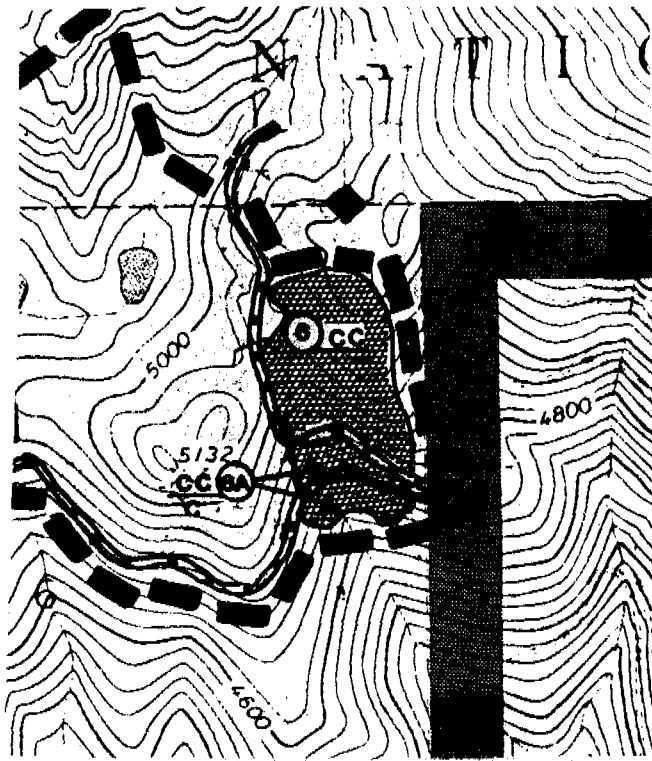
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SMZ - include within transect if within harvest unit.





05/14/1993  
Cabinet - Beaver Peak Resell  
Unit 2  
71501035

KOOTENAI NATIONAL FOREST  
SOIL IMPACT DATA FORM

ST Seed Cut  
Grapple pile '97, burn '98  
Jan-Feb 97 Dozer

DATE 5.14.93

OBSERVER Kuennen-Helf

DISTRICT Cabinet

SALE Beaver PK Resell UNIT # 2 23A

715-01-035

Walk Through

Ele-2700, HT-570  
As-NE, slope 15%

COMPACTION HEAVY

COMPACTION LIGHT

UNDISTURBED

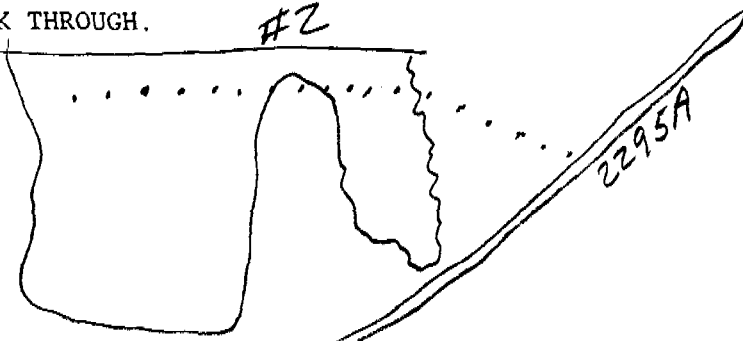
DISPLACED

EXCAVATED SKID TRAIL

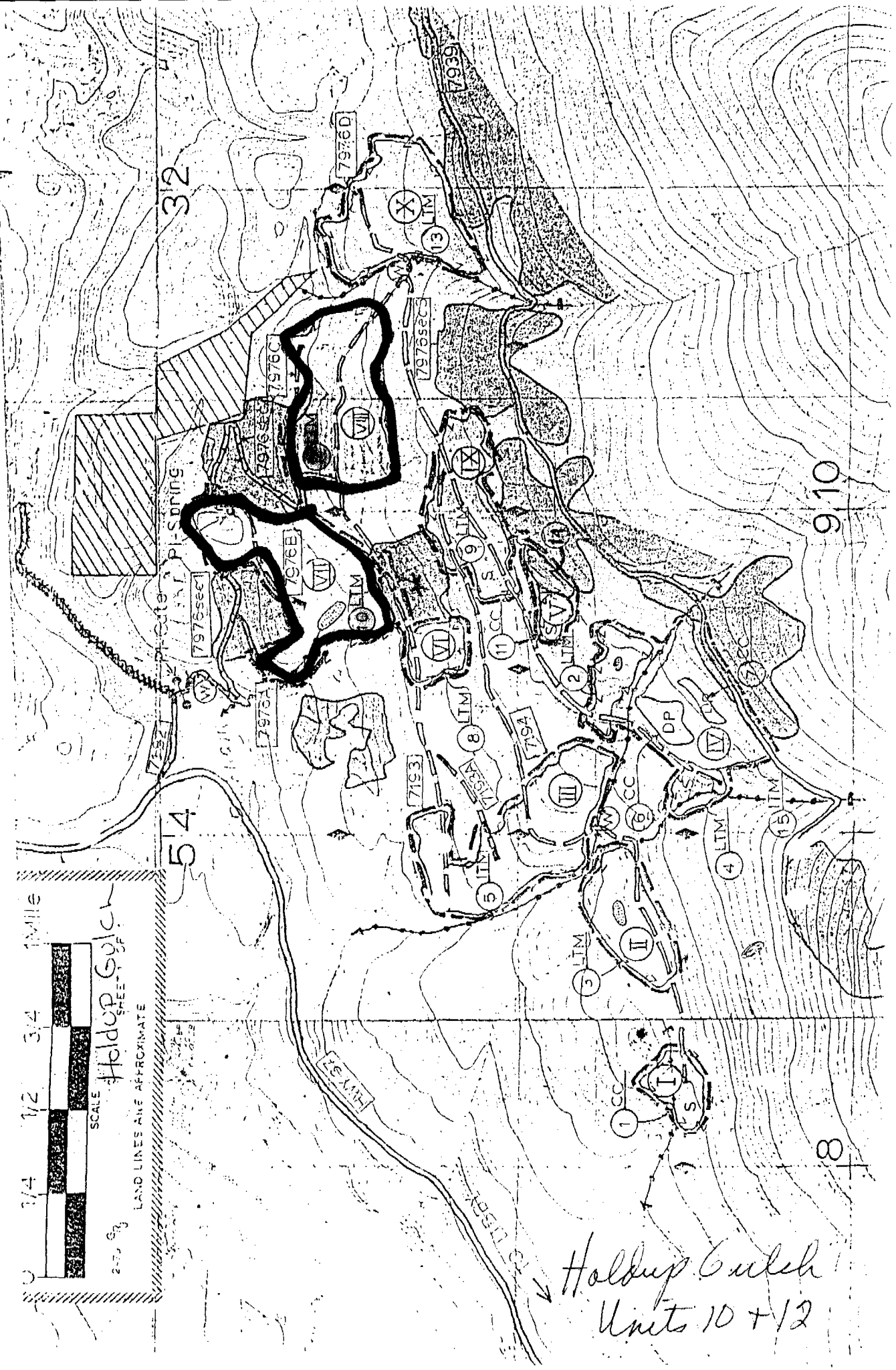
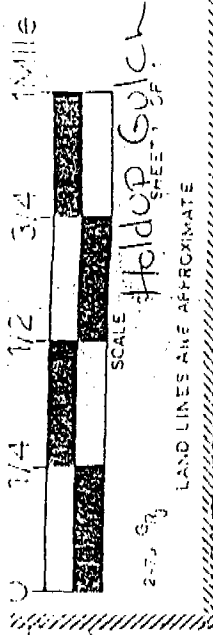
SMZ

COMMENTS essentially flat gd. Temp rd laid out. Thick ash cap.  
Looks good. winter operation. Scruffy temp rd.

SHAPE OF UNIT AND PATTERN OF WALK THROUGH.







Holdup Gulch  
 Units 10 + 12