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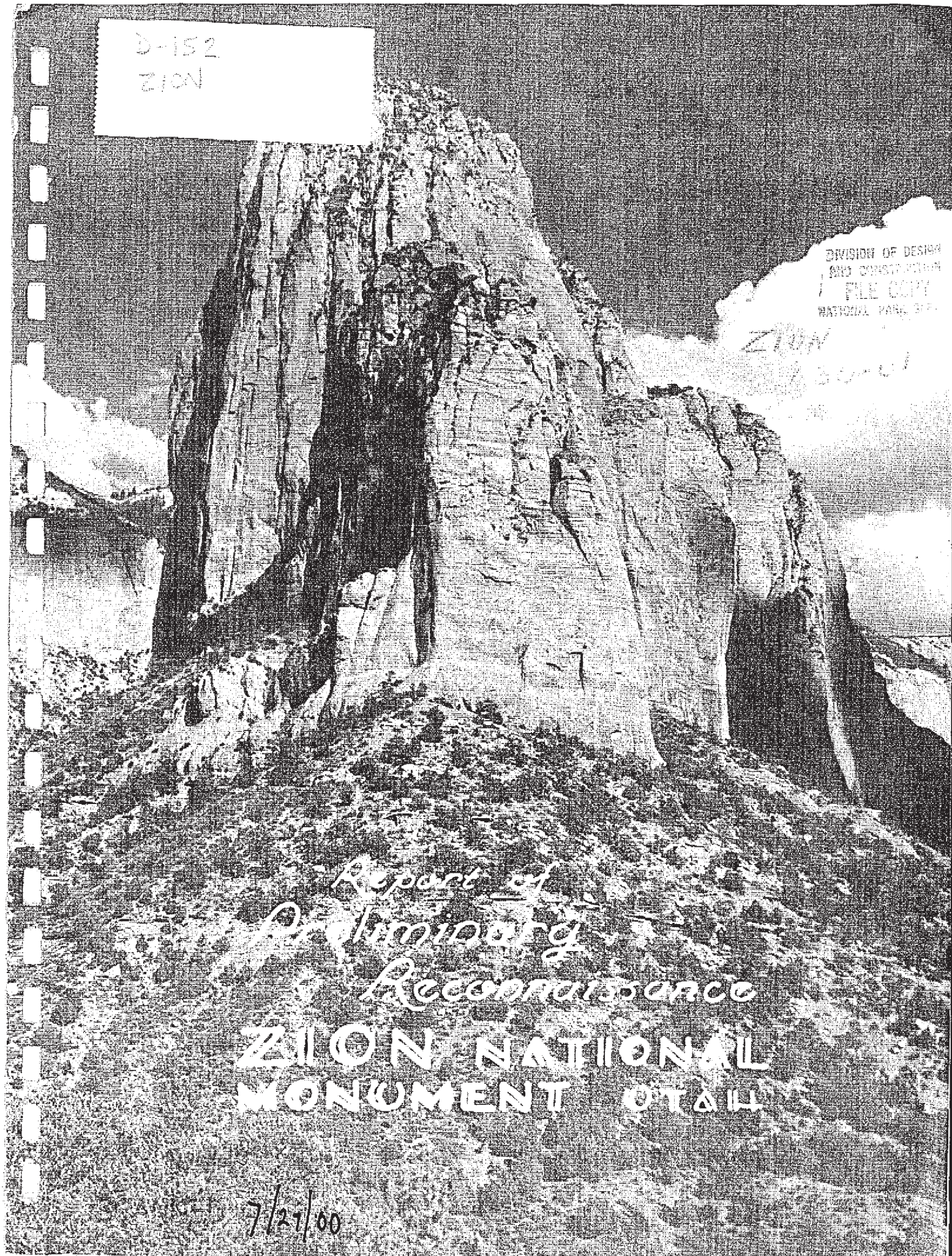

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Report of Preliminary Reconnaissance

ZION NATIONAL MONUMENT UTAH

7/27/00

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT OF PRELIMINARY RECONNAISSANCE

FOR THE DEVELOPMENT OF

ZION NATIONAL MONUMENT, UTAH

REGION THREE

JULY 15, 1955

Prepared by
Paul R. Franke, Superintendent
Glenn O. Hendrix, Park Landscape Architect
Carl W. Alleman, Park Landscape Architect, WODC

Cover Photo - ~~Paria~~ Tucupit Point, One of the Kolob Fingers

REPORT OF PRELIMINARY RECONNAISSANCE FOR THE DEVELOPMENT OF ZION NATIONAL MONUMENT

UTAH

I. INTRODUCTION.

The following is a report of a preliminary reconnaissance of Zion National Monument to determine the extent and nature of development of the area for public use. This reconnaissance was made May 16 through May 23, 1955, by: Paul R. Franke, Superintendent; M. W. Wilcox, Park Engineer; James B. Felton, Chief Ranger; Carl W. Alleman, Landscape Architect, Western Office, Division of Design and Construction; and Glenn O. Hendrix, Park Landscape Architect.

The rugged terrain of portions of the Monument as yet not accessible by roads required several modes of travel. The reconnaissance extended over seven days, including a four-day pack trip and three days by jeep. Numerous excursions on foot were undertaken each day.

In general, the chosen method for studying possible development of the Monument was based upon the selection of proposed developed areas, followed by studies of road and trail locations to provide access.

This report is a joint effort by the entire personnel making the reconnaissance, and should be considered as a preliminary step toward planning the development of Zion National Monument. Additional field studies, including engineering surveys, will be required.

A. Statement of Significance.

This area contains a grandeur of colorful canyon and mesa scenery that ranks high among the superlative scenic areas of the world. Zion National Monument supplements the Zion National Park scene and brings to the visitors understanding and realization of the mobility of the earth's crust. Here are manifested exhibits of faulting, folding, and volcanism producing an erosional pattern of tremendous proportions. Plants and animals influenced by the geologic processes span life zones from the desert to high mountains.

The traveler, if permitted access to the area, will cross through the Hurricane Fault, the west edge of the huge uplifted block which is Zion. Through meandering valleys may be viewed the towering peaks, flat topped mesas, sheer pinnacles, arches, cinder cones, and fields of lava. The area is an elaborate outdoor museum of nature's master work in a colorful setting, serene and peaceful, like an outdoor cathedral. The visit is an inspirational experience filled with awe and wonder. The development for public use is justified and will be appreciated by millions who will come to see it again and again.

B. General Theme of Development.

Development of the area should be limited to furnishing those facilities essential to the interpretation, maintenance, and protection of the area and to provide only such public accommodations which cannot be adequately furnished by private enterprise outside the Monument. Public facilities to be furnished within the monument include roads, trails, interpretive devices, picnic areas and a centrally located public use area consisting of a campground, a store, and perhaps a lunch room and gift shop. Service facilities should include employee quarters, and a maintenance center. The remainder of the area should be retained in its primitive character, accessible only by trail.

Various possible development sites and road locations other than those described herein were studied. Alternate road locations are outlined below and suggested by the attached plan. An important consideration for Monument development is the need for relief from over use rapidly developing in Zion National Park.

II. PROPOSED DEVELOPMENT.

A. Developed Areas.

1. Taylor Creek - located in the extreme western section of the Monument. Principal feature of interest is primarily geologic phenomona creating spectacular scenery in the Hurricane Fault and Kolob Terraces.

a. U. S. Highway 91 Entrance Area to include entrance station with residences for permanent personnel, quarters for seasonal personnel serving Taylor Creek and La Verkin Creek areas, district maintenance

headquarters. Power and telephone are available along Highway 91, and water can be supplied from Taylor Creek.

b. Three Forks Development to include parking area, informational and interpretive exhibits, comfort station, trail east along Taylor Creek with wayside exhibits at geologic fold and near junction of North and Middle Forks of Taylor Creek, trail northwest to petrified wood and geode deposits. Water available in Taylor Creek.

2. Timber Creek Picnic Area (Photos 11 and 12).

Groves of cottonwood with splendid views of the Kolob fingers, Timber Top Mountain and the Hurricane Fault to the West. Day use area to include picnic facilities, comfort stations, trails to Timber Top hanging gardens, scenic overlook. Water available.

3. La Verkin Creek Development (Photo 15).

Located in spectacular canyon of deep red rocks within short walking distance of view of one of the world's largest arches, known as "Natural Bridge," and near Hop Valley, an area of interesting erosional forms. Deep, narrow La Verkin Canyon eastward offers a varied flora and fauna not found elsewhere in the region. Facilities to include interpretive center, small campfire circle, campground, comfort stations, concession facilities (lunch room, gift shop, and store), employee quarters, trails to view of "Natural Bridge," conifer glades and La Verkin Canyon with wayside exhibits. Water available.

4. Fire Pit Knoll (Photo 24).

Spectacular lava cone with crater, views in all directions of the Monument, Park, and beyond to spectacular colorful towers, spires, mesas, containing interesting erosional characteristics. Trail proposed from parking area at base of knoll to the summit with interpretive devices. No water available. Pit toilets proposed near parking area.

5. Death Point (Photo 1).

A high point, elevation 7560, from which magnificent views are obtained of the Kolob Canyons, La Verkin Canyon,

Hop Valley, Natural Bridge. Parking area, trails, and interpretive devices are proposed. Development depends upon improvement of county roads. Water available in limited quantity.

B. Road System.

In order to provide access to the proposed developed areas, the following route for a park highway is proposed to be constructed in usable and economically feasible units:

1. U. S. Highway 91 to Three Forks to Lee Pass (4.6 miles, Photos 3, 4, and 5).

   A sidehill location will be required to climb the base of the Hurricane Fault near Highway 91. Following this ascent, the road will follow Taylor Creek on the south slope. The average grade of the Creek is approximately 5%. It is anticipated that about 1/4 mile of the road will require benching into the steep canyon wall. The ascent of approximately 600' from Three Forks to Lee Pass will require several switchbacks which can be located on a steep broad slope.

2. Lee Pass to Timber Creek Picnic Area to La Verkin Creek Development (7.2 miles, Photos 9 through 15).

   The descent to Timber Creek will require a sidehill location involving several sweeping curves on a gentle slope. The location then follows Timber Creek at an easy grade to the picnic area sites. A parking overlook is proposed for the Lee Pass summit for views of the Kolob fingers. The proposed location continues to follow Timber Creek on an easy grade to the intersection of Timber and La Verkin Creeks. The road then turns eastward along the north side of LaVerkin Creek through comparatively easy terrain. Some sidehill location and possibly channel changes will be required.

3. La Verkin Creek Development to Firepit Knoll (10.3 miles, Photos 18 through 23)

   A climb of approximately 500 feet from La Verkin Creek is required to reach the floor of Hop Valley. It will be necessary to develop distance at the mouth of Hop Valley through switchbacks or by a sidehill location on the steep south talus slope of La Verkin Valley. The location through Hop Valley will require construction over sandy

valley floor, a distance of approximately two miles. It is anticipated that stabilization of the sandy conditions will be required for this two mile section of road. A gentle broad slope will make the ascent from the south end of Hop Valley relatively easy. The location south of Hop Valley to Firepit Knoll is through a rolling terrain presenting no construction difficulties.

An alternate location for access from the north to Firepit Knoll is indicated on the plan (Photo 31). This location would bridge La Verkin Creek near its junction with Timber Creek, proceeding through relatively easy terrain along the rim of La Verkin Canyon, crossing Currant and Smith Creeks, reaching Smith Mesa from which the road would proceed eastward over easy terrain to Firepit Knoll. This route would be approximately two miles longer than the Hop Valley location and for approximately 5½ miles of its length would lie beyond the Monument boundary. For this reason, as well as for scenic and interpretive conditions, the Hop Valley location is much preferred.

4. Firepit Knoll to South Entrance Area, Zion National Park (23.3 miles, Photos 24 through 28).

Two routes have been investigated southerly from Firepit Knoll, one through Lee Valley, and the other through Cave Valley. Two administrative factors should be considered in the selection of the final location. First, it is desirable to separate the cross Monument traffic from local ranch and logging use. Secondly, in order to eliminate an additional entrance, it is highly desirable to connect the Monument highway with the Floor of the Valley Highway in Zion National Park in the vicinity of the Park's South Entrance Area.

The route which would accomplish these two objectives proceeds south from Firepit Knoll through Lee Valley, descends from Lee Valley by heavy and expensive construction, follows down the Left Fork of North Creek to its confluence with the Right Fork, climbs to the base of the mesa extending west from Cougar Mountain, and follows around the west and south ends of the mesa into the Park. The road from this point would cross the Coalpits and Scoggins Wash drainages, pass around the southern slope of Mount Kinesava to Blacks Canyon north of the town of Springdale, connecting with the South Entrance Area of

Zion National Park. Approximately 3.8 miles of this location south of Mount Kinesava is outside of the Park boundary. As an alternate to the "outside of boundary" location, a tunnel between West Temple and Mount Kinesava is indicated on the plan. A tunnel approximately one mile in length would be required.

An alternate route from Firepit Knoll would follow down Cave Valley, generally in the location of the existing graded road, cross North Creek in the vicinity of the Monument boundary, and return to the above-described route west of Cougar Mountain.

The Lee Valley and Cave Valley routes compare favorably in distance and scenic aspects. The Lee Valley route is completely within the Monument; the Cave Valley route for approximately 1½ miles of its length is beyond the Monument boundary. From an administrative and protective viewpoint, the Lee Valley location is preferred. For ease of construction, the Cave Valley location must be favored.

It should be noted that this section of road could be divided into two construction units. The existing county road may be utilized temporarily for the connection from Firepit Knoll to North Creek. The North Creek-South Entrance section (15.6 miles) might well be programmed in higher priority than the Firepit Knoll-North Creek section.

5. Death Point Road.

Approximately 0.7 mile of road would connect the proposed Death Point Parking Area with the county road. The terrain is comparatively rough but construction would not be difficult.

III. SPECIAL PROBLEMS.

At the present time, there are inholdings within the Monument, some of which conflict with proposed developments. Necessary and desirable purchases should be instigated in the immediate future in order of importance, recognizing the threat of private interests opening undesirable business enterprises within the boundary. Acquisitions of inholdings would also eliminate current logging operations which are a threat to the primitive sections of the Monument.

A large section of the Monument has been desecrated by over-grazing. Steps are now underway and should be continued to reduce the grazing with the plan to eventually eliminate it. Where grazing exists following development, certain areas must be protected by fencing.

The preliminary reconnaissance reported here should soon be followed by more detailed investigation, including engineering surveys and analysis. Portions of the proposed roads would require expensive construction and engineering surveys will determine the most feasible routes.

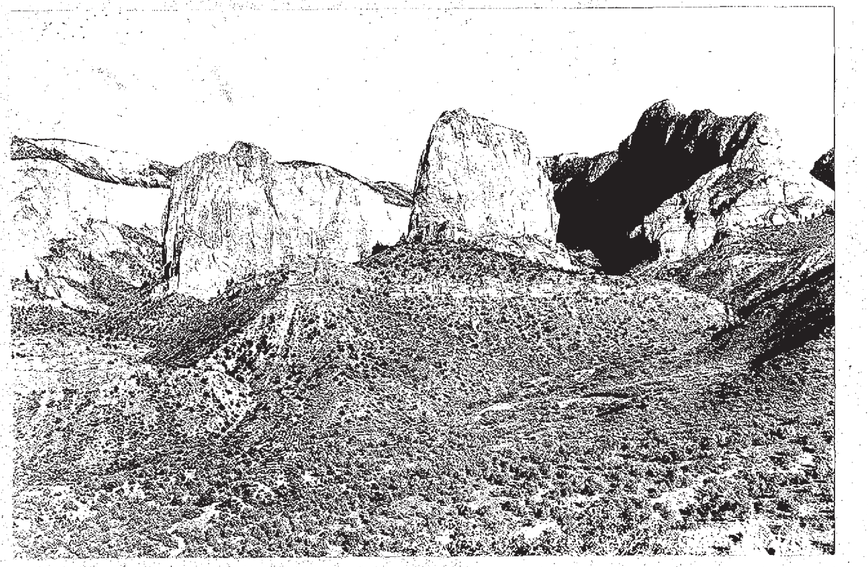
The inclusion of this monument area into Zion National Park, which it adjoins, is recommended. This would eliminate much confusion, both officially and in the mind of the public.

PRELIMINARY COST ESTIMATES
(Shown in Logical Units of Use and Construction)

	Construction Costs		
	R&T	B&U	Total
1. U. S. Highway 91 to Three Forks & Lee Pass			
a. Road - 4.6 miles @ $75,000	$345,000		
b. Trails - 3.3 miles @ $2,000	6,600		
c. *Public Facilities		$ 50,000	
d. Service Facilities & Utilities		198,400	
Totals	$351,600	$248,400	$600,000
2. Lee Pass to Timber Creek Picnic Area & La Verkin Creek Development			
a. Road - 7.2 miles @ $50,000	$360,000		
b. Bridge	25,000		
c. Trails - 7.4 miles @ $2,000	14,800		
d. *Public Facilities		$220,200	
e. Service Facilities & Utilities		130,000	
Totals	$399,800	$350,200	$750,000
3. La Verkin Creek to Firepit Knoll			
a. Road - 10.3 miles @ $80,000	$824,000		
b. Bridge	19,400		
c. Trails - 1.8 mile @ $2,000	3,600		
d. *Public Facilities		$ 3,000	
e. Service Facilities - none			
Totals	$847,000	$ 3,000	$850,000
4. Firepit Knoll to South Entrance Area, Zion National Park			
a. Firepit Knoll to North Creek via Lee Valley			
(1) Road - 7.7 miles @ $80,000	$616,000		
(2) Bridges - 2	59,000		
(3) Trails - none			
(4) Public Facilities - none			
(5) Service Facilities - none			
Totals	$675,000	———	$675,000
b. North Creek to South Entrance			
(1) Road - 15.6 mi. @ $60,000	$936,000		
(2) Bridge	30,000		
(3) Trails - none			
(4) *Public Facilities		$ 9,000	
(5) Service Facilities - none			
Totals	$966,000	$ 9,000	$975,000
5. Death Point			
a. Road - 0.7 mile @ $60,000	$ 42,000		
b. Trail - 1 mile @ $2,000	2,000		
c. *Public Facilities		$ 6,000	
Totals	$ 44,000	$ 6,000	$ 50,000
Grand Totals	$3,283,400	$616,600	$3,900,000

*Estimates do not include public facilities to be developed by concessioner.

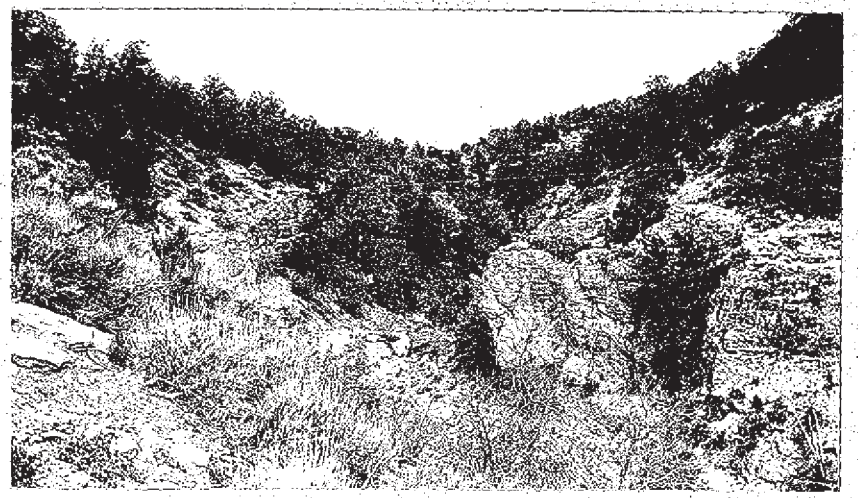
1. 210° panorama south from Death Point.
   a. Langston Mt.
   b. Hop Valley
   c. Burnt Mt.
   d. La Verkin Creek
   e. Natural Bridge
   f. Timber Top Mt.
   g. Nagunt Mesa
   h. Paria Point



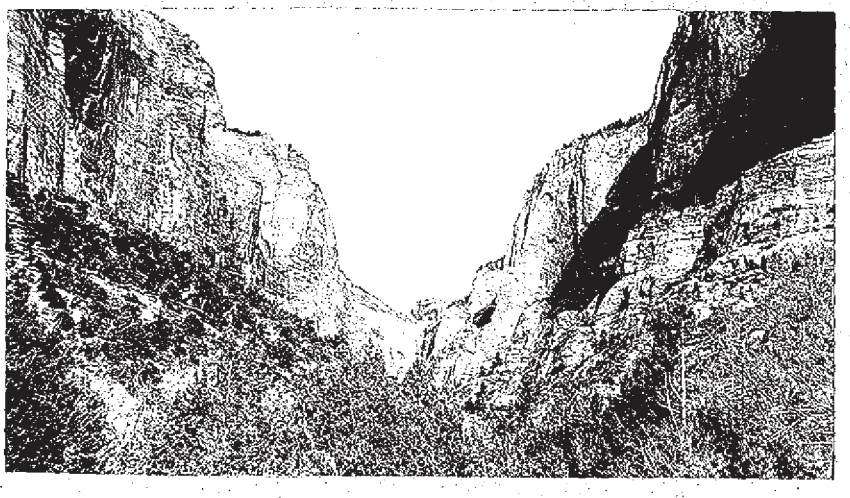
2. Kolob Fingers--a. Tucupit, b. Paria, c. Beatty Points.

3. Looking east up Taylor Creek from U. S. Highway 91, showing road location.

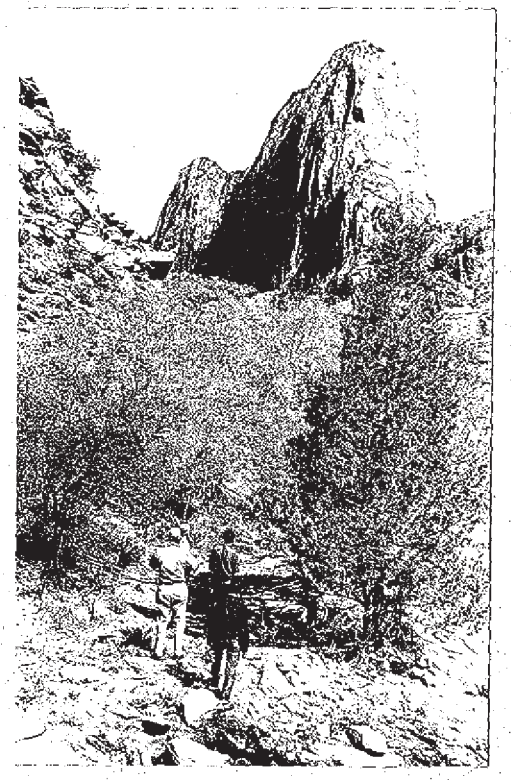
4. Looking east up Taylor Creek, showing road location.



5. Looking west down Taylor Creek, showing road location.

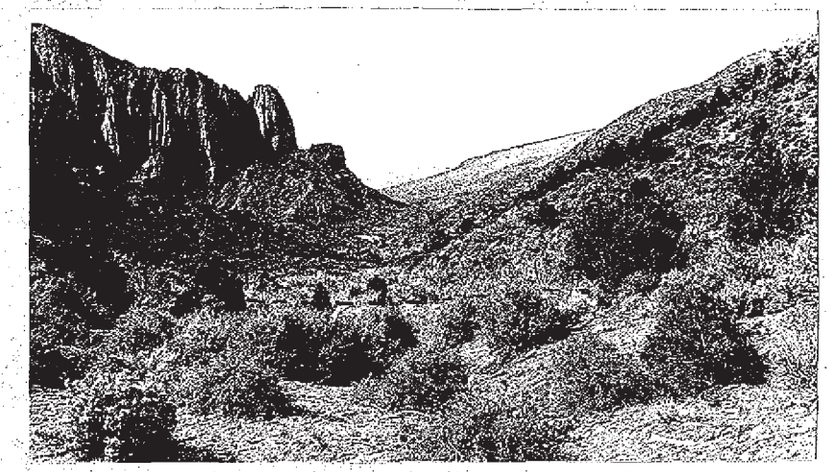


6. Middle Fork of Taylor Creek.

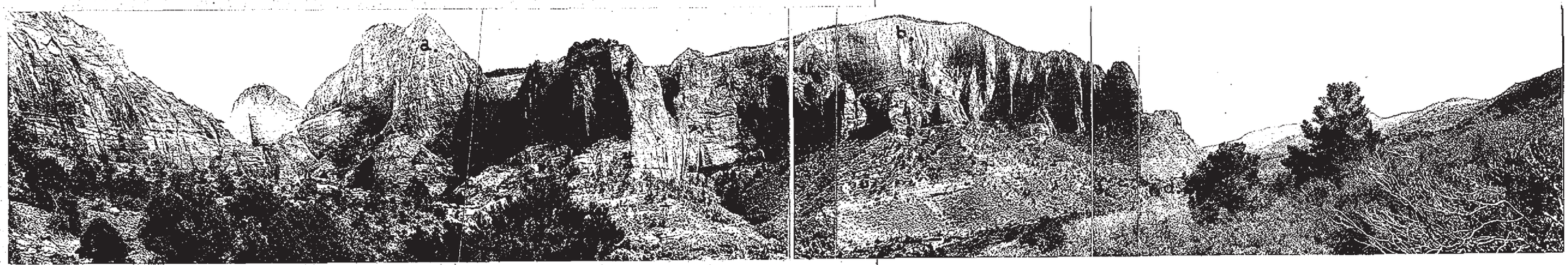


7. Looking east up Taylor Creek showing Paria Point.

8. Superlative example of folded formation--on Taylor Creek.

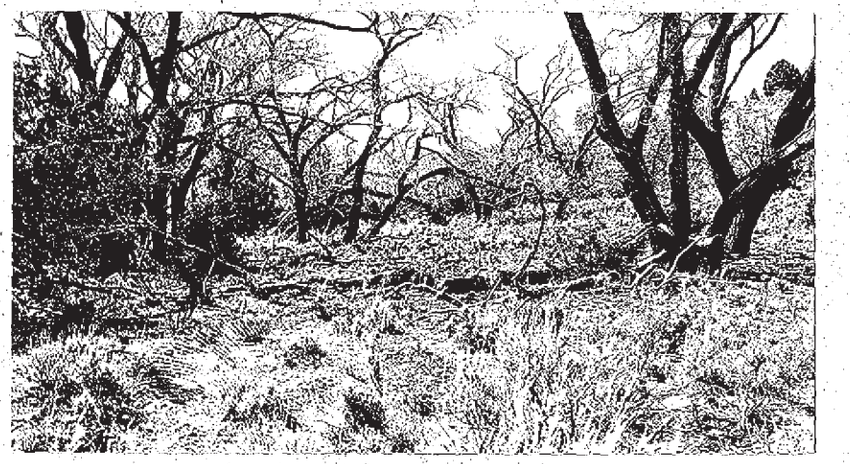


9. Looking south from Lee Pass into Timber Creek, showing road location.

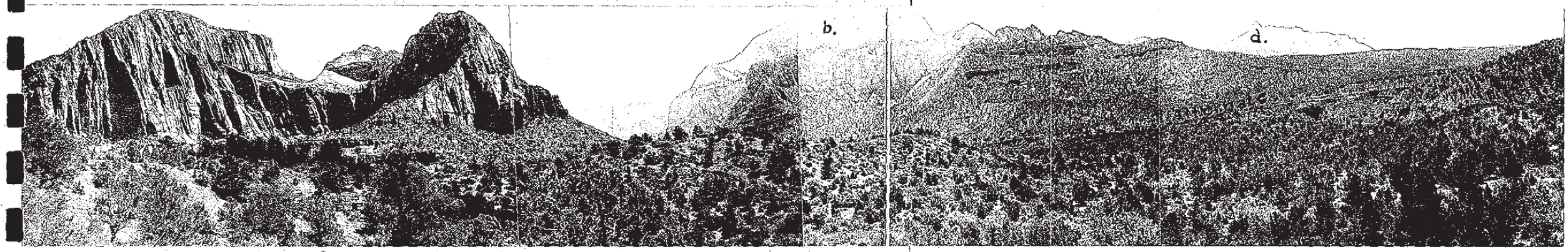


10. 90° panorama east and south from Lee Pass.
    a. Nagunt Mesa
    b. Timber Top Mt.
    c. Shuntavi Butte
    d. Timber Creek

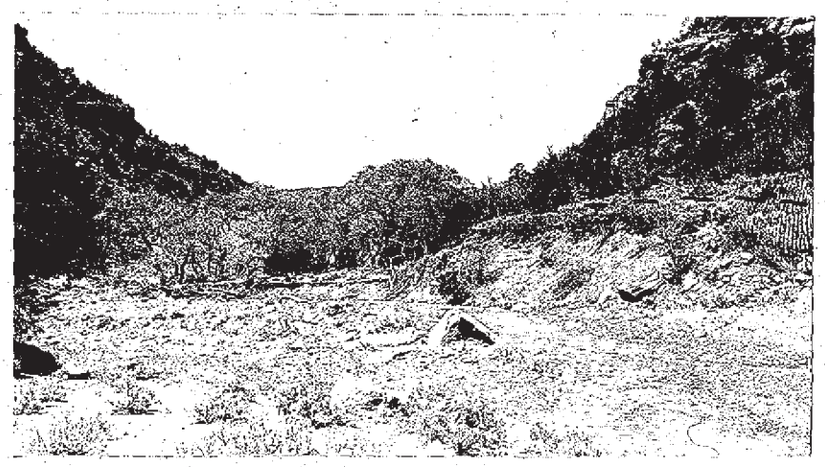
11. Looking east into Box Canyon at Timber Creek Picnic Development Site.



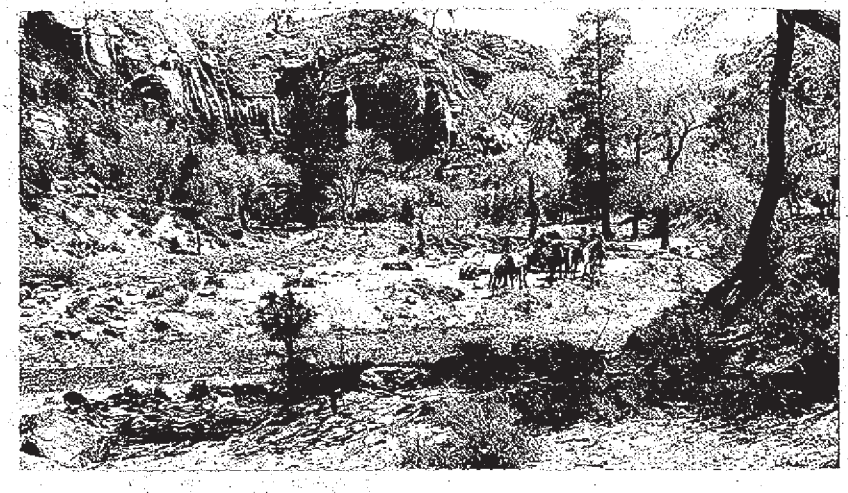
12. Cottonwood Grove at Timber Creek Picnic Development Site.



13. 160° panorama east and south near Junction of Timber and La Verkin Creeks showing road location.
a. Timber Top Mt.
b. Burnt Mt.
c. La Verkin Creek
d. Red Butte



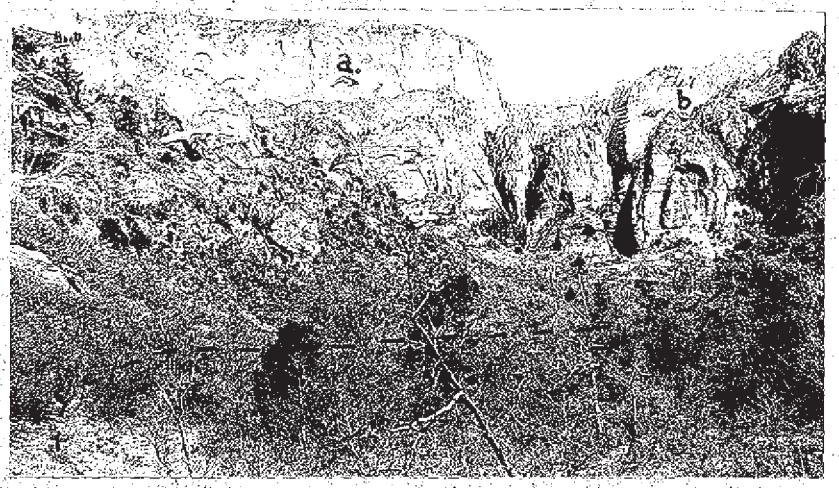
14. Looking west down La Verkin Creek showing road location.



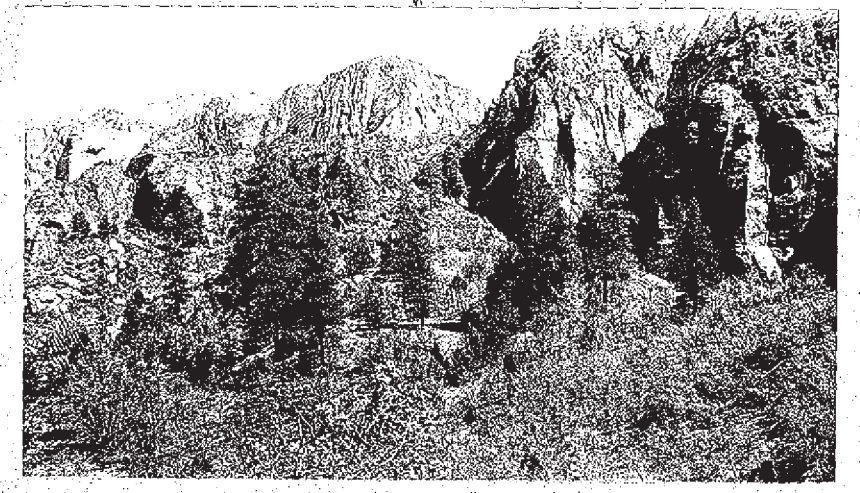
15. Looking east up La Verkin Creek showing road location and La Verkin Creek Development Site.

16. Chimney Rock near Natural Bridge.

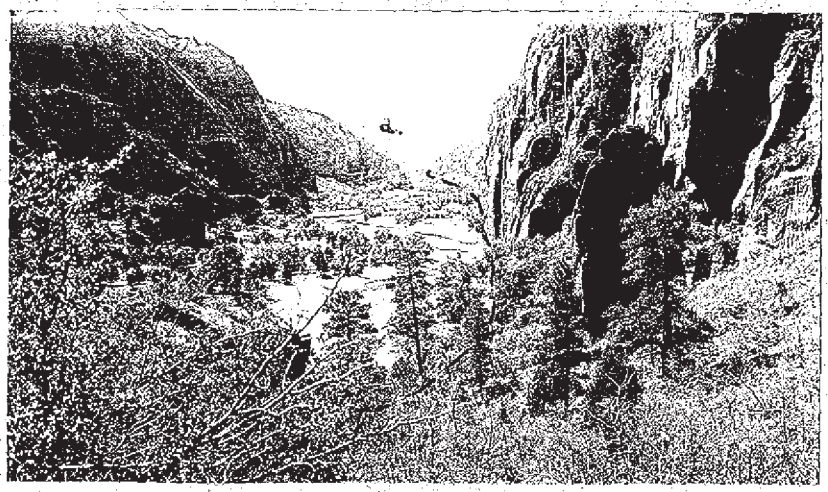
17. Natural Bridge--
Span, 300',
Height at front, 330'.



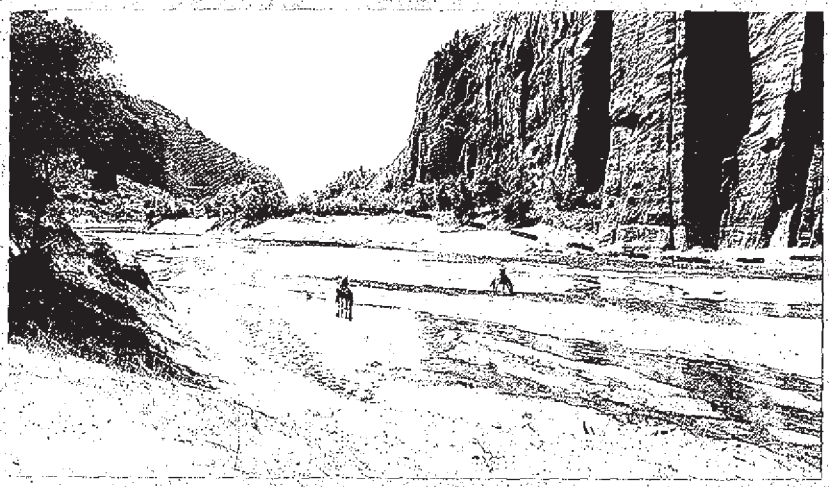
18. Looking north from mouth of Hop Valley showing road location.
a. Timber Top Mt. b. Death Point.



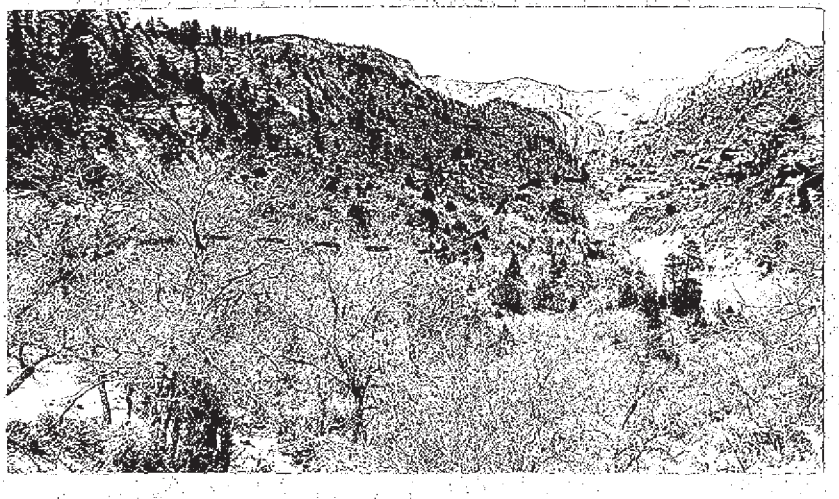
19. Looking north from Hop Valley Overlook.



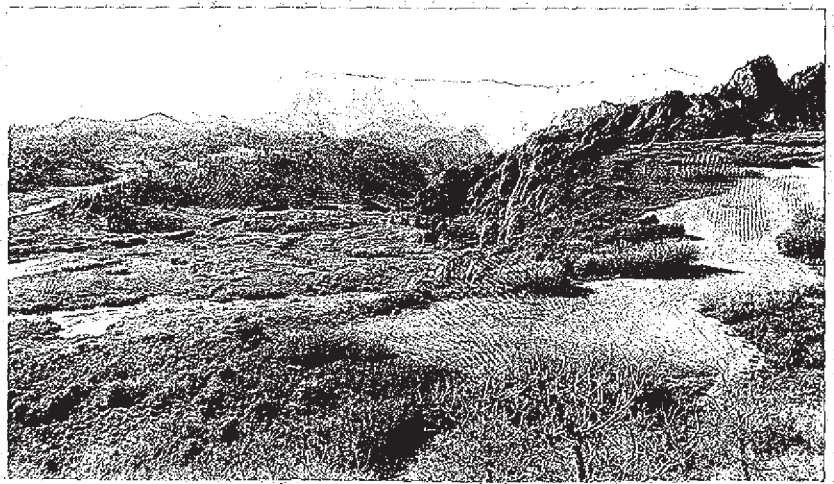
20. Looking south from Hop Valley Overlook showing road location in Hop Valley.
a. Firepit Knoll.



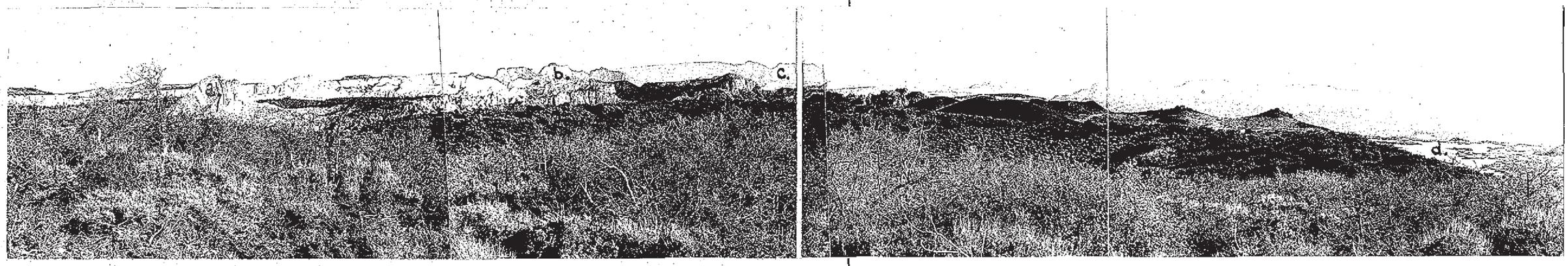
21. Looking up Hop Valley showing road location.



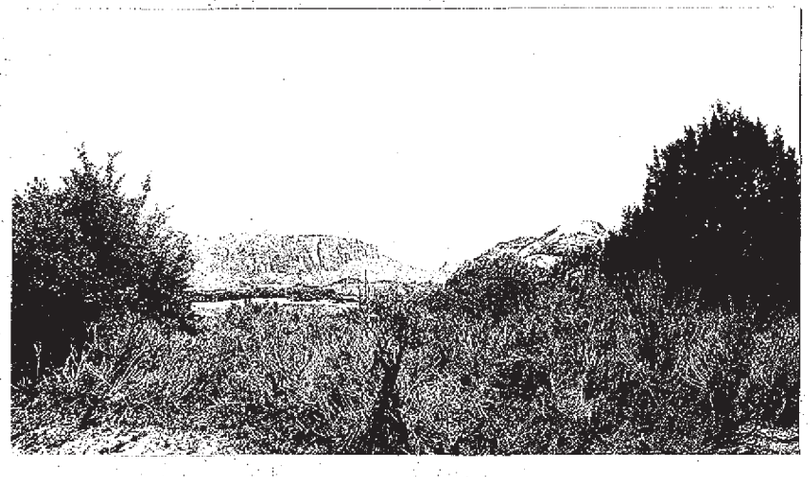
22. Looking down Hop Valley showing road location.



23. Looking north from Firepit Knoll showing road location descent into Hop Valley.

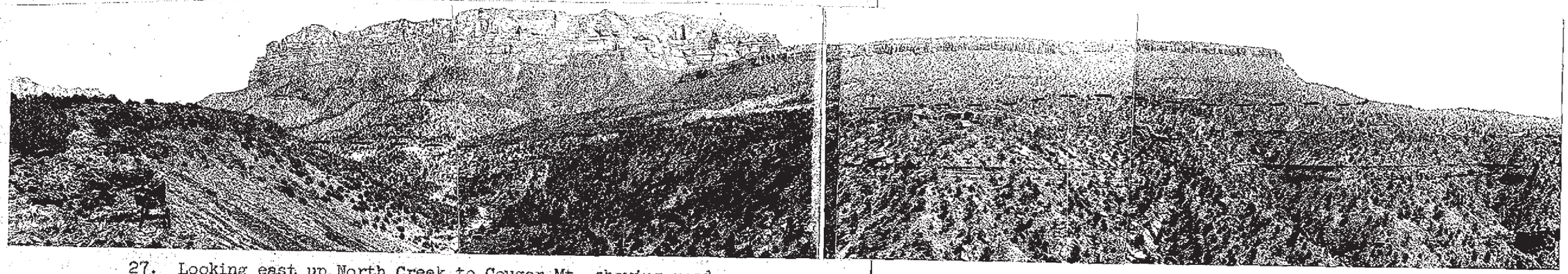


24. 140° panorama south from Firepit Knoll.
    a. Pine Valley Peak
    b. West Temple
    c. Smithsonian Butte
    d. Upper End Cave Valley

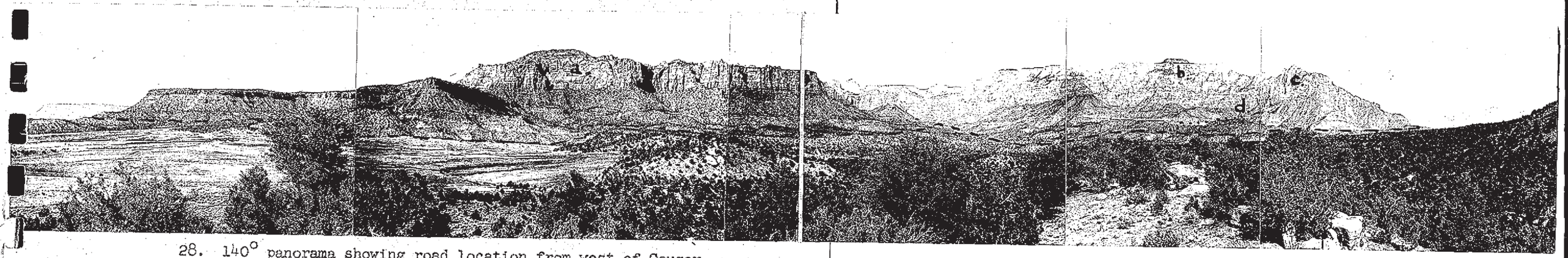


25. Looking down Lee Valley.

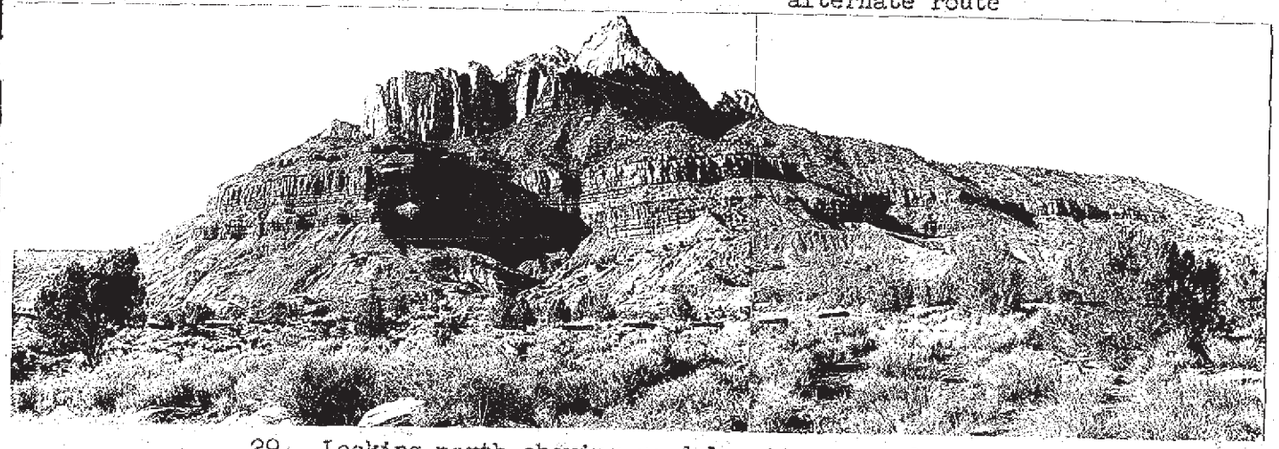
26. Looking up Lee Valley showing road location descent to Left Fork, North Creek.



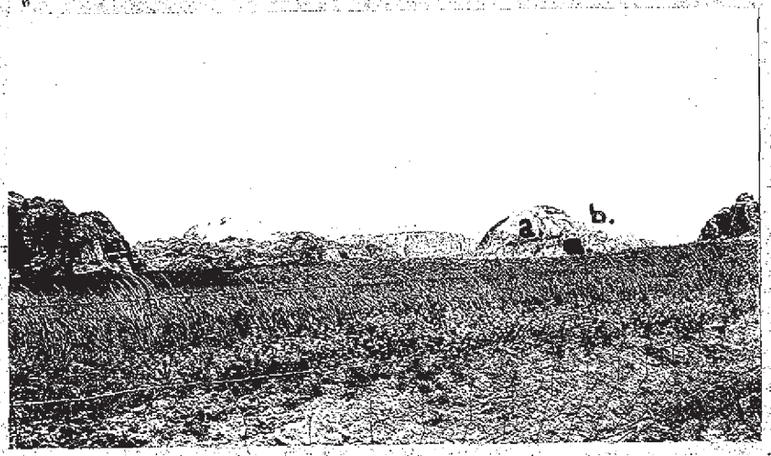
27. Looking east up North Creek to Cougar Mt. showing road location and descent into North Creek from alternate Cave Valley location.



28. 140° panorama showing road location from west of Cougar Mt. to base of Mt. Kinesava.
    a. Cougar Mt.
    b. West Temple
    c. Mt. Kinesava
    d. Tunnel location on alternate route

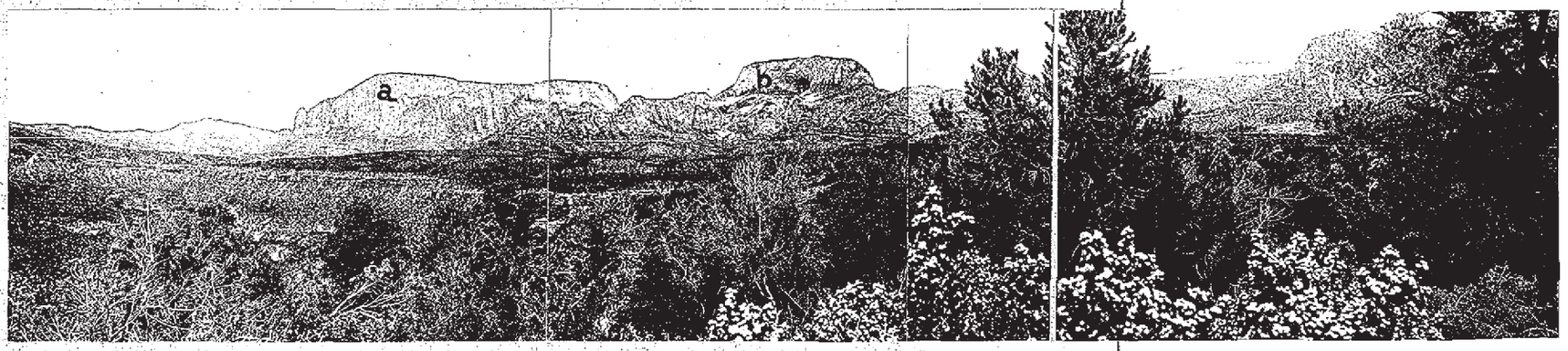


29. Looking north showing road location around southern base of Mt. Kinesava.

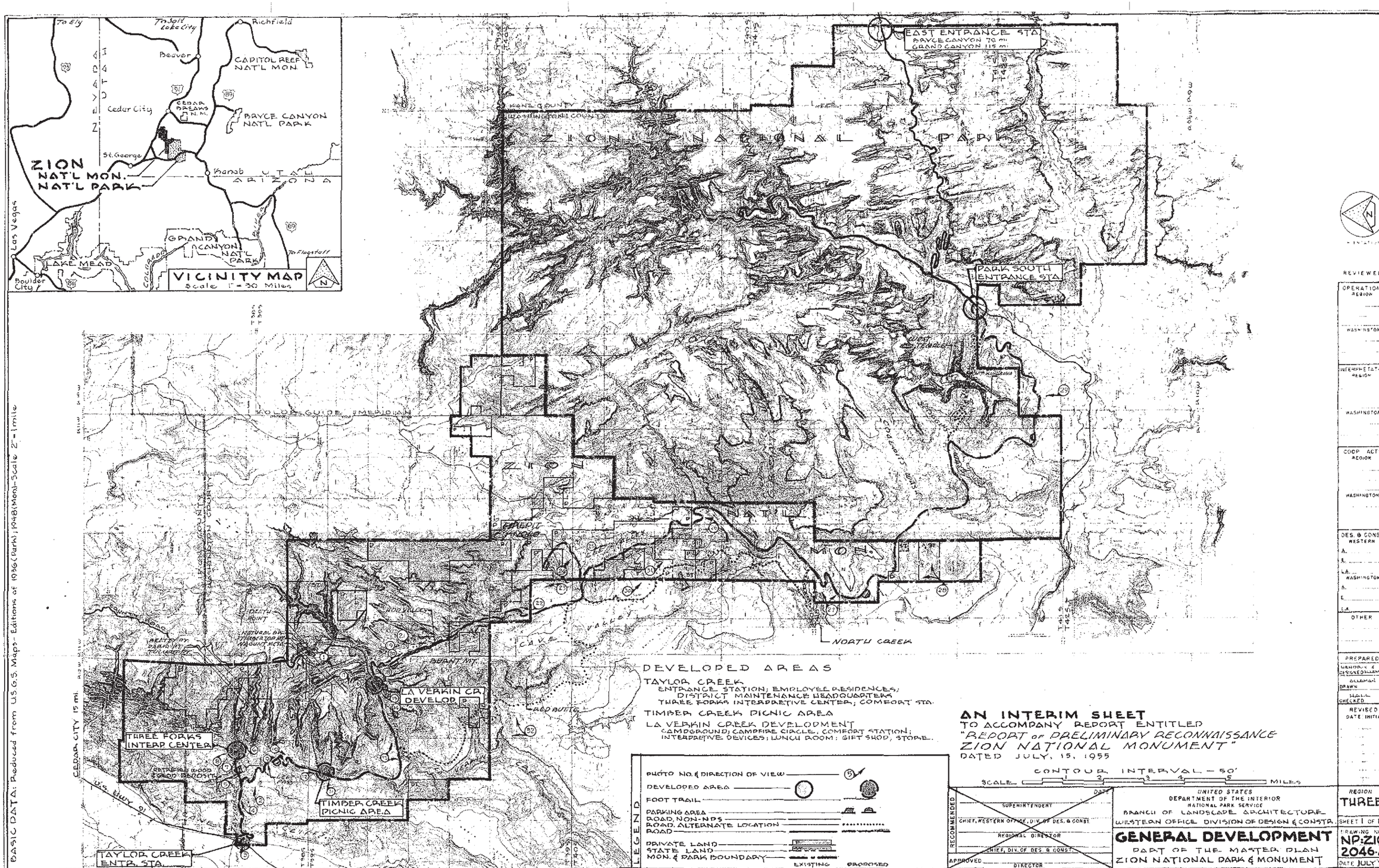


30. Looking southeast on alternate Cave Valley location.
a. Tabernacle Dome b. West Temple

31. Tabernacle Dome from Cave Valley.



32. 90° panorama looking north and east from Smith Mesa showing alternate road location between La Verkin Creek and Firepit Knoll.
a. Timber Top Mt. b. Burnt Mt. c. Red Butte



VICINITY MAP
Scale 1" = 30 Miles
To Ely
To Salt Lake City
Richfield
Beaver
CAPITOL REEF NAT'L MON.
Cedar City
CEDAR BREAKS N.M.
BRYCE CANYON NAT'L PARK
St. George
ZION NAT'L MON. NAT'L PARK
Kanab
UTAH
ARIZONA
Las Vegas
GRAND CANYON NAT'L PARK
LAKE MEAD
Boulder City
To Flagstaff
EAST ENTRANCE STA.
BRYCE CANYON 70 mi
GRAND CANYON 115 mi
KANE COUNTY
WASHINGTON COUNTY
ZION NATIONAL PARK
PARK SOUTH ENTRANCE STA.
KOLOB GUIDE MERIDIAN
ZION NAT'L MON.
NORTH CREEK
CAVE VALLEY
BURNT MT.
RED BUTTE
LA VERKIN CR. DEVELOP.
THREE FORKS INTERP. CENTER
TIMBER CREEK PICNIC AREA
TAYLOR CREEK ENTR. STA.
CEDAR CITY 15 mi.
U.S. HWY 91
DEVELOPED AREAS
TAYLOR CREEK
ENTRANCE STATION; EMPLOYEE RESIDENCES; DISTRICT MAINTENANCE HEADQUARTERS
THREE FORKS INTERPRETIVE CENTER; COMFORT STA.
TIMBER CREEK PICNIC AREA
LA VERKIN CREEK DEVELOPMENT
CAMPGROUND; CAMPFIRE CIRCLE, COMFORT STATION; INTERPRETIVE DEVICES; LUNCH ROOM; GIFT SHOP, STORE.
LEGEND
PHOTO NO. & DIRECTION OF VIEW
DEVELOPED AREA
FOOT TRAIL
PARKING AREA
ROAD, NON-NPS
ROAD, ALTERNATE LOCATION
ROAD
PRIVATE LAND
STATE LAND
MON. & PARK BOUNDARY
EXISTING
PROPOSED
AN INTERIM SHEET
TO ACCOMPANY REPORT ENTITLED
"REPORT OF PRELIMINARY RECONNAISSANCE ZION NATIONAL MONUMENT"
DATED JULY, 15, 1955
CONTOUR INTERVAL - 50'
SCALE 1 2 3 4 5 MILES
RECOMMENDED
SUPERINTENDENT
CHIEF, WESTERN OFFICE, DIV. OF DES. & CONST.
REGIONAL DIRECTOR
CHIEF, DIV. OF DES. & CONST.
APPROVED
DIRECTOR
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF LANDSCAPE ARCHITECTURE
WESTERN OFFICE DIVISION OF DESIGN & CONSTR.
GENERAL DEVELOPMENT
PART OF THE MASTER PLAN
ZION NATIONAL PARK & MONUMENT
REVIEWED
OPERATIONS REGION
WASHINGTON
INTERPRETATION REGION
WASHINGTON
COOP. ACTV. REGION
WASHINGTON
DES. & CONST. WESTERN
WASHINGTON
OTHER
PREPARED
DRAWN
CHECKED
REVISED
DATE INITIAL
REGION
THREE
SHEET 1 OF 1
DRAWING NO.
NP:ZIO 2046-A
DATE JULY '55
BASIC DATA: Reduced from U.S.G.S. Maps - Editions of 1936 (Park); 1948 (Mon.) - Scale 2" = 1 mile