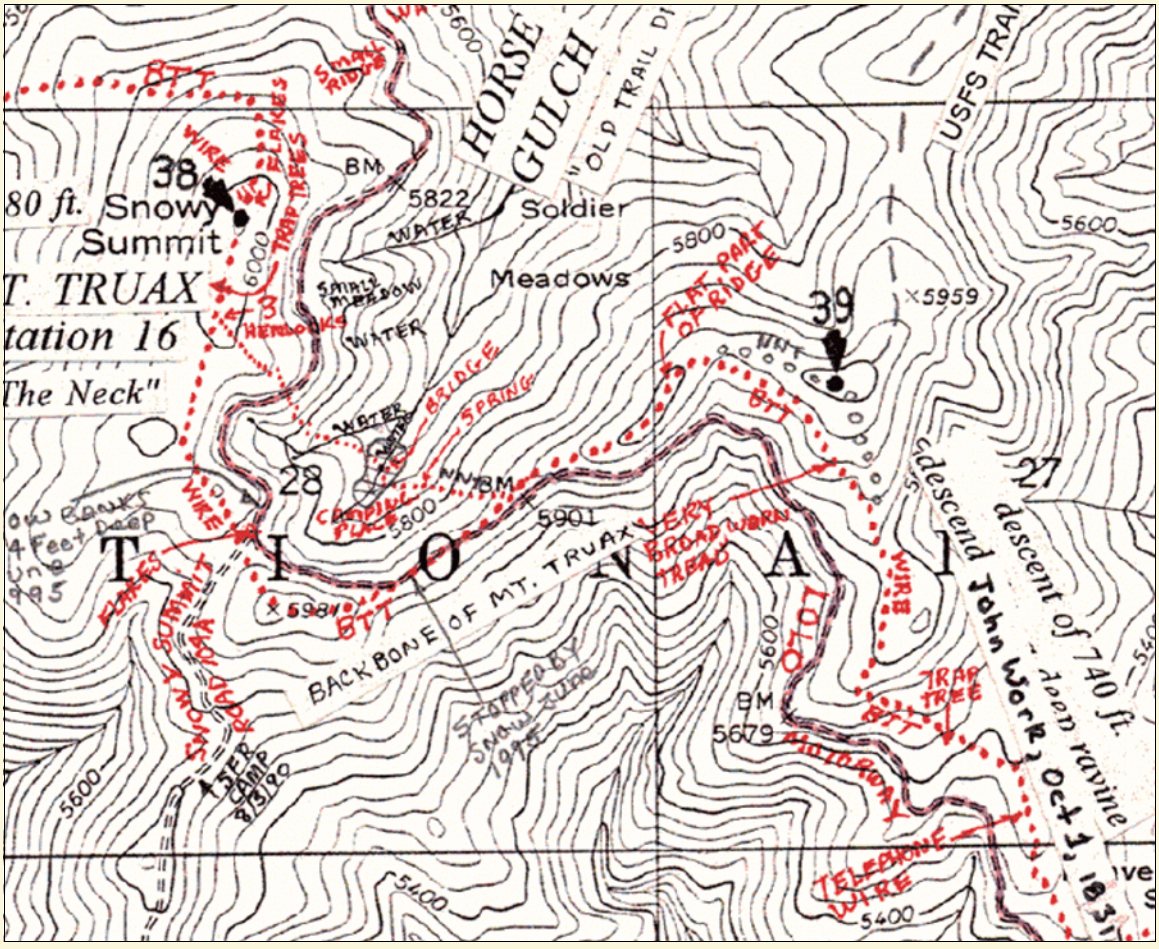
LOLO TRAIL HISTORY AND CARTOGRAPHY
Part VII, Research Maps D

Lolo Trail Research Field Maps, Folder F109

Historical Trails Research Report No. 0002

(Part 07, Research Maps D Field Maps F109.pdf)

(0002-MY-RESEARCH-MAPS-SFR Lolo Trail Research Field Maps, Folder F109 1985-2001)



Example Map, Snowy Summit on the Bird-Truax Trail 1866

Steve F. Russell, PhD, PE
Historic Trails Research
Ames, Iowa

1992

Historical Trails Research Report No. 0001
Lolo Trail Research Field Maps, Folder F109

REPORT SUMMARIZATION

This report pertains to the Lewis and Clark National Historic Landmark, the Lewis and Clark National Historic Trail, the Nez Perce National Historic Trail. It also applies to all the other trails in the Lolo Trail System: Northern Nez Perces Trail in 1866, Bird-Truax Trail 1866, Lewiston and Virginia City Wagon Road 1866, Route of John Work Fur Brigade 1831, Route of General O. O. Howard and the Nez Perce in 1877, John Mullan 1854, and other trails.

When I began my Lolo Trail System research in 1985, I started gathering all the historical map resources I could find. The ones I used up to 1992, are included in this report. I kept reorganizing the maps up to around 2001. In the early days of my hiking the trail, I carried topo maps of the area I hiked and made notations on them. During the subsequent winter, I added notation on them to try to create maps with complete detail on the old trails. In those days, I did not have a GPS, so I carried a compass, pace counter, and barometric altimeter so I could locate my position on the topo maps, using the elevation profile (Course and Distance). In the subsequent years, I had good-quality GPS equipment so I created newer maps with much better precision on trail and camp locations.

My motivation in preparing this small report on my early Lolo Trail System research was to show the baseline research, which led to my subsequent creation of precision map sets.

For information on Trail Research Methodology, Inference in Historical Trail Research, and this author, refer to the Appendix that follows the map pages.

Steve F. Russell

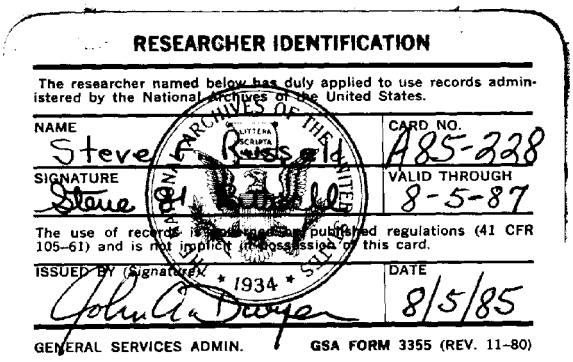
Lolo Trail
History and Cartography

PART VII, Research Maps D

Lolo Trail Research Field Maps, Folder F109

Smoking Place on the Lolo Trail

Steve F. Russell
Emeritus Associate Professor
Iowa State University
Ames, Iowa 50011
1985-2001



RESEARCHER IDENTIFICATION

The researcher named below has duly applied to use records administered by the National Archives of the United States.

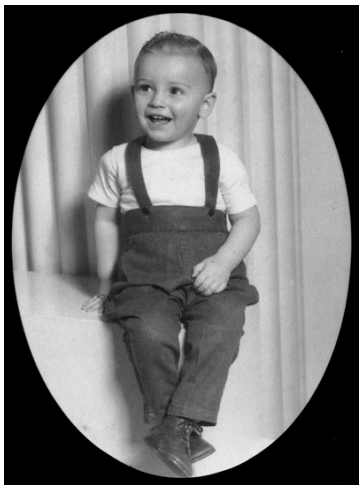
NAME: Steve F. Russell — CARD NO.: A85-228

SIGNATURE: Steve F. Russell — VALID THROUGH: 8-5-87

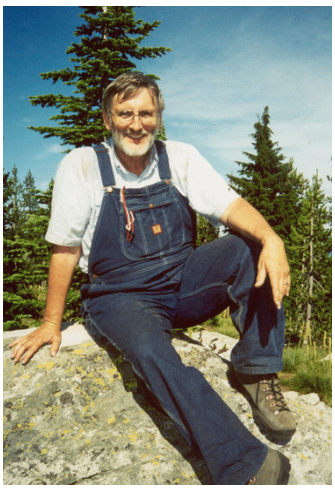
The use of records is governed by applicable published regulations (41 CFR 105-61) and is not implicit in possession of this card.

ISSUED BY (Signature): John A. Burger — DATE: 8/5/85

GENERAL SERVICES ADMIN. GSA FORM 3355 (REV. 11-80)



1946



2002

2014

Cover Photo

"Smoking Place on the Lolo Trail"

Photo by Steve F. Russell

Lolo Trail
History and Cartography

PART VII, Research Maps D

Lolo Trail Research Field Maps, Folder F109

1985-2001

The following are the field research maps of Steve F. Russell for the years 1985 through 2001. They were carried in the field and marked in the field. In 2001, this map series was discontinued in favor of using GPS and Computer Geographic Information Systems.

These maps have not been revised to make corrections since the 2001-2002 precision survey but they do show the state of the research in 2001. They have been included in this Lolo Trail report for their historical value.

MAP SET INDEX - FOLDER FI09

Lolo Trail System: Field Research Masters

This map set documents tread locations, road locations, and place names along the entire Lolo Trail System.

I. Map Sequence #1, Maps 1-24, Pages 2-25: PDF page 8
- ✓*Bird-Truax Trail of 1866, Weippe prairie to Lolo Pass* (Maps BTT16-31)
- ✓*Northern Nez Perces Trail of 1866, northern branch* (Maps NNT 1-24)
- ✓*Lewis and Clark Route, Willow Ridge eastward to Lolo Montana* (Maps LC 7B-24)

ll. Map Sequence #2, Maps 25-31, Pages 27-33: PDF page 71
- ✓*Northern nez Perces Trail of1805-06, southern branch, Weippe Prairie eastward to Willow Ridge* (Maps LC 1-7).
- ✓*Lewis and Clark Route from Weippe Prairie eastward to Willow Ridge* (Maps LC 1-7)

III. Map Sequence #3, Maps 32-35, Pages 35-38: PDF page 86
- ✓*Lewis and Clark Route, diversion to Lochsa River and Powell* (Maps LC 25-28).

IV. Map Sequence #4, Maps 36-43, Pages 40-47: PDF page 95
- ✓*Original Lolo Motorway Route of1934-35, Weippe Prairie to Beaver Saddle* (Maps LM1-6).
- ✓*Original Lolo Motorway Route, Powell Junction to Lochsa Lodge* (Maps LM15-16).

V. Map Sequence #5, Maps 44-67, Pages 49-72: PDF page 110
- ✓*Archive maps of the Lolo Trail System*

VI. Map Sequence #6, Maps 68-//, Pages 74-//: PDF page 159
- ✓Forest Visitor Maps. ✓Mud Creek Road. ✓French Mountain Road.
- ✓Weitas Creek Road Extension. ✓Frenchman Butte Road.
- ✓Pete King Road Extension.

These maps were originally part of my research map series in the Folder: Part 07, Research Maps D Field Maps F109.pdf

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Revision History:

(5-29-98) Updated maps from 1997 Field work.

(11-2-99) Updated maps from 1999 Field work.

MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #1, Maps LTS 1-24, Pages 2-25.

1. **Bird-Truax Trail of 1866 from Weippe Prairie eastward to Lolo Pass, maps BTT 16-31.**

2. **Northern Nez Perces Trail of 1866 (northern route), Weippe Prairie eastward to Lolo, Montana, maps NNT 1-24.**

3. **Lewis and Clark Route from Willow Ridge eastward to Lolo, Montana, maps LC 7B-24.**

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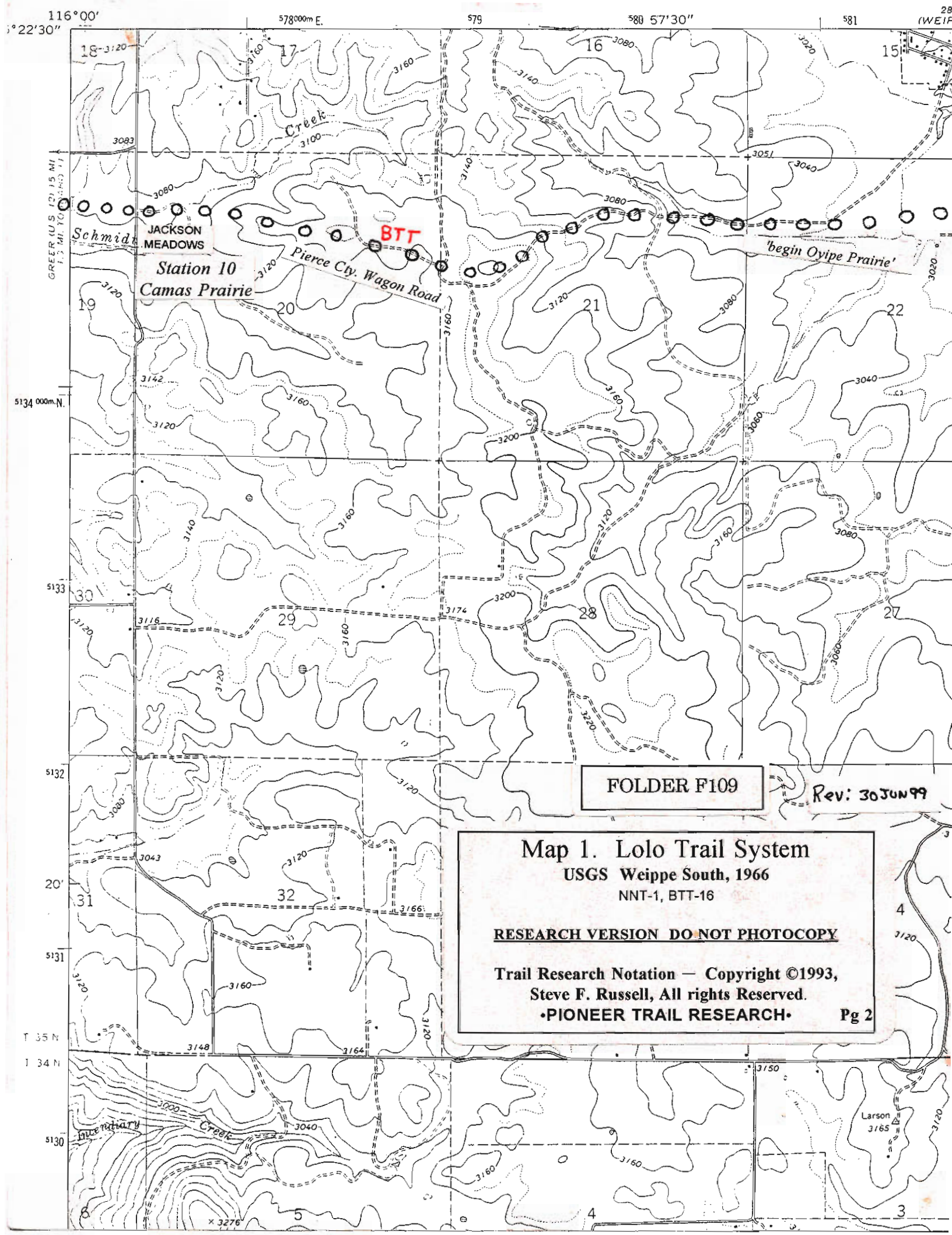
116°00'
°22'30"
578000m E.
579
580 57'30"
581
JACKSON MEADOWS
Station 10
Camas Prairie
Schmidt
BTT
Pierce Cty. Wagon Road
'begin Oyipe Prairie'
Creek
5134 000m.N.
5133
5132
5131
T 35 N
T 34 N
Larson
3165
FOLDER F109
Rev: 30JUN99
Map 1. Lolo Trail System
USGS Weippe South, 1966
NNT-1, BTT-16
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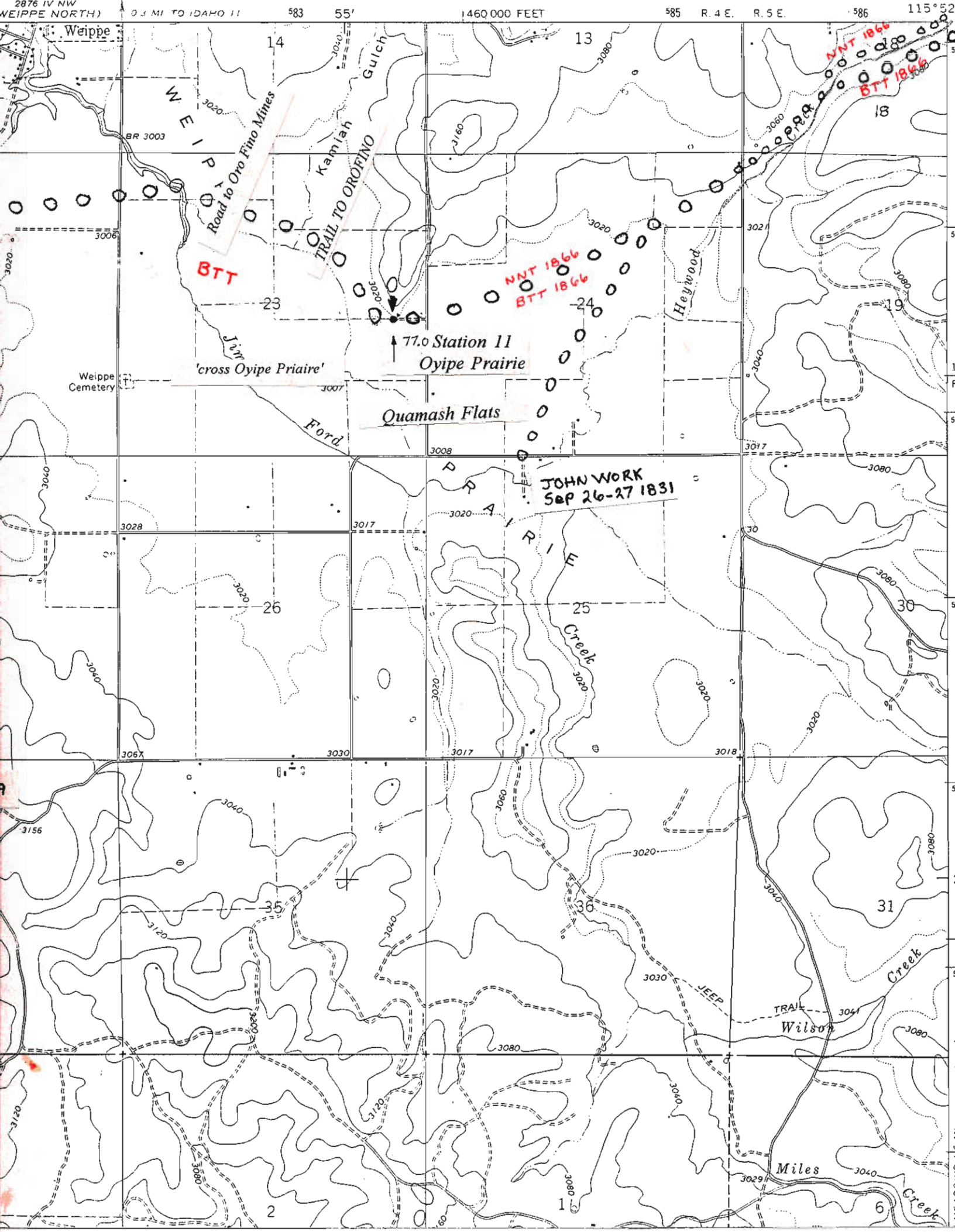
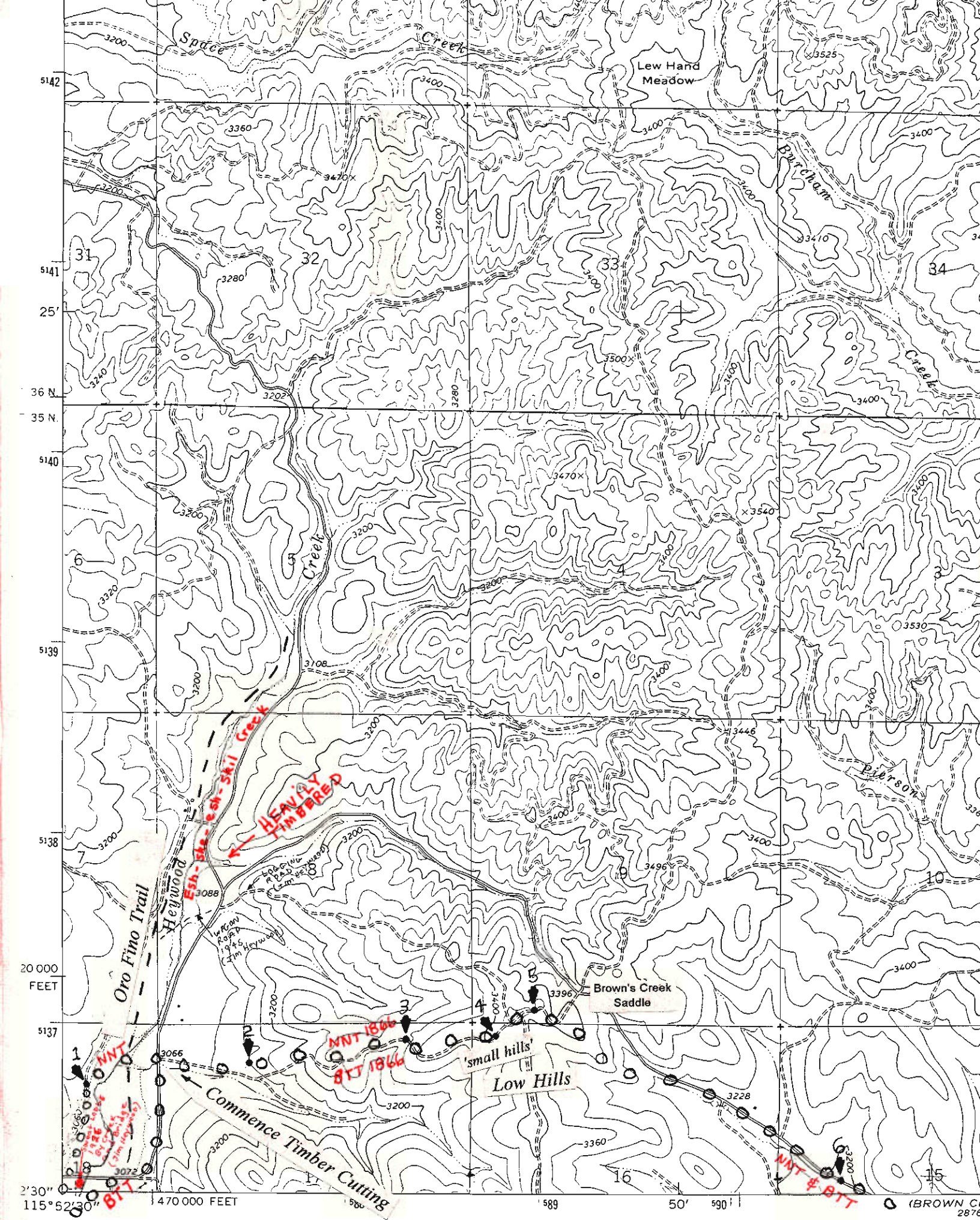
•PIONEER TRAIL RESEARCH•
Pg 2


2876 IV NW
(WEIPPE NORTH)
0.3 MI. TO IDAHO 11
583
55'
460 000 FEET
585
R. 4 E.
R. 5 E.
586
115°52
Weippe
Weippe Cemetery
Road to Oro Fino Mines
Kamiah
TRAIL TO OROFINO
Gulch
BR 3003
BTT
NNT 1866
BTT 1866
77.0 Station 11
Oyipe Prairie
'cross Oyipe Priaire'
Jim
Ford
Quamash Flats
Heywood
PRAIRIE
JOHN WORK
SEP 26-27 1831
Creek
Wilson
Miles
JEEP TRAIL
13
14
18
19
23
24
25
26
30
31
35
36
1
2
6



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

SCALE

FOLDER F109

Map 2. Lolo Trail System

USGS Pierce, 1966

NNT-2, BTT-17

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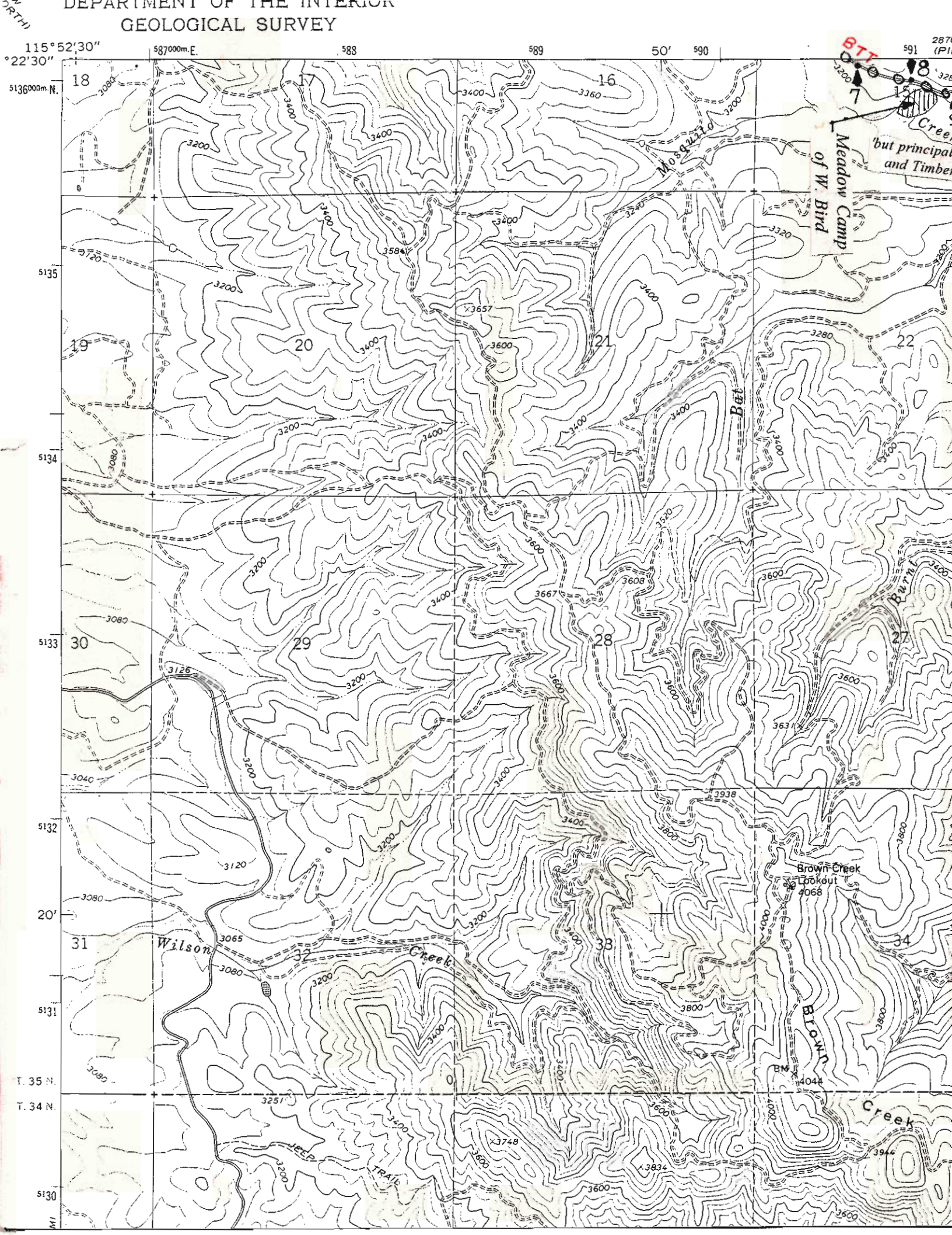
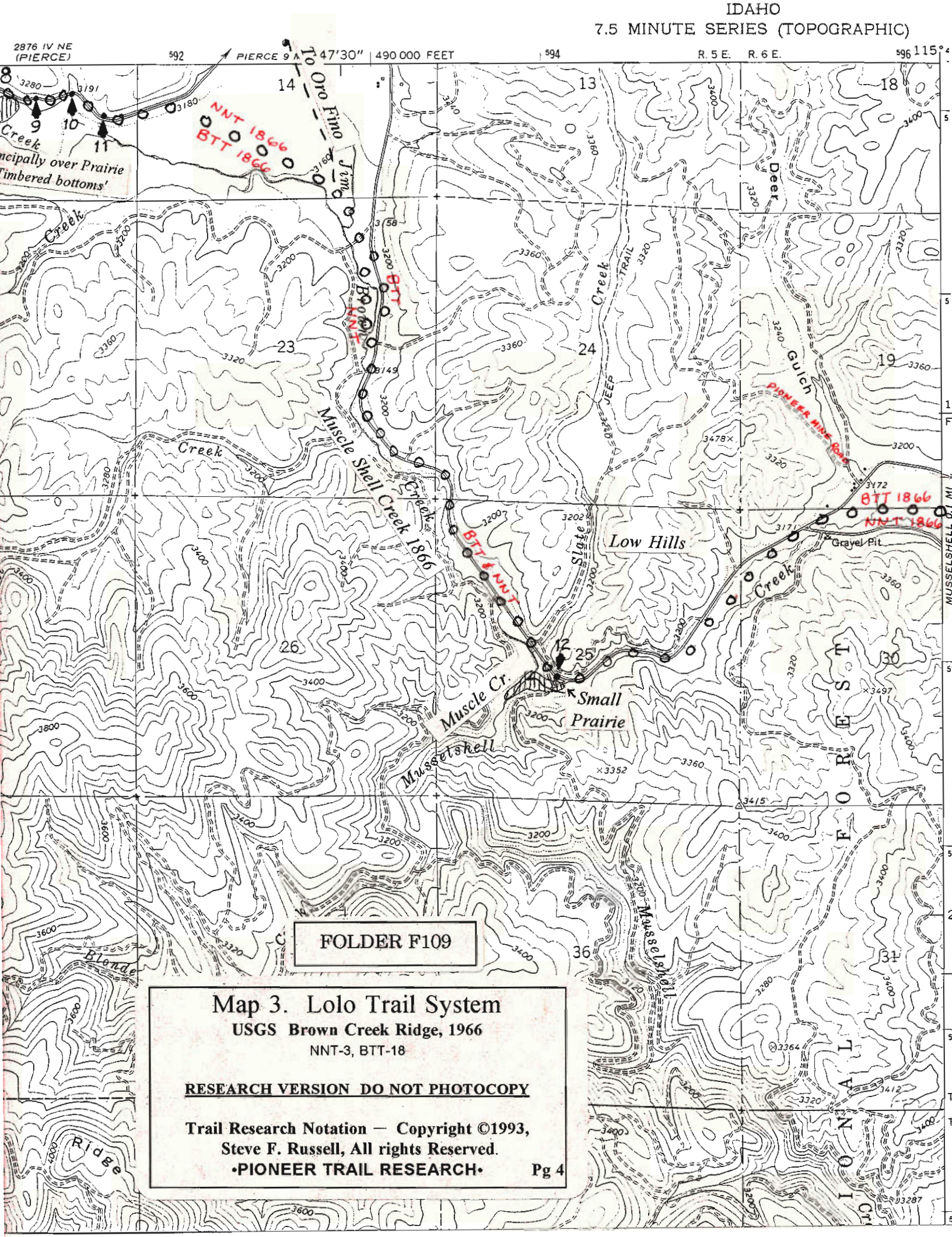
•PIONEER TRAIL RESEARCH• **Pg 3**


DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
115°52'30"
°22'30"
587000m.E.
588
589
50'
590
591
5136000m.N.
5135
5134
5133
5132
20'
5131
T. 35 N.
T. 34 N.
5130
18
17
16
15
8
7
19
20
21
22
30
29
28
27
31
32
33
34
Meadow Camp
of W. Bird
Mosquito
Bat
Burnt
Creek
Wilson
Creek
Brown
Creek
Brown Creek
Lookout
7068
BM
4044
JEEP
TRAIL
3944
3080
3120
3200
3251
3400
3584
3657
3600
3280
3520
3608
3667
3600
3800
3938
4000
3748
3834
3600
3065
3040
3126
3080
3200
3400
3600
3800
4000


IDAHO
7.5 MINUTE SERIES (TOPOGRAPHIC)
2876 IV NE
(PIERCE)
47'30" 490 000 FEET
R. 5 E.
R. 6 E.
PIERCE 9 A
To Oro Fino
NNT 1866
BTT 1866
Timber
Deer
Creek
TRAIL
Gulch
PIONEER MINE ROAD
Muscle Shell Creek 1866
BTT
NNT
BTT & NNT
Low Hills
Slate
Gravel Pit
Small
Prairie
Muscle Cr.
Musselshell
Creek
Blonde
Ridge
NATIONAL FOREST
FOLDER F109
Map 3. Lolo Trail System
USGS Brown Creek Ridge, 1966
NNT-3, BTT-18
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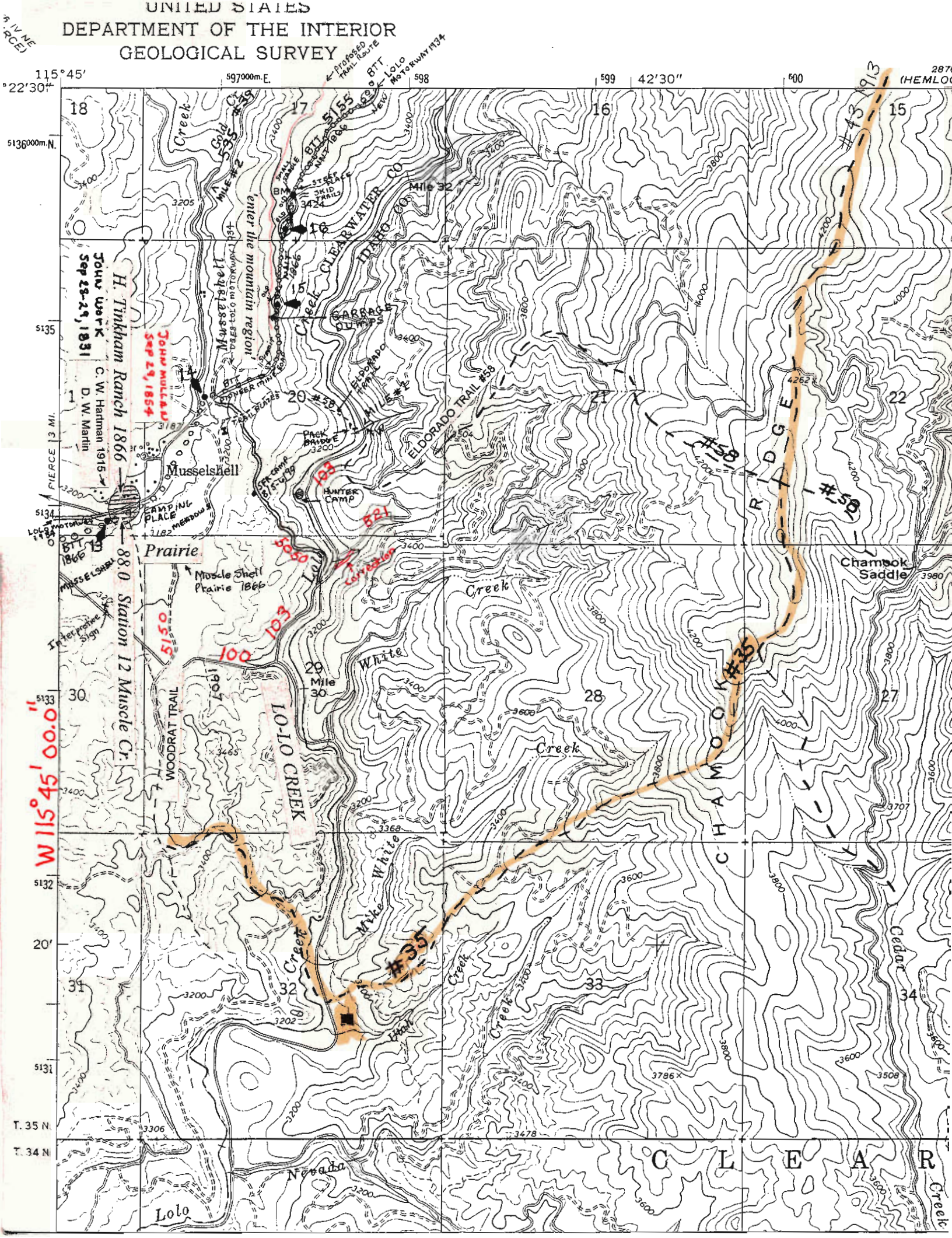
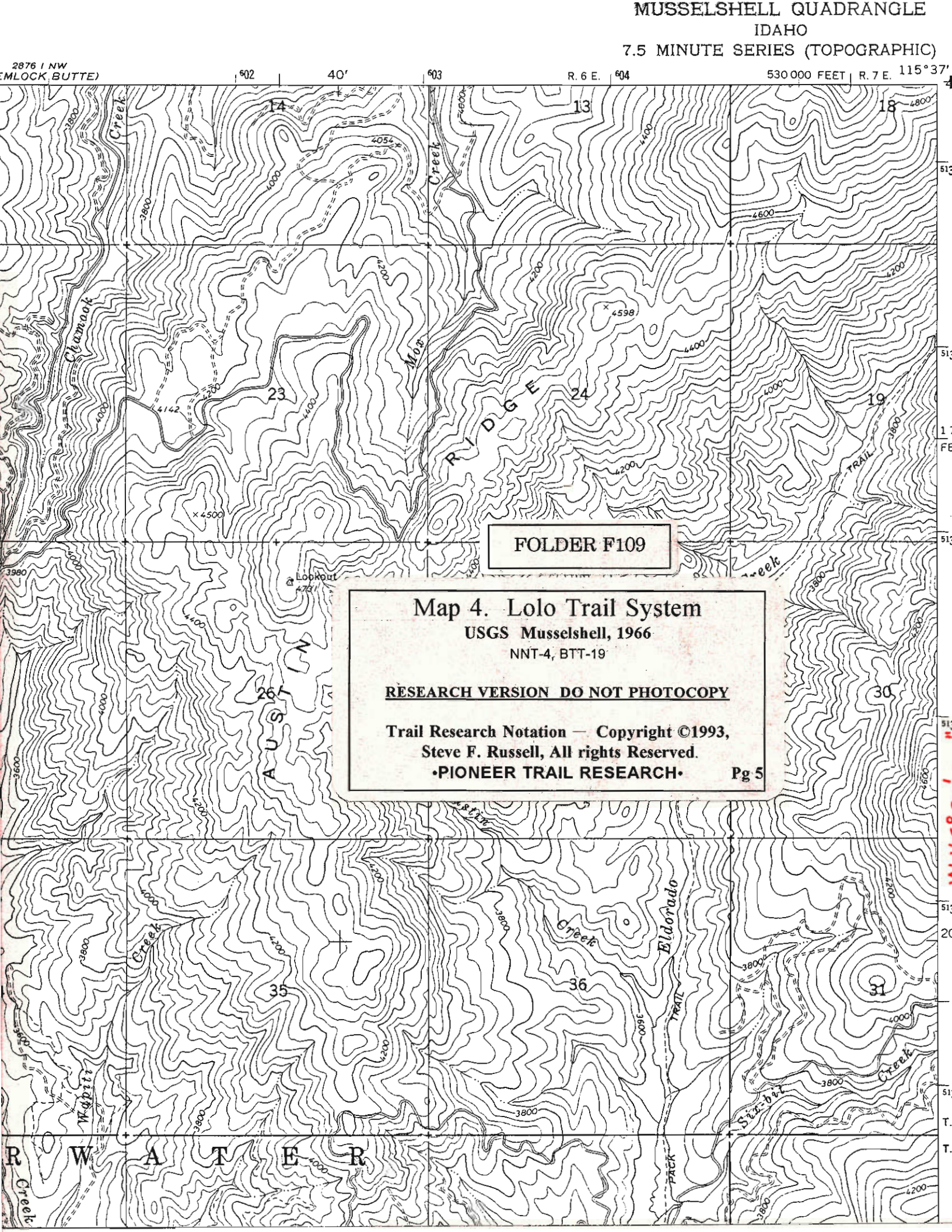
•PIONEER TRAIL RESEARCH•
Pg 4


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
115°45'
42'30"
597000m.E.
598
599
600
5136000m.N.
5135
5134
5133
5132
5131
T. 35 N.
T. 34 N.
W 115° 45' 00.0"
22'30"
Proposed Trail Route
BTT
Lolo Motorway 1934
New
Gold Creek
595
#59
Mile #2
Mussel Shell
Trail to Lolo Motorway 1934
Enter the mountain region
BTT
1866
Steep Place
Skid Trails
Small Meadow
Mile 32
Clearwater Co.
Idaho Co.
Garbage Dump
Eldorado Trail #58
Mile #1
Pack Bridge
Pioneer Mine
Trail Blazes
John Work
Sept 28-29, 1831
C. W. Hartman 1915
D. W. Martin
John Mullan
Sept 29, 1854
H. Tinkham Ranch 1866
Pierce 3 Mi.
Musselshell
Camping Place
Meadow
Lolo Motorway 1934
Prairie
Muscle Shell Prairie 1866
Interpretive Sign
88.0 Station 12 Muscle Cr.
Lolo Creek
Woodrat Trail
Mile 30
White Creek
Mike White Creek
Hunter Camp
Fr. Camp
Ridge
#58
#35
Chamook Saddle
Cedar Creek
Nevada Creek
Lolo
Creek
5050
5150
103
100
821
Correction
3465
3306
3478
3786
3508
3707
3980
4262


MUSSELSHELL QUADRANGLE
IDAHO
7.5 MINUTE SERIES (TOPOGRAPHIC)
2876 I NW
EMLOCK BUTTE)
602
40'
603
R. 6 E.
604
530 000 FEET
R. 7 E.
115°37'
Clamark Creek
Moss Creek
RIDGE
TRAIL
Lookout
4731
Austin
Creek
Eldorado
Creek
TRAIL
Wapiti
Creek
Six-bit
Creek
PACK
TRAIL
R O W A T E R
FOLDER F109
Map 4. Lolo Trail System
USGS Musselshell, 1966
NNT-4, BTT-19
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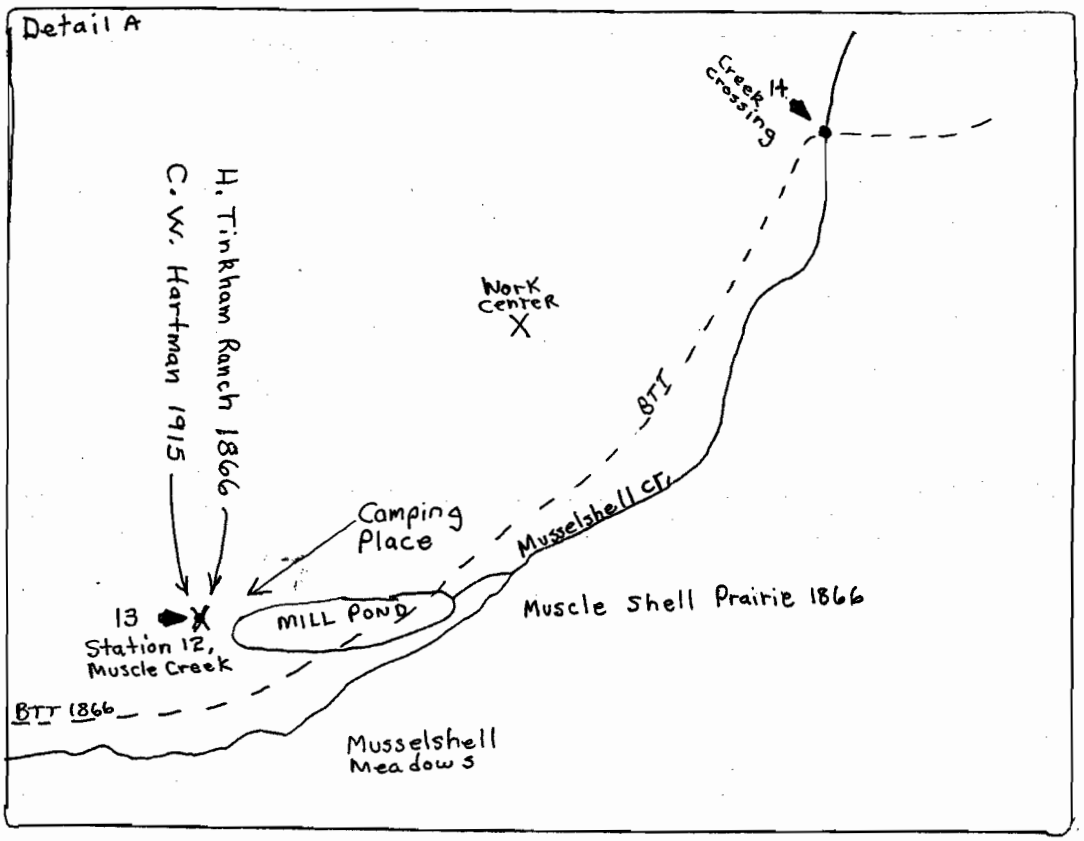
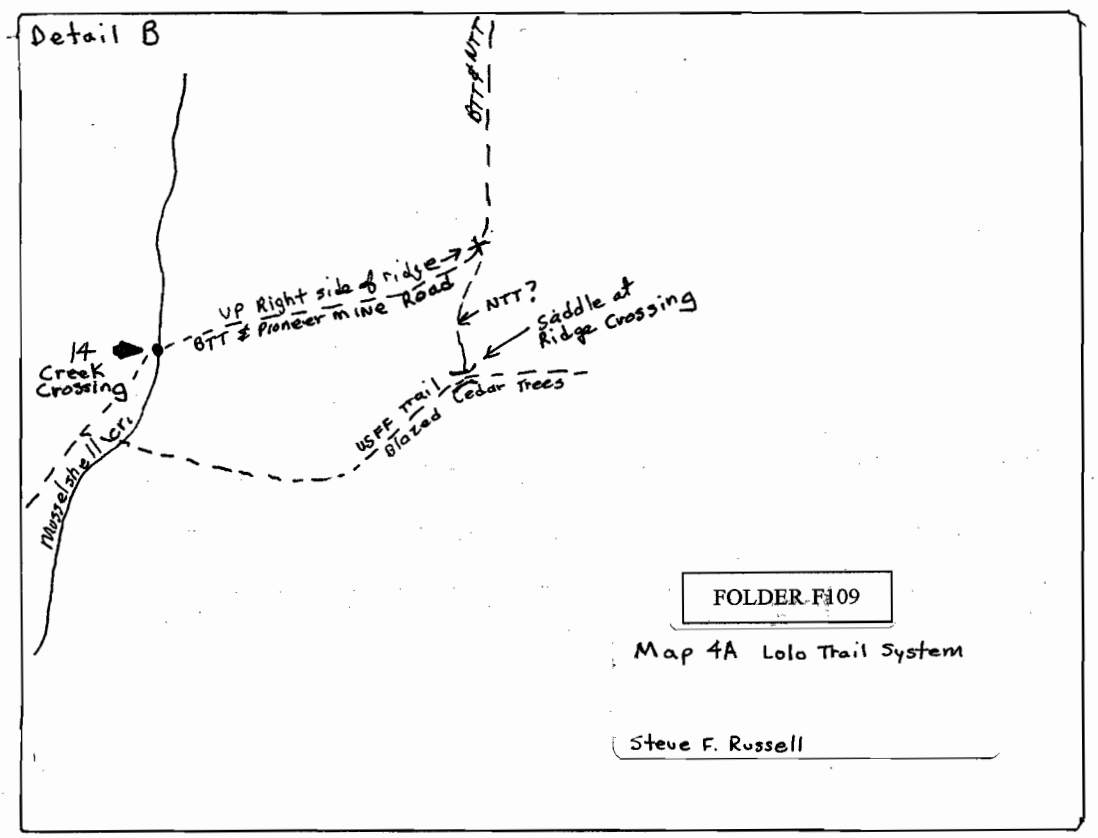
•PIONEER TRAIL RESEARCH• Pg 5





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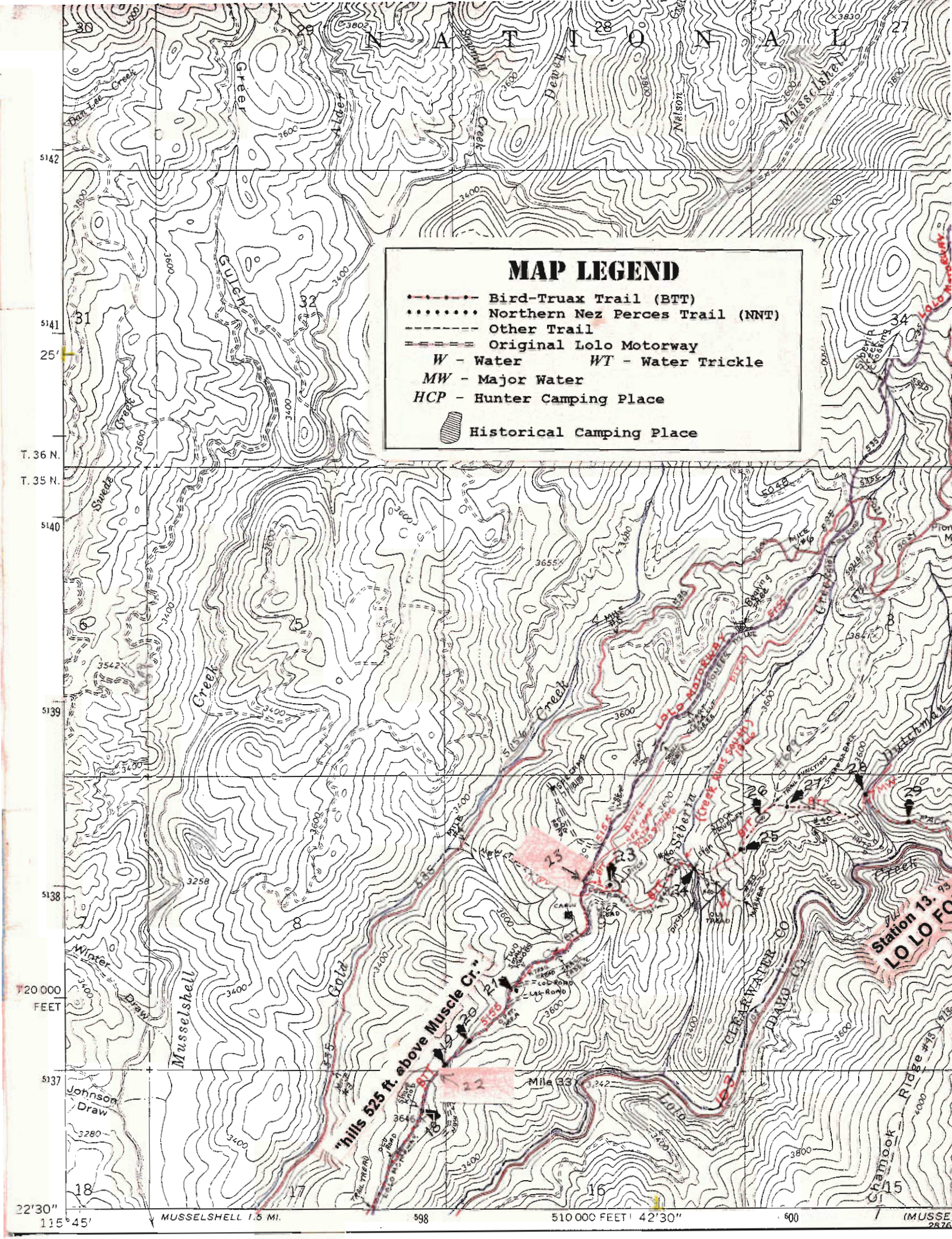
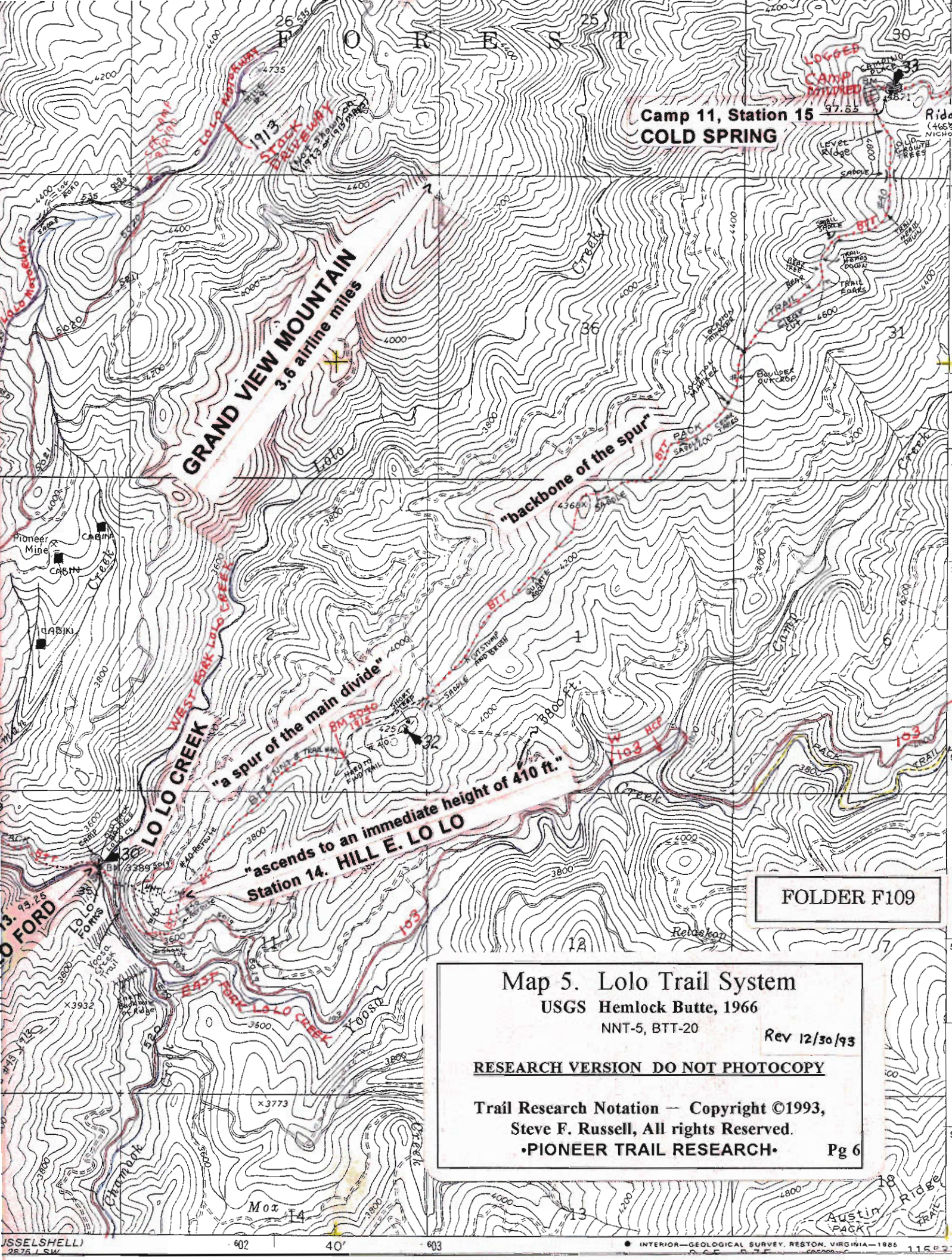
Map 4A Lolo Trail System

Steve F. Russell


MAP LEGEND
Bird-Truax Trail (BTT)
Northern Nez Perces Trail (NNT)
Other Trail
Original Lolo Motorway
W - Water
WT - Water Trickle
MW - Major Water
HCP - Hunter Camping Place
Historical Camping Place
"hills 525 ft. above Muscle Cr."
Mile 33
Station 13
LO LO FO
Lolo Motorway
(Creek runs south)
Siberia
Gold
Winter
Draw
Musselshell
Johnson
Draw
Swede
Creek
Gulch
Greer
Alder
Creek
Dan Lee
Creek
Dewey
Creek
Nelson
Creek
Siberia
Creek
Chamook
Ridge
CLEARWATER
CO
IDAHO
CO
T. 36 N.
T. 35 N.
5142
5141
5140
5139
5138
5137
20 000
FEET
22'30"
115°45'
MUSSELSHELL 1.5 MI.
510 000 FEET
42'30"



Map 5. Lolo Trail System

USGS Hemlock Butte, 1966

NNT-5, BTT-20

Rev 12/30/93

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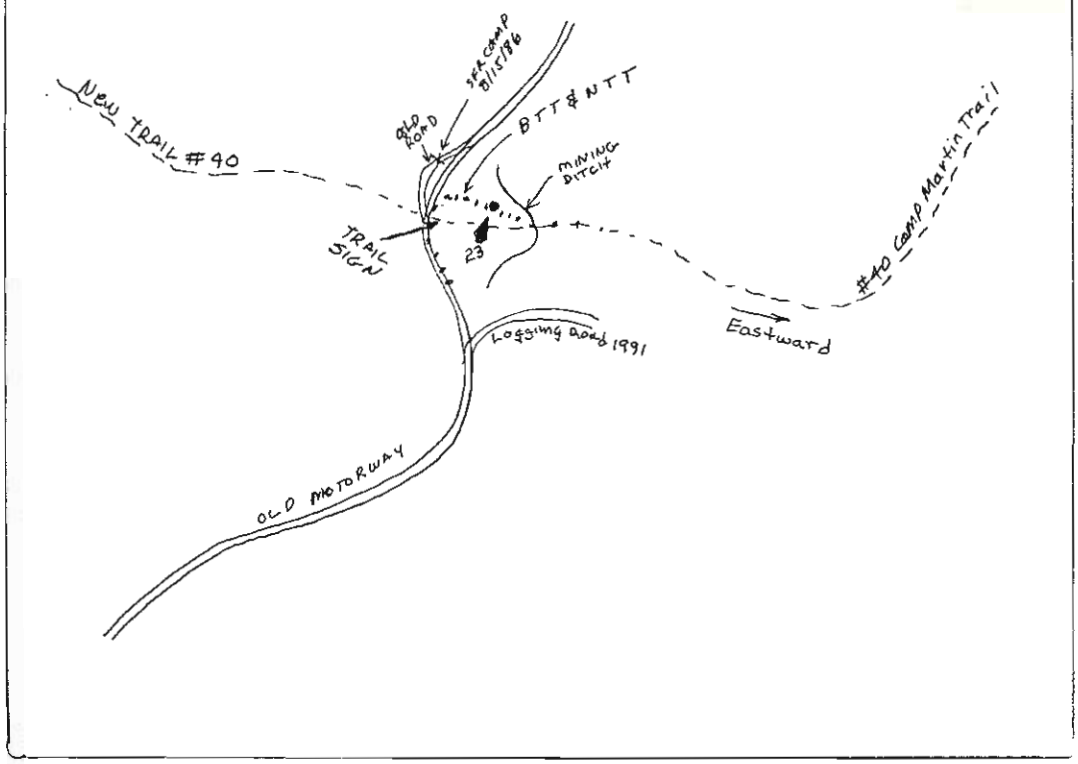
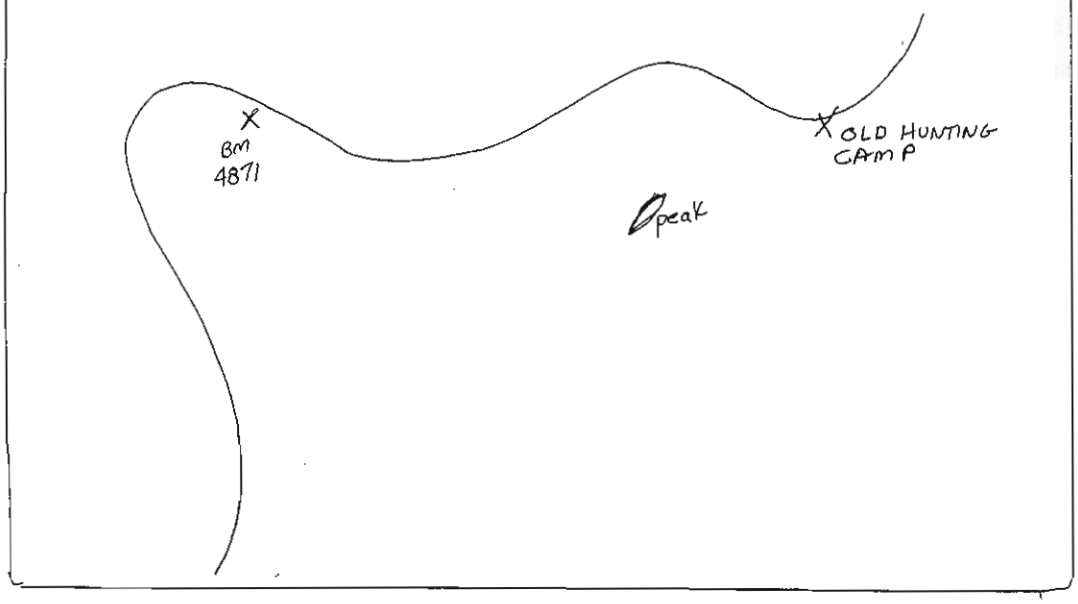
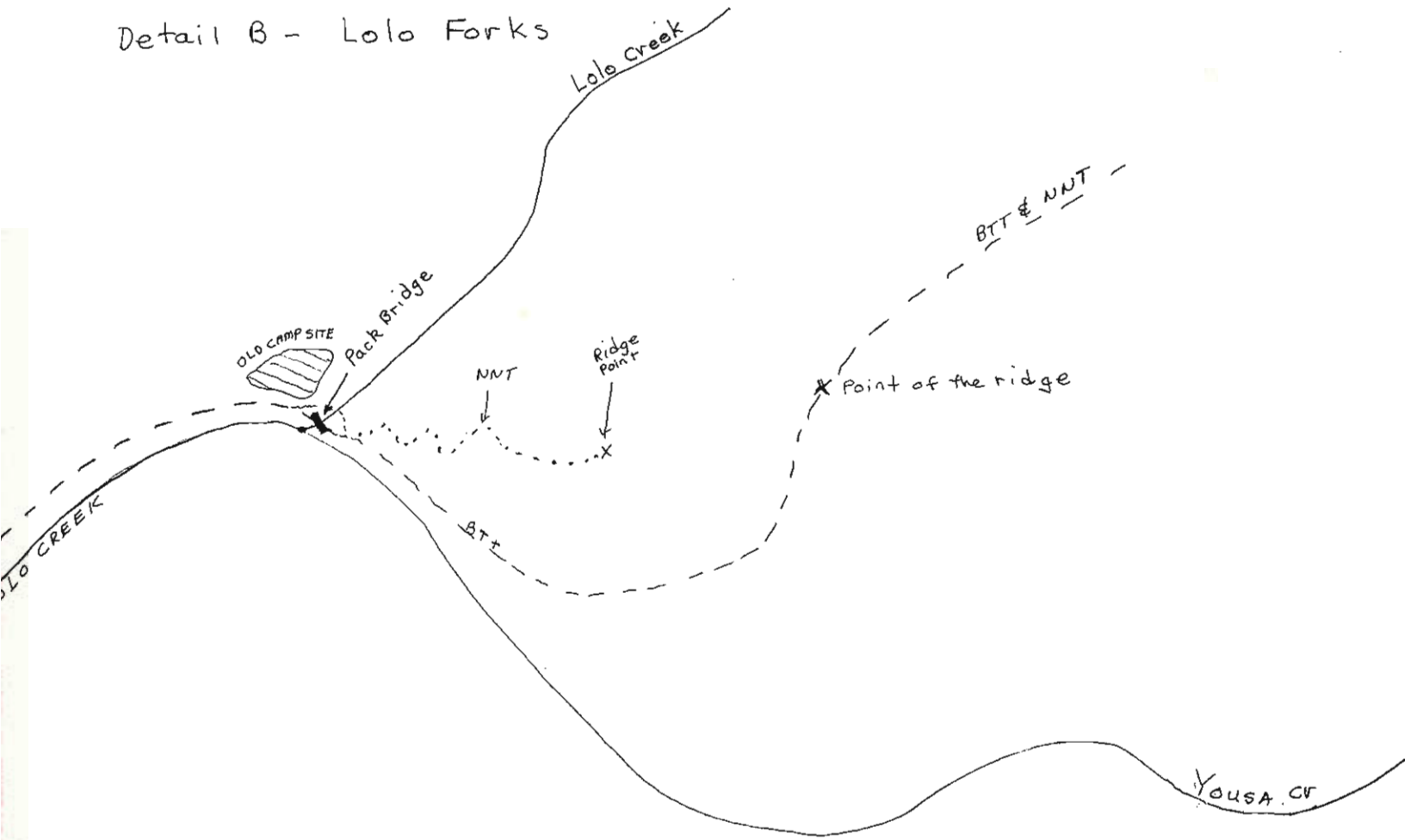
Detail A - Arrowhead-23

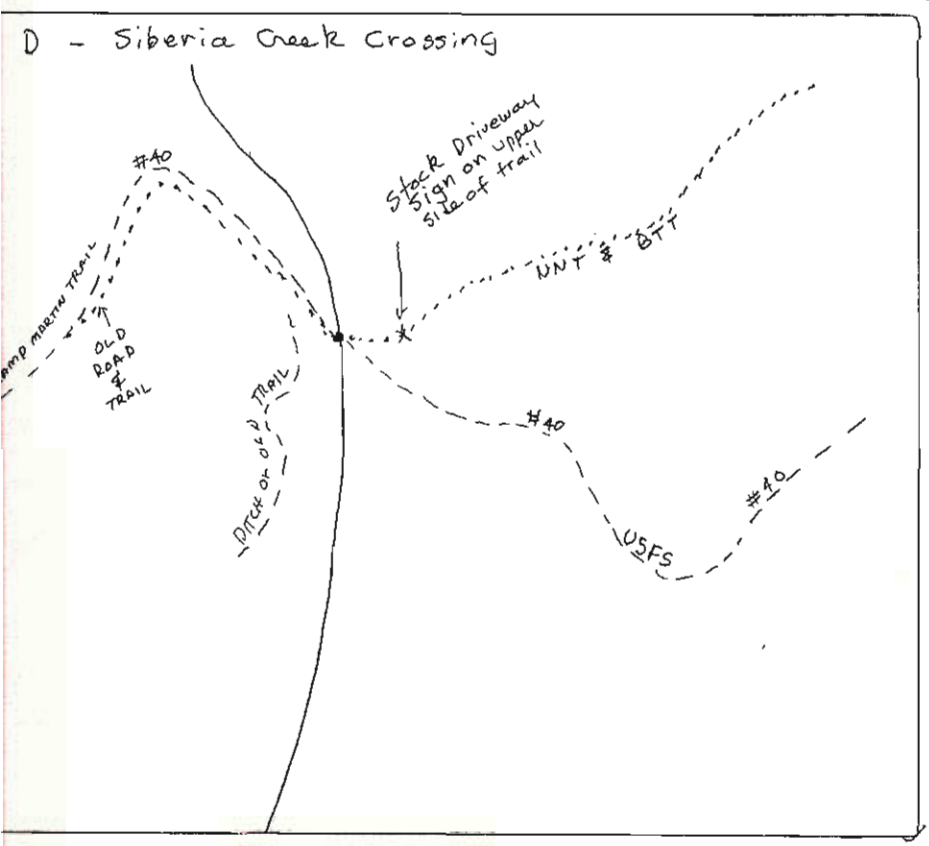


Detail C - Cold Spring and Ridge Camp



Detail D





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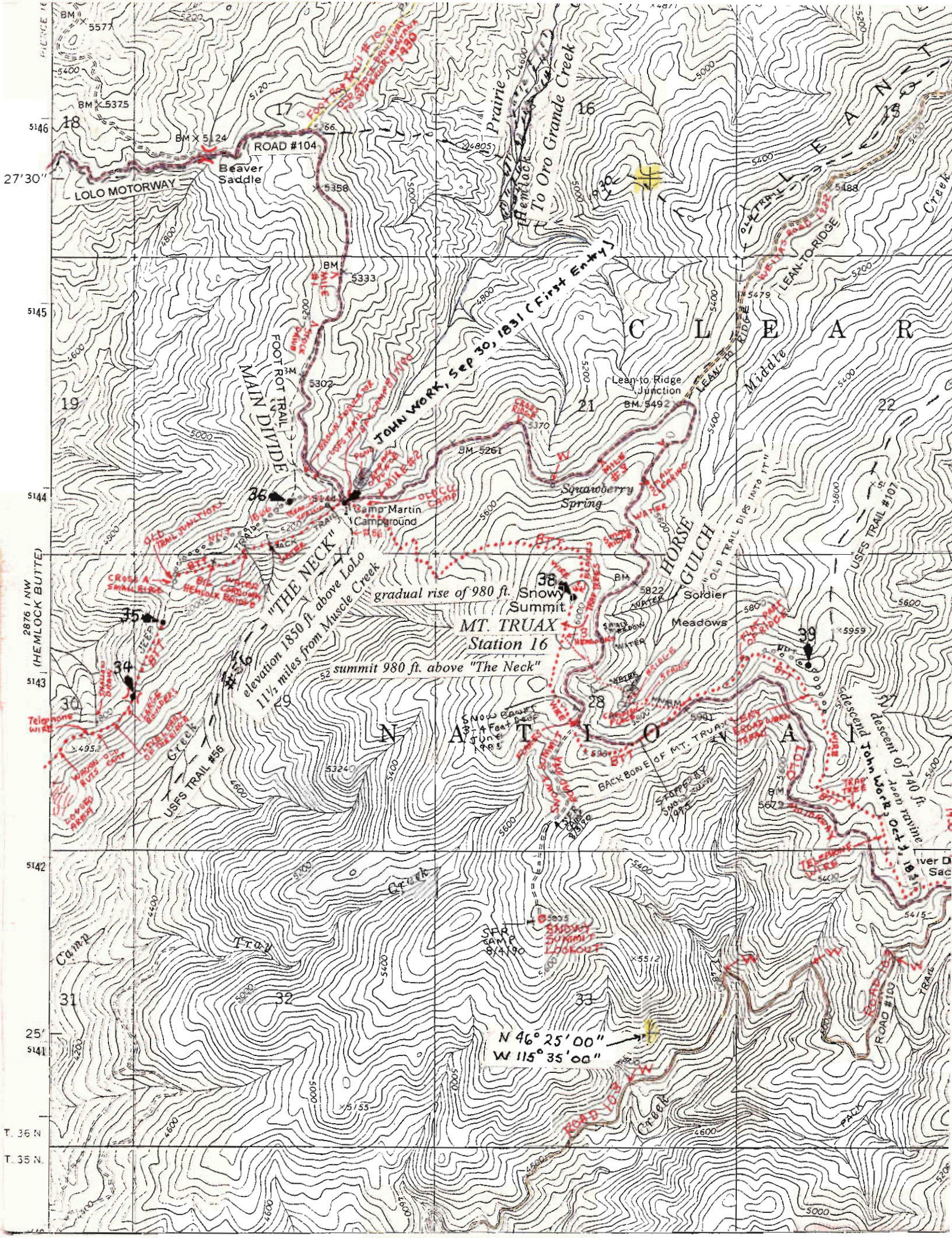
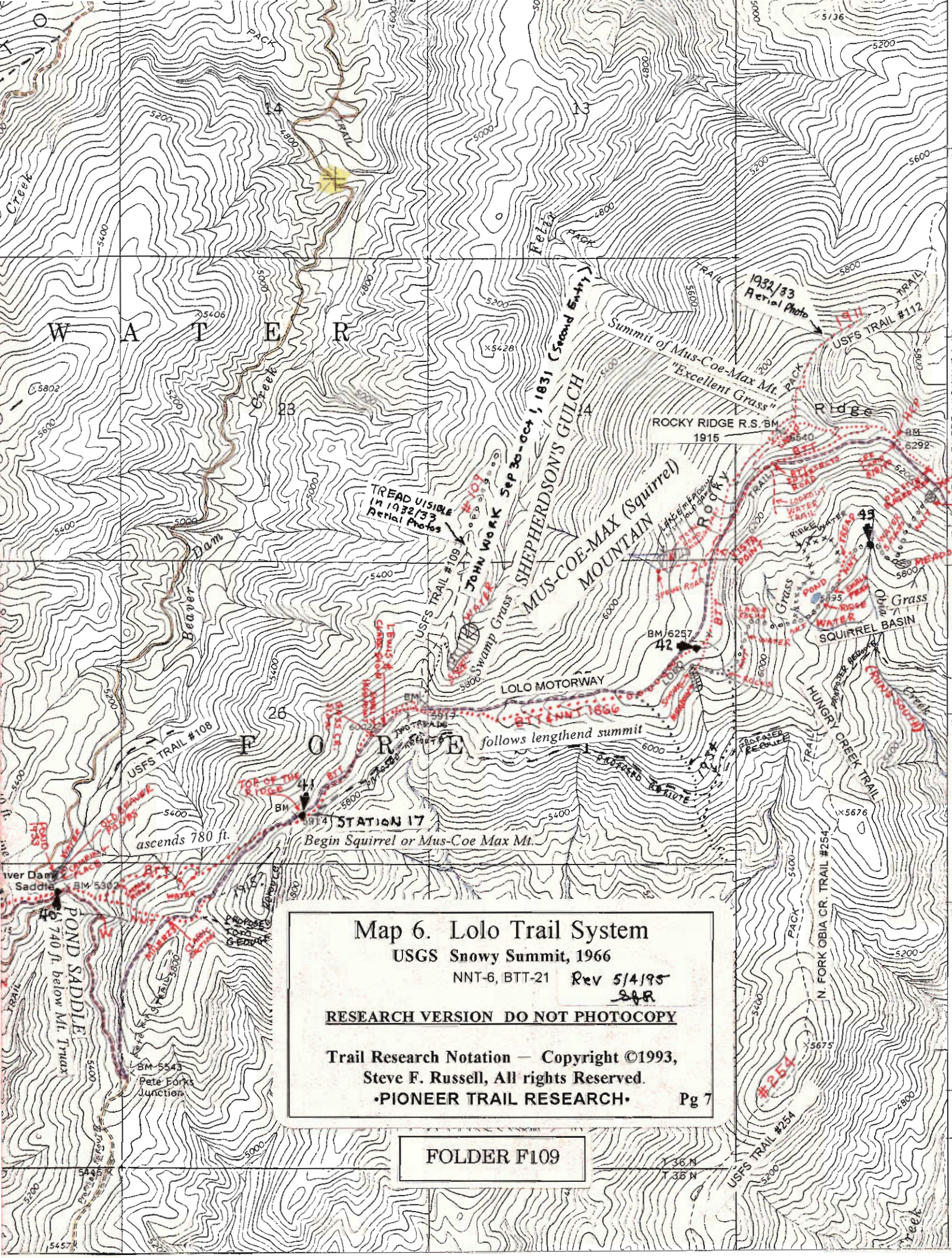
Map 5A Lolo Trail System Details

Steve F. Russell


LOLO MOTORWAY
Beaver Saddle
ROAD #104
FOOT ROT TRAIL #100
OLD TRAIL TO SUPERIOR, MONTANA 1890
MAIN DIVIDE
FOOT ROT TRAIL
JOHN WORK, Sep 30, 1831 (First Entry)
Prairie
Hemlock
To Oro Grande Creek
Lean-to Ridge Junction
BM 5492
LEAN-TO-RIDGE
Middle
CLEARWATER
Camp Martin Campground
Squawberry Spring
HORSE GULCH
"OLD TRAIL DIPS INTO IT"
USFS TRAIL #107
"THE NECK"
gradual rise of 980 ft.
elevation 1850 ft. above LoLo
11½ miles from Muscle Creek
MT. TRUAX
Station 16
summit 980 ft. above "The Neck"
Snowy Summit
Soldier Meadows
descent of 740 ft.
descend John Work Oct 3, 1831
BACK BONE OF MT. TRUAX
USFS TRAIL #56
Muscle Creek
Camp Truax
SNOWY SUMMIT LOOKOUT
SFR CAMP 8/1190
ROAD #103
ROAD #100
N 46° 25' 00"
W 115° 35' 00"
2876 I NW
(HEMLOCK BUTTE)
T. 36 N.
T. 35 N.



Map 6. Lolo Trail System

USGS Snowy Summit, 1966

NNT-6, BTT-21 Rev 5/4/95 SFR

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·PIONEER TRAIL RESEARCH· Pg 7

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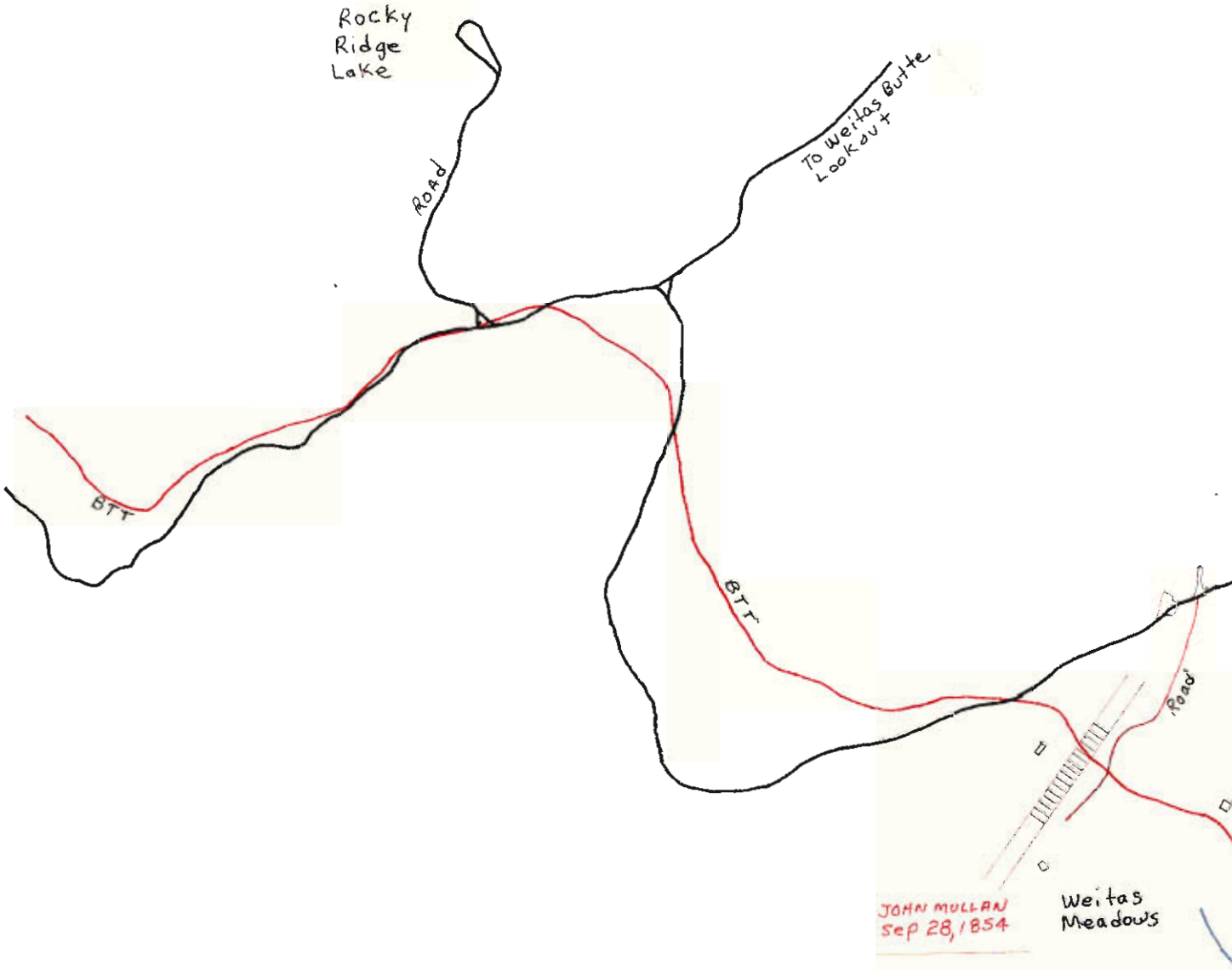


Map 6A Lolo Trail System

Weitas Meadows Area

based on 1933 Aerial Photo

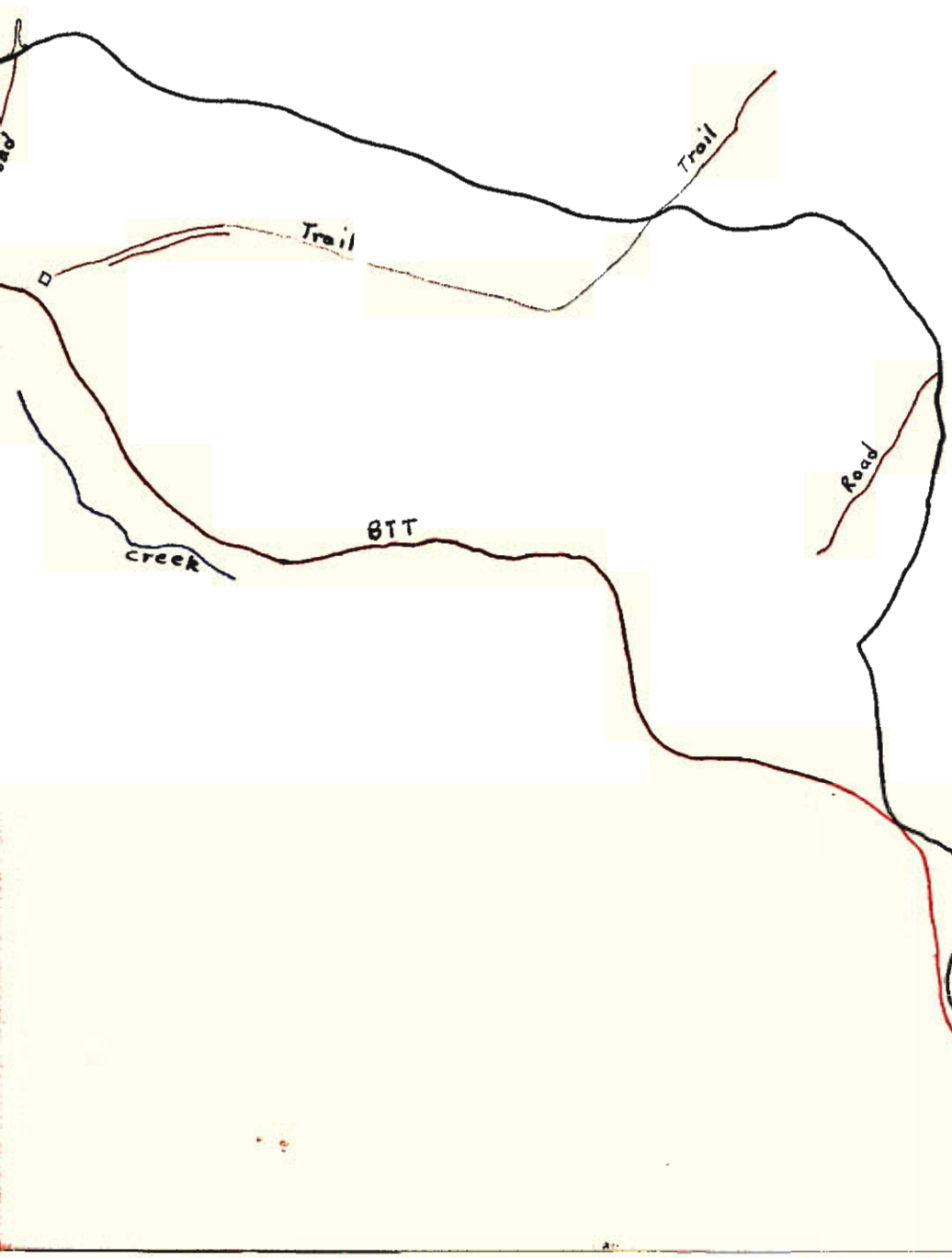
Black = 1933-34 Lolo Motorway

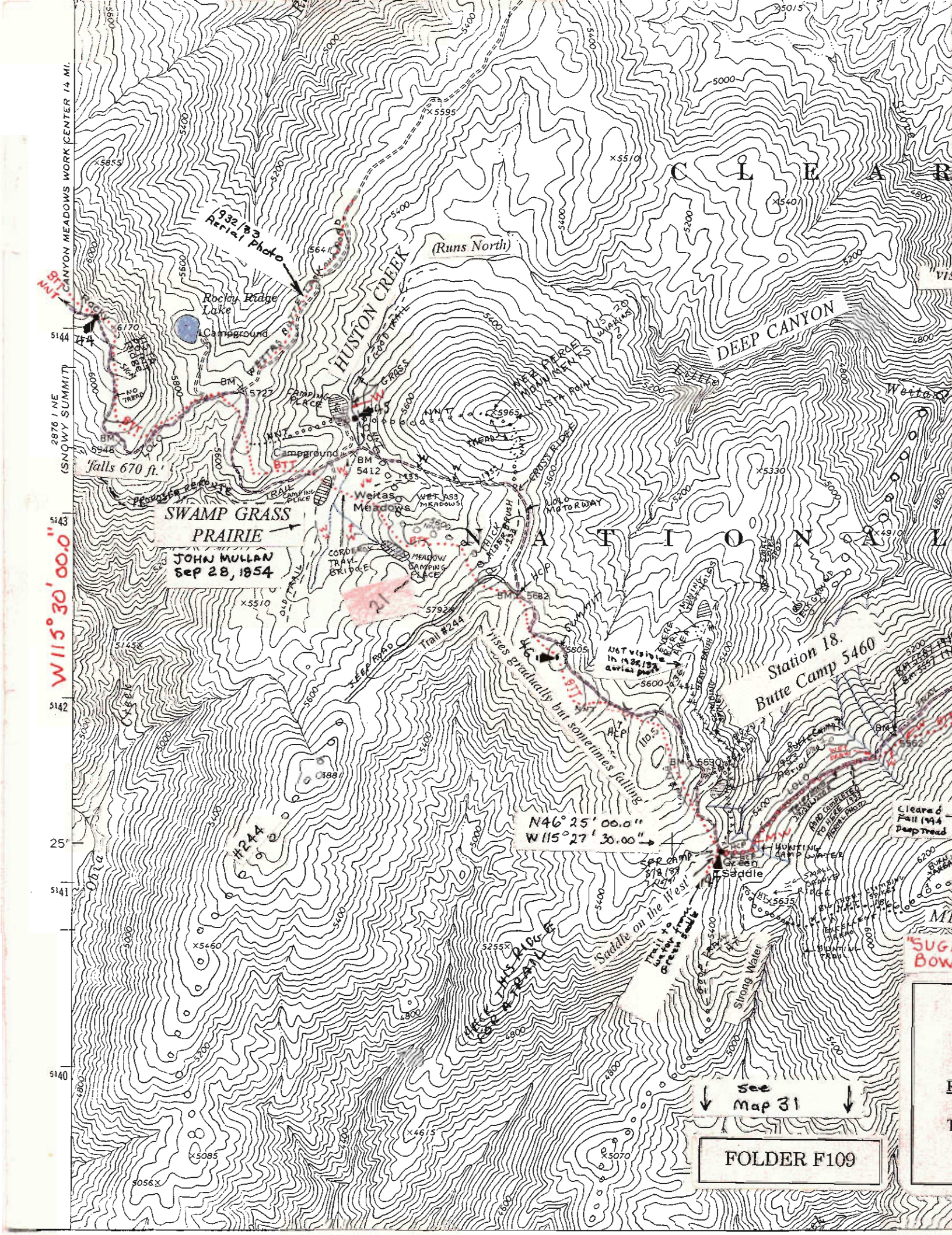
Red = Bird-Truax Trail, 1866

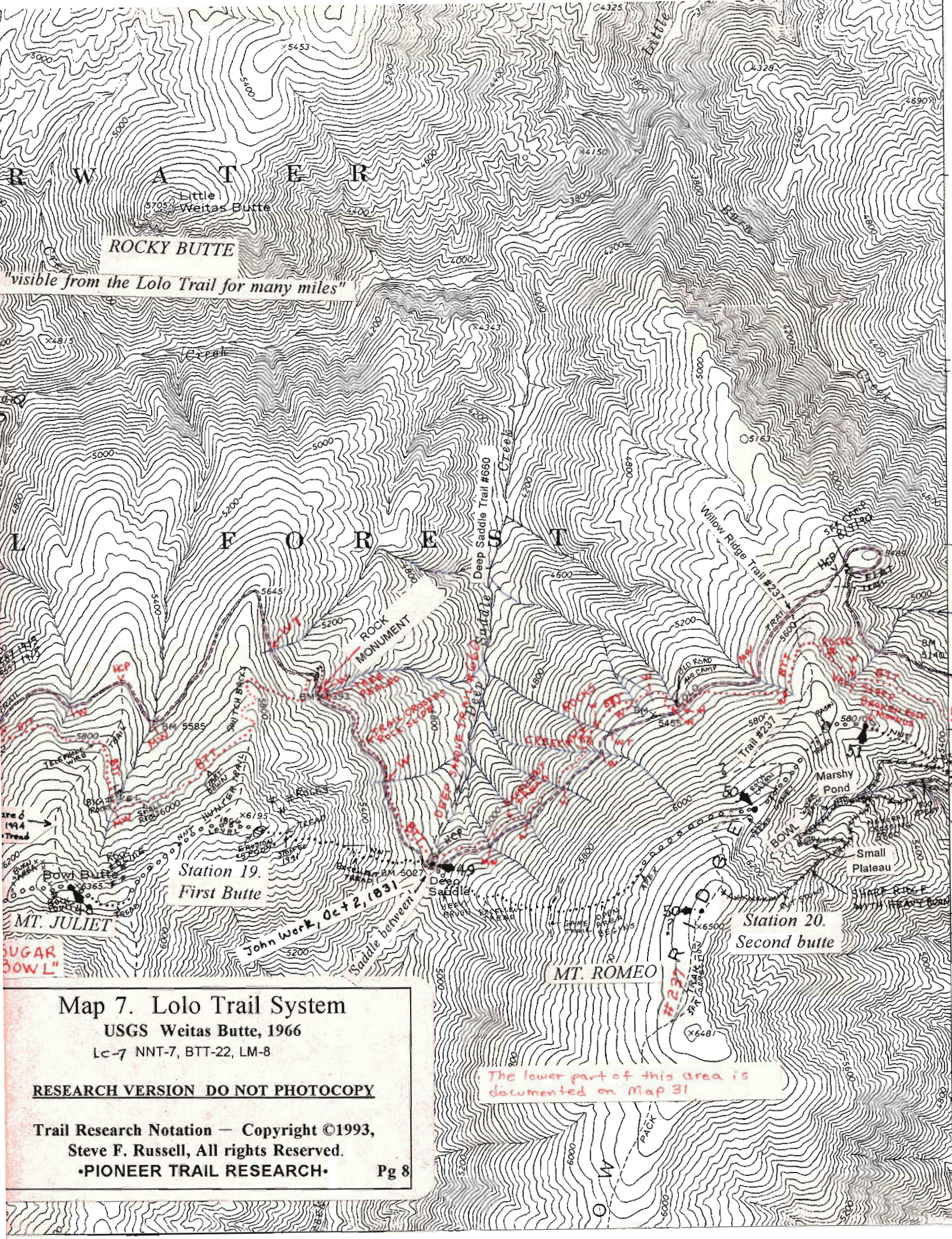
0.1 mi = 0.896 inch

Steve F. Russell 1995

© Steve F. Russell


Trail
Trail
Road
BTT
creek
BTT


CANYON MEADOWS WORK CENTER 14 MI.
2876 I NE (SNOWY SUMMIT)
W115° 30' 00.0"
1932/33 Aerial Photo
Rocky Ridge Lake
Campground
HUSTON CREEK
(Runs North)
DEEP CANYON
CLEAR
NATIONAL
Weitas Meadows
SWAMP GRASS PRAIRIE
JOHN MULLAN Sep 28, 1854
'falls 670 ft.'
Trail #244
'rises gradually but sometimes falling'
N46° 25' 00.0"
W115° 27' 30.00"
Station 18. Butte Camp 5460
Saddle
'Saddle on the West'
Strong Water
Obra Creek
Cleared Fall 1994 Deep Tread
See Map 31
FOLDER F109


R W A T E R
L F O R E S T
Little Weitas Butte
ROCKY BUTTE
"visible from the Lolo Trail for many miles"
Deep Saddle Trail #660
Willow Ridge Trail #237
ROCK MONUMENT
TREE PEELED
TRAIL CROSSES ROCK SLIDE
Deep Saddle
Bowl Butte
Station 19.
First Butte
Deep Saddle
John Work, Oct 2, 1831
Saddle between
MT. JULIET
MT. ROMEO
Station 20.
Second butte
Marshy Pond
Small Plateau
BOWL
RIDGE
#237
PACK
Map 7. Lolo Trail System
USGS Weitas Butte, 1966
Lc-7 NNT-7, BTT-22, LM-8
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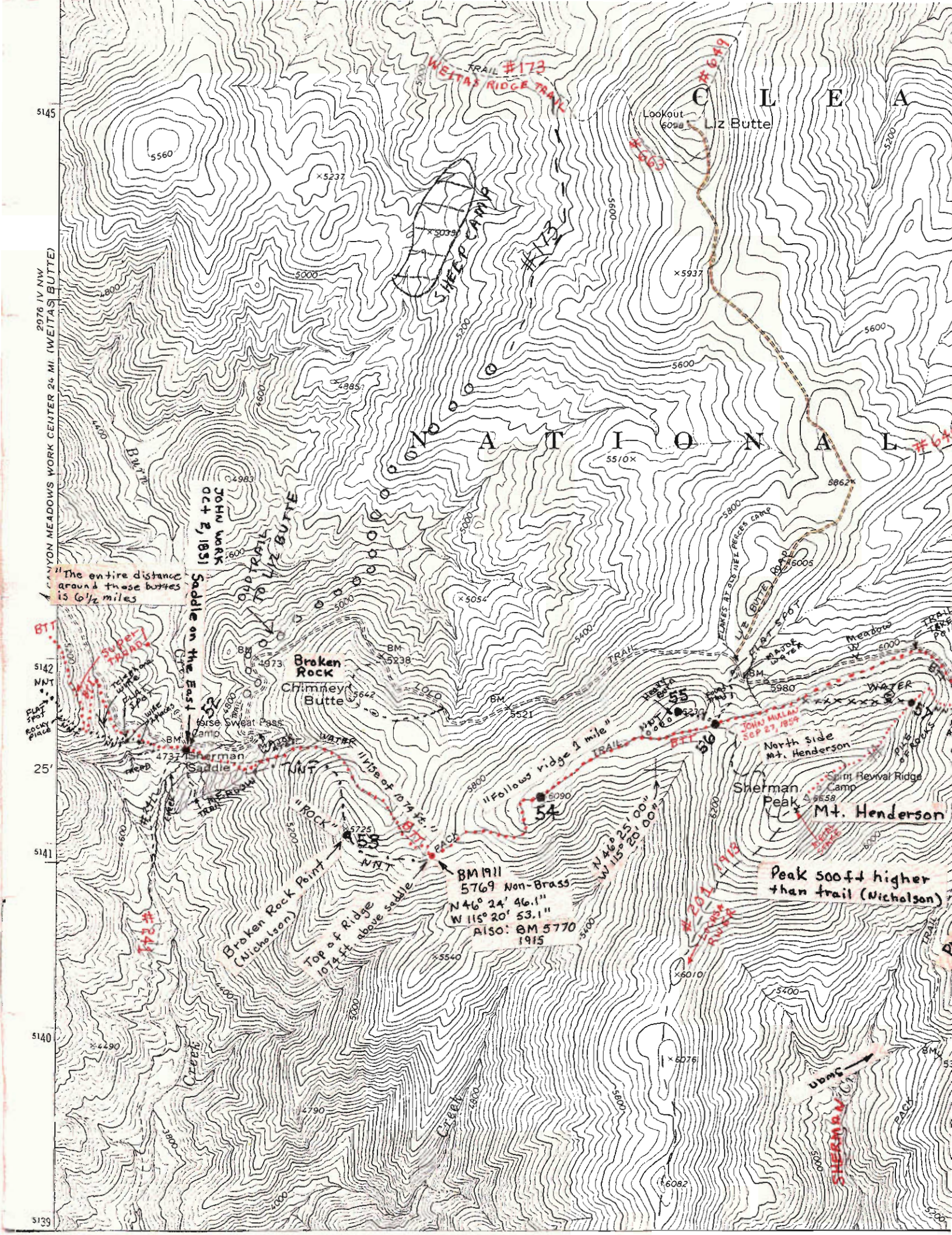
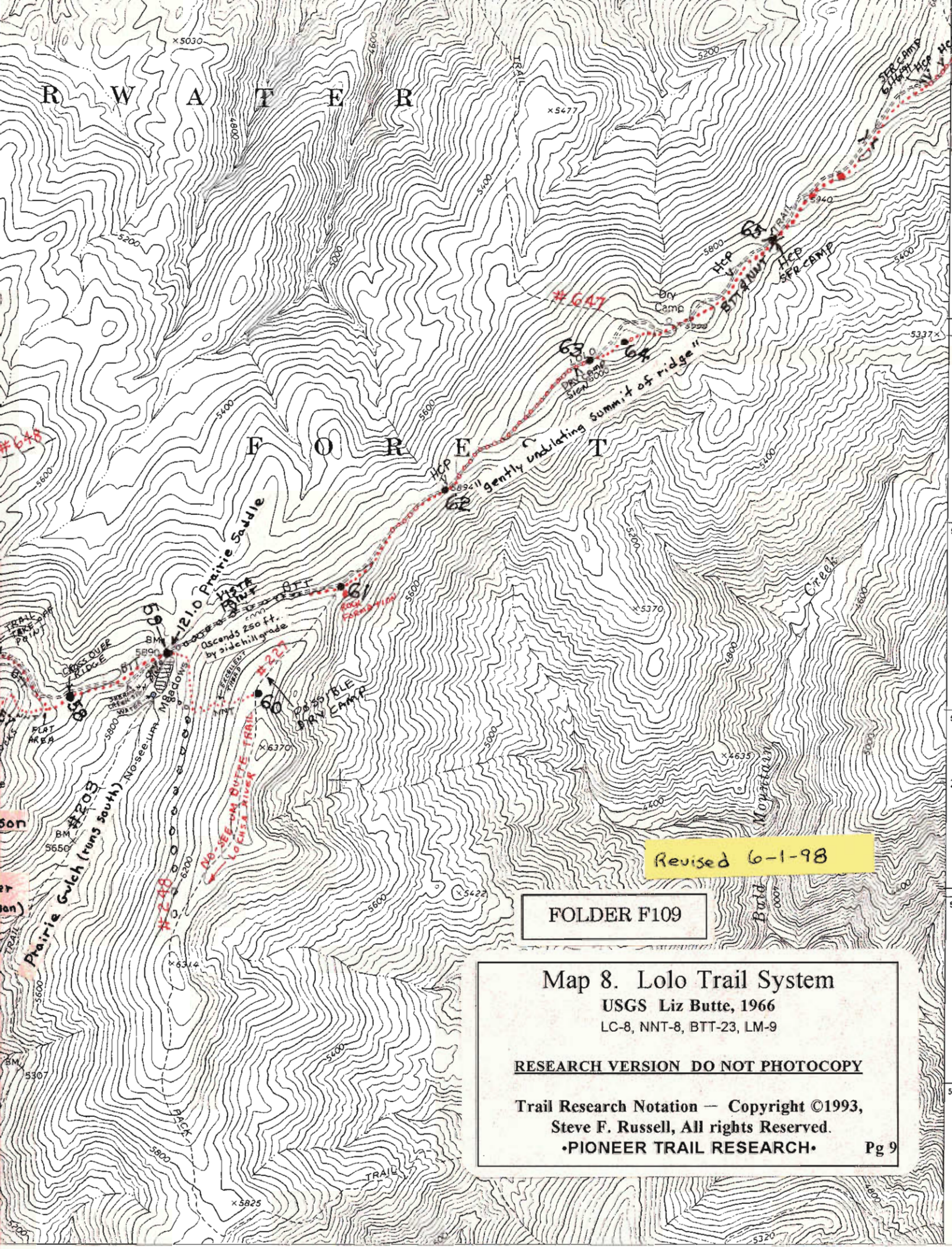
•PIONEER TRAIL RESEARCH•
Pg 8
The lower part of this area is documented on Map 31


2976 IV NW
CANYON MEADOWS WORK CENTER 24 MI (WEITAS BUTTE)
WEITAS RIDGE TRAIL #173
#649
Lookout 6058
Liz Butte
#663
#173
SHEEP CAMP
CLEARWATER
NATIONAL
#64
5510×
5862×
5600
5200
5000
4800
4600
4400
4885
4983
JOHN WORK Oct 2, 1831
"The entire distance around these buttes is 6½ miles"
Saddle on the East
TO TRAIL TO LIZ BUTTE
Broken Rock
Chimney Butte
5642
BM 4973
BM 5238
×5054
LOLO TRAIL
Horse Sweat Pass Camp
Sherman Saddle
4737
BM
SUPER TRAIL
#172
#173
WATER
"Follows ridge 1 mile"
"Rise of 1074 ft."
"ROCK"
5725
53
54
6090
55
5521
56
5237
5980
6005
FLAT SPOT
WATER
Meadow
JOHN MULLAN SEP 27, 1859
North Side Mt. Henderson
Spirit Revival Ridge Camp
Sherman Peak
Mt. Henderson
Peak 500 ft higher than trail (Nicholson)
Broken Rock Point (Nicholson)
Top of Ridge 1074 ft. above saddle
BM 1911
5769 Non-Brass
N 46° 24' 46.1"
W 115° 20' 53.1"
ALSO: BM 5770 1915
N 46° 25' 00"
W 115° 20' 00"
#201
LITTLE NORTH FORK CLEARWATER RIVER
5540
6010
6076
6082
4290
4790
Creek
SHERMAN PEAK
PACK
TRAIL
BTT
NNT
5145
5142
5141
5140
5139
25'



Revised 6-1-98

FOLDER F109

Map 8. Lolo Trail System

USGS Liz Butte, 1966

LC-8, NNT-8, BTT-23, LM-9

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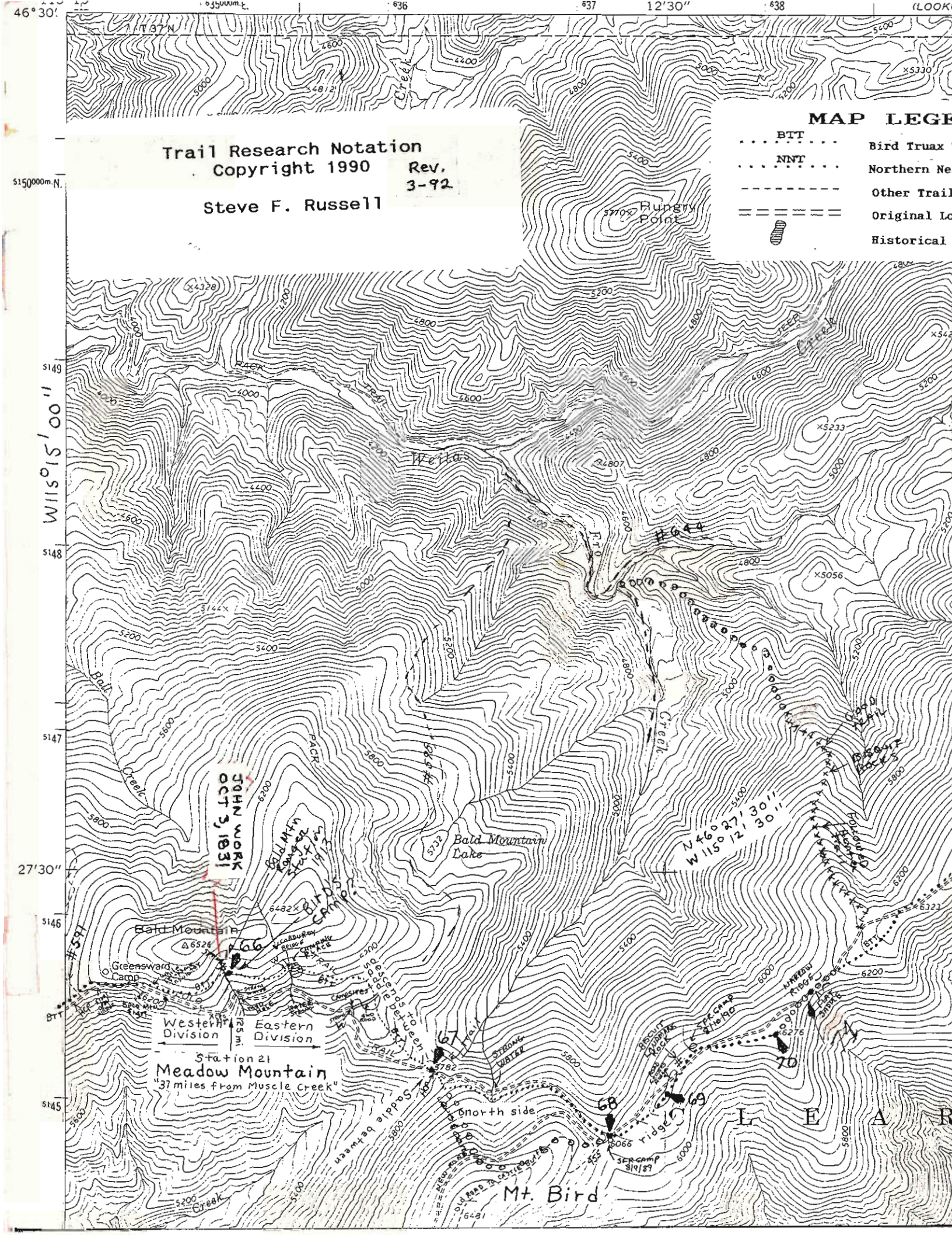
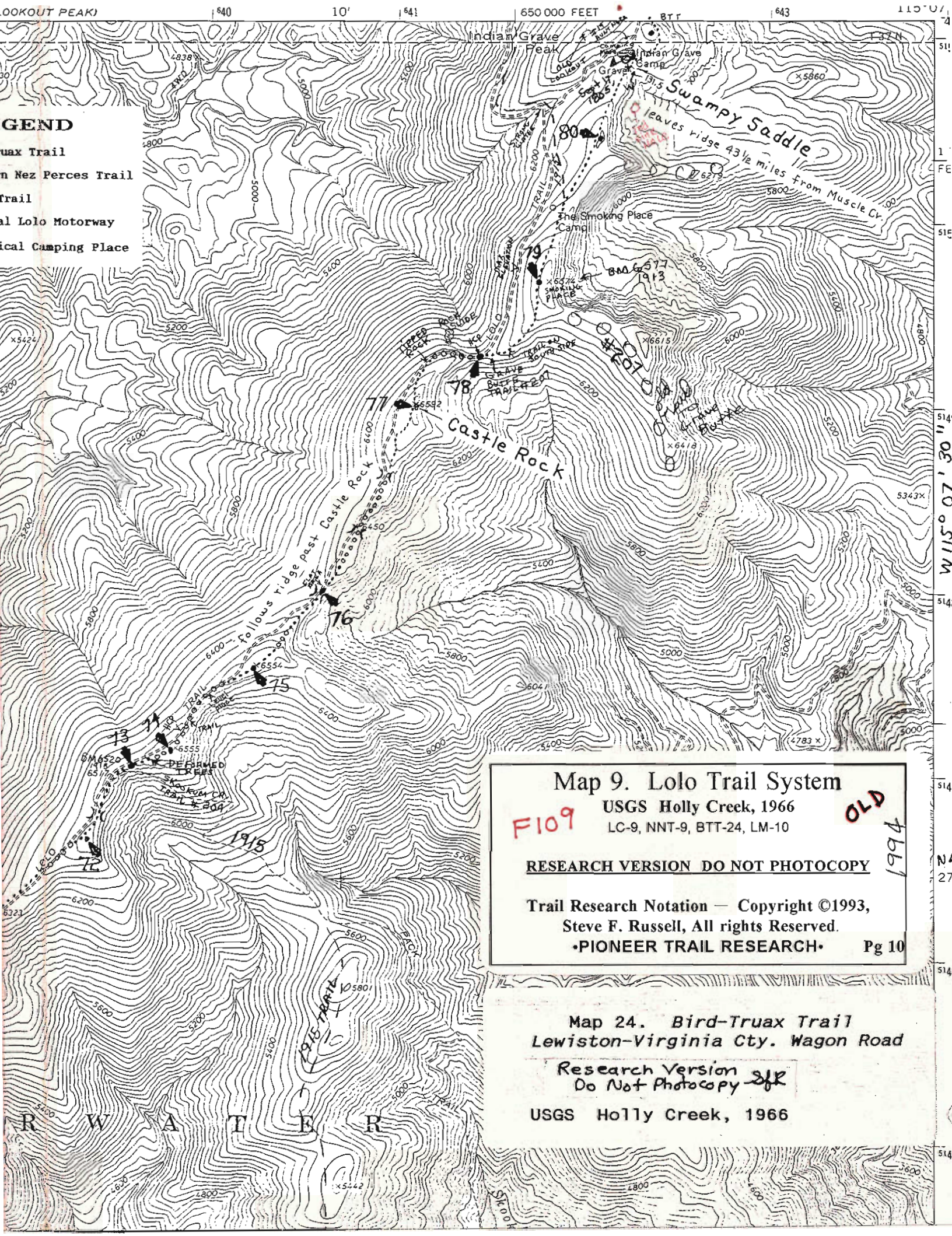

Trail Research Notation
Copyright 1990
Rev. 3-92
Steve F. Russell
MAP LEGE
BTT
Bird Truax
NNT
Northern Ne
Other Trail
Original Lo
Historical
Hungry Point
Weitas
Bald Mountain
Lake
Bald Mtn Ranger Station 1913
Bird Camp
Bald Mountain
Greensward Camp
Western Division
Eastern Division
Station 21
Meadow Mountain
"37 miles from Muscle Creek"
Mt. Bird
north side
ridge
Creek
Ridge
Trail
#644
#591
#666
#667
#668
#669
#670
JOHN WORK
OCT 3, 1831
N46°27' 30"
W115°12' 30"
46°30'
12'30"
27'30"
5150000m.N.
W115°15'00"



Map 9. Lolo Trail System

USGS Holly Creek, 1966

LC-9, NNT-9, BTT-24, LM-10

F109

OLD 1966

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•PIONEER TRAIL RESEARCH• Pg 10

Map 24. *Bird-Truax Trail*
Lewiston-Virginia Cty. Wagon Road

Research Version
Do Not Photocopy SFR

USGS Holly Creek, 1966

FOLDER F109

Map 10. Lolo Trail System

USGS Lookout Peak, 1965

LC-10, NNT-10, BTT-25, LM-11

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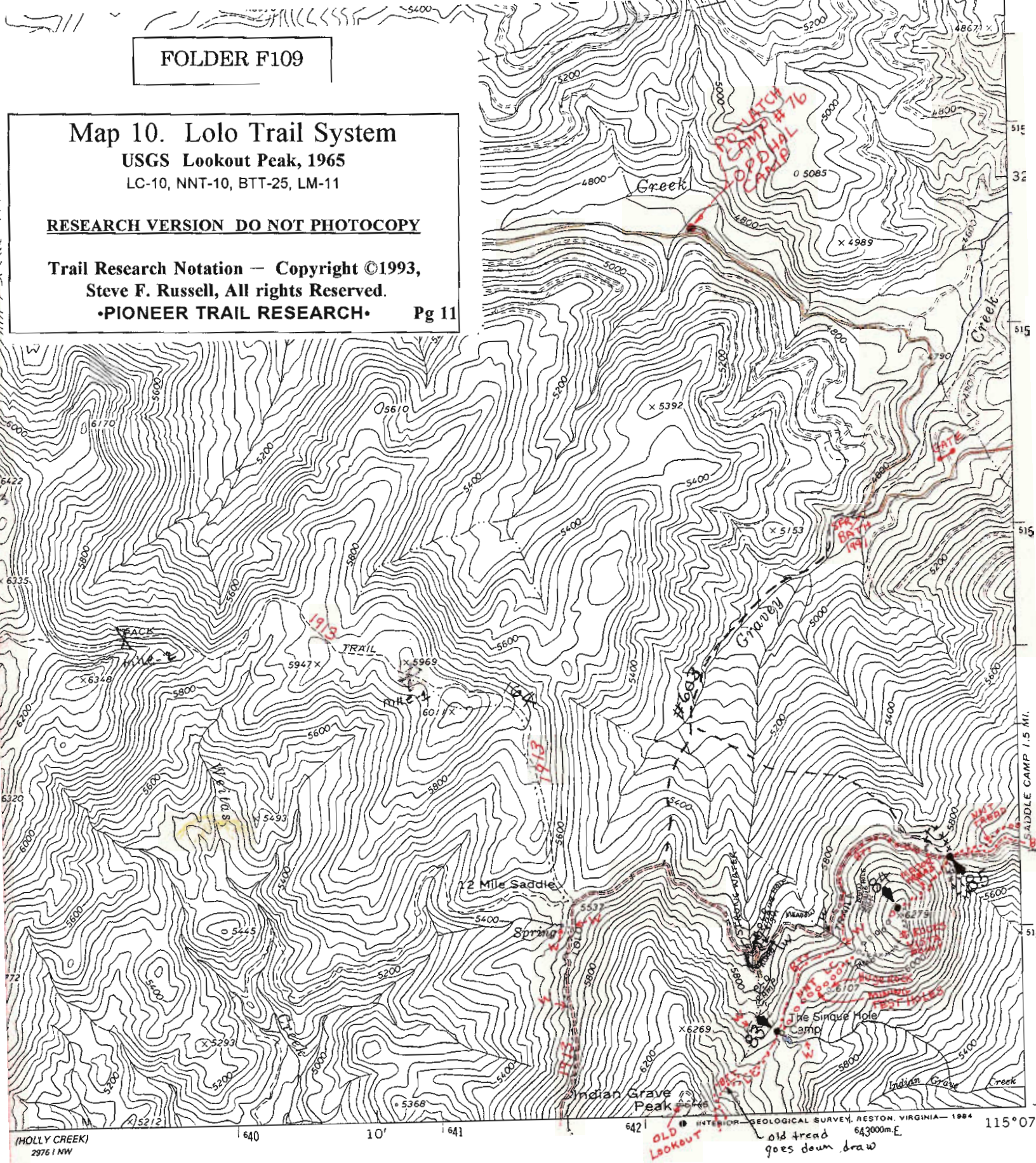
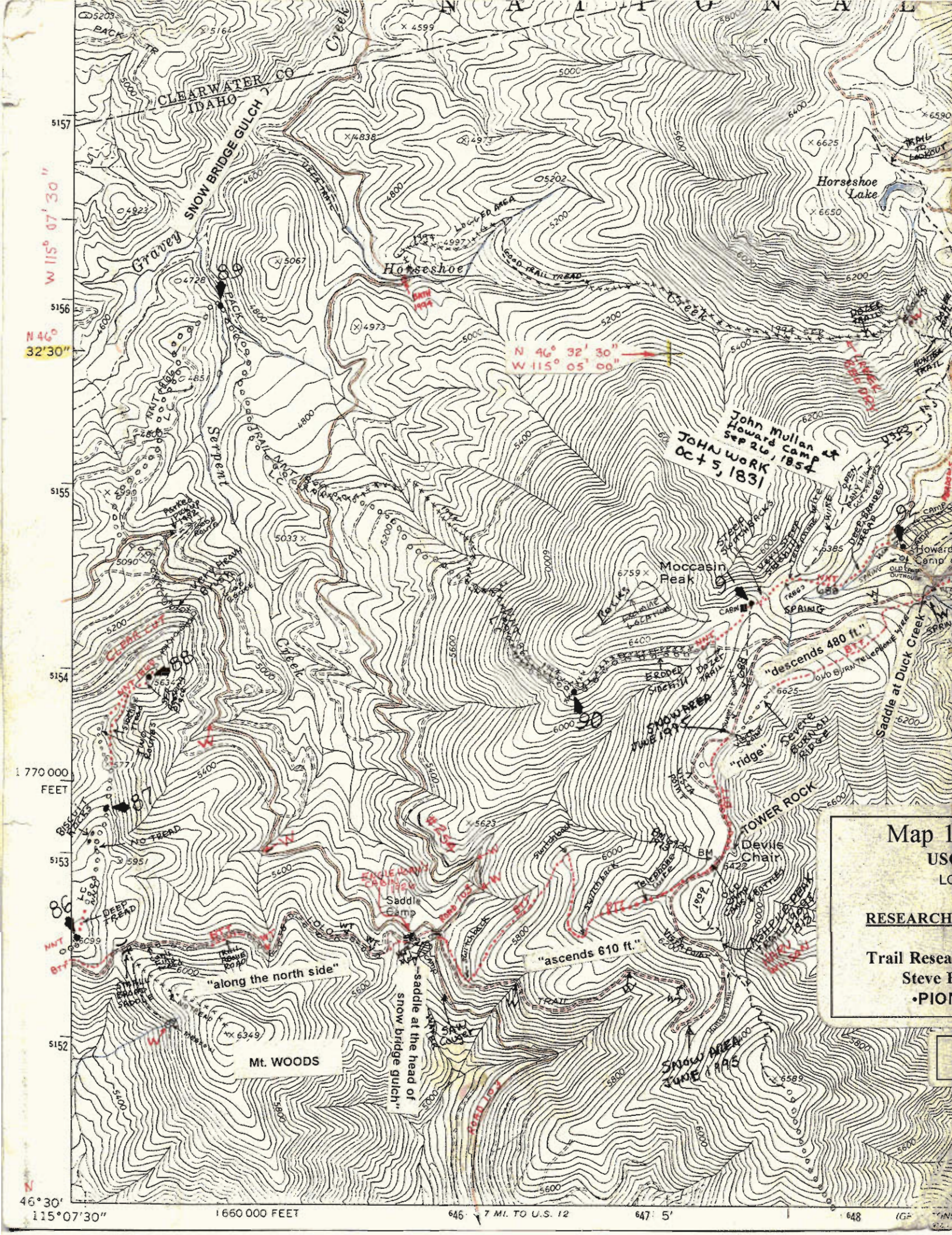
•PIONEER TRAIL RESEARCH• **Pg 11**




CLEARWATER CO
IDAHO
Gravey Creek
SNOW BRIDGE GULCH
Horseshoe Creek
Horseshoe Lake
Moccasin Peak
Devils Chair
TOWER ROCK
Mt. WOODS
Saddle Camp
Saddle at Duck Creek
Howard Camp
John Mullan
Howard Camp
Sep 26, 1854
JOHN WORK
Oct 5, 1831
N 46° 32' 30"
W 115° 05' 00"
"descends 480 ft."
"ascends 610 ft."
"along the north side"
"saddle at the head of snow bridge gulch"
"ridge"
SNOW AREA
JUNE 1995
LOGGED AREA
CLEAR CUT
Severe Burned Ridge
Ashpile Peak
Old Camp Bottles
Old Burn
Telephone Wire
Steep Switchbacks
Eroded Sidehill
Dozer Trail
Deep Graded Road
Good Trail Tread
Poor Trail
Perked Trail 1992
Trail Eliminated 1994
Trail Rerouted 1994
Trail Rerouted 1995
Single Log Crossing 1994
Log Bridge
Rock Cairn
Trail Sign
Spring
Cabin
Lookout
Trail to Lookout
Old Burn Outhouse
Open Grassy Hillside
Old Fence
Old Telephone Wire
Deep Graded Road
Steep Switchbacks
Telephone Wire
Eroded Sidehill
Dozer Trail
Severe Burned Ridge
Ashpile Peak
Old Camp Bottles
Old Burn
Telephone Wire
Saddle at Duck Creek
Howard Camp
Trail to Lookout
Horseshoe Lake
Snow Bridge Gulch
Gravey Creek
Horseshoe Creek
Serpent Trail
Clear Cut
Logged Area

ap 11. Lolo Trail System

USGS Horseshoe Lake, 1965

LC-11, NNT-11, BTT-26, LM-12 Rev 12/30/93

RCH VERSION DO NOT PHOTOCOPY

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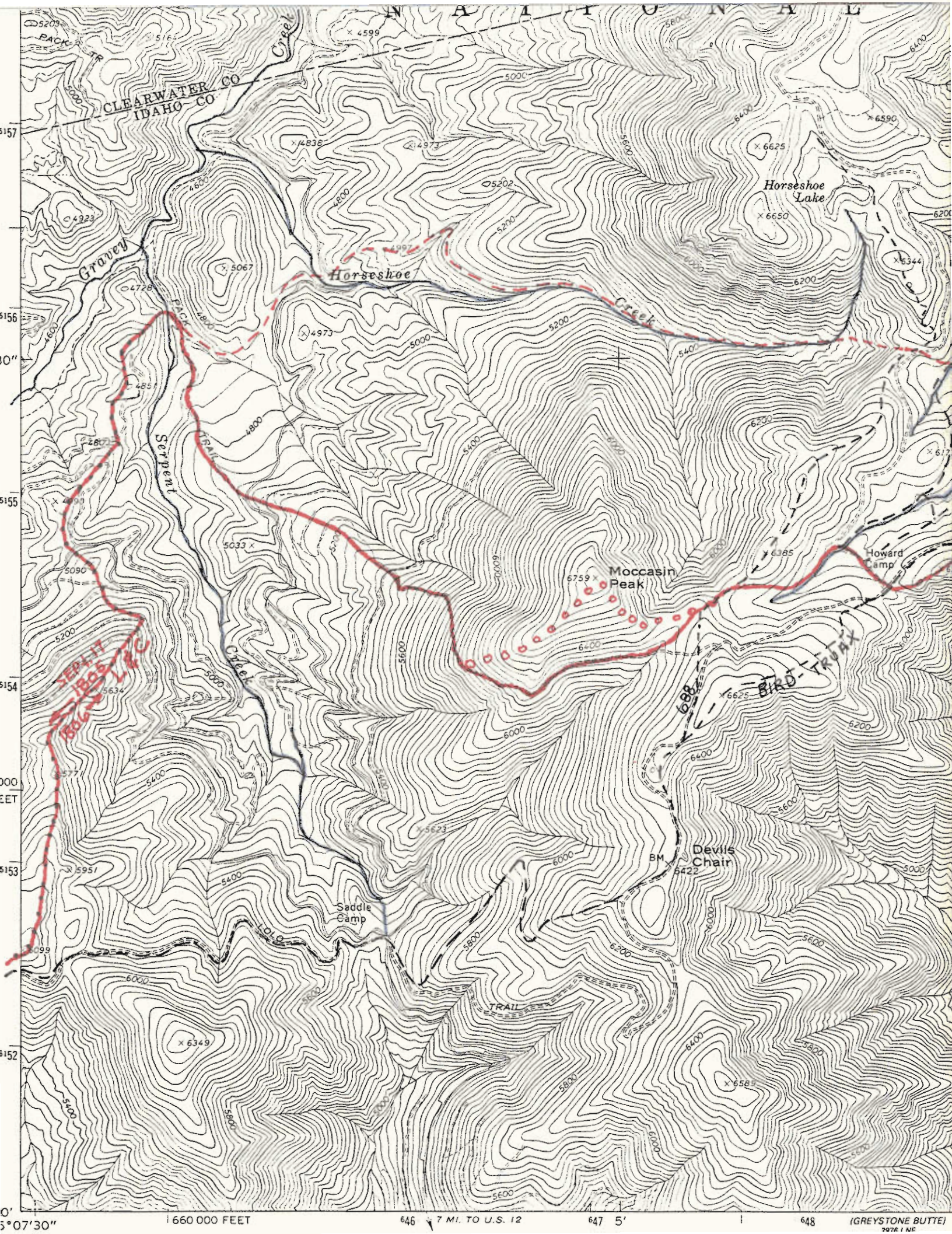
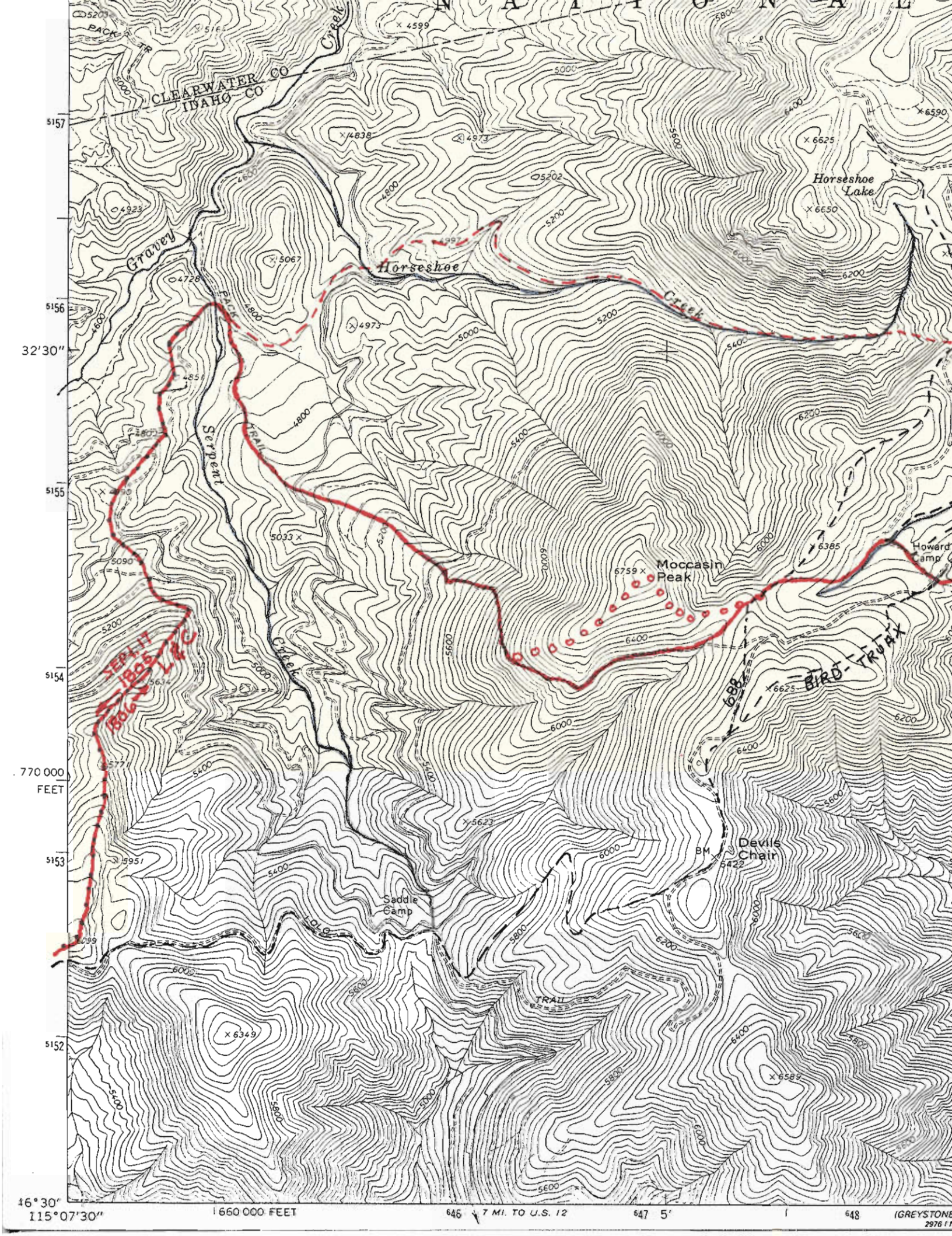
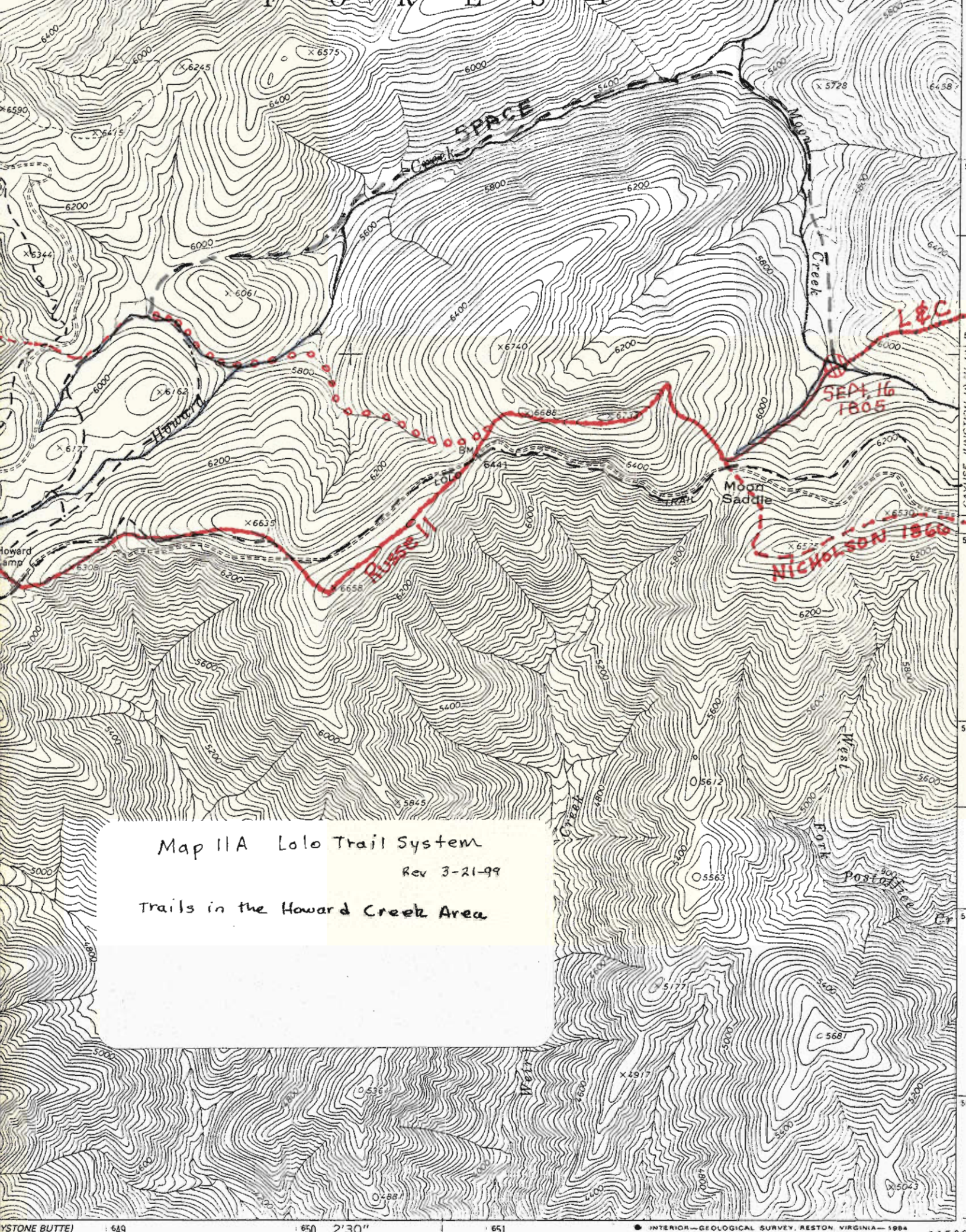

CLEARWATER CO
IDAHO CO
Gravey Creek
Horseshoe Creek
Horseshoe Lake
Serpent Creek
TRAIL
Moccasin Peak
Howard Camp
Devils Chair
BM
6422
Saddle Camp
LOLO
TRAIL
BIRD - TRAIL
SEPT 11 1805 LEWIS & CLARK 1806
PACK TR
6759
6625
6650
6590
6344
6385
6349
6589
5951
5634
5623
5577
5099
5090
5033
4973
4838
4728
4923
4599
5067
4855
5203
5202
6688
6000
5800
5600
5400
5200
5000
4800
4600
6400
6200
7 MI. TO U.S. 12
(GREYSTONE BUTTE)

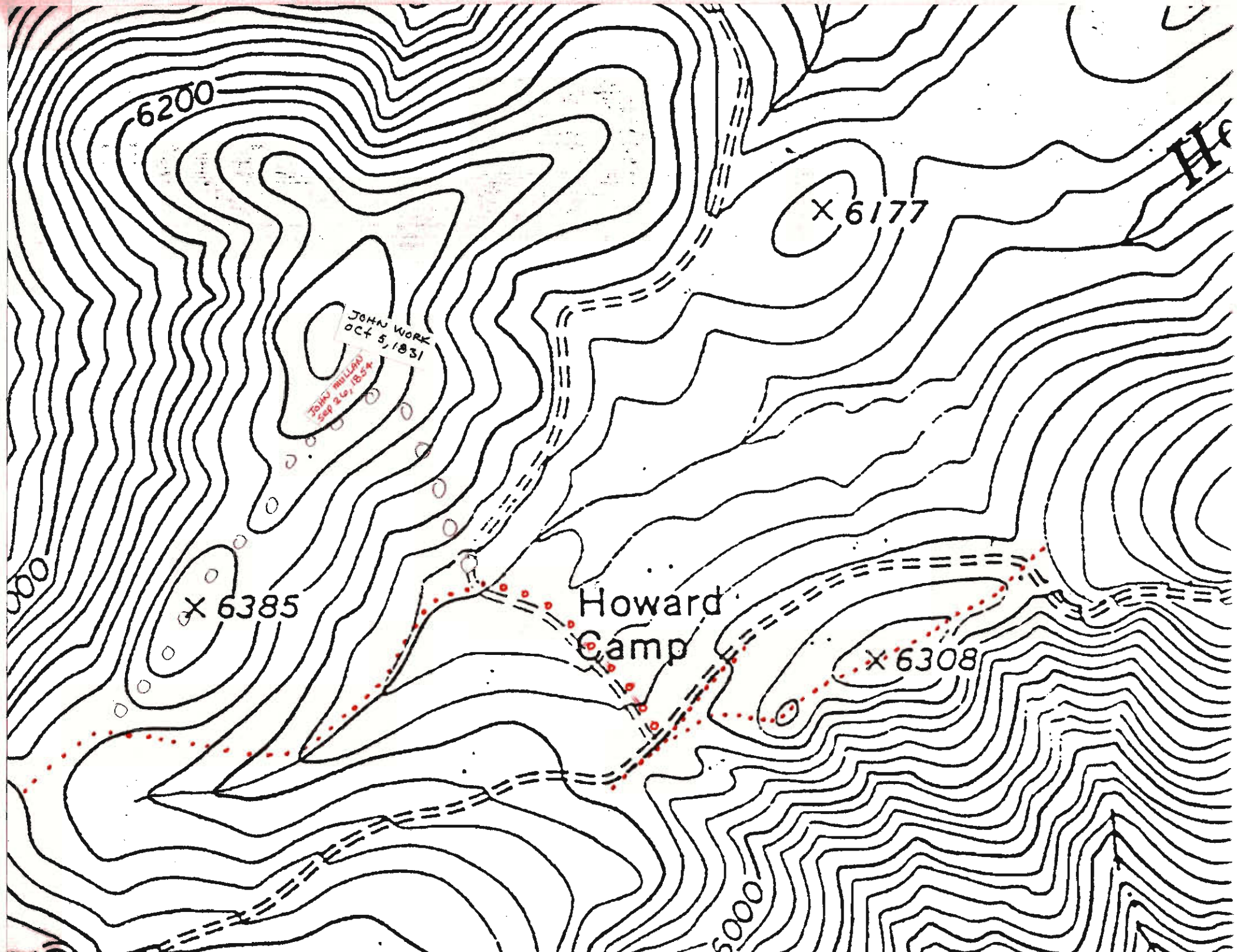

CLEARWATER CO
IDAHO CO
Gravey Creek
Horseshoe Creek
Horseshoe Lake
Serpent Creek
PACK TR
TRAIL
Moccasin Peak
Howard Camp
BIRD TRAIL
Devils Chair
BM
Saddle Camp
SEPT 11 1805 L&C
5157
5156
5155
5154
5153
5152
32'30"
770 000 FEET
46°30'
115°07'30"
1660 000 FEET
7 MI. TO U.S. 12
5'

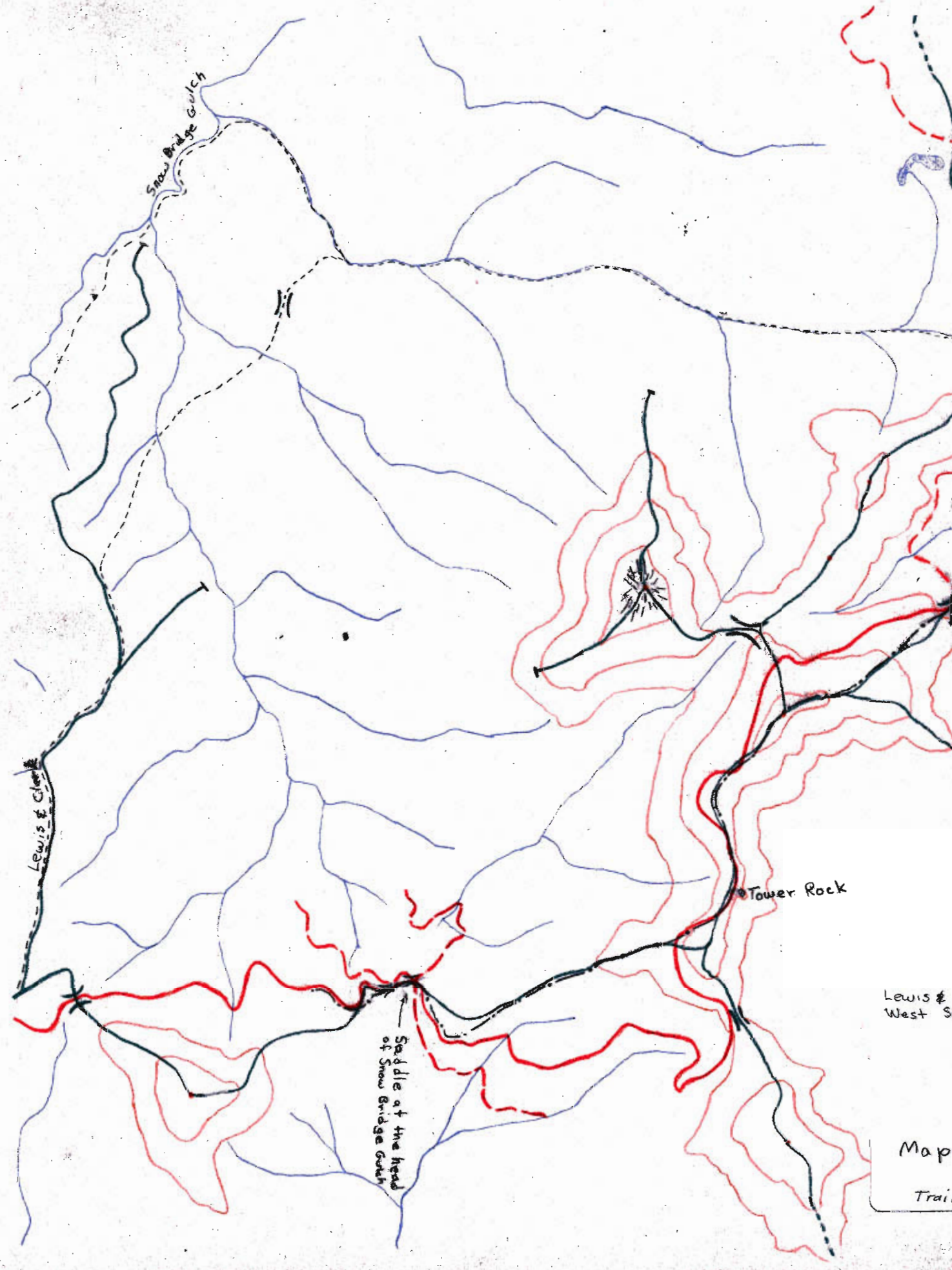


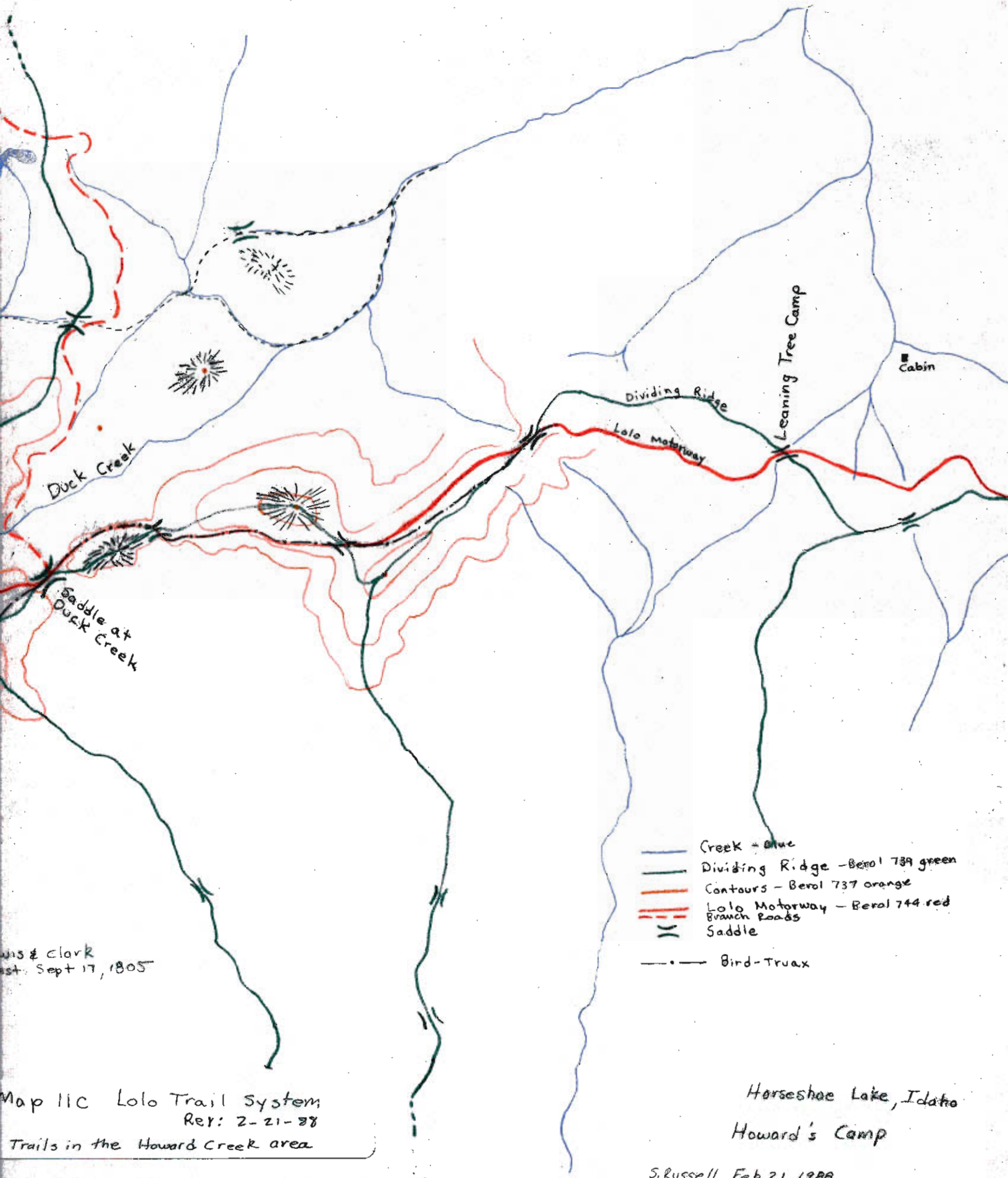
Map IIA Lolo Trail System

Rev 3-21-99

Trails in the Howard Creek Area


6200
JOHN WORK
OCT 5, 1831
JOHN MULLAN
SEP 2 Lt, 1854
X 6177
X 6385
Howard
Camp
X 6308
6000


Snow Bridge Gulch
Lewis & Clark
Tower Rock
Saddle at the head of Snow Bridge Gulch
Lewis &
West S
Map
Trai

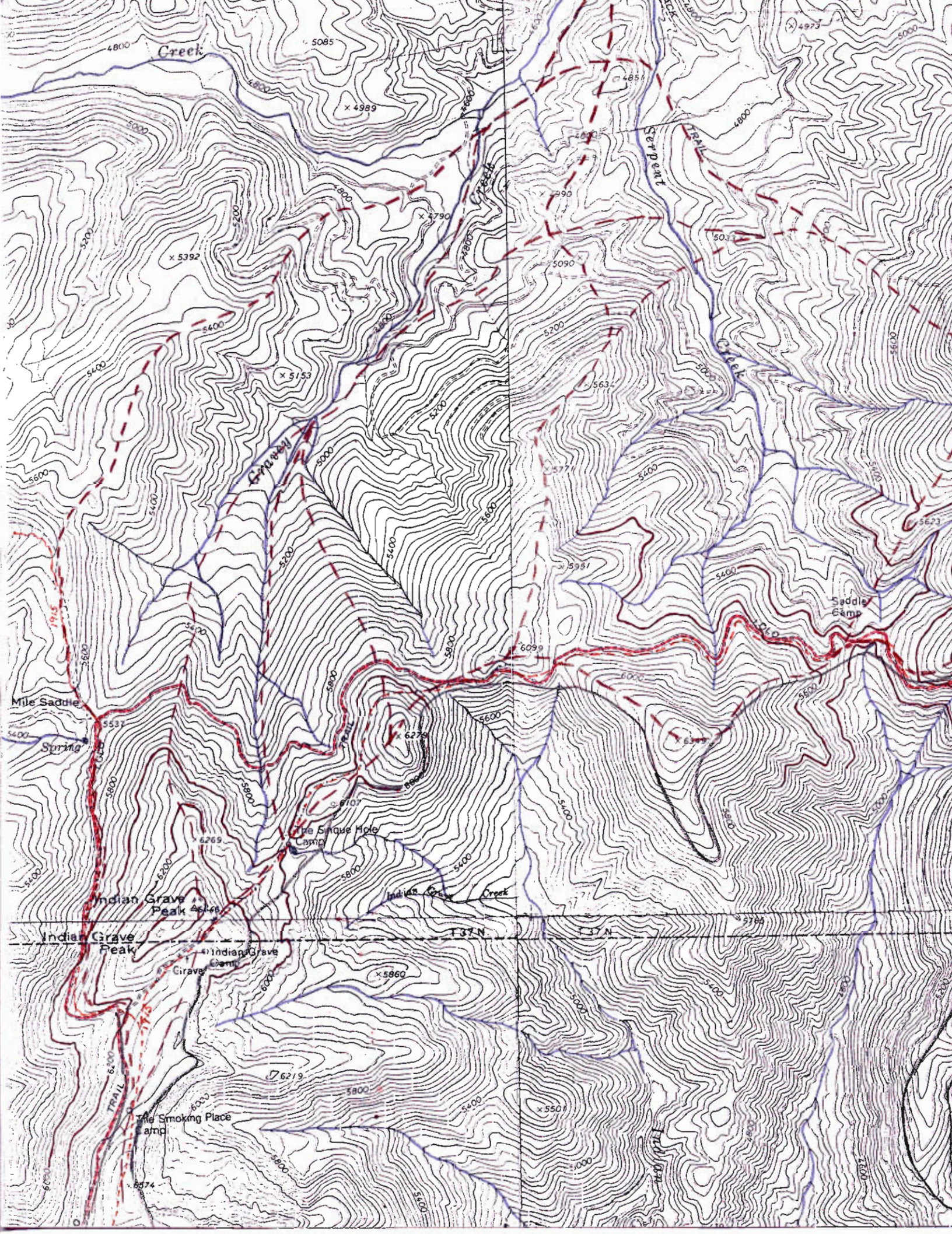


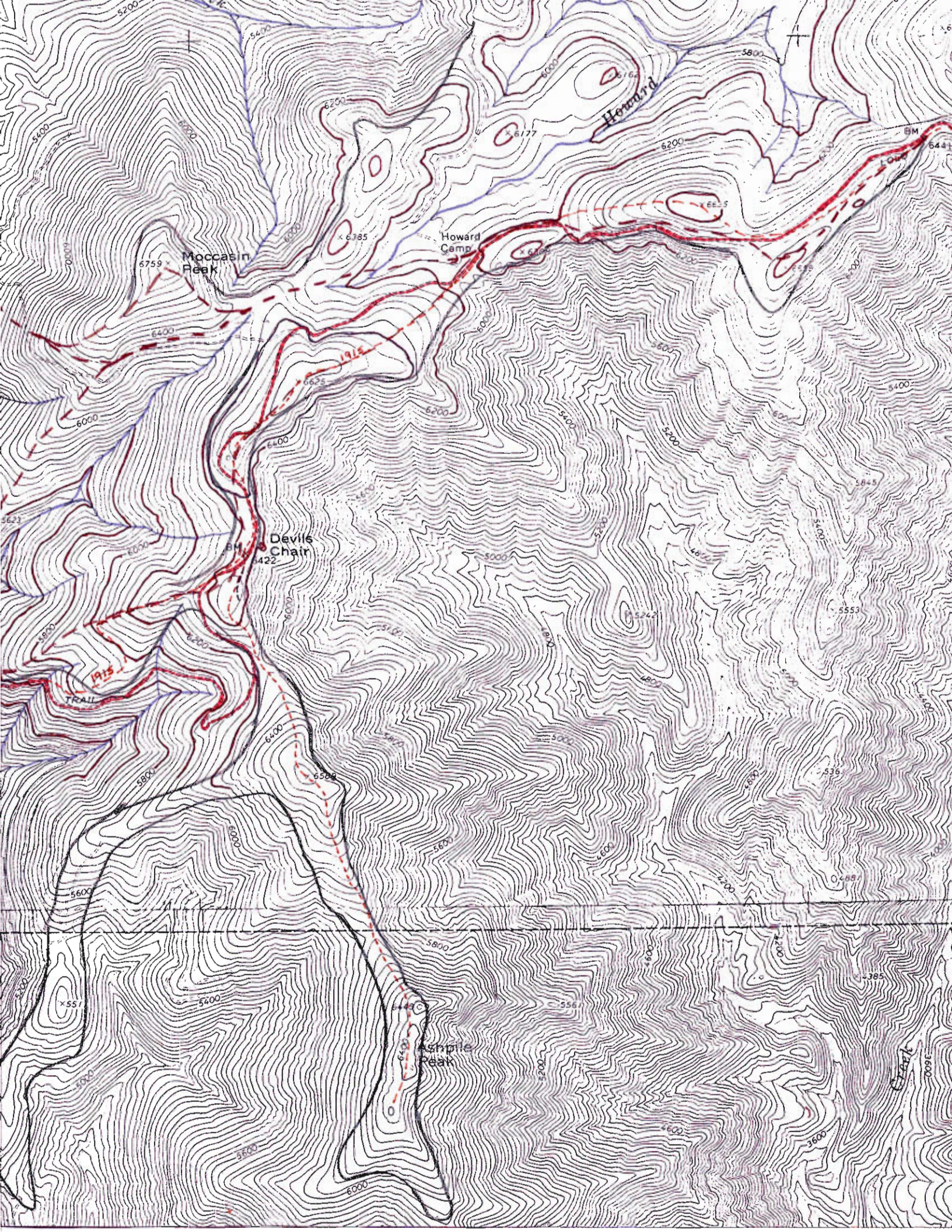
...ns & Clark
...st. Sept 17, 1805

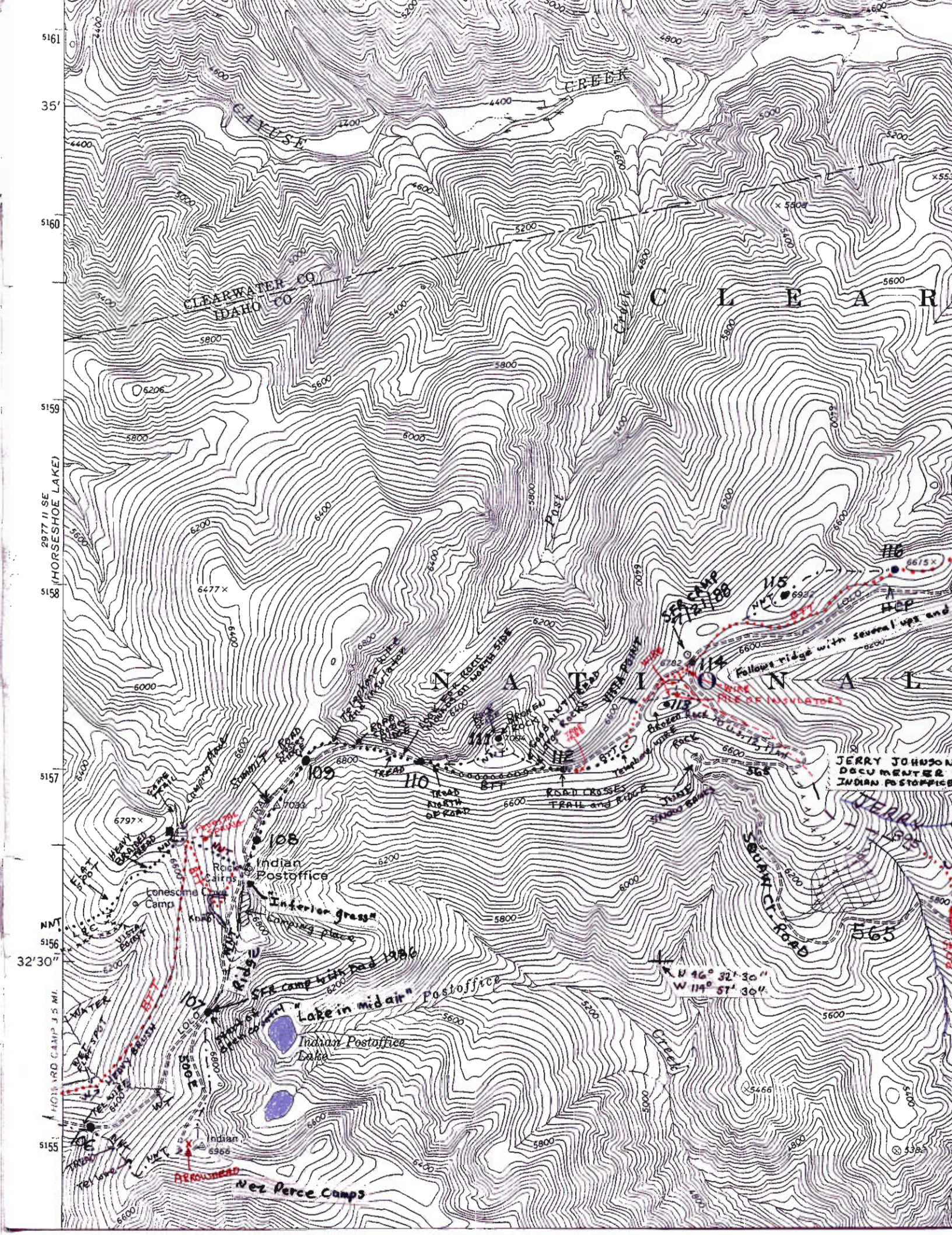
Map IIC Lolo Trail System
Rev: 2-21-88
Trails in the Howard Creek area

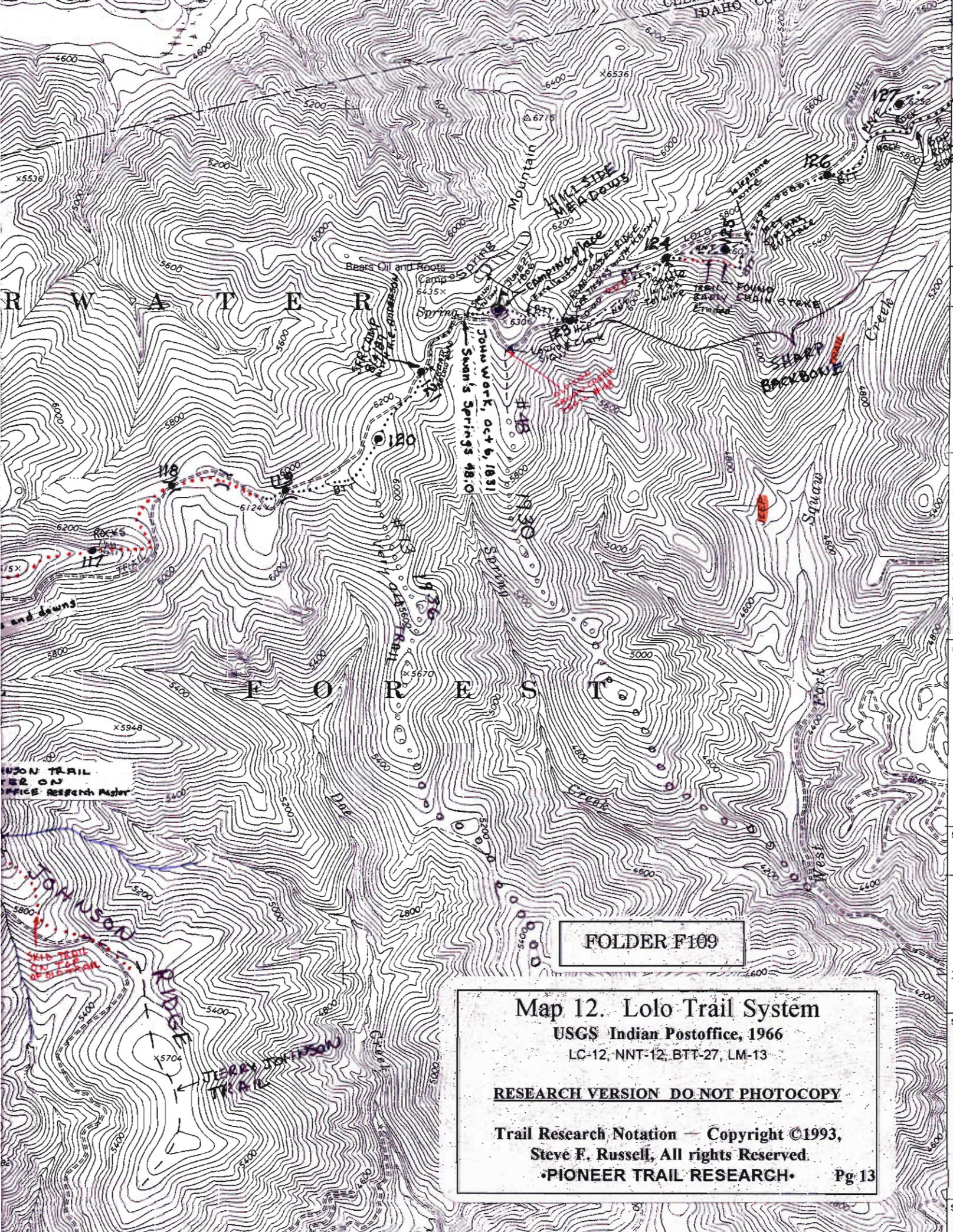
Horseshoe Lake, Idaho
Howard's Camp

S. Russell Feb 21, 1988


Creek
Serpent
TRAIL
Creek
Saddle Camp
Mile Saddle
Spring
TRAIL
The Sunque Hole Camp
Indian Grave Peak
Indian Grave Peak
Indian Grave Camp
Grave
T 37 N
T 37 N
TRAIL
The Smoking Place Camp
Indian Creek
Creek


Howard
Howard Camp
Moccasin Peak
6759
6785
6177
1915
Deville Chair
6422
TRAIL
6588
Ashville Peak
6443
5561
5553
5242
5845
5623
5551
6625
6655
6441
5385
3600


CREEK
CLEARWATER CO
IDAHO CO
Post
C L E A R
N A T I O N A L
Indian Postoffice
"Inferior grass" Camping place
"Lake in mid air" Postoffice
Indian Postoffice Lake
Nez Perce Camps
Squaw Cr. Road
JERRY JOHNSON
DOCUMENTER
INDIAN POSTOFFICE
Follows ridge with several ups and
Broken Rock
Rock Cairns
Conesome Creek Camp
Creek
5565
5466
5385


FOLDER F109
Map 12. Lolo Trail System
USGS Indian Postoffice, 1966
LC-12, NNT-12, BTT-27, LM-13
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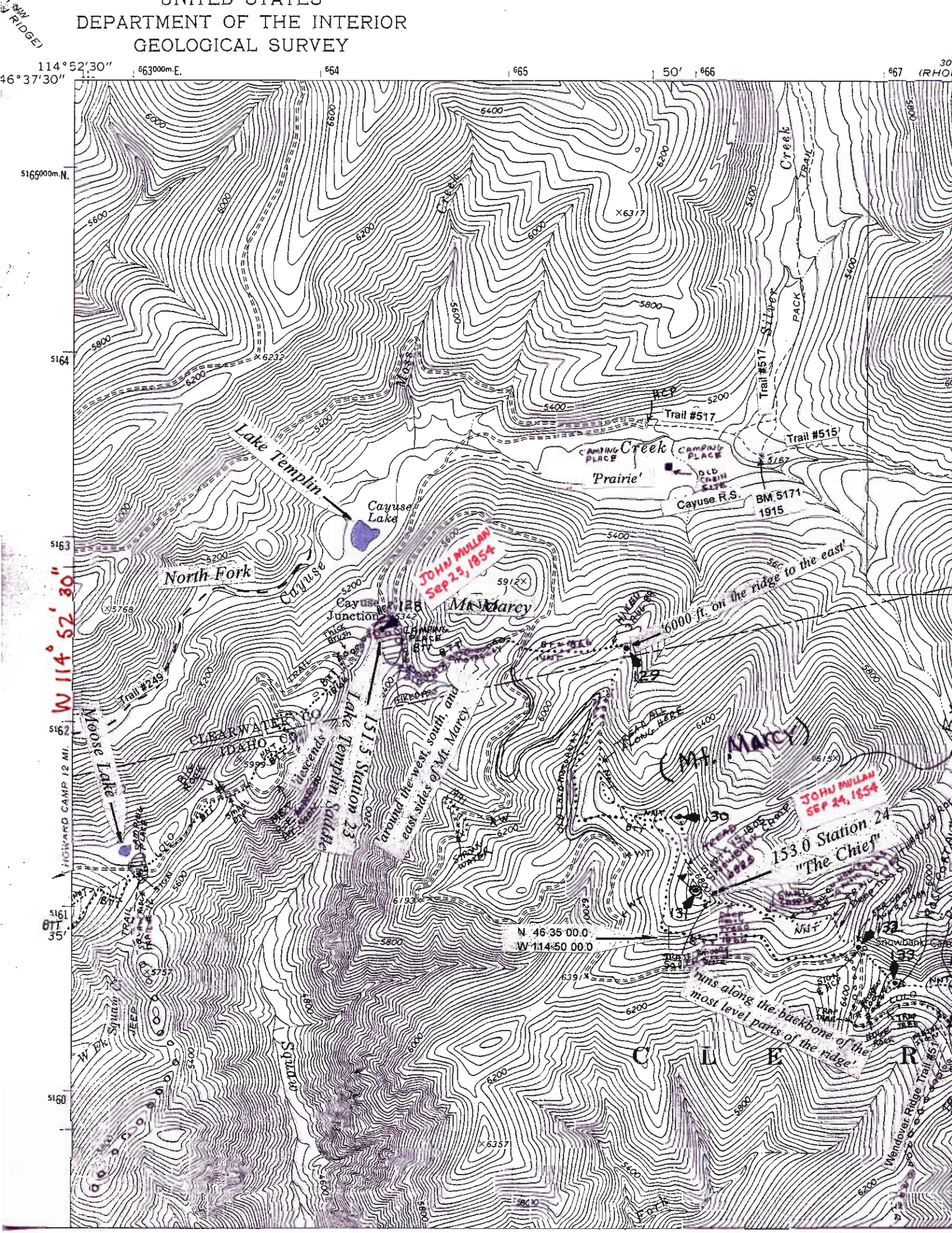
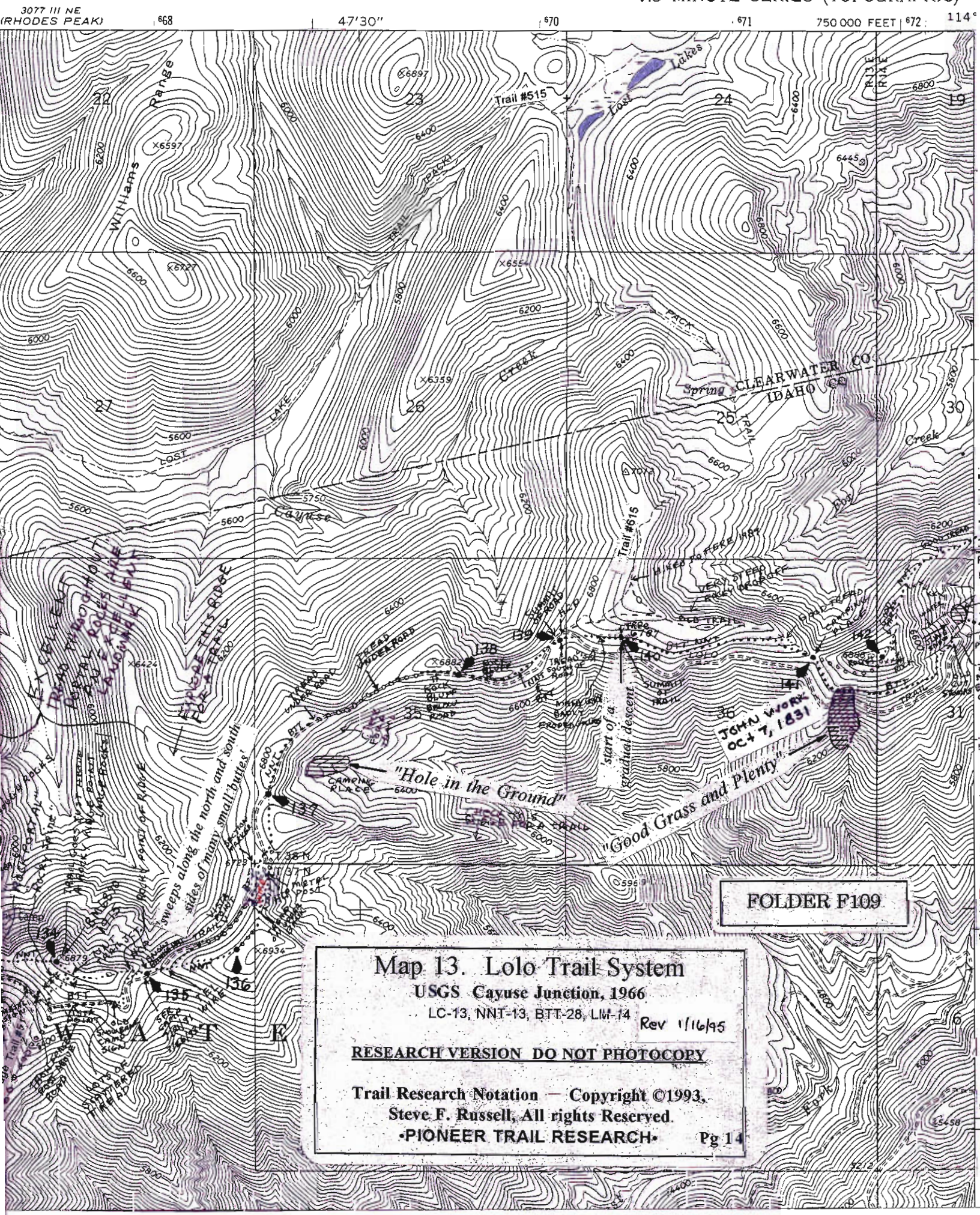
•PIONEER TRAIL RESEARCH•
Pg 13


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
114°52'30"
46°37'30"
663000m.E.
664
665
50'
666
667
5165000m.N.
5164
5163
5162
5161
5160
W 114° 52' 30"
Lake Templin
Cayuse Lake
North Fork
Cayuse
Cayuse Junction
Mt. Marcy
JOHN MULLAN Sep 25, 1854
Trail #517
Trail #515
Trail #249
Camping Place
Old Cabin Site
Cayuse R.S.
BM 5171
1915
Creek
Prairie
Silver
Pack
Trail
Moose Lake
CLEARWATER CO.
IDAHO CO.
Lake Templin Saddle
"around the west, south, and east sides of Mt. Marcy"
"6000 ft. on the ridge to the east"
(Mt. Marcy)
JOHN MULLAN Sep 24, 1854
153.0 Station 24
"The Chief"
N 46 35 00.0
W 114 50 00.0
"runs along the backbone of the most level parts of the ridge"
CLEAR
Howard Camp 12 mi.
W. Fk. Squaw
Squaw
Snowbank Camp
Wendover Ridge Trail #515
Thick Brush
Jeep Trail
Pack Trail
Big Rock
Steep Rocky Ridge
Deer Mountain
Tread Ale Along Here
Steep Rocky Trail
Steep Rocky Slope
Steep Rocky Ridge
Steep Rocky Face
Steep Rocky Bluff
Steep Rocky Bank
Steep Rocky Cliff
Steep Rocky Hill
Steep Rocky Mountain
Steep Rocky Valley
Steep Rocky Creek

CAYUSE JUNCTION QUADRANGLE
IDAHO
7.5 MINUTE SERIES (TOPOGRAPHIC)



Map 13. Lolo Trail System

USGS Cayuse Junction, 1966

LC-13, NNT-13, BTT-28, LM-14 Rev 1/16/95

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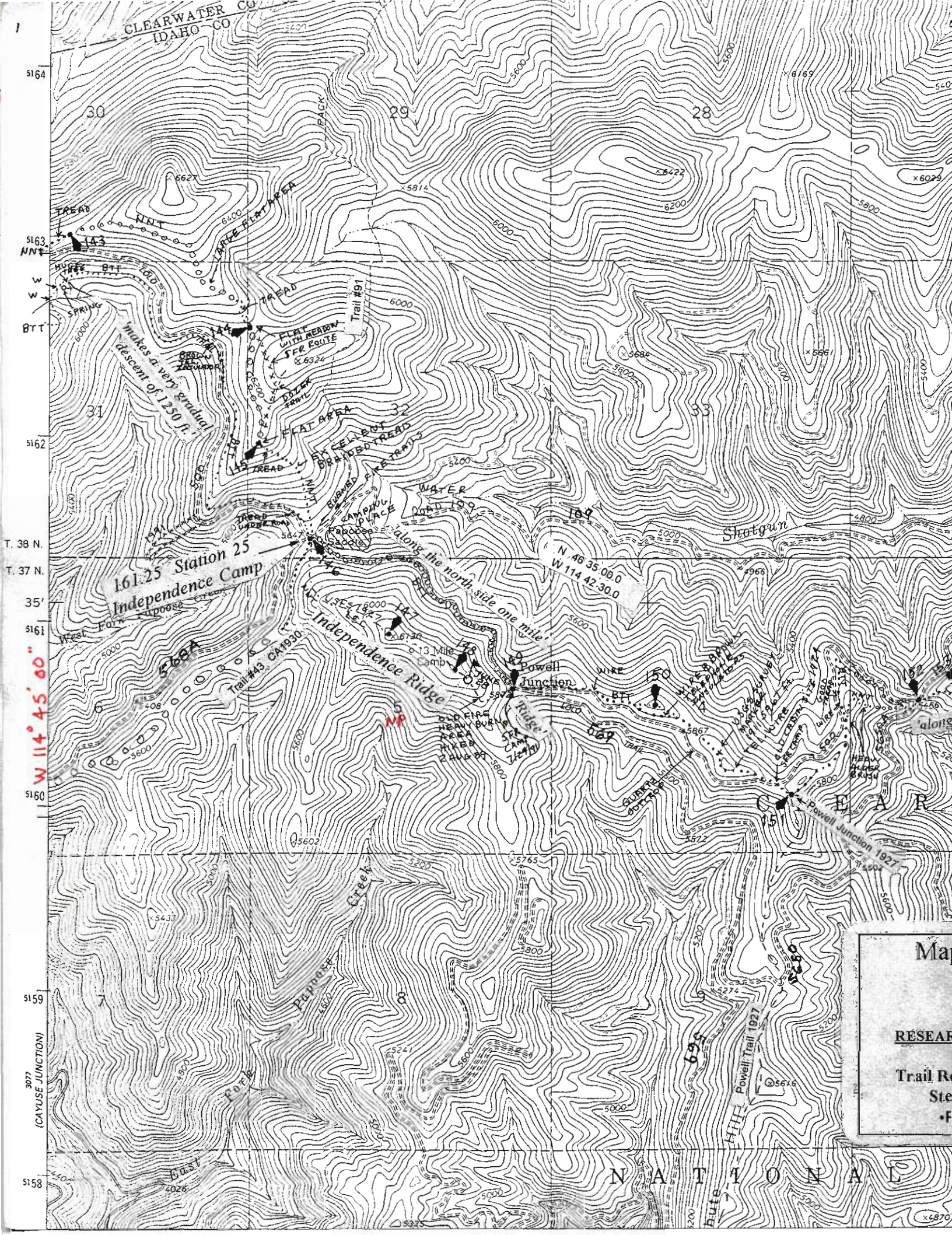
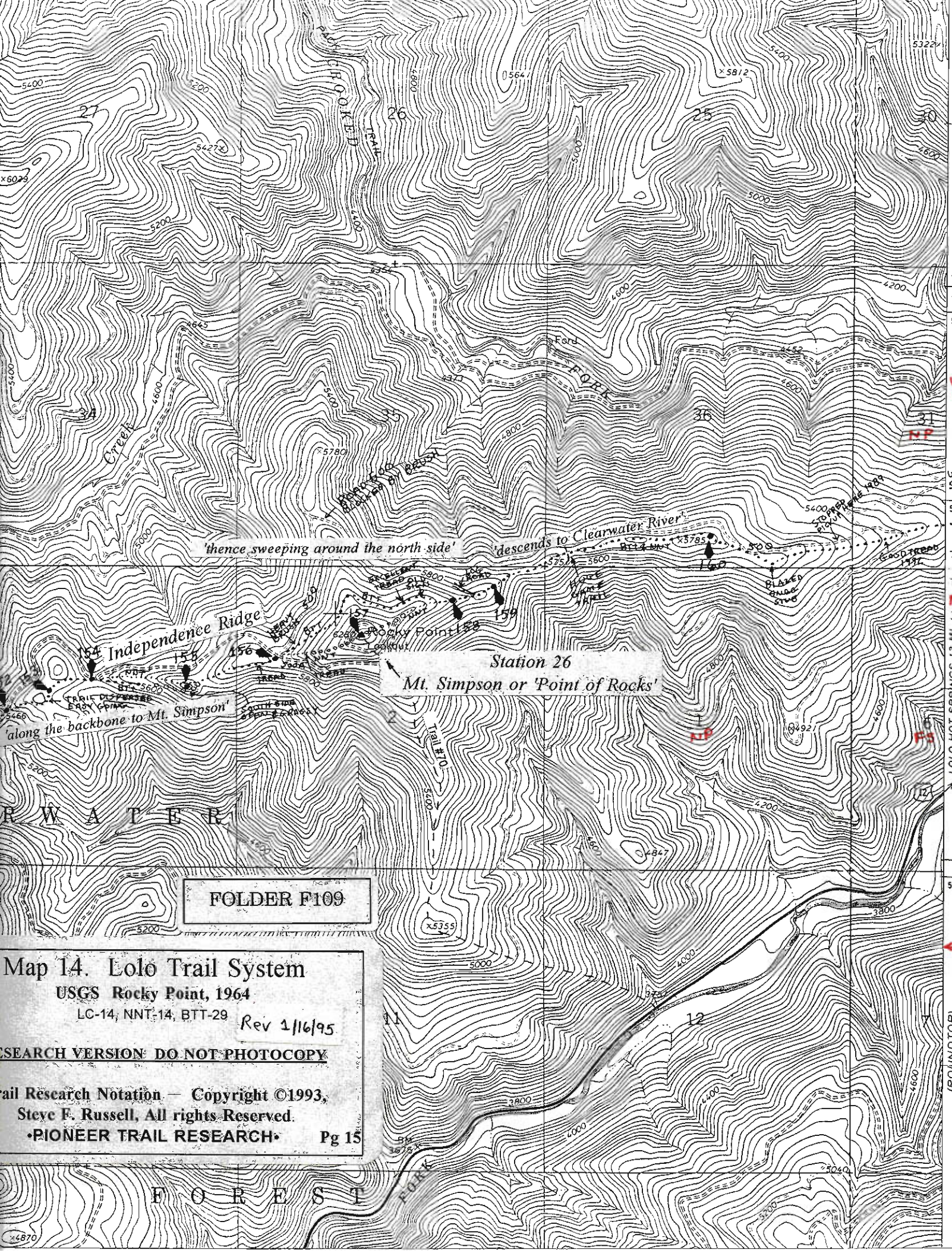

CLEARWATER CO
IDAHO CO
5164
5163
5162
5161
5160
5159
5158
T. 38 N.
T. 37 N.
W 114° 45' 00"
30
29
28
31
32
33
7
8
5
6
TREAD
143
144
145
146
147
148
149
150
151
Trail #91
Trail #43, CA1930
Independence Ridge
Powell Junction
Powell Junction 1927
Powell Trail 1927
Station 25
Independence Camp
161.25
Shotgun
Ridge
Creek
Park
Peppoose
Saddle
Camp
Spring
Water
Pond
Flat with meadow
SFR Route
Large flat area
makes a very gradual descent of 1250 ft.
along the north side one mile
N 46 35 00.0
W 114 42 30.0
Old fire heavy burn area hiked 2 Aug 89
SFR camp 7/24/91
Quarter corner
Loco
Trail
Cabin
Camp
Spring
Tank
Wire
BTT
NNT
West Fork
East Fork
Map
RESEAR
Trail Re
Ste
•F
NATIONAL
(CAYUSE JUNCTION)
3077



FOLDER F109

Map 14. Lolo Trail System

USGS Rocky Point, 1964

LC-14, NNT-14, BTT-29 Rev 1/16/95

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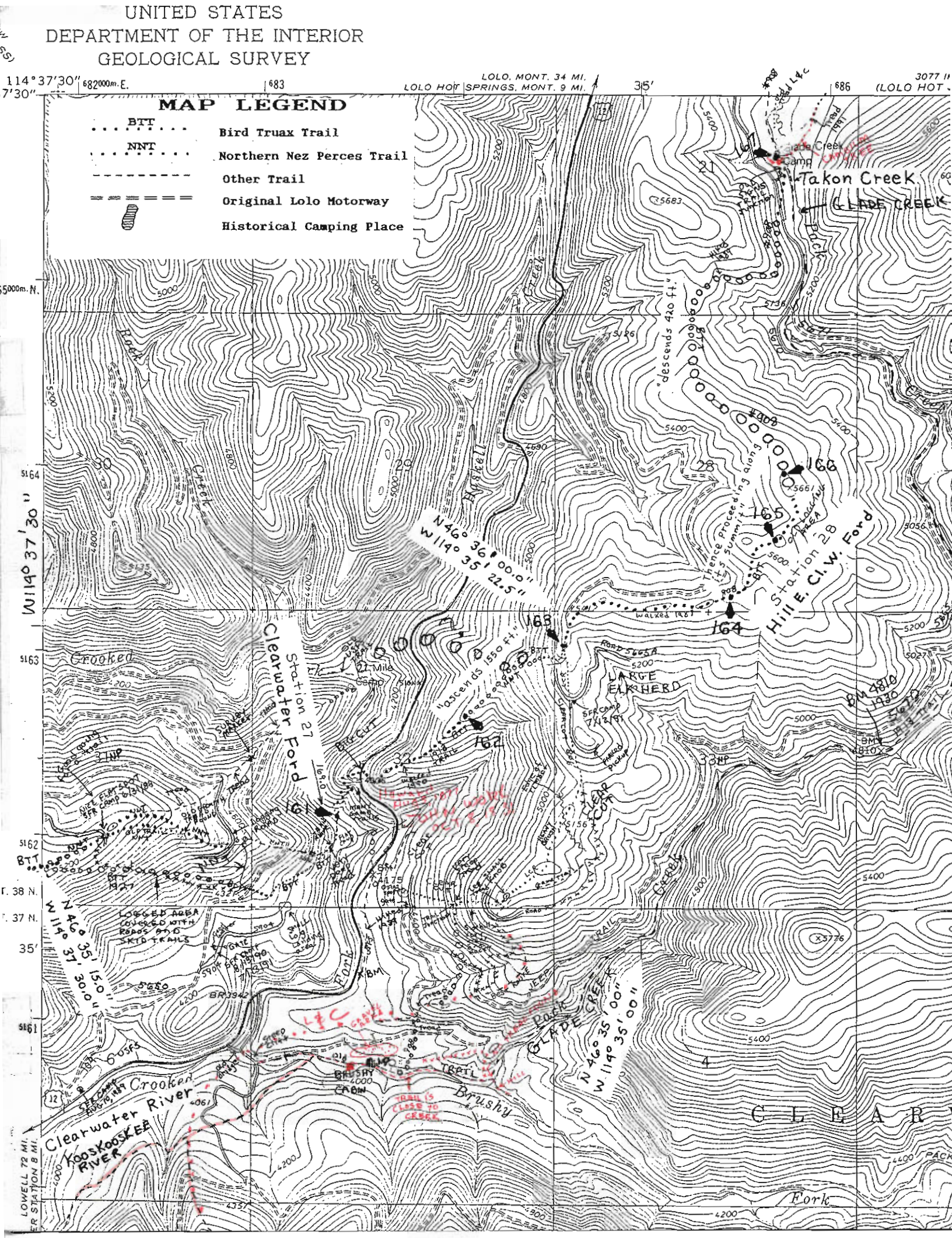
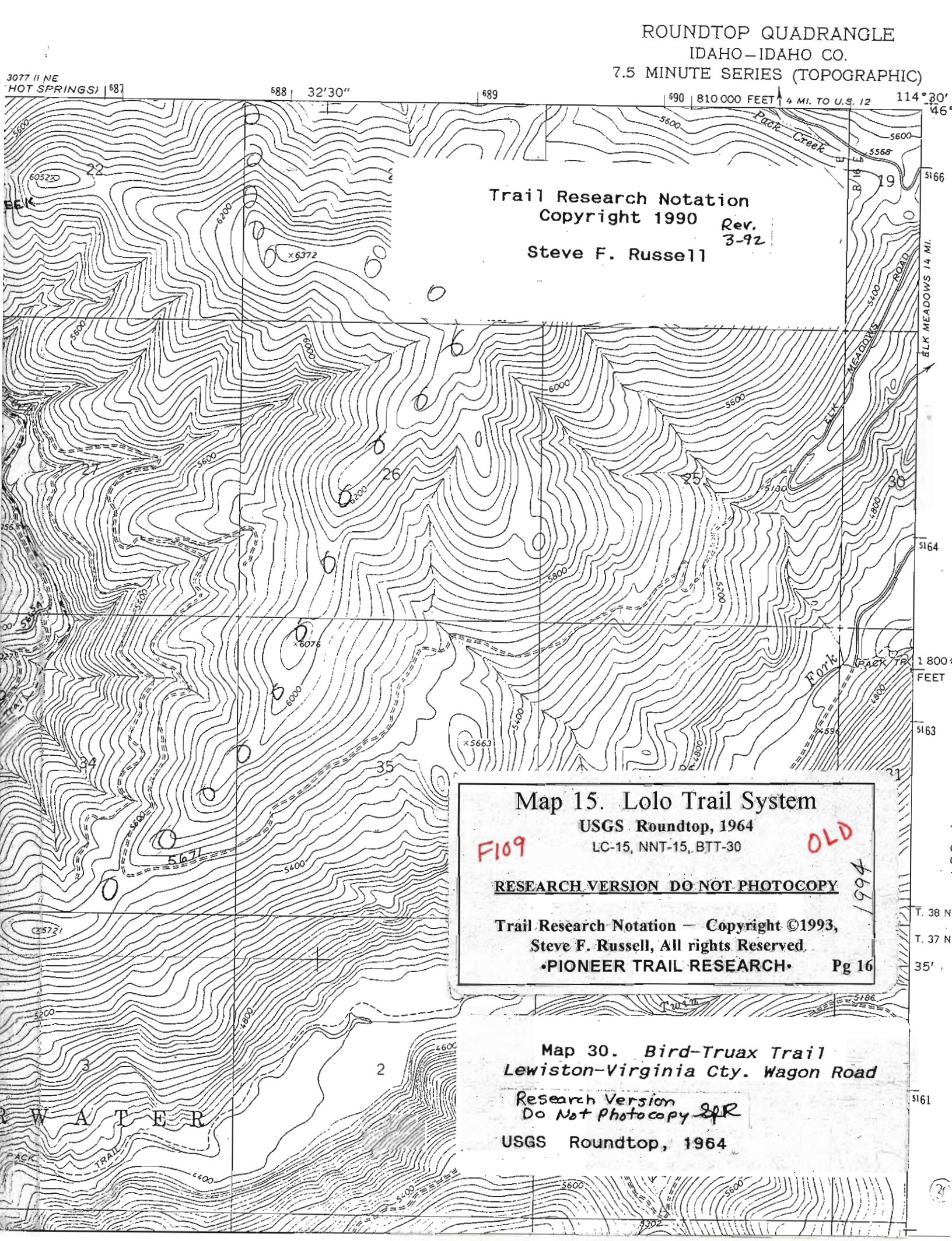

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
MAP LEGEND
BTT
Bird Truax Trail
NNT
Northern Nez Perces Trail
Other Trail
Original Lolo Motorway
Historical Camping Place
LOLO, MONT. 34 MI.
LOLO HOT SPRINGS, MONT. 9 MI.
Takon Creek
GLADE CREEK
Station 28
Hill E. Cl. W. Ford
Station 27
Clearwater Ford
LARGE ELK HERD
Crooked River
Clearwater River
KOOSKOOSKEE RIVER
Brushy Fork
GLADE CREEK
Hyskell
Creek
Road
Fork
CLEAR
CLEARWATER
N 46° 36' 00.0"
W 114° 35' 22.5"
N 46° 35' 37' 30.0"
W 114° 37' 15.0"
N 46° 35' 00"
W 114° 35' 00"
descends 420 ft.
ascends 1550 ft.
Thence proceeding along ridge summit
114°37'30"
7'30"
W114° 37' 30"
35'
LOWELL 72 MI.
R STATION 8 MI.


ROUNDTOP QUADRANGLE
IDAHO—IDAHO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
3077 II NE
(HOT SPRINGS)
32'30"
810 000 FEET
4 MI. TO U.S. 12
114°30'
46°
Pack Creek
ELK MEADOWS ROAD
ELK MEADOWS 14 MI.
Trail Research Notation
Copyright 1990 Rev. 3-92
Steve F. Russell
Map 15. Lolo Trail System
USGS Roundtop, 1964
F109
OLD
LC-15, NNT-15, BTT-30
1994
RESEARCH VERSION DO NOT PHOTOCOPY
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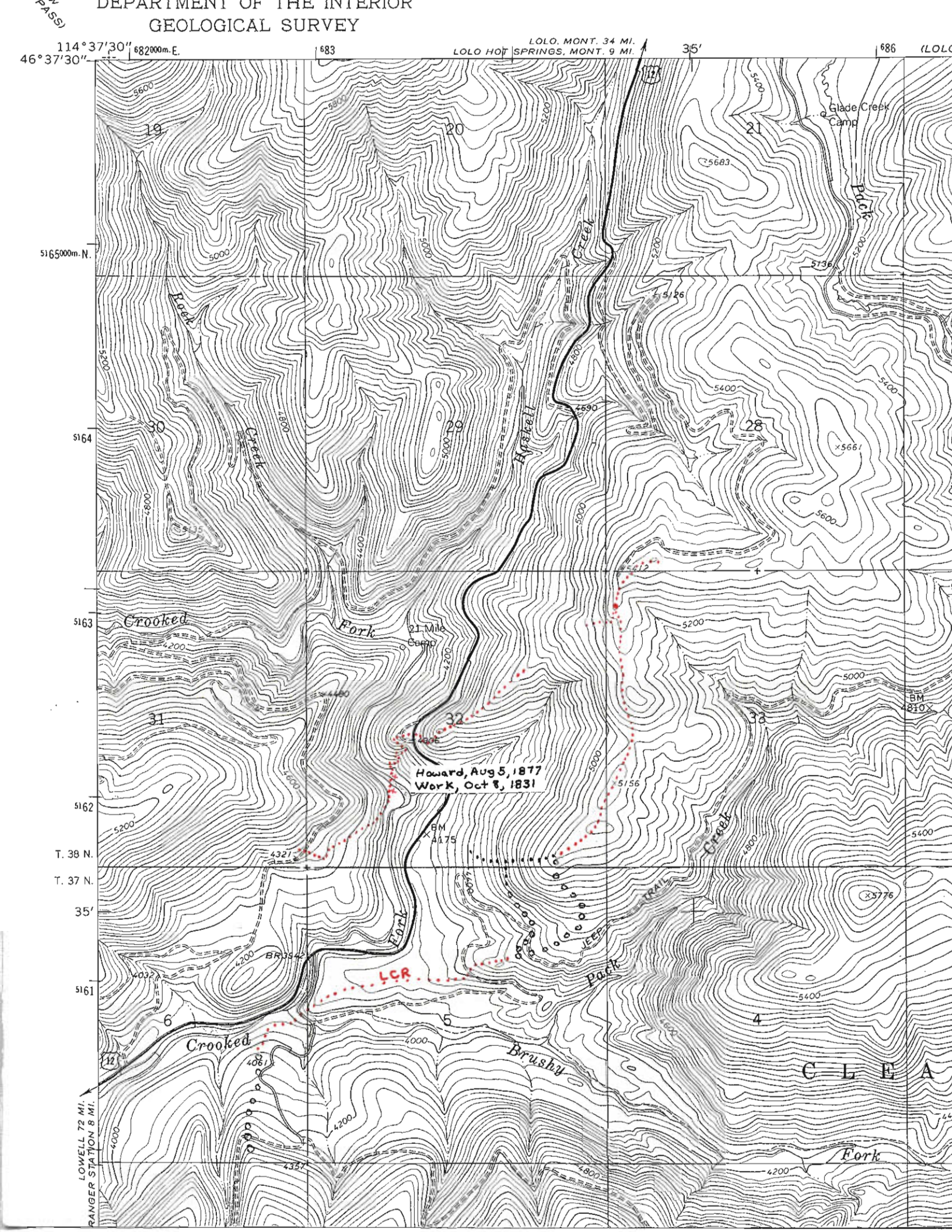
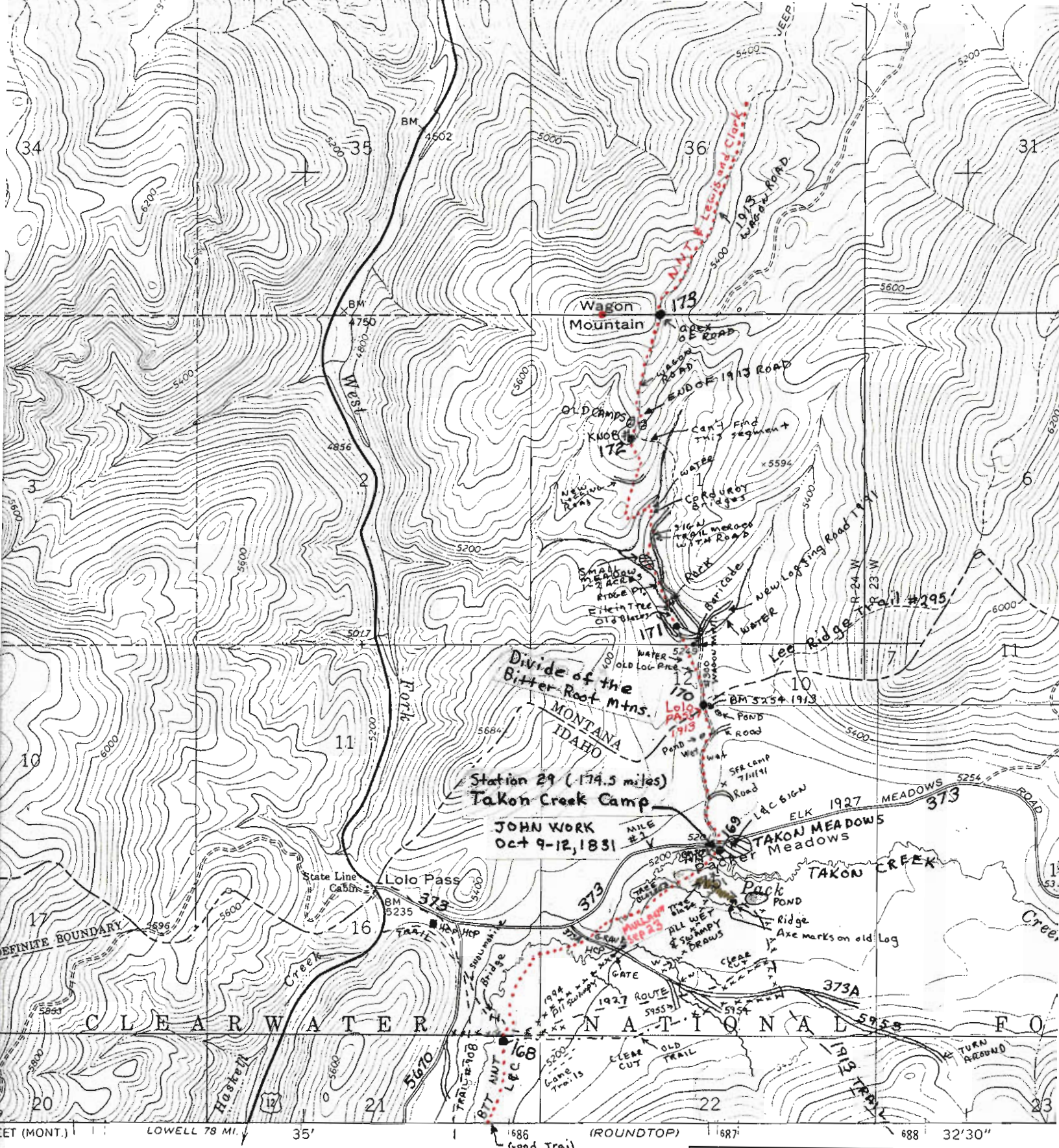
•PIONEER TRAIL RESEARCH• Pg 16
Map 30. Bird-Truax Trail
Lewiston-Virginia Cty. Wagon Road
Research Version
Do Not Photocopy SFR
USGS Roundtop, 1964
WATER
PACK TRAIL
Fork
1 800
FEET
T. 38 N
T. 37 N


DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
114°37'30"
46°37'30"
682000m.E.
683
686
LOLO, MONT. 34 MI.
LOLO HOT SPRINGS, MONT. 9 MI.
35'
5165000m.N.
5164
5163
5162
T. 38 N.
T. 37 N.
35'
5161
Glade Creek Camp
Pack
Creek
Haskell
Creek
Rock
Creek
Crooked
Fork
21 Mile Camp
Howard, Aug 5, 1877
Work, Oct 8, 1831
BM 4475
BM 4810
Fork
Crooked
Brushy
Pack
Creek
Fork
JEEP TRAIL
LCR
BRUSH
LOWELL 72 MI.
RANGER STATION 8 MI.
12
19
20
21
30
29
28
31
32
33
6
5
4
5683
5736
5126
5661
5776
5156
4321
4032
4081
4357
C L E A



FOLDER F109

Map 16. Lolo Trail System

USGS Lolo Hot Springs, 1964

LC-16, NNT-16, BTT-31

RESEARCH VERSION DO NOT PHOTOCOPY

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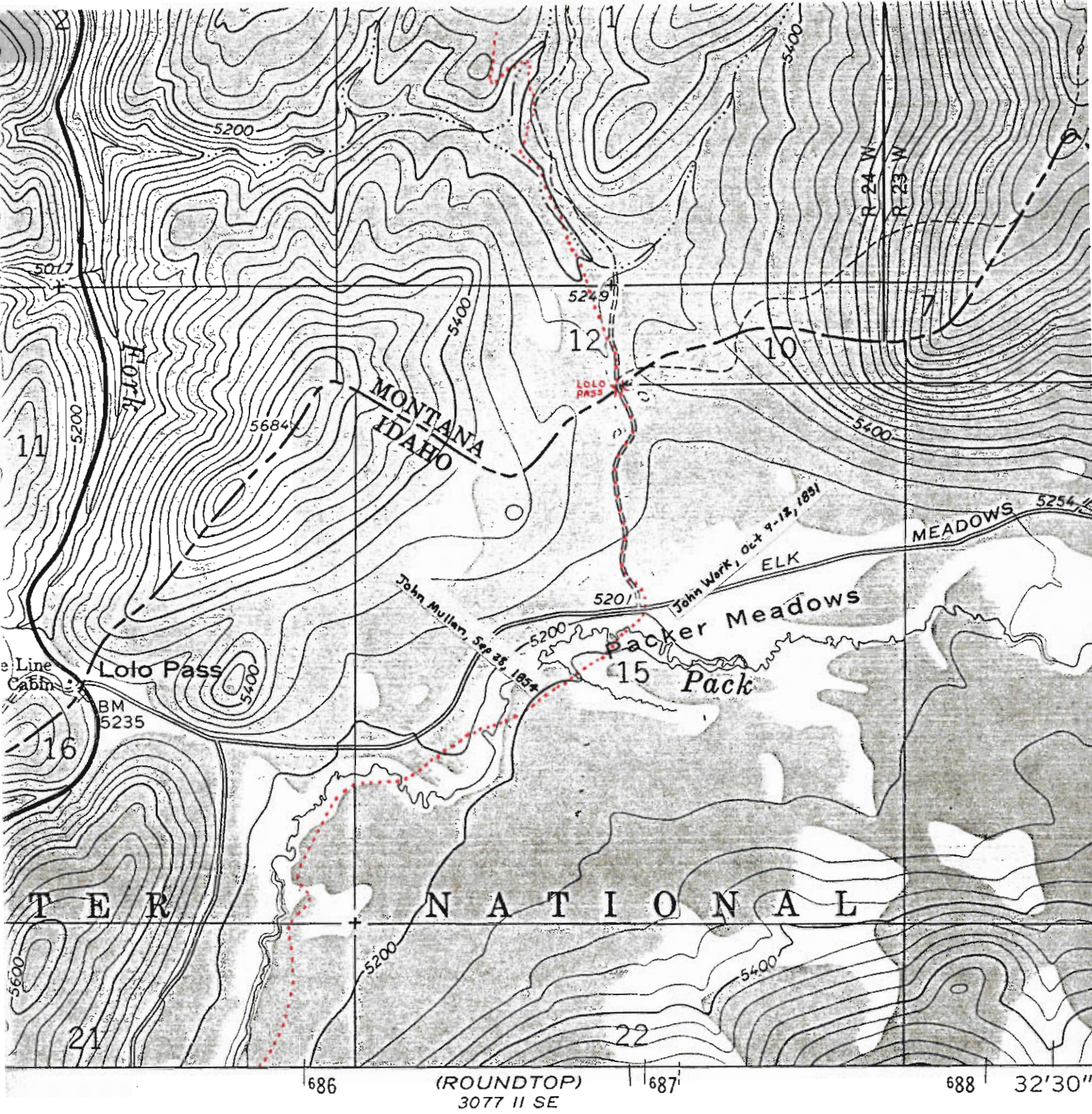
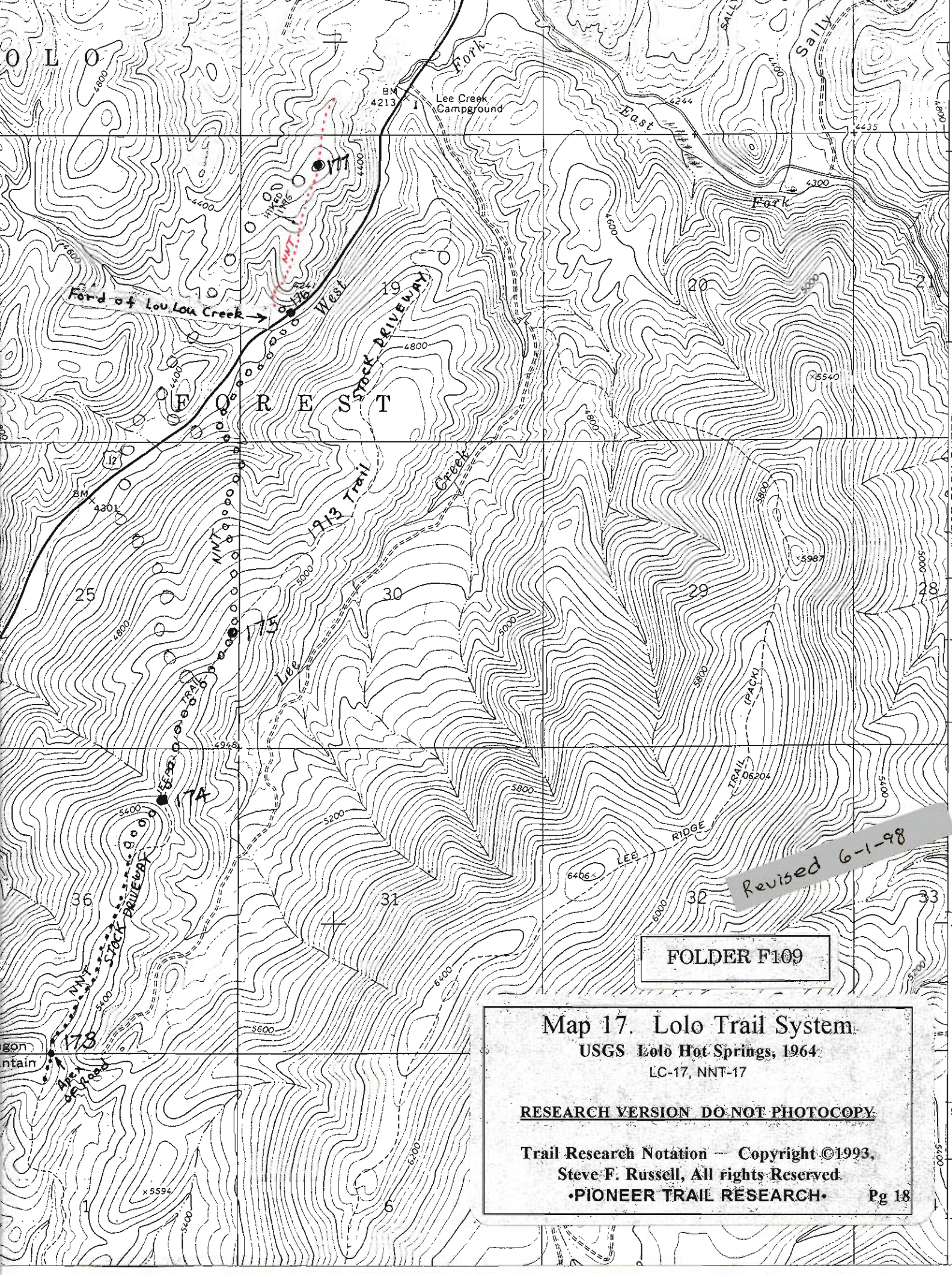
•PIONEER TRAIL RESEARCH•

UTM GRID AND 1964 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET


R 24 W
R 23 W
5017
5249
5400
5200
5684
12
10
11
7
LOLO PASS
MONTANA
IDAHO
FORK
5254
MEADOWS
ELK
John Work, Oct 9-12, 1851
5201
John Mullan, Sept 25, 1854
Packer Meadows
15
Pack
Lolo Pass
BM 5235
Line Cabin
16
T E R
N A T I O N A L
5600
21
22
686
(ROUNDTOP)
3077 II SE
687
688
32'30"



FOLDER F109

Map 17. Lolo Trail System

USGS Lolo Hot Springs, 1964

LC-17, NNT-17

RESEARCH VERSION DO NOT PHOTOCOPY

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FOLDER F109

Map 18. Lolo Trail System

USGS Lolo Hot Springs, 1964

LC-18, NNT-18

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MONTANA – IDAHO
7.5 MINUTE SERIES (TOPOGRAPHIC)

740 000 FEET (MONT.) LOLO (U.S. 93) 24 MI. 114°3

Granite Creek Gulch Creek Creek Creek Rowell Creek Martin Creek Mud Creek Sally Basin Fork West East Fork

ROAD CREEK TRAIL RIDGE

Granite Springs

Lolo Hot Springs

Spring Spring

General O.O. Howard Encamped Aug 6, 1877

John Work, Oct 15, 1831

Hot Spring 114°

Lolo: JUNE 29, 1806

OLD 1866

OLD BRIDGE & STOCK DRIVEWAY

TREAD

HIKED 1995

WALKED 1989

Lee Creek Campground

BM 4172

BM 4185

BM 4213

L O L O

185 184 183 182 181 180 179 178 177

32 33 5 4 12 8 9 13 18 17 16 24 19 20 21

FOLDER F109

Map 19. Lolo Trail System

USGS Lupine Creek, 1964

LC-19, NNT-19

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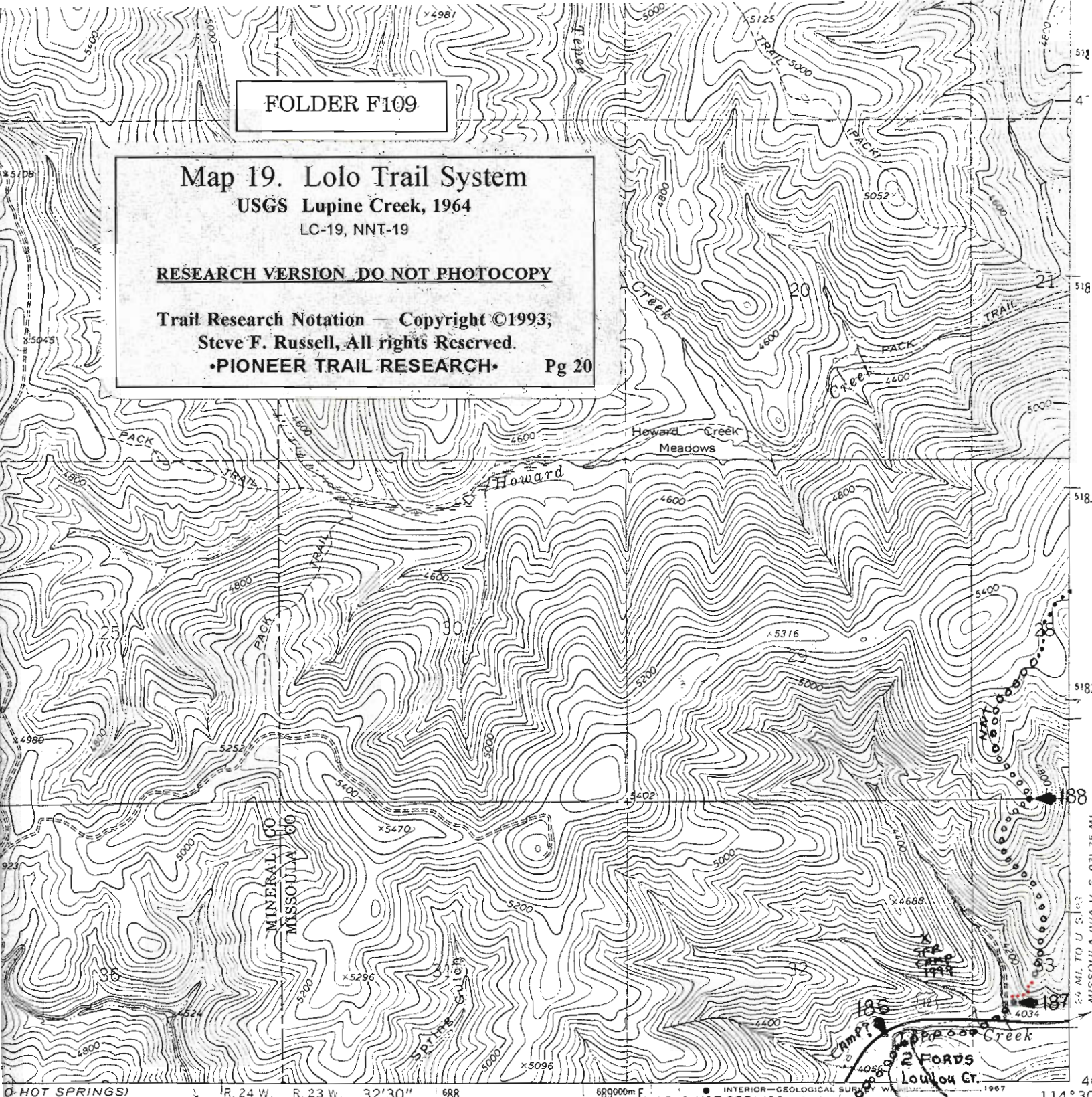
•PIONEER TRAIL RESEARCH• **Pg 20**



O HOT SPRINGS)
3077 II NE

CALE 1:24000

0 1 MILE

3000 4000 5000 6000 7000 FEET

0 1 KILOMETER

R INTERVAL 40 FEET
IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———

Unimproved dirt =======

U. S. Route

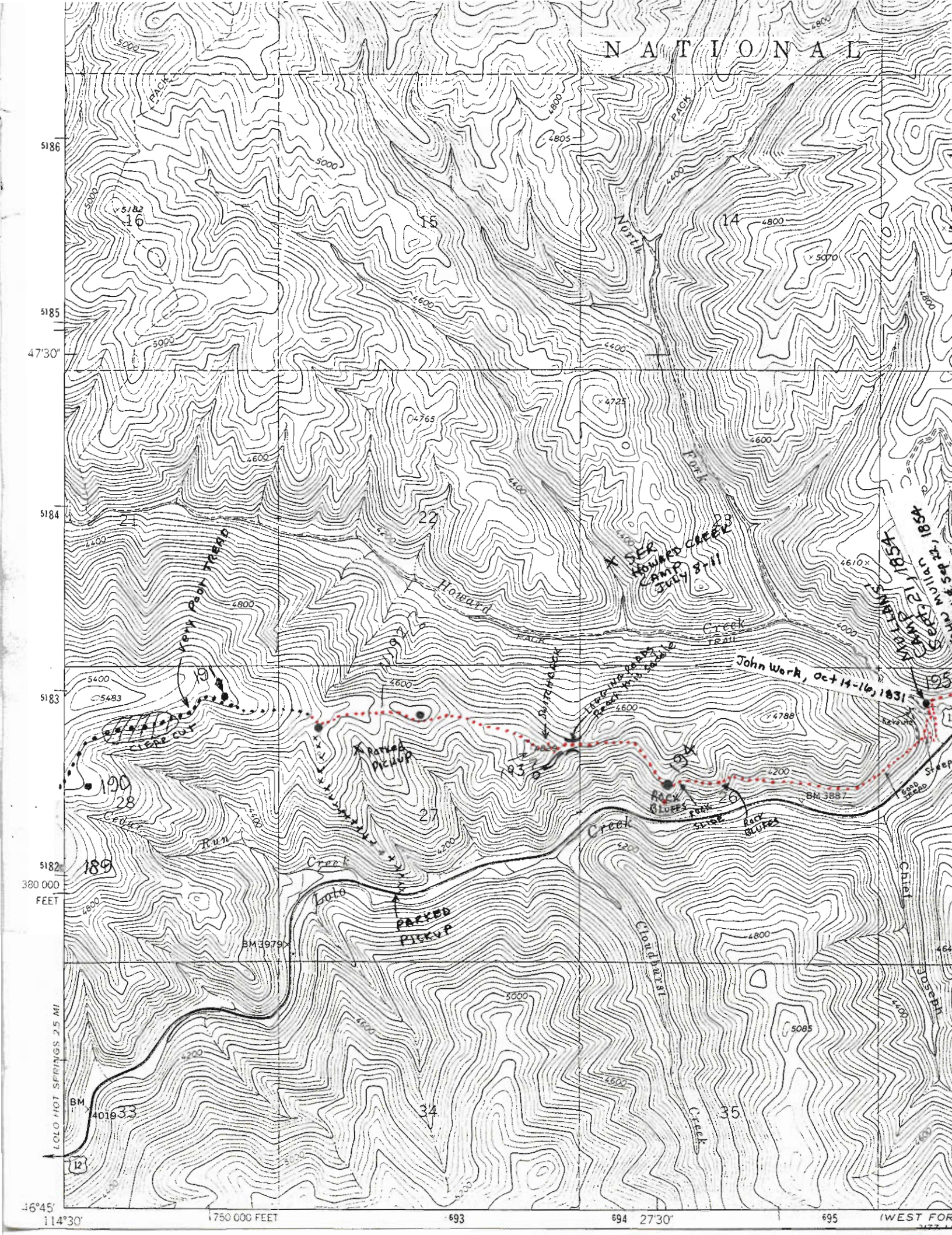
QUADRANGLE LOCATION

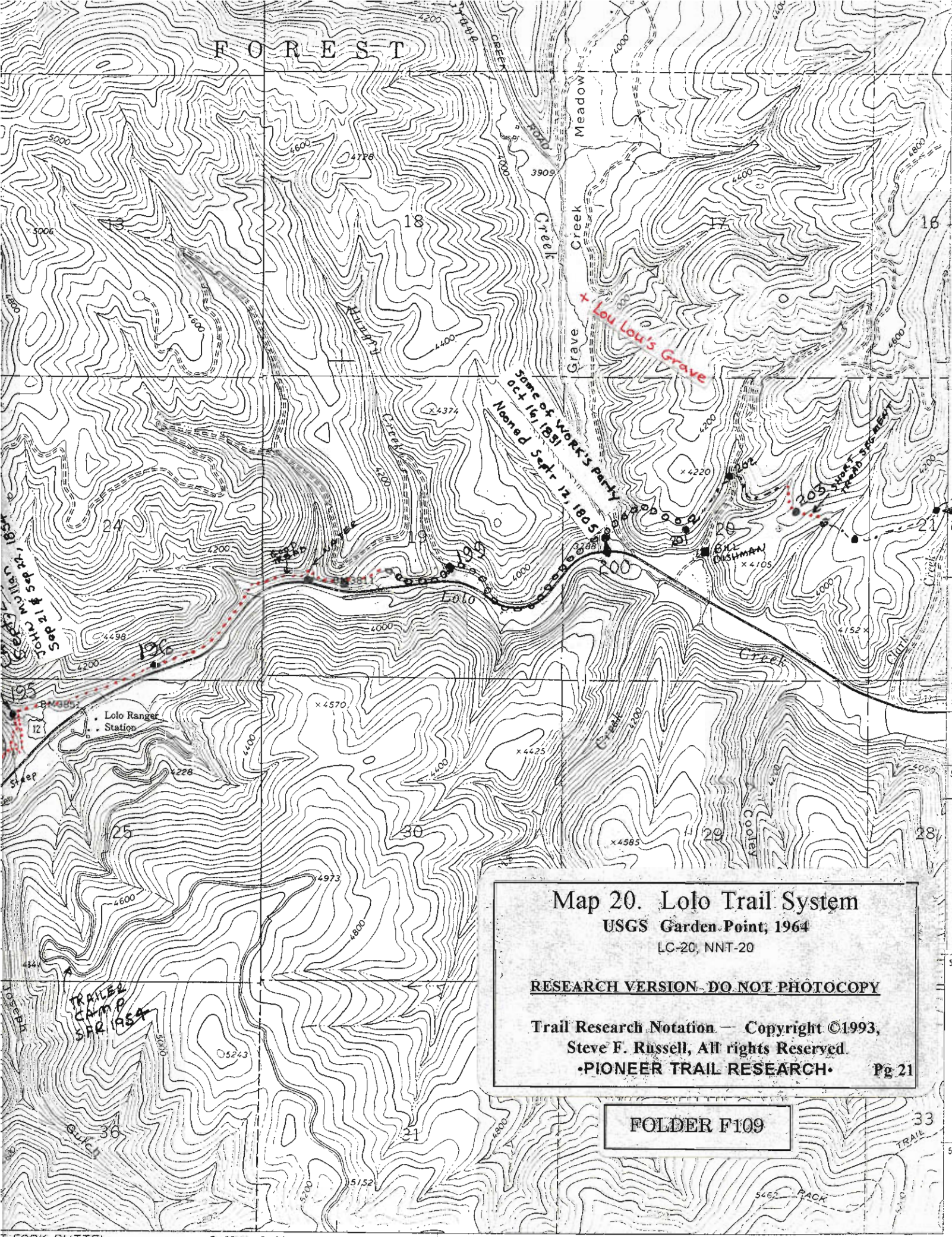
I NATIONAL MAP ACCURACY STANDARDS
ENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

LUPINE CREEK, MONT.
N4645—W11430/7.5

1964

AMS 3077 I SE—SERIES V894


NATIONAL
North Fork
Howard Creek Trail
Howard Creek
Camp July 8-11
Camp 21 1854
Camp 22 1854
John Work, Oct 14-16, 1831
Cedar Run Creek
Lolo Creek
Cloudburst Creek
Chief Joseph
Rock Bluffs
Rock Bluffs Slide
Rock Bluffs Trail
Parked Pickup
Parked Pickup
Cedar Run Trail
Cedar Run Cut
Lolo Hot Springs 25 mi
BM 3979
BM 3887
BM 4013
5182
5186
5185
47'30"
5184
5183
5182
380 000 FEET
46°45'
114°30'
750 000 FEET
693
694
27'30"
695
(WEST FOR



Map 20. Lolo Trail System

USGS Garden Point, 1964

LC-20, NNT-20

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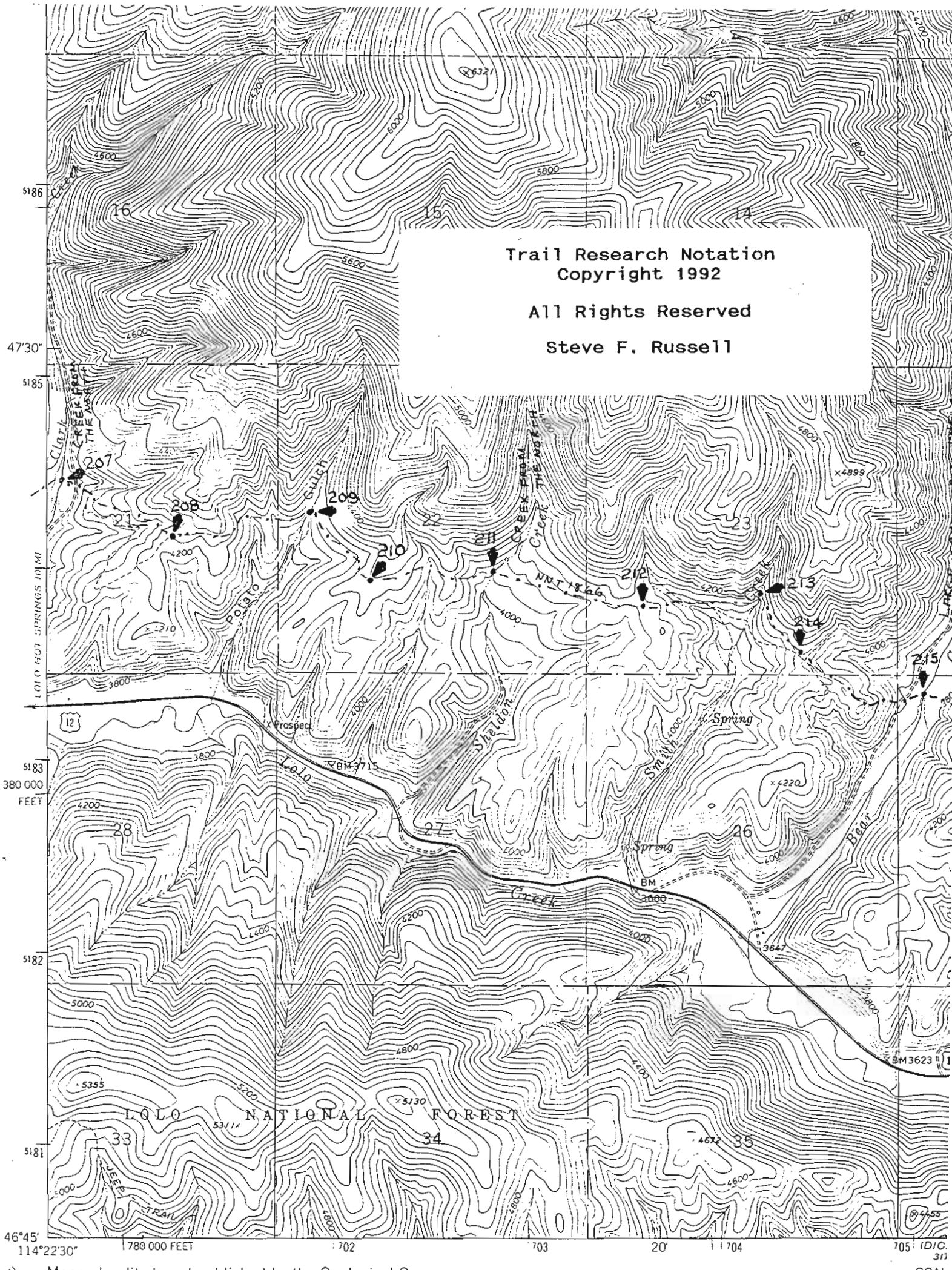
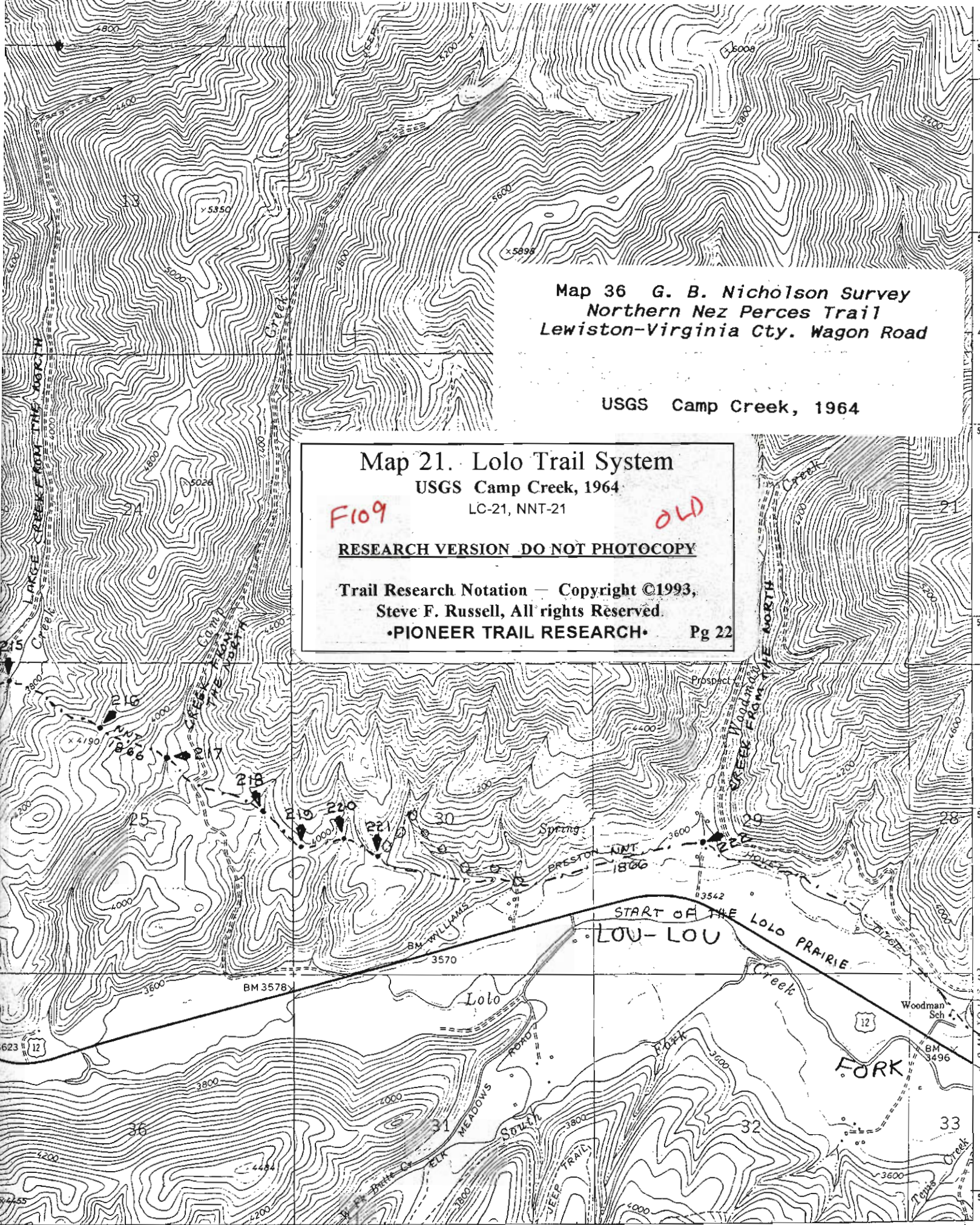
•PIONEER TRAIL RESEARCH• **Pg 21**

FOLDER F109


Trail Research Notation
Copyright 1992
All Rights Reserved
Steve F. Russell
Clark Creek from the North
207
208
209
Gulch
210
211
Creek from the North
212
213
214
215
Potato
Sheldon
Lolo
Prospect
BM 3715
Smith
Spring
Spring
Bear
Creek
BM 3660
3647
BM 3623
LOLO NATIONAL FOREST
33
34
35
JEEP TRAIL
LOLO HOT SPRINGS 11 MI
47'30"
46°45'
114°22'30"
5186
5185
5183
5182
5181
380 000 FEET
780 000 FEET
702
703
704
705
20'
16
15
14
21
22
23
27
28
26
12
Mapped, edited, and published by the Geological Survey


Map 36 G. B. Nicholson Survey
Northern Nez Perces Trail
Lewiston-Virginia Cty. Wagon Road
USGS Camp Creek, 1964
Map 21. Lolo Trail System
USGS Camp Creek, 1964
LC-21, NNT-21
F109
OLD
RESEARCH VERSION DO NOT PHOTOCOPY
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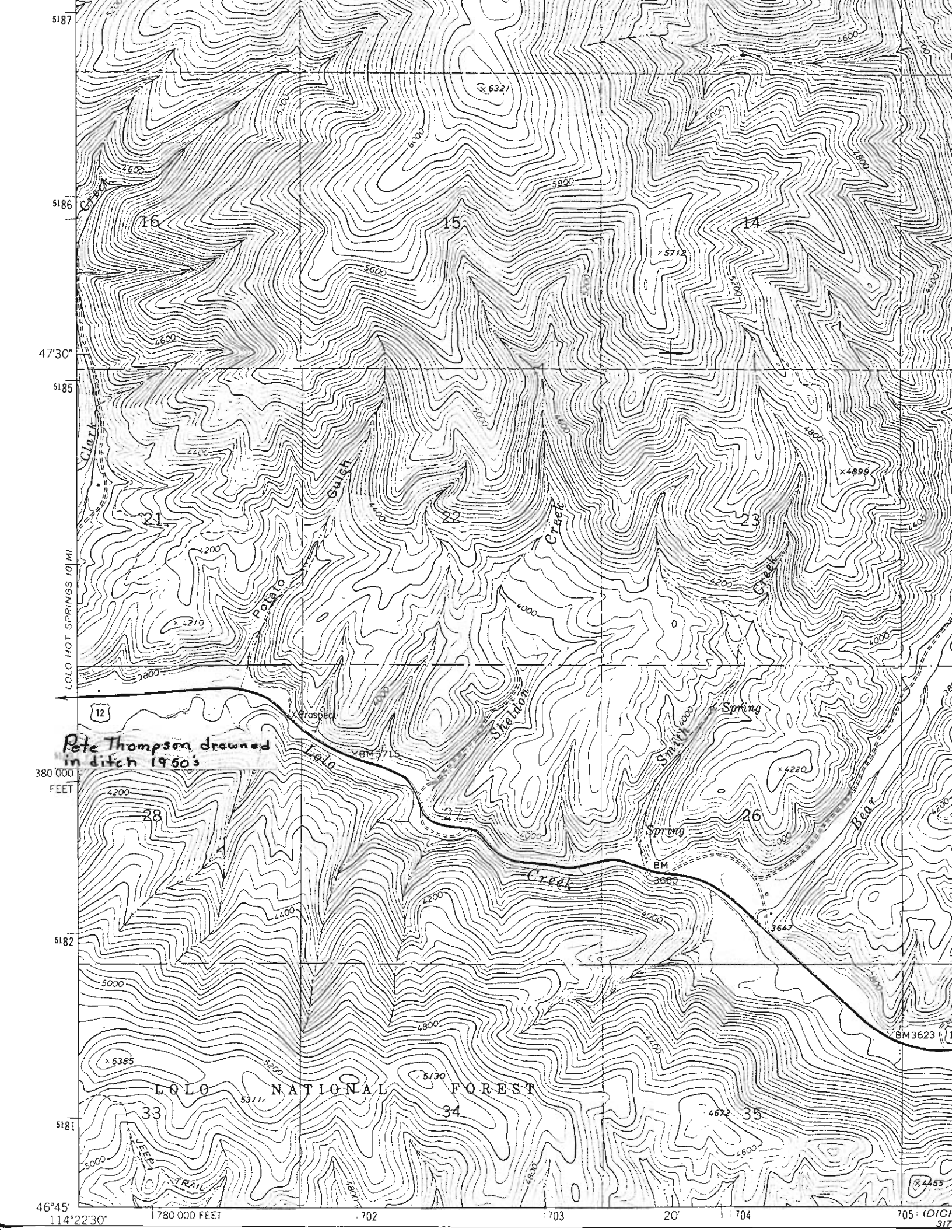
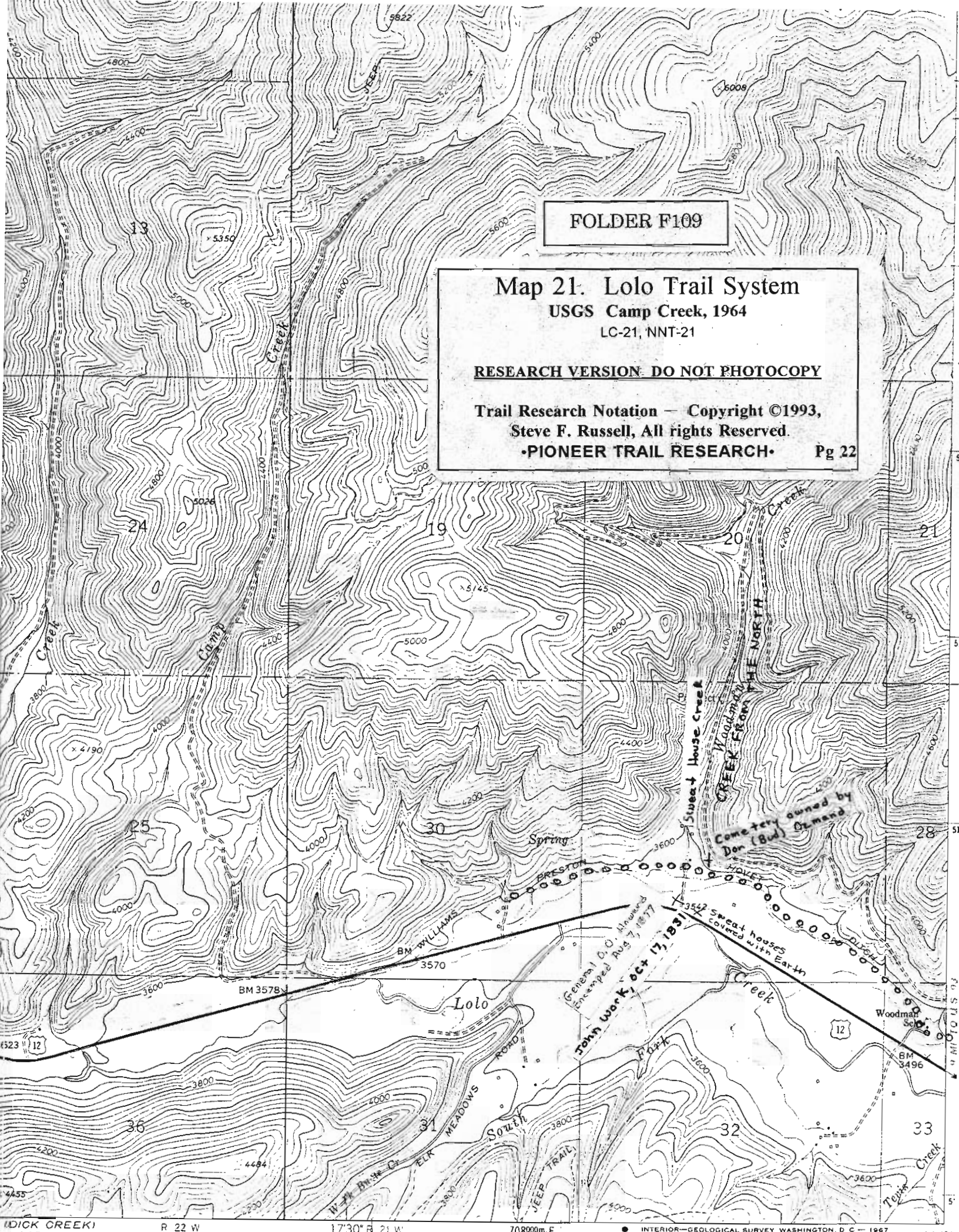
•PIONEER TRAIL RESEARCH• Pg 22
LOU- LOU
START OF THE LOLO PRAIRIE
Lolo
FORK
Spring
Prospect
Woodman Sch
Creek
South
Fork
ELK MEADOWS
ROAD
JEEP TRAIL
PRESTON NNT
1866
BM 3578
BM 3570
BM 3496
3542
LAKE CREEK FROM THE NORTH
CAMP CREEK FROM THE NORTH
WOODMAN CREEK FROM THE NORTH
Brette Cr
Tapis
R. 22 W.
17'30" R. 21 W.
708000m. E.
INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C — 1967
SCALE 1:24 000
ROAD CLASSIFICATION


Pete Thompson drowned in ditch 1950's
Clark Creek
Potato Gulch
Sheldon Creek
Smith Creek
Bear Creek
Lolo Creek
Spring
Spring
BM 3715
BM 3660
BM 3623
3647
4672
LOLO NATIONAL FOREST
JEEP TRAIL
LOLO HOT SPRINGS 10 MI.
12
16
15
14
21
22
23
28
27
26
33
34
35
5187
5186
5185
5182
5181
47'30"
46°45'
114°22'30"
380 000 FEET
780 000 FEET
702
703
20'
704
705


FOLDER F109
Map 21. Lolo Trail System
USGS Camp Creek, 1964
LC-21, NNT-21
RESEARCH VERSION DO NOT PHOTOCOPY
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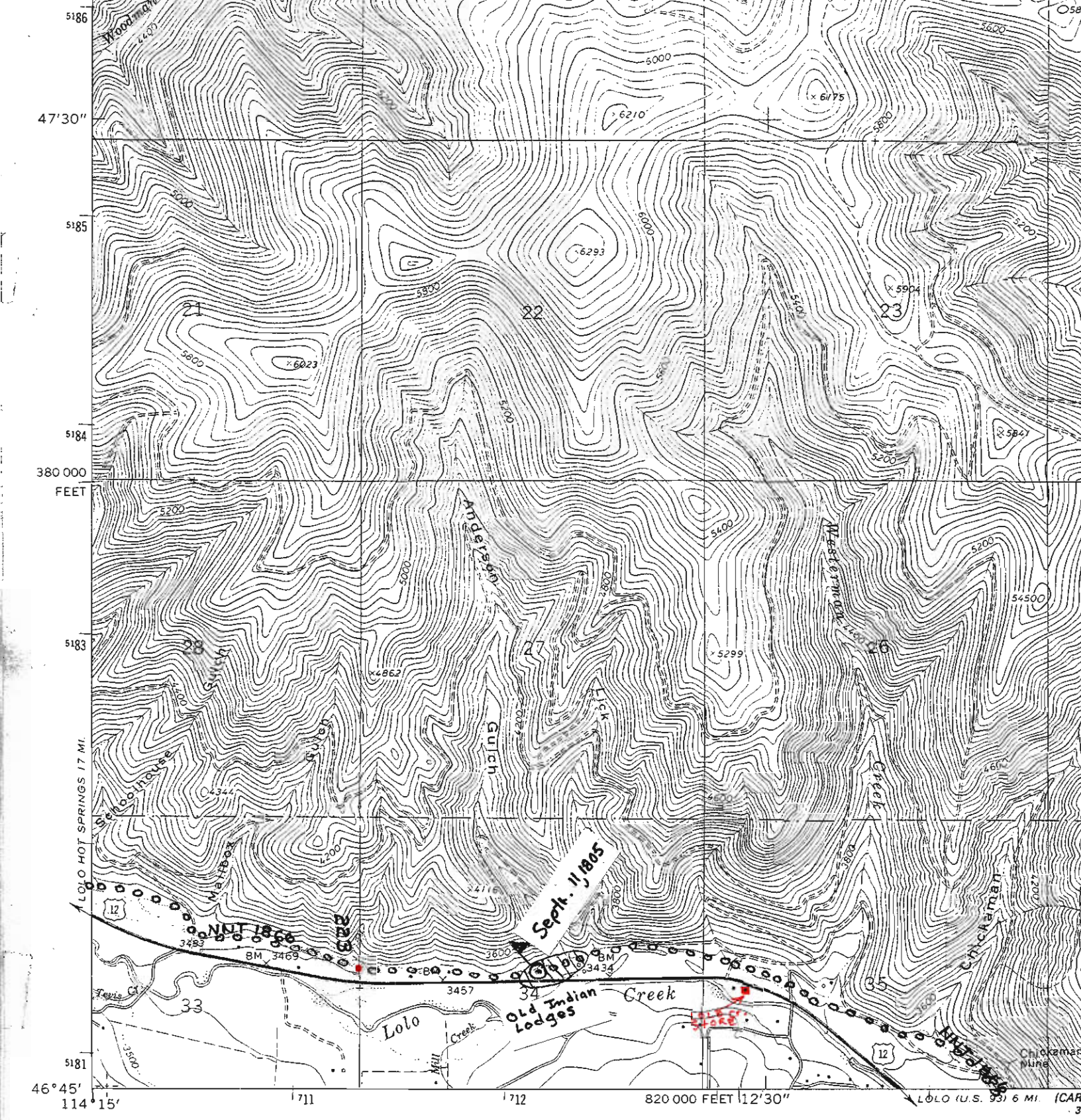
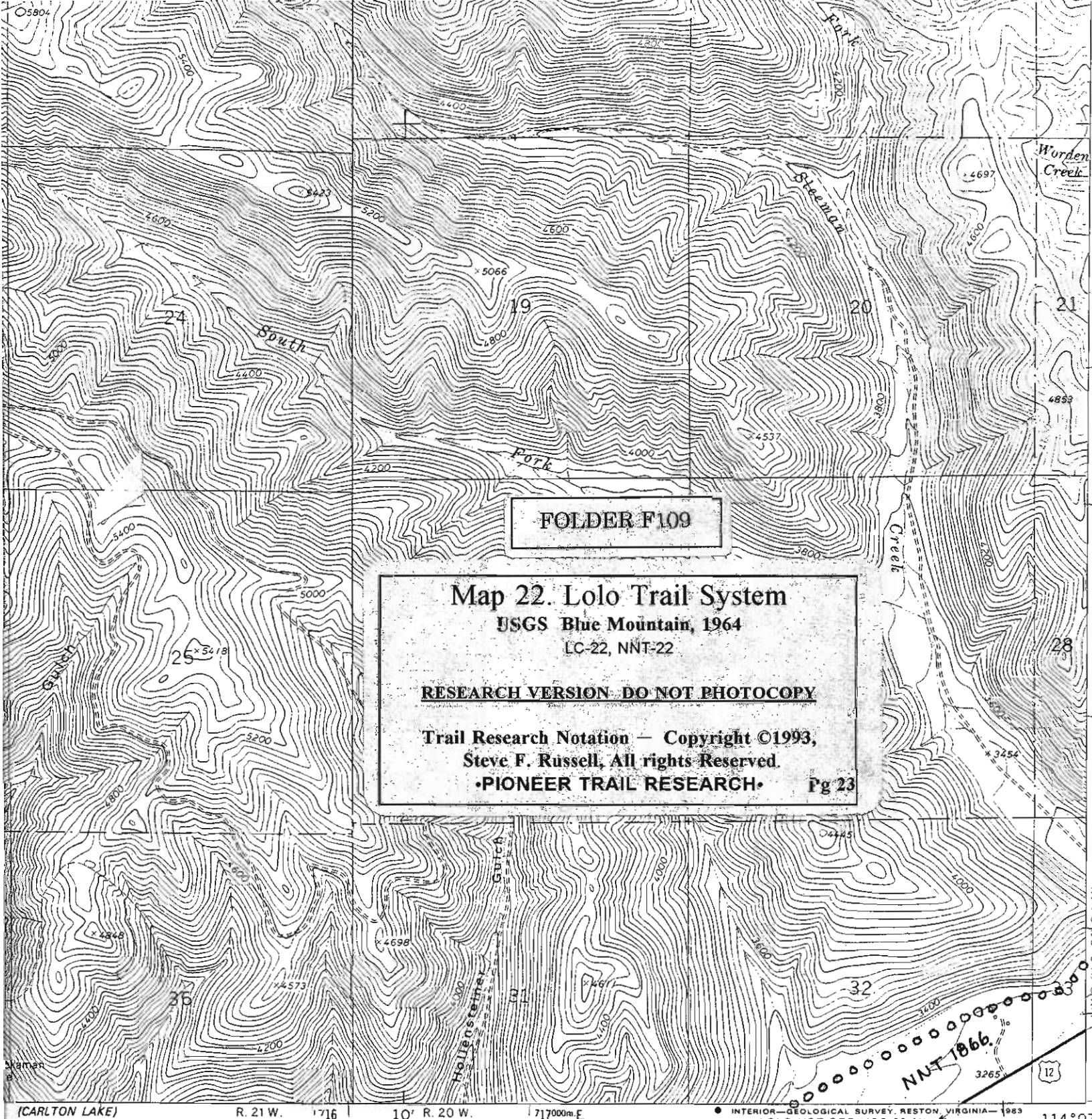
•PIONEER TRAIL RESEARCH• Pg 22
Sweat House Creek
Woodman
CREEK From THE North
Cemetery owned by
Don (Bud) Demand
Spring
PRESTON
HOVEY
BM WILLIAMS
3570
BM 3578
3542 Sweat houses
covered with Earth
John Work, Oct 17, 1831
General O.O. Howard
Encamped Aug 7, 1877
Lolo
Creek
Woodman
School
BM
3496
Fork
ROAD
MEADOWS
South
JEEP TRAIL
Twin
Creek
Camp
Creek
Creek
JEEP
13
24
19
20
21
25
30
28
36
31
32
33
5822
5350
5026
5145
4190
4484
4455
12
R 22 W
17'30" R 21 W
708000m. E.
INTERIOR—GEOLOGICAL SURVEY WASHINGTON, D C — 1967
114°1


5186
47'30"
5185
5184
380 000
FEET
5183
5181
46°45'
114°15'
711
712
820 000 FEET
12'30"
LOLO (U.S. 93) 6 MI.
LOLO HOT SPRINGS 17 MI.
Woodman
Anderson
Gulch
Lick
Gulch
Westermon
Creek
Chickaman
Creek
Meadowhouse
Mailbox
Gulch
NWP 1866
NWP 1866
Sept. 11 1805
BM 3469
BM 3434
3457
3483
Travis Ct
Old Indian Lodges
Lolo
Creek
Mill
Creek
Lolo Hot Springs
Chickaman line
21
22
23
28
27
26
33
34
35
12
6023
6293
6210
6175
5904
5841
5299
4862
4344
4116
5000
5200
5400
5600
5800
6000
3600
3800
4000
4200
4400
4600
4800


FOLDER F1.09
Map 22. Lolo Trail System
USGS Blue Mountain, 1964
LC-22, NNT-22
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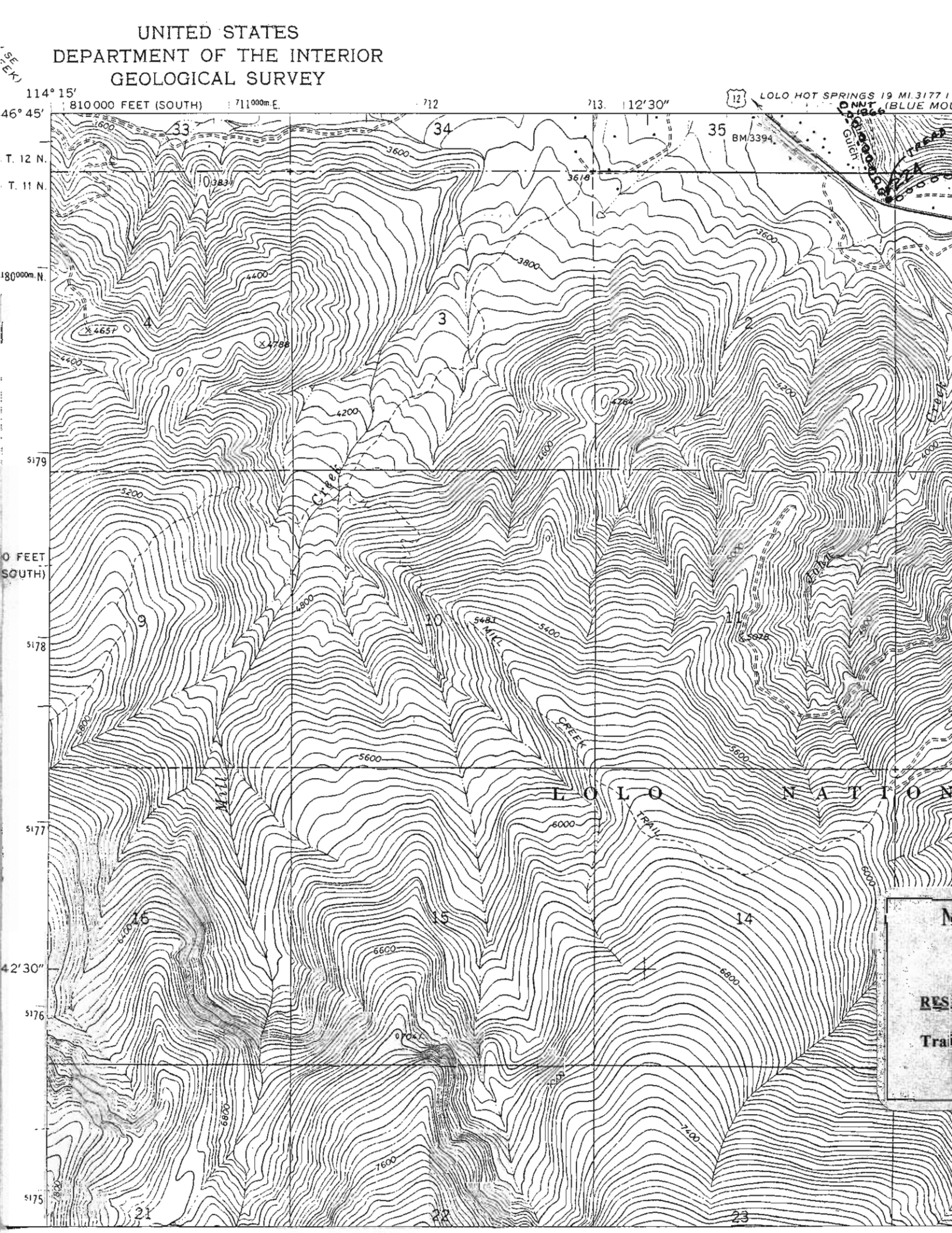
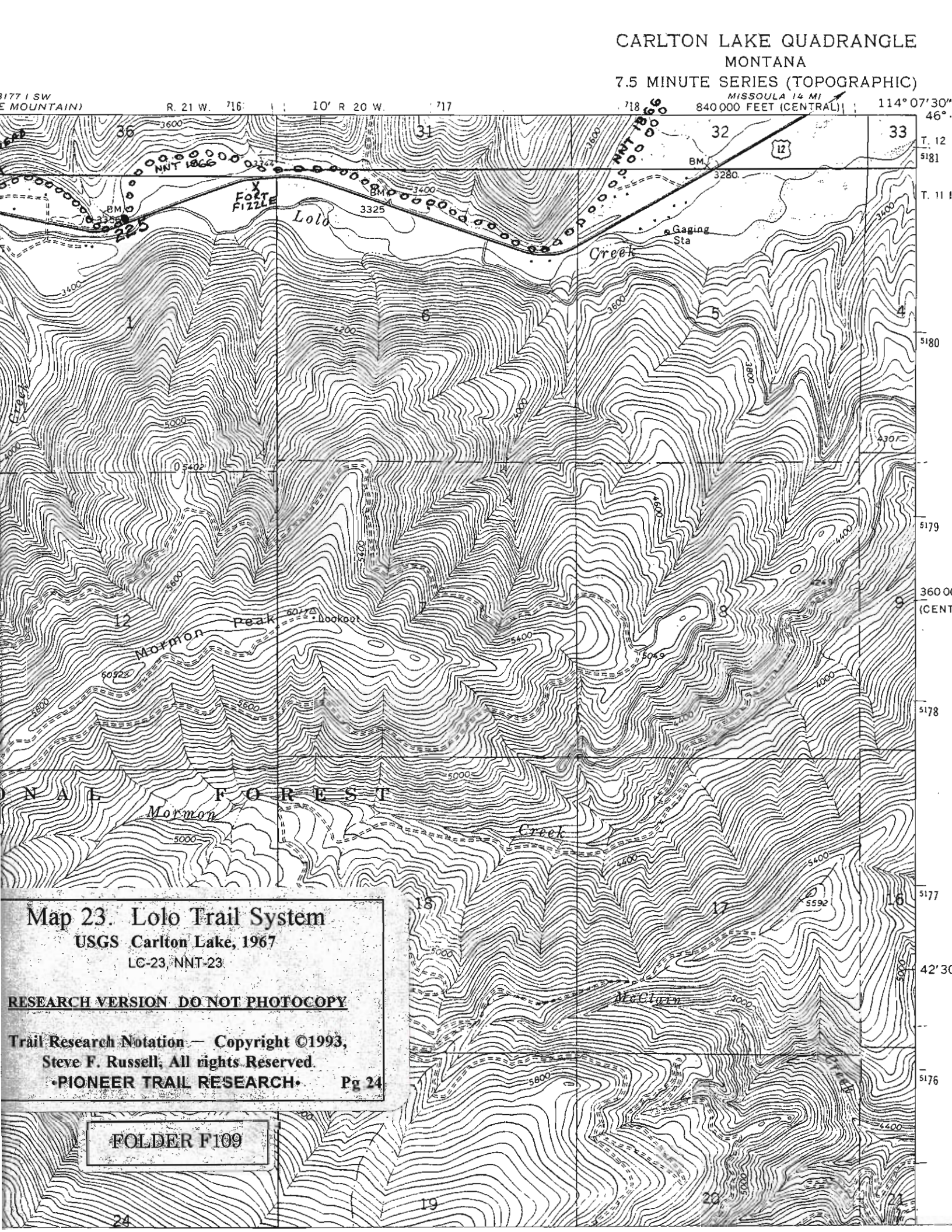
•PIONEER TRAIL RESEARCH• Pg 23
NNT 1866
Ray Hughes owned the general store in Lolo in 1950s
Woody Bentham
Roy Van Ostrand-antiques
MONTANA
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Unimproved dirt
U.S. Route
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER
UR INTERVAL 40 FEET
REPRESENT 20-FOOT CONTOURS
DETIC VERTICAL DATUM OF 1929
BLUE MOUNTAIN, MONT.
N4645—W11407.5/7.5
1964
PHOTOREVISED 1978
TH NATIONAL MAP ACCURACY STANDARDS
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
IC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
To place on the predicted North American Datum 1983
move the projection lines 12 meters north and
71 meters east as shown by dashed corner ticks
(CARLTON LAKE)
3177 II NW
R. 21 W.
10' R. 20 W.
717000m.E.
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1983
LOLO HOT SPRINGS 23 MI.
114°07


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
114° 15'
46° 45'
810 000 FEET (SOUTH)
711 000m E.
712
713
12'30"
LOLO HOT SPRINGS 19 MI.
T. 12 N.
T. 11 N.
180 000m N.
42'30"
33
34
35
BM 3394
4
3
2
9
10
11
16
15
14
21
22
23
LOLO NATIONAL
Mill Creek
MILL CREEK
TRAIL
Gulch
3600
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
4657
4788
4764
5483
5078
5176
5175
5179
5178
5177


CARLTON LAKE QUADRANGLE
MONTANA
7.5 MINUTE SERIES (TOPOGRAPHIC)
MISSOULA 14 MI
840 000 FEET (CENTRAL)
114° 07' 30"
46°
R. 21 W.
10' R 20 W.
T. 12
T. 11
NNT 1866
FORT FIZZLE
Lolo
Creek
Gaging Sta
BM
3325
3280
Mormon peak
Lookout
Mormon
Creek
McClain
Creek
NATIONAL FOREST
Map 23. Lolo Trail System
USGS Carlton Lake, 1967
LC-23, NNT-23
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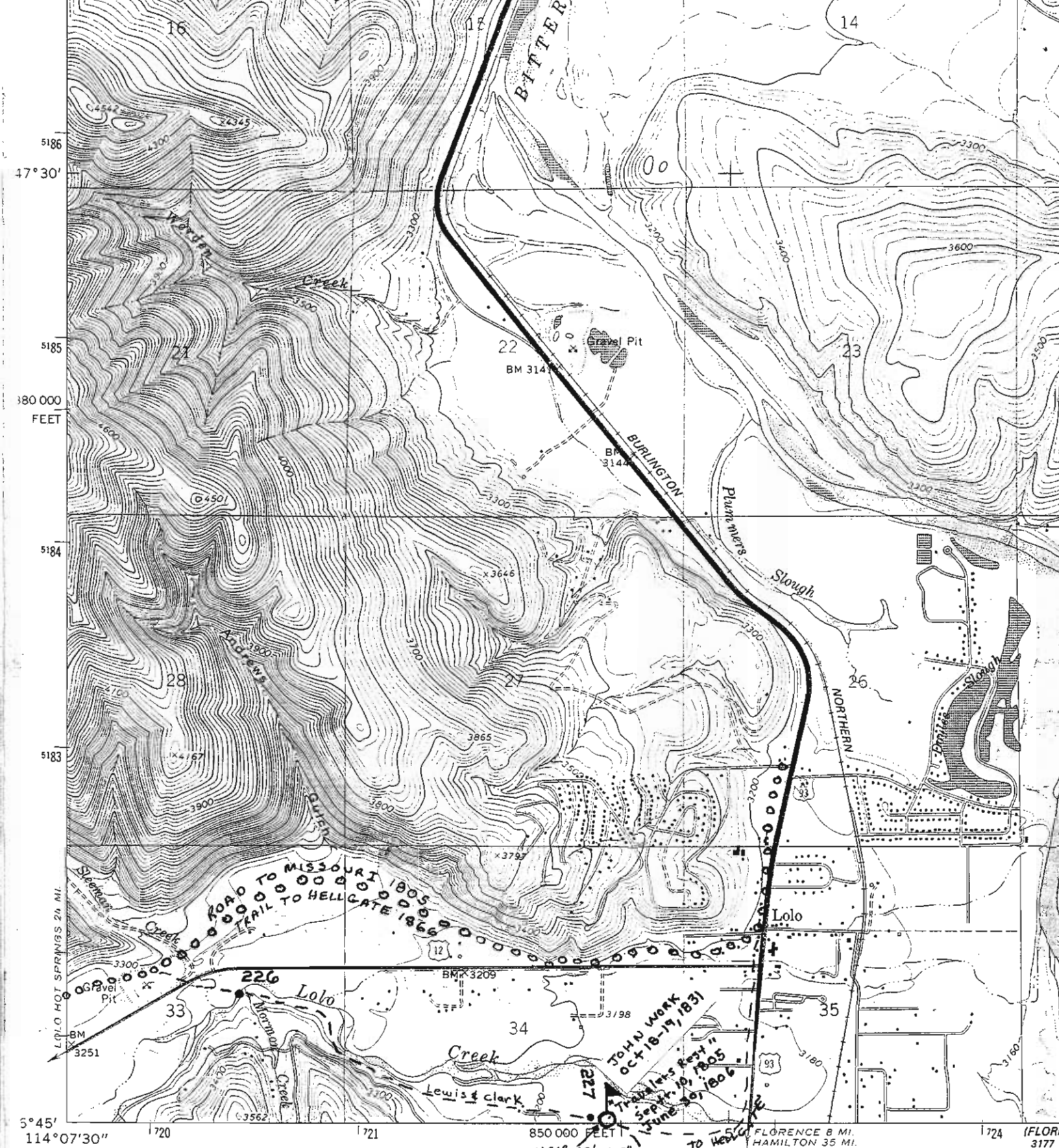
•PIONEER TRAIL RESEARCH• Pg 24
FOLDER F109



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Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1961. Field checked 1964

Polyconic projection. 1927 North American datum
10,000-foot grid based on Montana coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
zone 11, shown in blue

Red tint indicates area in which only landmark buildings are shown

722117 E
5181272 N

N46° 45'00.5"
W114° 05' 31.5"

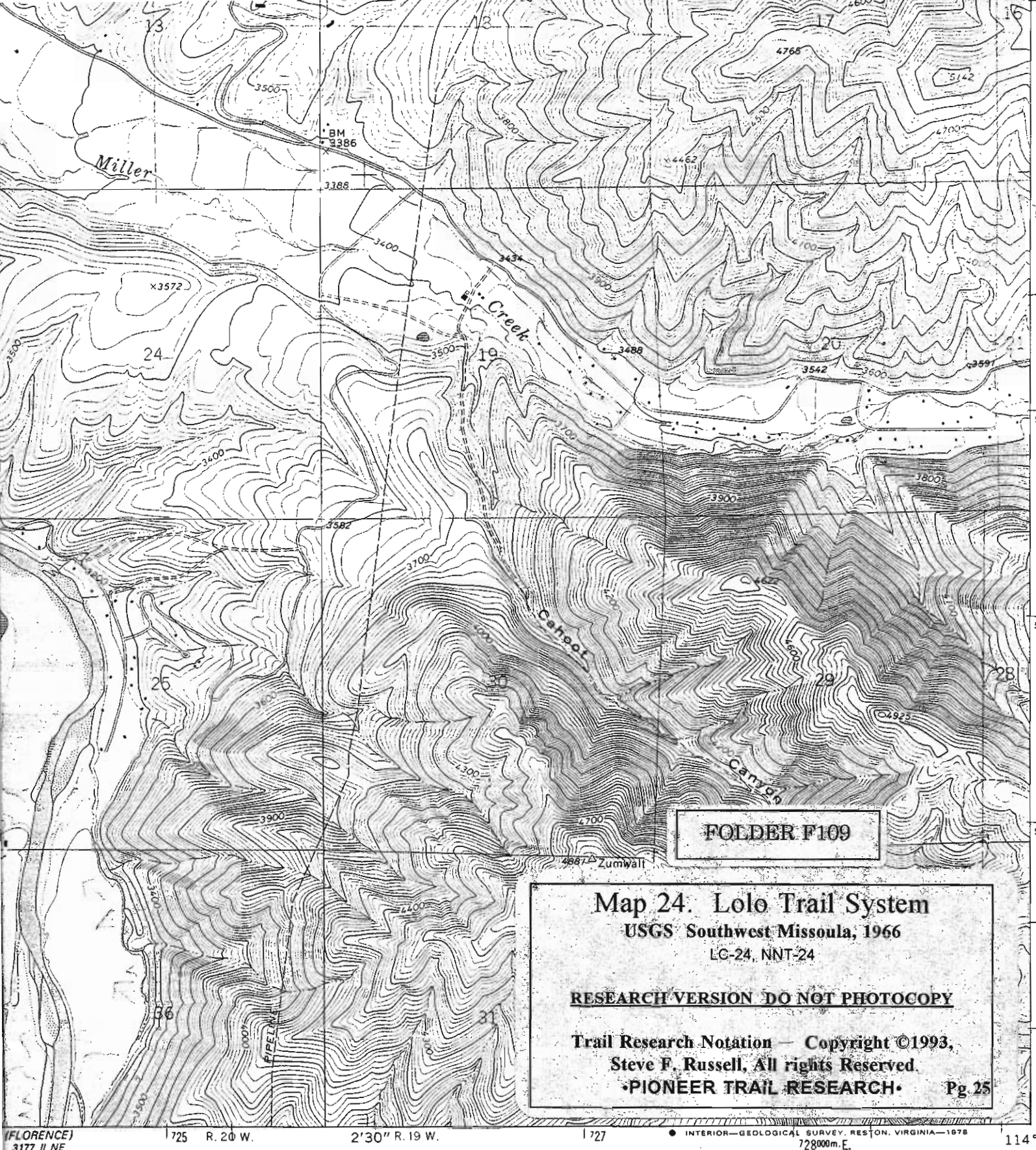
GN MN
2°08' 38 MILS
19° 338 MILS

UTM GRID AND 1978 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1

1 ½ 0
1000 0 1000 2000 3000
1 .5 0

CONTOUR INTE
DOTTED LINES REPRESI
NATIONAL GEODETIC VE


Miller
Creek
Cahoot
Canyon
Zumwalt
BM 3386
3388
3572
3582
3434
3488
3542
3591
4462
4766
5142
4622
4923
4967
FOLDER F109
Map 24. Lolo Trail System
USGS Southwest Missoula, 1966
LC-24, NNT-24
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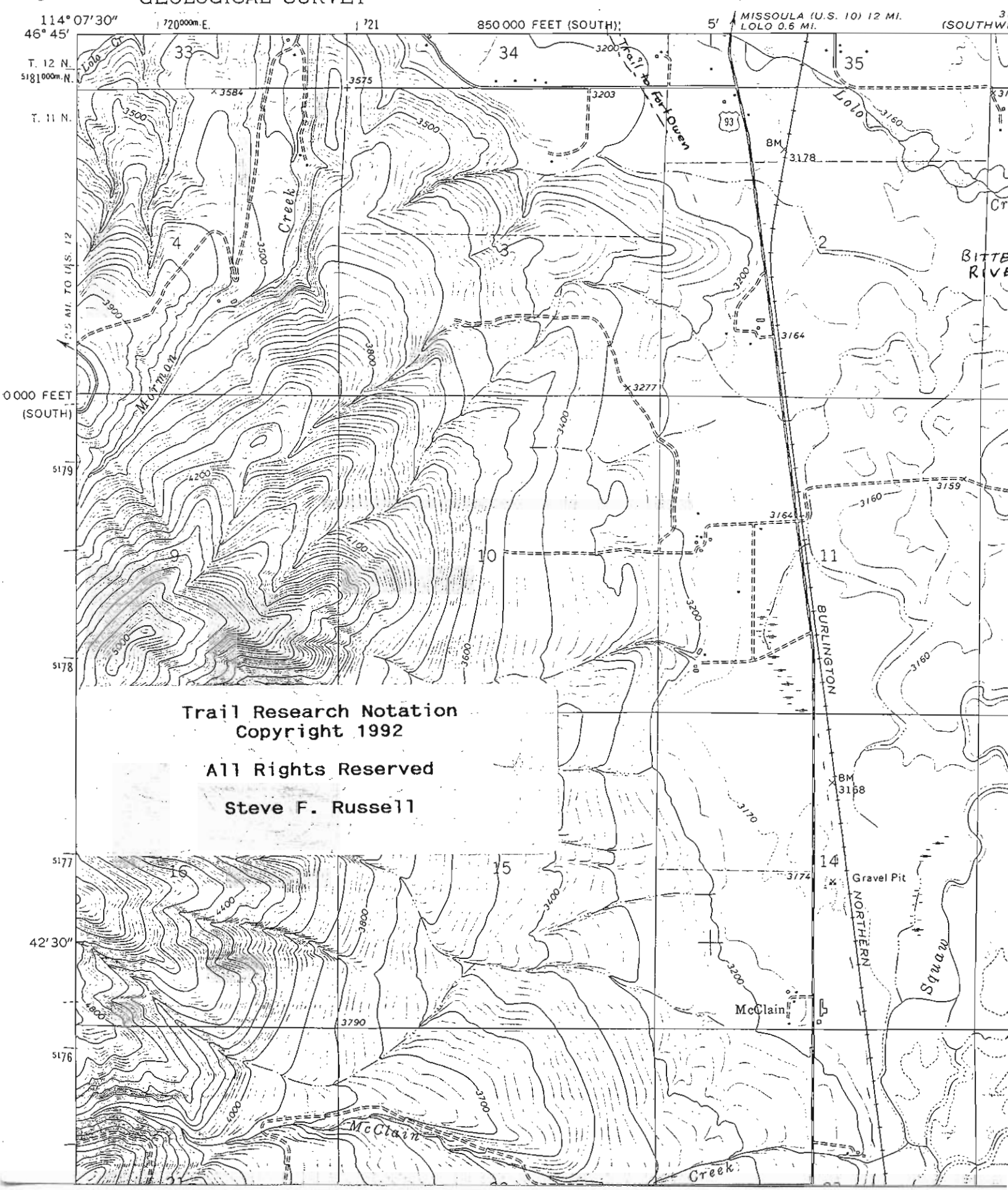
•PIONEER TRAIL RESEARCH• Pg.25
(FLORENCE)
3177 II NE
725
R. 20 W.
2'30" R. 19 W.
727
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1978
728000m.E.
5187
5186
5185
5184
5183
46
114°00'
ALE 1:24 000
0 1 MILE
3000 4000 5000 6000 7000 FEET
0 1 KILOMETER
INTERVAL 20 FEET
PRESENT 5-FOOT CONTOURS
IC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U. S. Route
MONTANA
QUADRANGLE LOCATION
SOUTHWEST MISSOULA, MONT.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



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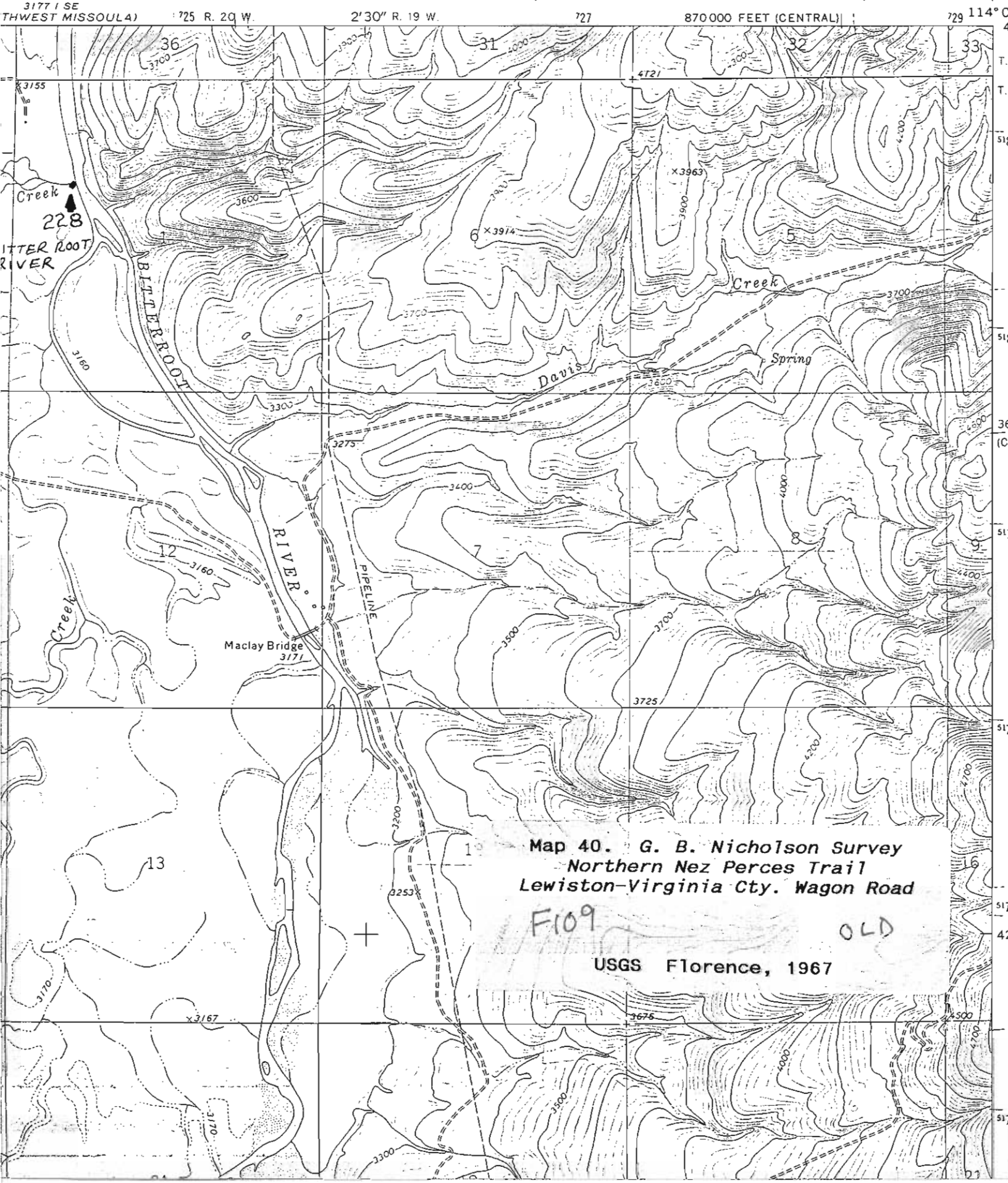
FLORENCE QUADRANGLE
MONTANA
7.5 MINUTE SERIES (TOPOGRAPHIC)



Map 40. *G. B. Nicholson Survey*
Northern Nez Perces Trail
Lewiston-Virginia Cty. Wagon Road

F109 OLD

USGS Florence, 1967

MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #2, Maps LTS 25-31, Pages 27-33.

1. **Northern nez Perces Trail of 1805-06, southern route, Weippe Prairie eastward to Willow Ridge, Maps LC 1-7.**

2. **Lewis and Clark Route from Weippe Prairie eastward to Willow Ridge, Maps LC 1-7.**

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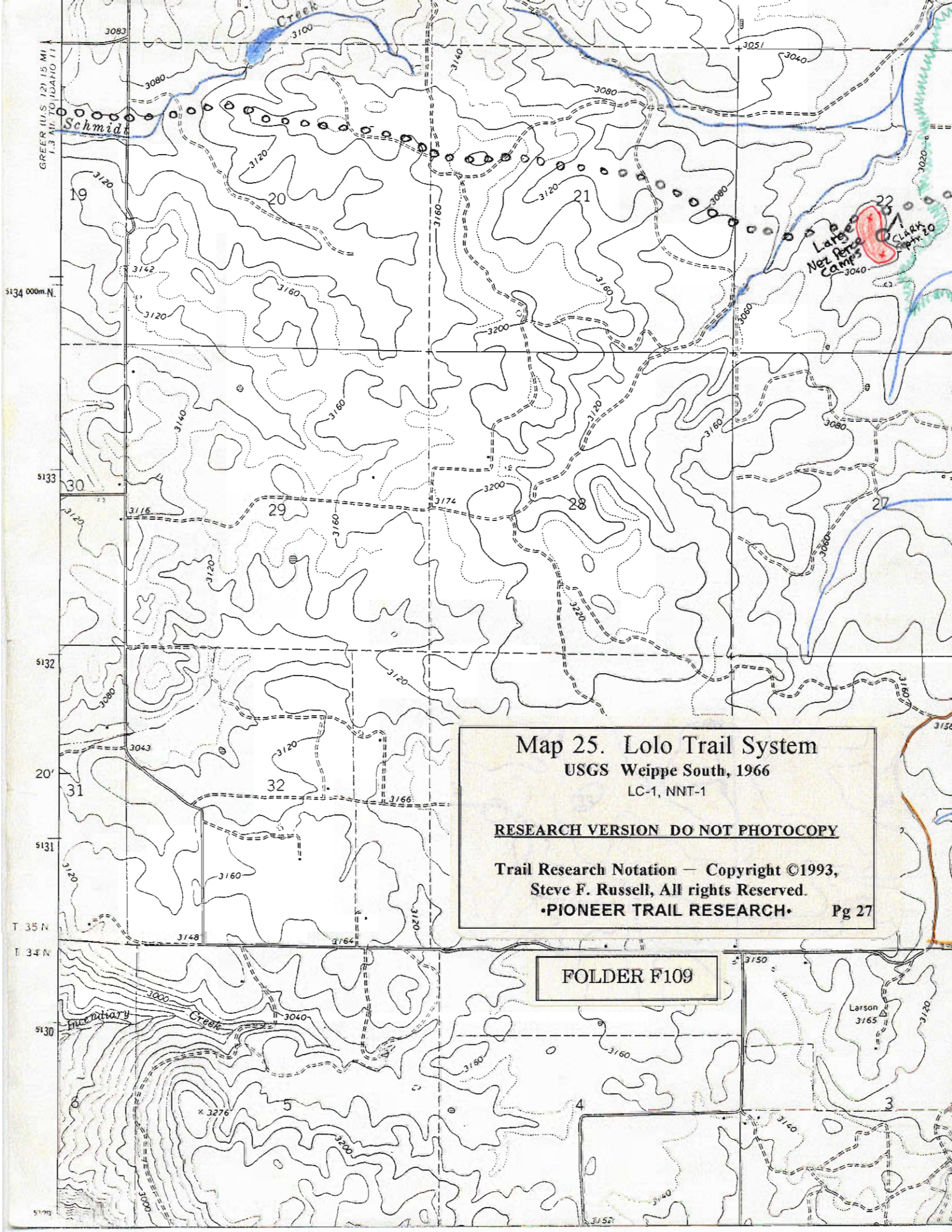

Map 25. Lolo Trail System

USGS Weippe South, 1966

LC-1, NNT-1

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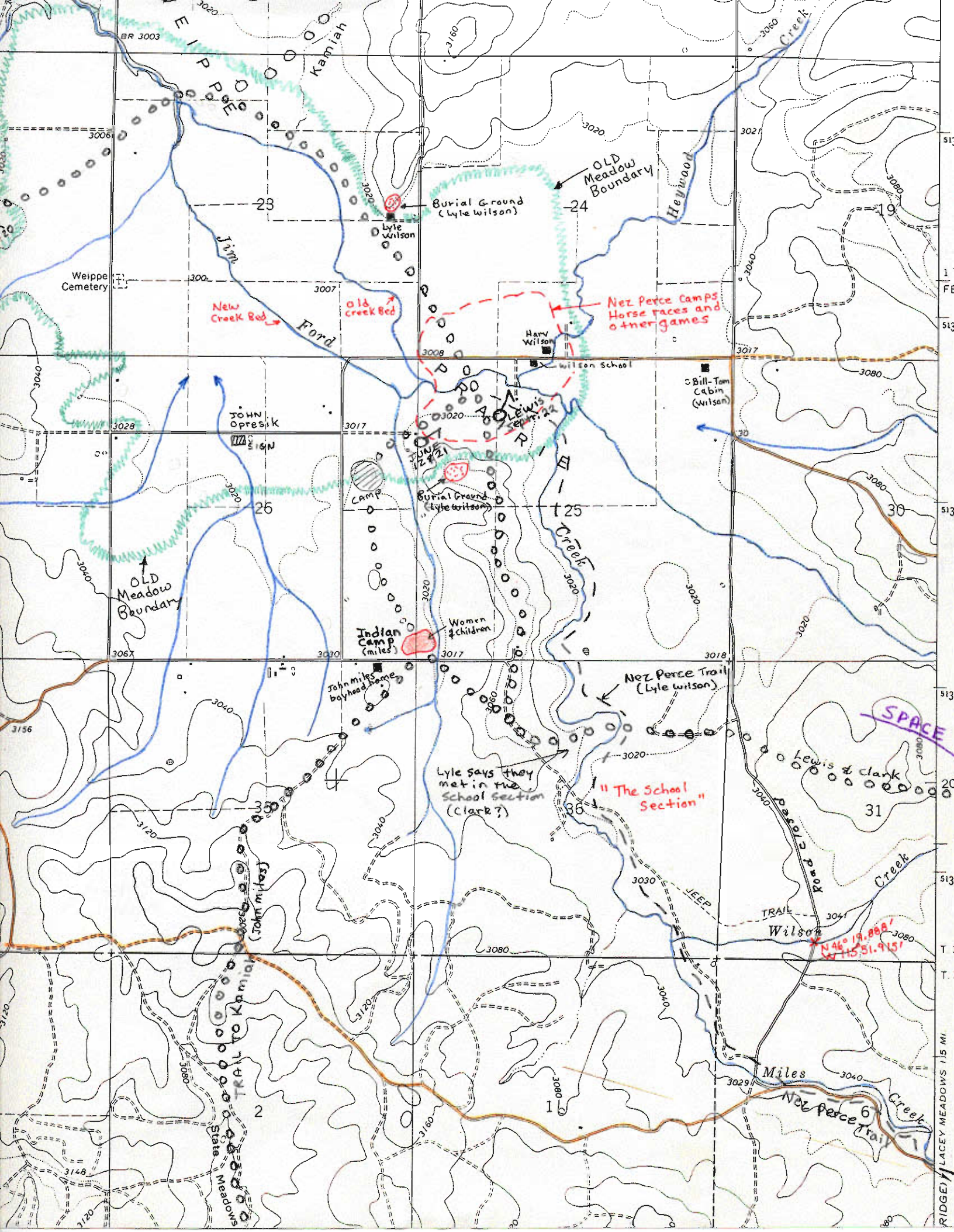
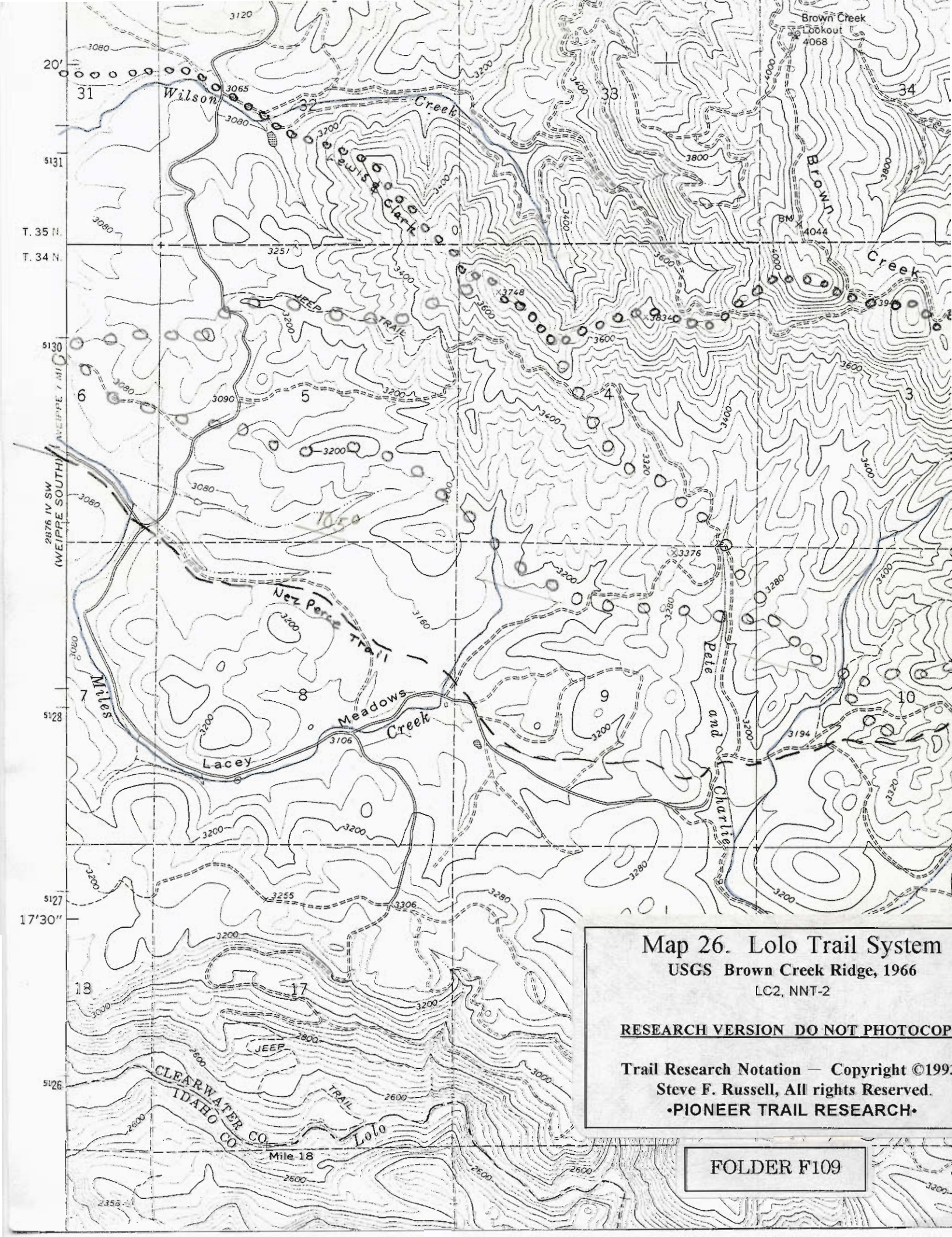
FOLDER F109


Kamiah
BR 3003
Creek
OLD Meadow Boundary
Burial Ground (Lyle Wilson)
Lyle Wilson
Heywood
Jim
Weippe Cemetery
New Creek Bed
old creek Bed
Ford
Nez Perce Camps Horse races and other games
Harry Wilson
Wilson School
Bill-Tom Cabin (Wilson)
JOHN Opresik
SIGN
JUNE 21
Camp
Burial Ground (Lyle Wilson)
Creek
OLD Meadow Boundary
Indian Camp (miles)
Women & children
John miles boyhood home
Nez Perce Trail (Lyle Wilson)
SPACE
Lewis & clark
Lyle says they met in the school section (clark?)
" The School Section"
Road closed
Creek
JEEP TRAIL
Wilson
N46° 19.888'
W115° 51.915'
(John miles)
Kamiah
State Meadows
Miles
Nez Perce Trail
Creek
LACEY MEADOWS 15 MI
RIDGE)



Map 26. Lolo Trail System

USGS Brown Creek Ridge, 1966

LC2, NNT-2

RESEARCH VERSION DO NOT PHOTOCOP

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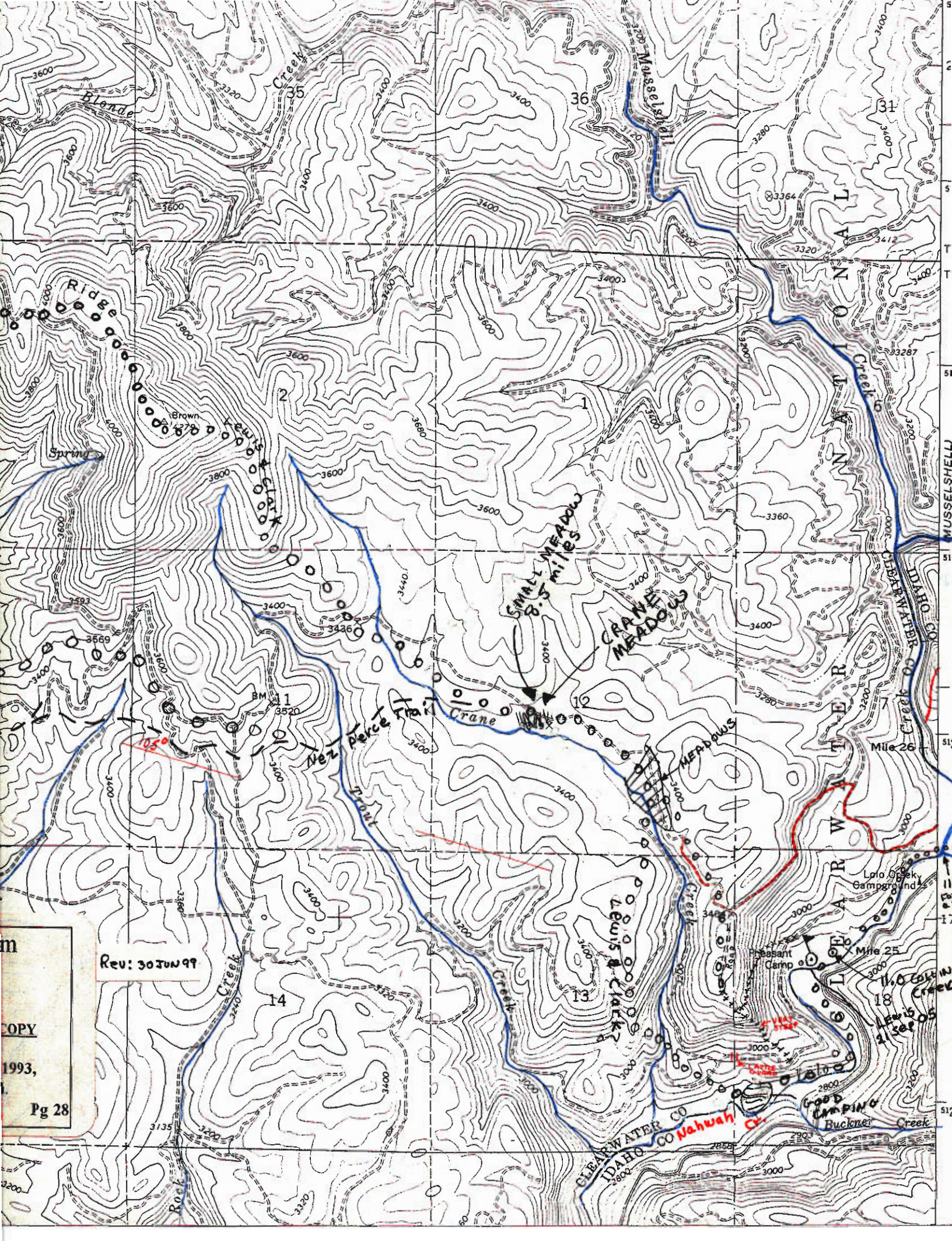
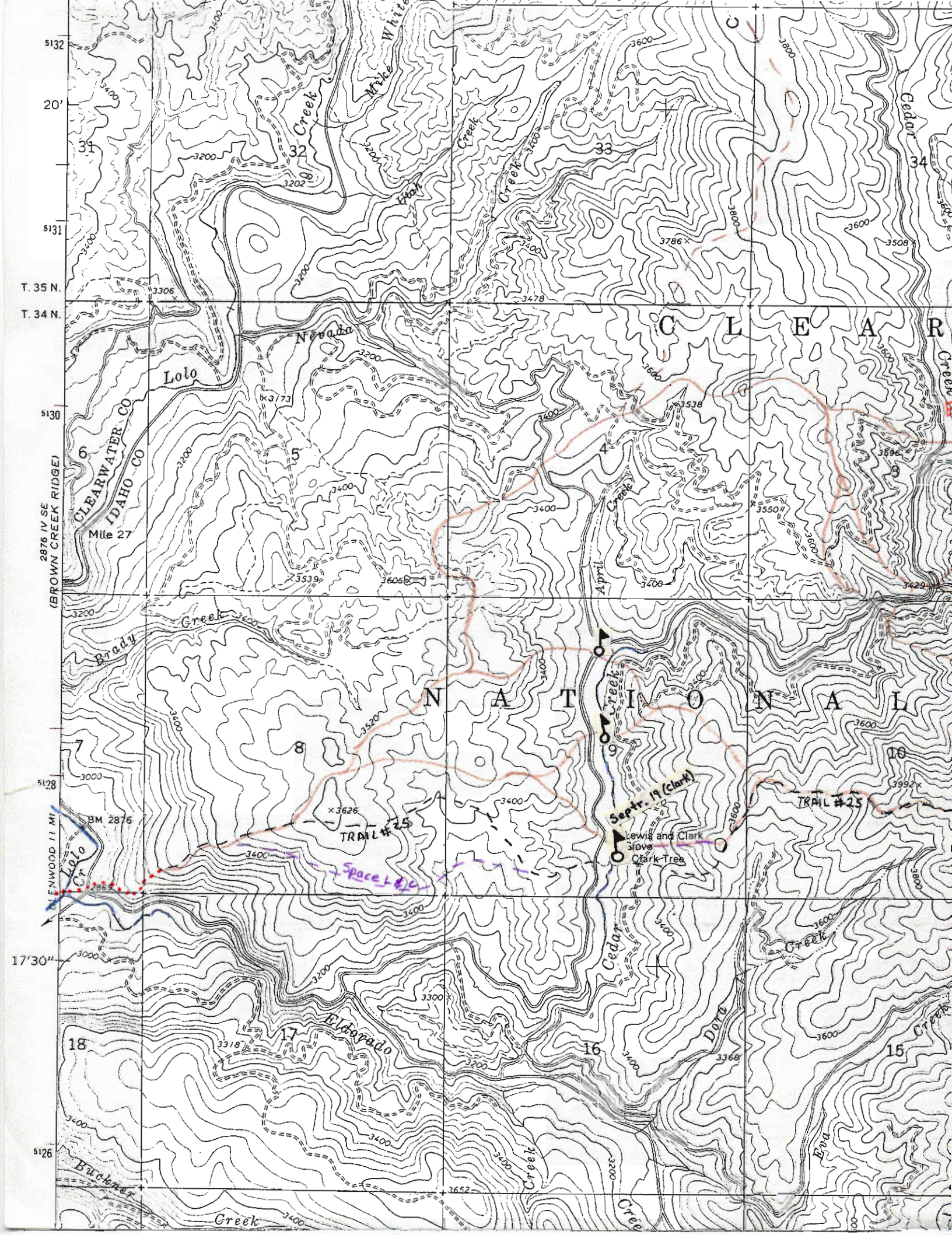
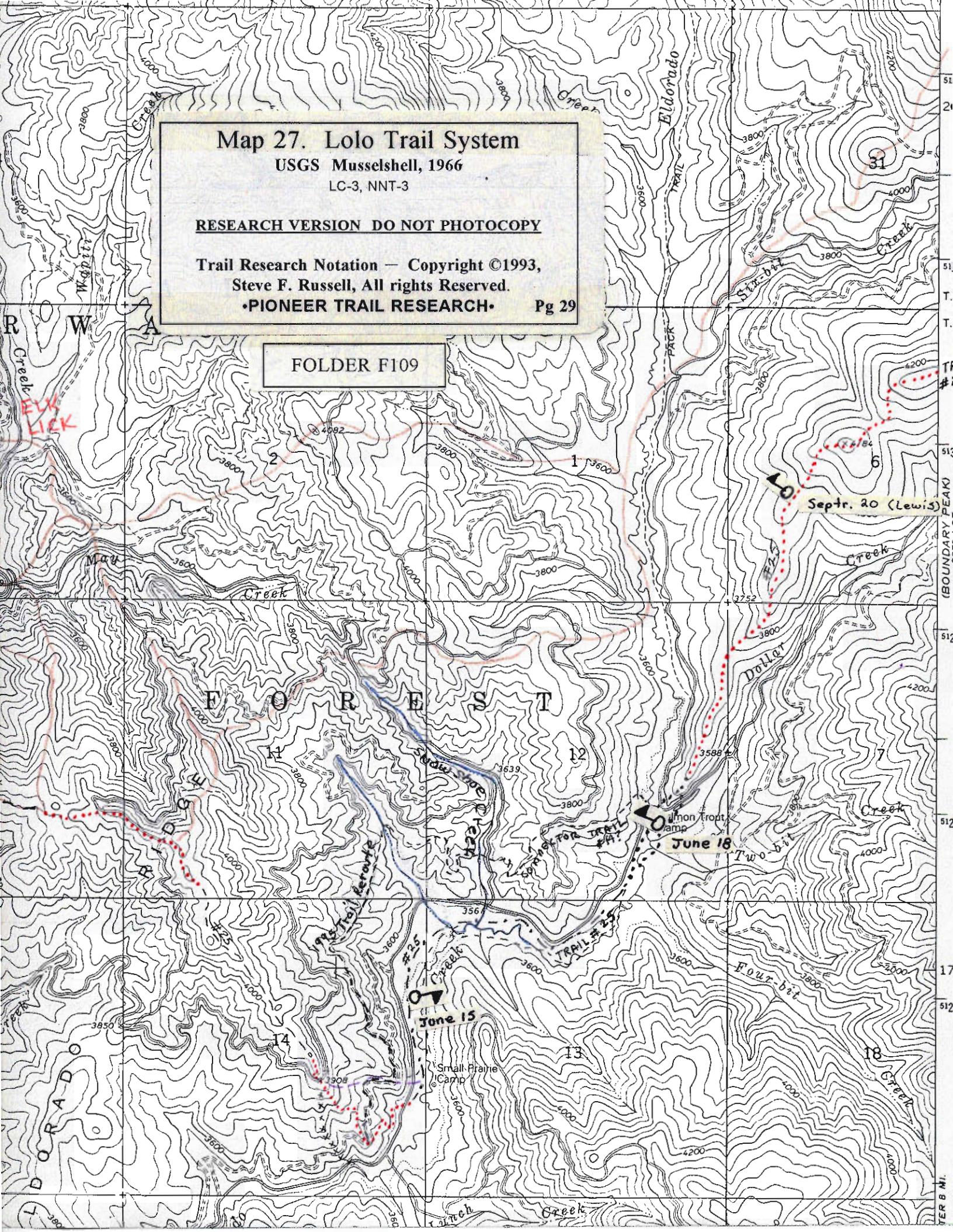
•PIONEER TRAIL RESEARCH•

FOLDER F109


Ridge
Blonde
Creek
Mussel Shell
Brown
Spring
Lewis & Clark
SMALL MEADOW
0.5 miles
CRANE MEADOWS
Crane
Nez Perce Trail
Trout
Creek
MEADOWS
Mile 26
Mile 25
Lolo Creek Campground
Pleasant Camp
Lewis & Clark
Good Camping
Buckner Creek
Nahwah Cr
CLEARWATER CO
IDAHO CO
NATIONAL
FOREST
MUSSELSHELL
Rock
Creek
BM
3520
105°
Rev: 30 JUN 99
COPY
1993,
Pg 28


T. 35 N.
T. 34 N.
CLEARWATER CO
IDAHO CO
Mile 27
Lolo
Nevada
Creek
Brady
Creek
April
Creek
Cedar
Creek
Eldorado
Creek
Dora
Creek
Era
Creek
Buckner
Creek
CLEAR
NATIONAL
Septr. 19 (Clark)
Lewis and Clark
Grove
Clark Tree
TRAIL #25
TRAIL #25
BM 2876
Lolo Cr
Space to C
2876 IV SE
(BROWN CREEK RIDGE)
17'30"


Map 27. Lolo Trail System
USGS Musselshell, 1966
LC-3, NNT-3
RESEARCH VERSION DO NOT PHOTOCOPY
Trail Research Notation — Copyright ©1993,
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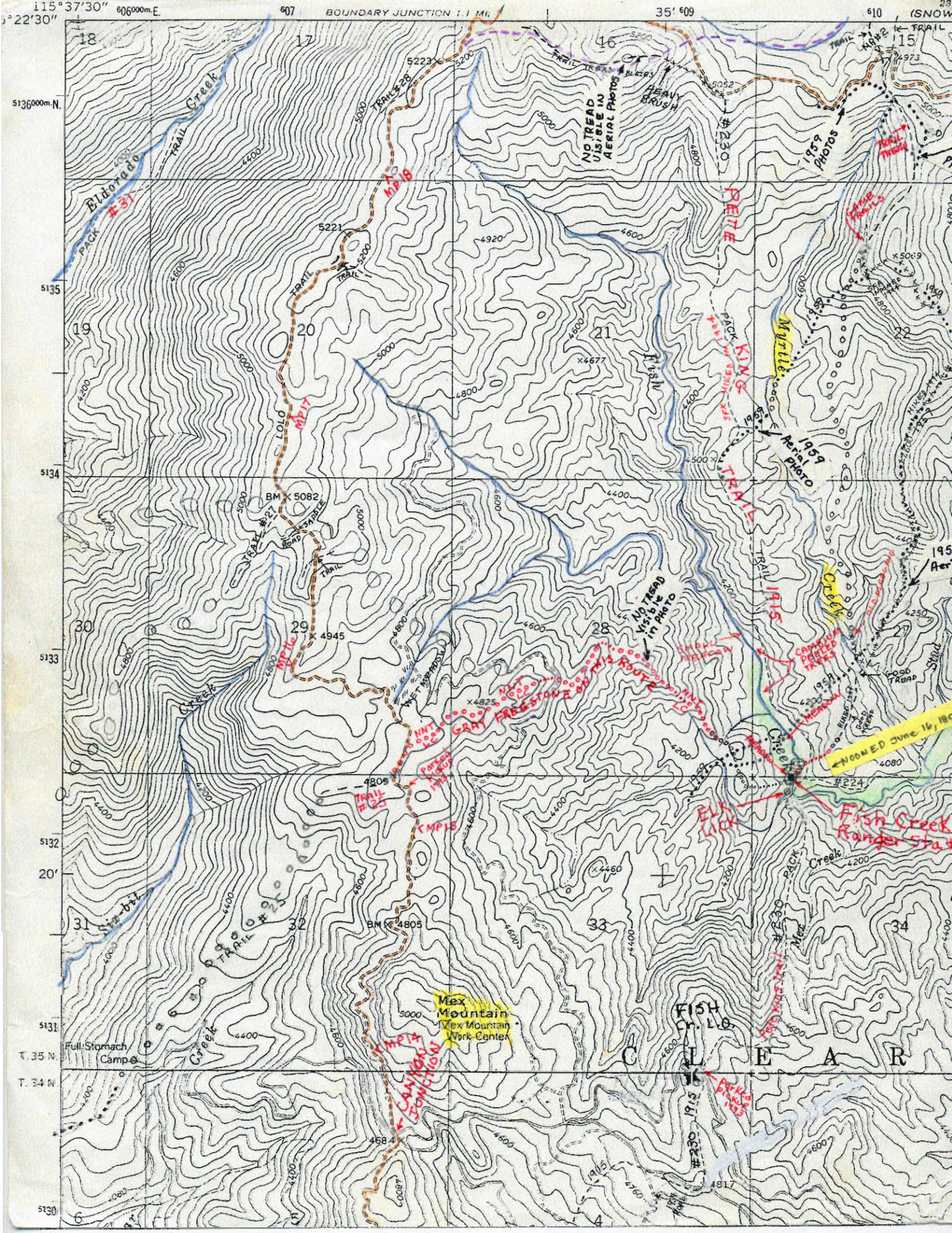
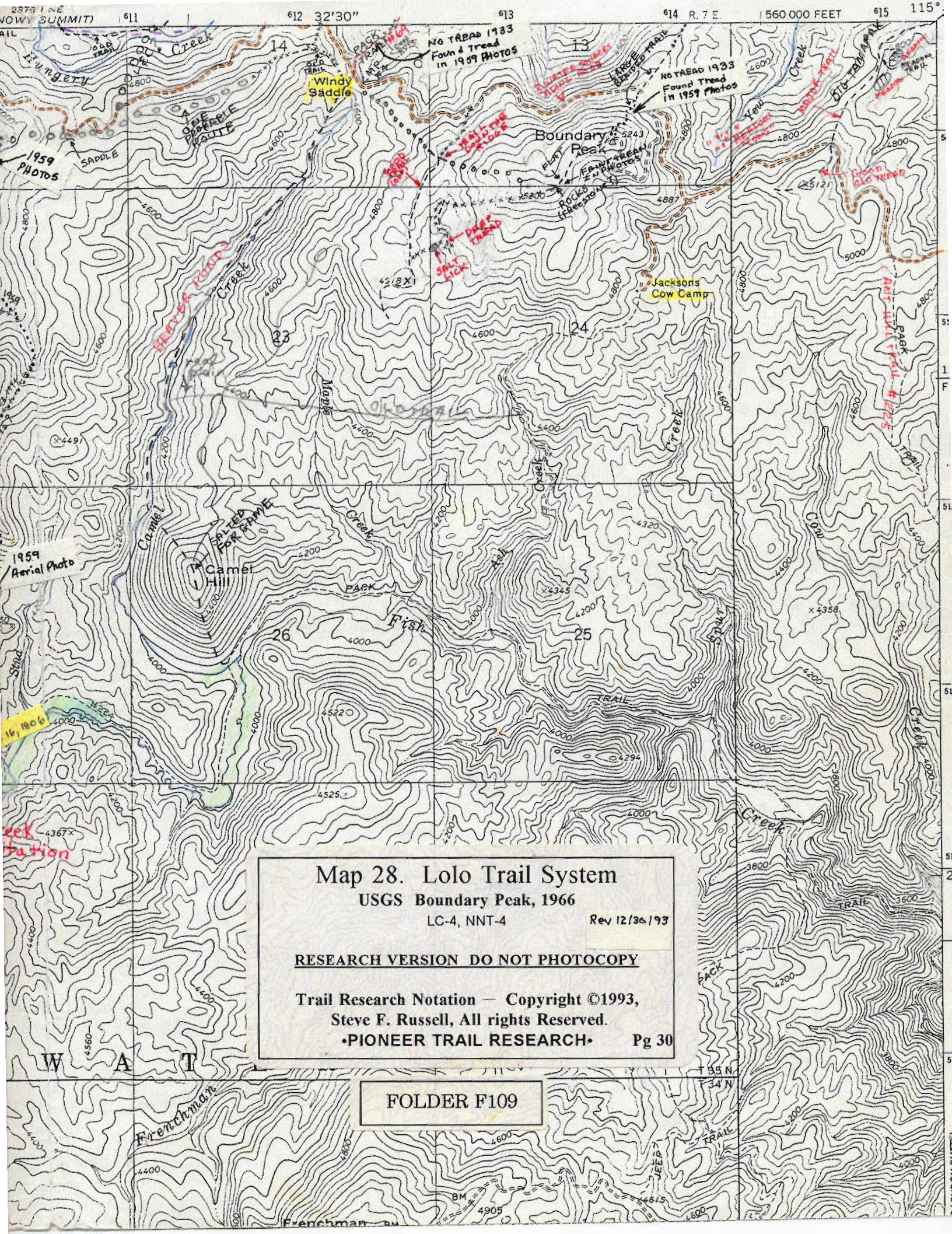
•PIONEER TRAIL RESEARCH• Pg 29
FOLDER F109
Eldorado Trail
Six-bit Creek
Elk Lick Creek
May Creek
Septr. 20 (Lewis)
Dollar Creek
Two-bit Creek
Four-bit Creek
June 18
Simon Trout Camp
June 15
Small Prairie Camp
Ridge
Forest
Boundary Peak


115°37'30"
606000m.E.
607
BOUNDARY JUNCTION 1.1 MI.
35'
609
610
(SNOW
TRAIL
#232
4973
5052
5000
5223
5200
TRAIL #28
BLAZES
HEAVY BRUSH
NO TREAD VISIBLE IN AERIAL PHOTOS
1959 PHOTOS
TRAIL THRU
Eldorado
#31
PACK
TRAIL
Creek
MP 18
5221
5200
TRAIL
4920
4600
4800
4400
4200
5000
5069
GAME TRAILS
PETE
KING
TRAIL
PACK
HIKED 1959
SEE 1959 Aerial PHOTO
Myrtle
Fish
×4677
1959
Aerial PHOTO
×5009
1959
HIKED 1959
5136000m.N.
5135
5134
5133
5132
20'
19
20
21
22
30
29
×4945
28
BM ×5082
TRAIL #27
SADDLE
ROAD
TRAIL
MP 17
LOLO
MP 16
Creek
WET MEADOW
NO TREAD Visible in PHOTO
GRAY FARESTON & SOUTH ROUTE
KNT LC
×4825
TIMBER
1959
Aerial
CAMPSITE PEELED TREES
GOOD TREAD
Creek
Creek
MEADOW
NOONED June 16, 19
4080
#224
4809
TRAIL #25
Parked Pickup 1963
MP 15
ELK LICK
Fish Creek Ranger Sta
Creek
PACK
×4460
31
32
33
34
BM ×4805
TRAIL #25
MP 14
CANYON JUNCTION
Mex Mountain
Mex Mountain Work Center
FISH Cr. L.O.
C L E A R
Full Stomach Camp
Creek
T. 35 N.
T. 34 N
4584
4817
1915
#230
Parked Pickup 1963
5130
6
5
4


Windy Saddle
Boundary Peak
Jacksons Cow Camp
Camel Hill
SALTED FOR ELAND
SADDLE
ONE POOR ELE ROUTE
1959 PHOTOS
NO TREAD 1933 Found Tread in 1959 PHOTOS
FAINT TREAD 1959 PHOTOS
DEER TREAD
SALT LICK
ROCKS (FREESTONE)
GOOD OLD TREED
ANT HILL TRAIL #225
1959 Aerial Photo
Map 28. Lolo Trail System
USGS Boundary Peak, 1966
LC-4, NNT-4
Rev 12/30/93
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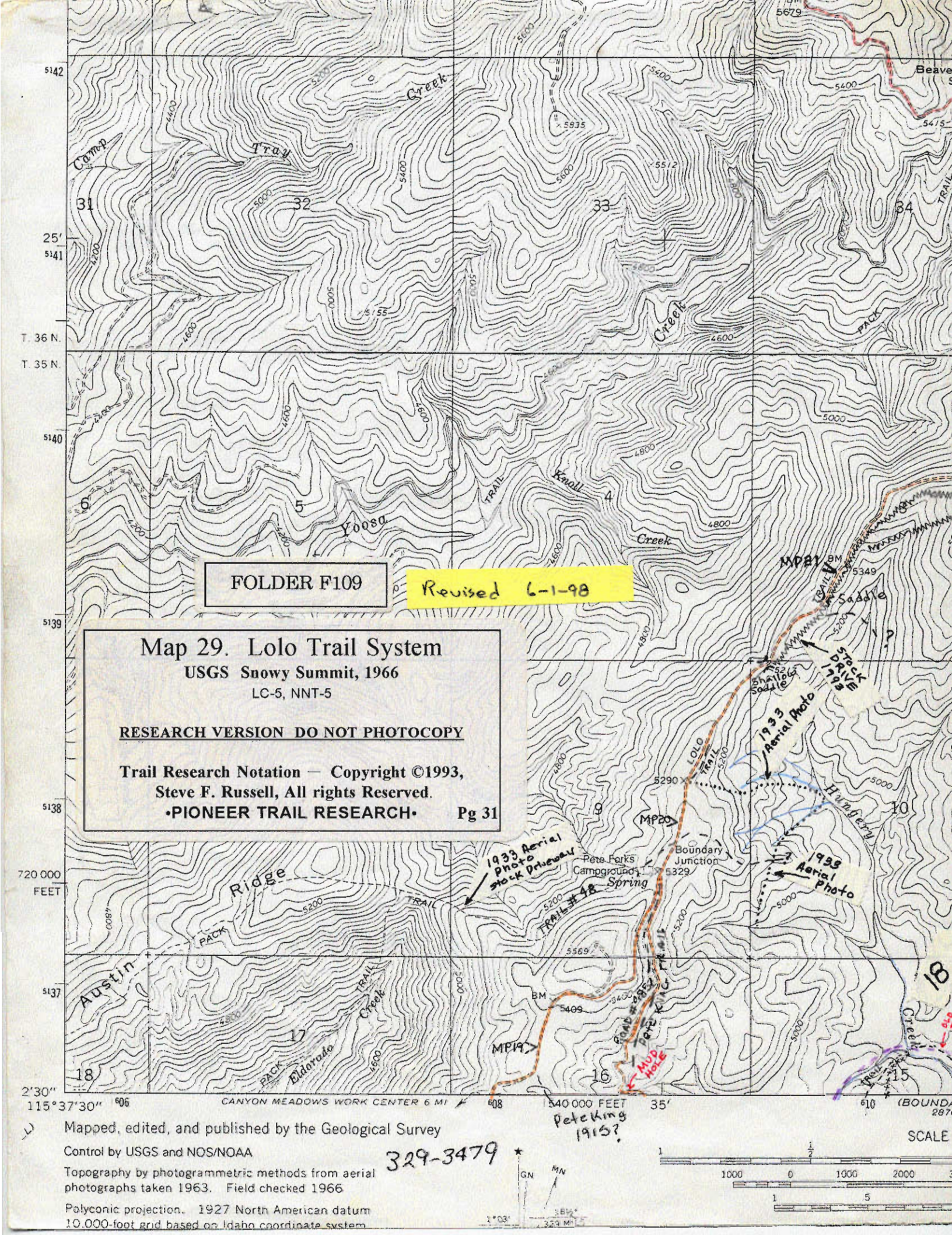
•PIONEER TRAIL RESEARCH• Pg 30
FOLDER F109


FOLDER F109
Revised 6-1-98
Map 29. Lolo Trail System
USGS Snowy Summit, 1966
LC-5, NNT-5
RESEARCH VERSION DO NOT PHOTOCOPY
Trail Research Notation — Copyright ©1993,
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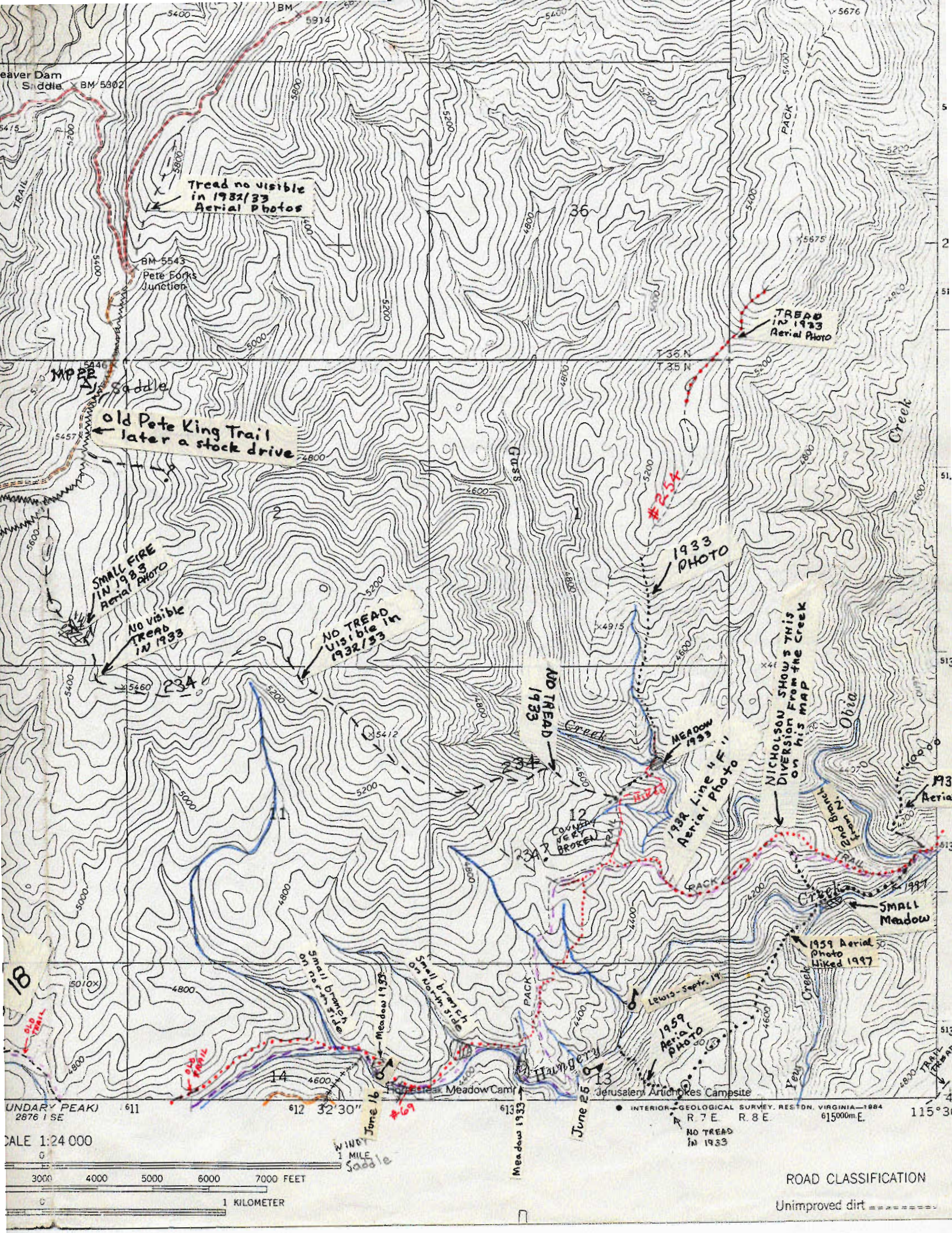
•PIONEER TRAIL RESEARCH• Pg 31
1933 Aerial Photo
1933 Aerial Photo stock Driveway
Pete Parks Campground
Boundary Junction
Spring
TRAIL #48
LOLO TRAIL
STOCK DRIVE TRAIL
Saddle
Ridge
Austin
Eldorado
Creek
Knoll
Yoosa
Hungery
MP21
MP20
MP19
MUD HOLE
Pete King 1915?
329-3479
CANYON MEADOWS WORK CENTER 6 MI
Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs taken 1963. Field checked 1966
Polyconic projection. 1927 North American datum
10,000-foot grid based on Idaho coordinate system
SCALE



UNDARY PEAK)
2876 I SE

611 612 32'30" 613 615000m.E. 115°30

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984

CALE 1:24 000

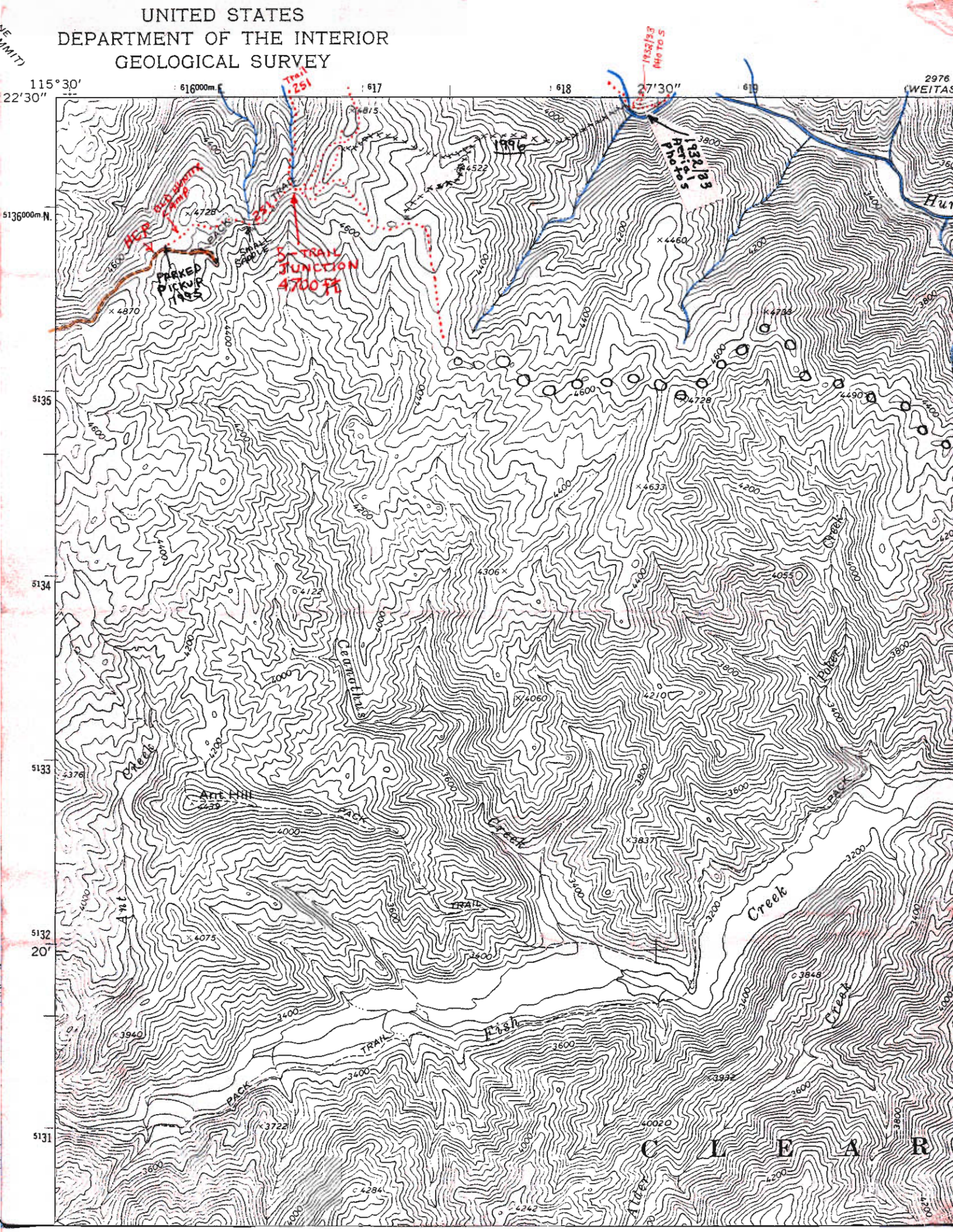
0 1 MILE

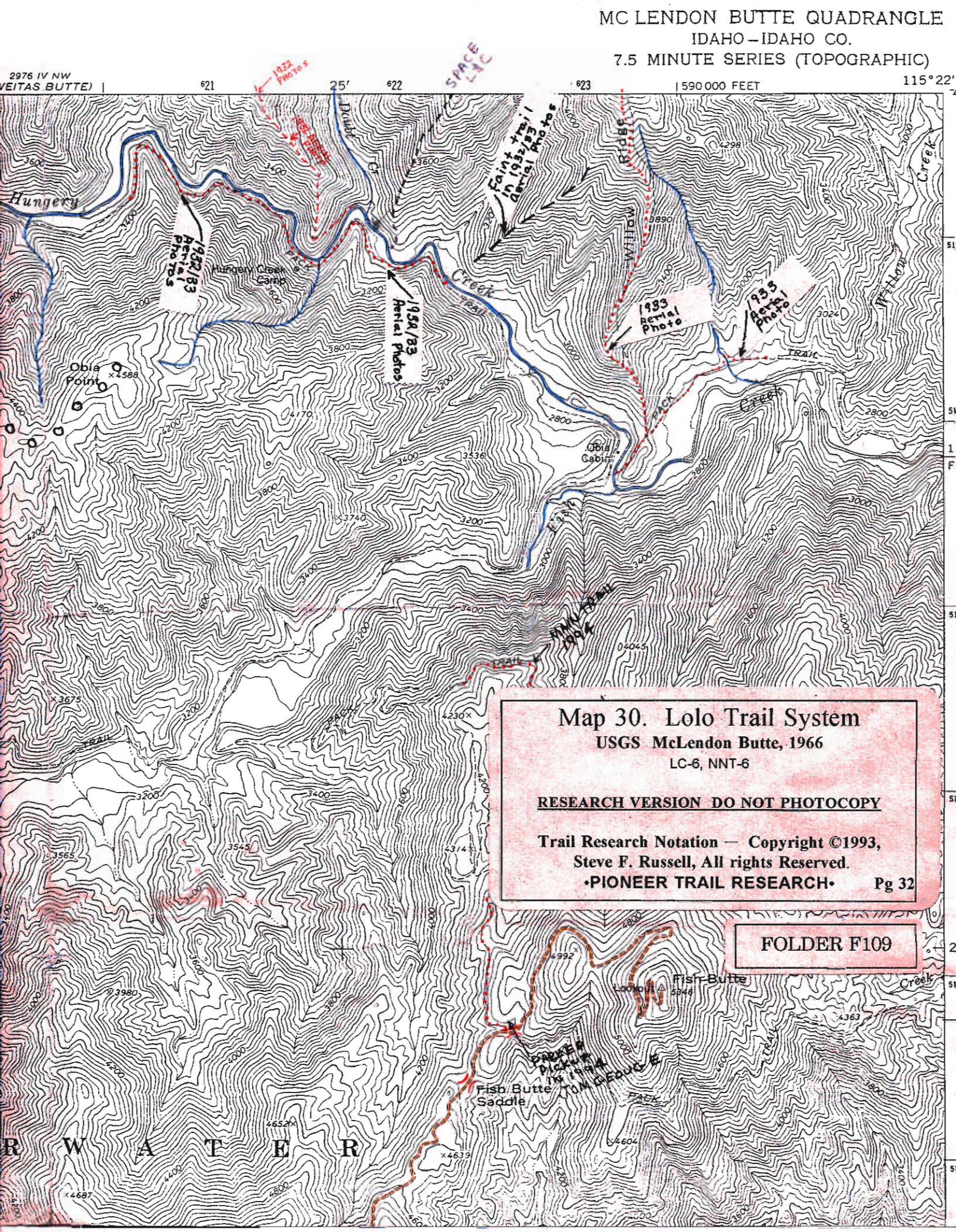
3000 4000 5000 6000 7000 FEET

0 1 KILOMETER

ROAD CLASSIFICATION

Unimproved dirt


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
115°30'
22'30"
616000m.E.
617
618
27'30"
619
5136000m.N.
5135
5134
5133
5132
20'
5131
Trail 251
TRAIL JUNCTION 4700 FT
PARKED PICKUP 1995
HCP
BLD-WHITE 2.4mp
PACK
Small Saddle
1996
1994 Aerial Photos
Ant Hill
Creek
Ant
Coarnuthus
Fish
Alder
Creek
Pulver
Creek
Creek
TRAIL
PACK
C L E A R



Map 30. Lolo Trail System

USGS McLendon Butte, 1966

LC-6, NNT-6

RESEARCH VERSION DO NOT PHOTOCOPY

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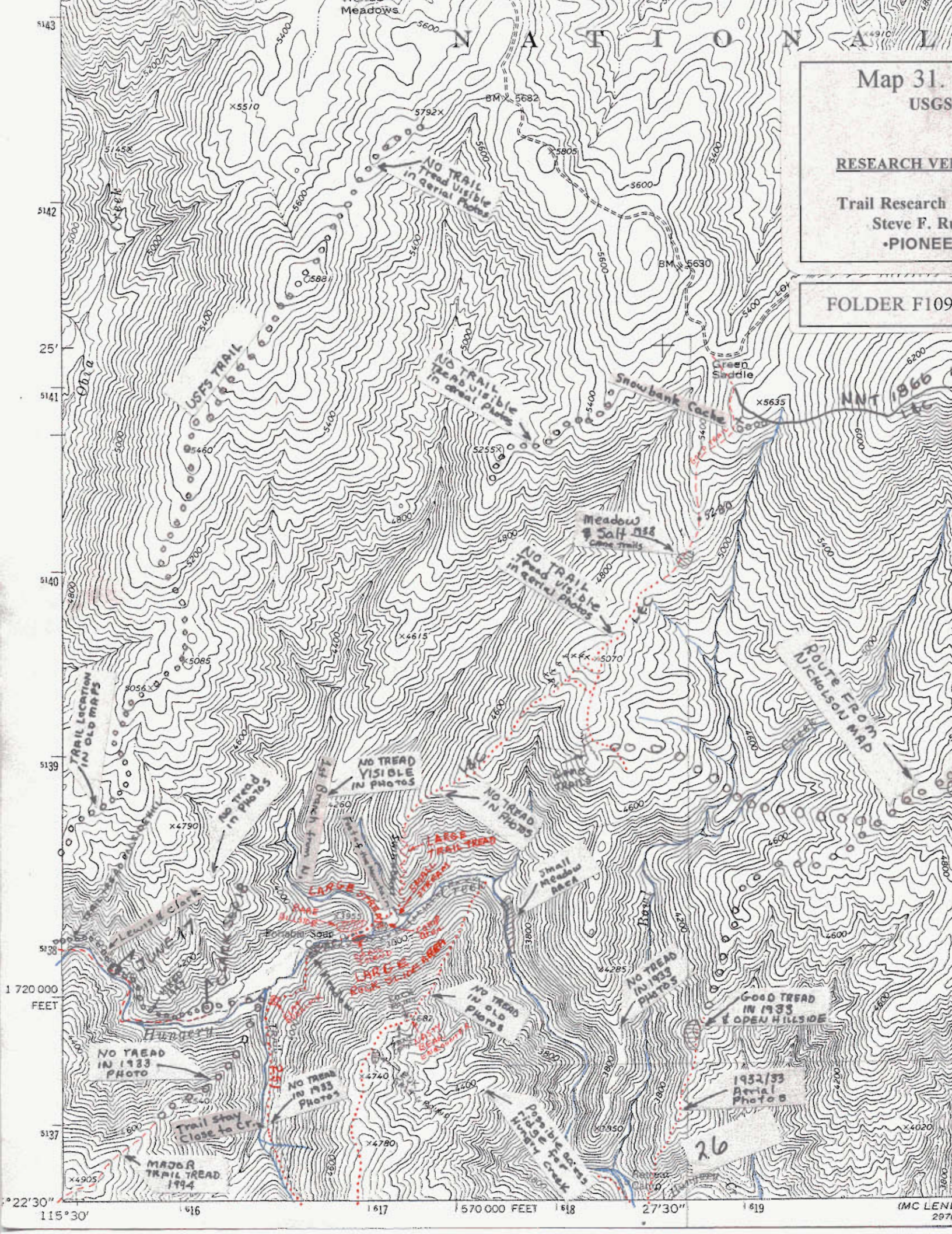
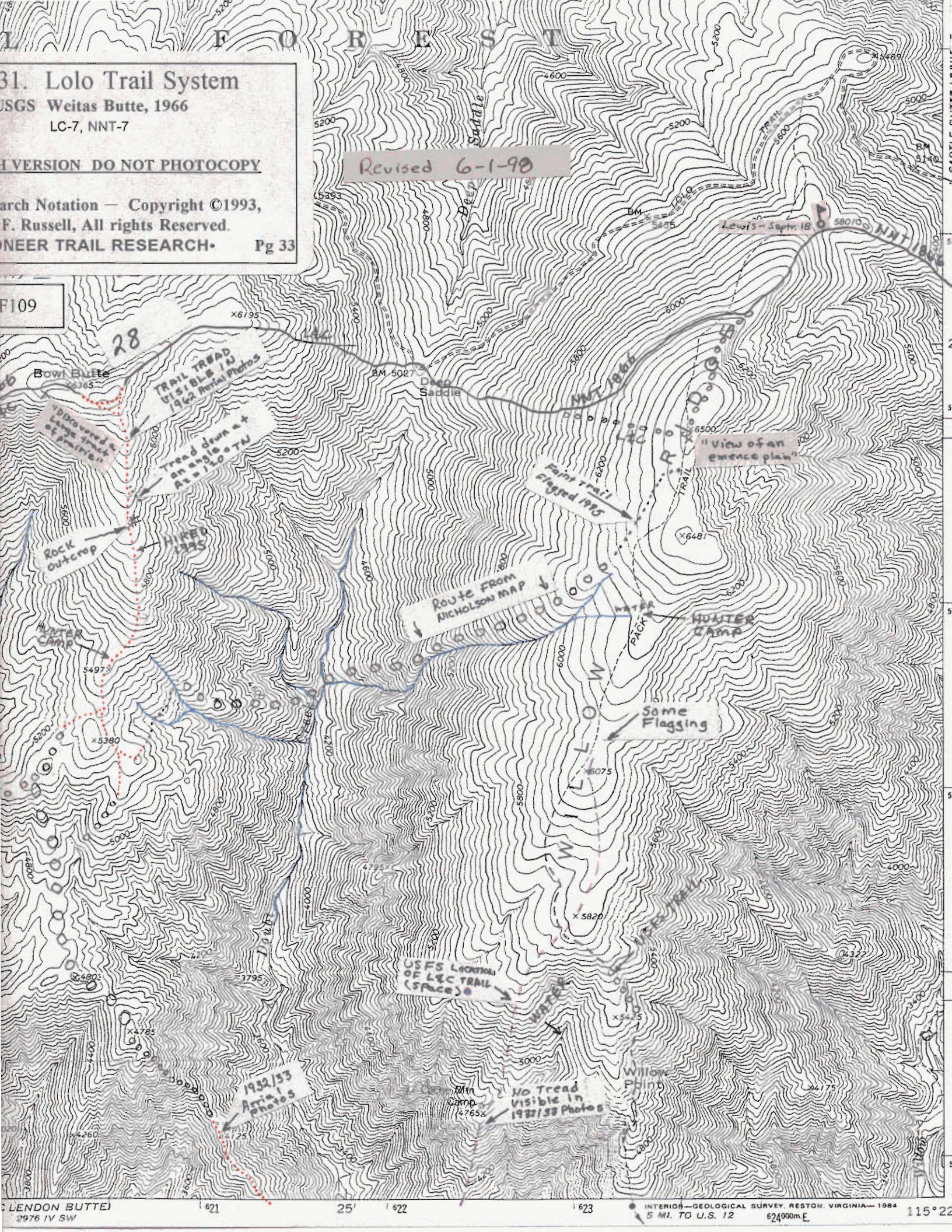
•PIONEER TRAIL RESEARCH• **Pg 32**

FOLDER F109


Map 31.
USGS
RESEARCH VE
Trail Research
Steve F. Ru
•PIONEE
FOLDER F109
NATIONAL
Meadows
BM 5682
BM 5630
5792x
5805
5588
5510
5145x
5460
5255
5635
Green Saddle
Snowbank Cache
NNT 1966
Ohio Creek
USFS TRAIL
NO TRAIL Tread visible in aerial photos
NO TRAIL Tread visible in aerial photos
NO TRAIL Tread visible in aerial photos
Meadow # Salt 1988 Game Trails
5280
4615
5070
5085
5056
4790
TRAIL LOCATION IN OLD MAPS
NO TREAD VISIBLE IN PHOTOS
NO TREAD IN PHOTOS
NO TREAD IN PHOTOS
Game Trails
ROUTE FROM NICHOLSON MAP
LARGE TRAIL TREAD
SMALL TREAD
LARGE AREA
FIRE BUILDER 1955
CAMP SITE
LARGE ROCK SLIDE AREA
Small Meadow Area
Forkable Spar Creek
Lewis & Clark
Hungery
Creek
Bear
4285
NO TREAD IN 1933 PHOTOS
NO TREAD IN OLD PHOTOS
Good TREAD IN 1933 & OPEN HILLSIDE
1932/33 Aerial Photos
NO TREAD IN 1933 PHOTO
NO TREAD IN 1933 PHOTOS
Trail stays close to cr.
MAJOR TRAIL TREAD 1994
Possible access ridge for Hungry Creek
4740
4780
4905
4950
4020
26
1 720 000 FEET
570 000 FEET
115°30'
22'30"
27'30"
5143
5142
5141
5140
5139
5138
5137
25'
1616
1617
1618
1619


L F O R E S T
31. Lolo Trail System
USGS Weitas Butte, 1966
LC-7, NNT-7
H VERSION DO NOT PHOTOCOPY
arch Notation — Copyright ©1993,
F. Russell, All rights Reserved.
ONEER TRAIL RESEARCH• Pg 33
F109
Revised 6-1-98
28
Bowl Butte
6365
TRAIL TREAD VISIBLE IN 1962 Aerial Photos
"Discovered a large tract of prairie."
Tread down at an angle at 1.1 LOLO TW
Rock outcrop
HIKED 1995
HUNTER CAMP
5497
Deep Saddle
BM 5027
NNT 1866
Faint trail flagged 1995
"View of an emence plain"
Route from Nicholson Map
HUNTER CAMP
Some Flagging
6075
5820
USFS Location of LRC Trail (Space)
Willow Point
1932/33 Aerial photos
No Tread Visible in 1932/33 Photos
Lewis - Sept. 18
5801
BM 5140
BM 5485
5393
6481
6195
5380
4785
4260
1795
4322
4175
LENDON BUTTE)
2976 IV SW
621
25'
622
623
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984
5 MI. TO U.S. 12
624000m.E
115°22

MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #3, Maps LTS 32-35, Pages 35-38.

1. **Lewis and Clark Route, diversion to Lochsa River and Powell, maps LC 25-28.**

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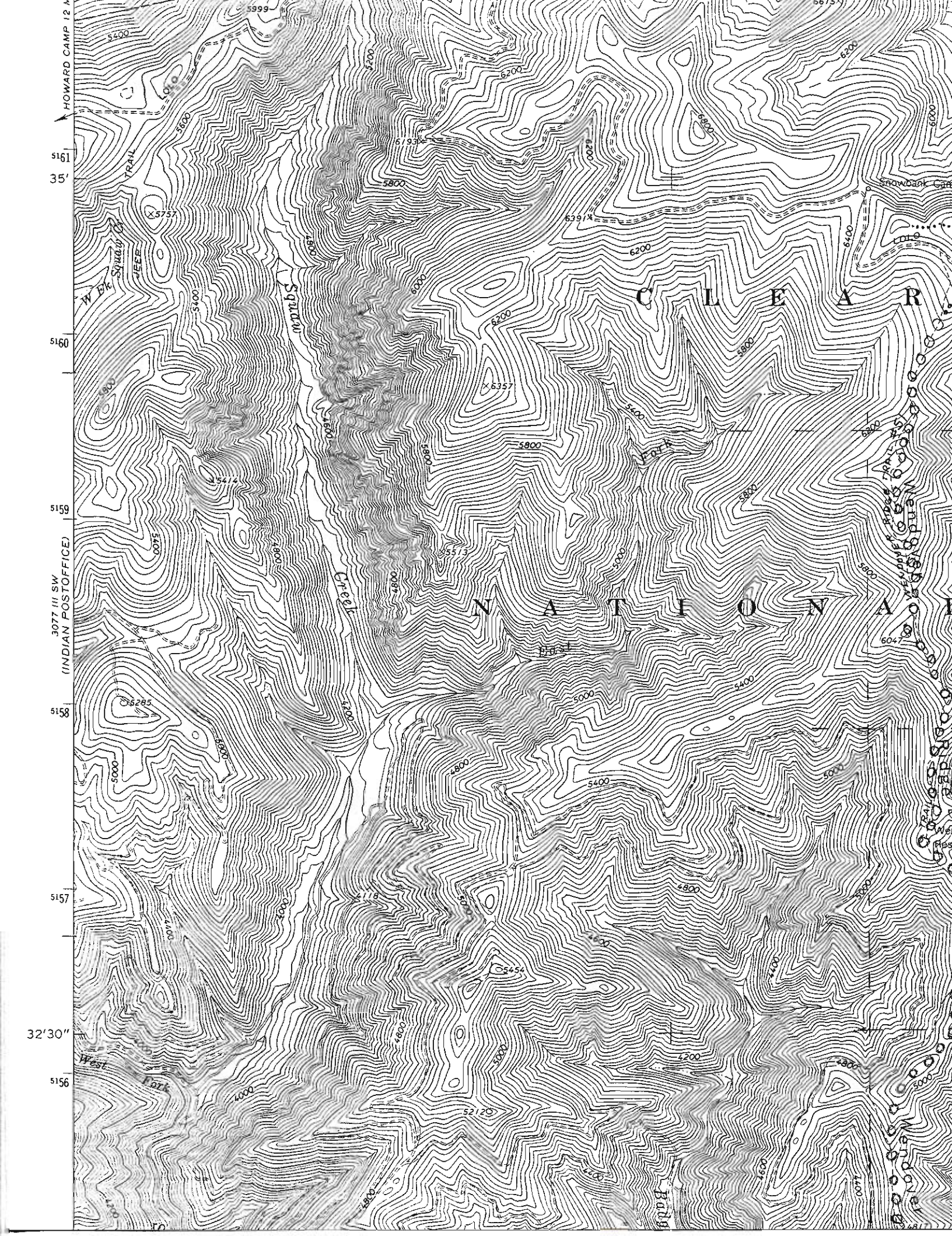
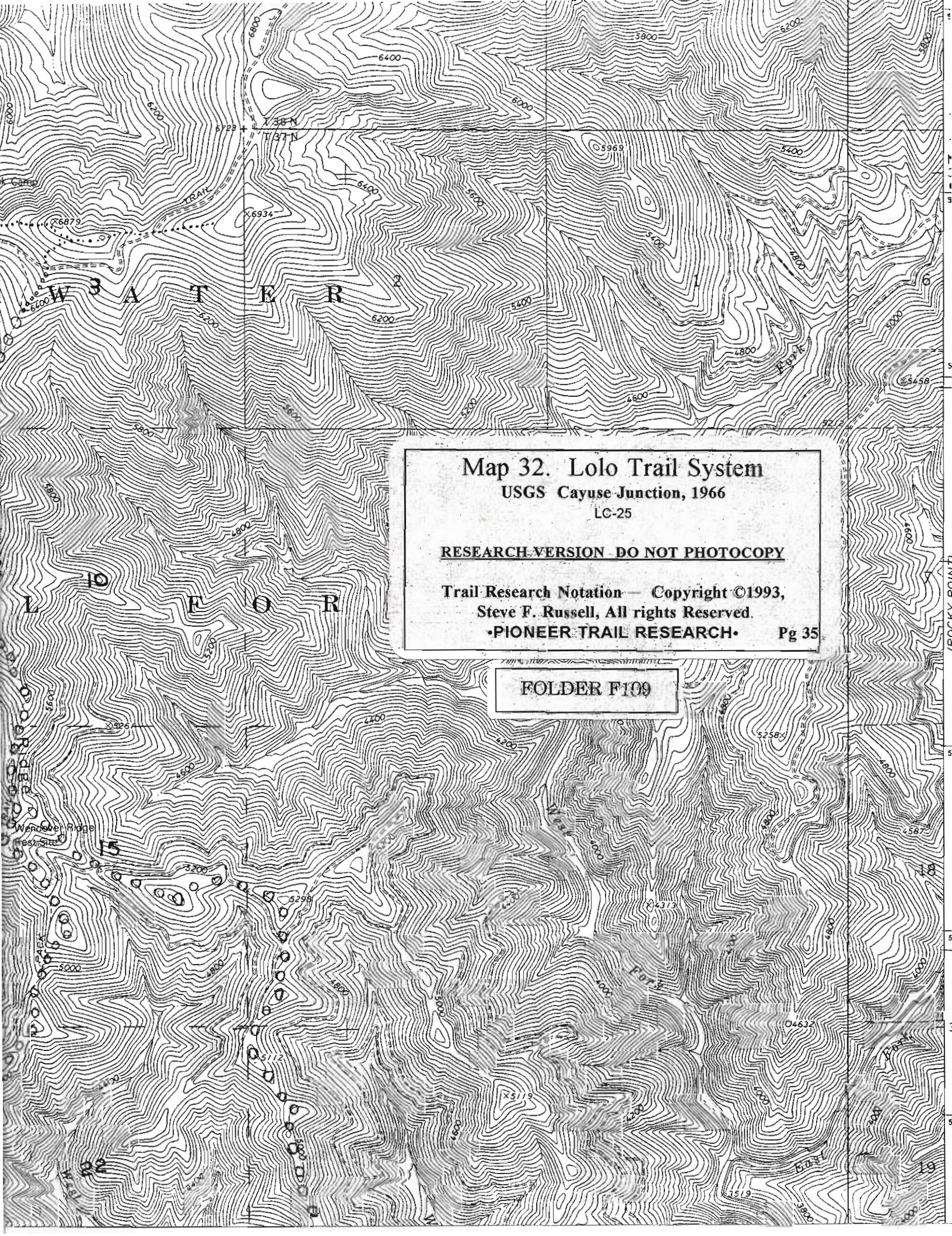

HOWARD CAMP 12 MI
3077 III SW
(INDIAN POSTOFFICE)
35'
32'30"
5161
5160
5159
5158
5157
5156
W Fk Squaw Cr
JEEP TRAIL
Squaw Creek
West Fork
Snowbank Cab
CLEAR
NATIONAL
TRAIL RIDGE
Badg
Waldo
6193
6391
6357
6047
5999
5757
5414
5513
5285
5118
5454
5212
5400
5600
5800
6000
6200
6400
6600
6800
5000
4800
4600
4400
4200
4000



Map 32. Lolo Trail System

USGS Cayuse Junction, 1966

LC-25

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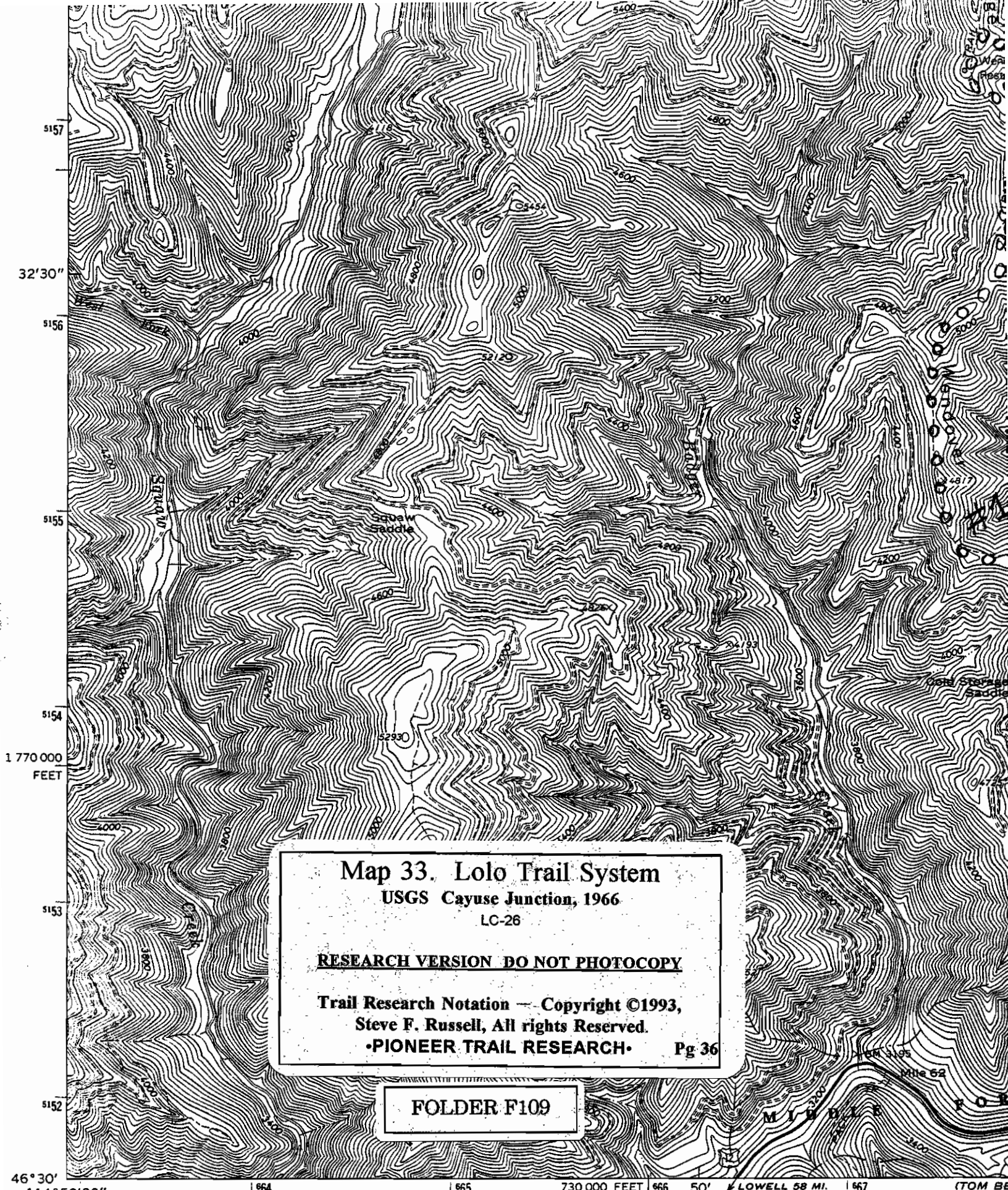
•PIONEER TRAIL RESEARCH•

FOLDER F109



Map 33. Lolo Trail System

USGS Cayuse Junction, 1966

LC-26

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•PIONEER TRAIL RESEARCH• **Pg 36**

FOLDER F109

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1965. Field checked 1966

Polyconic projection. 1927 North American datum

M BEAL PEAK)
3076 IV NE

669 | 47'30" | 670 | 671 | 672000m.E | 114°45

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984

CALE 1:24 000

0 1 MILE

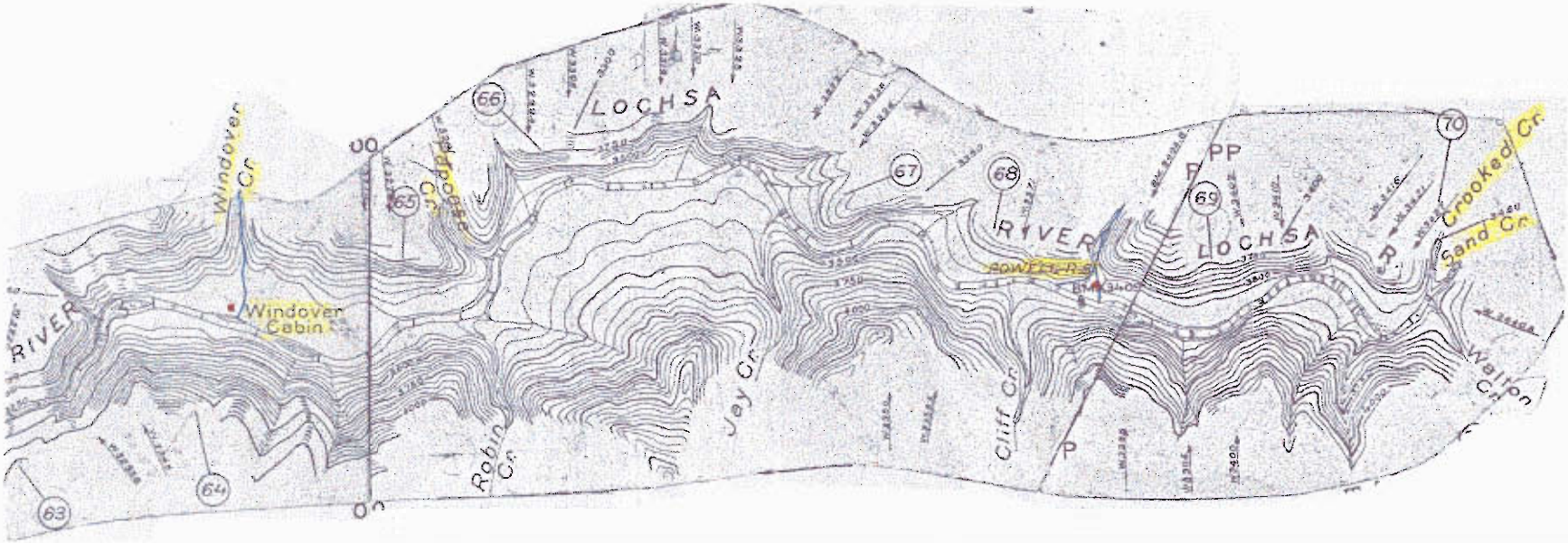
3000 4000 5000 6000 7000 FEET

0 1 KILOMETER

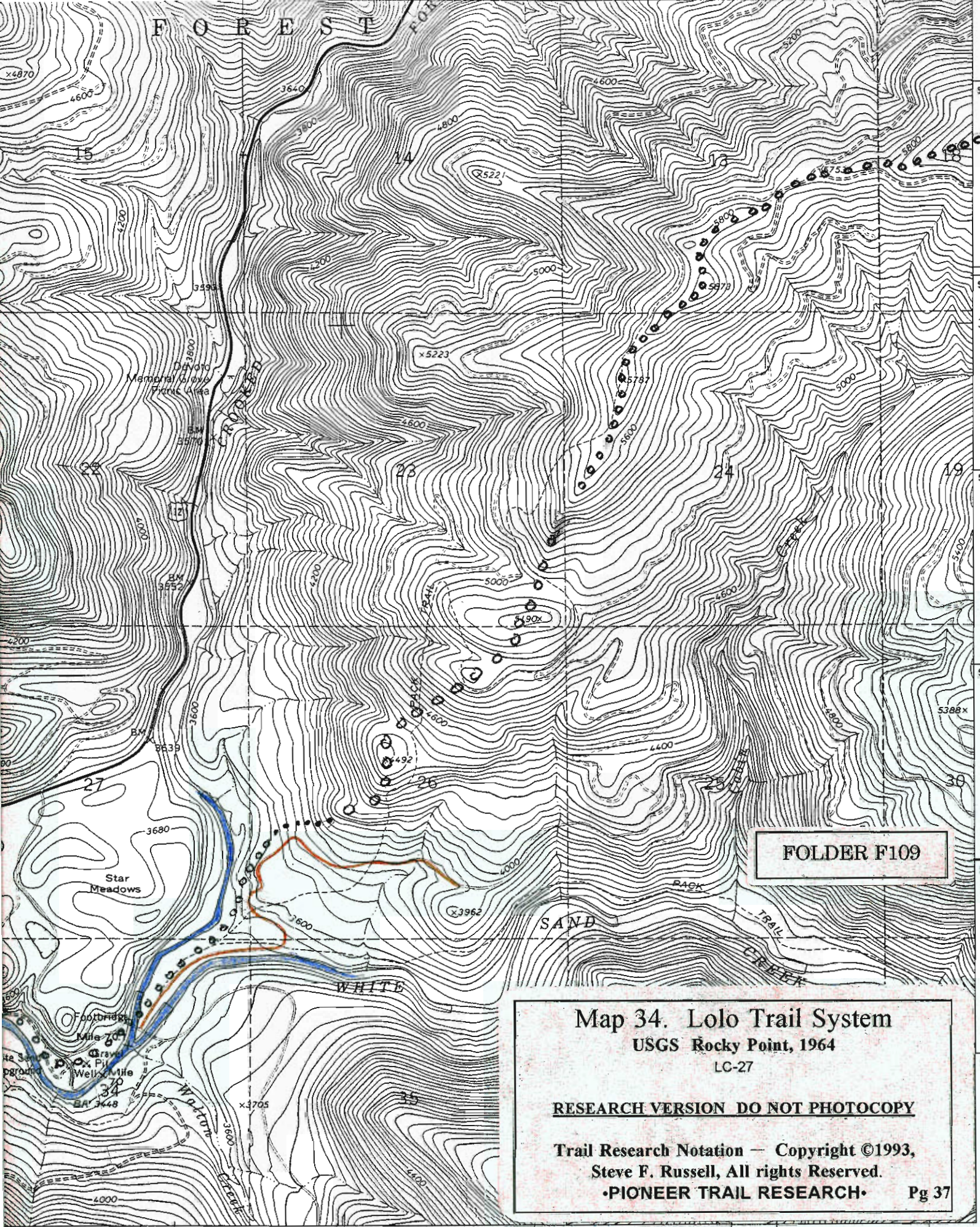
ROAD CLASSIFICATION

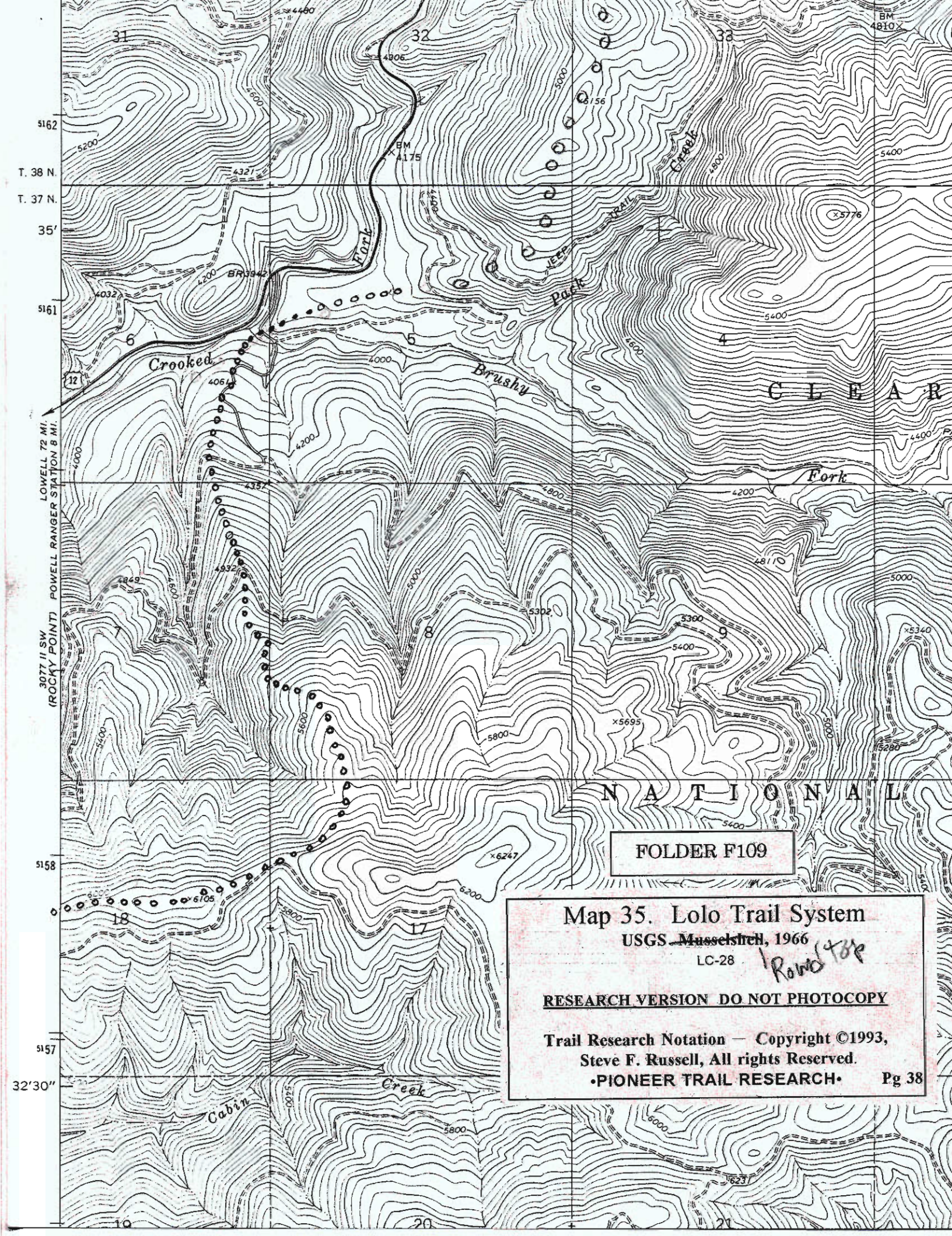
Heavy-duty ——— Light-duty ———

Unimproved dirt - - - - - -


LOCHSA
RIVER
Windover Cr.
Windover Cabin
Boulder Cr.
Robin Cr.
Jay Cr.
Cliff Cr.
RIVER
LOCHSA
POWELL R.S.
Crooked Cr.
Sand Cr.
Wells Cr.
63
64
65
66
67
68
69
70

N A T I O N A L
Parachute Creek
Parachute Creek
East
Loco
TRAIL
BM 5366
BM 3409
BM 3509
Spring
Powell Pasture
MIDDLE FORK CLEARWATER
WILD AND SCENIC RIVER
LOCHSA
Powell Campground
Lochsa Lodge
Powell Ranger Station
RIVER
PACK TRAIL
Fork
Creek
White Sa
Campgrou
LOWELL 6.3 MI
5158
5157
32'30"
5156
5155
5154
770 000 FEET
5153
5152
46°30'
114°45'
673
674
675
760 000 FEET
42'30"
676
677
(GRAVE
3076 I
Mapped, edited, and published by the Geological Survey
SCALE 1


FOREST
FOREST
CROOKED
Memorial Grove
Pioneer Area
BM 3570
BM 3552
BM 3639
TRAIL
PACK
Creek
SAND
CREEK
WHITE
Footbridge
Mile 70
Gravel Pit
Well
Mile 69
BM 3448
Walton
Creek
Star Meadows
FOLDER F109
Map 34. Lolo Trail System
USGS Rocky Point, 1964
LC-27
RESEARCH VERSION DO NOT PHOTOCOPY
Trail Research Notation — Copyright ©1993,
Steve F. Russell, All rights Reserved.
•PIONEER TRAIL RESEARCH• Pg 37
(RAVE PEAK)
3076 I NW
LE 1:24 000
ROAD CLASSIFICATION
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1964
114°37'30
40'
680000m.E.



FOLDER F109

Map 35. Lolo Trail System

USGS ~~Musselshell~~, 1966

LC-28 Road Trip

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MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #4, Maps LTS 36-43, Pages 40-47.

1. **Original Lolo Motorway Route of 1934-35, Weippe Prairie to Beaver Saddle, maps LM 1-6.**

2. **Original Lolo Motorway Route, Powell Junction to Lochsa Lodge, maps LM 15-16.**

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FOLDER F109

Map 36. Lolo Trail System

USGS Weippe North, 1966

LM-1

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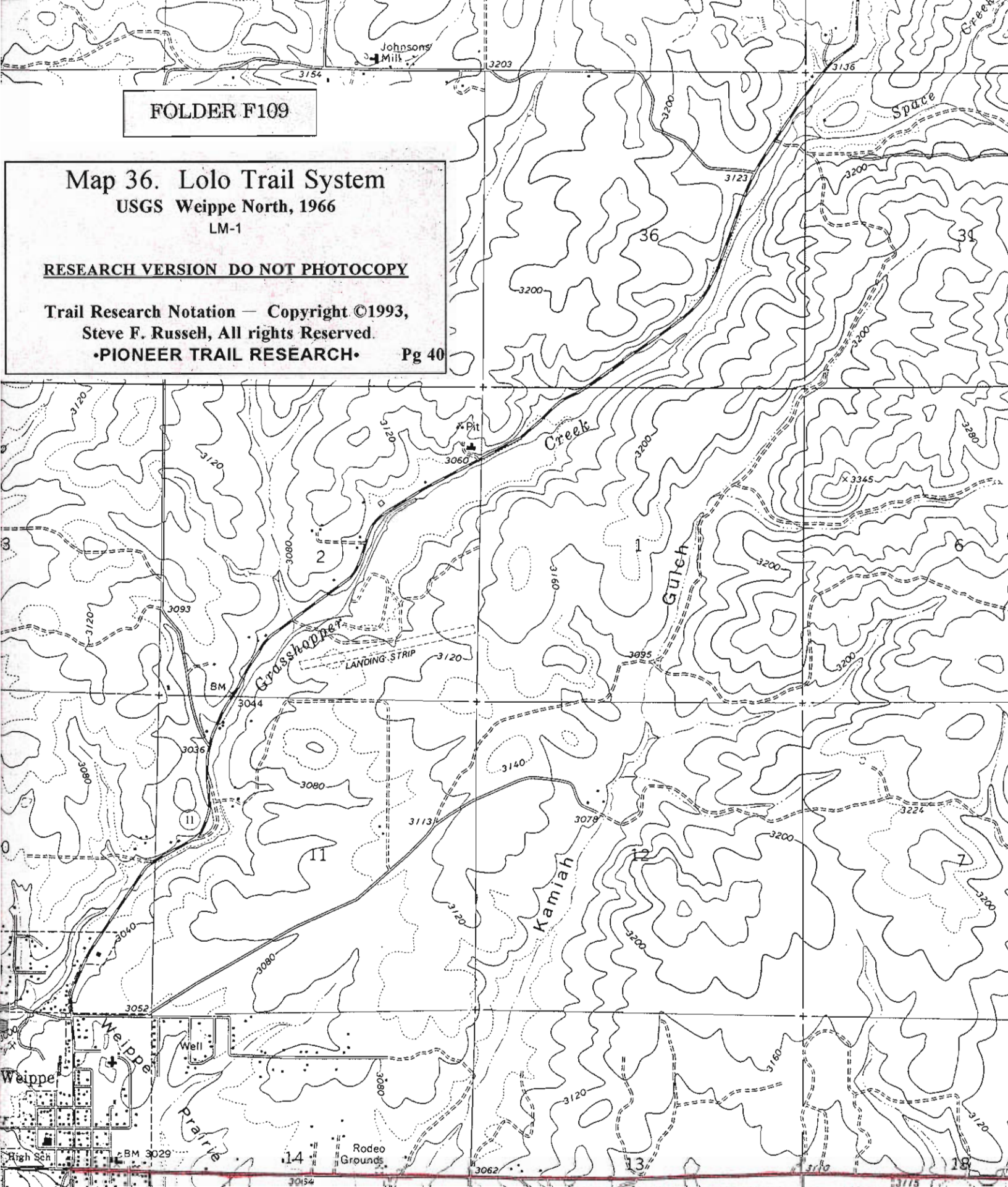
•PIONEER TRAIL RESEARCH• **Pg 40**



(WEIPPE SOUTH)
2876 IV SW

583 55′ 584 585 R. 4 E. R. 5 E. 586000m E.

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984

115°

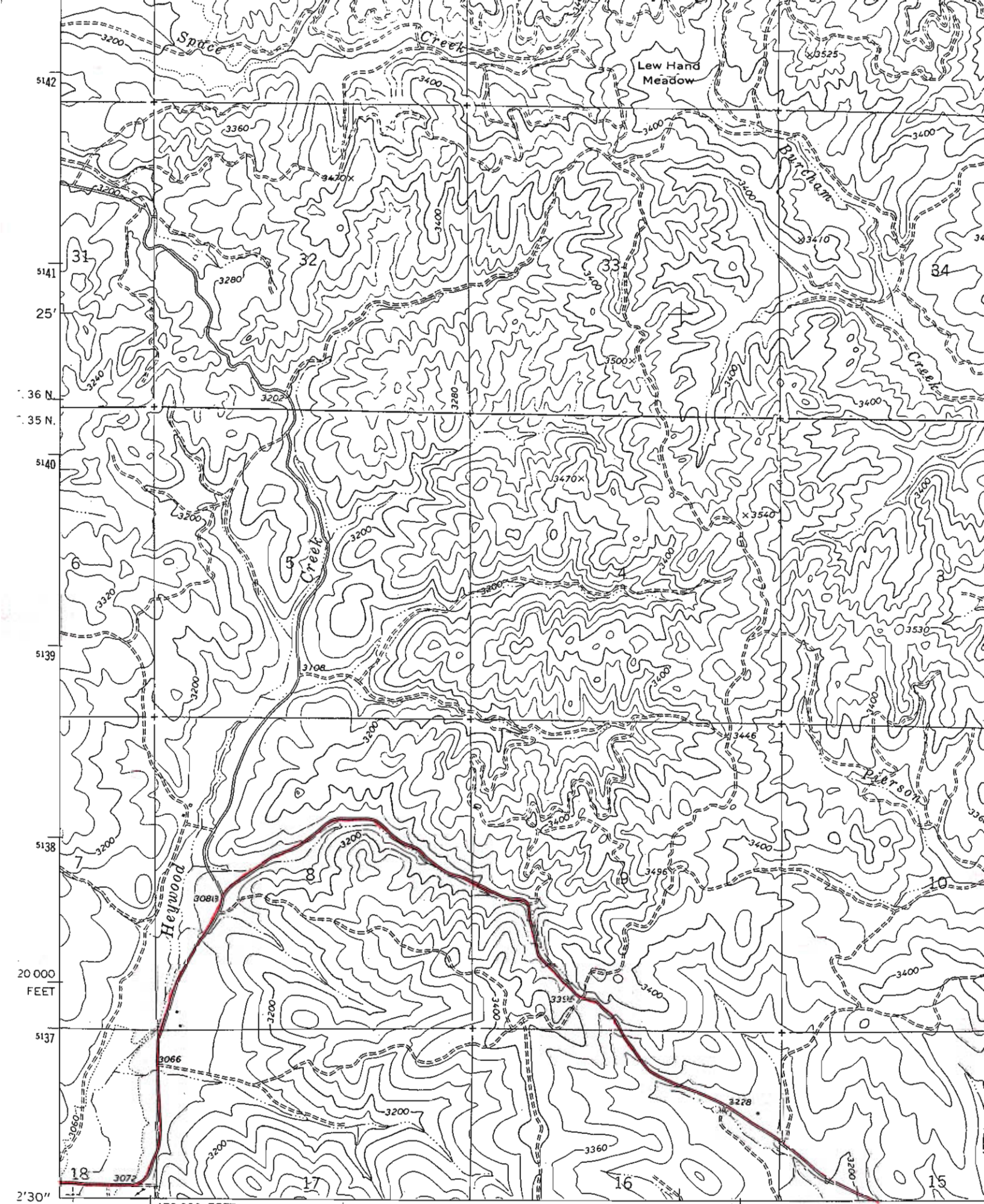
SCALE 1:24 000

0 1 MILE

2000 3000 4000 5000 6000 7000 FEET

ROAD CLASSIFICATION

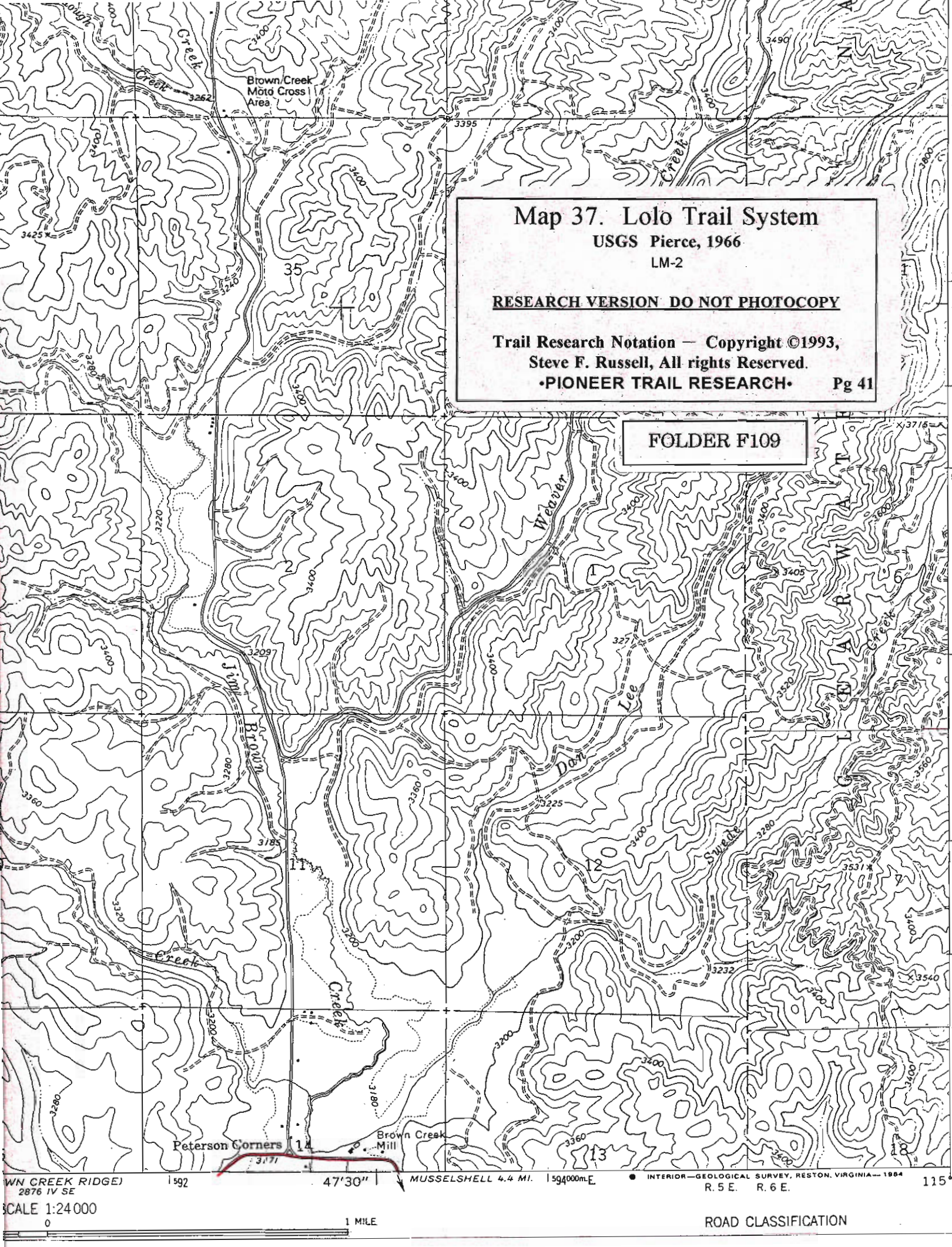
Medium-duty ..... Light-duty .....



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

SCALE



Map 37. Lolo Trail System

USGS Pierce, 1966

LM-2

RESEARCH VERSION DO NOT PHOTOCOPY

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•PIONEER TRAIL RESEARCH• **Pg 41**

FOLDER F109

(WN CREEK RIDGE)
2876 IV SE

592

47'30"

MUSSELSHELL 4.4 MI.

594000mE

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984

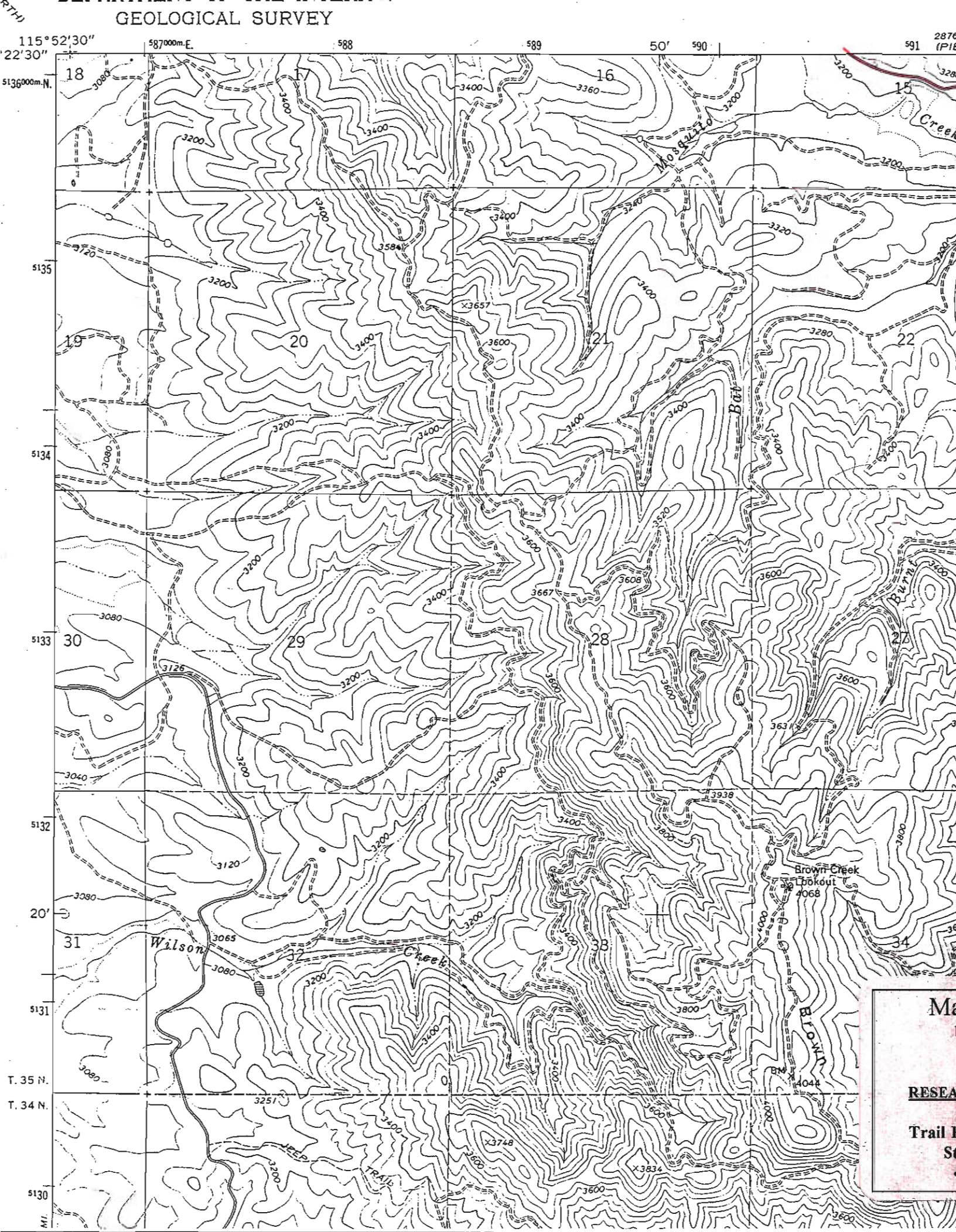
R. 5 E. R. 6 E.

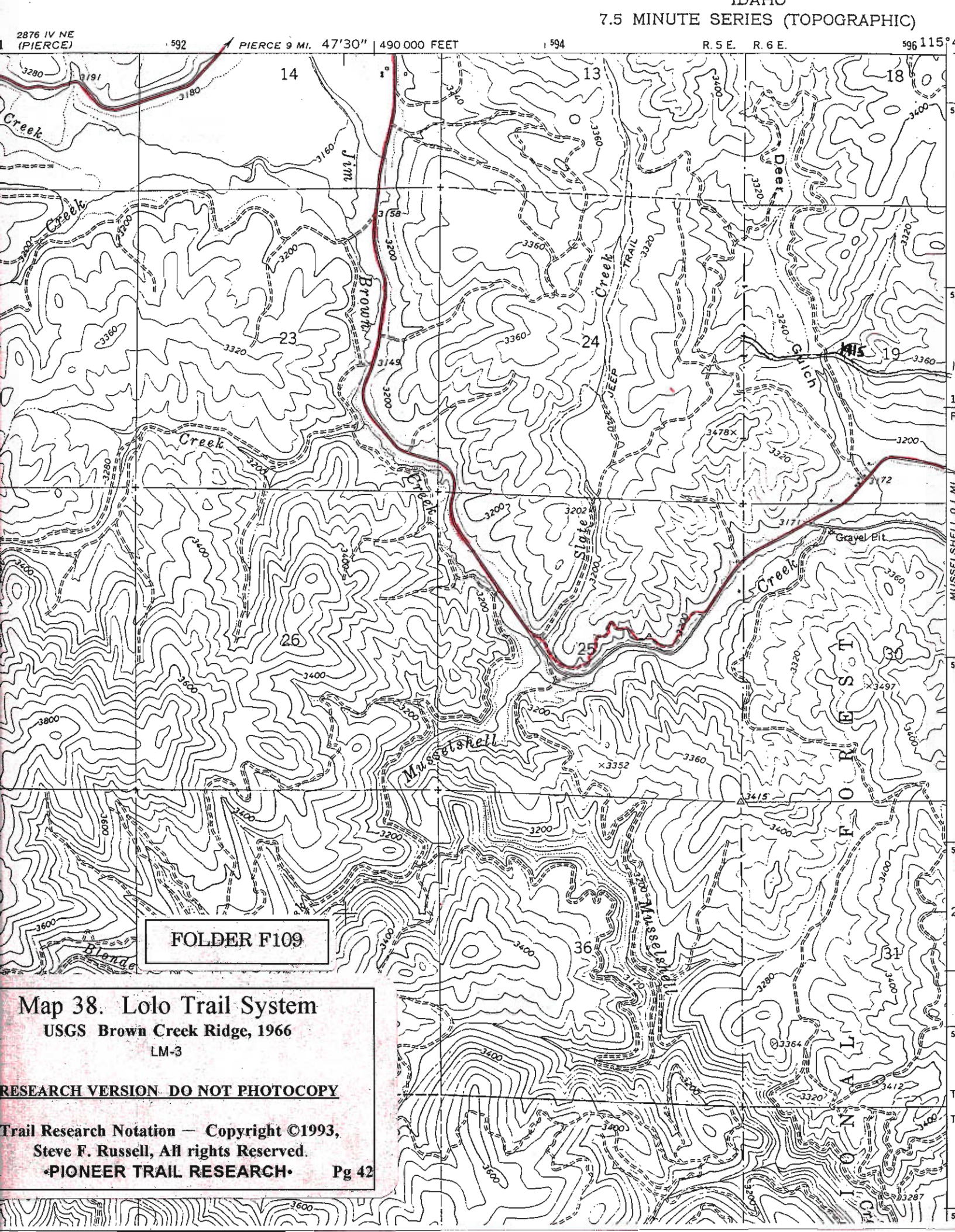
115°4

SCALE 1:24 000

0 1 MILE

ROAD CLASSIFICATION


GEOLOGICAL SURVEY
115°52'30"
22'30"
587000m.E.
588
589
50'
590
591
5136000m.N.
5135
5134
5133
5132
20'
5131
T. 35 N.
T. 34 N.
5130
MI.
18
17
16
15
19
20
21
22
30
29
28
27
31
32
33
34
Wilson
Creek
Brown Creek
Lookout
4068
Brown
BM
4044
Burns
Bar
Mosquito
JEEP
TRAIL
3080
3400
3200
3600
3120
3065
3251
3748
3834
3657
3667
3608
3584
3520
3280
3240
3320
3126
3040
2938
4000
3800
Ma
RESEA
Trail
St



Map 38. Lolo Trail System

USGS Brown Creek Ridge, 1966

LM-3

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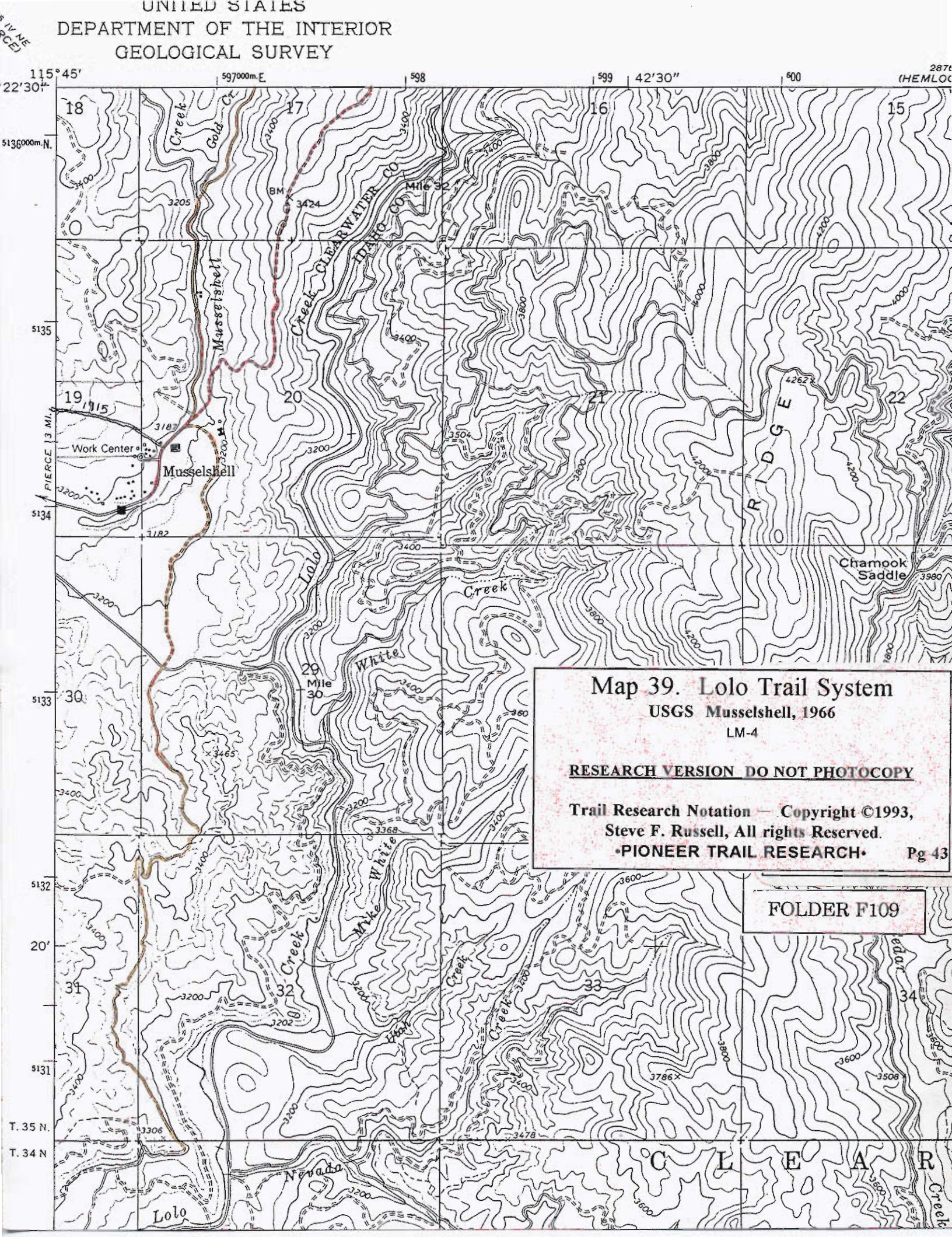

Map 39. Lolo Trail System

USGS Musselshell, 1966

LM-4

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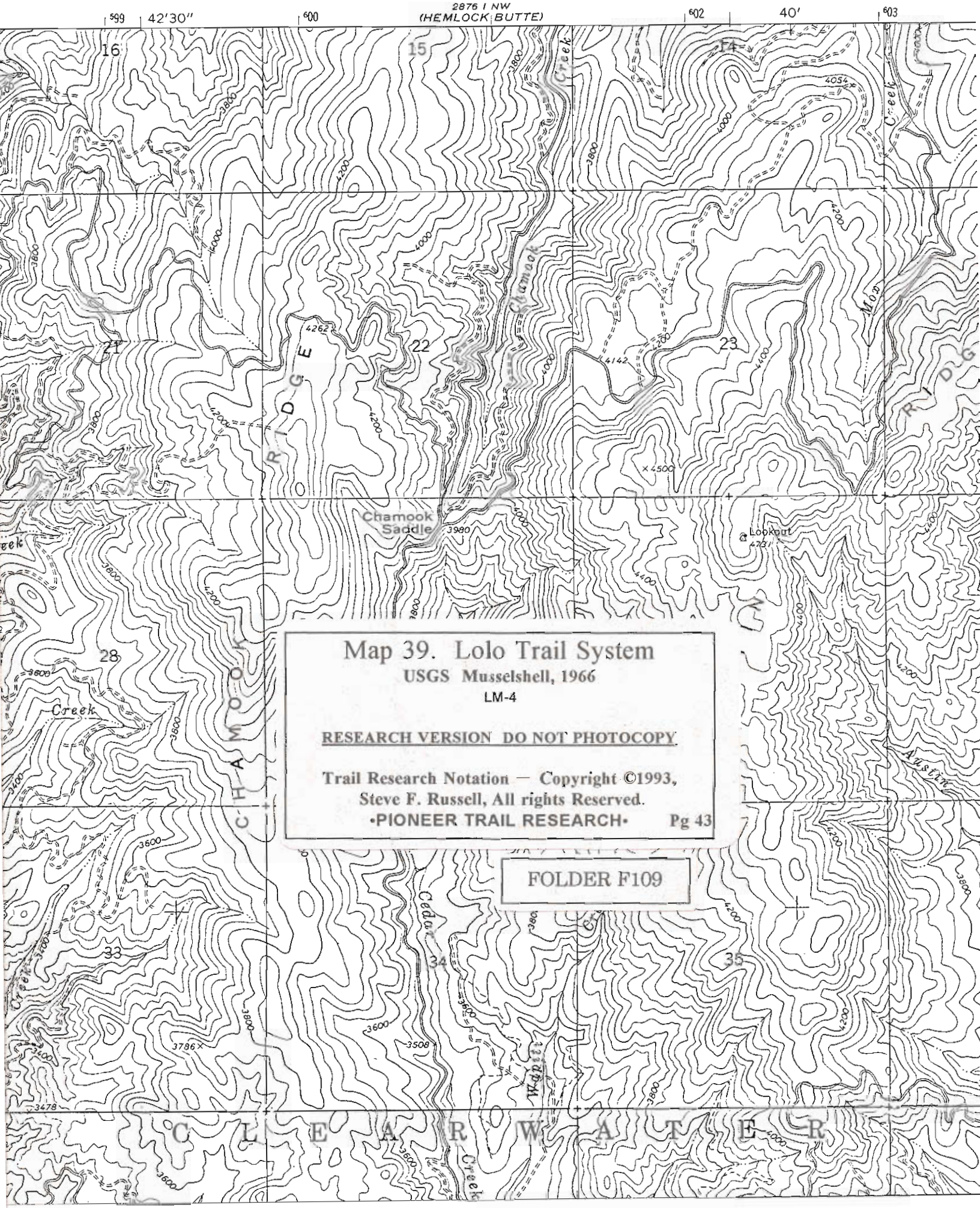

Map 39. Lolo Trail System

USGS Musselshell, 1966

LM-4

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Mapped, edited, and published by Geological Survey

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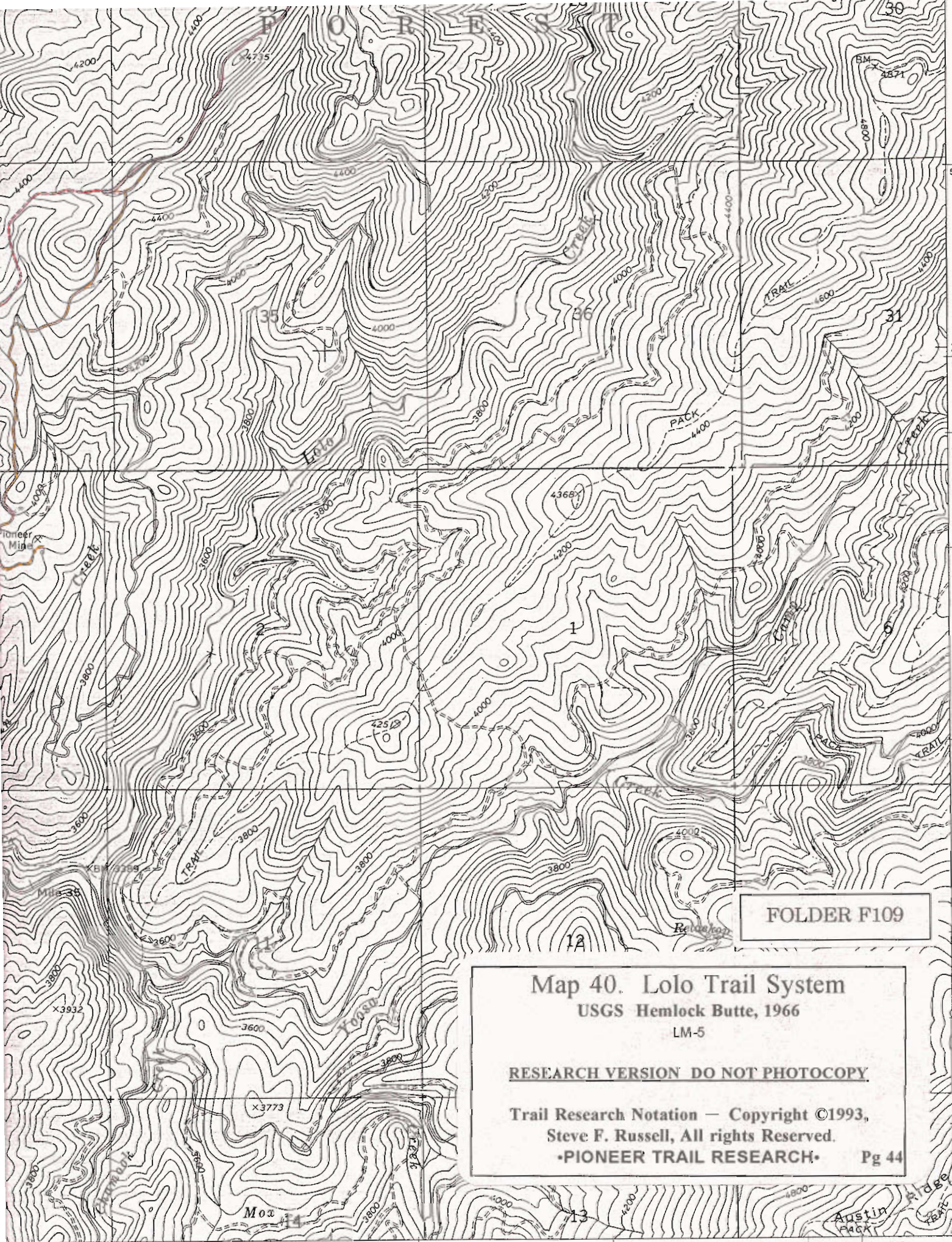
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Map 40. Lolo Trail System
USGS Hemlock Butte, 1966
LM-5
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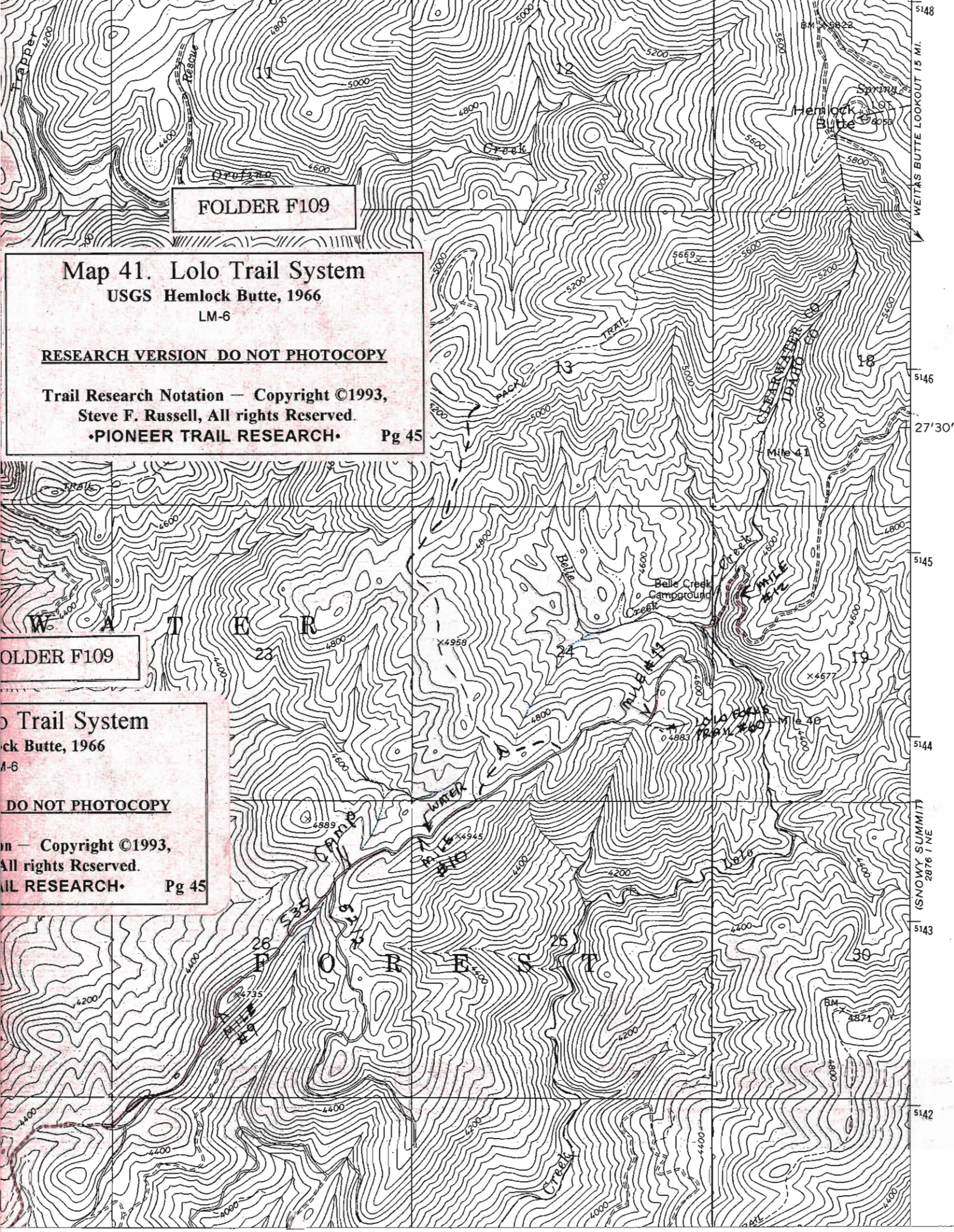
•PIONEER TRAIL RESEARCH• Pg 44
Lolo Creek
Lolo Trail
Pack Trail
Mox Peak
Austin Ridge
Pioneer Mine
Mile 35
R. 6 E.
R. 7 E.
T. 36 N.
T. 35 N.
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1985
115°37'30"
46°2
1:24 000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Map 41. Lolo Trail System
USGS Hemlock Butte, 1966
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FOLDER F109
o Trail System
ck Butte, 1966
M-6
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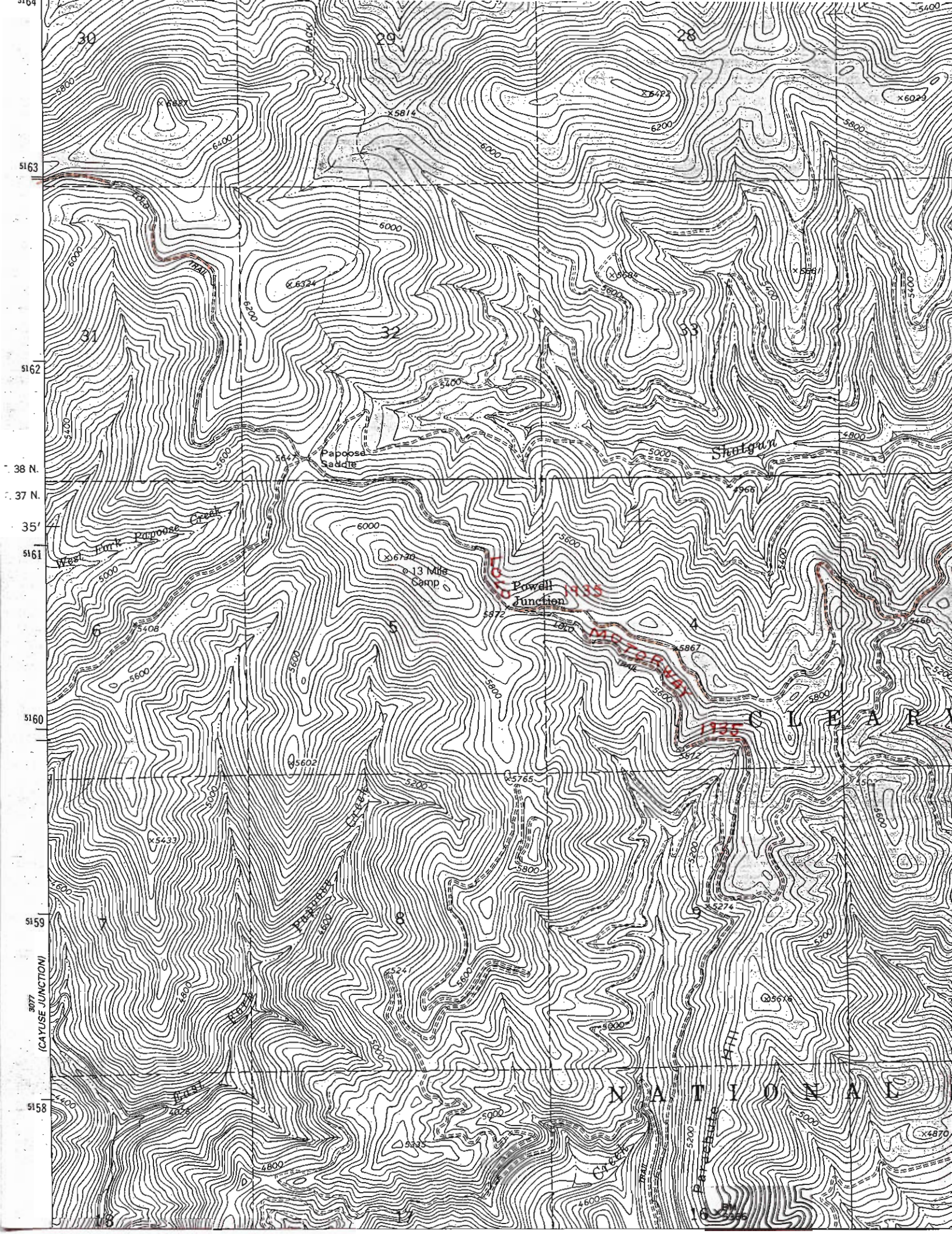
IL RESEARCH• Pg 45
Hemlock Butte
Belle Creek Campground
Mile 41
Mile 40
Mile 42
Mile 43
Mile 44
Mile 45
CLEARWATER CO IDAHO CO
WEITAS BUTTE LOOKOUT 15 MI.
SNOWY SUMMIT 2876 I NE
Lolo
Creek
TRAIL
PACK
W A T E R
F O R E S T
27'30'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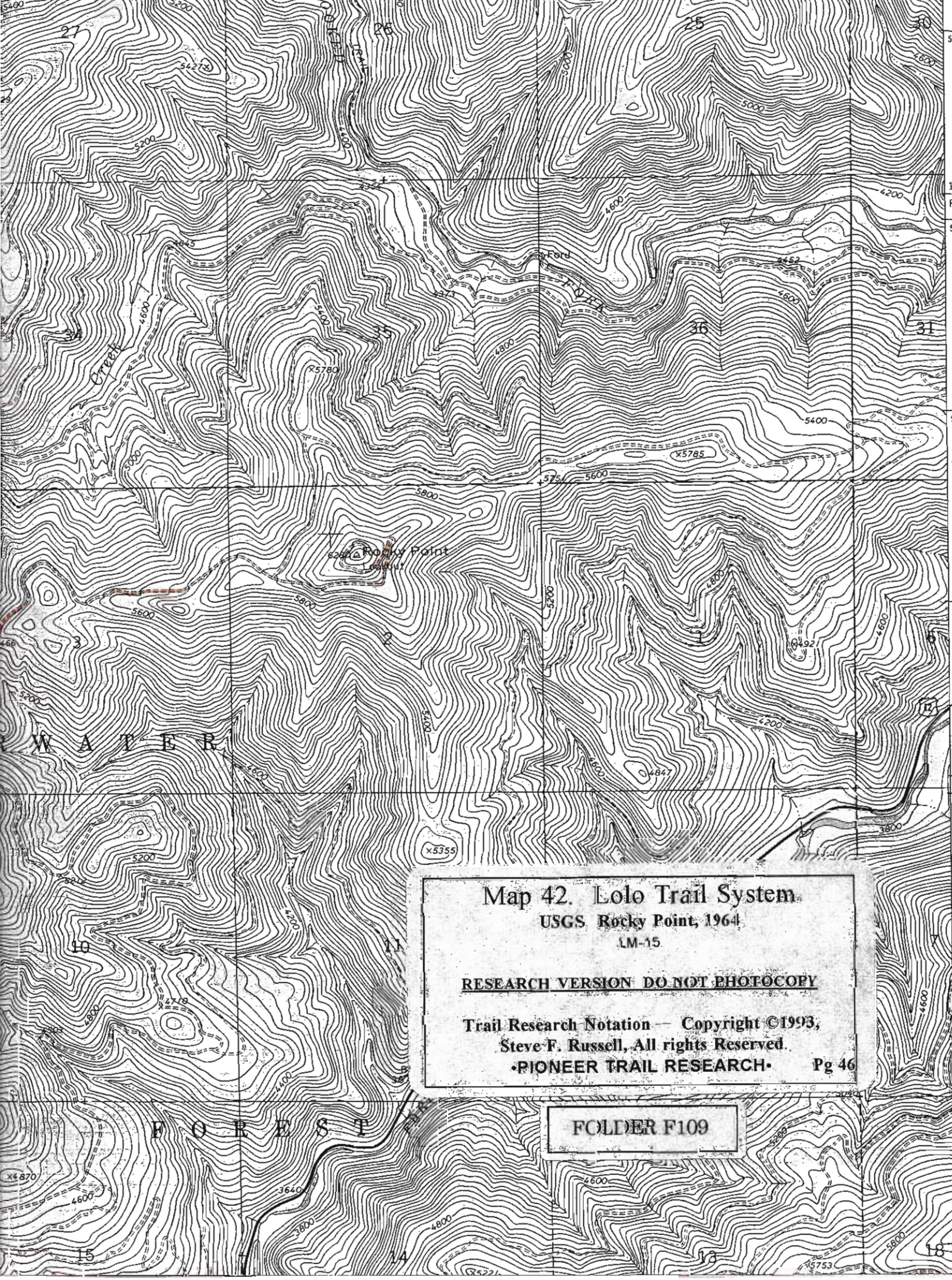
5163
5162
5161
5160
5159
5158
38 N.
37 N.
35'
Papoose Saddle
Shotgun
West Fork Papoose Creek
13 Mile Camp
Powell Junction
1935
MOTORWAY
1935
CLEARW
Papoose Creek
Parkman
Fork
East
Creek
Beaverhead
NATIONAL
(CAYUSE JUNCTION)
3077
Trail
Pass



Map 42. Lolo Trail System

USGS Rocky Point, 1964

LM-15

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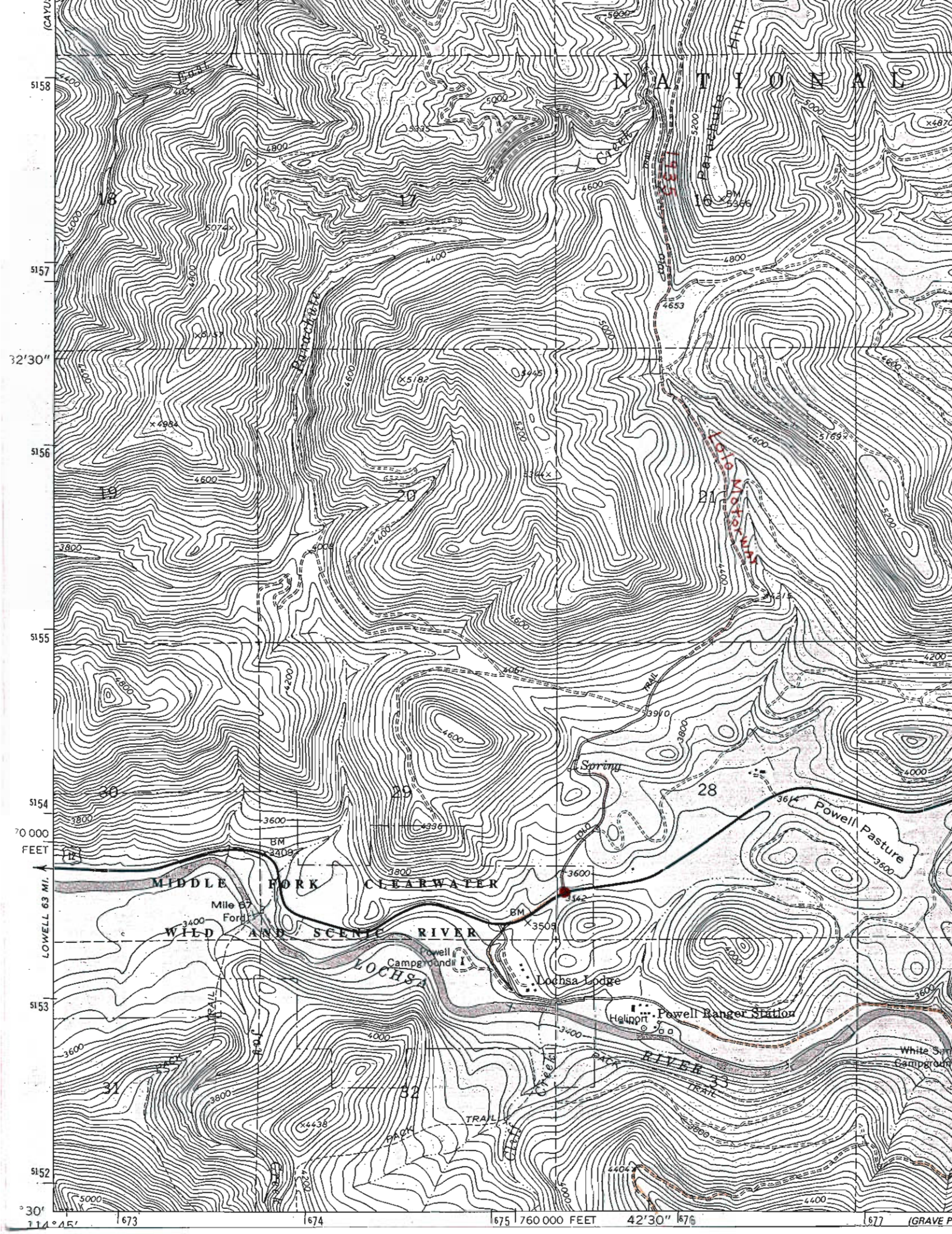
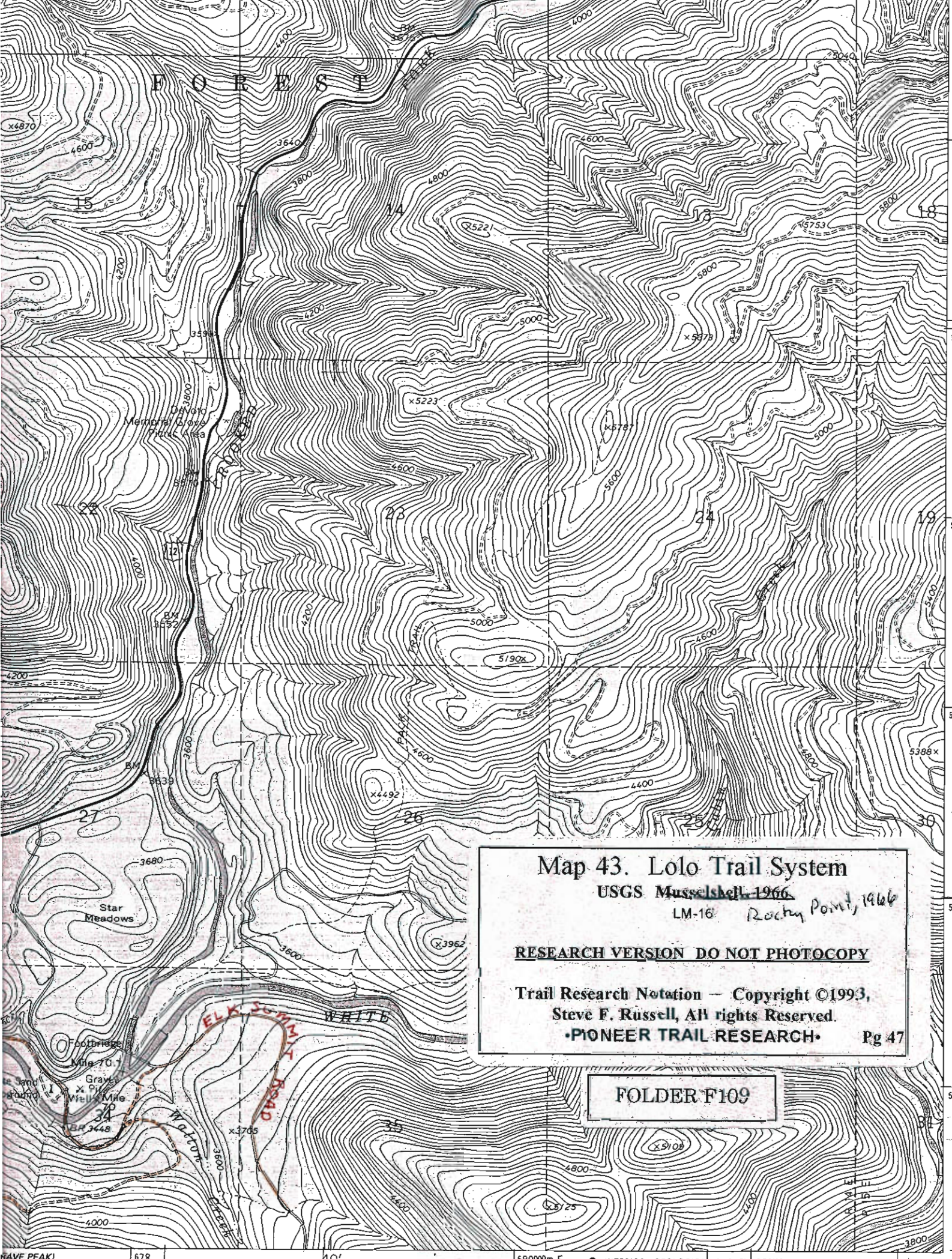

N A T I O N A L
Parachute Creek Trail
Parachute Creek
Lolo Motorway
Powell Pasture
Spring
MIDDLE FORK CLEARWATER
WILD AND SCENIC RIVER
Mile 67 Ford
Powell Campground
LOCHSA
Lochsa Lodge
Helipad
Powell Ranger Station
BACK RIVER TRAIL
White Sand Campground
LOWELL 63 MI.
70 000 FEET
760 000 FEET
42'30"
32'30"
114°45'
(GRAVE P


FOREST
Devoto Memorial Grove Picnic Area
Star Meadows
WHITE
ELK SUMMIT ROAD
Footbridge
Mile 70.1
Gravel Pit
Mile 70
Wallton Creek
PACIFIC
Map 43. Lolo Trail System
USGS Musselshell, 1966
LM-16 Rocky Point, 1966
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FOLDER F109

MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #5, Maps LTS 44-67, Pages 49-72.

1. Archive Maps of the Lolo Trail System.

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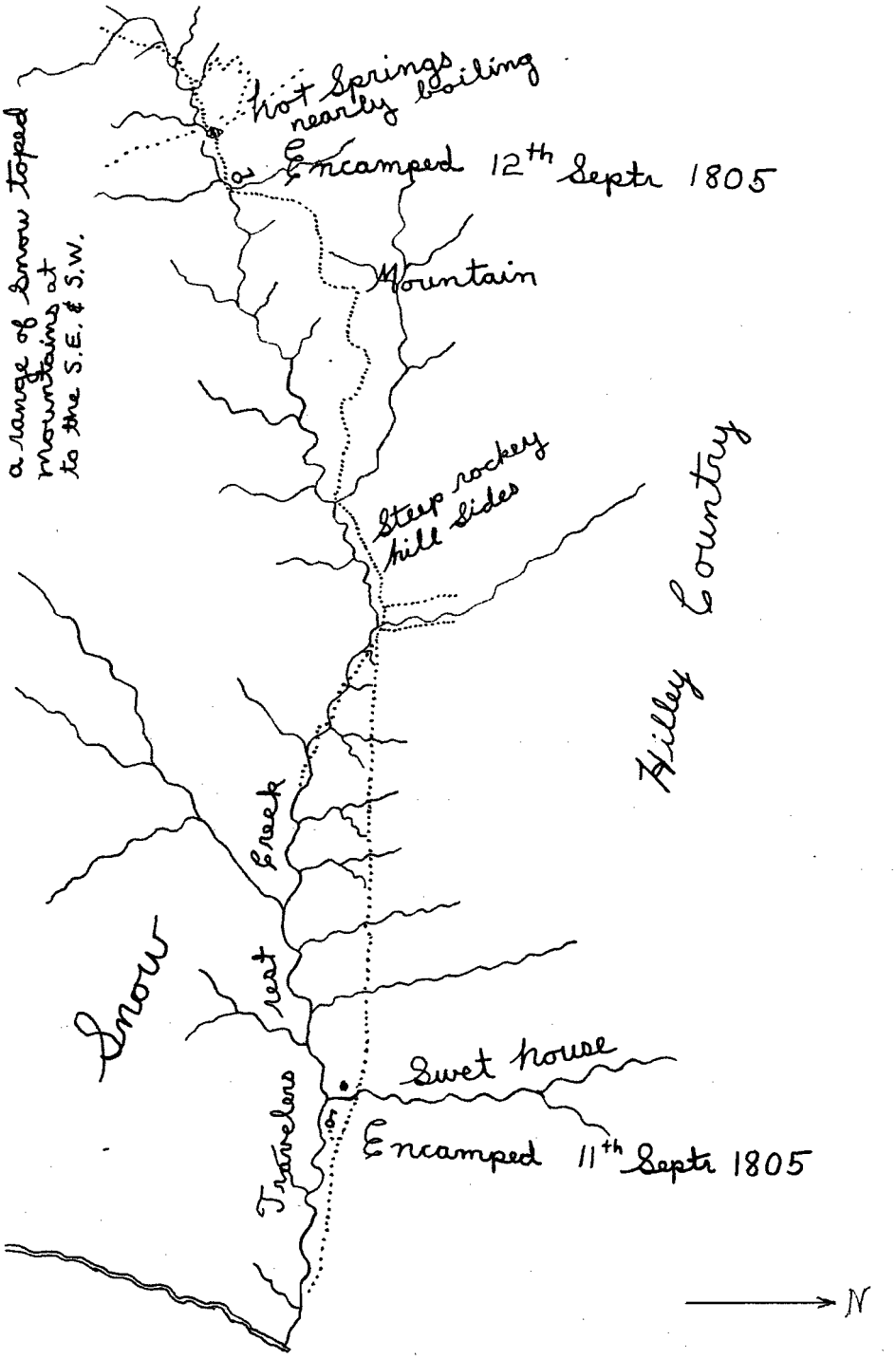
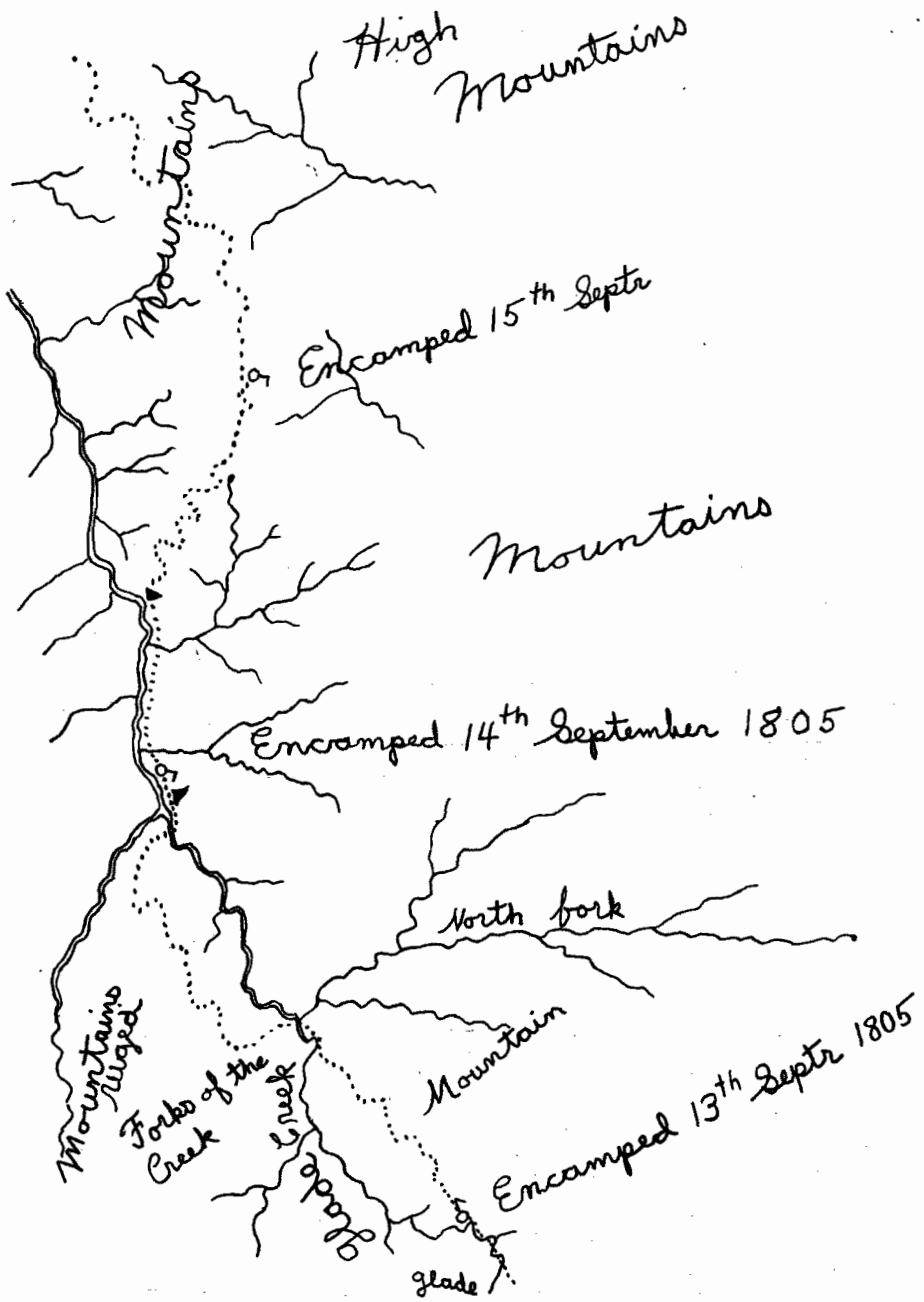


Moulton P 200

3/28/92
SpR



OLDER F109

p 44. Lolo Trail System
Lewis & Clark Archive Map
MOULTON, V5, Pg 200, 208

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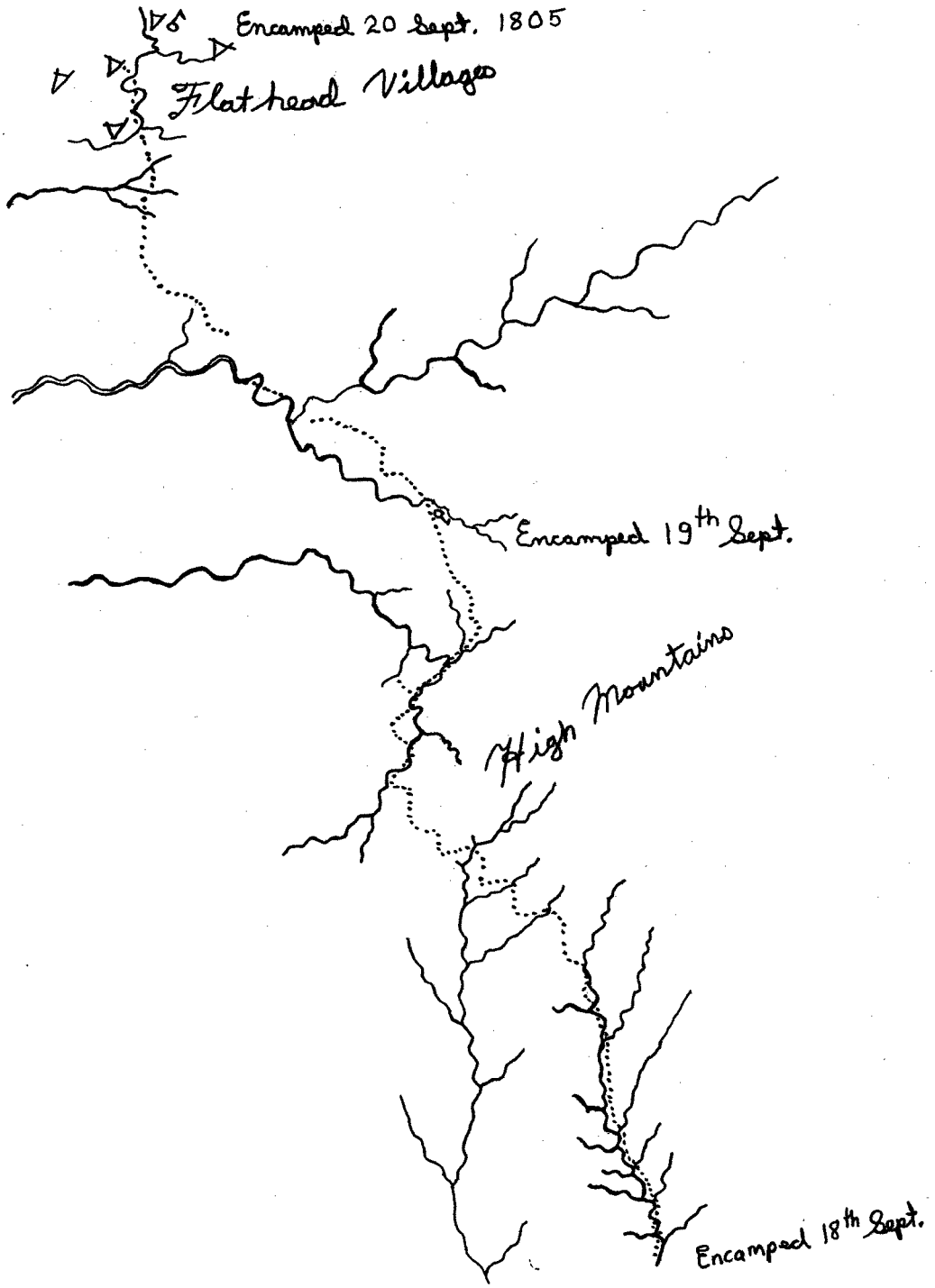
▲ Fndrew Camp
→ N

moulton p 208
3/29/31
SJR



Moulton P 220
SFR
12/17/92

FOLDER F109

Map 45. Lolo Trail System

Lewis & Clark Archive Map

MOULTON, V5, Pg 212, 220

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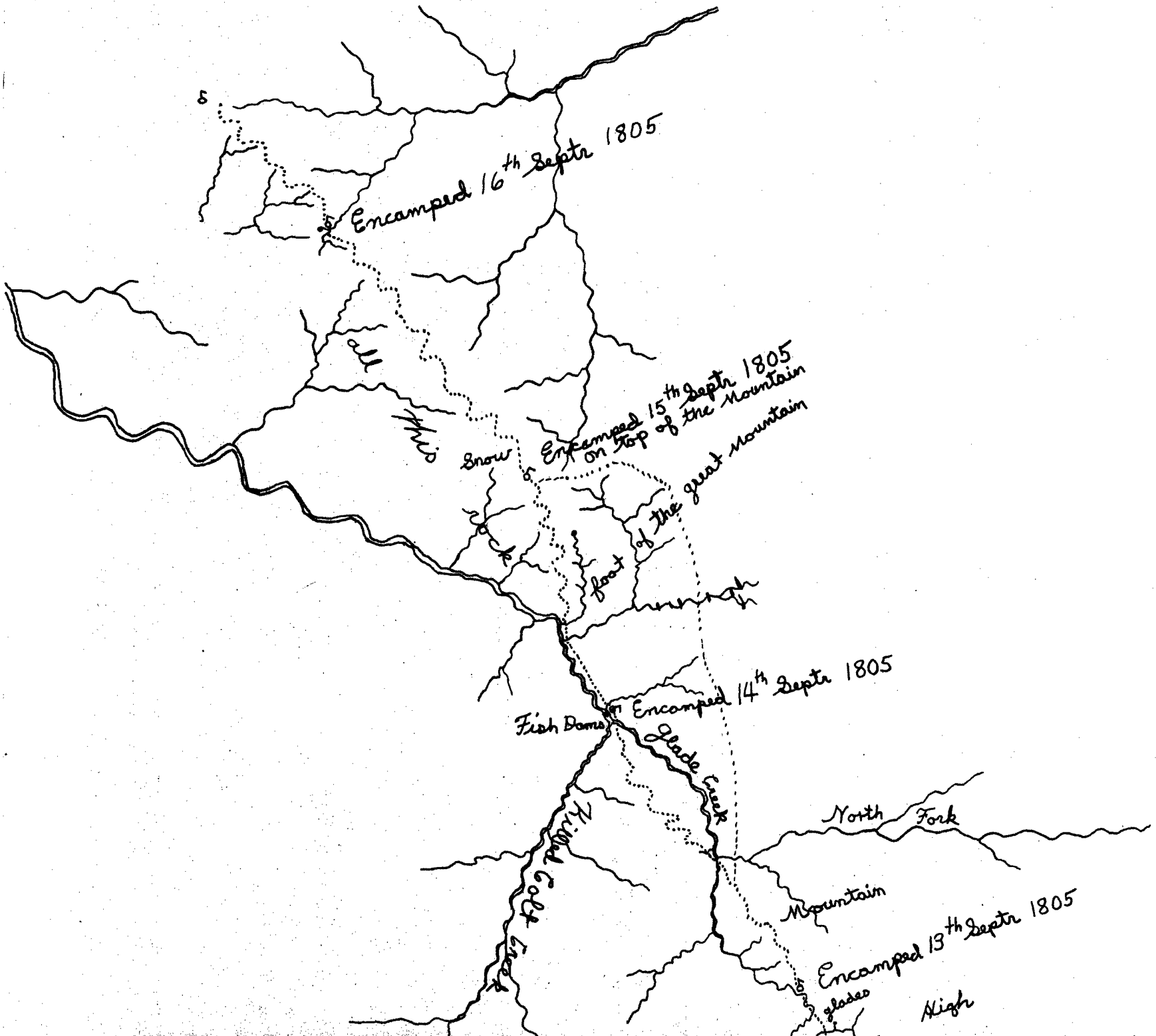
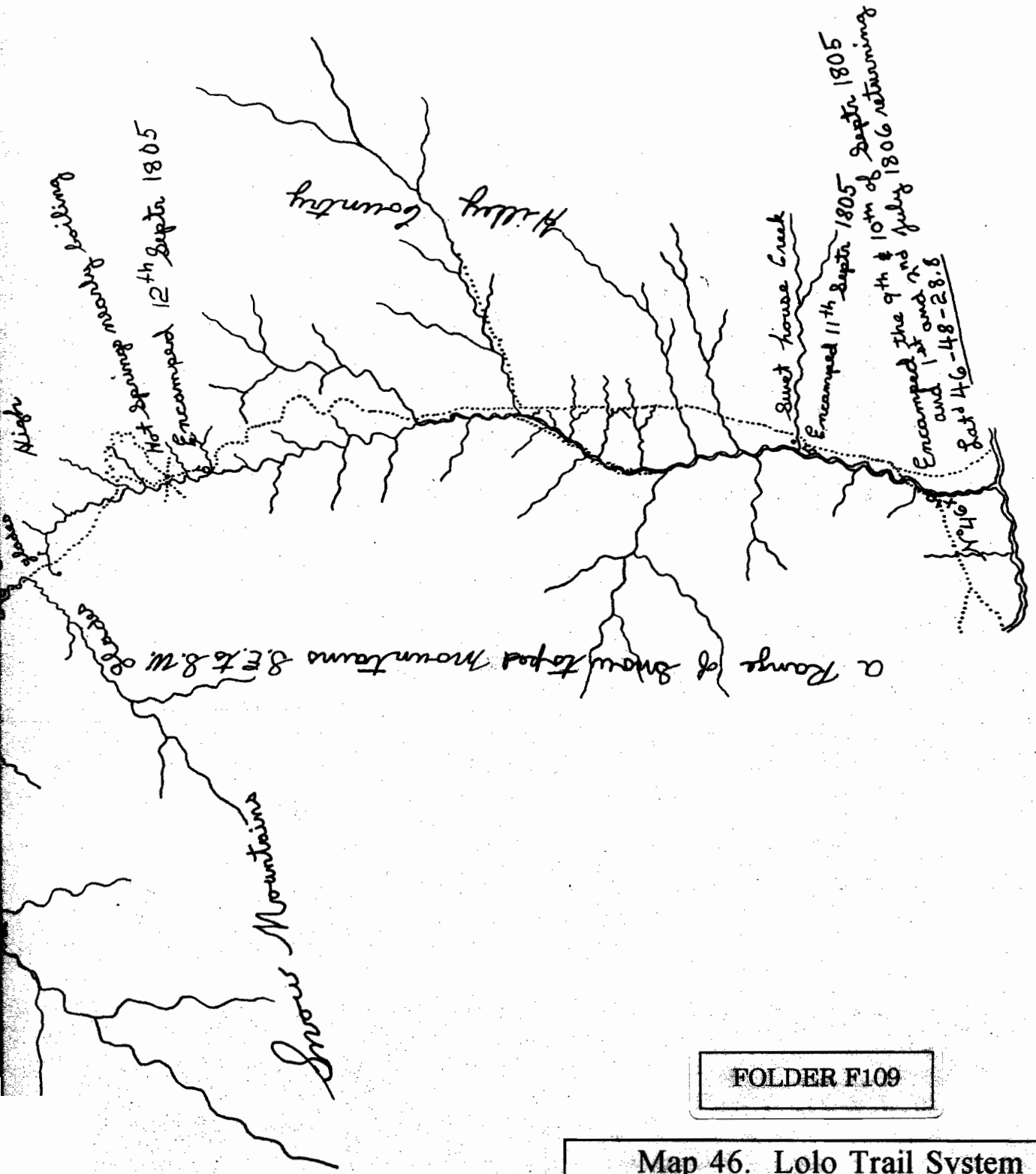
Moulton P 212

3/29/92


Encamped 16th Septr 1805
Encamped 15th Septr 1805
on top of the Mountain
Snow
foot of the great mountain
Encamped 14th Septr 1805
Fish Dams
Glade Creek
North Fork
Mountain
Encamped 13th Septr 1805
High



FOLDER F109

Map 46. Lolo Trail System

Lewis & Clark Archive Map

MOULTON, Maps 69, 70

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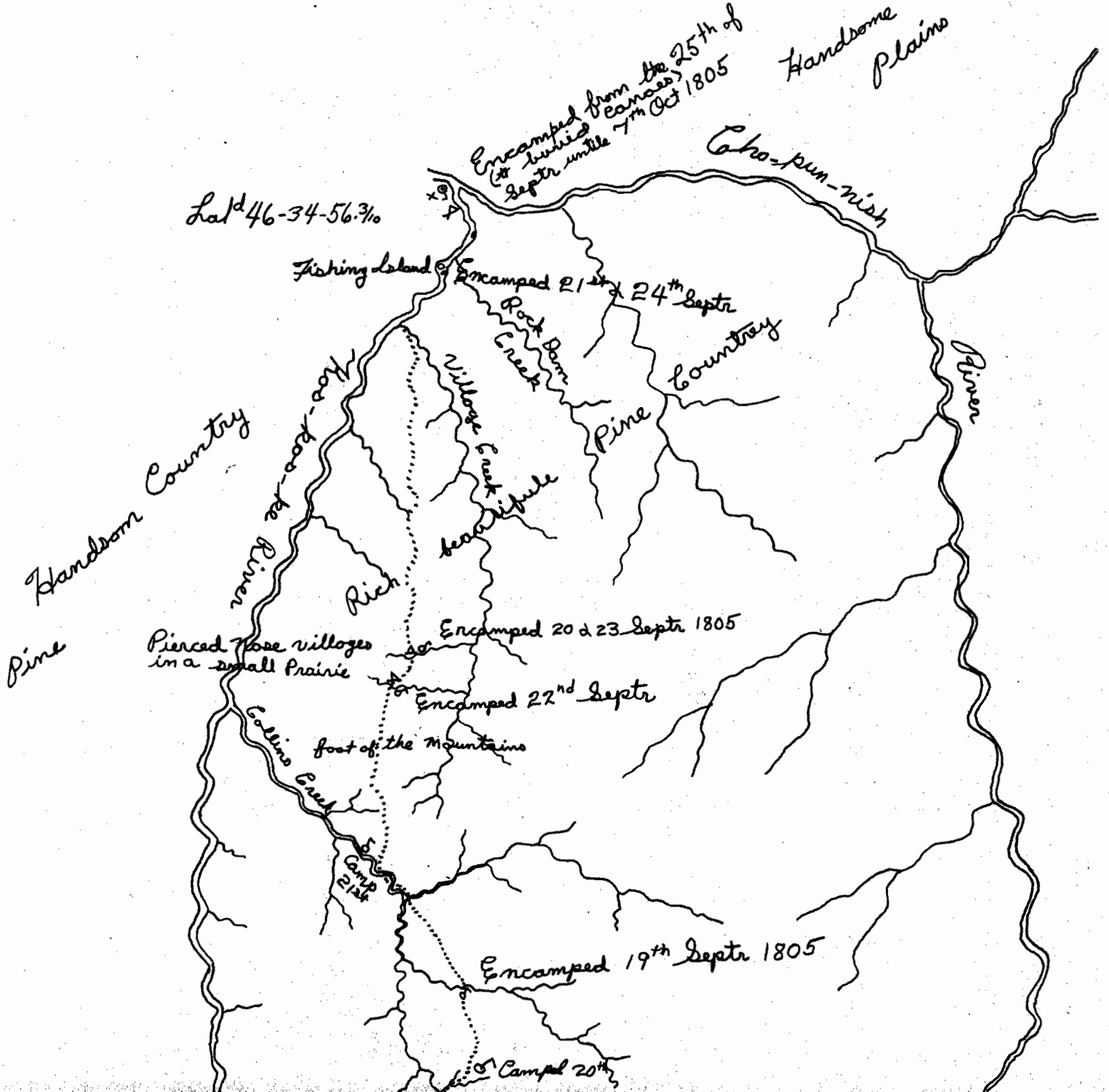
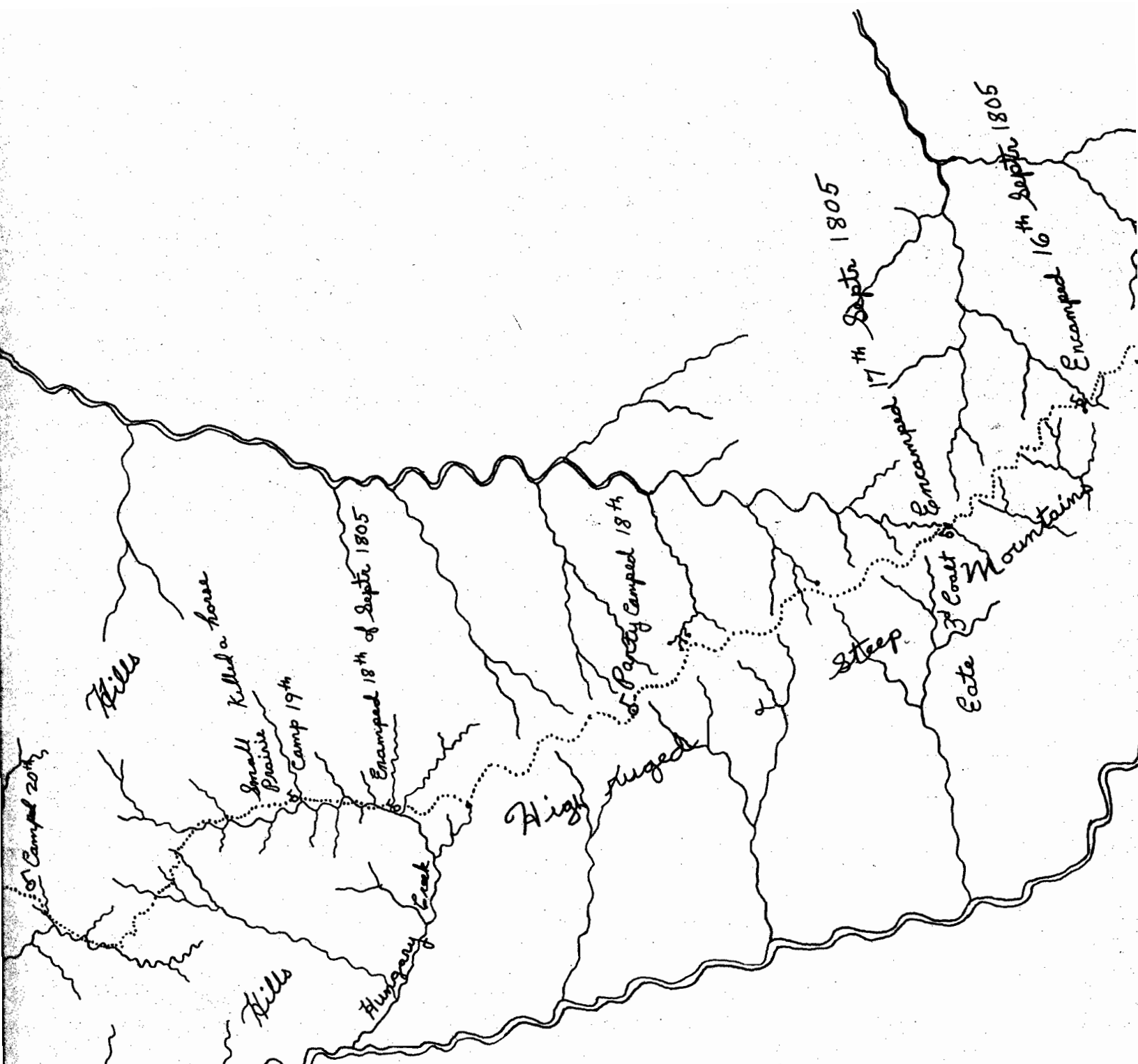

Encamped from the 25th of
last until canoes
Sept. 7th Oct 1805
Handsome
plains
Cho-pun-nish
Lat^d 46-34-56.3/10
Fishing Island
Encamped 21st & 24th Septr
Rock Dam
Creek
Village Creek
beautiful
Pine
Country
River
Handson Country
Koo-koo-koo River
Rich
Pine
Pierced Nose villages
in a small Prairie
Encamped 20 & 23 Septr 1805
Encamped 22nd Septr
foot of the Mountains
Collins Creek
Camp 21st
Encampeed 19th Septr 1805
Camped 20th



FOLDER F109

Map 47. Lolo Trail System

Lewis & Clark Archive Map

MOULTON, Maps 70, 71

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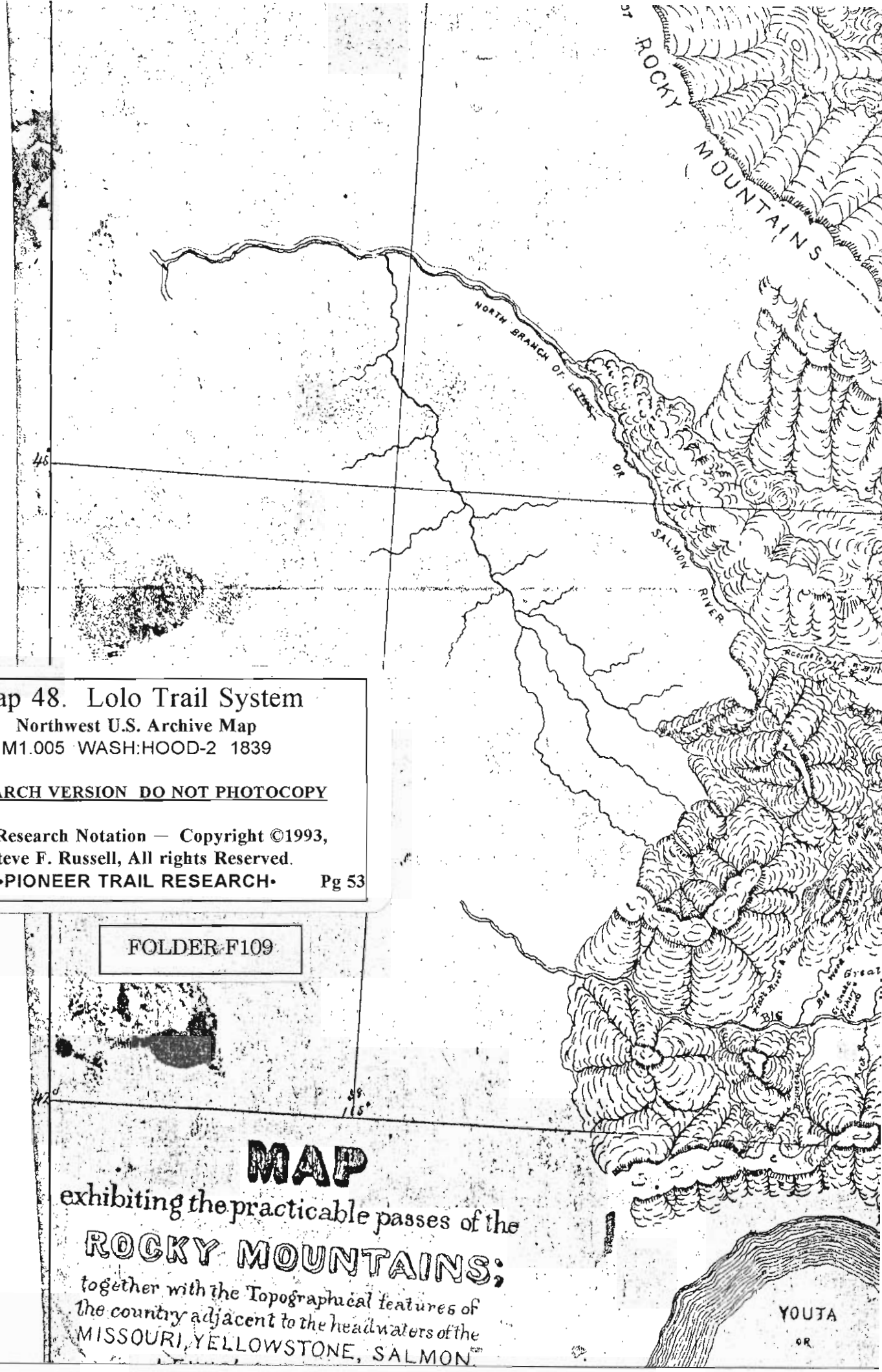
Moulton 70, 71

3/29/92



Map 48. Lolo Trail System

Northwest U.S. Archive Map
M1.005 WASH:HOOD-2 1839

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YELLOWSTONE RIVER
Big Horn River
Wind River
Wind River Valley
Three Tetons
Great Snake or Lewis R.
Green River
Bear River Valley
Bear R.
Falls of the Missouri
Three Forks
Gallatin R.
Madison R.
Jefferson R.
Big Hole
Big Horn Mts.
Wind River Mts.
Teton Mts.
Salmon R.
Snake R.
Portneuf R.
Blackfoot R.
Port Hall
Fort Hall
Fort Bridger
Fort Laramie
Sweetwater R.
Platte R.
Laramie R.
Powder R.
Tongue R.
Rosebud R.
Little Rosebud R.
Yellowstone Lake
Jackson's Lake
Pilot Knob
Pilot Hill
Pilot Peak
Pilot Knobs
Pilot Hills
Pilot Mts.
Pilot Creek
Pilot Valley
Pilot Rock
Pilot Butte
Pilot Range
Pilot Mountain
Pilot Creek Valley
Pilot Peak Valley
Pilot Hill Creek
Pilot Knob Creek
Pilot Mountains
Pilot Rock Creek
Pilot Butte Creek
Pilot Range Creek
Pilot Mountain Creek
Pilot Peak Creek
Pilot Hill Valley
Pilot Knob Valley
Pilot Rock Valley
Pilot Butte Valley
Pilot Range Valley
Pilot Mountain Valley
Pilot Peak Valley
Pilot Hill Creek Valley
Pilot Knob Creek Valley
Pilot Rock Creek Valley
Pilot Butte Creek Valley
Pilot Range Creek Valley
Pilot Mountain Creek Valley
Pilot Peak Creek Valley
Pilot Hill Valley Creek
Pilot Knob Valley Creek
Pilot Rock Valley Creek
Pilot Butte Valley Creek
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Pilot Hill Valley Creek Valley
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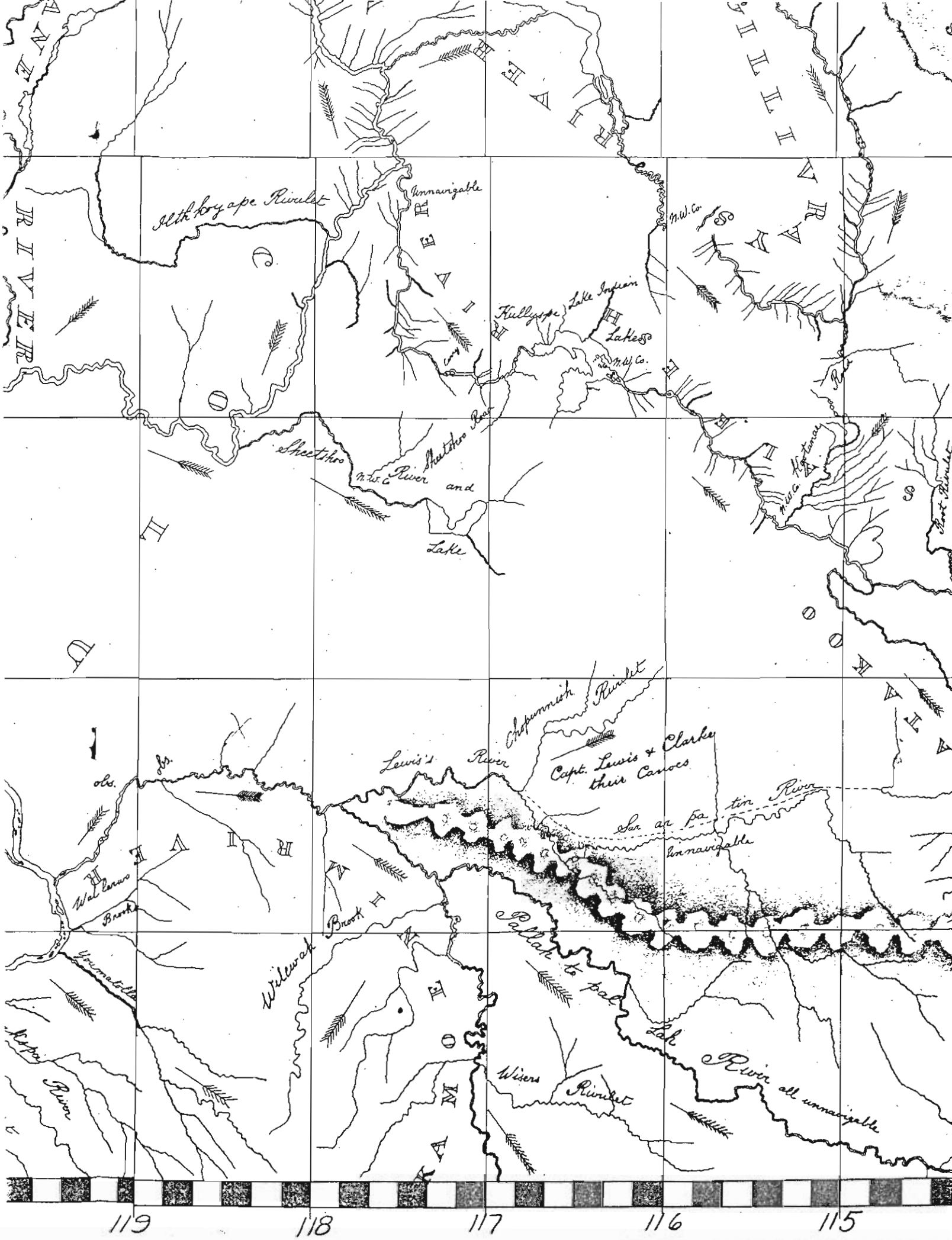
Unnavigable
Althborgape Rivulet
Sheetshoo
Lake
Chopunnish Rivulet
Lewis's River
Capt. Lewis & Clarke their Canoes
Unnavigable
Wal lamo Brook
Willewah Brook
Pallah to Pad
Wisers Rivulet
all unnavigable
119
118
117
116
115

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Map 49. Lolo Trail System

David Thompson Archive Map

M1.006 Thompson 1814

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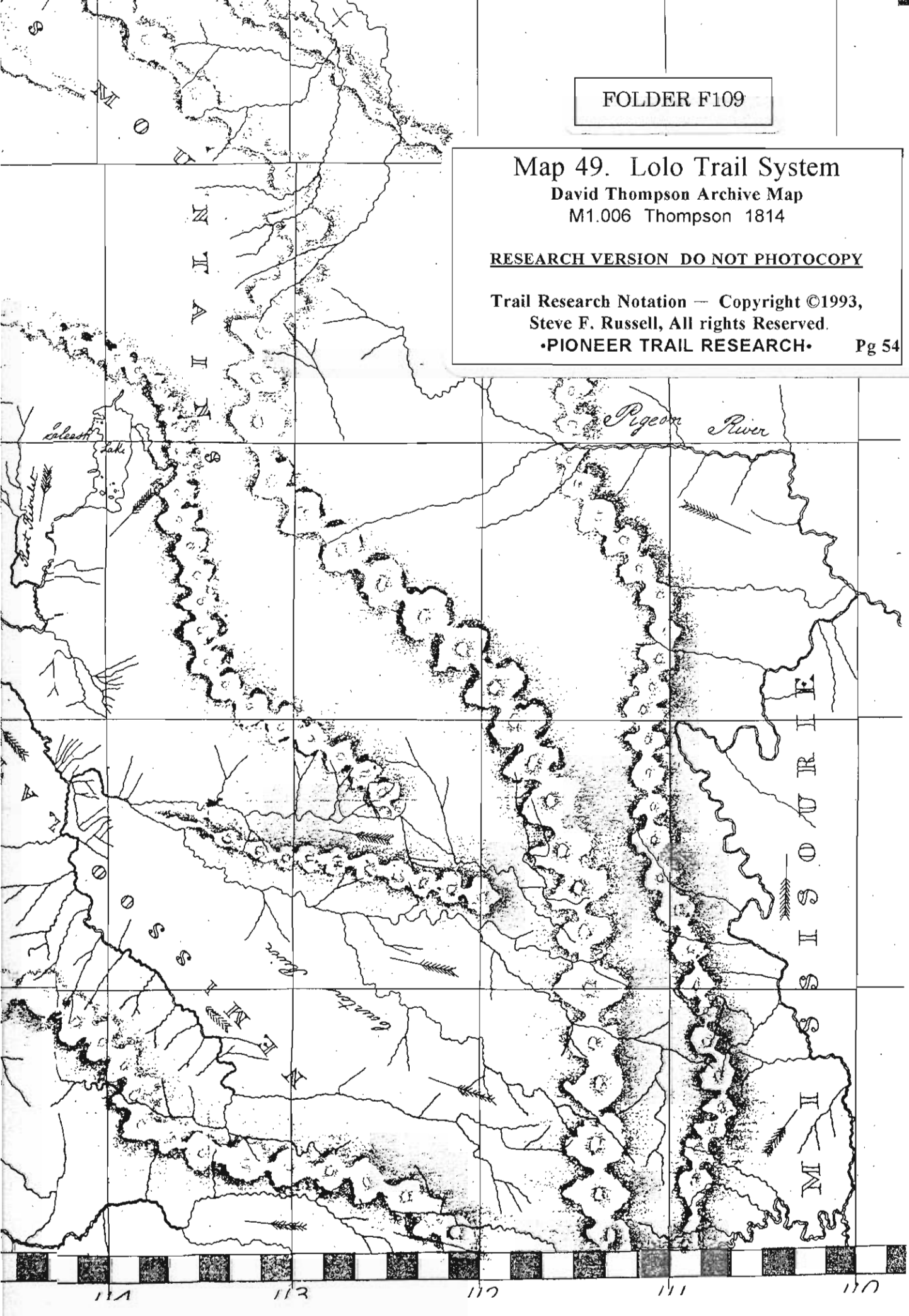

FOLDER F109
Kamas Prairie of the Coeur d'Alene
St. Joseph's River
Stevens Peak
1855
Peluse River
Stevens
Coosskooskie
Old Mission
Craig's
Clearwater River
Route of Lt Mullan in Septbr 1854
Pepunnemah Cr.
Ahleah Cr.
Weippe Prairie
Lolo Forks
Lolo Creek
Weitas Meadows
Sopiel Meadows
Route of
Route of A.W. Tinkham in Novbr 1853
Konever Cr.
LEWIS FORK - or SNAK

Map 50. Lolo Trail System
John Mullan PRR Archive Map
M2.001 PRR-Survey-Stevens-1 1853-55
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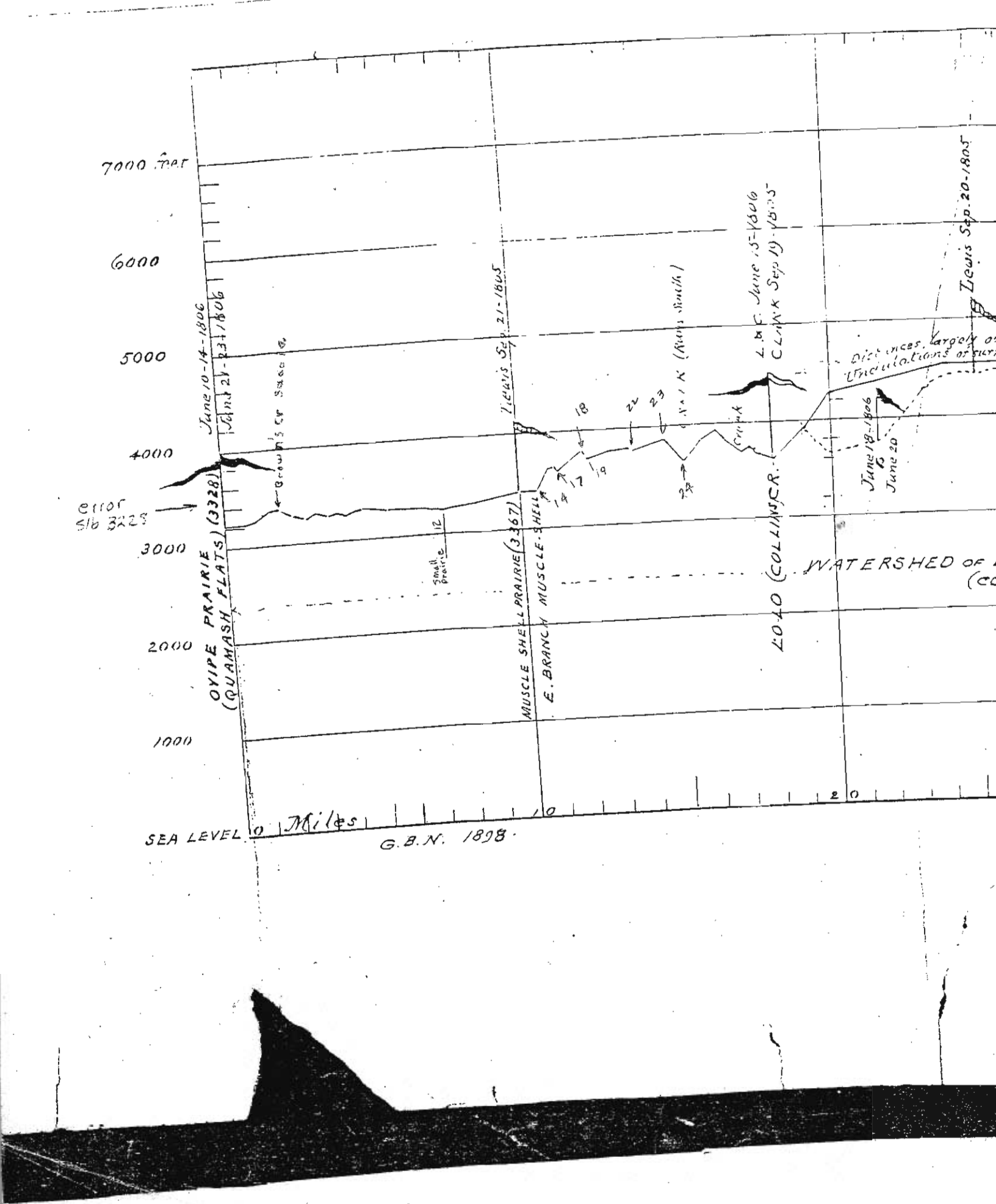
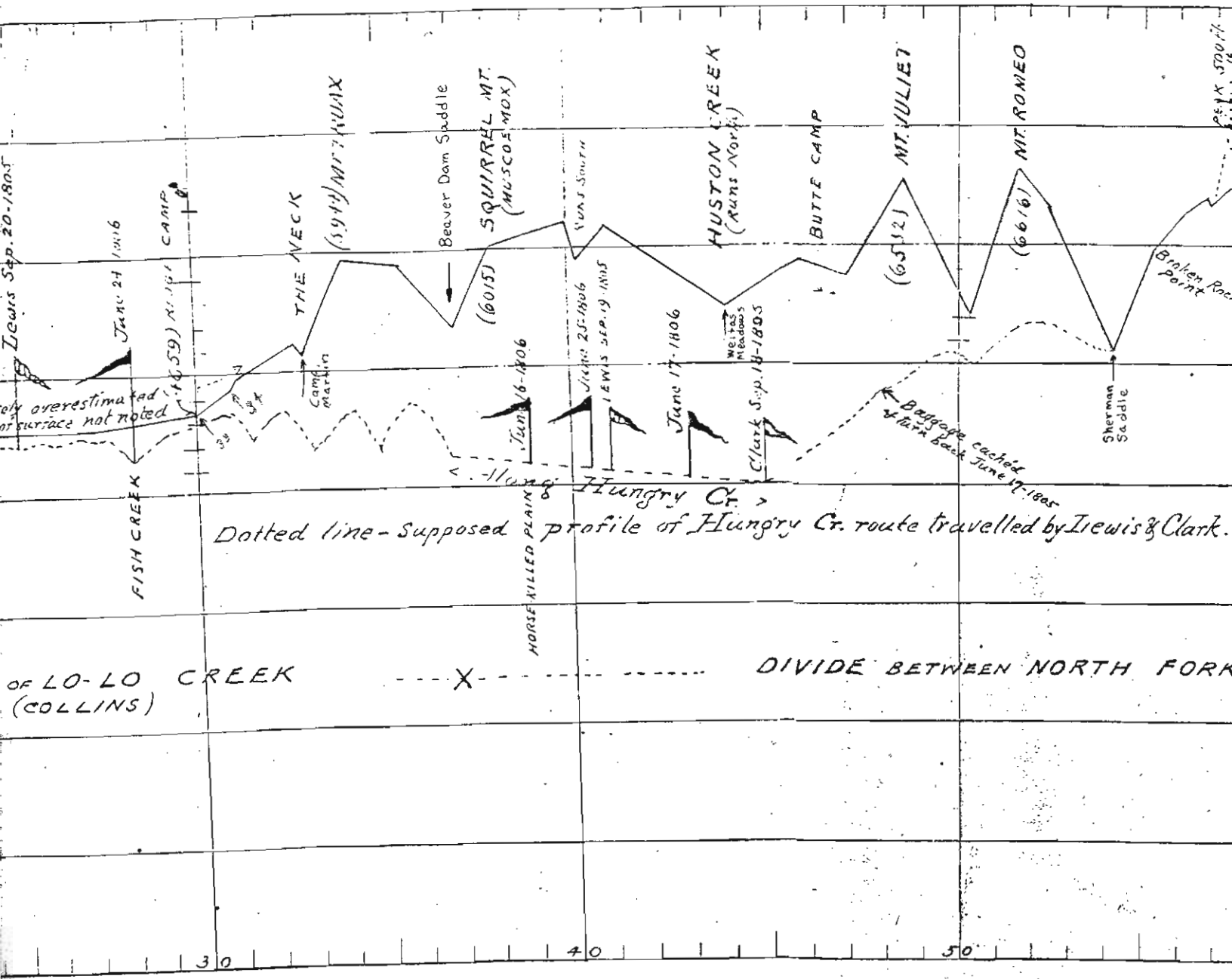
•PIONEER TRAIL RESEARCH• Pg 55
LATHE RIVER
Coll. Stevens in 1853
Defile at Coriaca
Travelled Ground
Route of Lt Mullan in September
Moon Creek
Crooked Fork Crossing
Howard Creek
Salmon Fork
BITTER ROOT MOUNTAINS
CLARK'S FORKS
Route of Lt. Mullan


7000 feet
6000
5000
4000
3000
2000
1000
SEA LEVEL
Miles
G.B.N. 1898.
June 10-14-1806
June 21-23/1806
Grows in Sage
Lewis Sep. 21-1805
Small Prairie
12
18
22
23
17
19
24
Crow
L. & C. June 13-15/1806
CLARK Sep. 19-1805
Lewis Sep. 20-1805
June 18-1806
& June 20
OYIPE PRAIRIE
(QUAMASH FLATS) (3328)
error
5/6 3328
MUSCLE SHELL PRAIRIE (3367)
E. BRANCH MUSCLE SHELL
LO40 (COLLINS CR.
WATERSHED OF



PROFILE OF THE LO LO

Map 51. Lolo Trail System

Nicholson Profile Map A

G. B. NICHOLSON 1898

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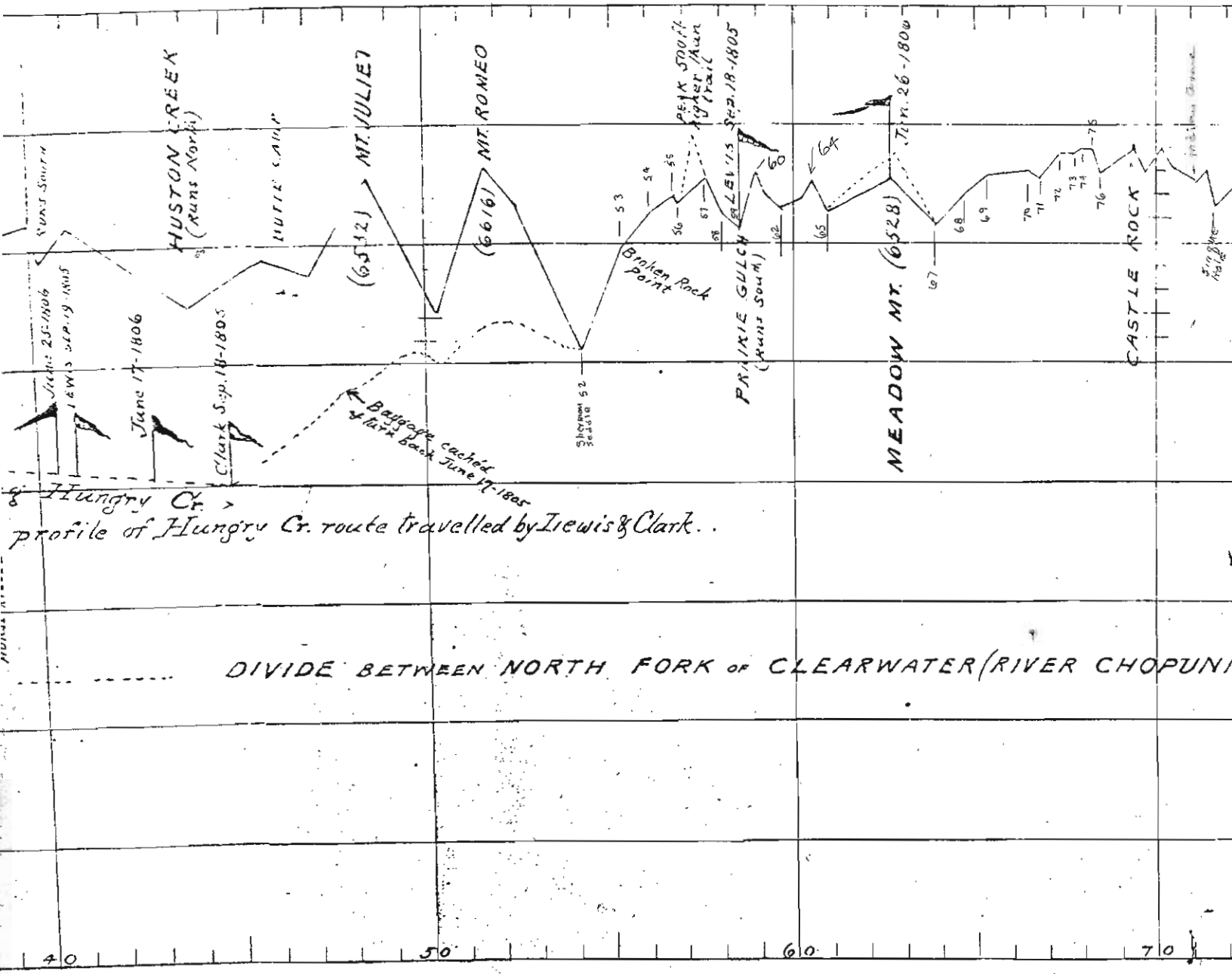
CFR NOTES: 1. above mile



Hungry Cr.

profile of Hungry Cr. route travelled by Lewis & Clark..

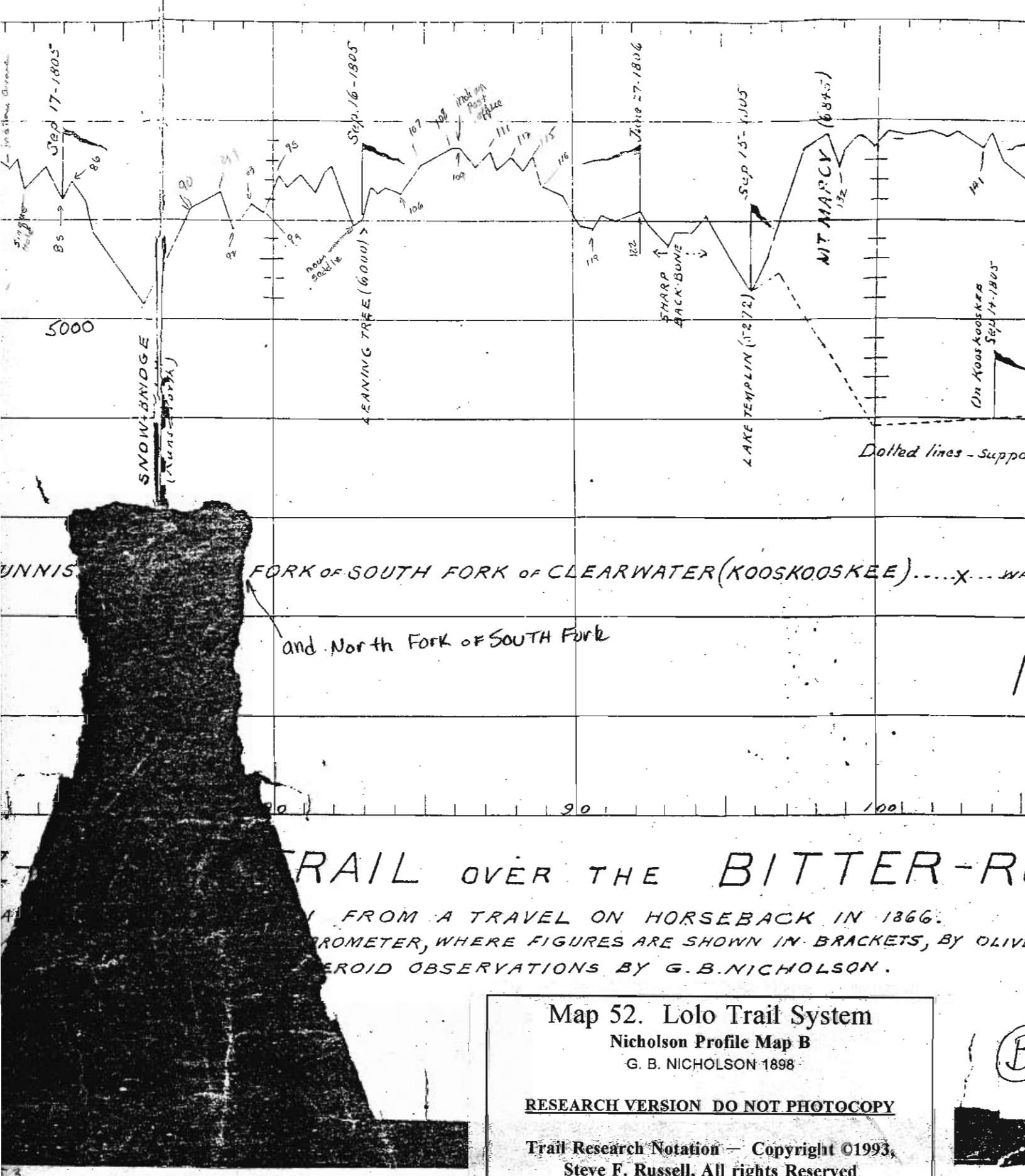
DIVIDE BETWEEN NORTH FORK OF CLEARWATER (RIVER CHOPUNI

PROFILE OF THE LOLO OR NORTH NEZ

*ALL DISTANCES ESTIMA
ELEVATIONS FROM OBSERV
ALL OTHER ELEVATIONS

CFR NOTES: 1. above mileage is long by a factor of 1.22 to 1.53

M3.
TUBI



Map 52. Lolo Trail System

Nicholson Profile Map B

G. B. NICHOLSON 1898

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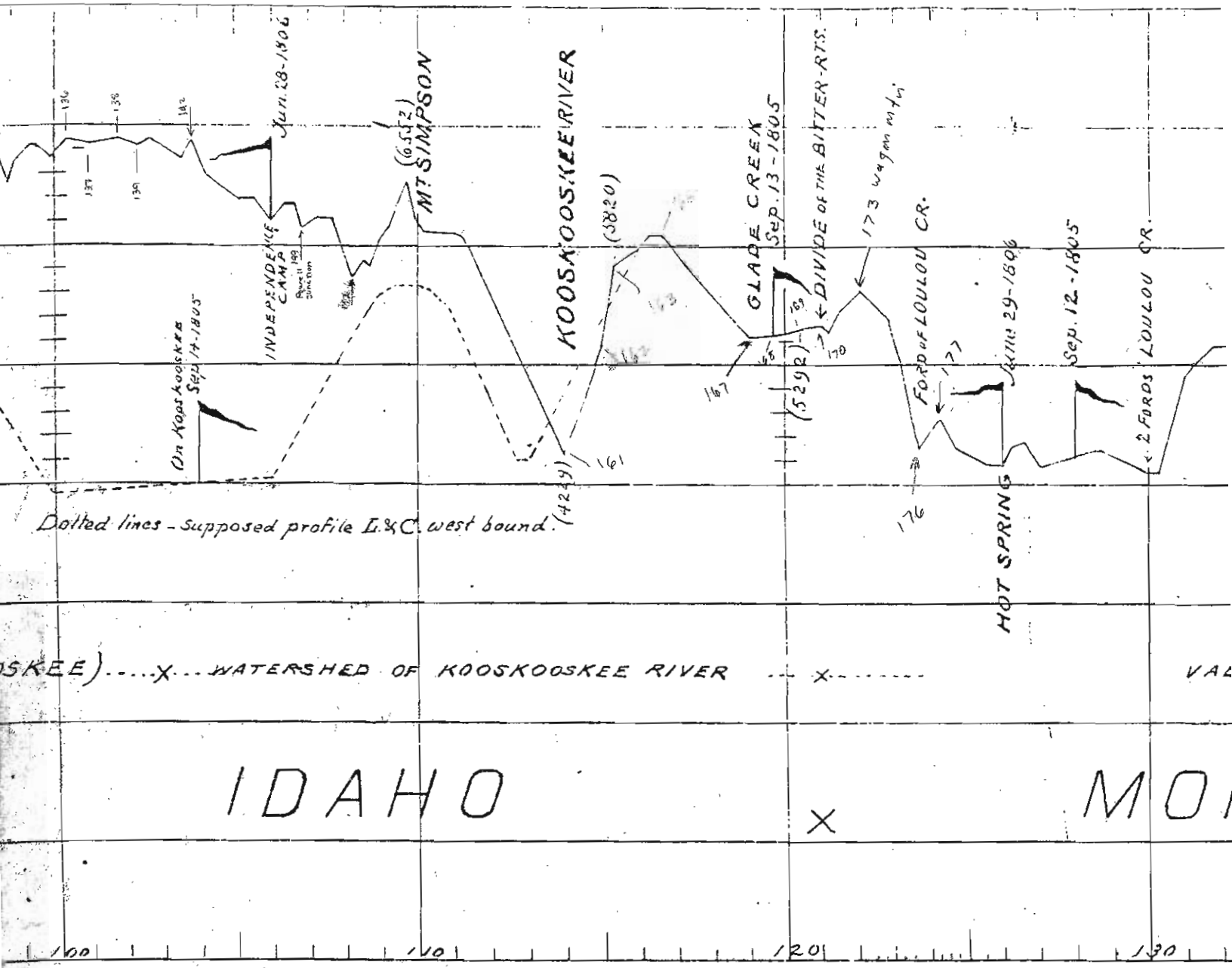


SKEE).....X...WATERSHED OF KOOSKOOSKEE RIVER .....X..... VA

TER-ROOT MOUNTAINS

IN 1866.

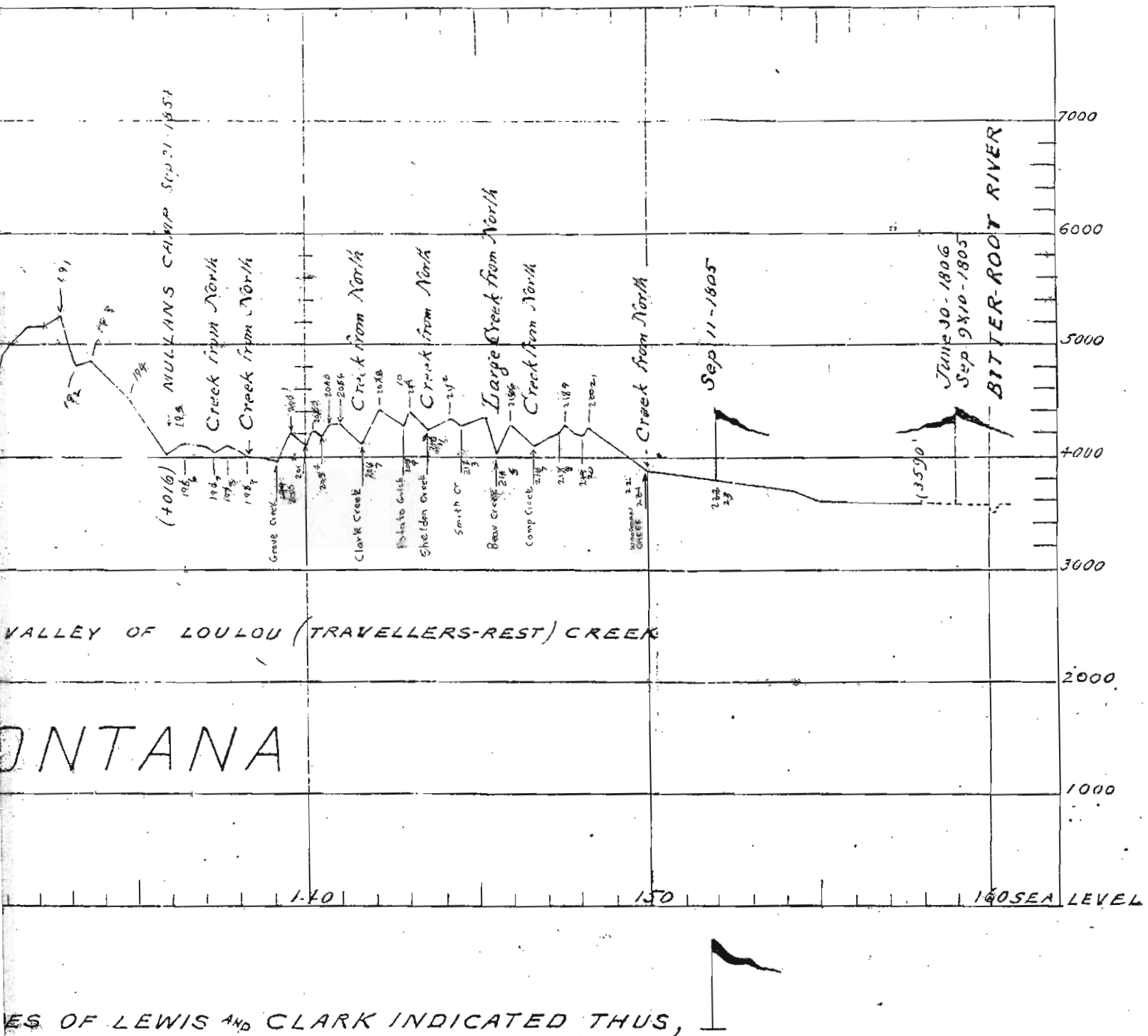
RACKETS, BY OLIVER MARCY,

LSON.

CAMPING PLACES

This map was prepa
in 1898, documentin

This copy was obtain
Archaeologists files.



ES OF LEWIS AND CLARK INDICATED THUS,

Map 53. Lolo Trail System

Nicholson Profile Map C

G. B. NICHOLSON 1898

FOLDER F109

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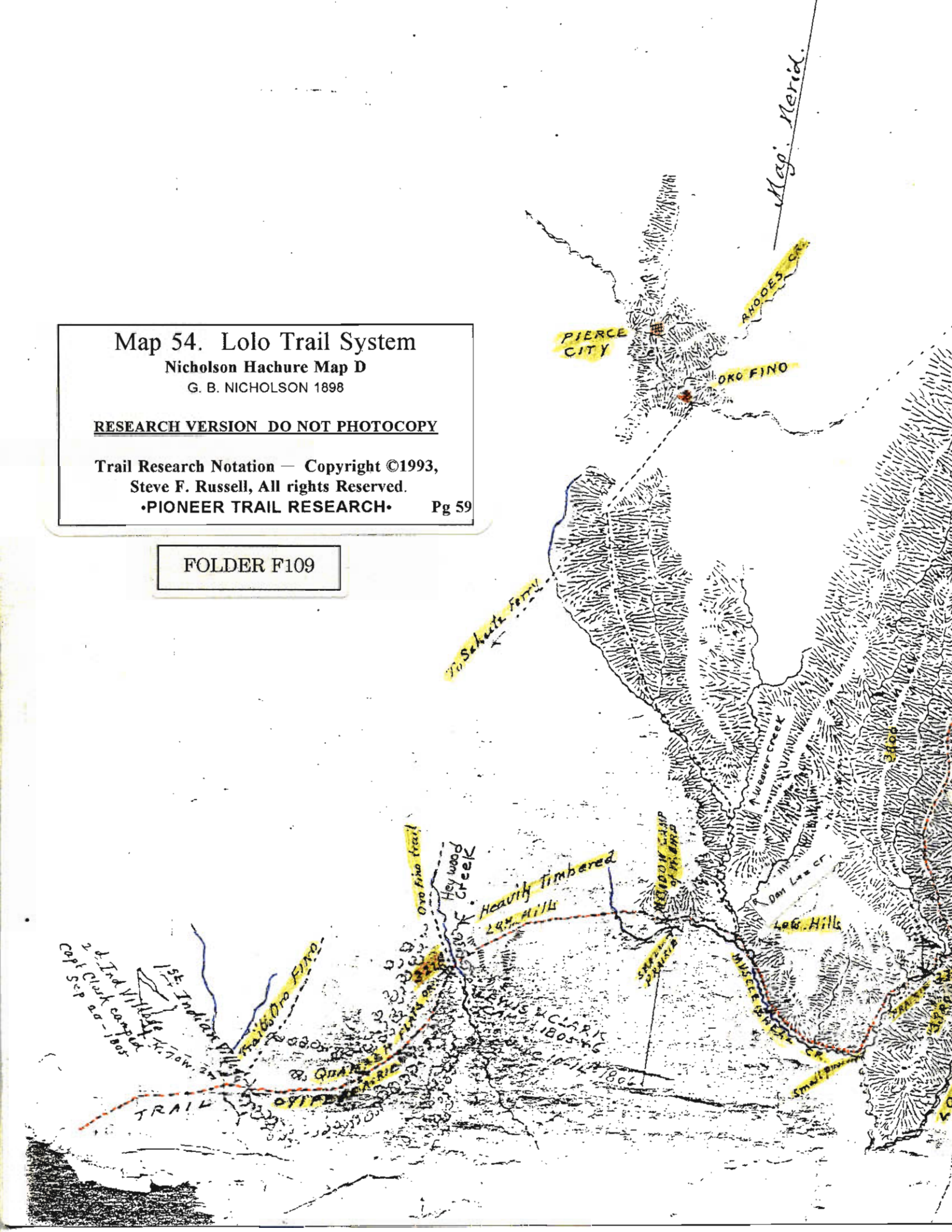
(C)

pared by George B. Nicholson
ing his survey of 1366.

ained in August 1990 from the
e of the Clearwater National Forest

Note: this is the Northern Pecces trail and not Bird-Tivax Trail


Map 54. Lolo Trail System
Nicholson Hachure Map D
G. B. NICHOLSON 1898
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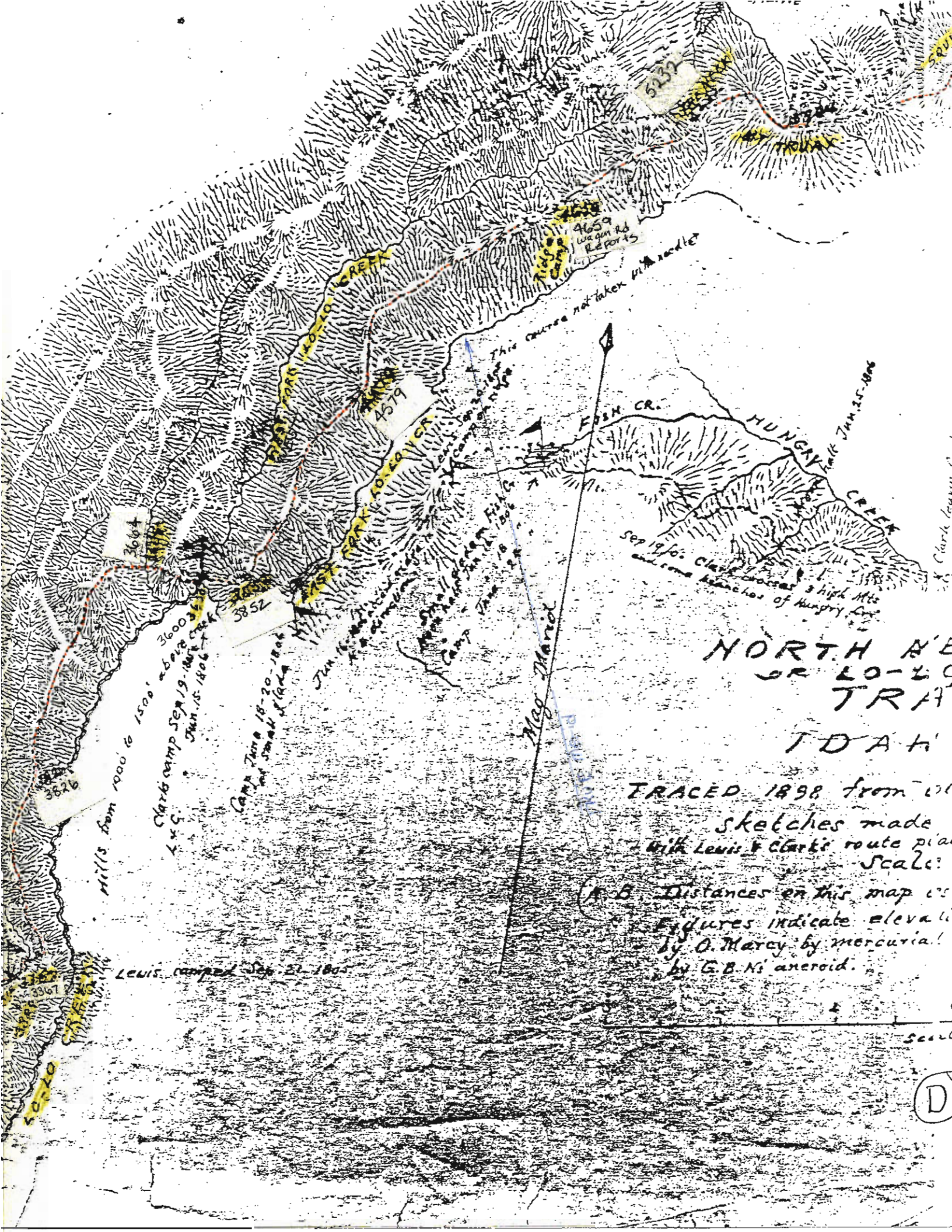
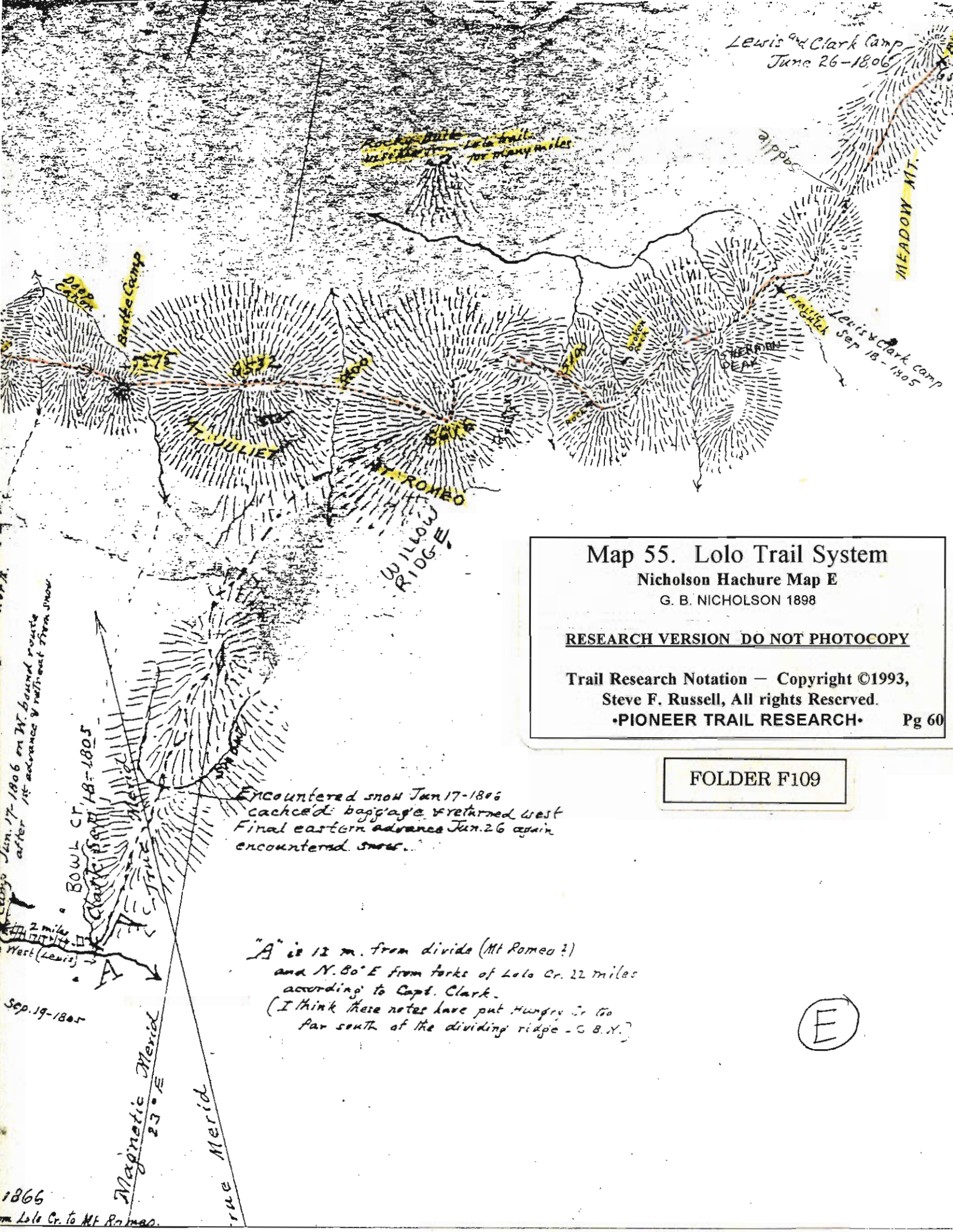
FOLDER F109
Mag. Merid.
PIERCE CITY
RHODES CR.
ORO FINO
To Selkirk Ferry
Beaver Creek
Oro Fino trail
Hey wood Creek
Heavily Timbered
Log Hills
Log. Hills
R. Dan Lee cr.
MUSSELSHELL CR.
Small pines
TRAIL
LEWIS & CLARK 1805-6
1806
3800


NORTH A'E
OR LO-L
TRA
IDAH
TRACED 1898 from
Sketches made
with Lewis & Clark's route pla
Scale:
A.B. Distances on this map
Figures indicate eleva
by O. Marcy by mercurial
by G.B.N's aneroid.
Mag. Meridt
Lewis camped Sep. 21. 1805
Camp June 18-20-1806
Clark's camp Sep 19-Oct 1 1806
Hills from 1000 to 1500' above
Fish Creek
Hungry Creek
Ridge Camp
4659
Wagon Rd Reports
5237
3664
3852
3826
3600
4579
3362
3367
3365
Sep 19 to Oct 1 Clark encamped 3 days on branches of Hungry Cr.
This course not taken with needle
Camp June 18 1806
Camp June 20 1806
Jun 15 1806
Jan 15 1806
Scale
D

GRAND VIEW MT.
To Old Grande Cr.
Prairie
SQUIRREL MT.
grass
grass
Huston Cr.
MT TRUAX
This course not taken with saddle
FISH CR.
HUNGRY CREEK
halt Jun. 25-1806
Sep 19 '05: Clark crosses 3 high Mts and some branches of Hungry Cr.
Clark leaves Creek Sep 14
Small plain where Clark killed horse Sep 19-1805
Camp June 16-1806.
Camp Jun 25-1806 - 1/3 mile from Horse-killed plain.
OBIA Creek
Lewis Sep 19-1805 crosses branch from North
3 miles from it.
Camp Jun. 17-1806 on W. bound route
after 1st advance
Due West
Lewis camp Sep.
Mag Merid
NORTH NEZ PERCE
OR LO-LO
TRAIL
IDAHO
TRACED 1898 from old reconnoisance
sketches made by G. B. Nicholson in 186
platted from their descriptions from



Map 55. Lolo Trail System

Nicholson Hachure Map E

G. B. NICHOLSON 1898

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NORTH FORK OF FEATHER
ORO FINO CREEK
BALD MT.
PIERCE CITY
ORO FINO
NORTH FORK TRAIL
Davidson
DAVIDSON CREEK
OLIVE PRAIRIE
GOLD CREEK
INDIAN FERRY

FOLDER F109
Map 56. Lolo Trail System
Nicholson Hachure Map F
G. B. NICHOLSON 1898
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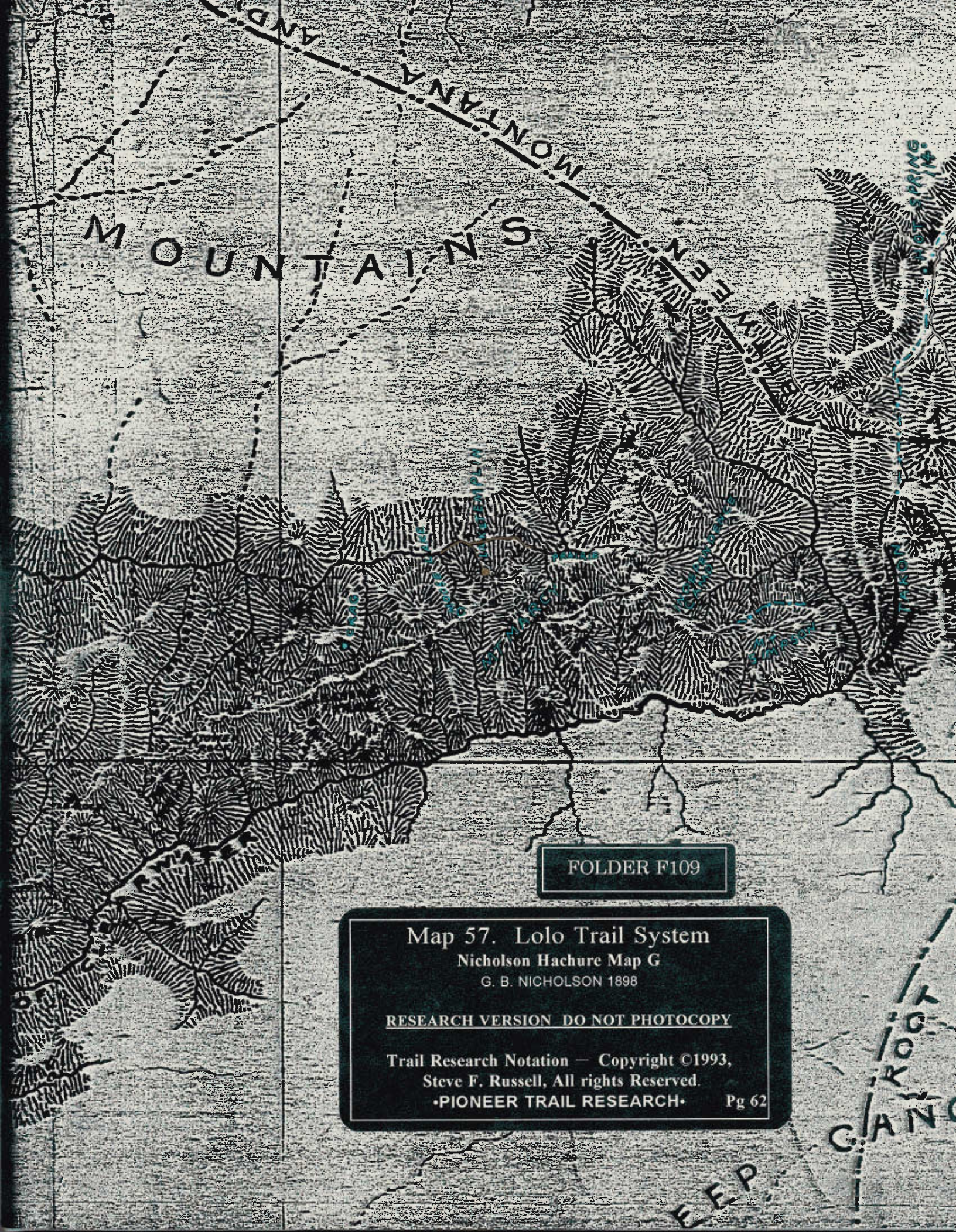
•PIONEER TRAIL RESEARCH• Pg 61
CLEARWATER
ORO GRANDE CREEK
MT. MULLER
MT. IDAHO
MT. HUMBIRD
MT. SAINT JOE
MT. GIFFORD
SOUTH FORK
NORTH FORK
LOOKING GLASS
BIG HOLE
BIG HOLE PASS
LOLO PASS
LOLO CREEK
LOLO TRAIL
LOLO TRAIL
LOLO TRAIL



FOLDER F109

Map 57. Lolo Trail System

Nicholson Hachure Map G

G. B. NICHOLSON 1898

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MISSOULA
BIG
LOU-LOU
FORK
BITTER ROOT
MOUNTAINS
ROGUE'S FORK
OWENS PEAK
FORT OWEN
CANTONMENT STEVENS
ONS

Bitter Root Forest Reserve
Tube 2 CIRCA 1897 Research
RG 49 Idaho #7 OMF

FOLDER F109

Map 58. Lolo Trail System

Bitter Root Forest Reserve Circa 1897

RG 49 Idaho #7 OMF

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•PIONEER TRAIL RESEARCH• **Pg 63**

45' 30' 15'

RIVER

North Fork of CLEARWATER

Rio Grande Cr

Weitus Cr

5 Pierce

Musselshell Cr

Bald Mt

Rocky Ridge

Sherman Pk.

Middle Fork of CLEAR

Lolo

Fk.

Kooskia

6

7

THE CRAGS MTS

The Crag

Old Man Cr

Clear Cr

36

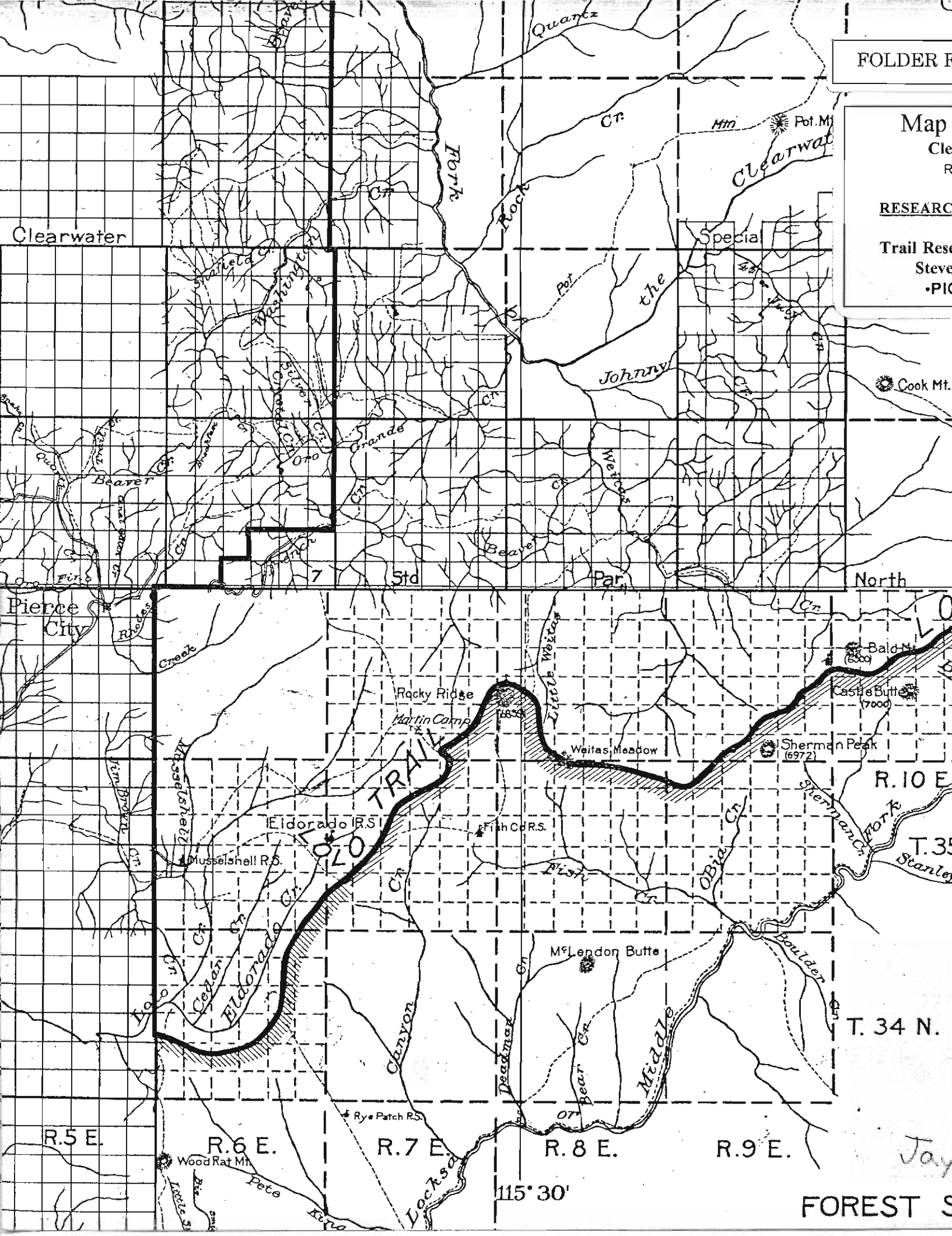
35

34

33

32

1897
115°
45'
30'
Lolo Cr.
Granite Cr
Lost Lakes
Lolo Trail
S Fk of N Fk
White Sand Cr.
Johnsons
Warm Springs Cr.
Walton Lakes
Grave Pk
Isaac Lake
Old Man Cr.
Elk Summit Lake
Big Sand L.
Jennett Lake
Diablo Pk
Hells Ford
Smarts
N. Fk. of Moose Cr.
Moose L.
Sawtoot
Roaring Ly
Twin Lakes
N. Fk.
Lost Horse
Lake Clara
Nolans
Moose Cr.
S. Fk.
Big Cr.
N. Fk. Bear Cr.
Lake Coquine
RIVER


FOLDER
Map
RESEARC
Trail Rese
Steve
•PIC
Clearwater
Special
Cook Mt.
Pot. Mt.
Clearwater
Mtn
Quartz
Ck.
Rock
Fork
Johnny
the
Creek
Washington
Silver
Creek
Ck.
Grande
Ore
Beaver
Ck.
Weitas
Beaver
Ck.
Ck.
Ck.

ER F109

1911

Map 59. Lolo Trail System
Clearwater National Forest 1911
RG 95 Series 126 Clearwater N.F.

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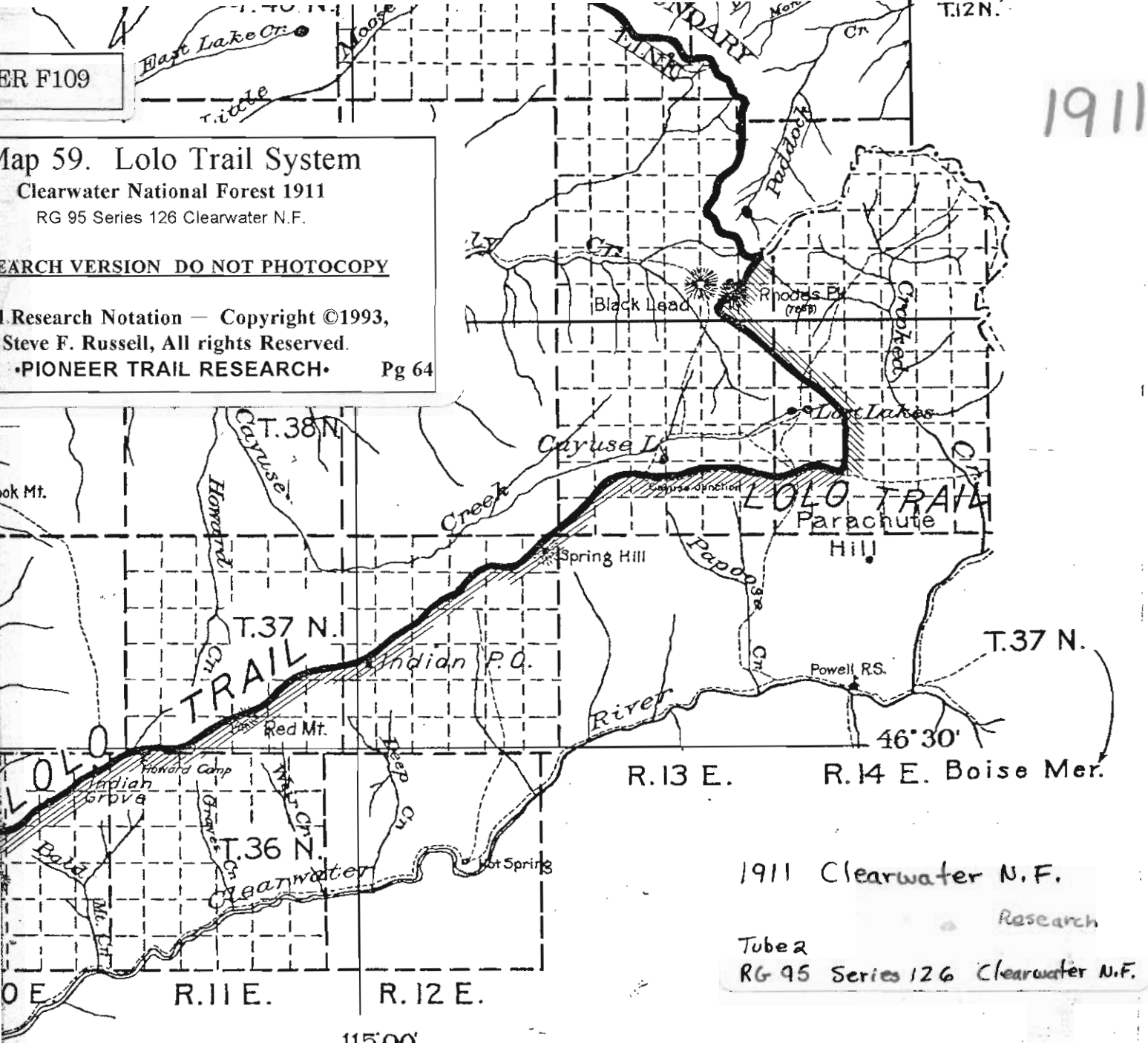


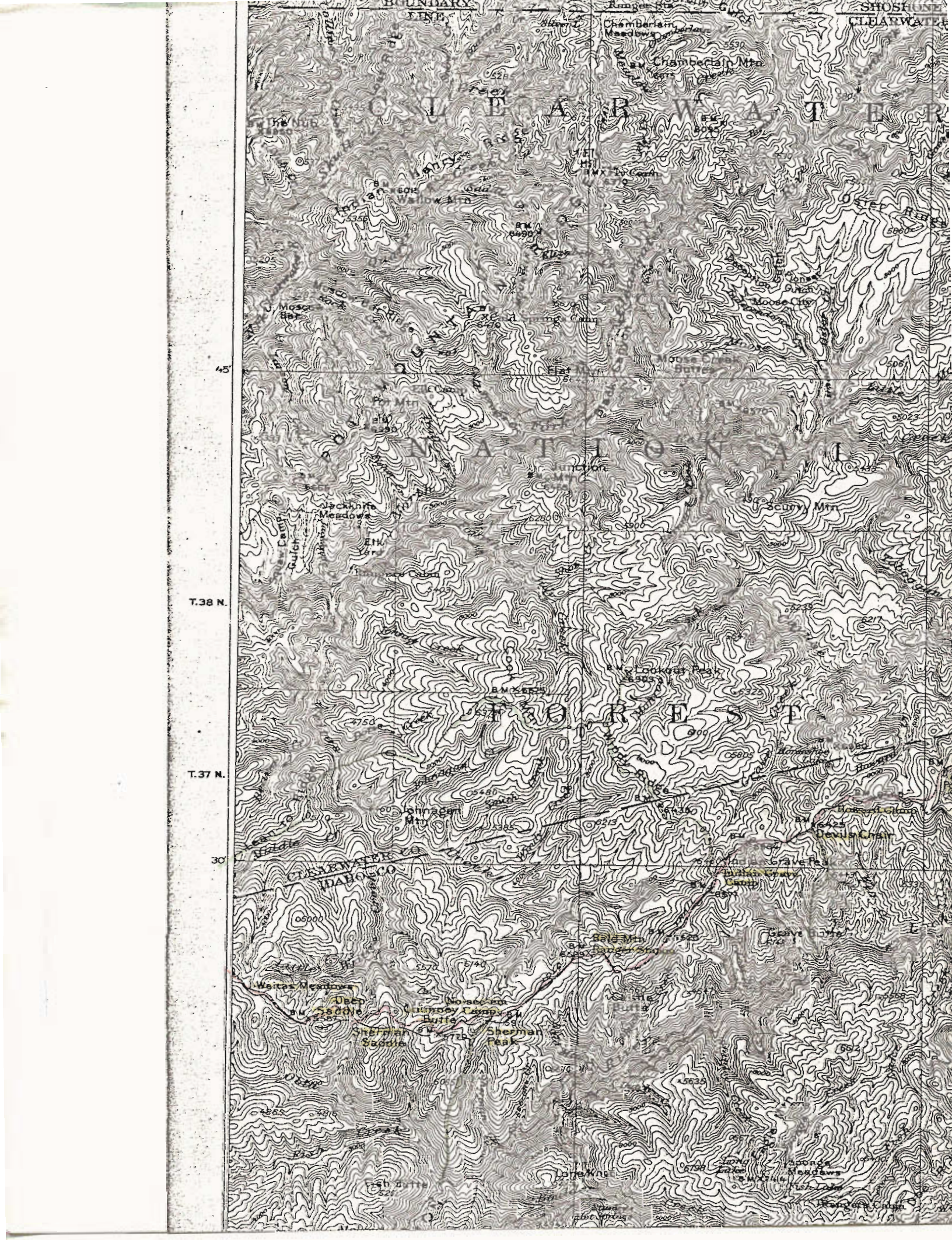
1911 Clearwater N.F.
Research
Tube 2
RG 95 Series 126 Clearwater N.F.

Administrative Sites within the Clearwater National Forest. Idaho. Boise Mer.

T. 35 N., R. 6 E.
Musselshell Adm. Site
N E & S E Sec 19 & N W & S W Sec. 20 = 80 acres
Withdrawn Dec. 20, 1907.

Jay Turner

SERVICE, U. S. DEPT. OF AGRICULTURE


BOUNDARY
CLEARWATER
Chamberlain Meadows
Chamberlain Mtn
The Nub
Indian Ridge
Wallowa Mtn
Moose Creek Ridge
Moose City
Moose Creek Buttes
Flat Mtn
Pot Mtn
Jackknife Meadows
Elk Yard
Scurvy Mtn
Lookout Peak
Johnson Mtn
Devils Chair
Grave Peak
Bald Mtn
Ranger Station
Weitas Meadows
Deep Saddle
Sherman Saddle
Sherman Peak
Long Lake
Lake Mtn
Fish Butte
45'
30'
T.38 N.
T.37 N.
CLEARWATER CO
IDAHO CO

1911-1913
Lolo Quad - Mont.
1:250,000
Tube 2
Research
RG 57 Lolo Quad (Mont)

1911

FOLDER F109

Map 60. Lolo Trail System

Lolo Quad - Montana 1:250,000

RG 57 Lolo Quad (Mont)

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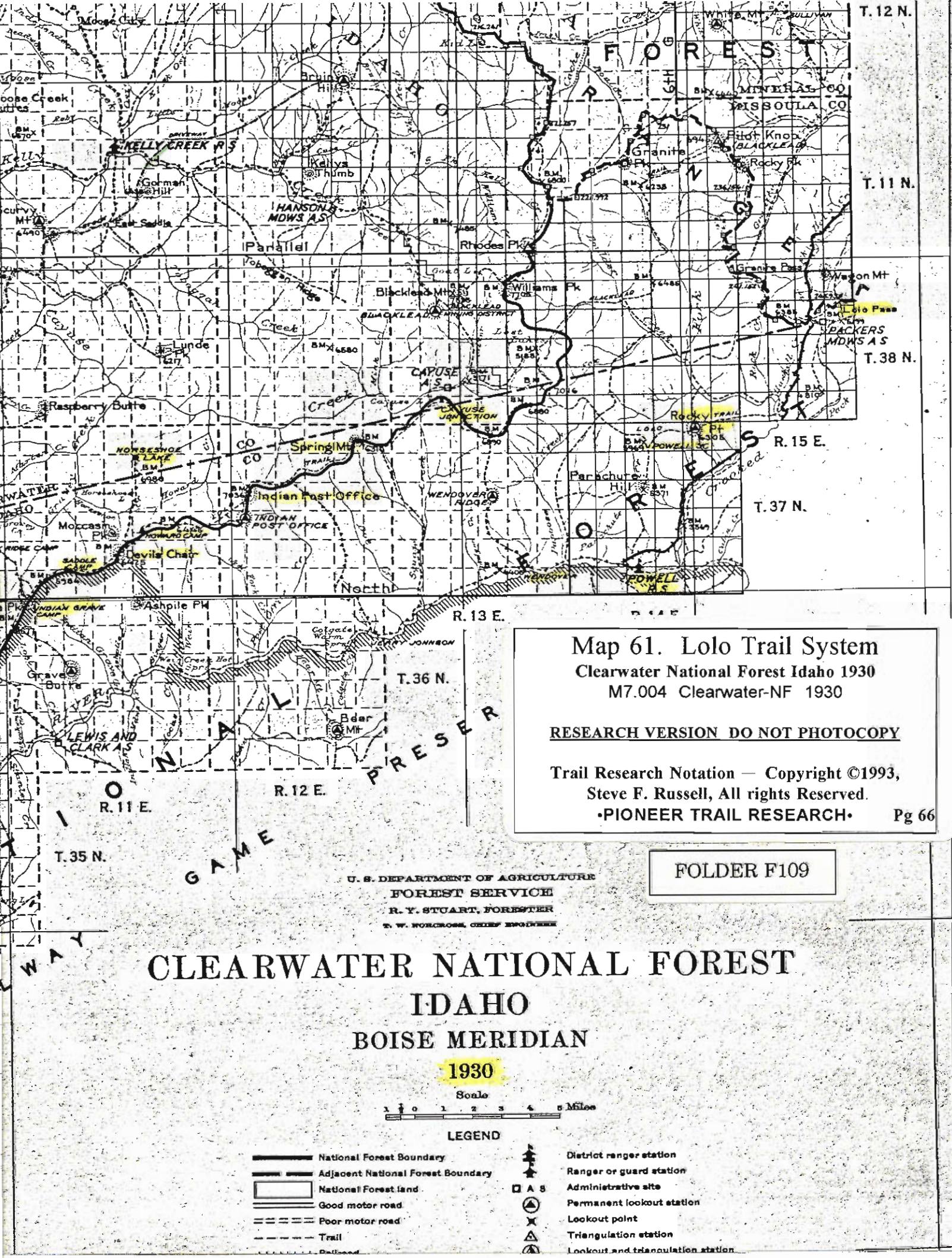
·PIONEER TRAIL RESEARCH·

1930 Clearwater N.F.
Tube 2
RG 95 Series 68 Clearwater NF
Research
PRESERVE
Sheep Mt
Mt Range
Moscow Bar
COLD SPRINGS
Flat Mt
Moose Buttes
Pot Mt
COLD SPRINGS A.S.
FORKS R.S.
Junction Mt
Twin Pks
Scurvy Mt
Clearwater
Special
FISHER CR A.S.
Elk Mt
Bald Butte
Switchback Hill
Headquarters
BUNGALOW R.S.
Bighorn Point
Bugle Point
CAMP GEORGE
WINDY RIDGE CAMP
OXFORD R.S.
Johnny Butte
Cook Mt
COOK MT R.S.
Lookout Pk
Doris Butte
Fox Butte
Shanghai
WEITAS R.S.
Monroe Butte
Tamarack Butte
Johnagan Mt
Smith Butte
Porphyry Pk
Parallel
French Mt
Standard
Pierce
Hemlock Butte
Indian Grave Pk
Weitas Butte
Bald Mt
Little Weitas Butte
Rocky Ridge
Liz Butte
Castle Butte
CAMP MARTIN
CAMP WILDERS
Snowy Summit
Weitas Mdws
Deep Saddle
Chimney Butte
Sherman Saddle
Sherman Pk
Nosedum Mdws
Nosedum Butte
Grouse Ct
Boundary Pk
Five Is
MUSSELSHELL R.S.
AERONAUTIC LANDING FIELD
AUSTIN RIDGE
Lone Knob
Fish Butte
LOCASA R.S.
BOULDER CR A.S.
Boulder
Brown Cr Ridge
ELDORADO A.S.
CANYON CR R.S.
Frenchman Butte
McLendon Butte
R. 10 E.
T. 34 N.
Middle Butte
Huckleberry Butte
Smoky Pk
CAMP
Maggie Butte
RYE PATCH R.S.
R. 9 E.
T. 33 N.
Woodrat Mt



Map 61. Lolo Trail System

Clearwater National Forest Idaho 1930

M7.004 Clearwater-NF 1930

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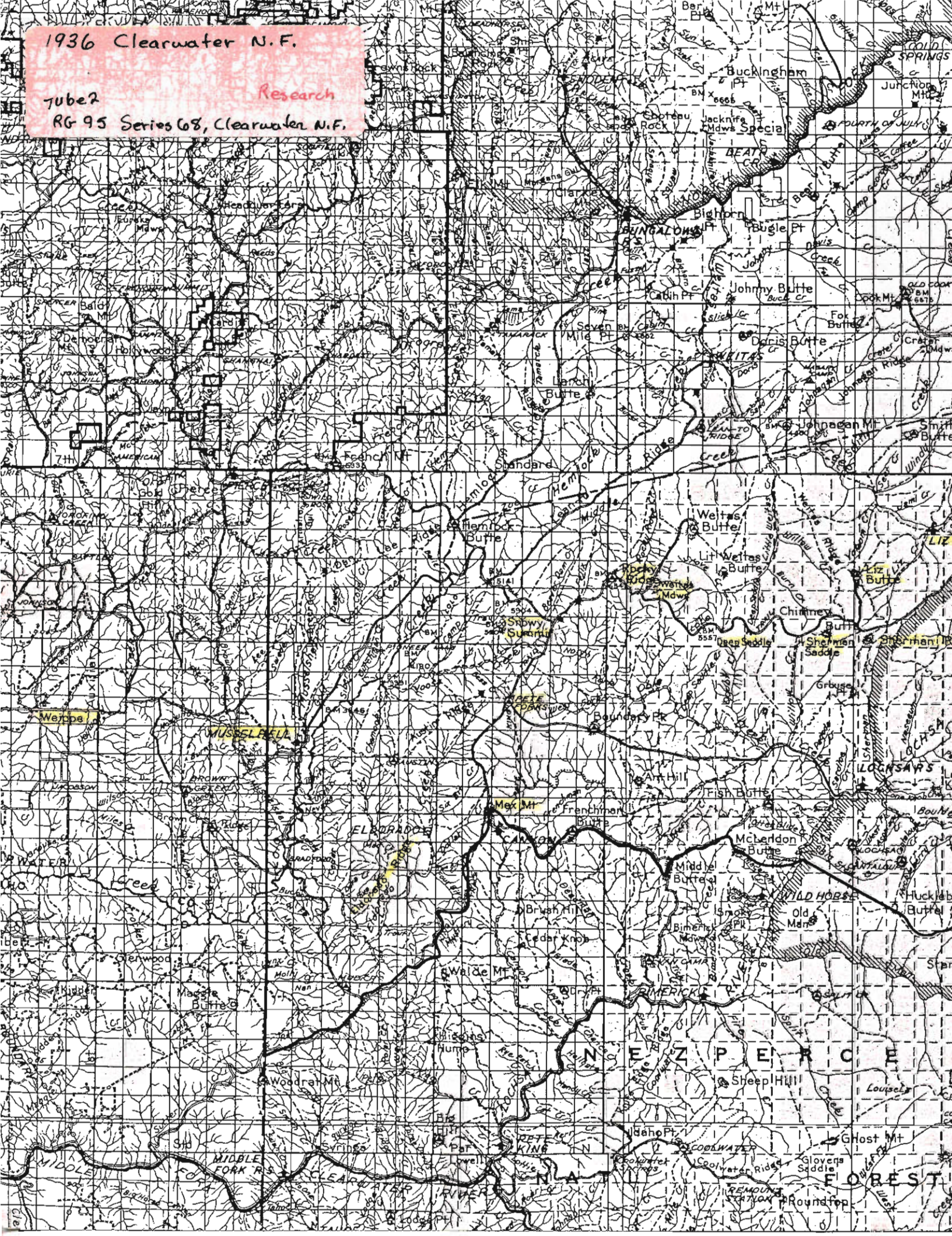
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R. Y. STUART, FORESTER
T. W. WORCESTER, CHIEF ENGINEER

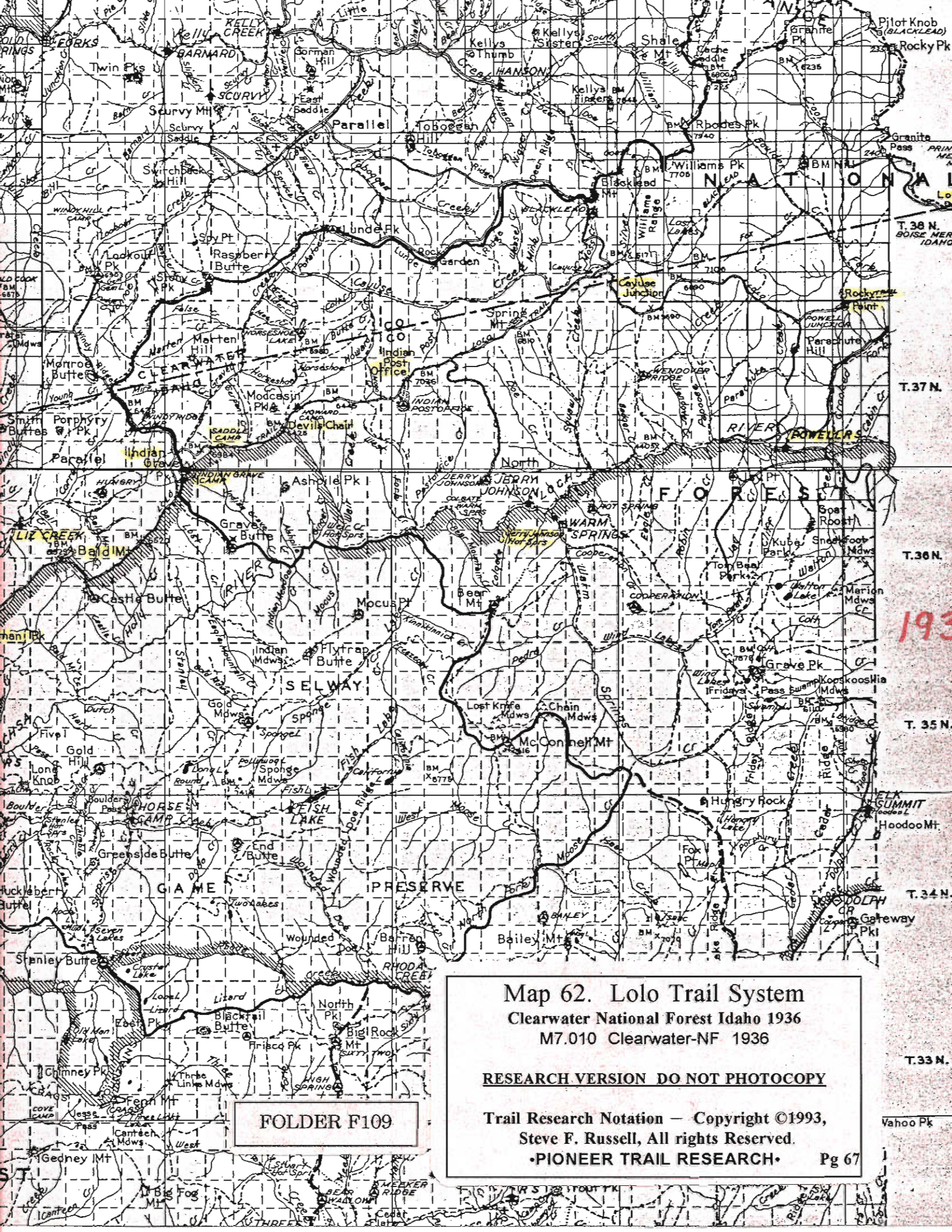
CLEARWATER NATIONAL FOREST
IDAHO
BOISE MERIDIAN
1930

Scale
1 ½ 0 1 2 3 4 5 Miles

LEGEND

- National Forest Boundary
- Adjacent National Forest Boundary
- National Forest land
- Good motor road
- Poor motor road
- Trail
- Railroad
- District ranger station
- Ranger or guard station
- A S Administrative site
- Permanent lookout station
- Lookout point
- Triangulation station
- Lookout and triangulation station


1936 Clearwater N.F.
Tube2
Research
RG 95 Series 68, Clearwater N.F.
Buckingham
Junction Mtn
Special
BEAVER CR
Bighorn Pt
Bugle Pt
BUNGALOWS R.S.
Johnny Butte
Doris Butte
Johnagan Mt
Johnagan Ridge
French Mt
Weitas Butte
Lit Weitas Butte
Liz Butte
Chimney Butte
Sherman Saddle
Snowy Summit
Boundary Pk
Ant Hill
Fish Butte
Mex Mt
Frenchman Butte
McLendon Butte
Middle Butte
WILD HORSE
Old Man
Bimerick Mdw
Walde Mt
Brush Hill
Cedar Knob
Woodrat Mt
Sheep Hill
Ghost Mt
Roundtop
Idaho Pt
Lodge Pt
Weippe
MUSSELFIELD
ELDORADO
NEZ PERCE
NATIONAL FOREST
MIDDLE FORK R.S.
CLEARWATER RIVER


Map 62. Lolo Trail System
Clearwater National Forest Idaho 1936
M7.010 Clearwater-NF 1936
RESEARCH VERSION DO NOT PHOTOCOPY
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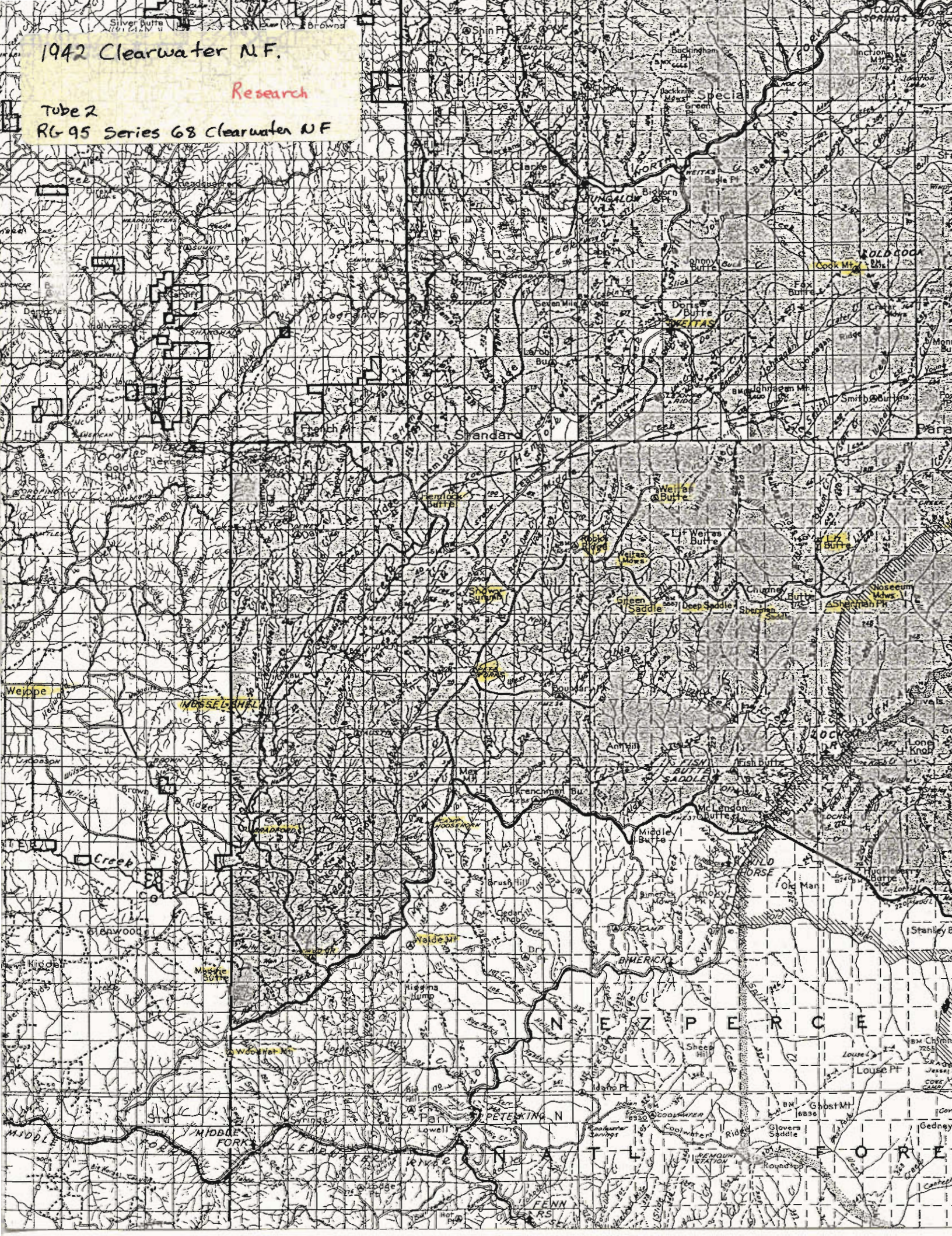
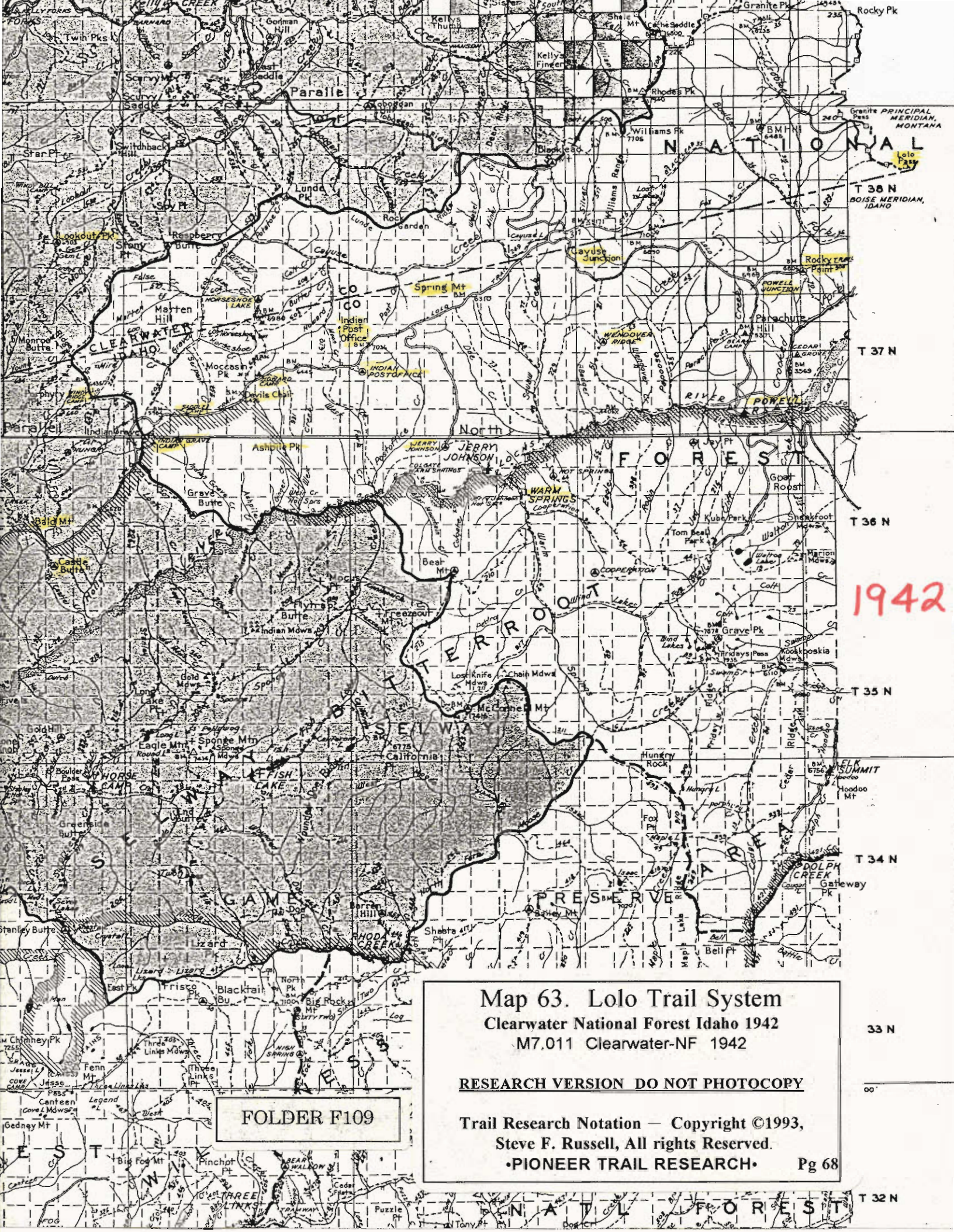
•PIONEER TRAIL RESEARCH• Pg 67
FOLDER F109
T. 38 N.
T.37 N.
T.36 N.
T. 35 N.
T.34 N.
T.33 N.
NATIONAL FOREST
SELWAY
GAME PRESERVE
CLEARWATER
Kelly Creek
Parallel
Toboggan Hill
Granite Pass
Pilot Knob (BLACKLEAD)
Rocky Pk
Williams Pk
Blacklead Mt
Lookout Pk
Raspberry Butte
Rock Garden
Spy Pt
Spring Mt
Indian Post Office
Parachute Hill
Powell
Malten Hill
Monroe Butte
Modcasin Pk
Devils Chair
Smith Butte
Porphyry Pk
Indian Grave
Ashpile Pk
Graves Butte
Bald Mt
Castle Butte
Mocus Pt
Bear Mt
Flytrap Butte
Indian Mdws
Gold Mdws
Sponge Mdws
Long Knife Mdws
Chain Mdws
McConnell Mt
Grave Pk
Kooskooskia Mdws
Hungry Rock
Hoodoo Mt
Fox Pt
Bailey Mt
Gateway Pk
Greenside Butte
End Butte
Barren Hill
Stanley Butte
Blacktail Butte
Friaco Pk
Big Rock Mt
North Pk
Chimney Pk
Fenn Mt
Gedney Mt
Big Fog Mt
Warm Springs
Jerry Johnson
Powell Ranger Station
Lolo Pass
Lolo Creek
Fish Lake
Horse Camp Creek
Rhoda Creek
Wendover Bridge
Indian Post Office
Saddle Camp
Indian Grave Camp
Horseshoe Lake
Two Lakes
Three Links Mdws
Cantech Mdws
Cayuse Junction
Rocky Point
Granite Pk
Shale Mt
Kellys Thumb
Kellys Sister
Scurvy Mt
Switchback Hill
Twin Pks
Gorman Hill
Scurvy Saddle
East Saddle
Williams Range
Lost Lakes
Fox Pk
Snag Foot Mdws
Tom Beal Park
Merion Mdws
Dalton Lake
Wind Lakes
Friday Pass
Swamp Pass
Hungry Lake
Fox Pk
Vahoo Pk

193


1942 Clearwater N.F.
Research
Tube 2
RG-95 Series 68 Clearwater NF
Silver Butte
Browns
Shin Pt
Buckingham Pt
Junction Mtn
Special
Clarke
Bighorn Pt
Headquarters
Cook Mt
Fox Butte
Dorns Butte
Seven Mile
Smith Butte
French Mt
Standard
Gold Hill
Riercel
Hemlock Butte
Weitas Butte
Lit Weitas Butte
Lit Butte
Green Saddle
Deep Saddle
Chimney Butte
Sherman Pk
Weippe
Boundary
Ann Hill
Fish Butte
Long Knob
Mex Mt
Frenchman Butte
McLendon Butte
Middle Butte
Brush Hill
Old Man
Smoky Pk
Cedar Knob
Glenwood
Kiddier
Walde Mt
Maggie Butte
Riggins Hump
Woodrat Mt
Sheep Hill
Louse Pt
Ghost Mt
Lowell
PETERKIN
Coolwater
Glovers Saddle
Roundtop
Remount Station
Fenn RS
Hot Pt
Lodge Pt
MIDDLE FORK CLEARWATER River
NEZ PERCE
NATIONAL FOREST



Map 63. Lolo Trail System

Clearwater National Forest Idaho 1942

M7.011 Clearwater-NF 1942

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1942

Map 64. Lolo Trail System

Nez Perce Reservation 1862 (Archive)

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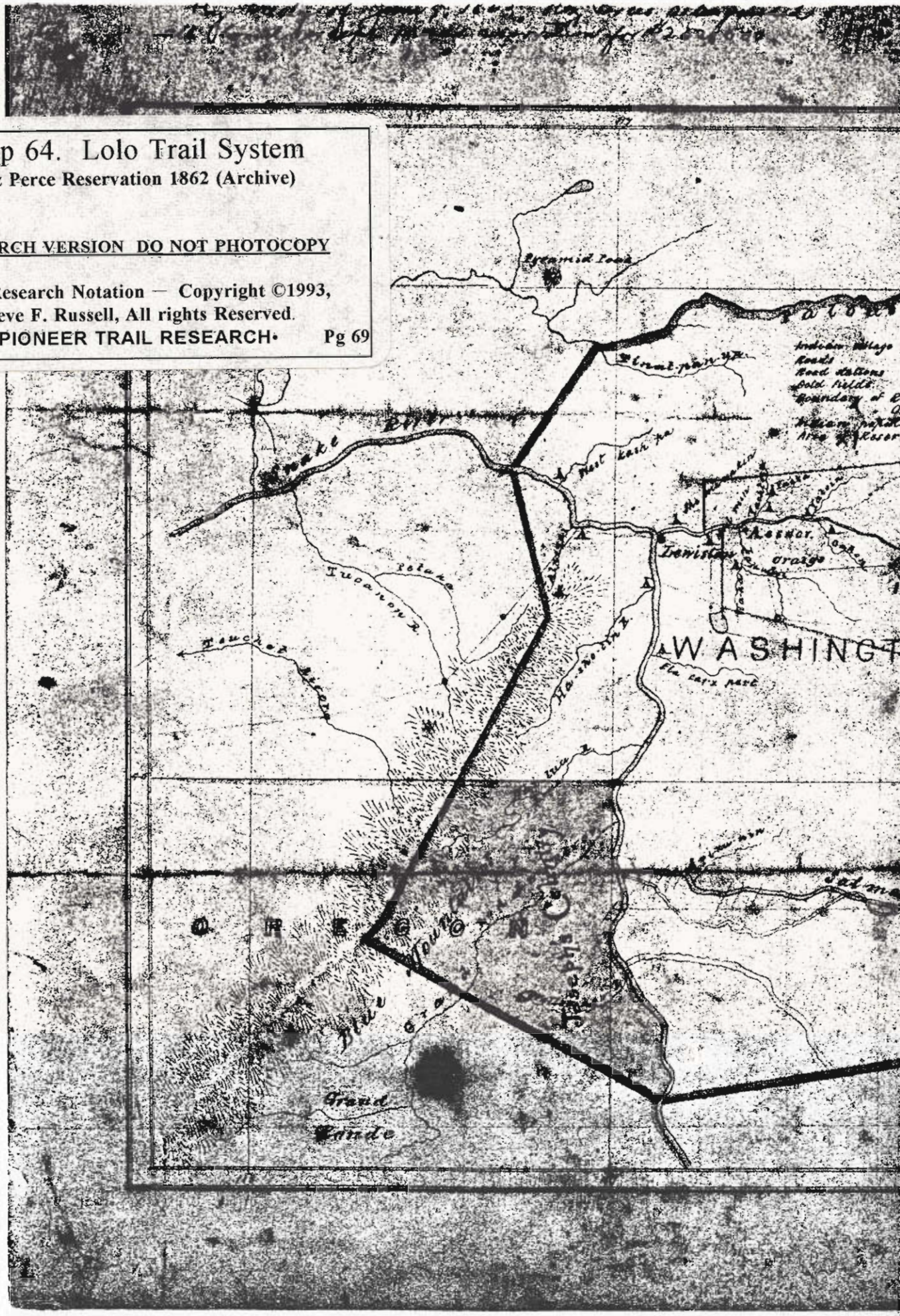
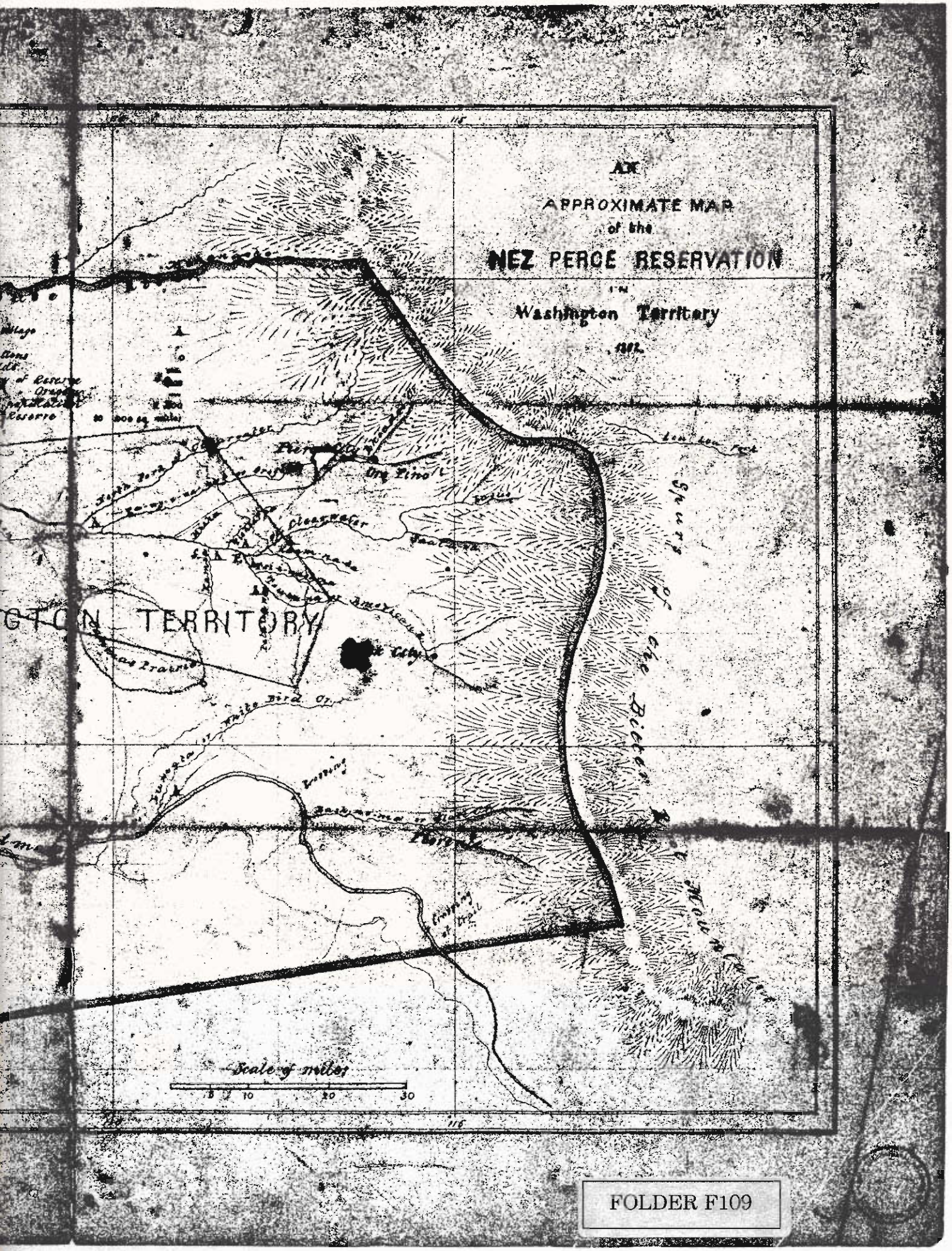
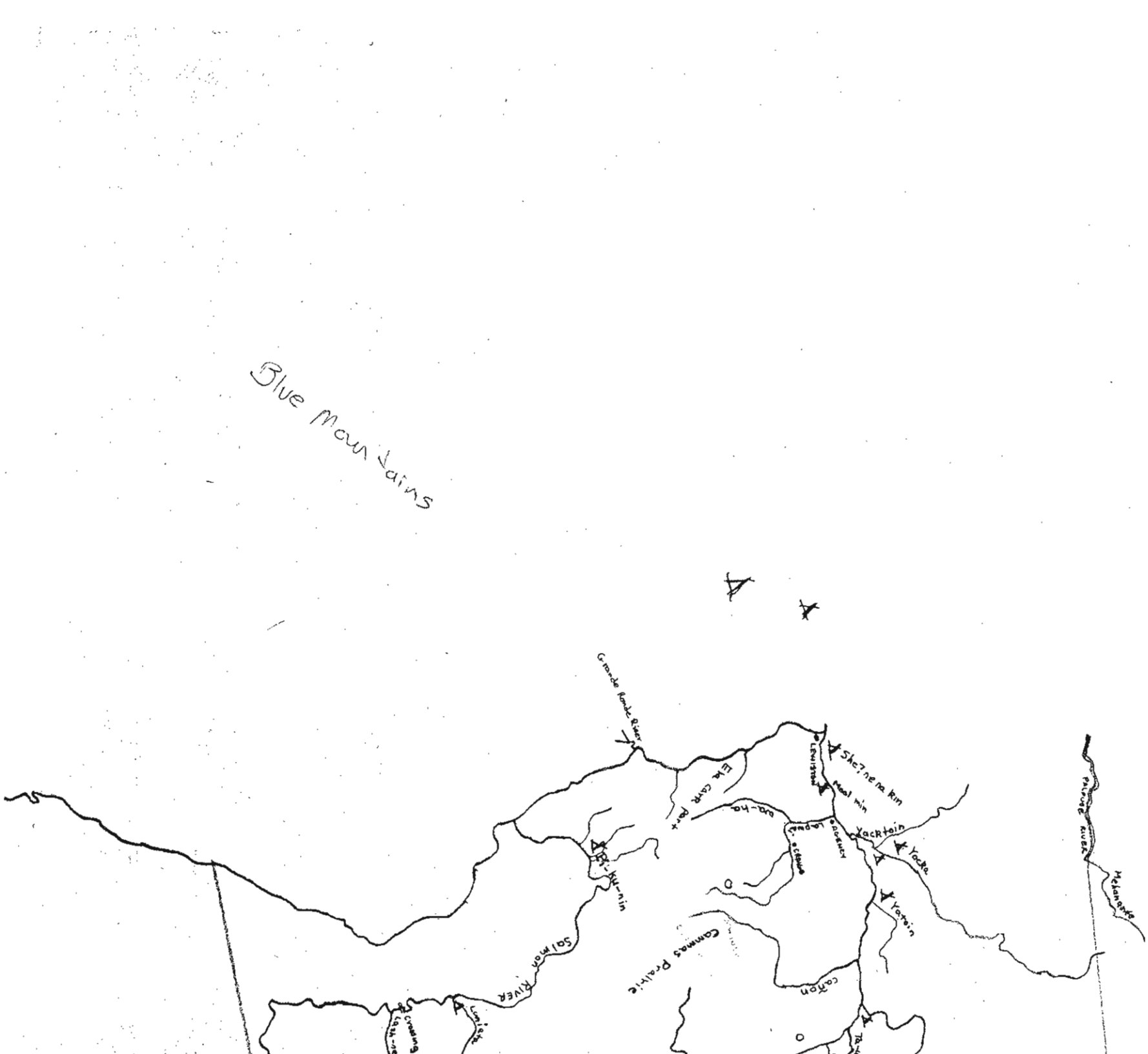




FOLDER F109

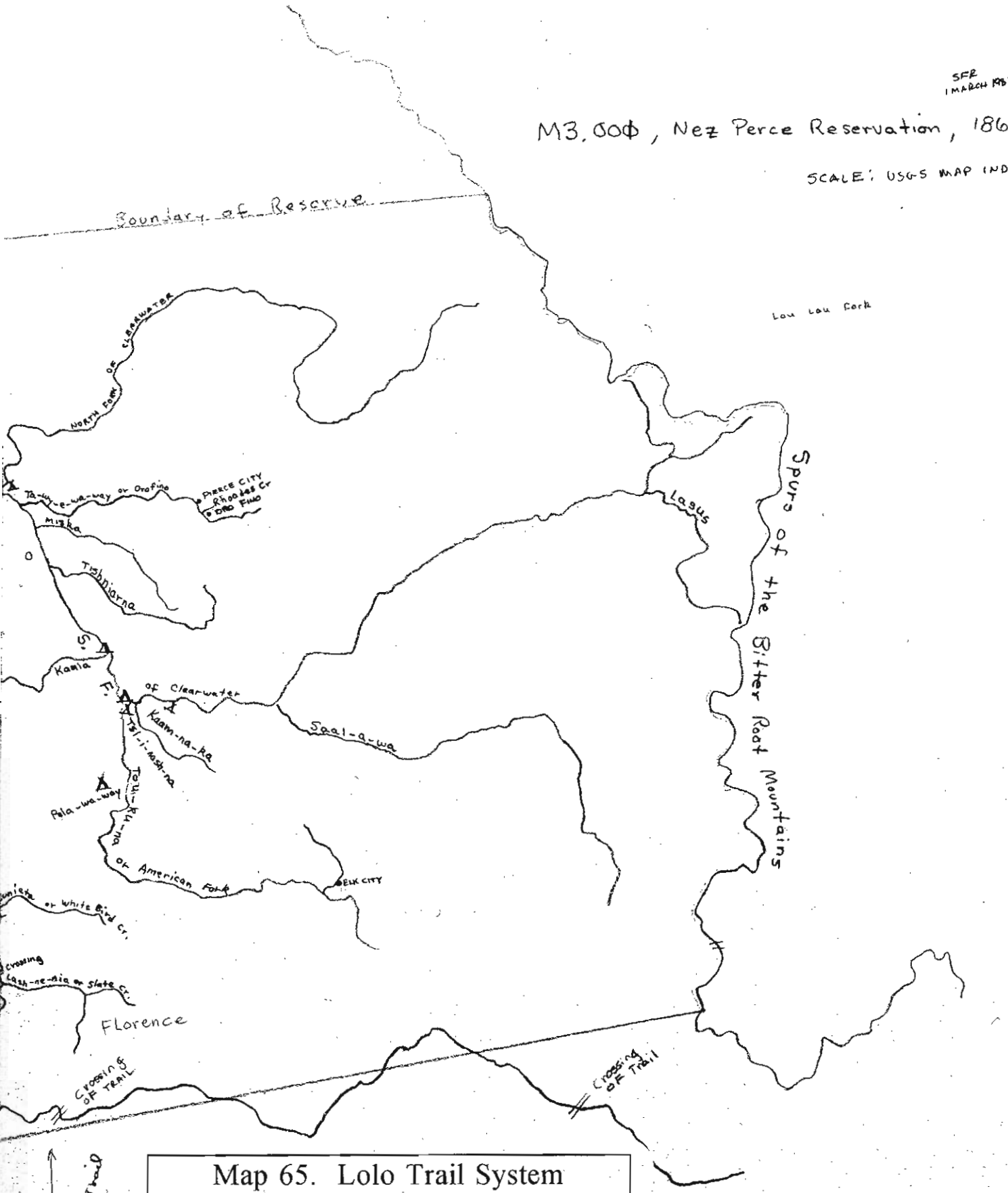
SFR: TUBE 1


Blue Mountains
Grande Ronde River
Elk Carr Port
Lewiston
Slickaminkin
Nez Perce Agency
Yackatain
Yakima
Yakima
Palouse River
Melanerke
Salmon River
Camas Prairie
Lapwai Crossing
Lapwai
Tammanawit
Tammanawit

SFR
1 MARCH 1987

M3,00Φ, Nez Perce Reservation, 1862

SCALE: USGS MAP INDEX, IDAHO



Map 65. Lolo Trail System

Nez Perce Reservation 1862 (Modern Topo)

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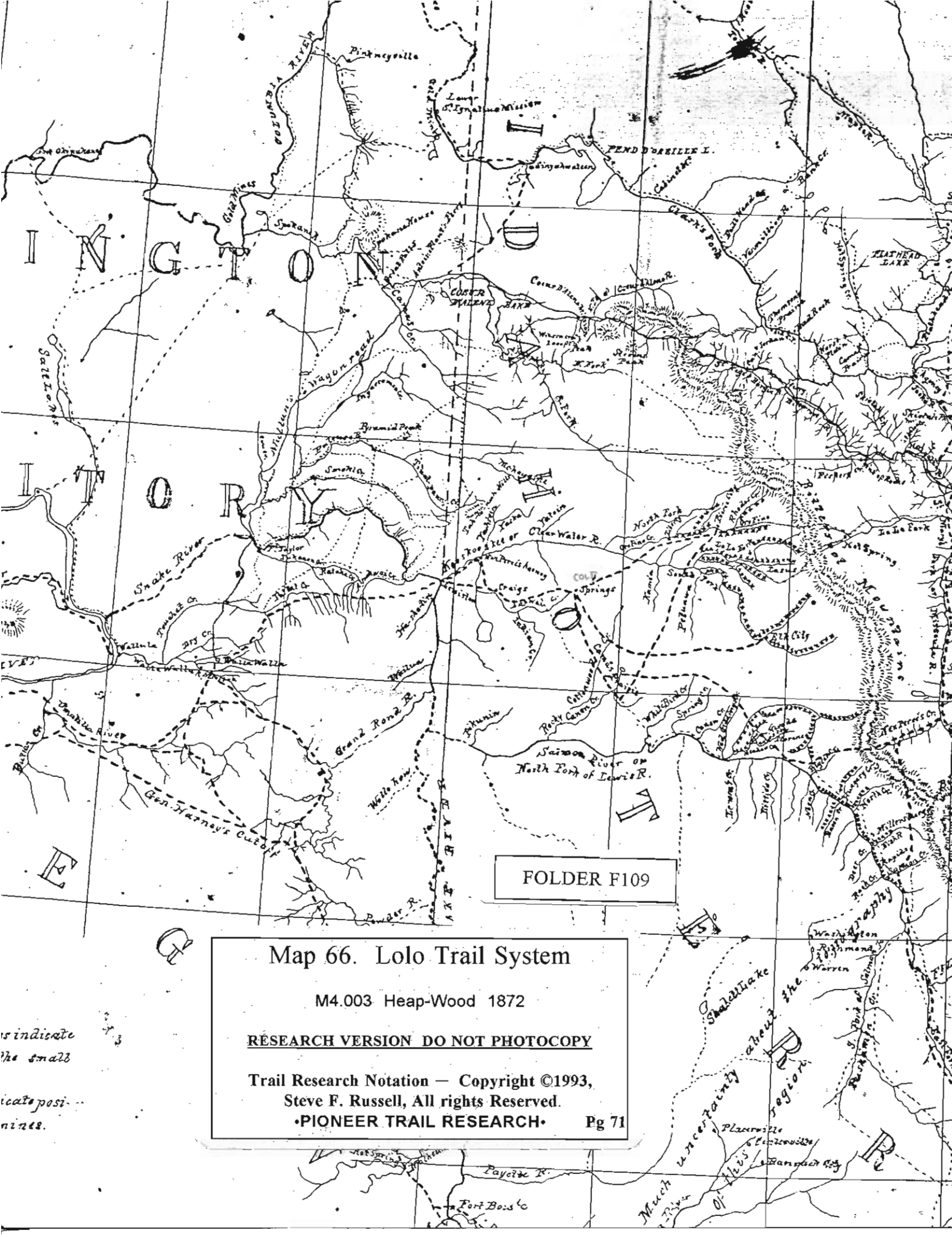
FOLDER F109



FOLDER F109

Map 66. Lolo Trail System

M4.003 Heap-Wood 1872

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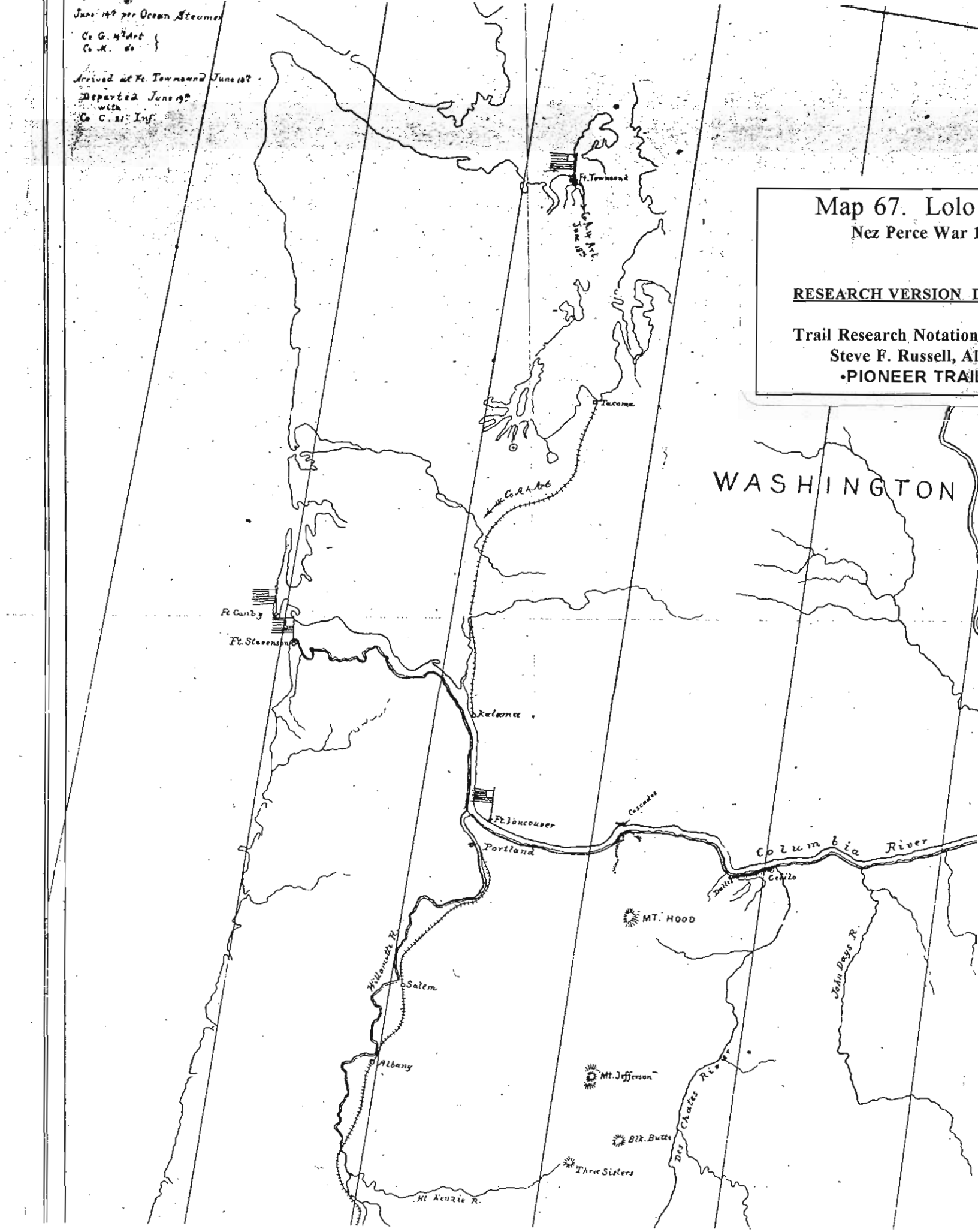
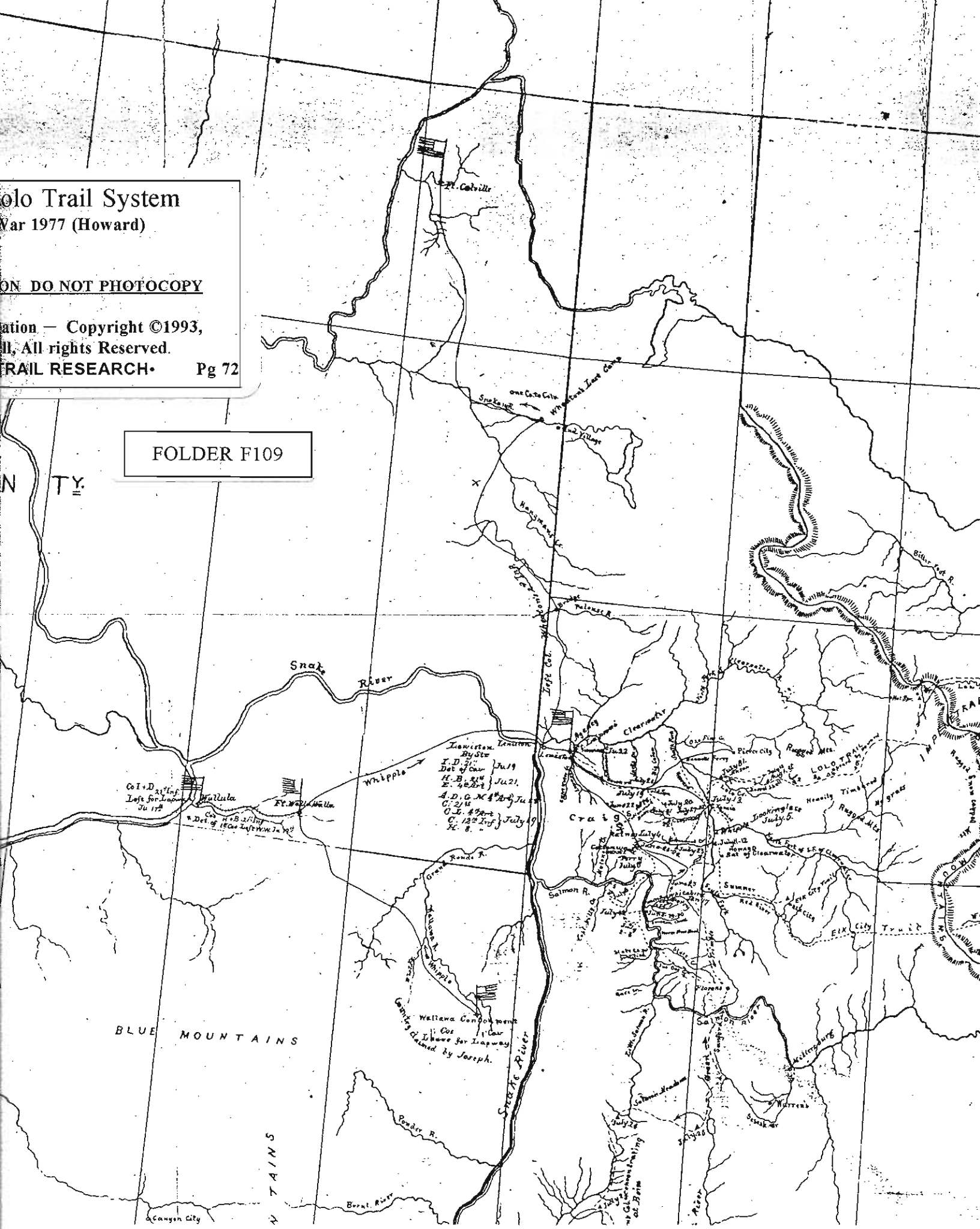
MONTANA
TERRITORY
UNEXPLORED
SOUTH
ROCKY MOUNTAINS
Three Buttes
Snake Head
Kayiyuse Bears
Birch R.
Battle R.
Teton R.
Medicine of Sun River
Trading Post
Flathead Mission
Yellow Water
Muscleshell
La Barge City
Deer Lodge Prairie
Gallatin R.
Three Forks
Madison R.
Jefferson River
Philipsburg
Virginia City
Nevada City
Hot Spring
Big Hole
Big Hole Prairie
Beaver Head
Rocky Mountains
Yellowstone R.
Big Rosebud R.
Rocky Fork
Crooked Fork
Stinking Water
Mt. Gallatin
Mt. Madison
Heart Mt.
Elephant Back Mt.
Sage Plain
Bear Hills
Medicine Lodge
Painted Rock
Henry's Fork
Pierre's C.
Bear's Paw Mountains
Little Rocky Mts
Judith R.
Judith Mts
Big Rapids
Belt Mountains
Highwood Mts
Highwood R.
Sheep Mts
Smith's River
Gallatin Valley
Gallatin Range
Flathead Pass
Deer R.
Boulder R.
Boulder Cr.
Sweet Grass Hills
Milk River
Marias R.
Teton Butte
Grand Bottom Park
Mirey Park
Elk Fork
Sun River
Dearborn R.
Flathead R.
Flathead Lake
Flathead Indians
Salt Lake
Atsina R.
Flatbow R.
Fort Benton
Fort Logan
Fort Parker
Fort Sarpy
Fort Mackenzie
Fort Union
Fort Peck
Fort Campbell
Fort Van Buren
Fort Alexander
Fort Piegan
Fort Brule
Fort Pierre
Fort Clark
Fort Berthold
Fort Atkinson
Fort Lookout
Fort Lookout
Fort Lookout



Map 67. Lolo
Nez Perce War 1

RESEARCH VERSION I

Trail Research Notation
Steve F. Russell, Al
•PIONEER TRAI


Ft. Colville
Snake River
Whipple
Lewiston
Craig
Salmon R.
Grande Ronde R.
Wallowa R.
Powder R.
Burnt River
Canyon City
Salmon River
Snake River
BLUE MOUNTAINS
Wallowa Country claimed by Joseph.
Co I + D 21st Inf Left for Lapwai Ju 17th
Wallula
Ft. Walla Walla
Co H + B 21st Inf Det of 18 Cos Left W.W. Ju 19th
I.D. 21st Det of Cav Ju 19
H.B. 21st E. 4th Art Ju 21.
A.D.G.M. 4th Art Ju 28
C. 2/11 O.L. 4th Art C. 12th Inf H. 8. July 19
Lapwai
Kamiah
Orofino
Pierce City
Rhodes Mtn.
Elk City
Timothy
Rugged Mts.
Summer
Red River
Florence
Warrens
Meadows
Yellowpine
Clearwater
Palouse R.
Hoodoo Mt.
Bitter Root R.
Lolo Trail
Lolo Creek
Weippe
Orofino Creek
Big Canyon Creek
Snake River
Whitebird Lane Camp
Nez Perce Village
Hungry Mt.
Looking Glass
Tom Beall
Joseph
Ju 22
July 12
July 5
July 6
July 7
July 8
July 9
July 10
July 11
July 13
July 14
July 15
July 16
July 17
July 18
July 20
July 23
July 24
July 25
July 26
July 27
July 28
June 29
June 30
July 1
July 2
July 3
July 4
July 5
July 6
July 7
July 8
July 9
July 10
July 11
July 12
July 13
July 14
July 15
July 16
July 17
July 18
July 19
July 20
July 21
July 22

MAP SET - FOLDER F109

LOLO TRAIL SYSTEM

RESEARCH MASTERS

Map Sequence #6, Maps LTS 68-//, Pages 74-//.

✓Forest Visitor Maps. ✓Mud Creek Road. ✓French Mountain Road. ✓Weitas Creek Road Extension. ✓Frenchman Butte Road. ✓Pete King Road Extension.

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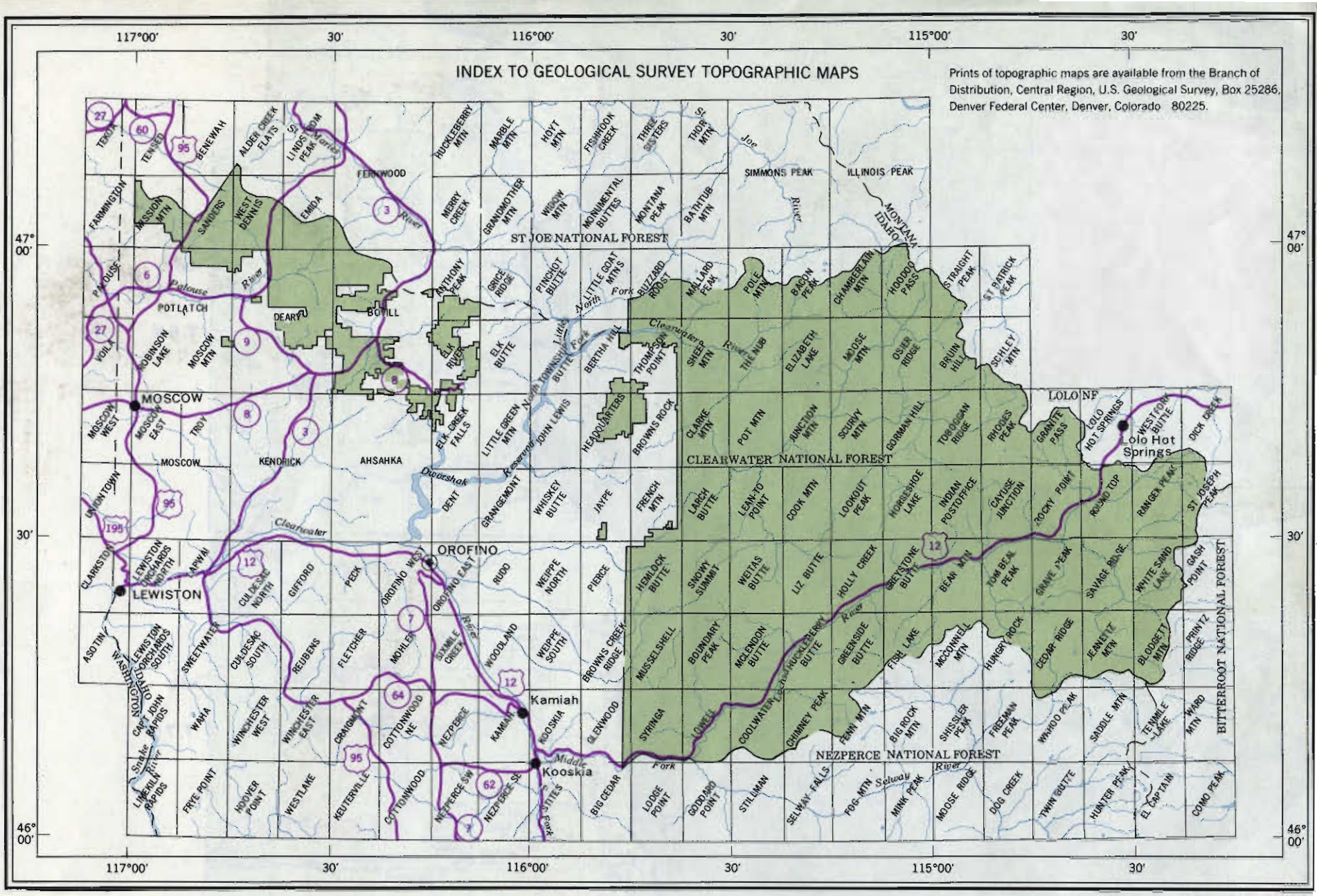

SEPT 1, 1986 REVISION OF TRAVEL RESTRICTIONS
EFFECTIVE UNTIL SEPT. 1, 1988 OR UNTIL
OTHERWISE EXTENDED OR RESCINDED

U.S. DEPARTMENT OF AGRICULTURE

Map 68.
Forest V

RESEARCH VER

Trail Research N
Steve F. Rus
•PIONEE

8. Lolo Trail System
est Visitor 1986 (Legend)
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NEER TRAIL RESEARCH· Pg 74

FOLDER F109

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R. MAX PETERSON, CHIEF

FOREST VISITORS MAP

CLEARWATER NATIONAL FOREST
AND
PALOUSE R.D. OF THE ST. JOE NATIONAL FOREST
IDAHO
BOISE AND PRINCIPAL MERIDIANS

1986

1" = 1 mile

Scale 1:126,720

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers

LEGEND

- Forest Supervisor's Headquarters
- District Ranger Station
- Forest Service Station
- Located or Landmark Object, Airway Beacon, ect.
- U.S. Mineral or Location Monument
- Boundary Monument
- Mine, Quarry or Gravel Pit
- Heliport
- Gaging Station
- Cave or Cavern
- Forest Products
- Dam (Developed Water)
- Corral
- House, Cabin or other Building
- Schoolhouse
- Church

- National Forest Boundary
- Adjacent National Forest Boundary
- State Boundary Line
- County Boundary Line
- Reservation Line
- Wilderness Area Boundary
- Special Area Boundary
- Permanent Lookout Station
- Permanent Lookout Station with Aeronautical Number on Roof (268)
- Permanent Lookout Station and Horizontal Control Station
- Horizontal Control Station
- Point of Interest
- Sportsman's Access
- Ski Area
- Recreation Site, Forest Service
- Recreation Site, other than Forest Service

- U.S. Highway (12)
- State Highway (11)
- Forest Route (460)
- Primary Highway
- Secondary Highway
- Primary Access Route - Normally Suitable for Automobile Travel - Travel with Caution
- Improved Light Duty
- Unimproved Dirt
- Trail (201)
- Historic or National Recreation Trail
- Railroad
- Power Transmission Line
- PIPELINE — Pipeline or Conduit
- Ranger District Boundary

- Lands Administered by Clearwater National Forest
- Adjacent National Forest Lands
- Bureau of Land Management
- State
- U.S. Army Corps of Engineers
- National Park
- Indian Reservation (Ownership not shown)
- Champion International
- Diamond International Corporation
- Potlatch Corporation
- Burlington Northern, Inc
- Bennett Tree Farms, Inc.
- Recreation or Wild River

TOWNSHIP AND SECTION LINE CLASSIFICATION

- Surveyed
- Unsurveyed, protraction by BLM

4740 English Elevation
1445 Metric Elevation
Meters equal feet times 0.3048

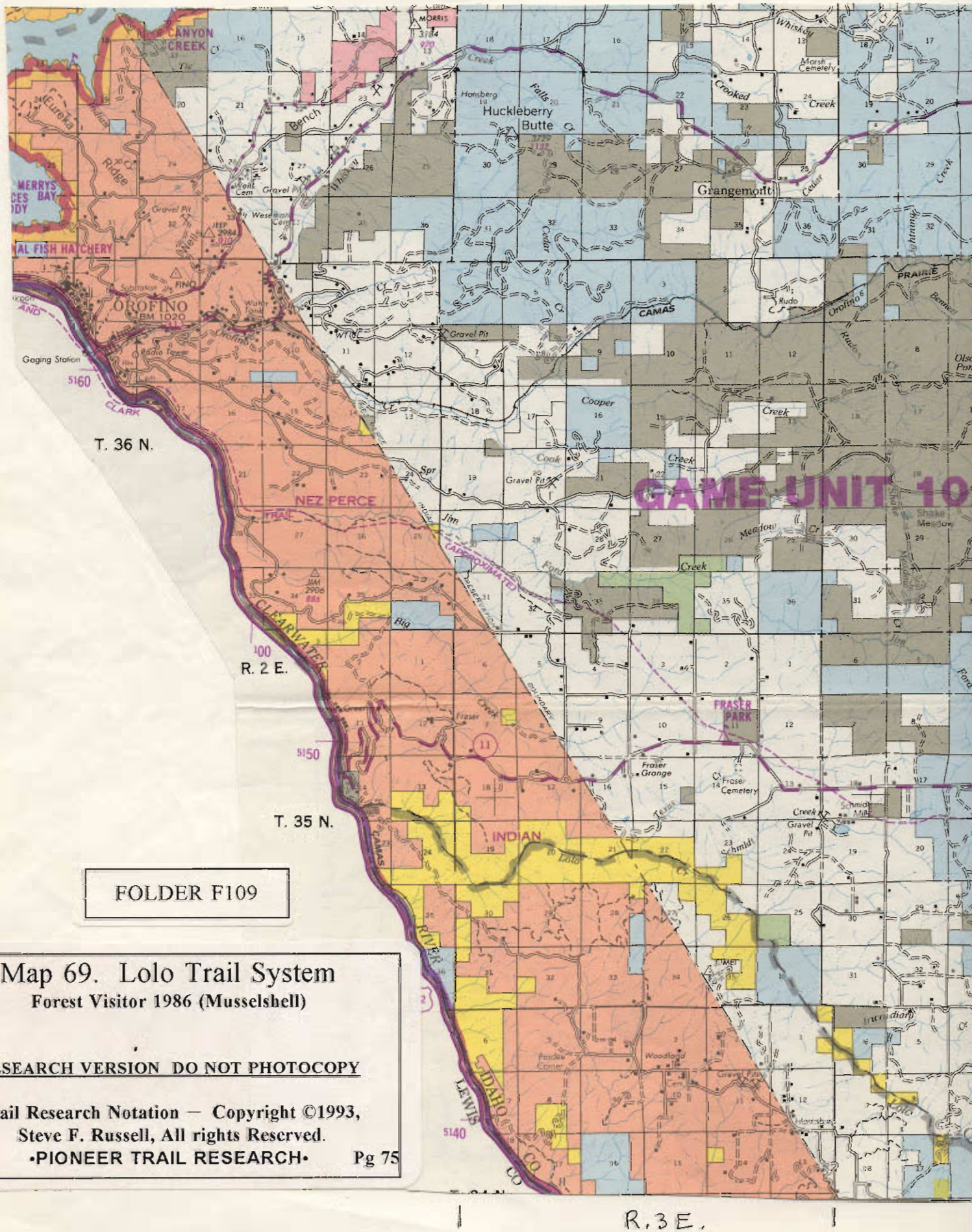
FOREST SERVICE MAP

Base prepared in the Regional Office, USDA Forest Service, Missoula, Montana 59807 from USFS planimetric maps and U.S. Geological Survey topographic maps. Updated by Forest in 1986 and reformatted by the USFS Geometronics Service Center, Salt Lake City, Utah 84119. Ownership guides for lands other than FS provided by cooperators. The designation of land ownership other than FS does not imply the right of access.

Steve Russell
1984

☆U.S. GOVERNMENT PRINTING OFFICE: 1988-595-145

8
15'
9
A
117°00'
B
C
45'
D



FOLDER F109

Map 69. Lolo Trail System

Forest Visitor 1986 (Musselshell)

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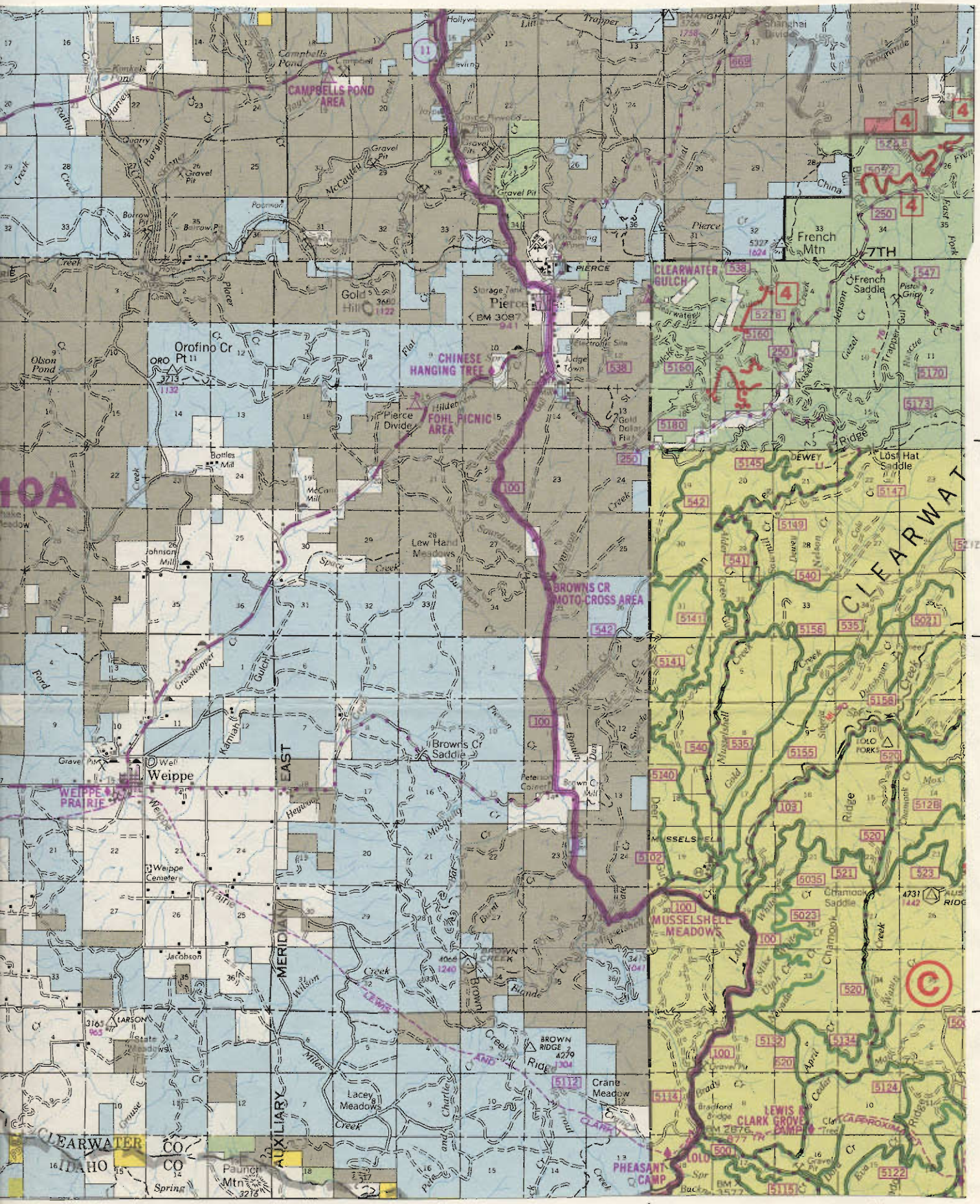
T. 37 N
T. 36N
T. 35 N
R. 4 E.
R. 5 E.
R. 6 E.
CAMPBELLS POND AREA
CHINESE HANGING TREE
FOHL PICNIC AREA
BROWNS CR MOTO-CROSS AREA
CLEARWATER GULCH
MUSSELSHELL MEADOWS
LEWIS & CLARK GROVE CAMP
PHEASANT CAMP
PIERCE
Weippe
Orofino Cr
Pierce Divide
Browns Cr Saddle
French Mtn
Lost Hat Saddle
Lew Hand Meadows
Lacey Meadows
Crane Meadow
Paunch Mtn
Chamook Saddle
Brown Ridge
CLEARWATER
IDAHO
CO
MERIDIAN
EAST
AUXILIARY
LOLO TRAIL AND CLARK
7TH

R. 7E.
R. 8E.
T.37N.
T.36N.
T.35N.
R 7 E.
R.8 E.
PIERCE
Cabin Pt
Johnny Butte
Sevenmile Pt
Doris Butte
Larch Butte
Sylvan Saddle
Lean-to Pt
Johnagan Mtn
7TH
Hemlock Butte
Beaver Saddle
Weitas Butte
Little Weitas Butte
Snowy Summit
Beaver Dam Saddle
Green Saddle
Bow Butte
Desert Saddle
Chimney Butte
Willow Pt
Windy Saddle
Boundary Pk
Jacksons Cow Camp
Camel Hill
Ant Hill
Obia Pt
Obia Cabin
FOOTROT CORRALS
CAMP MARTIN
ROCKY RIDGE LAKE
WEITAS MEADOWS
PETE FORKS
HORSESTEAK MEADOW CAMP
JERUSALEM ARTICHOKE CAMP
PORTABLE SOUP CAMP
RETREAT CAMP
CACHE MOUNTAIN
HUNGERY CREEK CAMP
HORSE SWEAT PASS
BELLE CR
Nineteenmile Camp
Savage Camp
Wedge Camp
Three Bears Camp
Lean-to Ridge Junction
Weitas Bridge
Horn Pack Bridge
Precipitation Gage
Snow Gage
Electronic Site and Snow Gage
BM 6540
BM 5835
BM 5543
BM 5349
SNOWY SUMMIT
PETE FORK
Tamarack Ridge
Hemlock Ridge
Middle Ridge
Rocky Ridge
Saddle Ridge
Willow Ridge
Horn Ridge
Pagoda Ridge
Ramdosa Ridge
Tamarack Creek
Hemlock Creek
Middle Creek
Rocky Creek
Saddle Creek
Willow Creek
Horn Creek
Pagoda Creek
Ramdosa Creek
Warm Cr
Burst Cr
Wedge Creek
Sandy Creek
Bennett Creek
Johnagan Creek
Tinkle Creek
Flame Cr
Buck Cr
Slick Cr
Dorris Creek
Weitas Creek
Fish Creek
Camel Hill Cr
Spur Cr
Coal Cr
Ceanothus Creek
Poker Creek
Wilbur Creek
Obia Creek
Hungery Creek
Bowl Creek
Dwight Creek
Yeast Creek
Meadows Creek
Soldier Meadows
Felix Creek
Dam Creek
Grass Creek
Knoll Creek
Austin Creek
Myrtle Creek
Stub Creek
Bit Cr
Tray Camp
Squawberry Spr
Sylvan Spr
Hemlock Spr
Sieve Spr
Middle Spr
Rocky Spr
Saddle Spr
Willow Spr
Horn Spr
Pagoda Spr
Ramdosa Spr
Obia Spr
Hungery Spr
Bowl Spr
Dwight Spr
Yeast Spr
Meadows Spr
Soldier Spr
Felix Spr
Dam Spr
Grass Spr
Knoll Spr
Austin Spr
Myrtle Spr
Stub Spr
Bit Cr Spr
Tray Spr
Camel Hill Spr
Ant Hill Spr
Poker Spr
Ceanothus Spr
Wilbur Spr
Pagoda Spr
Ramdosa Spr
Horn Spr
Willow Spr
Dwight Spr
Bowl Spr
Hungery Spr
Obia

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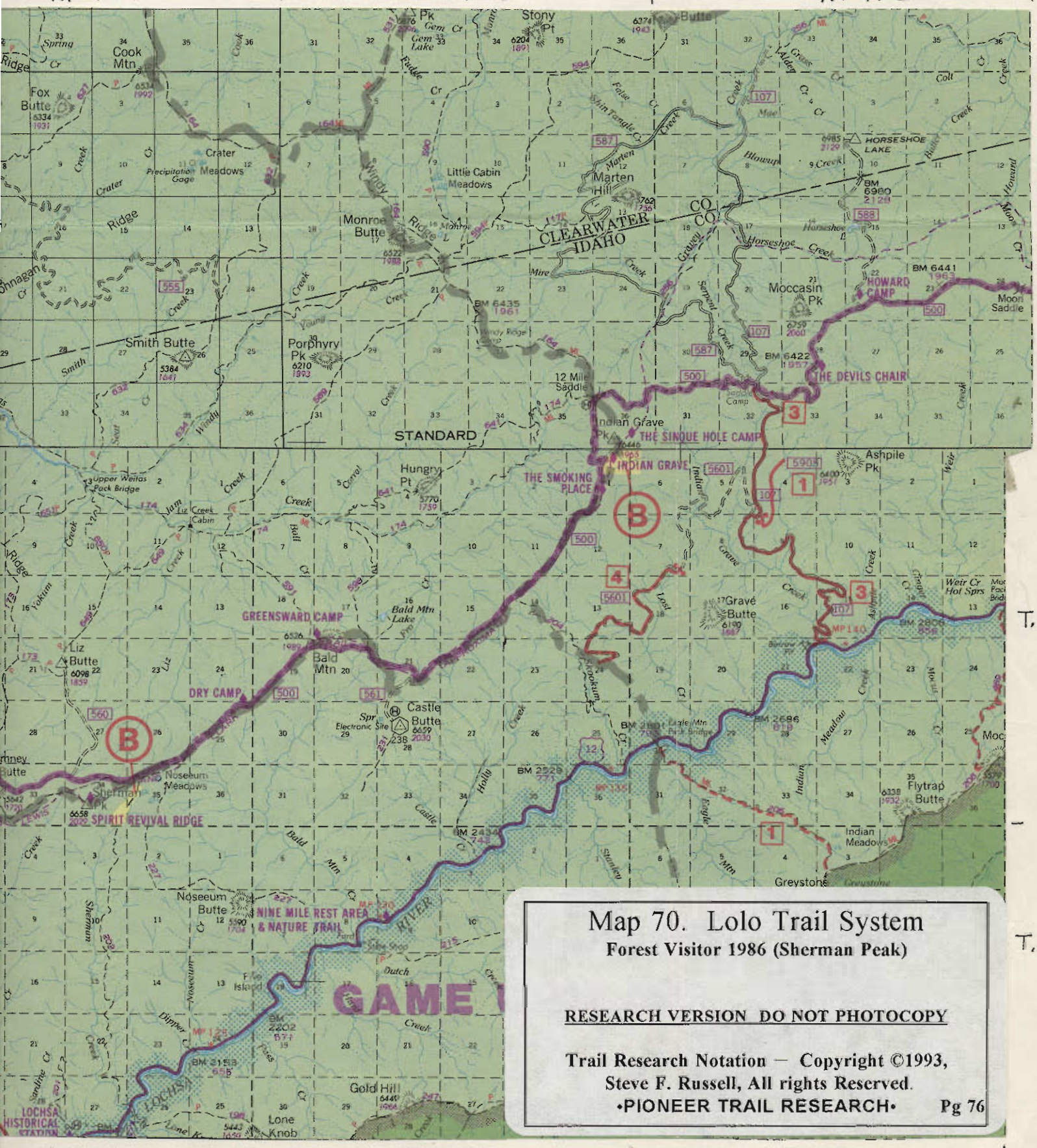

Map 70. Lolo Trail System

Forest Visitor 1986 (Sherman Peak)

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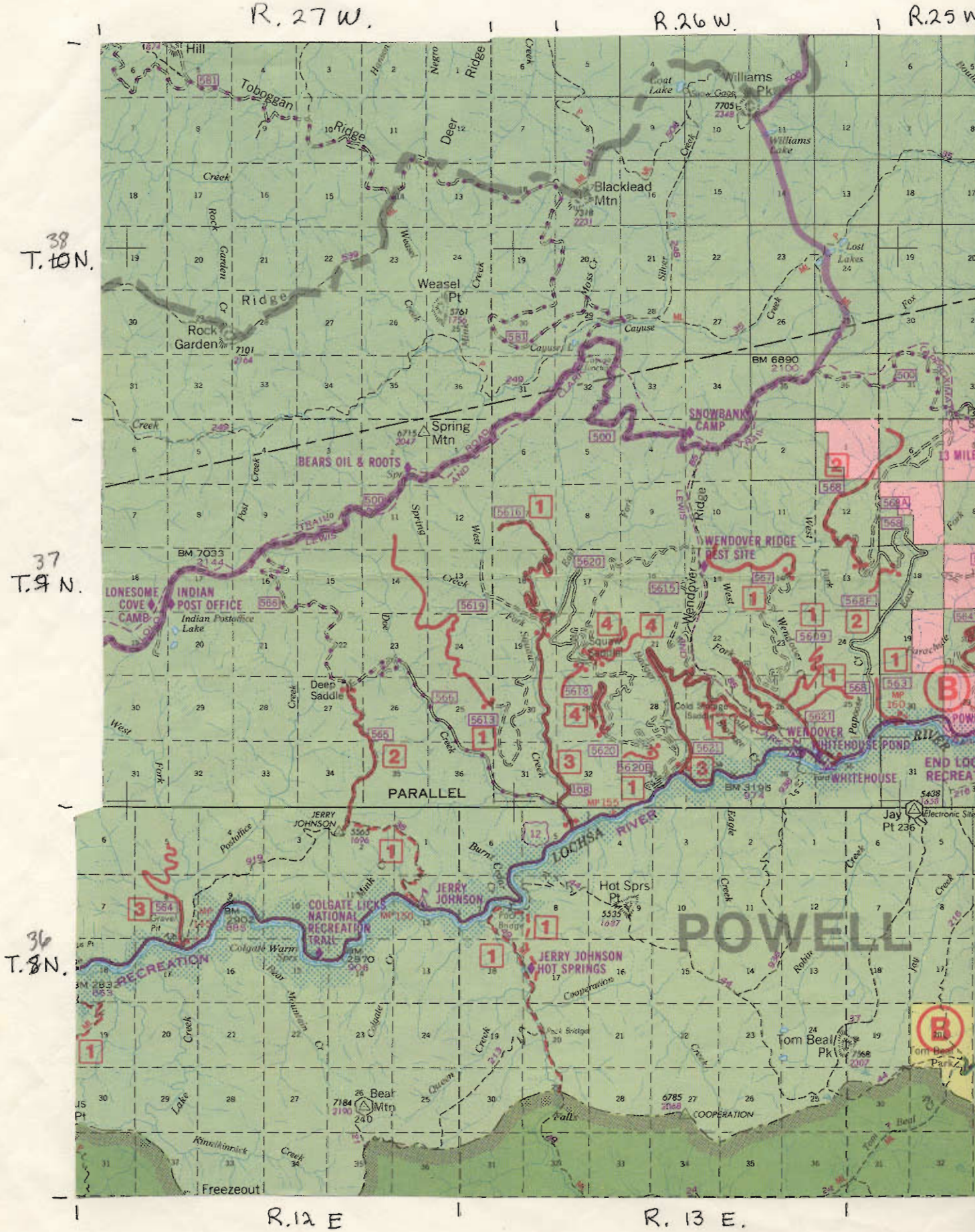
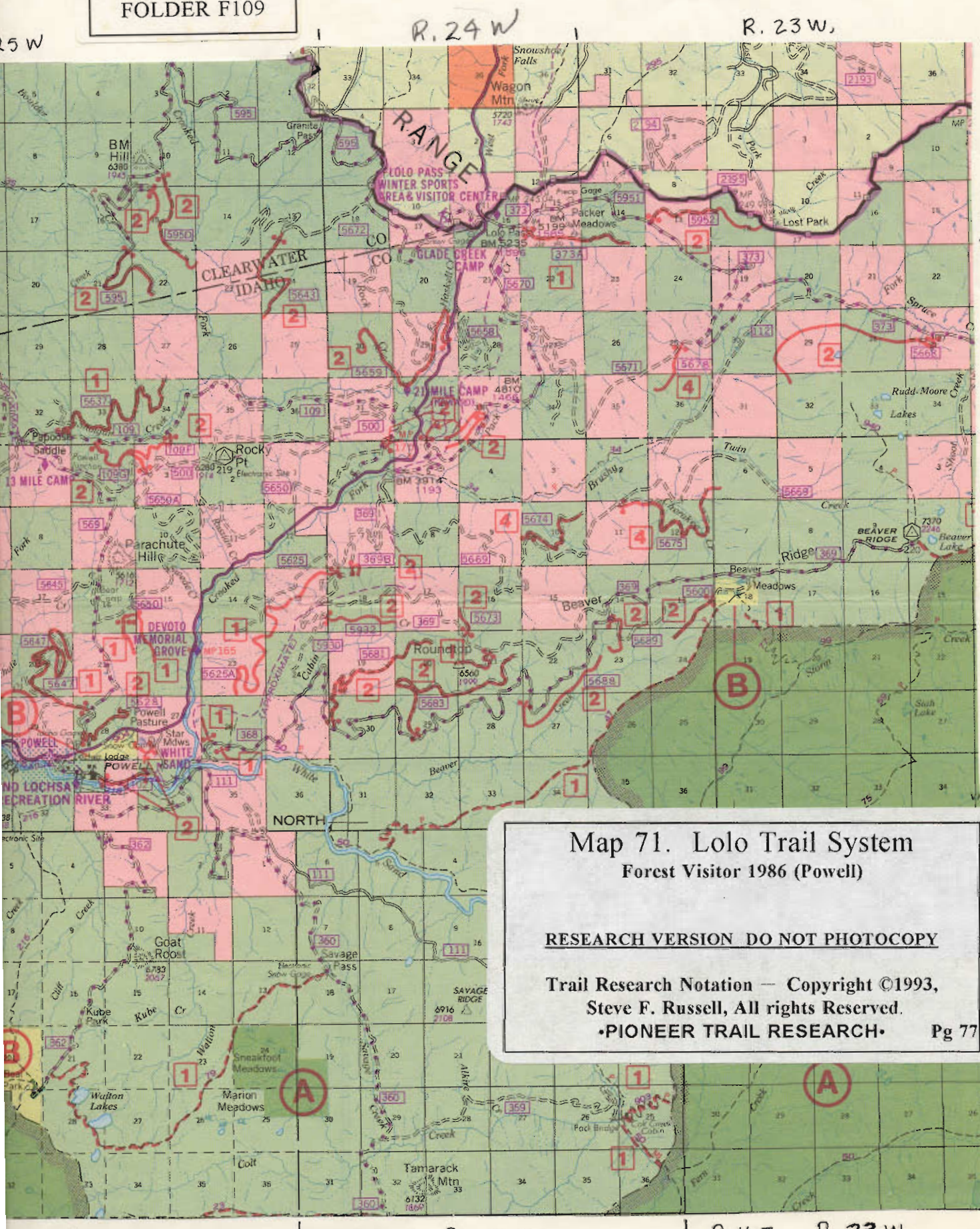

R. 27 W.
R. 26 W.
R. 25 W
T. 10 N.
T. 9 N.
T. 8 N.
R. 12 E
R. 13 E.
POWELL
PARALLEL
Spring Mtn
Blacklead Mtn
Weasel Pt
Rock Garden
Williams Pk
Lost Lakes
Cayuse
Deer Saddle
Hot Sprs Pt
Jay Pt 236
Tom Beal Pk
Beal Mtn
Freezeout
Indian Postoffice Lake
BEARS OIL & ROOTS
SNOWBANK CAMP
WENDOVER RIDGE REST SITE
WHITEHOUSE
WENDOVER WHITEHOUSE POND
LONESOME COVE CAMP
INDIAN POST OFFICE
JERRY JOHNSON
JERRY JOHNSON HOT SPRINGS
COLGATE LICKS NATIONAL RECREATION TRAIL
LOCHSA RIVER
BM 7033
BM 6890
BM 3195
Toboggan Ridge
Deer Ridge
Rock Garden Ridge
Spring Ridge
Lewis Ridge
Wendover Ridge
Clark Fork Road
Lewis Trail
Colgate Warm Springs
Jerry Johnson Hot Springs
Tom Beal Park
13 MILE

FOLDER F109



Map 71. Lolo Trail System

Forest Visitor 1986 (Powell)

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•PIONEER TRAIL RESEARCH•

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R. MAX PETERSON, CHIEF

46° 30′

LOLO NATIONAL FOREST
MONTANA
PRINCIPAL AND BOISE MERIDIANS

1984

Scale 1:126,720

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers

14

LEGEND

- Interstate
- U.S. Highway
- State Highway
- County Route
- Forest Route
- Primary Highway
- Secondary Highway
- Primary Access Route-Normally Suitable for Automobile Travel-Travel with Caution
- Improved Road
- Primitive Road
- Road or Trail with Restrictions-Inquire at Local Forest Service Station
- Trail (See Classification Note)
- Historic or National Recreation Trail
- Railroad
- Power Transmission Line
- Pipeline or Conduit
- Permanent Lookout Station
- Permanent Lookout Station with Aeronautical Number on Roof
- Permanent Lookout Station and Horizontal Control Station
- Horizontal Control Station

- Forest Supervisor's Headquarters
- District Ranger Station
- Forest Service Station
- Recreation Site, Forest Service
- Recreation Site, other than Forest Service
- Point of Interest
- Sportsman's Access
- Ski Area
- Trailhead, Livestock
- Mine, Quarry or Gravel Pit
- Located or Landmark Object
- U.S. Mineral or Location Monument
- Gaging Station
- Cave or Cavern
- Sawmill (Forest Products)
- House, Cabin or other Building
- Schoolhouse
- Church

- National Forest Boundary
- Administrative Forest Boundary
- Adjacent National Forest Boundary
- State Boundary
- County Boundary
- Game Management Area Boundary
- Wilderness Boundary
- Special Area Boundary
- Lands Administered by Lolo National Forest
- Adjacent National Forest Lands
- Bureau of Land Management Land
- National Fish and Wildlife Service Land
- State Land
- Champion International Land
- Burlington Northern, Inc. Land
- Recreation or Wild River
- Indian Reservation (Ownership not shown)

TOWNSHIP AND SECTION LINE CLASSIFICATION

- Surveyed, location reliable
- Unsurveyed, protraction by BLM

Trail (T) - Travelway limited to use by hikers, stock, and vehicles less than 40 inches in width. Some trails are closed to stock or motorized use.

Way (W) - Marked route or primitive foot trail.

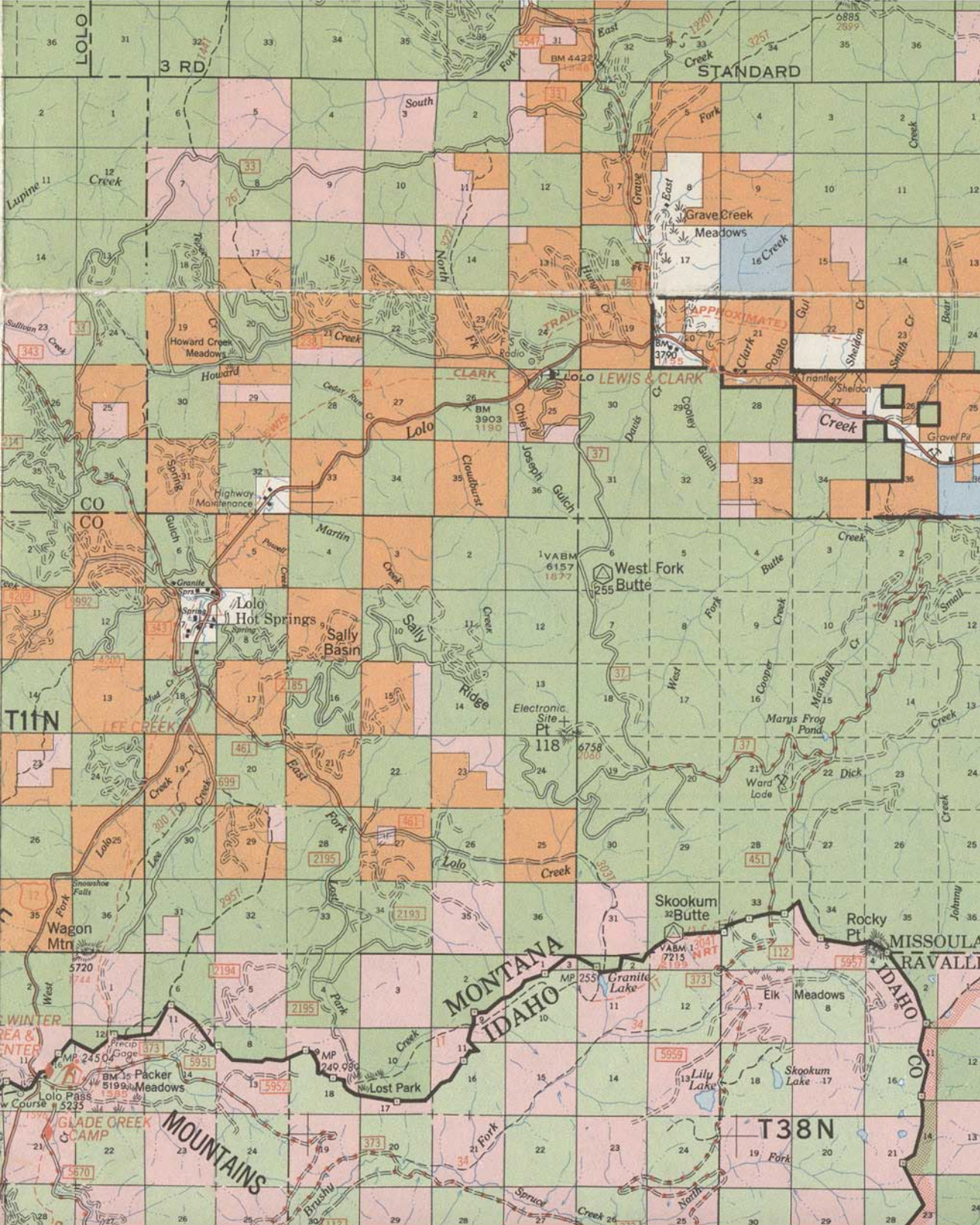
Note: Not all trails are maintained annually. Users should be prepared for the inherent risks of wildland travel. Restrictions or closures on motorized and stock travel are in effect on some areas, roads, and trails; refer to the Forest Travel Plan map.

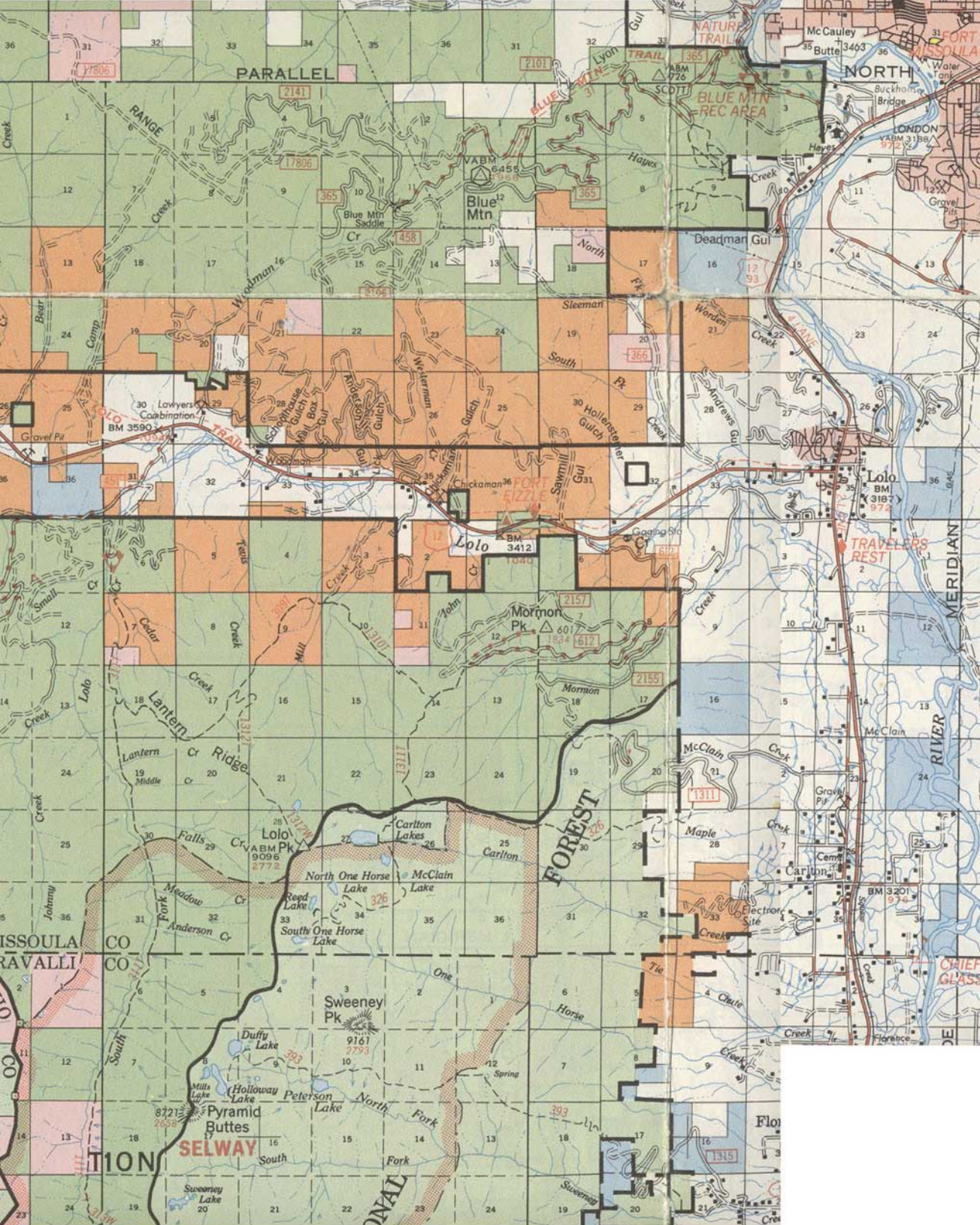
15

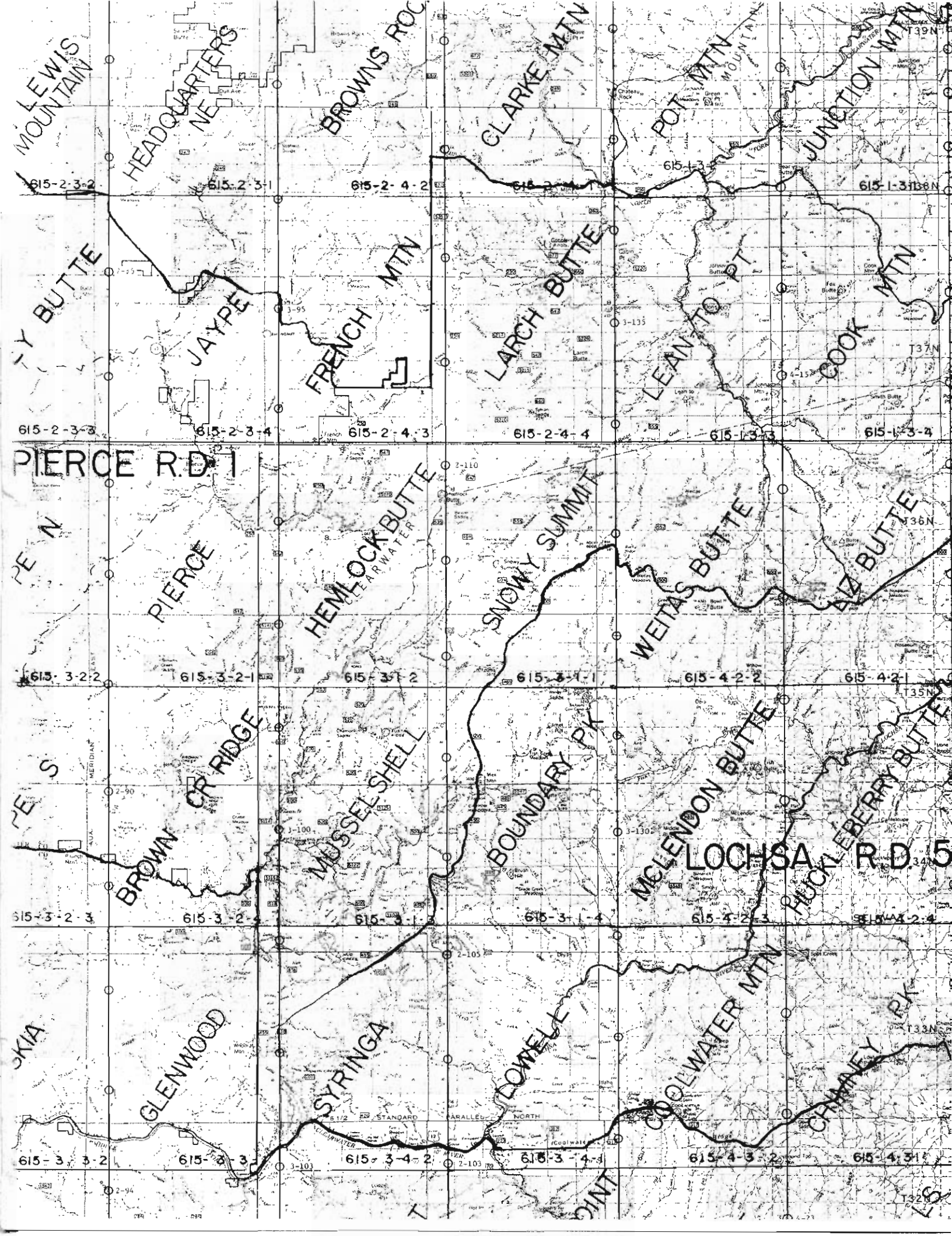
FOREST SERVICE MAP
Base material prepared in Regional Office, USDA Forest Service, Missoula, Montana 59807 from U.S. Forest Service planimetric maps and U.S. Geological Survey topographic maps. Updated in 1982 by USDA Forest Service, Geometronics Service Center, Salt Lake City, Utah 84119. Ownership guides for other than U.S. Forest Service are supplied by cooperators. The designation of other lands does not imply the right of access.

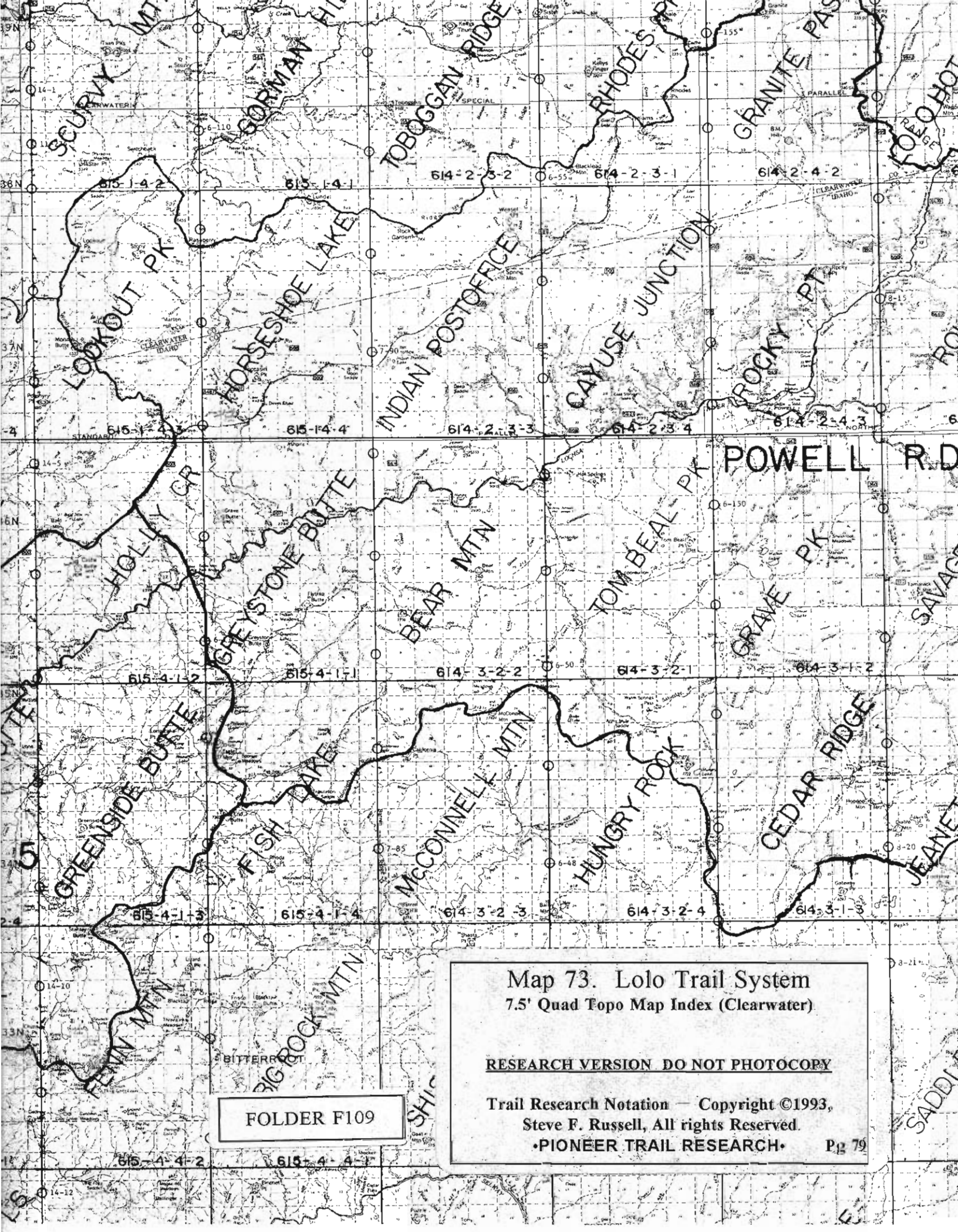
5492 English Elevation
1674 Metric Elevation
Meters equal feet times 0.3048

G H 45′ J


LOLO
3 RD
STANDARD
Creek
East Fork
South Fork
Grave Creek Meadows
Howard Creek Meadows
Howard Creek
Lupine Creek
Sullivan Creek
Lolo
LEWIS & CLARK
TRAILS
CLARK
Chief Joseph Gulch
Cloudburst Gulch
Davis Gulch
Cooley Gulch
Potato Creek
Clark Fork
Sheldon Creek
Gravel Pit
Highway Maintenance
CO
Martin Creek
Granite Springs
Lolo Hot Springs
Sally Basin
Sally Ridge
West Fork Butte
Butte Creek
Small Creek
Marshall Cr
Cooper Creek
Marys Frog Pond
Ward Lode
Dick Creek
Electronic Site Pt 118
T11N
Mud Creek
Lee Creek
Lolo Creek
Snowshoe Falls
Wagon Mtn
Skookum Butte
Rocky Pt
MISSOULA
RAVALLI
MONTANA
IDAHO
MP 255
Granite Lake
Elk Meadows
MP 245.04
Precip Gage
Packer Meadows
Lolo Pass
GLADE CREEK CAMP
MP 249.98
Lost Park
Lily Lake
Skookum Lake
MOUNTAINS
T38N
Brushy Fork
Spruce Creek
North Fork
BM 4422
BM 3799
BM 3903
VABM 6157
VABM 7215
APPROXIMATE
Gravel Pit


PARALLEL
RANGE
NORTH
BLUE MTN REC AREA
Blue Mtn
Blue Mtn Saddle
Deadman Gul
Lolo
BM 3412
Lolo
BM 3187
TRAVELERS REST
MERIDIAN
RIVER
Mormon Pk
Lolo Pk
VABM 9096
Sweeney Pk
9761
Pyramid Buttes
SELWAY
FOREST
Carlton
Carlton Lakes
North One Horse Lake
South One Horse Lake
McClain Lake
Reed Lake
Duffy Lake
Holloway Lake
Peterson Lake
Mills Lake
Sweeney Lake
Lantern Ridge
Lantern Cr
Middle Cr
Falls Cr
Meadow Cr
Anderson Cr
Johnny Fork
South Fork
North Fork
Lolo Creek
Mill Creek
Cedar Creek
Small Cr
Chickaman Cr
Sawmill Gul
Hollenstener Gulch
Andrews Gul
Woodman Gulch
Woodman Creek
Bear Cr
Camp Cr
Lyon Gulch
Hayes Creek
Worden Creek
McClain Creek
Maple Creek
Tie Creek
Florence Creek
Spring Creek
Gravel Pit
Cemetery
Electronic Site
Water Tank
Buckhorn Bridge
LONDON
Hayes
Mc Cauley Butte
FORT MISSOULA
NATURE TRAIL
LOLO TRAIL
BLUE MTN TRAIL
CHIEF JOSEPH TRAIL
LANE
T10N
ISSOULA CO
RAVALLI CO


LEWIS MOUNTAIN
HEADQUARTERS
NE
BROWNS ROC
CLARKE MTN
POT MTN
MOUNTAIN
JUNCTION MTN
T39N
615-2-3-2
615-2-3-1
615-2-4-2
615-1-3
615-1-3
T38N
Y BUTTE
JAYPE
FRENCH MTN
LARCH BUTTE
LEAN TO PT
COOK MTN
T37N
615-2-3-3
615-2-3-4
615-2-4-3
615-2-4-4
615-1-3-3
615-1-3-4
PIERCE R.D. 1
PE N
PIERCE
HEMLOCK BUTTE
CLEARWATER
SNOWY SUMMIT
WEITAS BUTTE
BIZ BUTTE
T36N
615-3-2-2
615-3-2-1
615-3-1-2
615-3-1-1
615-4-2-2
615-4-2-1
T35N
PE S
MERIDIAN
CR RIDGE
BROWN
MUSSEL SHELL
BOUNDARY PK
McLENDON BUTTE
HUCKLEBERRY BUTTE
LOCHSA R.D. 5
615-3-2-3
615-3-2-4
615-3-1-3
615-3-1-4
615-4-2-3
615-4-2-4
T34N
OKIA
GLENWOOD
SYRINGA
LOWELL
COOLWATER MTN
CHIMNEY PK
T33N
615-3-3-2
615-3-3-1
615-3-4-2
615-3-4-1
615-4-3-2
615-4-3-1
T32N



Map 73. Lolo Trail System

7.5' Quad Topo Map Index (Clearwater)

FOLDER F109

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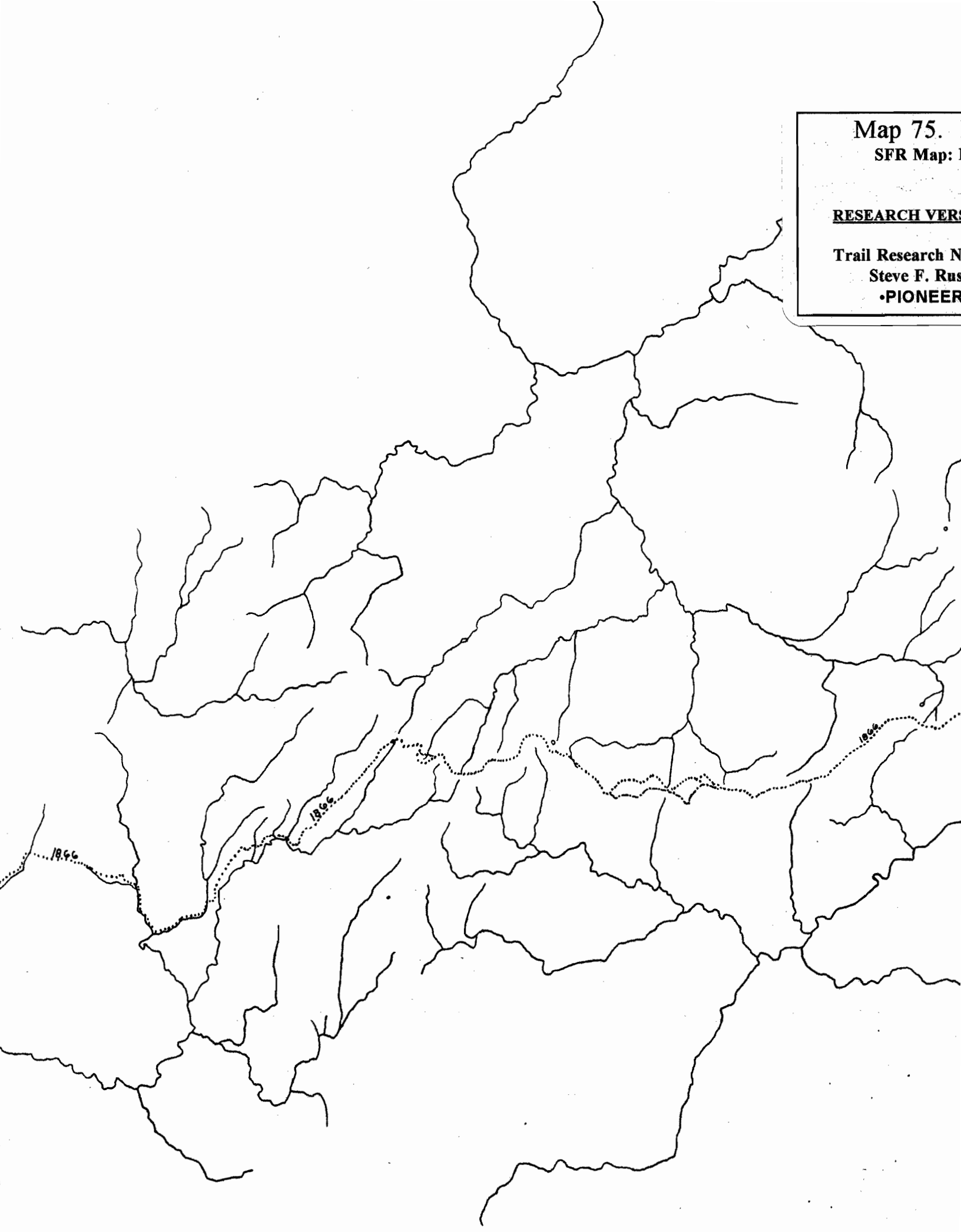
Map 75.
SFR Map:
RESEARCH VERS
Trail Research N
Steve F. Rus
•PIONEER
1866
1866
1866

5. Lolo Trail System
Map: Lolo Trail System 1866

VERSION DO NOT PHOTOCOPY

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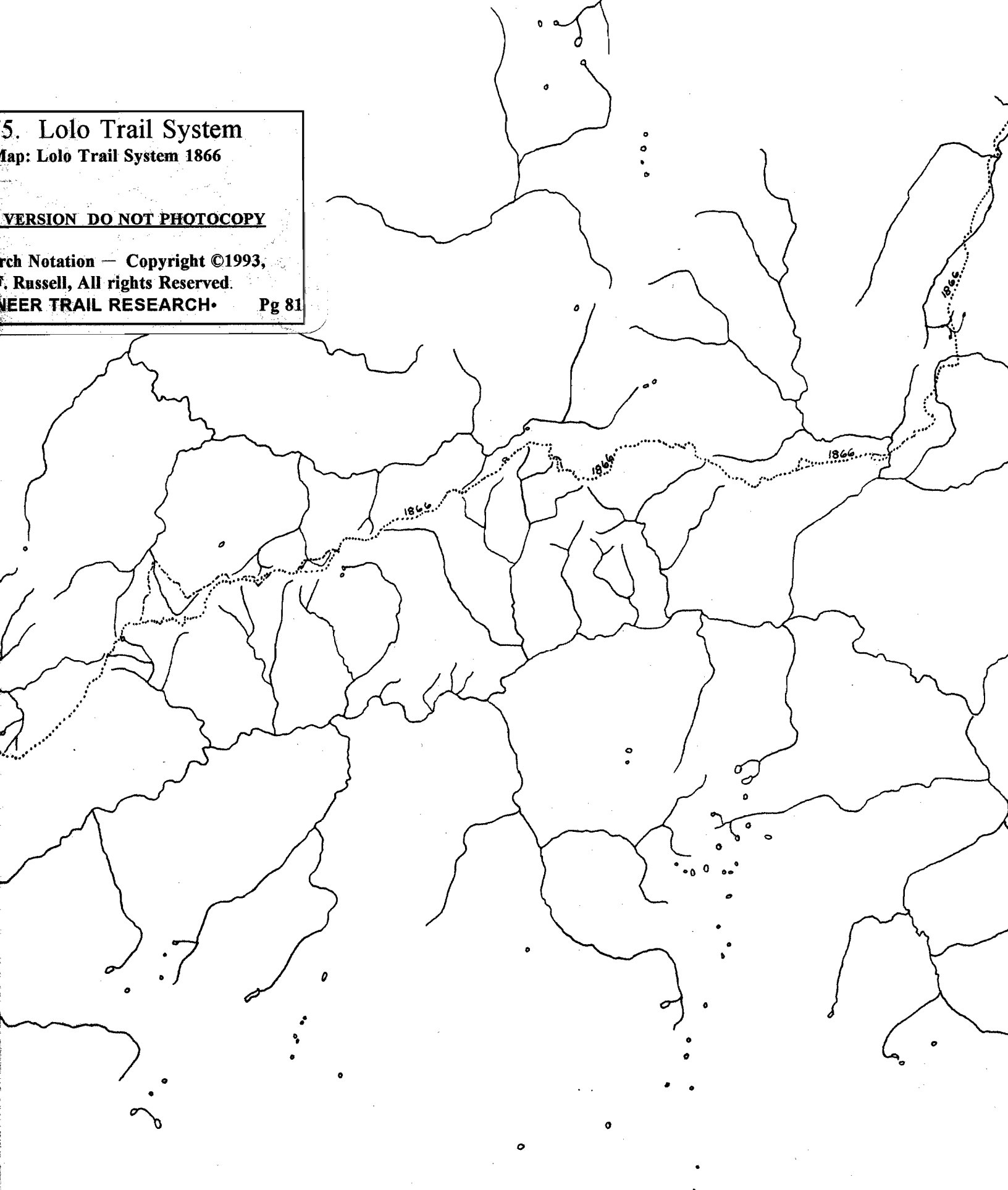
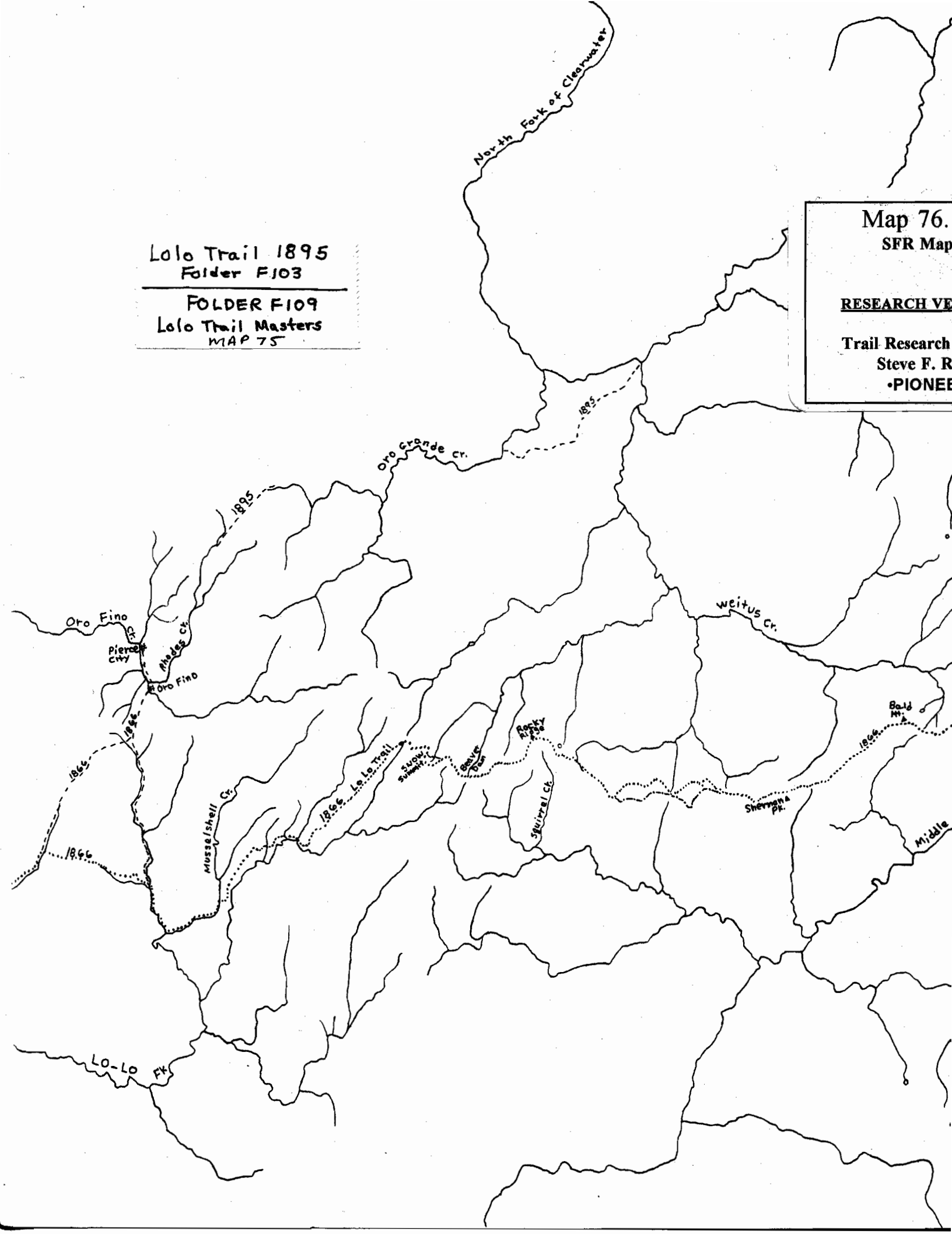
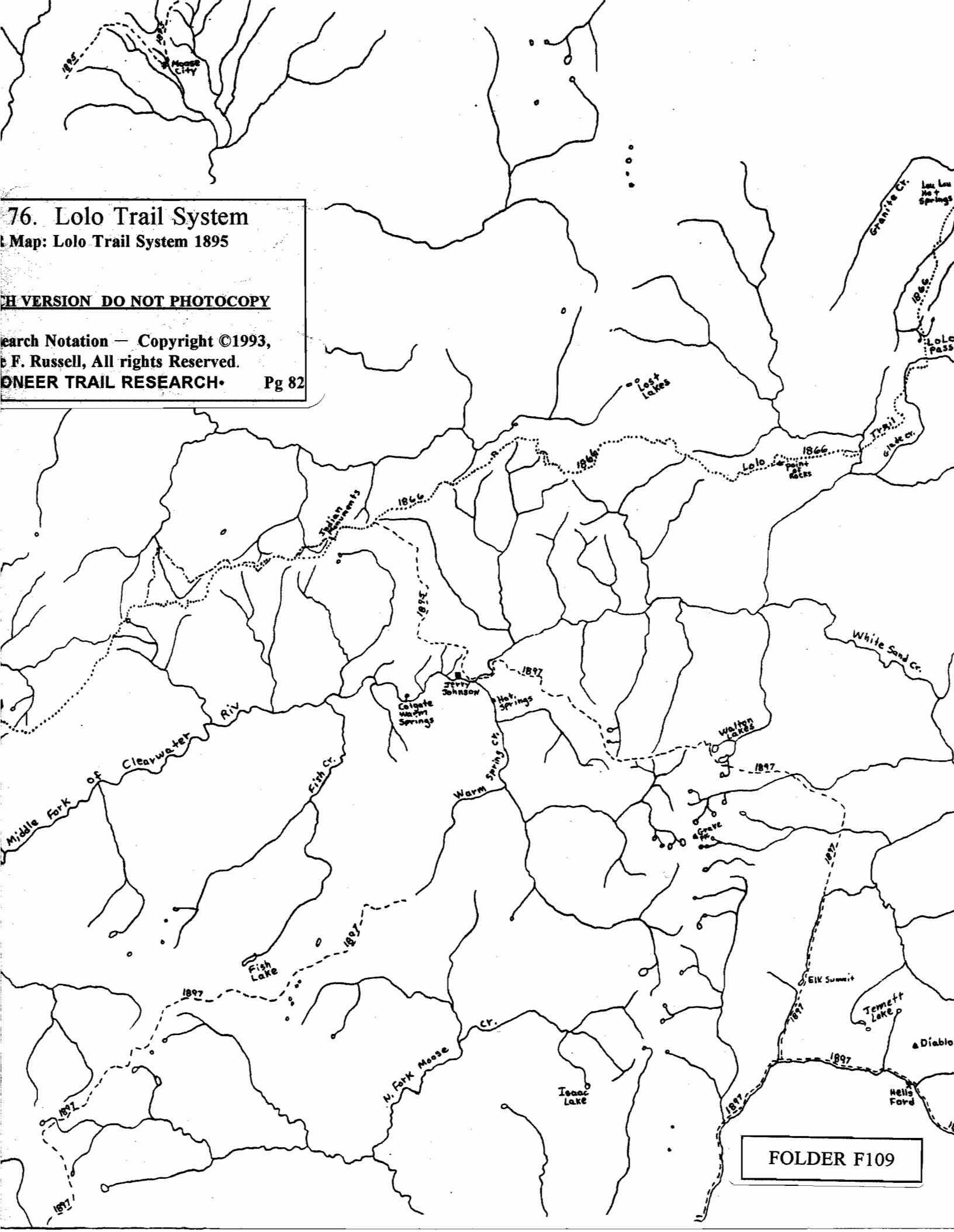


FOLDER F109


Lolo Trail 1895
Folder F103
FOLDER F109
Lolo Trail Masters
MAP 75
Map 76.
SFR Map
RESEARCH VE
Trail Research
Steve F. R
•PIONEE
North Fork of Clearwater
1895
Oro Grande Cr.
1895
Oro Fino Cr.
Pierce City
Rhodes Ck.
Oro Fino
1866
1866
1866
Mussel Shell Cr.
1866 Lo Lo Trail
Snow Summit
Beaver Dam
Rock Ridge
Squirrel Ck.
Weitus Cr.
Bald Mt.
1866
Sherman Pk.
Middle
LO-LO FK



76. Lolo Trail System

Map: Lolo Trail System 1895

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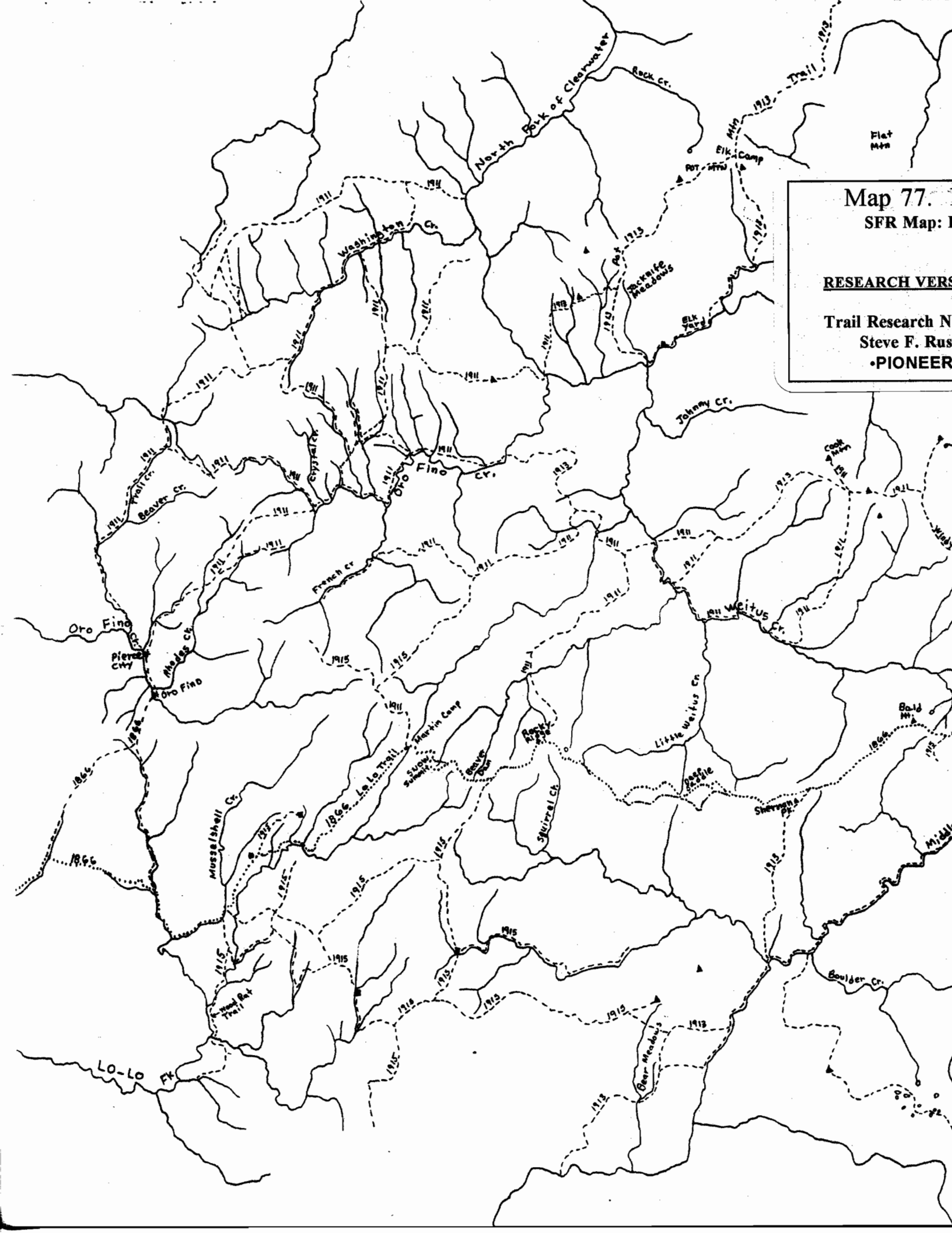
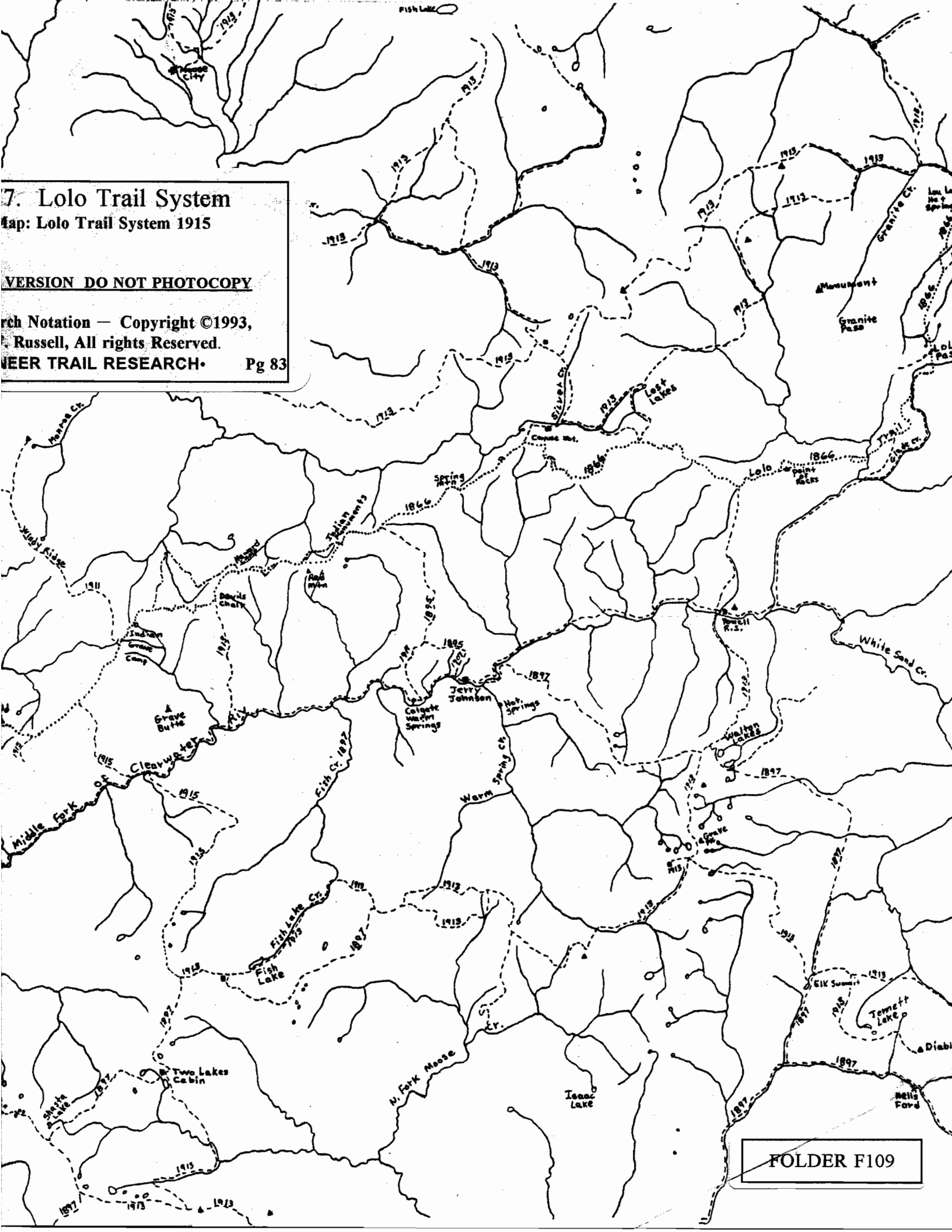
FOLDER F109


Map 77.
SFR Map:
RESEARCH VERS
Trail Research N
Steve F. Rus
•PIONEER
North Fork of Clearwater
Rock Cr.
Trail
Flat Mtn
Elk Camp
Washington Cr.
Jackrabbit Meadows
Elk Park
Johnny Cr.
Cook Mtn
Oro Fino Cr.
Beaver Cr.
French Cr.
Weitus Cr.
Oro Fino
Pierce City
Rhodes Ck.
Little Weitus Cr.
Bald Mtn
Martin Camp
Rocky Point
Snow Summit
Beaver Dam
Squirrel Ck.
Sherman Pk.
Mussel Shell Cr.
Lo Lo Trail
Hoodoo Trail
Boulder Cr.
Bear Meadows
LO-LO Fk.



7. Lolo Trail System

Map: Lolo Trail System 1915

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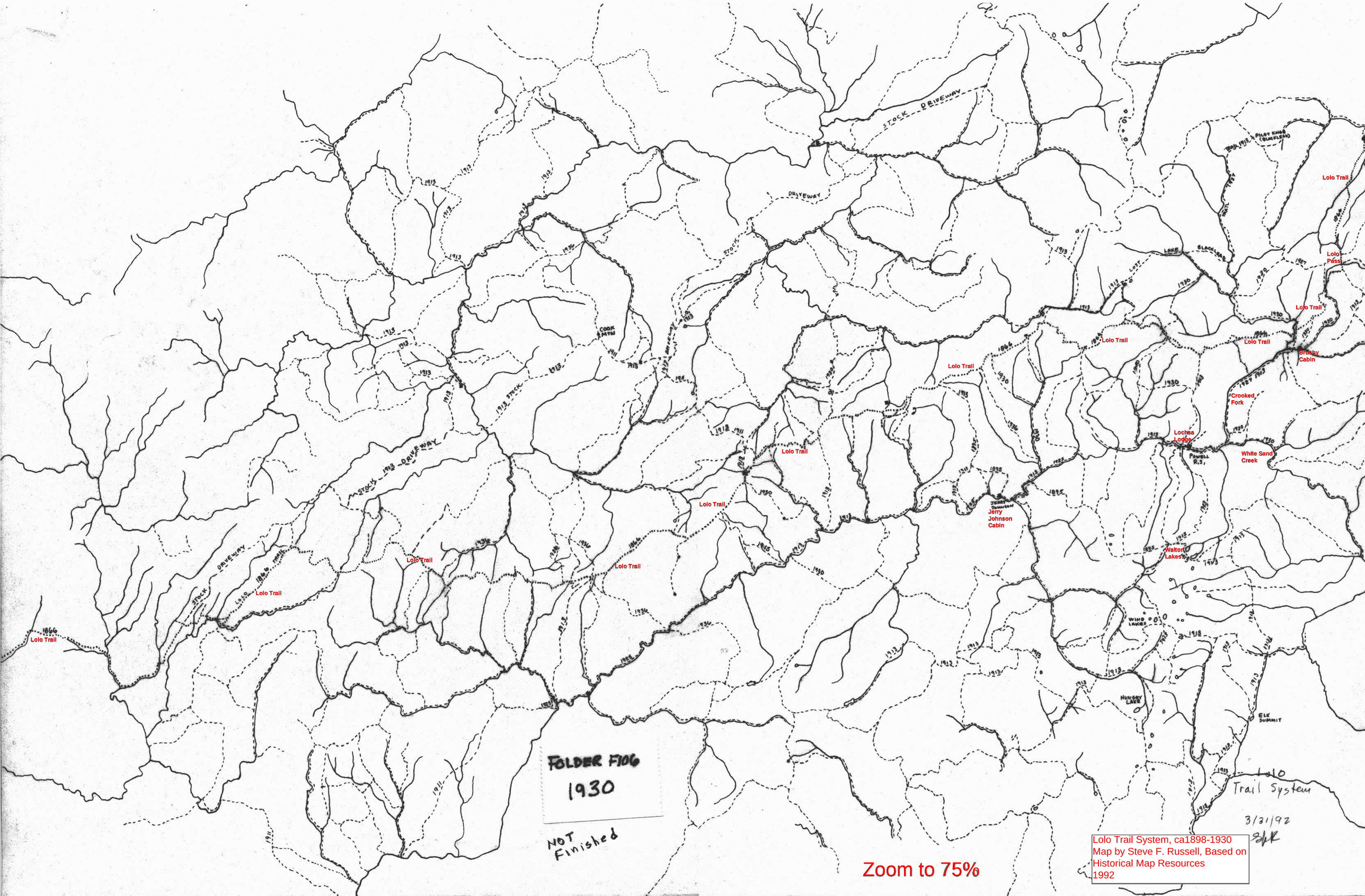
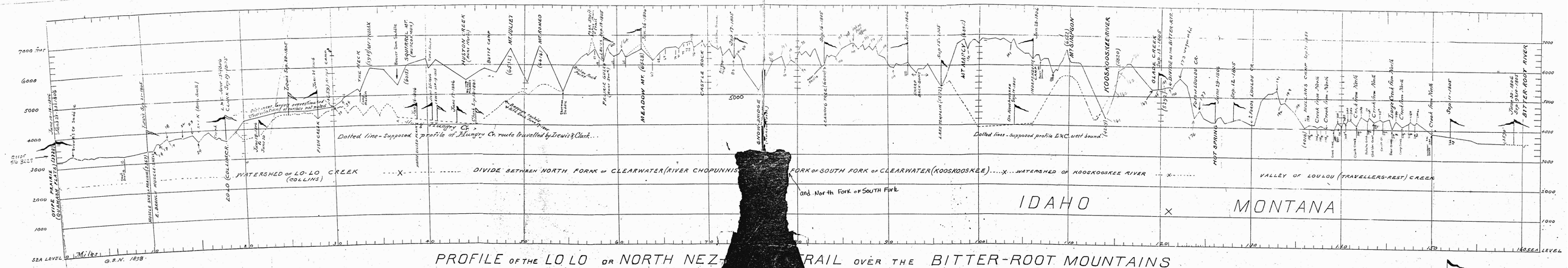

Lolo Trail
Lolo Pass
Brushy Cabin
Crooked Fork
Lochsa Lodge
White Sand Creek
Jerry Johnson Cabin
Walton Lakes
Elk Summit
Lolo Trail System
3/31/92
Lolo Trail System, ca1898-1930
Map by Steve F. Russell, Based on Historical Map Resources
1992
FOLDER F106
1930
NOT Finished
Zoom to 75%



PROFILE OF THE LO LO OR NORTH NEZ- RAIL OVER THE BITTER-ROOT MOUNTAINS

*ALL DISTANCES ESTIMA... FROM A TRAVEL ON HORSEBACK IN 1866.
ELEVATIONS FROM OBSERV... ROMETER, WHERE FIGURES ARE SHOWN IN BRACKETS, BY OLIVER MARCY,
ALL OTHER ELEVATIONS ...ROID OBSERVATIONS BY G.B.NICHOLSON.

CAMPING PLACES OF LEWIS & CLARK INDICATED THUS,

Map 51. Lolo Trail System
Nicholson Profile Map A
G. B. NICHOLSON 1898

RESEARCH VERSION DO NOT PHOTOCOPY

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(A)

Map 52. Lolo Trail System
Nicholson Profile Map B
G. B. NICHOLSON 1898

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(B)

Map 53. Lolo Trail System
Nicholson Profile Map C
G. B. NICHOLSON 1898

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(C)

CFR NOTES: 1. above measurements to long by a factor of 1.22 to 1.53

M3,015 NICHOLSON-ELEVATION-PROFILE 1898
TUBE-6

This map was prepared by George B. Nicholson in 1898, documenting his survey of 1866.
This copy was obtained in August 1990 from the Archaeologists files of the Clearwater National Forest

Note: This is the Northern Peyres trail and not Bird-Truex Trail

APPENDIX

1. Research Methodology

2. Final Years of a Trail Researcher

3. My Writing Style

4. Inference in Historical Trail Research

5. About the Author

Historical Trails Research Report No. 0001
Clark's Maps for the Lewis and Clark Expeditionover the Lolo Trails NHL

Research Methodology
for
Historical Trails Discovery and Documentation

This section briefly addresses the methodology I have developed for finding historic trails and wagon roads. Trying to describe a process that has been developed using science, inference, and intuition is difficult because it involves so many variables and perturbations. It is similar to a basketball coach writing a monograph on the process of coaching during a game. Some people question if it is even possible to develop such a methodology, but finding actual old worn trail tread is the proof that it works. In this monograph, the word 'trail' means the erosion trace of an historic trail or historic wagon road.

Trails and roads are transportation routes that people use to get from one point to another in the most practical way possible. The main criteria for trail location choices have always been directionality, water, food, shelter, safety, ease of travel, and availability. These are the same criteria that have been used by all travelers for uncounted millennia.

Major Criteria for Trail Location

Directionality	A traveler is interested in getting from "point-A" to "point-B" in the most effective way possible. Thus, trails have a directionality characteristic. This means the trail connects the points in the shortest practical distance, given obstacles and availability constraints. The trail may meander but it tries to keep close to a direct path.
Water	Essential for all life, a trail must pass by water sources frequently enough to serve the needs of people and livestock. Most of the time, a water source every 3-15 miles is acceptable although we know distances of 40-70 miles are a difficult reality for some trails..
Food	Also essential for life, the area traversed by a trail must provide plant and animal food sources adequate for livestock and people.
Shelter	Shelter from adverse weather is highly desirable but often scarce. Caves, cliffs, and tree-branch shelters can serve the purpose –when available. People often transported their shelter with them as they travel. For aboriginal people and early fir trappers, it was often animal hides. In modern times, it is the nylon tent and/or warm rain gear.
Safety	For aboriginal people, this was a key element in the location of trails. Safety from enemies, dangerous animals, cliffs, steep hillsides, etc, were paramount.
Ease of Travel	If a trail is well located for ease of travel, energy requirements, and food requirements; 'wear and tear' and stress and trauma are reduced. It is a plus if a trail can be located on reasonable slopes/ grades.
Availability	A good trail is available during most months of the year. The location must take into account snow, rain, tree dead-fall, and flooding streams and rivers.

Trail, Road, and Highway Construction, Induced Erosion Characteristics

A knowledge of the historical progression of trail-use helps greatly with the discovery of true trails. For example, a trail route such as the Ice Age Trail from Canada to the southern United States was traveled thousands of years ago by people on foot and with whatever domesticated animals (most often dogs) they had available. These migration routes can be estimated by campsites but any trail erosion trace has long disappeared due to erosion from rain, snow melt, fire runoff, etc.

In the Pacific Northwest, trails were worn by human foot traffic and dogs before the arrival of the horse, which was about 1730. Lewis & Clark followed well-worn Indian trails for most of their journey across the mountains (Lost Trail Pass in the exception). As horse herds increased their number, pack horses replaced the dog travois, especially in brushy, mountainous, timbered areas. The increased use of pack

horses also increased the depth and braid of existing trails. It is the horse trail erosion tread that we find in the mountains today.

Wagon roads replaced horse trails in some locations but, for the most part, the wagon roads were separate because (with notable exceptions) they required a route that was less steep; and gentle hillside slopes. Constructed wagon roads such as the Lander Road of the Oregon-California Trail and the Lewiston & Virginia City Wagon Road (Bird Truax Trail) in north-central Idaho, were surveyed to an acceptable wagon road grade.

The era of mechanized road construction and western agriculture brought about the destruction of the fundamental nature of the historic horse trail. Single-lane dirt roads covered over some of the trails and were followed by paved roads. Travelers of modern paved roads are usually unaware that they are driving over what was once a major Indian Trail, less than two centuries ago. One interesting use for old trails was to turn them into ditches for agriculture and mining. Sometimes they were located in the right place and had a slope that accommodated use as a water ditch.

The construction characteristics and erosion characteristics of a trail give powerful clues as to its origin. Constructed trails and wagon roads can be quite different from trails pioneered by aboriginal people and emigrants. Erosion trails by horses and horse travois are significantly different from erosion trails caused by wagons.

Trail Use Identification

One of the most difficult tasks in historic trail discovery and documentation is to determine its origin, era (dates) of use, and type of use. A trail can come into use by many different means. Science and art must both be used to properly identify them. Here are some trail types.
-ANIMALS: Horses, Cattle, Sheep, Buffalo, Elk, Moose, Deer, etc.
-HUMAN FOOT TRAFFIC: hiking, camping, hunting, etc.
-CONSTRUCTED TRAILS: Silver and Gold Mining, hunting, National Forests, National Parks, Recreation, Federal and State Government.

Indian Trails (Horse Trails) For the most part, these trails travel as directly as possible between two points, even when they have to go through difficult terrain. They tend to stay on ridges and other high points and almost never travel in the brush and windfall bottoms of rivers and creeks. They also tend, when possible, to be located in the most sunny areas of travel. This makes the trail usable earlier in the spring and later in the fall. For example, the trail will be located near the crown of the ridge but on the sunniest edge of it. These main trails do not ‘dip and dive’ off a ridge to access each water source or meadow of horse feed. The main trail stays on the ridge and travelers access these essential places with a side trail. This is the most energy efficient way of travel and energy efficiency was, and still is, very important. They will avoid locations that may expose them to enemy ambush. One significant feature of Indian trails in steep areas is the nature of the trail switchbacks. The trail is serpentine steeply up the hill and the switchbacks are only 3-5 time the length of a horse (30-50 feet). When a trail has long, shallow switchbacks, it is not an Indian trail.

Cattle Trails Cattle create grazing trails and patterns on hillsides where there may be a horse trail. This can create a difficult separation problem unless a vantage point can be gained where the weaving cattle pattern can be distinguished from the ‘straight-line’ horse trail. Cattle also produce a radial pattern of trails around a water source or salt block. Historic horse trails do not. Cattle were often driven on historic trails and create erosion patterns that are difficult to distinguish from horse trails. In the mountains, cattle to do a lot of single-file traveling, just as saddle horses do. I employ a variety of methods to eliminate cattle trails. Heavy cattle grazing over decades can obliterate a major historic trail.

Sheep Trails A stock driveway used by sheep can be 20 or more feet wide and a very well beaten path. It

often looks more like a road than a trail. It does not have the deep erosion patterns created by horses and cattle. Historic trails can be rapidly destroyed by sheep because they graze the plants so close to the ground that significant erosion is created.

National Forest Trails These trails were originally designed for horse and foot traffic but now may have mountain bike, motorcycle, or ATV traffic. Many of these trails were converted Indian trails with reroutes and longer switchbacks constructed where needed. Over the last 100 years, the historic nature of many original Indian trails has been lost. Forest trails were constructed, or modified, to create a more shallow grade and reduce erosion. Maps of these trails exist back to at least 1911 which helps separate them from Indian trails. Forest trails have a 'constructed' look about them that is different from pioneered trails.

National Park Trails These trails, for the most part, are constructed for tourist hiking and are of recent vintage. My research work up to this time has not included areas of National Parks.

Mining Trails Gold and silver miners originally used the Indian trails for explorations and travel, so some historic trails have been greatly impacted by mining activity. This is especially true for the Southern Nez Perces Trail in north-central Idaho. As mines were established and travel route changes were needed, the miners would abandon some sections of the Indian trail and construct their own trails. They had different needs and objectives. Because miners and Indians traveled the same way with horses and mules, distinguishing the two can be a challenge. In these areas, it is helpful to have old journals and knowledge of various mine locations to separate them out.

Hunting Trails In high-traffic hunting areas, hunters often develop trails from camping areas to water sources and meadows. These are often horse trails and, depending on their age, may be difficult to distinguish from historical trails. Fortunately, they can be distinguished by the way they link camping areas with known water sources and hunting meadows. On the Lolo Trail corridor in Idaho, they are usually less than five miles in length and most are less than two miles in length. They also tend to connect with National Forest trails so a good trail map is essential to separate the two. Additionally, maintained National Forest trails are brushed out to specific standards which can distinguish them from hunting trails, which tend to have brushing problems.

Livestock Driveways These were large trails used to drive cattle and sheep from winter pastures to summer pastures and from pastures to railheads. They were characterized by wide beaten paths and the directionality associated with pastures and railheads.

Wagon Roads In frangible soil types, old wagon roads tend to have a central swale created by the horse hooves and often, there are no discernable wagon wheel ruts. Where very rocky soil and hard surfaces exist, the wheel ruts are easily discernable.

Historical Documentation of Trails

Historical documentation of western trails is often available in the form of government maps, fur trader maps, explorer and pioneer journals, and history books. Original sources are essential for the best research quality. Second, or third-hand information can be degraded in quality caused by editing, bias, gross error and general lack of accurate knowledge. Even high-quality journals like those produced by Lewis & Clark and the Corps of Discovery can be interpreted in different ways and subject to editorial changes. However, the maps produced by William Clark are truly remarkable for the time and very helpful.

I rely mostly on original explorer journals and their maps as well as the Government Land Office Plat Surveys. Of course, both have occasional errors but their first-hand accounts usually produce good information to locate the erosion traces.

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Original Research Independence

The hallmark of my research has been to use only original documents dating, as near as possible, to the original dates of use of a trail or wagon road. This avoids the bias of using previous research. This is especially true for derivative books. After I apply my research methods and have determined trail and road locations as accurately as possible, I will then compare previous research results with my own. Most of the time they do not influence my results but, occasionally, I discover new information or an error in my research which I correct.

Anecdotal information and published oral histories have frequently proven to be inaccurate to the point where I place little confidence in them. In nearly all cases, the information has been passed down over a 100+ year span between the original source and today's generation.

Trail Dating and Route Evolution

Whenever reporting on trail research, it is essential to assign a correct date as to the location of the trail – at that time. The location of some portions of a trail will usually evolve over time and the reader and future researchers need to know the date that applies to whatever trail documentation is being provided. It is ideal if, when creating a map, each branch of the trail can be labeled with an applicable date. This evolution was never more abundantly clear than in the evolution of the various California and Oregon immigrant trails. There are literally hundreds of both major and minor branches in that trail system.

Ground Truthing

Hiking and finding the erosion trace of an old trail, and documenting it with a precision GPS, is the best way to insure high-quality research on an historic trail. Satellite, aerial, and ground photos can be very helpful and may produce good results in some cases, but they are no substitute for ground truthing. Various types of old maps can be used for approximation but accuracy is poor by modern standards. The original plat surveys by the Government Land Office (GLO), now called the Bureau of Land Management (BLM), offer good accuracy, but only on section line intersections with trails. The GLO maps can be quite inaccurate within section interiors, because of the "artistic liberty" taken by the map creators. It is best to get the information directly from the hand-written survey notes.

Experience, Intuition, and Dumb Luck

There is no amount of written information that is an adequate substitute for experience, inference, and intuition, when it comes to finding old trails. Trail location is so dependent on use, topography, vegetation, water, and other factors that there are unique aspects to each trail. Much trial and error is involved until this experience is gained. Last, but not least, is the element of 'dumb luck.' It happens when you are hiking along and literally stumble into the erosion trace of an old trail where you never expected it to be.

Revision and Additional Information

I will try to revise this document as new experiences point to new directions in research. I hope this information will be valuable to later generations of trail researchers.

Steve F. Russell
Historic Trails Research
Ames, Iowa
April 4, 2014

Historical Trails Research Report No. 0001

Clark's Maps for the Lewis and Clark Expeditionover the Lolo Trails NHL

Final Years of a Trail Researcher

I am beginning to realize that I'm in the final years of my life, and definitely in my final years as a "trail pounder." Those trail slopes seem to have gotten much steeper in the past ten years! Many of the hikes I had planned for the future, will not be realized. However, 35 years of solo camping and hiking have given me many wonderful memories, and exciting adventures that I will cherish.

Those "steep slopes" also apply to my writing and research report production. It is hard for me to accept that there is still much to do that I will be unable to complete.

With my final years starting to loom large, I've decided to produce as many reports on my trail research as time and energy permit. I apologize in advance for some incomplete results, or lack of thoroughness, or less than perfect prose, that will be a natural part of this final effort. I hope future generations will continue on and expand my research.

My Writing Style

The goals of my writing style are to present the essence of the history, location, campsites, and landmarks for historical trails. I write in a "conversational" style, with clear and understandable prose, that is succinct, covering only the essence of the trail.

I do not consider it important to spend the time needed to follow all the rules of writing and sentence structure. I am not trying to write in "Cambridge prose."

Inference in Historical Trail Research

Inference is a very important concept in all types of research from theoretical physics, to medicine, to historic trails. The skill of the researcher in understanding inference, properly applying it, and acknowledging its use, is of paramount importance. A researcher can never claim that the conclusions reached using inference are "absolute truth," and yet, this often happens in many fields of research.

"Evidence" > "Logic & Reasoning" > "Conclusions"

Conclusions reached by Inference are not Absolute Truth

The dictionary definition of inference is:

-a conclusion reached on the basis of evidence and reasoning.
-synonyms are: deduction, conclusion, reasoning, conjecture, speculation, a guess, presumption, assumption, supposition, reckoning, extrapolation.

Another dictionary definition for statistical inference is: "the theory, methods, and practice of forming judgments about the parameters of a population and the reliability of statistical relationships, typically on the basis of random sampling." The key term in all research inference is "**forming judgements**." It is the process of forming judgements that sometimes goes far astray in reporting research results. It is not uncommon for researchers to "create" unsubstantiated evidence (a.k.a., assumptions) to complete the "forming judgements" part of their work and their conclusions can be very misleading. It is incumbent on the researcher to avoid this behavior or, at least, to make it very clear what assumptions were made.

These definitions, however, do not give a full understanding of how inference is often applied. In historical research, the "evidence" is often sparse, or at best, fragmented, and no amount of "logic and reasoning" can make up for inadequate evidence. This results in "conclusions" that are often shaky, at best, or really wrong, at the worst.

Despite its importance, some researchers do not seem to fully understand the roll of inference in their research. For example, in medicine, we hear the term "statistical inference" which means to present research where the results are reported in terms of probability and statistics, and the reader is often left to make their own conclusions. This is not really "inference." The conclusions reached by "statistical inference" are one step removed from actual inference and, thus, produce conclusions that are even more speculative, and possibly misguided.

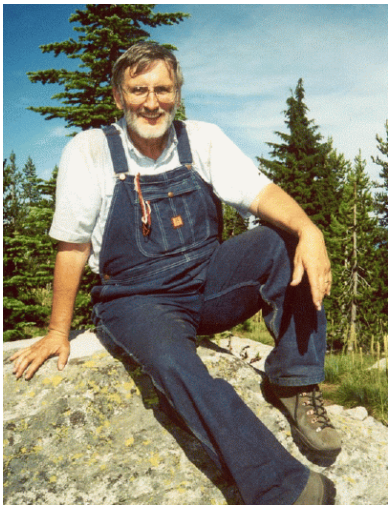
In historical trail research, inference plays a big roll in trying to understand the history of the trail as well as trying to accurately determine its location on a map and documenting associated landmarks and campsites. This is especially true when original-source historical documentation is limited.

In my research, I acknowledge my use of inference to produce my results to the best of my ability, and do not claim to have produced "absolute truth."

Steve F. Russell

2010

About the Author



Steve F. Russell, PhD, PE, is an Emeritus Associate Professor in the Department of Electrical and Computer Engineering at Iowa State University, Ames, Iowa. He was born in Lewiston, Idaho, and grew up along the Lewis and Clark Trail in north central Idaho and western Montana. Since 1985 he has conducted scholarly research on the historic trails of western Montana and north-central Idaho, and the Oregon-California Trail Systems. He is a recognized expert on the Lewis and Clark National Historic Trail where it crosses the mountains between the Missouri and Columbia Rivers.

For the last 30 years, he has spent summers doing primative hiking and camping, documenting the old trails on maps and with GPS. He spends winter evenings at his computer, processing the data and making maps. He has also amassed the largest collection of trail research materials in existence for this area. A few of the other historic trails he researches include the Lolo Trail National Historic Landmark, the Mullan Wagon Road, the Virginia City and Lewiston Wagon Road, Northern and Southern Nez Perce Trails, and the Carroll Trail. He has published several books and papers on historic trails and has received several honors, including the Esto Perpetua award from the State of Idaho, for his contributions to Idaho history. He is a past president of the Nez Perce National Historic Trail Foundation.

As an Electrical Engineer, Dr. Russell has worked in industry, as a pioneer, on communication systems such as TACSATCOM, the first world-wide satellite communication system, and the NAVSTAR Global Positioning System, now known simply as GPS. He is also a Registered Professional Engineer and a private consultant. His professional electrical engineering interests are communication systems, digital signal processing (DSP), Global Positioning System (GPS), and radio frequency (RF) design. He has taught many different courses in electric circuits, communication systems theory, DSP, spread spectrum, wireless security, spectral analysis, computer networking, discrete mathematics, signals and systems, and statistical communications theory. He has worked on numerous research projects with Rockwell-Collins. Dr. Russell is a Senior Member of IEEE and has served as student branch advisor for the Central Iowa Section of IEEE.

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Research Resources:

http://scholar.google.com/citations?hl=en&user=avpap9cAAAAJ
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https://trailresearch.org
"A Mans First Duty is to His Own Conscience and Honor," 1884, Mark Twain (1835-1910)