Avalanche Atlas, Ouray County, Colorado, University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper No. 25.

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Abstract: The Avalanche Atlas of Ouray County, Colorado, is intended to aid those in need of information concerning hazards related to land-use planning. The atlas is a catalog of avalanche activity which has been observed from the late 1870s through 1976 along Highways 550 and 361 in Ouray County, Colorado. The avalanche atlas contains avalanche maps, 35 mm low-level oblique photographs, and avalanche data summary sheets. All maps are reproduced on a scale of 1:24,000 from USGS 7 1/2' quadrangle topographic sheets. Avalanche summary sheets contain avalanche path names, denoting zones of geographic similarity, and paths with similar release characteristics. Elevations, vertical drop, and path lengths are specified; detailed descriptions of the starting zones, tracks, and runout zones are included; mean widths of avalanche paths are calculated; treeline elevations are specified; and descriptions of terrain and vegetation cover are provided. The history of each avalanche path is tabulated from information culled from 81 years of newspaper records, twenty years of Colorado Highway Department data, thirty years of Camp Bird Mine data and five years of INSTAAR Snow and Avalanche Project data.

Availability Statement

Unlimited
AVALANCHE ATLAS
OURAY COUNTY, COLORADO

by

Betsy R. Armstrong and Richard L. Armstrong

INSTAAR Snow and Avalanche Project
Institute of Arctic and Alpine Research
University of Colorado
Silverton, Colorado 81433

June 1977

Prepared for the Ouray County Commissioners
and the Ouray County Planning Commission

A contribution to the United States
Unesco Man and the Biosphere (MAB) Program Project 6:
Study of the impact of human activities on mountain
and tundra ecosystems

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PREFACE

This is the second avalanche atlas produced by the Institute of Arctic and Alpine Research (INSTAAR) for the main transportation arteries of a San Juan Mountain county. In a sense, it is a natural extension of the first, compiled by Miller, Armstrong, and Armstrong (1976), for San Juan County. Together, the two atlases represent a major component of INSTAAR's research, now in its sixth year, that deals with snow and avalanche studies in the San Juan Mountains. This atlas constitutes the work of the INSTAAR SNOW AND AVALANCHE PROJECT, based at Silverton under the leadership of Richard L. Armstrong. It is complemented by a natural hazard research project supported by a grant from the National Aeronautical and Space Administration (NASA) Office of University Affairs.

Snow avalanches present a major obstacle to effective land-use planning in the San Juan Mountains in particular, and in the entire mountain area of the Western United States and Canada in general. Despite several generations of studies in Switzerland, and in adjacent Alpine countries, many serious problems remain unsolved. It is perhaps not so remarkable that the mechanical properties of snow are so far from being fully understood when it is realized that the physical properties of the medium itself change constantly in time and space. In view of this problem, it seemed logical for INSTAAR to adopt a multi-faceted strategy which includes: studies of the properties of snow; attempts to develop a numerical forecast model to improve the prediction of avalanche occurrence; systematic collection of data on current and past avalanche events; studies of alternative methods to explosives for artificial avalanche release; and graphic portrayal of avalanche path characteristics in map and atlas forms.

The atlas form is an outgrowth of early work in Switzerland (Frutiger, 1977) which was applied to Colorado initially in 1963/64 (Frutiger, 1964). The next steps in the development of the avalanche atlas in the United States were taken under the leadership of Edward LaChapelle (1971, 1975) in the State of Washington. The current atlas represents another evolutionary step from this very respectable ancestry. It is hoped that its flexible format, which permits the addition of new data, will encourage observers of avalanche events within the area covered by the atlas to communicate directly with INSTAAR.
For the development of the INSTAAR SNOW AND AVALANCHE PROJECT (INSAP) as a whole, grateful acknowledgment is made to a variety of funding agencies, including: the Bureau of Reclamation; US Army Research Office (Durham); Colorado and Washington State Highway Departments and the Federal Department of Transportation; NASA, Office of University Affairs. Extensive scientific advice has been provided by Drs. Malcolm Mellor and Wilford Weeks of US Army Cold Regions Research and Engineering Laboratory (CRREL), while Dr. E.R. LaChapelle has played a major role as INSTAAR Research Associate and senior consultant. The preparation and production of the atlas itself was aided financially by Ouray County through Colorado House Bill 1041. Elizabeth Senear assisted extensively by handling the data reduction, and Steven Meyers made a vital contribution by providing the photographic reproduction. The crucial contribution to both the atlas production and the research project as a whole, has been provided by the Armstrong team, since Richard and Betsy have, in effect, given continuity and inspiration from the beginning.

The atlas is presented to Ouray County in the hopes that it will assist in the county's development of sound land-use policies, and in the reduction of danger to members of the public who travel through and live in this beautiful mountain region. It represents a contribution of the United States UNESCO* Man and the Biosphere (MAB) Program: Project 6A - study of the impact of human activities on mountain ecosystems, and to the International Geographical Union Commission on Mountain Geoecology.

Jack D. Ives,
Director, Institute of Arctic and Alpine Research
Chairman, U.S. MAB 6A Directorate,
Chairman, IGU Commission on Mountain Geoecology
15th May, 1977

* United Nations Educational, Scientific and Cultural Organization
INTRODUCTION

The Ouray County Avalanche Atlas has been prepared by the University of Colorado Institute of Arctic and Alpine Research (INSTAAR), at the request of the Ouray County Commissioners. The atlas provides detailed information on avalanche paths affecting Colorado Highway 361 and U.S. Highway 550 from the town of Ouray to Red Mountain Pass, based on aerial photographs, USGS 1:24,000 scale maps and all available avalanche event data from 1877 through 1976. Currently, Colorado Highway 361 and U.S. Highway 550 represent the major avalanche hazard areas in the county; since 1958, the eight recorded avalanche fatalities in Ouray County have all occurred on these roads, four deaths on each road (Armstrong, 1977).

The atlas is intended as a land-use planning aid and as an educational tool for those who travel these routes. In addition to this atlas, all avalanche hazard areas within the county have been mapped by INSTAAR, using remote sensing techniques (Bovis et al. 1976a; Ives and Bovis, 1978). The Ouray County Atlas covers the above mentioned road network, which not only represents the area of current maximum hazard, but because these routes have experienced continuous use for nearly 100 years, the avalanche event record is more complete than for any other location within the county. Historical avalanche event data for the entire county have been compiled in Avalanche Hazard in Ouray County, Colorado, 1877-1976 (Armstrong, 1977) and have been incorporated into this atlas and into the maps produced by Bovis et al. (1976a).

The work done by Bovis et al. represents an approach of another dimension. Such work involved mapping only and covered all areas of avalanche activity within the county. The purpose was to utilize remote sensing techniques to identify terrain subject to avalanche activity. This work was supported by a research grant from the Office of University Affairs, NASA (NASA-PY Grant No. NGL-06-003-200), and is directly linked to the requirements of Colorado State House Bill 1041. This type of mapping, which covers avalanche as well as other geomorphic hazards, has also been completed by INSTAAR for San Juan, San Miguel and Hinsdale Counties (Bovis et al., 1976 b and c; Knepper, et al., 1977).
The idea of an avalanche atlas is not a new one. In 1872, the Federal Government of Switzerland acknowledged the need to compile information on areas affected by avalanche activity and for detailed mapping of such areas, and requested that statistics be gathered on avalanches throughout the country. This resulted in the 1910 publication of *Statistics and Structural Control of Avalanches in the Swiss Alps* (Frutiger, 1977). In North America, the first avalanche atlas was produced by the U.S. Forest Service for use by the Colorado Department of Highways (Frutiger, 1964) and is still being used for avalanche control, highway design, and highway maintenance. Similar atlases were developed for the Washington State Highway Department by the Geophysics Program and Department of Civil Engineering, University of Washington. The first preliminary avalanche zone maps in Colorado were produced by INSTAAR for the vicinity of Vail (Krebs, ed., 1974; Ives and Krebs, 1978), and for Ophir, in San Miguel County (Ives et al., 1976). This work immediately preceeded passage of Colorado House Bill 1041 which stimulated systematic studies by the Colorado Geological Survey and resulted in the publication of avalanche zone maps for 14 critical areas (Mears, 1975; Rogers et al., 1974). The bill also accelerated production of the San Juan Mountain county maps mentioned above (Bovis et al., 1976 a, b, and c) and a total of 37 maps have been completed at a scale of 1:24,000, in collaboration with the Colorado Geological Survey.

A further step in the evolution of the avalanche atlas in the United States was the atlas produced by INSTAAR for San Juan County, Colorado (Miller et al., 1976) at the request of the San Juan County Commissioners. This atlas includes the mapping on USGS 1:24,000 scale maps of all avalanche paths affecting U.S. Highway 550 and Colorado Highway 110 within the county, outlines of the paths on aerial photographs, and pertinent dimensional data, terrain and vegetation parameters for the starting zone, track and runout zone of each path, and a compilation of observed avalanche activity from 1875 through 1976.

The Ouray County Avalanche Atlas follows basically the same format as that of the San Juan County Atlas. The information contained within this publication is not intended for critical engineering purposes, but rather as a guide for subsequent data-gathering. More detailed studies, such as those involving the location of a specific structure, would necessitate maps of a larger scale than
the 1:24,000 USGS maps currently available. The exact scale of such maps would be determined by the requirements of the investigator doing the detailed analysis and would likely be 1:2000 or larger.

The avalanche path outlines and technical data were determined on the basis of current understanding and experience with snow avalanche behavior in the mountains of Ouray County. The authors cannot assume responsibility for the future behavior of snow avalanches when affected by extraordinary winter storms, changes in climate, destruction of forest cover or other unforeseen events.

Additional information may be added to the atlas without difficulty since a separate sheet is devoted to each path. To assist with the continued improvement of our historical record, would atlas users in the San Juans please inform INSTAAR of any avalanche event they observe. Time of day, date and size of event should be noted and information mailed to: Director, Institute of Arctic and Alpine Research, University of Colorado, Boulder, Colorado 80309.
REFERENCES


DEFINITION OF TERMS

MAPS:

All maps are 7 1/2' USGS topographic reproductions at a scale of 1:24,000. These maps comply with U.S. Map Accuracy Standards, meaning that not more than 10 percent of the well-defined points on the map (such as buildings) are in error by more than 1/50 inch and not more than 10 percent of the elevations are in error by more than one-half the contour interval. Each path for which avalanche event data have been tabulated is outlined and numbered. The outlines are an approximate boundary of the path and do not indicate absolute limits. These limits can only be established by a detailed ground study of the path in question and by the use of maps with a larger scale than the 1:24,000 maps which are currently available. An arrow without an accompanying number indicates an area of avalanche activity which has not been observed on a regular basis or does not affect the highway. No summary sheet has been prepared for these paths.

PHOTOGRAPHS:

The majority of photographs were taken with a 35 mm camera from a light aircraft in April 1977. April is usually the period of maximum snow depth, thus the optimum time for air-photography. However, due to the extremely light winter of 1976-1977, several photographs taken in December 1974 were utilized for the Ironton Park and Uncompahgre Gorge areas on U.S. Highway 550. Each avalanche path is outlined and numbered on the photograph.

AVALANCHE SUMMARY SHEETS:

Path name(s): All names, both historic and current, are listed.
Path reference number: All paths which affect the highway or have been observed for five years or more, have been catalogued with a reference number. The first three digits indicate the station. Station 152 refers to U.S. Highway 550. Station 150 refers to Colorado Highway 361. The remaining three digits indicate the avalanche path. (A station number is a U.S. Forest Service classification number for a highway, mine, or town).
Area: An area is a region of geographic similarity: for example, the Canyon Creek drainage from the Camp Bird Mine to the town of Ouray is considered a single area (Colorado Highway 361, area 4). U.S. Highway 550 is divided into three areas:
- Area 1: Red Mountain Pass
- Area 2: Ironton Park
- Area 3: Uncompahgre Gorge

Map number: Each map in the atlas is numbered. Map numbers on the summary sheet indicate the maps on which the particular avalanche path is outlined.

Photograph number: Each photograph in the atlas is numbered. Photograph numbers on the summary sheet indicate the photographs on which the particular avalanche path is pictured and outlined.

Specifications:
- **Elevations**: Top and bottom elevations represent the highest elevation within the starting zone and the lowest elevation within the runout zone. Elevations are from the USGS 1:24,000 scale maps.
- **Vertical Fall**: The difference between top and bottom elevations.
- **Path Length**: The length of each path is calculated from vertical fall (VF) and horizontal map distance (HD) data. Length of path = $\sqrt{(VF)^2 + (HD)^2}$. Horizontal distance is determined by measuring on the map along the center line of the avalanche path from the highest elevation of the starting zone to the lowest elevation of the runout zone.
- **Number of Starting Zones**: The number of starting zones are obtained from maps, photographs and field observations. In cases where the number of starting zones is difficult to obtain due to the complexity of terrain, the term multiple is used.
- **Starting Zone**: The starting zone is that area of the path where the initial rupture of the snowcover occurs under most circumstances and where the avalanche begins its downward course. A starting zone generally possesses a slope angle of between $30^\circ$ and $45^\circ$, although avalanches may release on both steeper and more gentle slopes.
**Track:** Once initial failure and acceleration have occurred within the starting zone, the moving avalanche travels down the track where it attains its maximum velocity. The track may be well confined by valley sides or may be an unconfined open slope. The track, in general, possesses a gradient of from $20^\circ$ to $30^\circ$. Often the boundary between starting zone and track can be well defined according to slope angle or topography (for example, a broad, open basin feeding into a narrow gully) but often, and especially in the case of open slopes with little variation in slope angle, the distinction is difficult to make.

**Runout zone:** The runout zone is that portion of the path where the avalanche normally decelerates and comes to rest. Runout zone slopes usually are less than $20^\circ$ and may actually be flat. A runout zone may also extend up an opposite slope. The runout zone may be considered the most hazardous zone because its gentle slopes often provide the optimum construction sites within a mountain environment.

Runout zone boundaries as drawn on the maps and photographs are based on documented observations of maximum runout distances for the respective path. Where this direct information is lacking, the boundary is inferred from actual data taken from nearby paths with similar dimensions. Runout distances have not been established by means of theoretical equations.

**Slope angles:** Average slope angles were calculated from map data for starting zone, track and runout zone.

\[
\frac{\text{vertical fall}}{\text{horizontal distance}} = \text{tangent of the slope angle}
\]

**Acreages:** Area in acres was calculated from maps by the grid method. Grid density is one reference dot per 2.5 mm² map area or 0.9 acres on the ground.

**Mean widths:** These values represent the average track width as measured on the map.
**Treeline:** The treeline data were obtained from air photographs and field observations. The letter (B) indicates below timberline; (A) indicates above timberline.

**Terrain and vegetation cover:** Subjective descriptions of the terrain and vegetation in the starting zone, track and runout zone of each avalanche path are given. Relative density of geomorphic features, vegetation cover and forestation are given in terms of light, moderate and heavy.

**History:**

Historical avalanche event data for each path have been compiled and summarized from the monograph Avalanche Hazard in Ouray County, Colorado, 1877-1976 (Armstrong, 1977). The numbers represent data gathered from all known sources, and while perhaps not absolute totals, they give the reader an indication of the frequency of avalanche activity in each path. Detailed historical event data for each path, including dates for each observed event, whether the avalanche reached the road, was released artificially or reached full-track, and any damage recorded, are listed in the above publication (Armstrong, 1977).

Avalanche event data are divided by period and data source for each highway.

**U.S. Highway 550:**


**Colorado Highway 361:**

I. 1877-1940, Data collected from newspapers and personal interviews (Armstrong, 1977).

Definitions of Terms:

**Event:** The total number of avalanches observed during the period.

**Highway:** The number of times the avalanche was observed to reach or cross the highway.

**Full-track:** The number of times the avalanche was observed to release within the starting zone and reach the runout zone, traveling the full length of the path.

---

Map Scale

SCALE 1:24,000

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

Road Classification

Medium duty ——— Light duty ———

Unimproved dirt ———

U.S. Route ☐ State Route ☐
# Listing of Avalanche Paths and Path Reference Numbers

**U.S. Highway 550**

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<thead>
<tr>
<th>Reference Number</th>
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<td>Red Mountain Pass</td>
</tr>
<tr>
<td>042</td>
<td>National Bell South</td>
</tr>
<tr>
<td>043</td>
<td>National Bell North</td>
</tr>
<tr>
<td>044</td>
<td>Red Mountain 3</td>
</tr>
<tr>
<td>045</td>
<td>Genesee South</td>
</tr>
<tr>
<td>046</td>
<td>Genesee North</td>
</tr>
<tr>
<td>165</td>
<td>Champion Gulch</td>
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<tr>
<td>047</td>
<td>Red Mountain 2</td>
</tr>
<tr>
<td>048</td>
<td>Cora Bell</td>
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<tr>
<td>049</td>
<td>Red Mountain 1</td>
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<td>Swiss</td>
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<tr>
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<td>Jack</td>
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<td>Lake</td>
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<tr>
<td>078</td>
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<td>Fire</td>
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**Colorado Highway 361**

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<td>Thistledown Creek</td>
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<td>001</td>
<td>Fall Creek</td>
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<tr>
<td>002</td>
<td>Senator Gulch - Switchbacks</td>
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<tr>
<td>003</td>
<td>Swede Pete</td>
</tr>
<tr>
<td>004</td>
<td>Shirttail</td>
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<td>005</td>
<td>Neighbor White</td>
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<tr>
<td>006</td>
<td>Splitter</td>
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<tr>
<td>007</td>
<td>Hayden</td>
</tr>
<tr>
<td>008</td>
<td>Dolly Varden</td>
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<td>East Waterhole</td>
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<td>010</td>
<td>West Waterhole</td>
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<td>013</td>
<td>U.S.</td>
</tr>
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<td>014</td>
<td>Mt. Hayden South</td>
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<td>015</td>
<td>Mt. Hayden North</td>
</tr>
</tbody>
</table>
An aerial photograph of U.S. Highway 550 from the White Fir avalanche path (072) to Ironstone Park.
U.S. HIGHWAY 550: EAST SIDE

Red Mountain Pass to Ouray
avalanche paths: 040-071
Avalanche Summary Sheet

PATH NAME: Red Mountain Pass

PATH REFERENCE NUMBER: 152040  AREA: 1

MAP NUMBER: 4  PHOTOGRAPH NUMBER: 1

SPECIFICATIONS:

TOP ELEV.: 11200'  BOTTOM ELEV.: 11020'  VERTICAL FALL: 180'

LENGTH OF PATH: 400'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
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<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>1</td>
<td>1200</td>
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<tr>
<td>MEAN WIDTH</td>
<td></td>
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<tr>
<td>LENGTH</td>
<td>230</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, rock outcrops, grass and moderate coniferous

TRACK: Open slope, grass and light coniferous

RUNOUT ZONE: Open slope, grass

HISTORY: III.  events: 10  highway: 0  full-track: 2
Avalanche Summary Sheet

PATH NAME: National Bell South

PATH REFERENCE NUMBER: 152042 AREA: 1

MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 2, 3

SPECIFICATIONS:

TOP ELEV.: 12400' BOTTOM ELEV.: 10950' VERTICAL FALL: 1450'

LENGTH OF PATH: 4460' NUMBER OF STARTING ZONES: 1

STARTING ZONE TRACK RUNOUT ZONE

SLOPE ANGLE 32° 24° 5°

AREA ACRES 5 MEAN WIDTH 800 AREA ACRES 14

LENGTH 2540

TREE LINE

A A B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin, cliffs with talus and large boulders below

TRACK: Broad, open depression, talus and rock outcrops

RUNOUT ZONE: Broad, open slope, heavy coniferous

HISTORY: III. events: 4  
highway: 0  
full-track: 2
Avalanche Summary Sheet

PATH NAME: National Bell North

PATH REFERENCE NUMBER: 152043  AREA: 1

MAP NUMBER: 1, 4  PHOTOGRAPH NUMBER: 2, 3

SPECIFICATIONS:

TOP ELEV.: 12200'  BOTTOM ELEV.: 10740'  VERTICAL FALL: 1460'

LENGTH OF PATH: 3737'  NUMBER OF STARTING ZONES: 1

STARTING ZONE  TRACK  RUNOUT ZONE

SLOPE ANGLE  30°  21°  16°

AREA ACRES  5  MEAN WIDTH  400'  AREA ACRES  13

LENGTH  2230'

TREE LINE  A  A  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad open slope, talus and rock outcrops

TRACK: Broad shallow depression, talus and rock outcrops, grass

RUNOUT ZONE: Broad open slope, heavy coniferous

HISTORY: III.  events: 9
highway: 0
full-track: 5
Avalanche Summary Sheet

PATH NAME: Red Mountain 3
PATH REFERENCE NUMBER: 152044 AREA: 1
MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 2, 3

SPECIFICATIONS:
TOP ELEV.: 12800' BOTTOM ELEV.: 10680' VERTICAL FALL: 2120'
LENGTH OF PATH: 5030' NUMBER OF STARTING ZONES: 1

STARTING ZONE TRACK RUNOUT ZONE
SLOPE ANGLE 36° 23° 13°
AREA ACRES 16 MEAN WIDTH 880' AREA ACRES 17

LENGTH 2970'
TREE LINE A A R

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad shallow basin, talus and rock outcrops

TRACK: Open slope, talus

RUNOUT ZONE: Broad open slope, moderate boulders, grass and very light small coniferous

HISTORY: III. events: 17
highway: 0 full-track: 4
Avalanche Summary Sheet

PATH NAME: Genesee South

PATH REFERENCE NUMBER: 152045       AREA: 1
MAP NUMBER: 1, 4       PHOTOGRAPH NUMBER: 2, 3

SPECIFICATIONS:
TOP ELEV.: 12120'       BOTTOM ELEV.: 10880'       VERTICAL FALL: 1240'
LENGTH OF PATH: 2700'       NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>35°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td>480'</td>
</tr>
</tbody>
</table>

LENGTH 1560'

TREE LINE A       B       B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Shallow basin, talus

TRACK: Broad open slope, moderate small coniferous and brush

RUNOUT ZONE: Broad open slope, heavy coniferous

HISTORY: I. events: 5. During this period, 4 men and 15 mules were caught, with only one surviving. Genesee Mine buildings were damaged on 3 occasions

III. events: 8
highway: 0
full-track: 6
Avalanche Summary Sheet

PATH NAME: Genesee North
PATH REFERENCE NUMBER: 152046  AREA: 1
MAP NUMBER: 1, 4  PHOTOGRAPH NUMBER: 3

SPECIFICATIONS:
TOP ELEV.: 11700'  BOTTOM ELEV.: 10750'  VERTICAL FALL: 950'
LENGTH OF PATH: 2360'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>32°</td>
<td>21°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>2</td>
<td>MEAN WIDTH</td>
</tr>
</tbody>
</table>

LENGTH 1100'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad open slope, cliffs, rock outcrops and talus, brush

TRACK: Broad open slope, grass, brush and moderate coniferous

RUNOUT ZONE: Broad open slope, grass and bare ground, moderate coniferous

HISTORY: IIIJ. events: 6
highway: 0
full-track: 4
Avalanche Summary Sheet

PATH NAME: Champion Gulch, Yankee Girl
PATH REFERENCE NUMBER: 152165 AREA: 1
MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 3

SPECIFICATIONS:
TOP ELEV.: 12800' BOTTOM ELEV.: 10480' VERTICAL FALL: 2320'
LENGTH OF PATH: 7260' NUMBER OF STARTING ZONES: 3

STARTING ZONE TRACK RUNOUT ZONE
SLOPE ANGLE 29° 17° 12°
AREA ACRES 51 MEAN WIDTH: Upper: 480' Lower: 240' AREA ACRES 31

LENGTH 5360'
TREE LINE A B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad basin, talus, rock outcrops

TRACK: Broad, open basin cut by two V-shaped depressions, talus, bare ground, light coniferous, grass

RUNOUT ZONE: Broad, open slope, bare ground, light, small coniferous, grass

HISTORY:
I. events: 2 In January, 1886, this avalanche buried 9 men at the Dutton Mine; 4 were killed, 4 survived. In December, 1916, 11 men were caught in the Yankee Girl slide; one was killed, one was injured, 9 were uninjured.

III. events: 2
highway: 0
full-track: 1
Avalanche Summary Sheet

PATH NAME: Red Mountain 2

PATH REFERENCE NUMBER: 152047    AREA: 1
MAP NUMBER: 1, 4    PHOTOGRAPH NUMBER: 3

SPECIFICATIONS:
TOP ELEV.: 11800'    BOTTOM ELEV.: 10680'    VERTICAL FALL: 1120'
LENGTH OF PATH: 2900'    NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>32°</td>
<td>30°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>7</td>
<td>800'</td>
</tr>
<tr>
<td>MEAN WIDTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AREA ACRES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>1200'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad open slope, talus

TRACK: Shallow depression, talus and rock outcrops, very light coniferous with heavy coniferous below

RUNOUT ZONE: Broad open slope, heavy coniferous with open areas of grass and bare ground below

HISTORY: I. events: 1

III. events: 8
   highway: 0
   full-track: 5
Avalanche Summary Sheet

PATH NAME: Cora Bell

PATH REFERENCE NUMBER: 152048	AREA: 1

MAP NUMBER: 1, 4	PHOTOGRAPH NUMBER: 3

SPECIFICATIONS:

TOP ELEV.: 12200'  BOTTOM ELEV.: 10720'  VERTICAL FALL: 1480'

LENGTH OF PATH: 3450'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>7</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
</tbody>
</table>

LENGTH 1450'

TREE LINE

A      B      B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad shallow basin, talus and rock outcrops

TRACK: Broad shallow depression, talus and rock outcrops

RUNOUT ZONE: Broad open slope, heavy coniferous with open areas of grass and bare ground below

HISTORY: III. events: 12

highway: 0
full-track: 4
PATH NAME: Red Mountain 1
PATH REFERENCE NUMBER: 152049 AREA: 1
MAP NUMBER: 1 PHOTOGRAPH NUMBER: 4

SPECIFICATIONS:
TOP ELEV.: 11800' BOTTOM ELEV.: 10800' VERTICAL FALL: 1000'
LENGTH OF PATH: 2090' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>51°</td>
<td>30°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>1</td>
<td>320'</td>
</tr>
<tr>
<td>MEAN WIDTH</td>
<td></td>
<td>AREA ACRES 8</td>
</tr>
</tbody>
</table>

LENGTH 1200'

TREE LINE A B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad open slope, cliffs with talus and rock outcrops below

TRACK: Broad open slope, talus, light coniferous

RUNOUT ZONE: Broad open slope, rock outcrops, heavy aspen and coniferous

HISTORY: III. events: 2 highway: 0 full-track: 1
Avalanche Summary Sheet

PATH NAME: Ripple

PATH REFERENCE NUMBER: 152050    AREA: 1

MAP NUMBER: 1    PHOTOGRAPH NUMBER: 4

SPECIFICATIONS:

TOP ELEV.: 10600'    BOTTOM ELEV.: 9740'    VERTICAL FALL: 860'

LENGTH OF PATH: 1480'    NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>31°</td>
<td>27°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>1</td>
<td>MEAN WIDTH 320'</td>
</tr>
</tbody>
</table>

LENGTH 1340'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, moderate coniferous and bare ground

TRACK: Open slope, moderate coniferous and bare ground

RUNOUT ZONE: Open slope, heavy aspen and coniferous

HISTORY: III. events: 1
          highway: 0
          full-track: 1
Avalanche Summary Sheet

PATH NAME: Italian
PATH REFERENCE NUMBER: 152051  AREA: 1
MAP NUMBER: 1  PHOTOGRAPH NUMBER: 4

SPECIFICATIONS:
TOP ELEV.: 11920'  BOTTOM ELEV.: 10020'  VERTICAL FALL: 1900'
LENGTH OF PATH: 3880'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>26°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>14</td>
<td>240'</td>
</tr>
<tr>
<td>MEAN WIDTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>2520'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE
A  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, cliffs, rock outcrops and talus

TRACK: Open slope with brush, bare ground and light small coniferous, incised gully with bare ground below

RUNOUT ZONE: Crosses drainage of Gray Copper Gulch and may ascend opposite slope

HISTORY: III.  events: 6
highway: 0
full-track: 4
Avalanche Summary Sheet

PATH NAME: Swiss, Colony

PATH REFERENCE NUMBER: 152052-53  AREA: ___1___

MAP NUMBER: ___1___  PHOTOGRAPH NUMBER: ___4___

SPECIFICATIONS:

TOP ELEV.: 12280'  BOTTOM ELEV.: 10180'  VERTICAL FALL: 2100'

LENGTH OF PATH: 3900'  NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>35°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>55</td>
<td>MEAN WIDTH 1840'</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>LENGTH</td>
<td>2300'</td>
<td></td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, cliffs, talus, rock outcrops

TRACK: 152052: Open slope, talus, rock outcrops, brush
152053: Shallow depression, grass, moderate coniferous

RUNOUT ZONE: Crosses drainage of Gray Copper Gulch and may ascend opposite slope

HISTORY: III. events: 5
highway: 0
full-track: 5
Avalanche Summary Sheet

PATH NAME: Brooklyn Gulch
PATH REFERENCE NUMBER: 152054 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 5

SPECIFICATIONS:
TOP ELEV.: 12600' BOTTOM ELEV.: 9680' VERTICAL FALL: 2920'
LENGTH OF PATH: 8070' NUMBER OF STARTING ZONES: 1

STARTING ZONE TRACK RUNOUT ZONE
SLOPE ANGLE 33° 22° 9°
AREA ACRES 22 MEAN WIDTH: Upper: 880' Lower: 320' AREA ACRES 3

LENGTH 6370'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad basin, talus and rock outcrops, grass

TRACK: Broad V-shaped depression, rock outcrops, brush, grass

RUNOUT ZONE: Broad, open slope, heavy aspen and coniferous

HISTORY: I. events: 1. In Dec., 1883, 3 men were caught in their cabin. Only the cat was killed.

III. 2
highway: 0
full-track: 0

40
Avalanche Summary Sheet

PATH NAME: Albany Gulch

PATH REFERENCE NUMBER: 152055 AREA: 2

MAP NUMBER: 2 PHOTOGRAPH NUMBER: 5

SPECIFICATIONS:

TOP ELEV.: 12600' BOTTOM ELEV.: 9680' VERTICAL FALL: 2920'
LENGTH OF PATH: 7470' NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>30°</td>
<td>21°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>49</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper: 1280'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower: 320'</td>
</tr>
</tbody>
</table>

LENGTH 5500'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad shallow basin, talus and grass

TRACK: Broad V-shaped depression with moderate coniferous and grass, narrowing to V-shaped depression with brush and bare ground

RUNOUT ZONE: Broad V-shaped depression, heavy aspen

HISTORY: III. events: 2
highway: 0
full-track: 1
Avalanche Summary Sheet

PATH NAME: Manie, Moe, Jack, St. Germain
PATH REFERENCE NUMBER: 152056-059 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 5, 6

SPECIFICATIONS:
TOP ELEV.: 10400' BOTTOM ELEV.: 9640' VERTICAL FALL: 760'
LENGTH OF PATH: 1420' NUMBER OF STARTING ZONES: Multiple

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>32°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>10</td>
<td>2160'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH 1040'</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, shallow depression, moderate to heavy coniferous and aspen

TRACK: Broad, shallow depression, moderate to heavy aspen

RUNOUT ZONE: Open, level area, heavy brush

HISTORY: III. events: 8
          highway: 0
          full-track: 5
Avalanche Summary Sheet

PATH NAME: East Guadalupe

PATH REFERENCE NUMBER: 152060 AREA: 2

MAP NUMBER: 2 PHOTOGRAPH NUMBER: 6, 7

SPECIFICATIONS:

TOP ELEV.: 12560' BOTTOM ELEV.: 9560' VERTICAL FALL: 3000'

LENGTH OF PATH: 7450' NUMBER OF STARTING ZONES: 3

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>40°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>106</td>
<td>640'</td>
</tr>
</tbody>
</table>

LENGTH 5250'

TREE LINE

A

B

B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin, cliffs, rugged rock outcrops, talus

TRACK: Broad, V-shaped depression, rock outcrops, brush, grass

RUNOUT ZONE: Broadening fan, light aspen, broad, open grassy slope below

HISTORY: I. events: 5. During this period, the Guadalupe Mine boarding house was destroyed twice; March, 1912, and February, 1919

II. events: 4
   highway: 3
   full-track: 3

III. events: 22
   highway: 0
   full-track: 2
Avalanche Summary Sheet

PATH NAME: Slippery Jim
PATH REFERENCE NUMBER: 152061
AREA: 2
MAP NUMBER: 2, 3
PHOTOGRAPH NUMBER: 6, 7

SPECIFICATIONS:
TOP ELEV.: 11600'
BOTTOM ELEV.: 9520'
VERTICAL FALL: 2080'
LENGTH OF PATH: 3440'
NUMBER OF STARTING ZONES: Multiple

STARTING ZONE
SLOPE ANGLE 39°
AREA ACRES 11

TRACK
SLOPE ANGLE 35°
AREA ACRES 12

RUNOUT ZONE
SLOPE ANGLE 9°
AREA ACRES

TREE LINE
B

LENGTH 2420'

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad, shallow depressions, smooth rock ledges, grass, light coniferous

TRACK: Broad open slope with shallow depressions, smooth rock ledges, moderate aspen and grass

RUNOUT ZONE: Broad, open slope, grass, brush

HISTORY:

II. events: 16
highway: 12
full-track: 12

III. events: 37
highway: 4
full-track: 13
Avalanche Summary Sheet

PATH NAME: East Riverside South

PATH REFERENCE NUMBER: 152062   AREA: 3

MAP NUMBER: 2, 3   PHOTOGRAPH NUMBER: 7, 8

SPECIFICATIONS:

TOP ELEV.: 10080'   BOTTOM ELEV.: 9360'   VERTICAL FALL: 720'

LENGTH OF PATH: 1400'   NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>38°</td>
<td>42°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>1</td>
<td>280'</td>
</tr>
</tbody>
</table>

LENGTH 640'

TREE LINE

B                  B                  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Narrow, V-shaped depression, rock outcrop

TRACK: Broadening open slope, bare ground, light, small coniferous and aspen

RUNOUT ZONE: Broad, open slope, boulders, bare ground, crosses drainage of Red Mountain Creek

HISTORY: III. events: 9

highway: 7

full-track: 5
Avalanche Summary Sheet

PATH NAME: East Riverside Right
PATH REFERENCE NUMBER: 152063
AREA: 3
MAP NUMBER: 2, 3
PHOTOGRAPH NUMBER: 7, 8

SPECIFICATIONS:
TOP ELEV.: 10080'
BOTTOM ELEV.: 9340'
VERTICAL FALL: 740'
LENGTH OF PATH: 1410'
NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>42°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td>320'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>560'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, cliffs with rock outcrops, moderate coniferous and aspen below

TRACK: Open slope, rock outcrops, moderate coniferous and aspen

RUNOUT ZONE: Open slope, boulders, bare ground, crosses drainage of Red Mountain Creek

HISTORY: III. events: 7
highway: 4
full-track: 4
Avalanche Summary Sheet

PATH NAME: East Riverside

PATH REFERENCE NUMBER: 152064 AREA: 3

MAP NUMBER: 2, 3 PHOTOGRAPH NUMBER: 7, 8

SPECIFICATIONS:

TOP ELEV.: 12600' BOTTOM ELEV.: 9320' VERTICAL FALL: 3280'

LENGTH OF PATH: 6600' NUMBER OF STARTING ZONES: 2

STARTING ZONE TRACK RUNOUT ZONE

SLOPE ANGLE 34° 29° 27°

AREA ACRES 53 MEAN WIDTH: Upper: 1280' Lower: 560' AREA ACRES 8

LENGTH 4950'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin, rock outcrops, grass

TRACK: V-shaped depression narrowing to incised gully, rock outcrops, light, small aspen

RUNOUT ZONE: Open slope, crosses drainage of Red Mountain Creek, frequently ascends opposite slope

HISTORY: I. events: 35. During this period, 3 people, 5 horses, and a dog were caught: one man, 2 horses, and the dog were killed

II. events: 90

highway: 68
full-track: 18
During this period, 7 people were caught, 4 were killed

III. events: 45

highway: 33
full-track: 21
Avalanche Summary Sheet

PATH NAME: East Riverside Left

PATH REFERENCE NUMBER: 152065 AREA: 3

MAP NUMBER: 2, 3 PHOTOGRAPH NUMBER: 7, 8

SPECIFICATIONS:

TOP ELEV.: 9800' BOTTOM ELEV.: 9240' VERTICAL FALL: 560'

LENGTH OF PATH: 980' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>48°</td>
<td>40°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, smooth rock faces, light, small coniferous

TRACK: Broad, open slope, bare ground, grass, cliff face of road cut below

RUNOUT ZONE: Open slope, bare ground, crosses drainage of Red Mountain Creek

HISTORY: III. events: 30
highway: 20
full-track: 19
Avalanche Summary Sheet

PATH NAME: North of Emergency Phone

PATH REFERENCE NUMBER: 152066  AREA: 3

MAP NUMBER: 3  PHOTOGRAPH NUMBER: 8

SPECIFICATIONS:

TOP ELEV.: 9360'  BOTTOM ELEV.: 9160'  VERTICAL FALL: 200'

LENGTH OF PATH: 310'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>49°</td>
<td>45°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>720'</td>
</tr>
<tr>
<td>LENGTH</td>
<td></td>
<td>110'</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, rock outcrops, smooth rock slabs

TRACK: Open slope, grass, light coniferous

RUNOUT ZONE: Vertical cliff face of the road cut and the road

HISTORY:

II. events: 2
   highway: 2
   full-track: 0

III. events: 4
   highway: 2
   full-track: 2
Avalanche Summary Sheet

PATH NAME: Cliff
PATH REFERENCE NUMBER: 152067 AREA: 3
MAP NUMBER: 3 PHOTOGRAPH NUMBER: 8

SPECIFICATIONS:
TOP ELEV.: 9600' BOTTOM ELEV.: 9160' VERTICAL FALL: 440'
LENGTH OF PATH: 710' NUMBER OF STARTING ZONES: 2

STARTING ZONE TRACK RUNOUT ZONE
SLOPE ANGLE 51° 45° 27°
AREA ACRES 2 MEAN WIDTH 1200' AREA ACRES 3
LENGTH 330'
TREE LINE B B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Cliff with talus, moderate small aspen below

TRACK: Open slope, talus, moderate small aspen, light coniferous

RUNOUT ZONE: Broad, shallow depression, small rocks, bare ground, brush light coniferous

HISTORY: III. events: 4
highway: 2
full-track: 2
Avalanche Summary Sheet

PATH NAME: Dunsmore
PATH REFERENCE NUMBER: 152068 AREA: 3
MAP NUMBER: 3 PHOTOGRAPH NUMBER: 8, 9

SPECIFICATIONS:
TOP ELEV.: 9600' BOTTOM ELEV.: 9040' VERTICAL FALL: 560'
LENGTH OF PATH: 850' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>53°</td>
<td>41°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>400'</td>
</tr>
</tbody>
</table>

LENGTH 470'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Open slope, cliffs with smooth rock slab below

TRACK: Open slope, talus, large boulders

RUNOUT ZONE: Shallow depression, talus, moderate aspen and brush

HISTORY: II. events: 2
highway: 2
full-track: 1

III. events: 8
highway: 6
full-track: 4
Avalanche Summary Sheet

PATH NAME: Mother Cline

PATH REFERENCE NUMBER: 152069  AREA: 3

MAP NUMBER: 3  PHOTOGRAPH NUMBER: 9

SPECIFICATIONS:

TOP ELEV.: 9400'  BOTTOM ELEV.: 8880'  VERTICAL FALL: 520'

LENGTH OF PATH: 760'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>45°</td>
<td>45°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>4</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, smooth rock slabs

TRACK: Broad, open slope, smooth rock slabs, light coniferous

RUNOUT ZONE: Broad, convex slope, rock outcrops, talus

---

I. events: 28. On Feb. 21, 1895, the Red Mt. mail carrier and his horses were buried: all survived

II. events: 71
   highway: 52
   full-track: 10
   During this period, 3 vehicles were buried.

III. events: 70
   highway: 54
   full-track: 18
   During this period, 3 vehicles were buried, one 4 times.
   On April 27, 1973, the Mother Cline ran 7 times.
Avalanche Summary Sheet

PATH NAME: Silver Point
PATH REFERENCE NUMBER: 152070  AREA: 3
MAP NUMBER: 3  PHOTOGRAPH NUMBER: 10

SPECIFICATIONS:
TOP ELEV.: 10200'  BOTTOM ELEV.: 8640'  VERTICAL FALL: 1560'
LENGTH OF PATH: 2600'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>45°</td>
<td>36°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>5</td>
<td>240'</td>
</tr>
<tr>
<td>MEAN WIDTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>1690'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, smooth rock cliffs

TRACK: Open slope, smooth rock face, very light, small coniferous

RUNOUT ZONE: Open slope, talus, moderate coniferous

HISTORY: II. events: 6
highway: 6
full-track: 2

III. events: 10
highway: 7
full-track: 4
Avalanche Summary Sheet

PATH NAME: Jackpot
PATH REFERENCE NUMBER: 152071    AREA: 3
MAP NUMBER: 3    PHOTOGRAPH NUMBER: 11

SPECIFICATIONS:
TOP ELEV.: 9640'    BOTTOM ELEV.: 8320'    VERTICAL FALL: 1320'
LENGTH OF PATH: 2010'    NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>59°</td>
<td>38°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>6</td>
<td>Upper: 560'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower: 200'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>LENGTH</td>
<td>1110'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, rock slabs

TRACK: Shallow depression, light to moderate coniferous, bare ground

RUNOUT ZONE: Broad, open slope, talus, grass, bare ground

HISTORY:
II. events: 4
  highway: 4
  full-track: 4

III. events: 2
  highway: 2
  full-track: 2
U.S. HIGHWAY 550: WEST SIDE

Ouray to Red Mountain Pass
avalanche paths: 072-099
Avalanche Summary Sheet

PATH NAME: White Fir
PATH REFERENCE NUMBER: 152072  AREA: 3
MAP NUMBER: 3  PHOTOGRAPH NUMBER: 12

SPECIFICATIONS:
TOP ELEV.: 11200'  BOTTOM ELEV.: 8360'  VERTICAL FALL: 2840'
LENGTH OF PATH: 4990'  NUMBER OF STARTING ZONES: 3

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>42°</td>
<td>32°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>33</td>
<td>560'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE

B

B

B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, cliffs, light coniferous

TRACK: Open slope, cliffs, smooth rock outcrops, brush, grass

RUNOUT ZONE: Open slope, cliffs, smooth rock outcrops, brush, grass, crosses drainage of Red Mountain Creek

HISTORY: III. events: 11
highway: 0
full-track: 2
Avalanche Summary Sheet

PATH NAME: Silver Gulch

PATH REFERENCE NUMBER: 152073        AREA: 3

MAP NUMBER: 3            PHOTOGRAPH NUMBER: 13

SPECIFICATIONS:

TOP ELEV.: 12520'        BOTTOM ELEV.: 8840'        VERTICAL FALL: 3680'

LENGTH OF PATH: 8590'        NUMBER OF STARTING ZONES: 5

STARTING ZONE        TRACK        RUNOUT ZONE

SLOPE ANGLE 36°        27°        14°

AREA ACRES 84        MEAN WIDTH 1200'        AREA ACRES 7

LENGTH 6850'

TREE LINE A        B        B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: South upper: Broad basin with cliff bands above, bare ground, talus below. South lower: Broad, open slope with rock outcrops, light coniferous, grass, bare ground. Main path: Broad, V-shaped depression, rock outcrops, moderate coniferous, grass, bare ground.

TRACK: Deep, narrow, V-shaped gully, rugged rock outcrops, boulders, cliffs

RUNOUT ZONE: Broad, shallow depression, talus, brush, crosses drainage of Red Mountain Creek, occasionally ascends the opposite slope

HISTORY: III. events: 17

highway: 1

full-track: 6
Avalanche Summary Sheet

PATH NAME:  West Riverside
PATH REFERENCE NUMBER:  152074      AREA:  3
MAP NUMBER:  3              PHOTOGRAPH NUMBER:  13, 14

SPECIFICATIONS:
TOP ELEV.:  11800'      BOTTOM ELEV.:  9320'      VERTICAL FALL:  2480'
LENGTH OF PATH:  6380'      NUMBER OF STARTING ZONES:  3

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
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</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>33°</td>
<td>23°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>90</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:
STARTING ZONE:  Broad, open basin, grass

TRACK:  Narrow, V-shaped depression with incised gully, smooth rock outcrops, cliffs

RUNOUT ZONE:  Broad, shallow depression, boulders, bare ground, grass, crosses drainage of Red Mountain Creek, frequently ascends the opposite slope

HISTORY:  I.  events:  5
          II.  events:  18
                     highway:  11
                     full-track:  2
          III.  events:  15
                     highway:  2
                     full-track:  9
Avalanche Summary Sheet

PATH NAME: West Guadalupe

PATH REFERENCE NUMBER: 152075 AREA: 2

MAP NUMBER: 2, 3 PHOTOGRAPH NUMBER: 15

SPECIFICATIONS:
TOP ELEV.: 12800' BOTTOM ELEV.: 9560' VERTICAL FALL: 3240'
LENGTH OF PATH: 6910' NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>37°</td>
<td>27°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>47</td>
<td>720'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH</td>
</tr>
</tbody>
</table>

TREE LINE A B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad, open slope, smooth cliffs

TRACK: Broad, shallow depression, smooth rock outcrops, moderate coniferous and aspen

RUNOUT ZONE: Broad open slope, moderate to heavy coniferous and aspen, occasionally crosses highway

HISTORY: II. events: 1
        highway: 1
        full-track: 0

III. events: 15
      highway: 0
      full-track: 5
Avalanche Summary Sheet

PATH NAME: Water Gauge North

PATH REFERENCE NUMBER: 152076 AREA: 2

MAP NUMBER: 2 PHOTOGRAPH NUMBER: 16

SPECIFICATIONS:

TOP ELEV.: 11520' BOTTOM ELEV.: 9600' VERTICAL FALL: 1920'

LENGTH OF PATH: 3460' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>43°</td>
<td>31°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>11</td>
<td>MEAN WIDTH 160'</td>
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</tbody>
</table>

LENGTH 1780'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, rock outcrops, moderate coniferous and aspen

TRACK: Upper: Open slope, rock outcrops, moderate coniferous and aspen
Lower: Open slope, heavy, small aspen

RUNOUT ZONE: Crystal Lake

HISTORY: III. events: 14
highway: 0
full-track: 4
Avalanche Summary Sheet

PATH NAME: Lake
PATH REFERENCE NUMBER: 152077 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 16

SPECIFICATIONS:
TOP ELEV.: 11000' BOTTOM ELEV.: 9600' VERTICAL FALL: 1400'
LENGTH OF PATH: 2570' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>45°</td>
<td>34°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH</td>
</tr>
</tbody>
</table>

TREE LINE: B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, rock outcrops, boulders, bare ground, light, small aspen

TRACK: Shallow depression, moderate to heavy, small aspen and brush

RUNOUT ZONE: Crystal Lake

HISTORY: III events: 4 highway: 0 full-track: 2
Avalanche Summary Sheet

PATH NAME: Earth, Fire

PATH REFERENCE NUMBER: 152078-079 AREA: 2

MAP NUMBER: 2 PHOTOGRAPH NUMBER: 16

SPECIFICATIONS:

TOP ELEV.: 10800' BOTTOM ELEV.: 9640' VERTICAL FALL: 1160'

LENGTH OF PATH: 1910' NUMBER OF STARTING ZONES: 2

STARTING ZONE TRACK RUNOUT ZONE

SLOPE ANGLE 35° 36° 0°

AREA ACRES <1 MEAN WIDTH 350' AREA ACRES <1

LENGTH 1340'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, rock outcrops, boulders, light coniferous

TRACK: Shallow depression, bare ground, grass, light, small aspen

RUNOUT ZONE: Crystal Lake

HISTORY: III. events: 8

highway: 0

full-track: 2
Avalanche Summary Sheet

PATH NAME: Ironton

PATH REFERENCE NUMBER: 152082  AREA: 2

MAP NUMBER: 2  PHOTOGRAPH NUMBER: 16, 17

SPECIFICATIONS:

TOP ELEV.: 11320'  BOTTOM ELEV.: 9620'  VERTICAL FALL: 1700'

LENGTH OF PATH: 4500'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>31°</td>
<td>28°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>20</td>
<td>1440'</td>
</tr>
</tbody>
</table>

LENGTH 2860'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad basin, cliffs, rock ridges, rock outcrops

TRACK: Broad, open slope, grass, light small aspen, very light coniferous

RUNOUT ZONE: Broad level area, heavy brush, grass

HISTORY:

II. events: 2
   highway: 2
   full-track: 2
   On February 14, 1958, the avalanche crossed the highway, removing several power poles

III. events: 9
   highway: 0
   full-track: 4
Avalanche Summary Sheet

PATH NAME: Air, Water
PATH REFERENCE NUMBER: 152080, 081 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 16, 17

SPECIFICATIONS:
TOP ELEV.: 10600' BOTTOM ELEV.: 9640' VERTICAL FALL: 960'
LENGTH OF PATH: 1920' NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>32°</td>
<td>31°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>240'</td>
</tr>
<tr>
<td></td>
<td>LENGTH</td>
<td>1500'</td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad, open slope, small rock outcrops, moderate to heavy aspen

TRACK: Open slope, heavy, small aspen with steep rock band below

RUNOUT ZONE: Open, level area, brush, grass

HISTORY: III. events: 1
          highway: 0
          full-track: 0
Avalanche Summary Sheet

PATH NAME: Tidy
PATH REFERENCE NUMBER: 152083 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 17, 18

SPECIFICATIONS:
TOP ELEV.: 11320' BOTTOM ELEV.: 9640' VERTICAL FALL: 1680'
LENGTH OF PATH: 3900' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>31°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>5</td>
<td>240'</td>
</tr>
</tbody>
</table>

LENGTH 2740'

TREE LINE B B B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Open slope, grass, bare ground, light coniferous

TRACK: Open slope, grass, bare ground, heavy, small aspen in lower track

RUNOUT ZONE: Broad, level area, heavy brush

HISTORY: III. events: 9
          highway: 0
          full-track: 5
Avalanche Summary Sheet

PATH NAME: Full Moon Gulch

PATH REFERENCE NUMBER: 152084       AREA: 2

MAP NUMBER: 2                  PHOTOGRAPH NUMBER: 18

SPECIFICATIONS:
TOP ELEV.: 12800'     BOTTOM ELEV.: 9660'     VERTICAL FALL: 3140'
LENGTH OF PATH: 10024'       NUMBER OF STARTING ZONES: 4

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
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</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>37°</td>
<td>18°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>55</td>
<td>Mean Width: Upper: 1920'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower: 400'</td>
</tr>
</tbody>
</table>

LENGTH 8320'

TREE LINE A       B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Very large basin, cliffs, rock ridges, rock outcrops

TRACK: Broad, V-shaped depression, light coniferous, brush, grass

RUNOUT ZONE: Broad, open slope, heavy grass and brush

HISTORY: III. events: 12
highway: 0
full-track: 2
Avalanche Summary Sheet

PATH NAME: Daisy Hill
PATH REFERENCE NUMBER: 152085 AREA: 2
MAP NUMBER: 2 PHOTOGRAPH NUMBER: 18

SPECIFICATIONS:
TOP ELEV.: 11000' BOTTOM ELEV.: 9660' VERTICAL FALL: 1340'
LENGTH OF PATH: 3470' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>40°</td>
<td>25°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>13</td>
<td>1200'</td>
</tr>
<tr>
<td>LENGTH</td>
<td>1930'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad, open slope, bare ground, grass, light, small aspen

TRACK: Broad, open slope, moderate to heavy small aspen

RUNOUT ZONE: Broad, open slope, moderate to heavy small aspen, brush

HISTORY: III. events: 9
highway: 0
full-track: 3
Avalanche Summary Sheet

PATH NAME: Richmond

PATH REFERENCE NUMBER: 152086  AREA: 1

MAP NUMBER: 2  PHOTOGRAPH NUMBER: 19

SPECIFICATIONS:

TOP ELEV.: 12000'  BOTTOM ELEV.: 9920'  VERTICAL FALL: 2080'

LENGTH OF PATH: 4720'  NUMBER OF STARTING ZONES: 2

STARTING ZONE  TRACK  RUNOUT ZONE

SLOPE ANGLE  34°  25°  15°

AREA ACRES  7  MEAN WIDTH: Upper: 960'  Lower: 120'  AREA ACRES 2

LENGTH 4220'

TREE LINE  A  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad shallow basin, rock outcrops

TRACK: Broad, V-shaped depression, grass, light coniferous above, with rugged, heavily-eroded rock outcrops below

RUNOUT ZONE: Broad, V-shaped depression, bare ground, moderate coniferous and aspen

HISTORY: III.  events: 4  highway: 0  full-track: 0
Avalanche Summary Sheet

PATH NAME: McIntyre Gulch

PATH REFERENCE NUMBER: 152087  AREA: 1
MAP NUMBER: 4  PHOTOGRAPH NUMBER: 19

SPECIFICATIONS:
TOP ELEV.: 1300'  BOTTOM ELEV.: 9960'  VERTICAL FALL: 3040'
LENGTH OF PATH: 8860'  NUMBER OF STARTING ZONES: 3

STARTING ZONE  TRACK  RUNOUT ZONE

SLOPE ANGLE  38°  15°  13°
AREA ACRES  79  MEAN WIDTH Upper: 3120'  AREA ACRES  10
Lower: 240'

LENGTH  7290'

TREE LINE  A  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, shallow depression, smooth rock outcrops, grass

TRACK: Narrow, V-shaped gully, rock outcrops, bare ground, brush, grass

RUNOUT ZONE: Open slope, heavy brush and aspen

HISTORY:

II. events: 2
   highway: 2
   full-track: 0

III. events: 5
   highway: 0
   full-track: 1
Avalanche Summary Sheet

PATH NAME: Galena Lion Gulch

PATH REFERENCE NUMBER: 152088   AREA: 1
MAP NUMBER: 1 4   PHOTOGRAPH NUMBER: 19, 20

SPECIFICATIONS:
TOP ELEV.: 13150'   BOTTOM ELEV.: 10080'   VERTICAL FALL: 3070'
LENGTH OF PATH: 7100'   NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper: 39°</td>
<td>Upper: 31°</td>
<td>13°</td>
</tr>
<tr>
<td>Lower: 40°</td>
<td>Lower: 20°</td>
<td></td>
</tr>
<tr>
<td>Upper: 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AREA ACRES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower: 47</td>
<td>MEAN WIDTH 400'</td>
<td>AREA ACRES 18</td>
</tr>
<tr>
<td>Upper: 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper: 4530'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LENGTH Lower: 2310'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE
A       B       B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Upper: Broad, open slope, cliffs, rock outcrops, grass below. Lower: Broad, rugged, incised basin, bedrock

TRACK: Narrow, V-shaped gully, rugged rock outcrops

RUNOUT ZONE: Open slope, grass, moderate small aspen, brush

HISTORY:

I. events: 1

II. events: 1
   highway: 1
   full-track: 1

III. events: 10
   highway: 0
   full-track: 1
Avalanche Summary Sheet

PATH NAME: G. Ridge
PATH REFERENCE NUMBER: 152089 AREA: 1
MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 20, 21

SPECIFICATIONS:
TOP ELEV.: 11000' BOTTOM ELEV.: 10400' VERTICAL FALL: 600'
LENGTH OF PATH: 1340' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>36°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td>MEAN WIDTH 400'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH 700'</td>
</tr>
</tbody>
</table>

TREE LINE

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, smooth rock outcrops, light, small aspen, grass

TRACK: Broad, open slope, moderate to heavy small aspen

RUNOUT ZONE: Broad, open slope, moderate to heavy small aspen

HISTORY: III. events: 4
highway: 0
full-track: 2
Avalanche Summary Sheet

PATH NAME: Governor Gulch

PATH REFERENCE NUMBER: 152090       AREA: 1

MAP NUMBER: 1, 4       PHOTOGRAPH NUMBER: 19, 21

SPECIFICATIONS:

TOP ELEV.: 12000'       BOTTOM ELEV.: 10200'       VERTICAL FALL: 1800'

LENGTH OF PATH: 4530'       NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>37°</td>
<td>17°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>35</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>2090'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE

STARTING ZONE: Basin, rugged, heavily eroded bedrock, bare ground

TRACK: Narrow, incised gully

RUNOUT ZONE: Broad, open slope, heavy aspen, light coniferous

HISTORY: III. events: 10
highway: 0
full-track: 2
Avalanche Summary Sheet

PATH NAME: King

PATH REFERENCE NUMBER: 152091  AREA: 1

MAP NUMBER: 1, 4  PHOTOGRAPH NUMBER: 21, 22

SPECIFICATIONS:

TOP ELEV.: 11600'  BOTTOM ELEV.: 10340'  VERTICAL FALL: 1260'

LENGTH OF PATH: 2780'  NUMBER OF STARTING ZONES: 1

STARTING ZONE  TRACK  RUNOUT ZONE

SLOPE ANGLE  32°  30°  8°

AREA ACRES  3  MEAN WIDTH 650'  AREA ACRES 2

LENGTH 2020'

TREE LINE  B  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, grass

TRACK: Broad, open slope, light aspen and coniferous, grass

RUNOUT ZONE: Broad, open slope, light aspen and coniferous, grass

HISTORY: III. events: 19

highway: 0

full-track: 3
Avalanche Summary Sheet

PATH NAME: Twin Bridges
PATH REFERENCE NUMBER: 152092  AREA: 1
MAP NUMBER: 1.4  PHOTOGRAPH NUMBER: 21.22

SPECIFICATIONS:
TOP ELEV.: 10600'  BOTTOM ELEV.: 10420'  VERTICAL FALL: 180'
LENGTH OF PATH: 740'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>27°</td>
<td>25°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>1</td>
<td>240'</td>
</tr>
</tbody>
</table>

LENGTH 340'

TREE LINE
STARTING ZONE: Broad, open slope, rock outcrops
TRACK: Broad, open slope, grass, moderate aspen, light coniferous
RUNOUT ZONE: Broad, open slope, grass, light coniferous

HISTORY: II.  events: 4
            highway: 4  full-track: 0
PATH NAME: Barstow

PATH REFERENCE NUMBER: 152093  AREA: 1
MAP NUMBER: 1, 4  PHOTOGRAPH NUMBER: 22

SPECIFICATIONS:
TOP ELEV.: 10520'  BOTTOM ELEV.: 10360'  VERTICAL FALL: 160'
LENGTH OF PATH: 430'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>30°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>960'</td>
</tr>
</tbody>
</table>

LENGTH: 140'

TREE LINE: B  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, rock outcrops, light coniferous, grass

TRACK: Broad, open slope, light coniferous, grass

RUNOUT ZONE: Broad, open slope, light coniferous, grass, with highway below

HISTORY: II. events: 9
highway: 9
full-track: 0
Avalanche Summary Sheet

PATH NAME: Idarado
PATH REFERENCE NUMBER: 152094 AREA: 1
MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 23

SPECIFICATIONS:
TOP ELEV.: 10760' BOTTOM ELEV.: 10700' VERTICAL FALL: 60'
LENGTH OF PATH: 170' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>45°</td>
<td>45°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>640'</td>
</tr>
<tr>
<td></td>
<td>LENGTH 90'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Shallow depression, rock outcrops, brush, grass

TRACK: Shallow depression, rock outcrops, light aspen, grass

RUNOUT ZONE: Highway 550

HISTORY: II. events: 6
highway: 6
full-track: 2

III. events: 11
highway: 1
full-track: 1
Avalanche Summary Sheet

PATH NAME: Willow Swamp

PATH REFERENCE NUMBER: 152095  AREA: 1

MAP NUMBER: 1, 4  PHOTOGRAPH NUMBER: 23

SPECIFICATIONS:

TOP ELEV.: 1440'  BOTTOM ELEV.: 10750'  VERTICAL FALL: 690'

LENGTH OF PATH: 1670'  NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>37°</td>
<td>23°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>7</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td>LENGTH</td>
<td>880'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, shallow basin, moderate smooth rock outcrops, grass

TRACK: Broad, shallow depression, moderate talus and coniferous, grass

RUNOUT ZONE: Broad, open slope, bare ground, brush, grass

---

HISTORY:

I. events: 6
   On Jan. 20, 1933, a Colorado Highway Department truck with two men was caught, both survived.

II. events: 44
    highway: 24
    full-track: 7

III. events: 79
     highway: 9
     full-track: 15
Avalanche Summary Sheet

PATH NAME: Blue Willow

PATH REFERENCE NUMBER: 152096 AREA: 1

MAP NUMBER: 1, 4 PHOTOGRAPH NUMBER: 23

SPECIFICATIONS:

TOP ELEV.: 11040' BOTTOM ELEV.: 10680' VERTICAL FALL: 360'

LENGTH OF PATH: 630' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>34°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>MEAN WIDTH 80'</td>
</tr>
</tbody>
</table>

LENGTH 210

TREE LINE B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, cliffs

TRACK: Broad, open slope, grass, bare ground

RUNOUT ZONE: Broad, open slope, grass, bare ground

HISTORY: III. events: 33
highway: 9
full-track: 19
Avalanche Summary Sheet

PATH NAME: Blue Point

PATH REFERENCE NUMBER: 152097   AREA: 1
MAP NUMBER: 1, 4   PHOTOGRAPH NUMBER: 23

SPECIFICATIONS:

TOP ELEV.: 11160'   BOTTOM ELEV.: 10720'   VERTICAL FALL: 440'
LENGTH OF PATH: 780'   NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>MEAN WIDTH</td>
<td>AREA ACRES</td>
</tr>
<tr>
<td>45°</td>
<td>300'</td>
<td>2</td>
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<tr>
<td>AREA ACRES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LENGTH 280'

TREE LINE

B

B

B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Small basin, cliffs, rock outcrops, grass

TRACK: Broad, shallow basin, smooth rock outcrops, grass

RUNOUT ZONE: Broad, shallow depression, talus, brush

HISTORY:

II. During this period, Blue Point crossed the road 102 times

III. During this period, Blue Point crossed the road 48 times
Avalanche Summary Sheet

PATH NAME: Snowflake

PATH REFERENCE NUMBER: 152098 AREA: 1

MAP NUMBER: 4 PHOTOGRAPH NUMBER: 24

SPECIFICATIONS:

TOP ELEV.: 11120' BOTTOM ELEV.: 11000' VERTICAL FALL: 120'

LENGTH OF PATH: 340' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>30°</td>
<td>34°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>&lt;1</td>
<td>300'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>240'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Rock outcrop, light, small coniferous, grass

TRACK: Rock outcrops, light coniferous, brush, grass

RUNOUT ZONE: Highway 550

HISTORY:

II. events: 16
highway: 14
full-track: 3

III. events: 6
highway: 3
full-track: 4
Avalanche Summary Sheet

PATH NAME: Fence
PATH REFERENCE NUMBER: 152099  AREA: 1
MAP NUMBER: 4  PHOTOGRAPH NUMBER: 24

SPECIFICATIONS:
TOP ELEV.: 11160'  BOTTOM ELEV.: 11000'  VERTICAL FALL: 160'
LENGTH OF PATH: 390'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30°</td>
<td>34°</td>
<td>0°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>MEAN WIDTH</td>
<td></td>
<td>LENGTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270'</td>
</tr>
<tr>
<td>TREE LINE</td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Rock outcrops, light coniferous, grass

TRACK: Cliff, rock outcrops, light coniferous, grass

RUNOUT ZONE: Highway 550

HISTORY: II. events: 3
highway: 3  full-track: 0

III. events: 4
highway: 0  full-track: 3
An aerial photograph of Colorado Highway 361 looking southwest towards U.S. Mountain and the Camp Bird Mine.
Avalanche Summary Sheet

PATH NAME: Squaw Gulch

PATH REFERENCE NUMBER: 150016  AREA: 4

MAP NUMBER: 5  PHOTOGRAPH NUMBER: 25, 26

SPECIFICATIONS:

TOP ELEV.: 11400'  BOTTOM ELEV.: 8520'  VERTICAL FALL: 2880'

LENGTH OF PATH: 7180'  NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>32°</td>
<td>27°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>68</td>
<td>MEAN WIDTH 240'</td>
</tr>
</tbody>
</table>

LENGTH 5320'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin, light coniferous

TRACK: V-shaped drainage, rock outcrops, light, small coniferous, brush, grass

RUNOUT ZONE: Broad, open slope, moderate to heavy aspen and coniferous

HISTORY: II. events: 2

highway: 1
full-track: 0
Avalanche Summary Sheet

PATH NAME: Lewis Creek
PATH REFERENCE NUMBER: 150017 AREA: 4
MAP NUMBER: 5 PHOTOGRAPH NUMBER: 26

SPECIFICATIONS:
TOP ELEV.: 12200' BOTTOM ELEV.: 8600' VERTICAL FALL: 3600'
LENGTH OF PATH: 10000' NUMBER OF STARTING ZONES: 4

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>36°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>55</td>
<td>640'</td>
</tr>
</tbody>
</table>

LENGTH 7810'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Open slope, moderate, small coniferous, light, medium coniferous, grass

TRACK: Shallow, V-shaped depression, rock outcrops, bare ground, brush

RUNOUT ZONE: Broad fan, brush, light aspen, grass

HISTORY:
Avalanche Summary Sheet

PATH NAME: Thistledown Creek

PATH REFERENCE NUMBER: 150018  AREA: 4

MAP NUMBER: 5  PHOTOGRAPH NUMBER: 26

SPECIFICATIONS:

TOP ELEV.: 12600'  BOTTOM ELEV.: 8640'  VERTICAL FALL: 3960'

LENGTH OF PATH: 10480'  NUMBER OF STARTING ZONES: 6

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>35°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>103</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LENGTH 8100'</td>
</tr>
</tbody>
</table>

TREE LINE

A  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, shallow, open basin with cliffs above, narrowing into a V-shaped depression with rock outcrops, light coniferous

TRACK: V-shaped gully, smooth rock face, boulders, light coniferous and brush

RUNOUT ZONE: Broad, open fan, brush, light, small aspen, grass

HISTORY:
Avalanche Summary Sheet

PATH NAME: Fall Creek
PATH REFERENCE NUMBER: 150001 AREA: 4
MAP NUMBER: 5 PHOTOGRAPH NUMBER: 27

SPECIFICATIONS:
TOP ELEV.: 12800' BOTTOM ELEV.: 8960' VERTICAL FALL: 3840'
LENGTH OF PATH: 8340' NUMBER OF STARTING ZONES: 5

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>39°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>128</td>
<td>560'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE

A B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: North: Broad, steep-sided basin, rock outcrops, cliffs, talus, rock glacier below. South: Broad, shallow basin, rock outcrops, light coniferous, grass

TRACK: Narrow, V-shaped gully, rock outcrops, boulders, brush, grass

RUNOUT ZONE: Broad, open fan, heavy brush

HISTORY: II. events: 5 highway: 1 full-track: 0
Avalanche Summary Sheet

PATH NAME: Hayden

PATH REFERENCE NUMBER: 150007 AREA: 4

MAP NUMBER: 5 PHOTOGRAPH NUMBER: 27, 28

SPECIFICATIONS:

TOP ELEV.: 12200' BOTTOM ELEV.: 9360' VERTICAL FALL: 2840'

LENGTH OF PATH: 4970' NUMBER OF STARTING ZONES: 2

STARTING ZONE TRACK RUNOUT ZONE

SLOPE ANGLE 37° 37° 27°

AREA ACRES 40 MEAN WIDTH 640' AREA ACRES 9

LENGTH 3340'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin divided by rock outcrop, cliffs, light coniferous

TRACK: Broad, open slope broken by cliff bands, light, small coniferous and brush

RUNOUT ZONE: Crosses drainage of Canyon Creek, frequently ascends opposite slope

HISTORY:

I. events: 2

II. events: 31
highway: 5
full-track: 4
### Avalanche Summary Sheet

**Path Name:** East Waterhole

**Path Reference Number:** 150009  **Area:** 4

**Map Number:** 5  **Photograph Number:** 27, 28

**Specifications:**

- **Top Elev.:** 12400'  **Bottom Elev.:** 9600'  **Vertical Fall:** 2800'
- **Length of Path:** 5390'  **Number of Starting Zones:** 1

<table>
<thead>
<tr>
<th>Starting Zone</th>
<th>Track</th>
<th>Runout Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope Angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35°</td>
<td>33°</td>
<td>29°</td>
</tr>
<tr>
<td>Area Acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>160'</td>
<td>7</td>
</tr>
</tbody>
</table>

**Starting Zone:** Broad, open slope, large rock outcrops, smaller cliff bands, grass

**Track:** Shallow, V-shaped depression cut by narrow, incised gully in lower portion, bedrock, light, small coniferous

**Runout Zone:** Broad, open slope broken by cliff band, grass, moderate small coniferous and brush, crosses drainage of Canyon Creek, frequently ascends opposite slope

**History:**

I. Waterhole avalanches - events: 20
   On Jan. 29, 1909, 4 men and 26 stock were caught and killed
   In 1936, the County Road Gang was caught

II. events: 53
    highway: 13
    full-track: 7
Avalanche Summary Sheet

PATH NAME: East Schoolhouse

PATH REFERENCE NUMBER: 150011 AREA: 4

MAP NUMBER: 5 PHOTOGRAPH NUMBER: 27

SPECIFICATIONS:

TOP ELEV.: 13040' BOTTOM ELEV.: 9680' VERTICAL FALL: 3360'

LENGTH OF PATH: 5390' NUMBER OF STARTING ZONES: 3

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>39°</td>
<td>24°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>90</td>
<td>2560' Upper: 480'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2660'</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, shallow depression, rock outcrops, talus, grass below

TRACK: Shallow depression, grass, light, small coniferous, large cliff band in lower portion

RUNOUT ZONE: Broad, open slope, grass, brush, crosses drainage of Canyon Creek

HISTORY: I. events: 1

II. events: 14
  highway: 0
  full-track: 2
  On Feb. 14, 1958, a caterpillar tractor and 4 men were caught, 3 were killed
Avalanche Summary Sheet

PATH NAME: U.S.
PATH REFERENCE NUMBER: 150013 AREA: 4
MAP NUMBER: 6 PHOTOGRAPH NUMBER: 29

SPECIFICATIONS:
TOP ELEV.: 12960' BOTTOM ELEV.: 9750' VERTICAL FALL: 3210'
LENGTH OF PATH: 7590' NUMBER OF STARTING ZONES: 3

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>41°</td>
<td>31°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>100</td>
<td>3280'</td>
</tr>
</tbody>
</table>

LENGTH 2520'
TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: North: Two broad, shallow depressions broken by cliff bands and rock outcrops, grass, light coniferous. Middle: Steep-sided, broad, open basin, cliffs with talus below. South: Open slope, cliff bands with grass and brush.

TRACK: North: Shallow depressions, smooth bedrock, grass, brush.
Middle: Broad, shallow depression, talus, grass. South: Open slope, cliff bands with grass and brush.

RUNOUT ZONE: North: Broad, open slope, grass, brush. Middle, South: Upper portion is broad, open, nearly level area with moderate to heavy coniferous below; lower portion is a cliff band with a broad, open slope, light, small coniferous below.

HISTORY:

I. events: 11. This avalanche destroyed the U.S. Mine boarding house, the Camp Bird Mill, and killed one man on 17 March 1906

II. events: 15
highway: 0
full-track: 4
Avalanche Summary Sheet

PATH NAME: Mt. Hayden, South and North

PATH REFERENCE NUMBER: 150014-015  AREA: 4

MAP NUMBER: 6  PHOTOGRAPH NUMBER: 29

SPECIFICATIONS:

TOP ELEV.: 11880'   BOTTOM ELEV.: 10200'   VERTICAL FALL: 1680'

LENGTH OF PATH: 3400'   NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North: 4</td>
<td>30°</td>
<td>20°</td>
</tr>
<tr>
<td>South: 6</td>
<td></td>
<td>North: 15</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>MEAN WIDTH</td>
<td>AREA ACRES</td>
</tr>
<tr>
<td>North: 4</td>
<td>240'</td>
<td>South: 13</td>
</tr>
<tr>
<td>South: 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>1860'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE A B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: North: Open slope, grass, light, small coniferous. South: Open slope, grass, moderate, very small coniferous with cliff bands below.

TRACK: North: Shallow depression, grass, brush. South: Shallow depression with smooth bedrock, grass, light, small coniferous.

RUNOUT ZONE: Open slope, grass, moderate coniferous

HISTORY: 1. events: 2. Both the Camp Bird Mill and the Camp Bird tramway were damaged by this slide
Avalanche Summary Sheet

PATH NAME: West Schoolhouse

PATH REFERENCE NUMBER: 150012  AREA: 4

MAP NUMBER: 6  PHOTOGRAPH NUMBER: 30, 33

SPECIFICATIONS:

TOP ELEV.: 12400'  BOTTOM ELEV.: 9680'  VERTICAL FALL: 2720'

LENGTH OF PATH: 6080'  NUMBER OF STARTING ZONES: 2

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>34°</td>
<td>26°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Upper: 960'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower: 240'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LENGTH 3940'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE

A  B  B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open slope, rock outcrops, light coniferous

TRACK: Narrow, deep, steep-sided gorge, bedrock, light coniferous

RUNOUT ZONE: Broad, open slope, moderate to heavy aspen and coniferous, grass, crosses drainage of Canyon Creek

HISTORY: II. events: 12

highway: 4
full-track: 4
Avalanche Summary Sheet

PATH NAME: West Waterhole

PATH REFERENCE NUMBER: 150010 AREA: 4

MAP NUMBER: 6 PHOTOGRAPH NUMBER: 30, 31, 33

SPECIFICATIONS:

TOP ELEV.: 11800' BOTTOM ELEV.: 9620' VERTICAL FALL: 2180'

LENGTH OF PATH: 5270' NUMBER OF STARTING ZONES: 2

STARTING ZONE          TRACK          RUNOUT ZONE

SLOPE ANGLE  27°          26°          18°

AREA ACRES  15          MEAN WIDTH  240' AREA ACRES 6

LENGTH 3560'

TREE LINE A B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, open basin, rock outcrops, light coniferous

TRACK: Deep, steep-sided, V-shaped gorge, bedrock with cliff bands

RUNOUT ZONE: Broad, open fan, rock outcrops, grass, light, small coniferous, crosses drainage of Canyon Creek

HISTORY: II. events: 10
highway: 2
full-track: 2
On Feb. 14, 1958, 2 men were caught, one was killed
Avalanche Summary Sheet

PATH NAME: Dolly Varden

PATH REFERENCE NUMBER: 150008
AREA: 4

MAP NUMBER: 6
PHOTOGRAPH NUMBER: 31, 33

SPECIFICATIONS:

TOP ELEV.: 11200'  BOTTOM ELEV.: 9480'  VERTICAL FALL: 1720'

LENGTH OF PATH: 3970'  NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>37°</td>
<td>29°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>15</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td>XXXX</td>
<td>XXXX</td>
<td>XXXX</td>
</tr>
</tbody>
</table>

LENGTH 2780'

TREE LINE: B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Broad, V-shaped depression, rock outcrops, moderate coniferous

TRACK: Narrow, incised gully, bedrock

RUNOUT ZONE: Open slope, crosses drainage of Canyon Creek

HISTORY: II. events: 10
          highway: 5
          full-track: 2
Avalanche Summary Sheet

PATH NAME: Swede Pete, Shirttail, Neighbor White, Splitter
PATH REFERENCE NUMBER: 150003-006 AREA: 4
MAP NUMBER: 6 PHOTOGRAPH NUMBER: 31, 32

SPECIFICATIONS:
TOP ELEV.: 10400' BOTTOM ELEV.: 9600' VERTICAL FALL: 800'
LENGTH OF PATH: 1100' NUMBER OF STARTING ZONES: 4

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>48°</td>
<td>58°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>1020'</td>
<td></td>
</tr>
<tr>
<td>TREE LINE</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Narrow, incised gully, cliffs, light coniferous

TRACK: Rock cliffs, couloirs

RUNOUT ZONE: Broad, open slope, boulders, bare ground, heavy brush

HISTORY:
I. events: 5. In Feb., 1936, 3 men, 20 mules, and 4 horses were caught by the Neighbor White
II. events: 59
   highway: 41
   full-track: 17
Avalanche Summary Sheet

PATH NAME: Switchbacks

PATH REFERENCE NUMBER: 150002 AREA: 4

MAP NUMBER: 6 PHOTOGRAPH NUMBER: 32, 33

SPECIFICATIONS:

TOP ELEV.: 11200' BOTTOM ELEV.: 9040' VERTICAL FALL: 2160'

LENGTH OF PATH: 4200' NUMBER OF STARTING ZONES: 1

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>40°</td>
<td>31°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>23</td>
<td>MEAN WIDTH  480'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH</td>
<td>1670'</td>
<td></td>
</tr>
</tbody>
</table>

TREE LINE B B B

TERRAIN AND VEGETATION COVER:

STARTING ZONE: Shallow depression with small cliffs above, rock outcrops moderate, small aspen

TRACK: Shallow, V-shaped depression, rock outcrops, moderate, small aspen and coniferous

RUNOUT ZONE: Broad, shallow depression, heavy brush, light, small aspen, cabin, crosses switchbacks of highway and drainage of Canyon Creek

HISTORY: I. events: 5. In Feb., 1893, 7 men and 24 horses were caught, 4 men and all of the horses were killed

II. events: 15
  highway: 10
  full-track: 3
Avalanche Summary Sheet

PATH NAME: Senator Gulch
PATH REFERENCE NUMBER: 150002
AREA: 4
MAP NUMBER: 6
PHOTOGRAPH NUMBER: 32, 33

SPECIFICATIONS:
TOP ELEV.: 11760'  BOTTOM ELEV.: 9040'  VERTICAL FALL: 2720'
LENGTH OF PATH: 7700'  NUMBER OF STARTING ZONES: 6

<table>
<thead>
<tr>
<th>STARTING ZONE</th>
<th>TRACK</th>
<th>RUNOUT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE ANGLE</td>
<td>38°</td>
<td>22°</td>
</tr>
<tr>
<td>AREA ACRES</td>
<td>99</td>
<td>MEAN WIDTH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AREA ACRES</td>
</tr>
</tbody>
</table>

LENGTH 5350'

TREE LINE
A

B

B

TERRAIN AND VEGETATION COVER:
STARTING ZONE: Broad, open slopes, multiple cliff bands, rock outcrops, light to moderate coniferous

TRACK: Broad, V-shaped depression, light to moderate coniferous, bare ground

RUNOUT ZONE: Broad, shallow depression, heavy brush, light, small aspen, cabin, crosses switchbacks of highway and drainage of Canyon Creek

HISTORY:
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Numbers 1 through 5, and 11 and 12 are out of print. A second edition of Number 1 is available from
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1973. 228 pp. Order from the author, Institute for Environmental Studies, University of Wiscon-
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11. Solar and Atmospheric Radiation Data for Broughton Island, Eastern Baffin Island, Canada,
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