

2860 Withdrawal from Mineral Entry
Coronado N. F.; R-3
Santa Catalina Research Natural Area

Area Recommended for Withdrawal from Mineral Entry
Under the General Mining Laws

Coronado National Forest

Gila and Salt River Meridian

Arizona

Santa Catalina Research Natural Area

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

N. 88° 30' W., 33 chains to Corner #1; thence S. 50° W., 65 chains to Corner #2; thence S. 36° W., 172 chains to Corner #3; thence S. 64° E., 174 chains to Corner #4; thence N. 18° E., 108 chains to Corner #5; thence N. 30° E., 98 chains to Corner #6; thence E. 60 chains to Corner #7; thence N. 90 chains to Corner #8; thence N. 65° W., 35 chains to Corner #9; thence S. 86° 30' W.; 36 chains to Corner #10; thence S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning,

Containing 4,131 acres, more or less in Pima County, Arizona

Title

~~Establishment~~ Report for Santa Catalina 3/23/1927
Research Natural Area, within Coronado
National Forest, Pima, Arizona
(County) (State)

Text

- a. Principal distinguishing features.
Wilderness Rocks - Lemmon Creek Basin
- b. Location. (Include a map.)
T. 12 S., R. 15 E.
- c. Area by cover types. 2,531 acres coniferous
440 acres deciduous
1,200 acres brush types, total area 4,131 acres
- d. Physical and climatic conditions.
Elevation 5,500 to 9,150, rough and precipitous, highly inaccessible,
"Wilderness Rocks" area included
- e. Description of values. The following items are suggestive.
Discuss (1), (2), and (3) in relation to utility for scientific studies;
(4), (5), (6), and (7) in relation to conflicting uses.

- (1) Flora.
Ponderosa pine, Douglas fir, white pine, Englemann spruce,
corkbark fir, aspen, sugar maple, boxelder, alders, net leaf
and silver leaf oak, juniper, and Arizona cypress.
- (2) ~~Geology.~~
Granitic
- (3) Fauna.
White-tail deer and Rocky Mountain sheep
- (4) Minerals.
Not withdrawn from mineral entry
- (5) Recreation.
- (6) Water use.
- (7) Other uses. (Especially uses that may arise which would
conflict, such as powerline rights-of-way.)
None - closed to grazing - lookout tower and cabin on
Mt. Lemmon.

Trail traverses area.

Exhibit II

originated in Forestry
initiated by GAD
rewritten in Solicitor's Office

1-28
3-19-27

Classification-Coronado
Santa Catalina Natural Area

LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress of August 10, 1912 (37 Stat., 287), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands, adjacent to the Mt. Lemmon Recreational Area, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, in T. 12 S., R. 15 E., S. & S. R. E., containing 4,464 acres, more or less, as shown by a survey made by Forest Ranger J. A. Friebers in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain cover of such a character that it would be in the public interest to keep this in its present state in so far as practicable, to the end that the flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I, R. W. DeLoach Assistant Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In Testimony Whereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

Secretary of Agriculture
(Seal)

R. W. DeLoach
Assistant Secretary of Agriculture.

(Seal)

Copy 11449 sent Coronado

Originated in Forestry
Initiated by LAF
Rewritten in Solicitor's Office

1-28
3-13-27

Classification-Coronado
Santa Catalina Natural Area

LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress of August 10, 1912 (37 Stat., 807), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands, adjacent to the Mt. Lemmon Recreational Area, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 12, in T. 12 S., R. 15 E., S. & S. E. N., containing 4,464 acres, more or less, as shown by a survey made by Forest Ranger J. A. Frisborn in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain some of such a character that it would be in the public interest to keep this in its present status in so far as practicable, to the end that the flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I, R. W. Doolittle, Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In testimony whereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

(Seal)

Secretary of Agriculture.

Original copy not returned

UNITED STATES GOVERNMENT

Forest Service
Washington 25, D. C.

Memorandum

4000(2300)

TO : Regional Forester, R-3

DATE: June 25, 1962

FROM : John Sieker, Director
Division of Recreation and Land Uses

Your reference: 6/1/62
& 5/1/62

SUBJECT: Research - Santa Catalina Natural Area

AIRMAIL

Your May 1 memorandum recommended that the March 23, 1927 order of the Secretary of Agriculture establishing the boundaries of the Santa Catalina Natural Area be modified to bring it up to date with current conditions.

Enclosed are three copies of the new order dated June 14, 1962. The original, bearing Secretary Freeman's signature, is filed here.

Enclosures

John Sieker

RECEIVED
JUN 27 1962
REGION 3
RECREATION & LANDS

Related corre. filed in 2320.

Lee-

Send 2 copies to Coronado. Copy of Order is in the Wilderness atlas, and our map should be modified. Millie can fix our map if you give her the bdy. change. Make P/c for me to contact Cartographic Section to correct their maps.
Chan

R-L File Copy		Info	Action	Initials
A.R.F. Smith Landon's ship Adj.	A.G.W. D.P.G.			
Land Class.	E.W.V.			Lee
Purchase & Minerals	D.D.C. N.H.S. E.R.T. C.R.G.			
Rec. & Uses	E.H.T. F.J.W. L.F.H. H.G.L. H.O.D. C.P.S. J.S.B.			
Adm. Asst.	E.L.G.			
Div. Cl.	M.M.			
Landon. Cl.	B.R.			
Mineral Cl.	R.M.			
Rec. Cl.	L.W.			
Status Cl.	B.G.B.			
Uses Cl.	M.H.			
File Cl.	J.R.			

Status noted
3/21/7

Forest Service
Washington 25, D. C.

R-3

RECEIVED U.S.F.

JUL 17 - 1962

REGIONAL
RECREATION & LAND

Orville L. Freeman,
Secretary of Agriculture

4000(2300)

JUN 1 1962

Edward P. Cliff, Chief
Forest Service

Research - Santa Catalina Natural Area

On March 23, 1927 Acting Secretary of Agriculture, R. W. Dunlap signed a land classification order designating a tract of 4,464 acres, more or less, within the Coronado National Forest, near Tucson, Arizona, to be retained in natural condition. The area has been managed in that manner since then, and its continuance is intended.

A recent survey of the area has revealed some errors in the original survey, and the inclusion of some lands inappropriate to the "natural area" concept for which the designation was made.

Enclosed is a modification report for the area, intended to correct the errors of the original survey and eliminate the inappropriate inclusions. The proposed modification will simplify administrative protection and promote the most useful purposes of nature area establishment.

We recommend that you signify your concurrence with the action by signing the enclosed Modification Report.

Enclosure

3cc: R-3

EDWARD P. CLIFF

A.R.F. Smith	
Landown/Ship	
Adj.	
Land Class.	
Purpose	
Stat.	
Rec'd. Uses	
Div. Cl.	
Landown. Cl.	
Mineral Cl.	
Rec. Cl.	
Status Cl.	
Uses Cl.	
File Cl.	

2 copies sent to Coronado

EXHIBIT #5

SANTA CATALINA NATURAL AREA
Boundary Modification

Coronado National Forest
(Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)

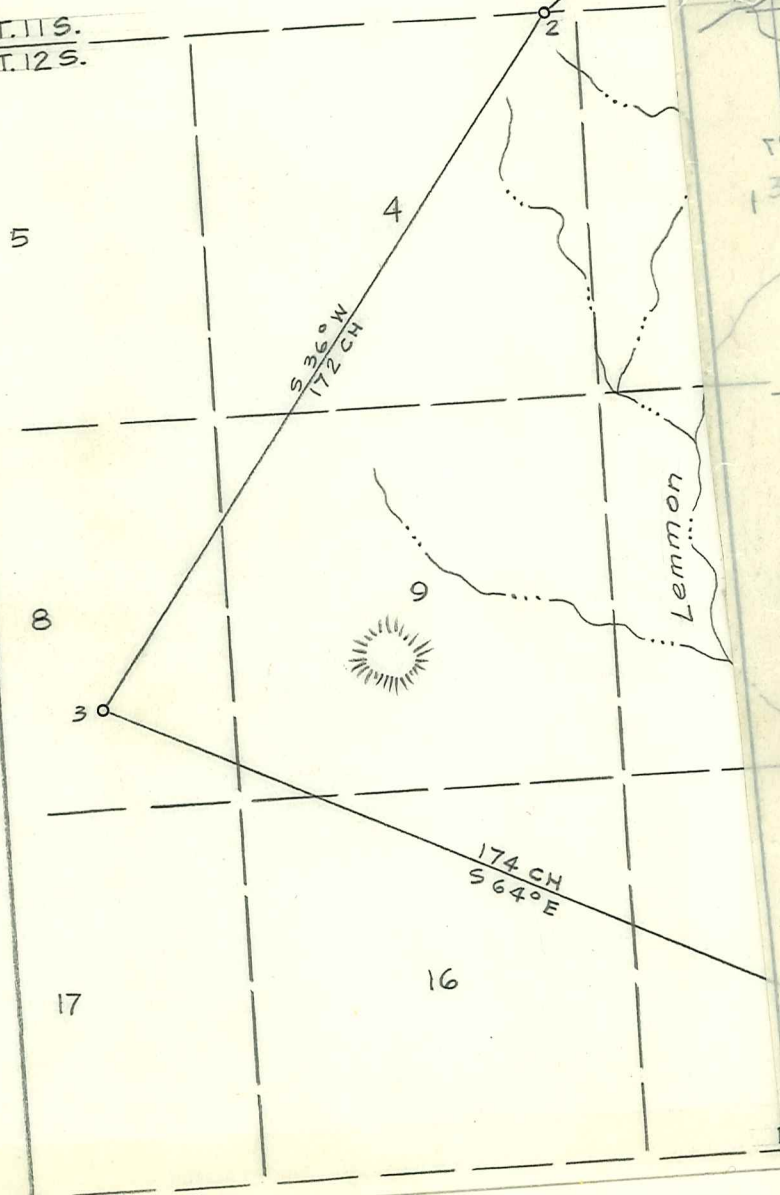
Scale 2" = 1 mile Acres: 4131

Relocation of Cor. # 1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

T. 11 S.
T. 12 S.



4000 Research

The area is referenced to U.S.G.S. Bench Mark
unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB8
Rock Lookout, which is Corner #11, the point c

- N. 88° 30' W., 33 chains to Corner #1
- S. 50° W., 65 chains to Corner #2
- S. 36° W., 172 chains to Corner #3
- S. 64° E., 174 chains to Corner #4
- N. 18° E., 108 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° E., 35 chains to Corner #9
- S. 86° W., 36 chains to Corner #10
- S. 54° 30' W., 57 chains to Corner #11

(SANTA CATALINA NATURAL AREA)
Santa Catalina
Lemmon
Thence
beginning of the
Thence
beginning of the
Lemmon

Research Natural Areas

USDA Forest Service, Rocky Mountain, Intermountain, Southwestern and Great Plains States

SEARCH RNAs BY

County

GO

SANTA CATALINA

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 - CREDITS

General Information S.USNAHP*90

- Created: 1927
- Size: 4464 (acres)
- Elevation Range: 5500 - 9150ft
- Location: *Santa Catalina RNA is located in the Santa Catalina Mountains of southern Arizona, just north of Tucson. The RNA lies within the Pusch Ridge Wilderness.*

Site Description

Santa Catalina RNA was established in 1927, and was the first area designated as a Research Natural Area in the country. The RNA encompasses a large basin along the south side of the Catalina Mountains. It is rugged and steep country with extensive fields of granite boulders that support pine-oak woodlands and a variety of other vegetation types. Uncommon plant species in the RNA include the oak (*Quercus wislizenii*).

Climate and Enviromental Information

Data not Available

Vegetation - Santa Catalina

Interior Live Oak (SAF 241) Engelmann Spruce-Subalpine Fir (SAF 206)

A cooperative project of the

USDA Forest Service
Northern Region,
Rocky Mountain Region,
Southwestern Region,
Intermountain Region,
Rocky Mountain Research Station,
and the
Montana Natural Heritage Program

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SEND US A COMMENT

CATALINA RESEARCH NATURAL AREA

Ponderosa pine type
Mixed conifer type
Hardwood type

Ponderosa pine - *Pinus ponderosa*
Douglas fir - *Pseudotsuga menziesii glauca*
white fir - *Abies concolor*
limber pine - *Pinus flexilis*
Rocky Mountain maple - *Acer glabrum*
quaking aspen - *Populus tremuloides*
Arizona alder - *Alnus oblongifolia*
Gambel oak - *Quercus gambelii*
silverleaf oak - *Quercus hypoleucoides*
locust - *Robinia neomexicana*
snowberry - *Symphoricarpos* sp.
ceanothus - *Ceanothus* sp.
thimbleberry - *Rubus parviflorus*
raspberry - *Rubus neomexicanus*
cactus - *Mammillaria* sp.
pine mistletoe - *Phoradendron* sp.
strawberry - *Fragaria ovalis*
vetch - *Vicia* sp.
Canada violet - *Viola canadensis*
senecio - *Senecio* sp.
horsenettle - *Solanum* sp.
sandwort - *Arenaria* sp.
clover - *Trifolium* sp.
hemlock - *Sium suave*
geranium - *Geranium* sp.
northern bedstraw - *Galium boreale*
cinquefoil - *Potentilla* sp.
coralbell - *Heuchera sanguinea*
solomonseal - *Polygonatum cobrense*
bracken - *Pteridium* sp.
pentstemon - *Pentstemon* sp.
meadowrue - *Thalictrum* sp.
goldenpea - *Thermopsis montana*
lupine - *Lupinus* sp.
columbine - *Aquilegia* sp.
yarrow - *Achillea* sp.
false-carrot - *Caucalis microcarpa*
trillium -
green sage - *Artemesia carruthii*
carex - *Carex* sp.
Juncus - *Juncus* sp.
mountain muhly - *Muhlenbergia montana*
pine dropseed - *Elypharoneuron tricholepis*
nodding brome - *Bromus anomalus*
deer grass - *Muhlenbergia rigens*

DEPARTMENT OF AGRICULTURE
WASHINGTON



LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress on August 10, 1912 (37 Stat., 287), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands, adjacent to the Mt. Lemmon Recreational Areas, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., and unsurveyed Sections 2, 3, 4, 9 10, 11 and 15, in T. 12 S., R. 15 E., G. & S. R. M., containing 4,464 areas, more or less, as shown by a survey made by Forest Ranger J. A. Frieborn in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain cover of such character that it would be in the public interest to keep this in its present status in so far as practicable, to the end that flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I R. W. Dunlap, Acting Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In Testimony Thereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

(Seal)

Acting Secretary of Agriculture.

MODIFICATION OF LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the Santa Catalina Mountains, Coronado National Forest

WHEREAS, by land classification order dated March 23, 1927, the Acting Secretary of Agriculture gave public notice that certain lands adjacent to Mt. Lemmon Recreational Area, in the unsurveyed sections, containing 4,464 acres, more or less, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were designated as the Santa Catalina Natural Area, and that all national forest lands therein should be managed as to permit scientific studies of the forest growth by the Natural History Society of Tucson, Arizona, and other like scientific organizations; and

WHEREAS it is desired to modify said land classification order by correcting errors in the original survey, eliminating that portion of the natural area needed and used by the Department of Defense (Air Force) for radar purposes in the interest of national defense and other special use permittees, and establishing the boundary using geographic features to enhance administrative and protection requirements; and

WHEREAS, the modification will simplify administration and protection and promote the most useful purposes of natural area establishment:

NOW, THEREFORE, the aforesaid land classification order dated March 23, 1927, is hereby modified and amended to include in the Santa Catalina Natural Area certain lands located in unsurveyed sections 34, 35 and 36, T. 11 S., R. 15 E. and unsurveyed sections 1, 2, 3, 4, 8, 9, 10, 11, 15 and 16, T. 12 S., R. 15 E., G. & S.R.B.&M., containing 4,131 acres, as shown on the attached map designated "Santa Catalina Natural Area Boundary Modification, 8/21/59." Corner number 11 as designated on the attached map is the Lemmon Rock Lockout. The new corners numbered 1 and 10 are marked on the ground with appropriately stamped steel stakes and witness trees.

In all other respects the aforesaid land classification remains unchanged.

In Testimony Whereof, I have hereunto set my hand at Washington, D. C., this
14th day of June, 1962.

SECRETARY

L
Recreation-Coronado
Santa Catalina Natural Area

Tucson, Arizona
January 25, 1927

REPORT

TUCSON NATURAL HISTORY SOCIETY

This is an organization formed in 1923 by a number of residents of Tucson, Arizona. The membership is composed of scientists connected with the University of Arizona and the Carnegie Desert Laboratory, nature lovers, sportsman and public spirited citizens who are interested in conservation of natural resources, natural history, game preservation and so forth. The active membership now numbers 200. An annual program prepared, copy of which is attached in order to give some idea of the scope and activities of the Society. The objectives of the Society are the stimulation and interest in and appreciation of nature including both plants and animals; the popularization of the out-doors; the gaining of information regarding wild life; conservation of natural resources.

In November 1925, the Society made the proposal that a "natural area" be set aside by the Forest Service within the Santa Catalina division of the Coronado National Forest. No specific area was suggested but upon examination, an area, of approximately 200 acres was tentatively designated and mapped which upon further consideration was enlarged to include the present areas as shown on the attached map. A tentative set of rules govern the area was drawn up by the Society as follows:

TENTATIVE RULES, SANTA CATALINA NATURAL AREA

(U.S. Forest Service and Tucson Natural History Society sponsors)

The area shall be known as the Santa Catalina Natural Area.

The bounds of the area shall be as indicated on the accompanying map.

It is agreed that the area may at any time be enclosed with a fence of construction suitable to keep out livestock either by the U.S. Forest Service of the Tucson Natural History Society or both.

Grazing by any kind of domestic livestock shall be absolutely prohibited on the area.

No buildings shall be erected on the area except for protection and study.

Only such roads, trails and telephone lines shall be built and maintained on the area as are necessary for purposes of administration and protection of the area from fire.

No firearms shall be carried on the area except under seal or special permit.

No hunting, trapping nor fishing, except under permit for predatory animals or for the collection of scientific experiments, shall be allowed in the area; it is the object of the area to maintain the original conditions of the region as far as possible undisturbed for any reason whatever.

There shall be no cutting of trees or shrubs, or clearing away of logs, brush or any other modification of the original conditions, except as necessary for fighting fires.

Extraordinary care must be exercised to protect the area, which, as the years go by, will be increasingly valuable as a scientific natural object lesson, from the ravages of fire.

Suitable signs, with the name of the area, and bearing the following or similar instructions, shall be posted at all points of entrance of trails into the area:

SANTA CATALINA NATURAL AREA

“ For the preservation of natural conditions undisturbed for all time. Designated for study by foresters, livestock men, naturalists, scientists, and the general public. Please give us your cooperation in being especially careful with fires, and by leaving the soil, rocks, plants, animals, and all other modifiable features in and undisturbed and natural condition.”

FOREST SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE
TUCSON NATURAL HISTORY SOCIETY.

LOCATION AND AREA

In portions or in whole of unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., R. 15 E. and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, T. 12 S., R. 15 E., G. & S.R.M., containing 4,464 acres more or less. The area is located about 60 miles north of Tucson, Arizona by a highway and is adjacent to the Mt. Lemmon Recreational Area on the Coronado National Forest.

ELEVATION

The elevation varies from 9,150 feet on Mt. Lemmon to about 5,500 feet on the southern portion of the area.

TOPOGRAPHY

The area for the most part includes an extremely rough and precipitous section and is practically inaccessible in some portions. The so-called “Wilderness or Rocks” is

included within the area and the entire area is within a basin about one mile wide by three miles long with the Marshall Gulch and Lemmon Creek drainages.

COVER

The cover consists of western yellow pine, with a scattering stand of Douglas fir, White pine, Engelmann spruce and Cork-bark fir with aspen on the higher elevations; in the stream bottoms such hardwoods as sugar maple, boxelder, alders and associated types occur; on the southerly exposures, the cover is mostly of browns type chiefly netleaf and silver leaf oak with a mixture of Juniper and Arizona cypress. In all, oak approximately 2800 acres include conifers yielding approximately 12 ft. B.M. per acre, 400 acres of deciduous types yielding about 5 cords per and 1200 acres of brush types which would yield about 3 cords per acre. In fact a very wide range of native flora is contained within the area from the semi-desert to alpine type. This timber is almost wholly inaccessible from a commercial standpoint and any management plan would of necessity eliminate this area from exploitation due to its inaccessibility. Accordingly, the setting aside of the area for the purpose indicated would not conflict with management plans existing or proposed or with any working circle in connection therewith.

LAND CLASSIFICATION

The entire area has been classified as non-listable under the Acts of June 11, 1906 or August 10, 1912 and is chiefly valuable for forest purposes.

SPECIAL USES AND RIGHTS OF WAY

None in existence. While the demand for recreational use in the way of summer homes adjacent to this area in considerable, there is ample room for expansion on other portions of the Catalina division for this purpose. The water power possibilities are negligible or wholly lacking.

GRAZING

The greater part of the area is closed to grazing at the present by reason of the exclusion from grazing of the existing Mt. Lemmon Recreational Area. The remainder of the area has never been grazed by domestic stock as it is practically inaccessible from any point due to the topography. Accordingly the factor of grazing will not cause any disturbances to range management plans.

FIRE AND FOREST SERVICE IMPROVEMENTS

The fire hazard is high but the area is included with the fire protection system in the force on the Catalina Division and Forest Service trails have been constructed within the past few years to provide for access in the event of fire. Other than possible additional trails and ways or telephone lines for protection purposes, no

improvements are contemplated. Existing Forest Service improvements consist of a cabin for housing of fire guard and a fire lookout tower on Mt. Lemmon.

GAME

The entire area, and in fact, the entire Catalina Division, is within a State Game Refuge. Many deer are found within the area of the white-tail species and one of the few remaining bands of Rocky Mountain sheep are contained within or adjacent to this area.

RECOMMENDATIONS

It is recommended that the proposed rules of the Society be approved with modifications and that the area be set aside under the procedure for the dedication of recreation areas as a special measure of prevention or recreational resources under formal order by the Secretary.

There follows a draft of the proposed order:

RESERVATION FOR RECREATIONAL PURPOSE OF LANDS WITHIN
THE CORONADO NATIONAL ADJACENT TO TUCSON, ARIZONA

“Pursuant to an Act of Congress the directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that mat be opened to homestead entry, certain lands aggregating 4.464 acres more or less within the Coronado National Forest, situated adjacent to Tucson Arizona as indicated upon the diagram hereto attached, have been duly examined, and, being found to comprise natural resources susceptible of many public uses and possessing much scenic beauty which should be available to the public, were classified and segregated on _____ as not chiefly valuable for agriculture and therefore not subject to segregation under the Act of August 10, 1912.

It appears that these lands are not only of great value for national forest purposes but should also be permanently retained in Government ownership in order to provide for their protection, development, use and enjoyment by the general public, and can be so administered by the Forest Service without additional expenses to the Government.”

Approved:

(Date)

Forest Supervisor

Approved:

(Date)

Acting District Forester

SANTA CATALINA RESEARCH NATURAL AREA

ABSTRACT

Santa Catalina Natural Area consists of 4,460 acres (1,705 ha) of interior ponderosa pine on the west slope of Mt. Lemmon in the Santa Catalina Mountains at 32° 25' N. Lat., 110° 48' W. Long. Ponderosa pine is the overwhelmingly dominant tree species on the site although many other conifers and broadleaf species occur in favorable situations as in canyons, on north or east slopes and along streams.

The site was established as a natural area in 1927 by the United States Forest Service, Coronado National Forest.

Location

Santa Catalina Research Natural Area (SCRNA) is located in the Coronado National Forest on the west slope of the Santa Catalina Mountains, Pima County, Arizona. The site is 14.5 (23.2 km) miles north and 10.0 (16.6 km) miles east of City Hall in Tucson. By road, the site is approximately 40 miles from downtown Tucson. SCRNA includes all or part of sections 1, 2, 3, 4, 8, 9, 10, 11, 15 and 16 of T. 12S., R. 15E. as well as the southern portions of sections 34, 35 and 36 of T. 11S., R. 15E. The northern edge of SCRNA is 0.5 miles south of the radar station atop Mt. Lemmon (See Figure 1).

Access and Accommodations

SCRNA is readily accessible from Tucson, Arizona via the Catalina Highway (= Wilmot Road in Tucson south of Speedway Boulevard which is a two-lane paved road that terminates at a radar station on Mt. Lemmon. It takes about one hour to drive from Tucson's east side to Mt. Lemmon a distance of approximately 35 (56.0 km) miles. It is also possible to drive to Mt. Lemmon from Oracle on the north side of the Santa Catalinas. The drive from Oracle is only 30 miles but the road is not paved and definitely not suitable for passenger cars. From the radar station, it is necessary to hike downslope to SCRNA. Lemmon Rock Lookout, 0.6 miles (1 km) from the radar station provides a spectacular overview of SCRNA (See Photos). Several hiking trails provide access to the heart of SCRNA, notably, the Romero Pass Trail skirts the northwestern edge and Wilderness of Rocks Trail passes through SCRNA. The Southern Arizona Hiking Club of Tucson has published a topographic map of the Santa Catalina Mountains which shows the locations of the numerous hiking trails within this range.

There are numerous camping areas along the Catalina Highway. Spencer Canyon and Bear Wallow Campgrounds are the closest campgrounds to SCRNA. Both allow trailers, provide drinking water and have a combined total of 29 campsites. It is recommended that visitors to the Santa Catalinas obtain a visitors map of the Coronado National Forest from Forest Service Headquarters, 130 South Scott, Tucson, Arizona for further helpful information regarding camping and picnicking sites.

The City of Tucson offers a very wide range of commercial accommodations from campgrounds to luxury hotels and guest ranches. Very limited indoor accommodations are present at Summerhaven (See Map) although persons not interested in camping would probably do well to plan on staying in Tucson while visiting SCRNA unless room reservations have been established at Summerhaven.

Climate

The climate of SCRNA shows strong seasonal fluctuations in contrast with nearby areas at lower

elevations. Summers are warm with daytime highs reaching into the nineties in the lower portions of SCRNA and the mid to high eighties in higher portions. Nighttime summer lows drop into the forties and fifties. Winters are cold with lows occasionally falling below zero and highs frequently not exceeding the freezing point. Conversely, midwinter high temperatures may be quite mild and pleasant on sunny days.

The average annual precipitation at nearby Palisades Ranger Station is about 30 inches per year. Most of this total falls during the summer rainy months of July, August, and September. For example, in 1971, a total of 30.79 inches was recorded at Palisades and 16.77 inches of this total occurred in those three months (U.S.D.C. 1971). A second peak of precipitation occurs during December, January and February with relatively dry periods separating the two rainy peaks. Snowfall is not uncommon during the winter months.

Topography and Landform

The elevational range within SCRNA is approximately 3,400 feet, from 5,000 to 8,400 feet above sea level. Low elevations occur in the bottoms of deep canyons (Lemmon and Sabino) while high elevations are reached on the south slope of Mt. Lemmon itself. The entire area is rugged and characterized by deep canyons, massive rock outcrops, sheer pinnacles and cliffs. The Wilderness of Rock portion of SCRNA is a relatively flat mesa between Lemmon and Sabino Canyons but it is strewn with massive boulders and high rock hummocks and outcrops. Drainages run to the southwest and eventually lead into the imposing, steep-walled Sabino Canyon which runs into the desert below and Tanque Verde Creek. The upper reaches of Lemmon and Sabino Creek are perennial and pools exist in lower Sabino Canyon throughout the year.

Geologically, the south slope of the Santa Catalina and SCRNA are dominated by a complex of granite and gneiss. The Wilderness of Rock area, immediately south of Lemmon Rock, is composed largely of Catalina Gneiss which includes granitic gneiss and gneissic granite (See Fig. 1). At the northern edge of SCRNA are deposits of Dripping Springs Quartzite that extend east and south toward Summerhaven. In the Summerhaven area, Dripping Springs Quartzite is flanked to the east by Cambrian-aged Troy Quartzite and on the west by Barnes Conglomerate and Pioneer Shale. The entire core of the Santa Catalinas is a granitic complex of Precambrian age which is discussed by Dubois (1959).

Biota

The dominant plant species at SCRNA is ponderosa pine (*Pinus ponderosa*) which occurs throughout the natural area in pure stands and in mixed stands with other coniferous species. At high elevations, ponderosa pine occurs on somewhat open south-facing slopes and is mixed with southwestern white pine (*Pinus strobiformis*) Douglas fir (*Pseudotsuga menziesi*) and white fir (*Abies concolor*) in canyons and on north-facing slopes. Mixtures of ponderosa pine and chihuahuana pine (*Pinus chihuahuana*) occur at lower elevations. Canyons at lower elevations also contain Douglas fir mixed with ponderosa and Chihuahuana pines. South-facing slopes at lower elevations also have, and may be dominated by, pinyon (*Pinus cembroides*) and juniper (*Juniperus deppeana*) along with broadleaf chaparral species.

Conspicuous broadleaf species that occur at SCRNA include manzanita (*Arctostaphylos pungens*), silver-leaf oak (*Quercus hypoleucoides*), shrub live oak (*Q. turbinella*), net-leaf oak (*Q. reticulata*), Arizona oak (*Q. arizonica*), buckbrush (*Ceanothus fendleri*), and aspen (*Populus tremuloides*). Arizona alder (*Alnus oblongifolia*), big-tooth maple (*Acer grandidentatum*), box-elder (*A. negundo*), Rocky Mountain Maple (*A. glabrum*), New Mexico locust (*Robinia neomexicana*), and snowberry (*Symphoricarpos oreophilus*) contribute to the floral diversity of SCRNA. Numerous annuals and grasses also occur on the site. For more thorough discussions of the flora of this region, the reader is referred to Whittaker and Niering (1964, 1965, and 1968), Shreve (1915),

Lowe (1964) and for a discussion of the evolution of floristic elements in the Santa Catalina Mountains (and elsewhere), see Axelrod (1958).

The vertebrate fauna of SCRNA shows a mixture of northern (Rocky Mountain) and southern (Mexican) forms with a dominance of northern species. Common bird species at SCRNA that have affinities with northern coniferous forest include Hairy Woodpecker (*Dendrocopos villosus*), Red-breasted Nuthatch (*Sitta canadensis*), Ruby-crowned Kinglet (*Regulus calendula*), Mountain Chickadee (*Parus gambeli*) and Red Crossbill (*Loxia curvirostra*). Species with more southern affinities include Mexican Junco (*Junco phaeonotus*), Painted Redstart (*Setophaga picta*), Olive Warbler (*Peucedramus taeniatus*), Red-faced Warbler (*Cardellina rubrifrons*) and Rivoli's Hummingbird (*Eugenes fulgens*). Marshall (1957) discusses many of the avian species that occur in mixed pine-oak woodland and his work is largely applicable to the avifauna of SCRNA.

The reptilian and mammalian faunas of SCRNA are similar to such faunas at more northerly latitudes. Common mammals include chipmunks (*Eutamias* sp.), Deer Mouse (*Peromyscus maniculatus*), Mule Deer (*Odocoileus hemionus*) and occasionally Bighorn Sheep (*Ovis canadensis*). Frequently encountered reptiles are short-horned Lizard (*Phrynosoma douglasi*), Eastern Fence Lizard (*Sceloporus undulatus*), Tree Lizard (*Urosaurus ornatus*) and Gopher Snake (*Pituophis melanoleucus*).

Research History

Apparently few research projects have been restricted to SCRNA although a wealth of information has been gleaned from the Santa Catalina Mountains. Without doubt, many studies have included work done on or near SCRNA. Walter Bulmer (1966) conducted Masters Thesis research in Marshall Gulch near the northeastern edge of SCRNA and numerous class field trips from the University of Arizona involve portions of SCRNA.

Maps and Aerial Photographs

Santa Catalina Research Natural Area is on the Mt. Lemmon, Arizona Topographic Quadrangle, 15 minute series, although the specific site is not indicated on the map. The Coronado National Forest has published a two-part map of the entire forest which shows the precise location of SCRNA (and other natural areas on the Coronado National Forest). A smaller map, which also identifies SCRNA, is included in a brochure published by the U.S. Forest Service, dealing with the Coronado National Forest. The large, two-part map is available for \$2.00 (\$1.00 per section) and the brochure is free from the Supervisor, Coronado National Forest, 130 South Scott, Tucson, Arizona. The Forest Service has aerial photos of SCRNA and the Santa Catalinas although they are not produced for general distribution.

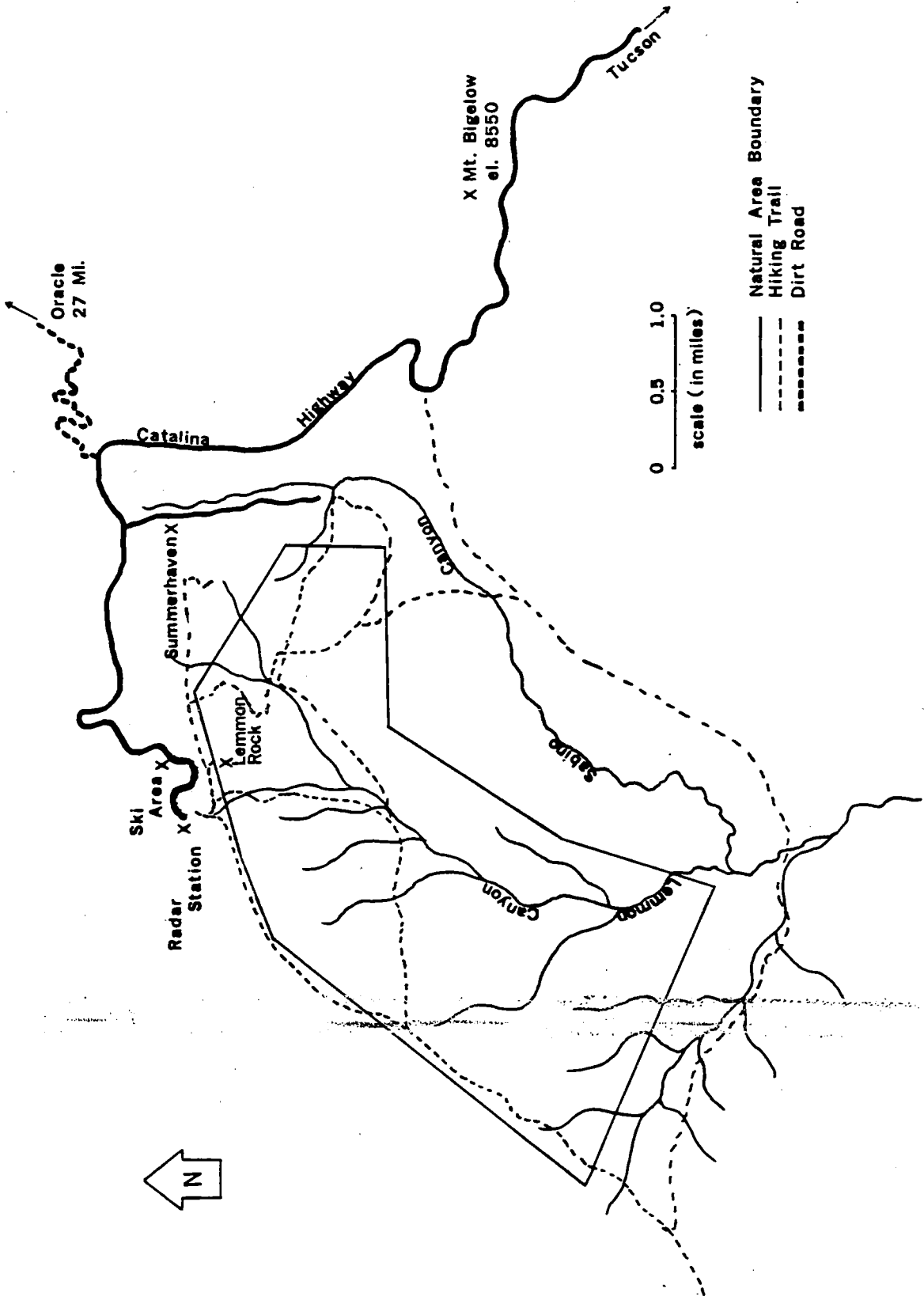


FIGURE 1 Sketch map of Santa Catalina Natural Area.

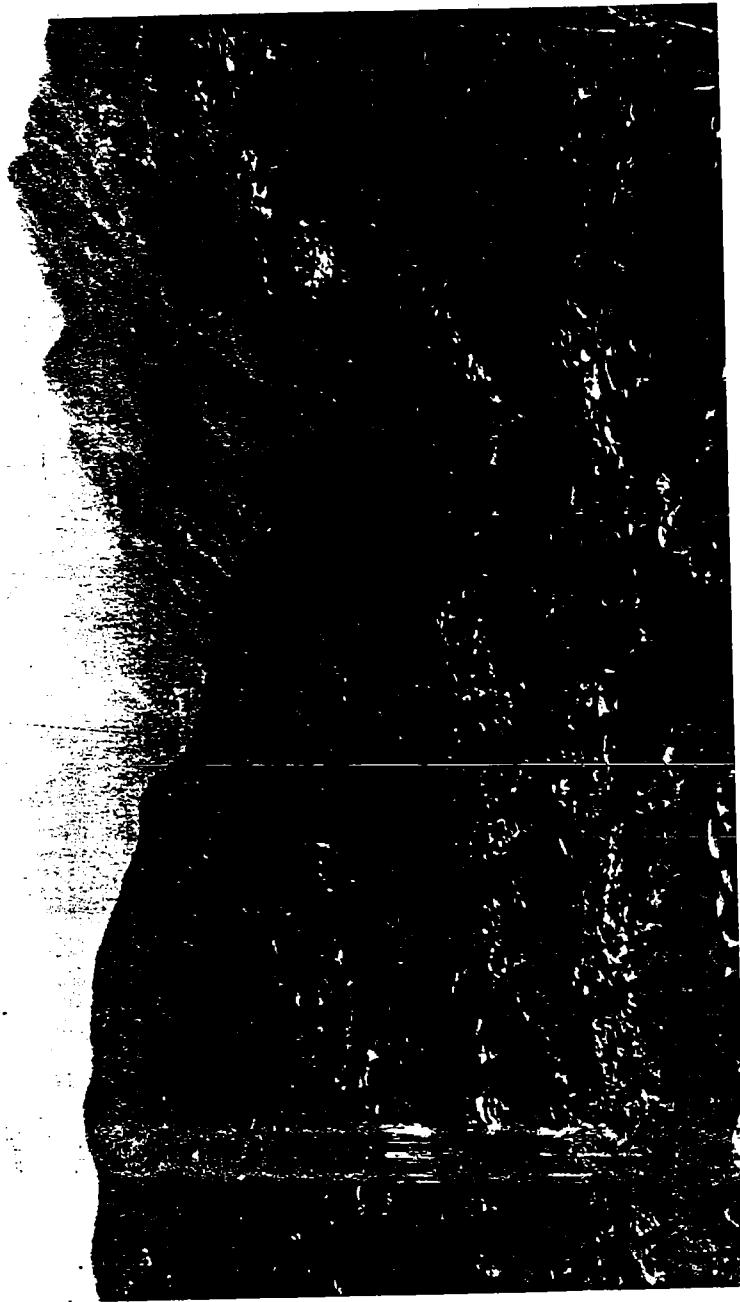


Photo 1. Looking southeast from Lemmon Rock over the Santa Catalina Natural Area. Sabino Canyon is at the right center of the photo.



Photo 2. Mixed stand of ponderosa and white pine with Douglas fir along the Romero Pass Trail in the Santa Catalina Natural Area.

LITERATURE CITED

- Axelrod, D. I.
1958. Evolution of the Madro-Tertiary Geoflora. *Botan. Rev.* 24:433-509.
- Bulmer, W.
1966. Breeding biology of the Red-faced Warbler, (*Cardellina rubrifrons*). Unpubl. M.S. Thesis, Univ. of Arizona.
- Dubois, R. L.
1959. Geology of the Santa Catalina Mountains. In L. S. Heindl, ed., *Southern Arizona Guidebook II*. Ariz. Geol. Soc.
- Lowe, C. H., Jr., ed.
1964. *The vertebrates of Arizona*. Univ. of Ariz. Press, Tucson, 259 pp.
- Marshall, J. T., Jr.
1957. Birds of the pine-oak woodland in southern Arizona and adjacent Mexico. *Pacific Coast Avifauna*, 32:1-125.
- Shreve, F.
1915. The vegetation of a desert mountain range as conditioned by climatic factors. *Carnegie Inst. Washington, Publ.* 199:1-110.
- United States Department of Commerce
1971. *Climatological data Arizona Vol. 75*.
- Whittaker, R. H. and W. A. Neiring
1964. Vegetation of the Santa Catalina Mountains, Arizona. I. Ecological classification and distribution of species. *Journ. Ariz. Acad, Sci.* 3:9-34.
-
1965. Vegetation of the Santa Catalina Mountains, Arizona. II. A gradient analysis of the south slope. *Ecology* 46:429-452.
-
1968. Vegetation of the Santa Catalina Mountains, Arizona. III. Species distribution and floristic relations on the north slope. *Journ. Ariz. Acad. of Sci.* 5:3-21.

Coronado NF

*this pg x'd in G.C. '83
and in Coronado NF file*

4060 Research Facilities

August 4, 1983

Santa Catalina RNA

Forest Service RNA Coordinator
Washington Office

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Larry Schmidt of our Regional Office has asked that we send the enclosed original Land Classification Order signed by R.W. Dunlap directly to you.

R.B. Tippeconnig

R.B. TIPPECONNIC
Forest Supervisor

Enclosure

cc:
RO - S&W, Larry Schmidt
Santa Catalina RD

Sent to:
Forest Service RNA Coordinator
USDA, Forest Service
P.O. Box 2417, RPE - 811
Washington, D.C. 20013
Attn: Russell Burns

RES/M. BORENS/hmc/8/4/83

RECEIVED

AUG 08 1983

SOIL & WATER



DEPARTMENT OF AGRICULTURE

WASHINGTON

LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress of August 10, 1912 (37 Stat., 267), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands, adjacent to the Mt. Lemmon Recreational Area, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, in T. 12 S., R. 15 E., G. & S. R. M., containing 4,464 acres, more or less, as shown by a survey made by Forest Ranger J. A. Frieborn in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain cover of such a character that it would be in the public interest to keep this in its present status in so far as practicable, to the end that the flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I, R. W. Dunlap, Acting Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In Testimony Whereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

(Seal)

R. W. Dunlap
Acting Secretary of Agriculture.

JUSTIFICATION STATEMENT FOR THE SANTA CATALINA RESEARCH NATURAL AREA

I. Special Purpose Area Situation

A. Location and Description of Site

The area is located on the south slopes of the Santa Catalina Mountains approximately 10 miles northeast of Tucson, Arizona, in Pima County. A wide range of native flora from the semi-desert to the alpine type is contained within the area. Deer of the white-tail species, and nearly extinct bands of Rocky Mountain sheep are also to be found.

B. Present Use and Anticipated Future Use

The area is presently used by the scientific community as a research natural area and for outdoor public recreation--primarily by hikers, sightseers, hunters, and fishermen. Future use will be similar to present; however, demand will be greater because of a rapidly growing population in the vicinity.

C. Existing Improvements and Proposed Development

Except for approximately 6 miles of hiking trails, there are no improvements within the boundaries of the area. There are no plans for future development.

II. Minerals Situation

A. Mining History

There is no evidence of mining activity within the area proposed for withdrawal. There are no known mineralized areas. The nearest mineralized areas are in the Canelo Hills and the Huachua Mountains. Any mineral content in these areas is of marginal commercial value.

B. Search of the County Records

A search of the Pima County records did not reveal any current claims.

C. Mineral Examiner's Report

Preliminary Mineral Report enclosed. A supplementary report based on further examination will be submitted.

D. Mining Economics of Local Area

There should be no impact on local economics since the area is not believed to be mineralized.

III. Summary

- A. The present and future use of this area to be withdrawn is higher for research than for minerals.
- B. The area is not adequately protected by Public Law 167 (69 Stat. 367; 30 U.S.C. 601 et seq.) and would be significantly disrupted by mining location or mining activities.
- C. The acreage requested is reasonable in terms of present use and expected use in the reasonably near future.

DM

Forest Supervisor
Coronado N. F.

2

April 5, 1977

SUBJECT

2860 Withdrawals - Santa
Catalina Research Natural Area

TO

R. O.
Lands Status Section
Albuquerque

MESSAGE

For various reasons, including differences with BLM concerning preparation of land and staff reports, and the new BLM Organize Act, very few withdrawals have been processed in the past year or so. It is anticipated that we may soon be able to send these cases to the Washington Office for further processing.

Upon reviewing the file in the above proposed withdrawal, it appears that the signed EAR is missing. Your letter of 4/29/75 states that the EAR was enclosed. I would appreciate receiving a signed copy from your files.

Thanks.

SIGNATURE

Eleanor M. Reed

REPLY

Copy attached

RECEIVED USFS

APR 18 1977

REGION 3
LANDS

SIGNATURE

Margita - Coronado

DATE

4/15/77

ENVIRONMENTAL ANALYSIS REPORT

WITHDRAWAL FROM MINERAL ENTRY

SANTA CATALINA RESEARCH NATURAL AREA

SANTA CATALINA RANGER DISTRICT

CORONADO NATIONAL FOREST

REGION 3

FOREST SERVICE

DEPARTMENT OF AGRICULTURE

Prepared by *[Signature]* 3/20/75
District Fire Control Officer Date

Recommended by *[Signature]* 3/21/75
District Ranger Date

Recommended by *[Signature]* April 29, 1975
Recreation & Lands Staff Officer Date

Approved by *[Signature]* 4/29/75
Forest Supervisor Date

1. REASON

The withdrawal from mineral entry of the Santa Catalina Natural Area under the authority of Executive Order 10355, 6/26/52 (17 F.R. 4831) is the proposed action. The objective being to maintain the area in its near natural condition.

2. DESCRIPTION

The Santa Catalina Natural Area was designated as such in March 1927 by Acting Secretary of Agriculture R. W. Dunlap. The area continues to be not only of value for timber production and streamflow protection, but also continues to contain cover of such a character that it would be in the public interest to keep it in its present state of preservation. There is active mining around all sides of the Santa Catalina Mountains and, therefore, by withdrawing the Santa Catalina Research Natural Area from mineral entry, the flora would continue to be a subject of study for the scientific community of Tucson and Southern Arizona.

The Santa Catalina Natural Area is located within the Intermediate and Woodland Management Zones of the Santa Catalina Mountains.

The area is located on the south slopes of the Santa Catalina Mountains in Pima County on the Coronado National Forest and is approximately 10 miles north of Tucson, Arizona. One can drive to within 1/4 mile of the Natural Area boundary in about one hour via the Hitchcock Highway from Tucson. The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1958 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E.,

SECTION:

Thence S. 70° W, 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area,
Thence N. 28° 30' W, 33 chains to Corner #1,
Thence S. 50° W, 65 chains to Corner #2,
Thence S. 36° W, 172 chains to Corner #3,
Thence S. 64° E, 174 chains to Corner #4,
Thence N. 18° E, 108 chains to Corner #5,
Thence N. 30° E, 98 chains to Corner #6,
Thence E. 60 chains to Corner #7,
Thence N. 90 chains to Corner #8,
Thence N. 65° W, 35 chains to Corner #9,
Thence S. 26° 30' W, 36 chains to Corner #10,
Thence S. 54° 30' W, 57 chains to Lemmon Rock Lookout, the point of beginning.

The area of the Santa Catalina Research Natural Area comprises about 4,131 acres.

Approximately 20 acres of the Lucky Boy patented mining claim is located within the boundary in the north one-half of Section 36, T. 11 N., R. 15 E. This acreage is, however, in the process of being exchanged to the U. S. Forest Service. A search made in June 1973 of the Pima County Courthouse, Tucson, Arizona, records did not reveal any mining claims being currently filed upon.

This area is now being used by the scientific community as a natural area and for outdoor public recreation, primarily by backpackers, hikers, sightseers, and hunters. Some interested organizations are as follows:

1. University of Arizona.
2. Southern Arizona Hiking Club.
3. Tucson Natural History Society.
4. Sierra Club.

The geology of the Santa Catalina Research Natural Area is primarily that of a decomposed gneiss and metamorphosed granite.

Climate varies according to elevation. The higher northern end of the area is that of the Canadian Zone, being cool and moist through most of the year. Mean annual precipitation is 31". Average snow fall is 85" with a high of 131" and a low of 22" during the last 10 years. Temperatures have varied from a summertime high of 90° to a winter low of -10°.

The area for the most part includes extremely rough and precipitous terrain and is practically inaccessible in some portions. The so-called "Wilderness of Rock" is included within the area and the entire area is within a basin about one mile wide by three miles long with a generally southwest exposure. The area is within the Marshal Gulch and Lemmon Creek drainages both of which are tributaries to the Rillito River via Sabine Creek. The elevation varies from 8,800 feet on Mt. Lemmon to about 4,800 feet along the southern boundary.

Soils are shallow and primarily sandy loams of a metamorphosed granitic origin. They are porous and generally favorable for tree growth wherever depth is sufficient.

Vegetative cover consists primarily of Ponderosa Pine with a scattering of Douglas fir, White pine, Corkbark fir, Juniper, Arizona cypress, and aspen. Along the stream bottoms hardwoods such as maple, box elder, and alders occur. On southerly exposures the cover is mostly brush with netleaf and silver leaf oak predominating.

There are numerous springs in the area which result in Loweron Creek being one of the perennial streams in the Santa Catalina Mountains. Water quality is good.

Livestock has been excluded from the Natural Area for over 45 years. The forage that is produced there is of more value for game than domestic animals. Wildlife in the area consists of many species, some of which are: Abert squirrel, javelina, Coati mundi, quail, dove, gray chipmunk, coyote, mountain lion, bear, and whitetail deer.

Other than the fire lookout at Loweron Rock and approximately 6 miles of hiking trails, the area is in its near-natural condition.

Air quality in the area is relatively good compared to that of lower elevations. Smoke from the Magma Copper Mines, 15 miles to the north-east, frequently descends upon the area, however, damage to the vegetation has not been detected.

The Santa Catalina Natural Area is very scenic in that it includes the so-called "Wilderness of Rocks." One is given the impression that he is standing in a giant rock garden. The naturalness of the area is in a splendid state of preservation as it has never been disturbed.

Hunting is permitted in the area. The area is presently being used by hikers, sightseers, and hunters as well as by botanists, zoologists, and geologists.

Man has had very little influence upon the area. Other than the aforementioned fire lookout and 6 miles of hiking trails there are no man-made improvements. Essentially no logging, livestock grazing, or mining has occurred.

Due to the proximity of the area, the community of Tucson and the University of Arizona use the area extensively for recreation and scientific study.

3. ENVIRONMENTAL EFFECTS AND ECONOMICAL ANALYSIS

A. Primary Impacts on the Environment

The effects of the proposal will have no environmental impacts on:

1. Renewable resources, such as -
 - a. Air quality.
 - b. Human-social aspects.
 - c. Natural beauty.
 - d. Open space.
 - e. Vegetation.
 - f. Water quality and quantity.
 - g. Wildlife and fish.
 - h. Wilderness.

2. Nonrenewable resources, such as -

- a. Antiquities.
- b. Minerals.
- c. Soils.

3. Uses, such as -

- a. Forage for livestock.
- b. Land uses.
- c. Outdoor Recreation.
- d. Timber.
- e. Transportation.

4. Activities, such as -

- a. Economics.
- b. Fire management.
- c. Information and education.
- d. Insects and disease.
- e. Landownership adjustments.
- f. Safety.

5. Critical areas, such as -

- a. Archeological sites.
- b. Highwater table.
- c. High slope dynamics.
- d. Historical sites.
- e. Indian ceremonial areas and religious shrines.
- f. Key wildlife areas.
- g. Potential research natural area.
- h. Rare and endangered species habitat.
- i. Riparian sites.
- j. Sensitive ecological areas.
- k. Unique geological features.

B. Secondary Impacts on the Environment

By withdrawing the Santa Catalina Natural Area from mining and mineral exploration, secondary impacts will not result from increased pressures and demands being placed on facilities or public services outside the immediate area.

4. FAVORABLE ENVIRONMENTAL EFFECTS

The beneficial effects of withdrawing the Santa Catalina Research Natural Area from mining exploration will be that the following will remain in an undisturbed natural state:

- A. Vegetation and water quality.
- B. Land use patterns.
- C. Wildlife habitat.
- D. Soil productivity.
- E. Natural beauty.
- F. Critical areas.
- G. Open space.

By continuing the preservation of this area, after having been kept in a naturalistic condition for over 45 years, the area would remain an invaluable natural area for geobotanists, botanical and other scientific investigation and instruction.

5. ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

There would be no adverse effects upon the environment.

6. ALTERNATIVES TO PROPOSED ACTION

There is only one alternative to the proposal of withdrawing the area from mining and mineral exploration under authority of Executive Order 10355 and that is to simply leave it in its present status of being inadequately protected by Public Law 167 (69 Stat. 367; 30 U.S.C. 601 et seq.).

7. RELATIONSHIPS BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

Permitting mining and mineral exploration in the Santa Catalina Research Natural Area would have a short-term adverse effect on an environment that has thus far been preserved. The long-term effects of the proposal will benefit present and future generations by preserving amenity values.

The cost of the proposal that would be passed on to future generations would be that of enforcing Executive Order 10355.

8. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCE

The proposal once implemented would not commit future generations to a similar course of action. There would be no long-term alteration of the basic resources. On the contrary, if the area is not withdrawn, mining and mineral exploration may cause irreversible and irretrievable commitment of the basic resources.

9. LOCAL ORGANIZATIONS

The Valley Club of Arizona, Southern Arizona Hiking Club, Tucson Natural History Society, and the Sierra Club favor this proposal. Mining interests have not been consulted; however, it is probable the area would be held scattered operations based on the fact that the mineral resources of the area is not fully known and more exploration is needed.

10. IMPACTS OF PROPOSED ZONE AND RECOMMENDATIONS

Adoption of this proposal will have no major impacts on the environment and the area is not a highly developed area, therefore, it is recommended that no additional studies be made. Nevertheless, the area could be withdrawn if the area is withdrawn.

11. CONCLUSIONS

A. General Location map.



United States
Department of
Agriculture

Forest
Service

Rocky Mountain
Research Station

240 W. Prospect Rd.
Fort Collins, CO
80526-2098

File Code: 4060-3

Date: APR 17 1998

William E. Wright
Laboratory of Tree-Ring Research
The University of Arizona
P.O. Box 210058
Tucson, AZ 85721-0058

Dear Mr. Wright:

It is my pleasure to approve your proposal for dendrochronology research on the Santa Catalina Research Natural Area on the Coronado National Forest as outlined in the proposal that you sent us. We would greatly appreciate receiving a copy of all research reports and publications coming from this research. Please send this information to the RNA ecologist at the Rocky Mountain Research Station. Your interest in Research Natural Areas is also appreciated. Although we do have an approval process in order to maintain the integrity of these valuable areas, we also encourage research on our RNAs. The cumulative record of research on individual RNAs adds to our understanding of long-term ecological change as well as the composition, structure, and function of the ecosystems that the Forest Service manages. You will also need approval for this research from the Coronado National Forest and I suggest that you contact Mima Falk, the ecologist and RNA coordinator on the Forest, at 520-670-4550. She is already aware of your proposal and has indicated that their approval will be granted contingent upon our concurrence.

Sincerely,

DENVER P. BURNS
Station Director

cc:

Mima Falk, Coronado NF
Reggie Fletcher, R-3
Tom Andrews, RMRS
Merrill Kaufmann, RMRS



AUG 05 1983

fr x'd w "83 Corr" & "WD"

4060 Research Facilities

Santa Catalina Natural Area
(your ltr. 7/6/83)

Chief

Enclosed are copies of Dunlap's March 23, 1927 order establishing the Santa Catalina Natural Area and the Modification Order signed by Freeman June 14, 1962.

The Coronado National Forest has an original copy of the Dunlap Order and will forward it by separate cover. It appears that the Region only has copies of Freeman's order which were stamped in the signature block.

LARRY J. SCHMIDT

DON RENTON
Chairman of Research Natural Committee

Enclosure

cc: Larry Schmidt
Mike Borens, Coronado

LSCHMIDT:fr:8/2/83



Don Renton



United States
Department of
Agriculture

Forest
Service

WO

Reply to: 4060 Research Facilities

Date: July 6, 1983

Subject: Santa Catalina Natural Area

To: Regional Forester, Region 3

Timber Management Research in the WO maintains the official file of research natural areas (RNA's) on NFS lands. We do not have the original Land Classification Order signed by R.W. Dunlap, Acting Secretary of Agriculture, establishing the Santa Catalina Natural Area on the Coronado National Forest. The Order was dated 19 March 1927 and was signed by Dunlap on 23 March 1927.

We also need the original Modification of Land Classification Order for the Santa Catalina Natural Area signed by Orville L. Freeman on 14 June 1962 to complete this file. Please inspect your files and forward the documents or any information you can find about them to:

Forest Service RNA Coordinator
USDA Forest Service
P.O. Box 2417, RPE-811
Washington, D.C. 20013

(8-235-8200 phone)

Thank you for your cooperation.

Stan Krugman

STANLEY L. KRUGMAN
Director of Timber Management Research

8-2-83
contacted Mike Adams
he is forwarding original to W.O.
by certified mail.
Jhe
CNF

- RENTON _____
- CRAWFORD _____
- LaSALLE _____
- LONG _____
- LITTLE _____
- WEISZ _____
- REPLOGLE _____
- STEWART _____

RECEIVED

JUL 18 1983

SOIL & WATER

Land Management
Planning

JUL 12 1983



MODIFICATION OF LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the Santa Catalina Mountains, Coronado National Forest

WHEREAS by land classification order dated March 23, 1927, the Acting Secretary of Agriculture gave public notice that certain lands adjacent to the Mt. Lemmon Recreational Area, in unsurveyed sections, containing 4,464 acres, more or less, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were designated as the Santa Catalina Natural Area, and that all national forest lands therein should be so managed as to permit scientific studies of the forest growth by the Natural History Society of Tucson, Arizona, and other like scientific organizations; and

WHEREAS it is desired to modify said land classification order by correcting errors in the original survey, eliminating that portion of the natural area needed and used by the Department of Defense (Air Force) for radar purposes in the interest of national defense and other special use permits, and establishing the boundary using geographic features to enhance administrative and protection requirements; and

WHEREAS the modification will simplify administration and protection and promote the most useful purposes of natural area establishment:

NOW, THEREFORE, the aforesaid land classification order dated March 23, 1927, is hereby modified and amended to include in the Santa Catalina Natural Area certain lands located in unsurveyed sections 34, 35 and 36, T. 11 S., R. 15 E., and unsurveyed sections 1, 2, 3, 4, 8, 9, 10, 11, 15 and 16, T. 12 S., R. 15 E., C. & S.R.P.M., containing 4,131 acres, as shown on the attached map designated "Santa Catalina Natural Area Boundary Modification, 6/21/52." Corner number 11 as designated on the attached map is the Lemmon Rock Lookout. The new corners numbered 1 and 10 are marked on the ground with appropriately stamped steel stakes and witness trees.

In all other respects the aforesaid land classification order remains unchanged.

In Testimony Whereof, I have hereunto set my hand at Washington, D.C., this 11th day of June, 1952.

Orville L. Freeman
SECRETARY

L
Classification-Coronado
Santa Catalina Natural Area

LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress of August 10, 1912 (37 Stat., 267), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands, adjacent to the Mt. Lemmon Recreational Area, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, in R. 12 S., R. 15 E., G. & S. R. N., containing 4,464 acres, more or less, as shown by a survey made by Forest Ranger J. A. Frieberg in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain cover of such a character that it would be in the public interest to keep this in its present status in so far as practicable, to the end that the flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I, R. W. Dunlap, Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In Testimony Whereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

Secretary's Fin. Room

(Signed)

R. W. Dunlap
Assistant Secretary of Agriculture.

(Seal)

Orig. 11 copies sent Coronado

R E P O R T

TUCSON NATURAL HISTORY SOCIETY

This is an organization formed in 1923 by a number of residents of Tucson, Arizona. The membership is composed of scientists connected with the University of Arizona and the Carnegie Desert Laboratory, nature lovers, sportsmen and public spirited citizens who are interested in conservation of natural resources, natural history, game preservation and so forth. The active membership now numbers about 100. An annual program is prepared, copy of which is attached in order to give some idea of the scope and activities of the society. The objectives of the society are the stimulation of interest in and appreciation of nature including both plants and animals; the popularization of the out-doors; the gaining of information regarding wild life; conservation of natural resources.

In November 1925, the Society made the proposal that a "natural area" be set aside by the Forest Service within the Santa Catalina division of the Coronado National Forest. No specific area was suggested but upon examination, an area of approximately 200 acres was tentatively designated and mapped which upon further consideration was enlarged to include the present area as shown on the attached map. A tentative set of rules to govern the area was drawn up by the Society as follows:

TENTATIVE RULES, SANTA CATALINA NATURAL AREA

(U. S. Forest Service and Tucson Natural History Society,
sponsors)

The area shall be known as the Santa Catalina Natural Area.

The bounds of the area shall be as indicated on the accompanying map.

It is agreed that the area may at any time be inclosed with a fence of construction suitable to keep out livestock either by the U. S. Forest Service or the Tucson Natural History Society or both.

Grazing by any kind of domestic livestock shall be absolutely prohibited on the area.

No buildings shall be erected on the area except for protection and study.

Only such roads, trails and telephone lines shall be built and maintained on the area as are necessary for purposes of administration and protection of the area from fire.

No firearms shall be carried on the area except under seal or special permit.

No hunting, trapping nor fishing, except under permit for predatory animals or for the collection of scientific specimens, shall be allowed on the area; it is the object of the area to maintain the original conditions of the region as far as possible undisturbed for any reason whatever.

There shall be no cutting of trees or shrubs, or clearing away of logs, stumps, brush or any other modification of the original conditions, except as necessary for fighting fires.

Extraordinary care must be exercised to protect the area, which, as the years go by, will be increasingly valuable as a scientific natural object lesson, from the ravages of fire.

Suitable signs, with the name of the area, and bearing the following or similar instructions, shall be posted at all points of entrance of trails into the area:

SANTA CATALINA NATURAL AREA

"For the preservation of natural conditions undisturbed for all time. Designed for study by foresters, livestock men, naturalists, scientists, and the general public. Please give us your cooperation in being especially careful with fires, and by leaving the soil, rocks, plants, animals, and all other modifiable features in an undisturbed and natural condition."

FOREST SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE
TUCCON NATIONAL HISTORY SOCIETY.

LOCATION AND AREA

In portions or in whole of unsurveyed Sections 29, 26, 34, 35 and 36, T. 11 S., R. 15 E. and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, T. 12 S., R. 15 E., G. & S.R.M., containing

4,404 acres more or less. The area is located about 60 miles north of Tucson, Arizona by a highway and is adjacent to the Mt. Lemmon Recreational Area on the Coronado National Forest.

ELEVATION

The elevation varies from 9,150 feet on Mt. Lemmon to about 5,500 feet on the southern portion of the area.

TOPOGRAPHY

The area for the most part includes an extremely rough and precipitous section and is practically inaccessible in some portions. The so-called "Wilderness of Rocks" is included within the area and the entire area is within a basin about one mile wide by three miles long with a generally southwest exposure. The area is within the Marshall Gulch and Lemmon Creek drainages.

COVER

The cover consists of western yellow pine, with a scattering stand of Douglas fir, white pine, Engelmann spruce and port-bark fir with aspen on the higher elevations; in the stream bottoms such hardwoods as sugar maple, boxelder, alders and associated types occur; on the southerly exposures, the cover is mostly of the browse type chiefly netleaf and silver leaf oak with an admixture of Juniper and Arizona cypress. In all, approximately 2000 acres include conifers yielding approximately 12 ft. B.M. per acre, 400 acres of deciduous types yielding about 5 cords per acre and 1800 acres of brush types which would yield about 3 cords per acre. In fact a very wide range of native flora is contained within the area from the semi-desert to the alpine type. This timber is almost wholly inaccessible from a commercial standpoint and any management plan would of necessity eliminate this area from exploitation due to its inaccessibility. Accordingly, the setting aside of the area for the purpose indicated would not conflict with management plans existing or proposed or with any working circle in connection therewith.

LAND CLASSIFICATION

The entire area has been classified as non-forestable under the Acts of June 11, 1906 or August 10, 1912 and is chiefly valuable for forest purposes.

SPECIAL USES AND RIGHTS OF WAY

None in existence. While the demand for recreational use in the way of summer homes adjacent to this area is considerable, there is ample room for expansion on other portions of the Catalina Division for this purpose. The water power possibilities are negligible or wholly lacking.

GRAZING

The greater part of the area is closed to grazing at present by reason of the exclusion from grazing of the existing Mt. Lemmon Recreational Area. The remainder of the area has never been grazed by domestic stock as it is practically inaccessible from any point due to the topography. Accordingly the factor of grazing will not cause any disturbance to range management plans.

FIRE AND FOREST SERVICE IMPROVEMENTS

The fire hazard is high but the area is included with the fire protection system in force on the Catalina Division and Forest Service trails have been constructed within the past few years to provide for access in the event of fire. Other than possible additional trails and ways or telephone lines for protection purposes, no improvements are contemplated. Existing Forest Service improvements consist of a cabin for housing a fire guard and a fire lookout tower on Mt. Lemmon.

GAME

The entire area, and in fact, the entire Catalina Division, is within a State Game Refuge. Many deer are found within the area of the white-tail species and one of the few remaining bands of Rocky Mountain sheep are contained within or adjacent to this area.

RECOMMENDATIONS

It is recommended that the proposed rules of the Society be approved with modifications and that the area be set aside under the procedure for the dedication of recreation areas as a special measure of preservation or recreational resources under formal order by the Secretary.

There follows a draft of the proposed order:

RESERVATION FOR RECREATIONAL PURPOSES OF LANDS WITHIN THE CORCHADO NATIONAL FOREST ADJACENT TO TUCSON, ARIZONA

"Pursuant to an Act of Congress directing the Secretary of Agriculture to select, classify, and segregate lands within the

boundaries of National Forests that may be opened to homestead entry, certain lands aggregating 4,464 acres more or less within the Coronado National Forest, situated adjacent to Tucson, Arizona as indicated upon the diagram hereto attached, have been duly examined, and, being found to comprise natural resources susceptible of many public uses and possessing much scenic beauty which should be available to the public, were classified and segregated on _____ as not chiefly valuable for agriculture and therefore not subject to segregation under the Act of August 10, 1912.

It appears that these lands are not only of great value for national forest purposes but should also be permanently retained in Government ownership in order to provide for their protection, development, use and enjoyment by the general public, and can be so administered by the Forest Service without additional expense to the Government."

Approved:

January 25, 1927
(Date)

Fred Winn
Forest Supervisor

Approved:

January 26, 1927
(Date)

John D. Jones
Acting District Forester

SANTA CATALINA RESEARCH NATURAL AREA

Coronado National Forest, Santa Catalina District

Primary Ecosystem: 122.32 Arizona pine forest

890 acres (360 ha)

This area was established in 1927 as a research natural area from encouragement of the Tuscon Natural History Society. The Society proposed a "natural area" in the Santa Catalina Mountains be set up for a variety of purposes including the stimulation and appreciation of the out-doors, study of wildlife, and conservation of natural resources. The proposal by the Society was adopted by the Forest Service, and the Nation's first Research Natural Area included 4131 acres (1673 ha) established under the Secretary of Agriculture's U-4 Regulation "To keep the area in its present status so far as practicable to the end that the flora may be made the subject of study by the Natural History Society of Tuscon; and other like scientific organizations".

The entire area of the original RNA tract is within the Santa Catalina Wilderness, and management of so vast a tract for strictly scientific and educational purposes is no longer so practical in view of the high recreational usage of the area. The adjusted boundary provides a more manageable area while at the same time including ecosystems representative of the larger, original area. Lemmon Canyon contains a stringer of riparian vegetation, and both encinal/rockland and Arizona pine/rockland ecosystems in the adjusted boundary (on uplands and canyon slopes) are vegetations widely distributed on the south slopes of the Santa Catalina Mountains where very shallow soils (of the Entosol Order) occur on gneiss and granitic rock (Terrestrial Ecosystem Survey 1982, Whittaker and Niering 1965, Whittaker *et al.* 1968).

References:

Terrestrial Ecosystem Survey. 1982. Climate-elevation-vegetation gradient, Catalina North and Catalina South, 2 p., USDA Forest Serv., Southwestern Region, Albuquerque, NM 87102.

Smith, E. Linwood. 1974. Established natural areas in Arizona, A guidebook for scientists and educators. Ariz. Off. Economic Planning & Development, Office of the Governor, Phoenix, AZ, 300 p.

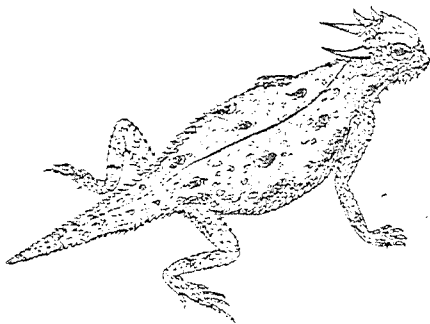
Whittaker, R. H. and W. A. Niering. 1965. Vegetation of the Santa Catalina Mountains, Arizona: a gradient analysis of the south slope. *Ecology* 46: 429-452.

_____, S.W. Buol, W.A. Niering, Y.H. Havens. 1968. A soil and vegetation pattern in the Santa Catalina Mountains, Arizona. *Soil Sci.* 105: 440-450.

1st 2 pgs. xl in G.C. '83, "RNAs-Dev. Process" "Outservice Groups" & in "San Francisco Peaks RNA" (also, see below)

Sita Cata

Arizona Natural Heritage Program



Phrynosoma m'calli

THE STATE OF ARIZONA
in cooperation with
THE NATURE CONSERVANCY

March 31, 1983

30 NORTH TUCSON BLVD.
TUCSON, ARIZONA 85716
(602) 323-1857
323-0867

Larry Schmidt
U.S. Forest Service
517 Gold Avenue, SW
Albuquerque, NM 87102

Dear Larry:

I have finally had an opportunity to compile the information on plants and animals that have limited distribution in Arizona which we have identified on Research Natural Areas. We promised it to you during our February meeting in Tucson. Enclosed is a list of species found on the RNA with a notation on any state or federal protection status they have received (see enclosed list of protection statuses).

see file
"Sycamore Canyon RNA" (parts of the list which refer to other RNAs may be found in the respective files) see page 3. attached here

The most notable site from our perspective is Goodding RNA in Sycamore Canyon. As we have progressed with our mapping of rare elements and habitats, a cluster exceeding anything else in at least the western United States has developed in the canyon centered in the existing RNA and trailing down-canyon within the proposed extension acreage. To give some indication of the significance of the RNA, five of the plants which occur here have been recently recommended for USFWS Threatened status and one for Endangered status. I have enclosed a copy on the flora of Sycamore Canyon co-authored by Tom Van Devender of our office, in case you needed one.

There have been several recommendations, including Greg Goodwin's and ours made a couple of years ago, to enlarge San Francisco Peaks RNA. We certainly would like to see these proposals enacted and provide the alpine tundra and the exceptional flora, in particular Senecio franciscanus, the RNA protection it deserves and requires, considering the mounting pressure on the long term viability of the Peaks. If an increase in acreage is a problem, perhaps the boundaries can be shifted to include much of the alpine tundra in sections 29 and 32 and retain only the best bristlecone pine stand of the existing RNA and adjacent areas identified by Greg Goodwin.

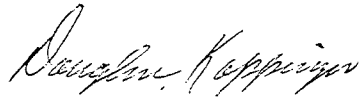
You mentioned to us the need for public input as to the practical values of RNAs. Certainly from the standpoint of the preservation of species diversity, which is becoming more pervasive in land management throughout the United States, the value of RNAs is beyond question. Even though research on some established RNAs has been minimal to non-existent, this doesn't lessen the value of the site as a future research resource. Also, it just makes good

Larry Schmidt
31 March 1983
Page 2

sense from a long-term management standpoint to leave as many options available as possible for future needs, and a comprehensive RNA system is one of those options.

I hope this input is useful, and we hope to continue working with the Forest Service on RNAs. In addition we look forward to receiving your refinement of the guidelines on Zoological and Botanical Areas.

Sincerely,



Douglas G. Koppinger

DGK/mp

cc: Mike Borens

Enclosure

PHELPS CABIN

<u>Species</u>	<u>Common Name</u>	<u>Status</u>
<u>Animals</u>		
<u>Clethrionomys gapperi</u>	Red-backed Vole	
<u>Mustela frenata</u>	Long-tailed Weasel	
<u>Zapus princeps</u>	Jumping Mouse	S/T
<u>Plants</u>		
<u>Allium gooddingii</u>	Goodding Onion	S/C, Cl, PT, SE
<u>Calypso bulbosa</u>	Western Fairy Slipper	S/C
<u>Epilobium oregonense</u>	Oregon Willow Herb	
<u>Gentiana fremontii</u>	Moss Gentian	
<u>Goodyera repens</u>	Lesser Rattlesnake Plantain	S/C
<u>Habenaria stricta</u>	Slender Bog Orchid	S/C
<u>Oxypolis fendleri</u>	Hog Fennel	
<u>Salix arizonica</u>	Arizona Willow	Cl, DL, SE

WEST FORK OF OAK CREEK

Animals

Thamnophis rufipunctatus Narrow-headed Garter Snake S/T

Plants

Adiantum pedatum American Maidenhair

Agrimonia gryposepala Hook-nosed Agrimony

Aletes macdougali Vagabond Parsnip

Cimicifuga arizonica Arizona Bugbane Cl, PT, SE

Cystopteris bulbifera Bulblet Fern

Heuchera eastwoodiae Eastwood Alum Root

Ostrya knowltoni Knowlton Hop Hornbeam

Parnassia parviflora Grass of Parnassus

Polystichum lonchitis Mountain Holly Fern

GOUDY CANYON

Plants

Danthonia californica Oat Grass

SANTA CATALINA

Plants

Spiranthes parasitica Fallen Ladys Tresses

DATE S. Cata

March 7 1983

CROSS REFERENCE (1) Coronado NF

CROSS REFERENCE (2) Pole Bridge Camp RNA 1/

CROSS REFERENCE (3) Sycamore Canyon RNA 1/

CROSS REFERENCE (4) Santa Catalina RNA 1/

TO x-ret (5) Butterfly Peak RNA 1/

FROM Letter x'd in G.C. '83

SUMMARY Letter from D. Renton, Director of Land Mgt. Planning, to Coronado Forest Supervisor with "modifications or small additions... the task group believes needs to be incorporated in the final plan." Maps for Pole Bridge & Santa Catalina enclosed.

FILED

REMARKS

1/ These files contain only this form

S. Catalina

this pg x'd in 8.1.81 and
↑ in "RNA's Dev. Process."

R-3

4060 Research Facilities

July 23, 1981

RNA Information

RNA Task Group

see file "Briefing Paper"

Enclosed are some updated pages for the briefing paper you recently received.

see file "Outservice
Groups..." for
entire enclosure;
only page pert. to Santa
Catalina RNA is here.

I have also included some information on proposed RNA's in Arizona that we received from Tanna Baldwin. I like their classification approach which used the Brown, Lowe, and Pases System. (Available from Rocky Mountain Station).

LARRY SCHMIDT
RNA Task Group Chairman

Enclosure

LSchmidt: mp/7/21/81

-- Patagonia-Sonoita Creek Preserve

- 143.1 Scrub-Grassland (Semi-desert Grassland)
- 223.2 Interior Southwestern Riparian Deciduous Forest & Woodland
- 233.2 Interior Southwestern Swamp & Riparian Scrub
- 244.7 Sonoran Interior Marshland
- 254.7 Sonoran Interior Strand
- 264.7 Sonoran Inland Submergents

FS -- Gooding R.N.A. *Cinabo*

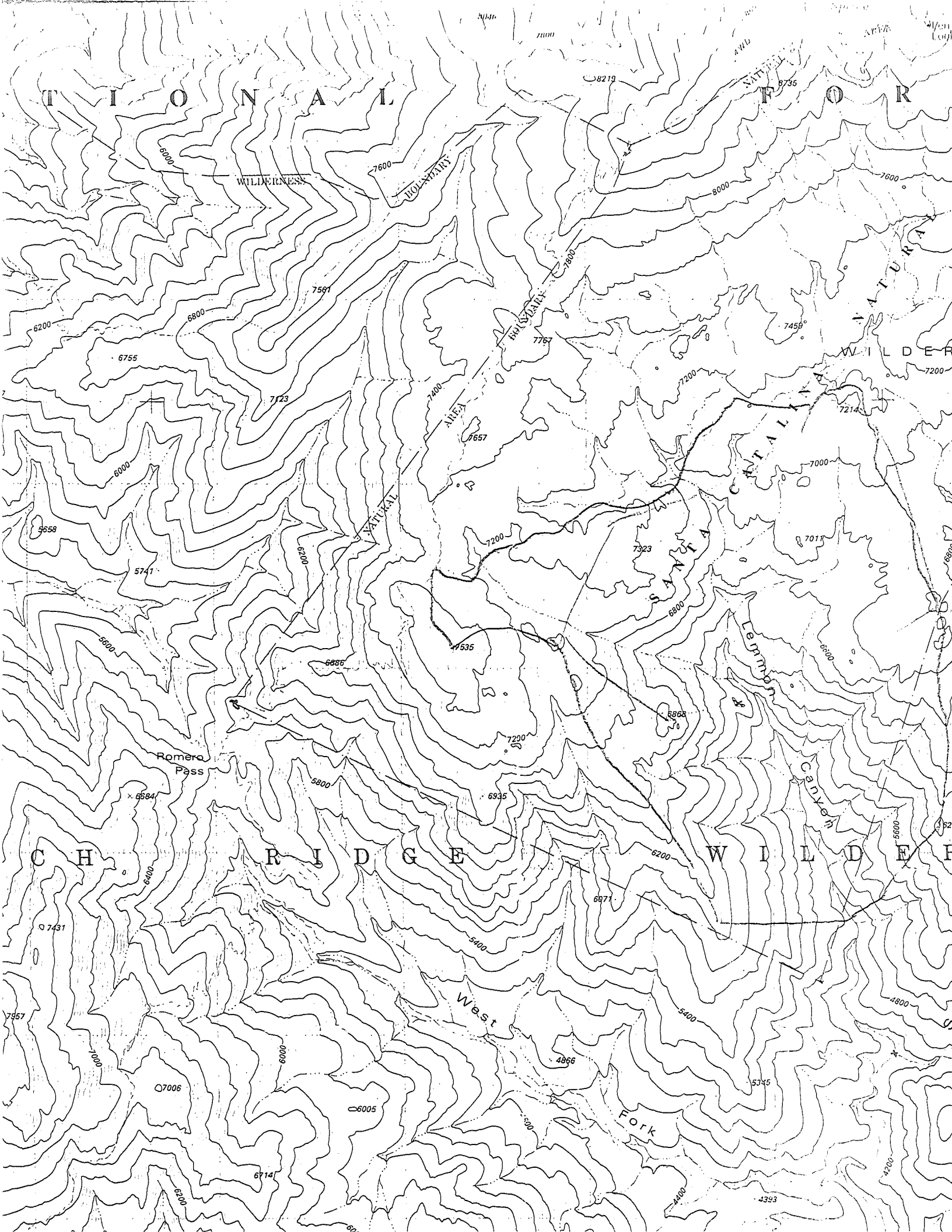
- 123.3 Madrean Evergreen Forest & Woodland
- 143.1 Scrub-Grassland
- 223.2 Interior Southwestern Riparian Deciduous Forest & Woodland

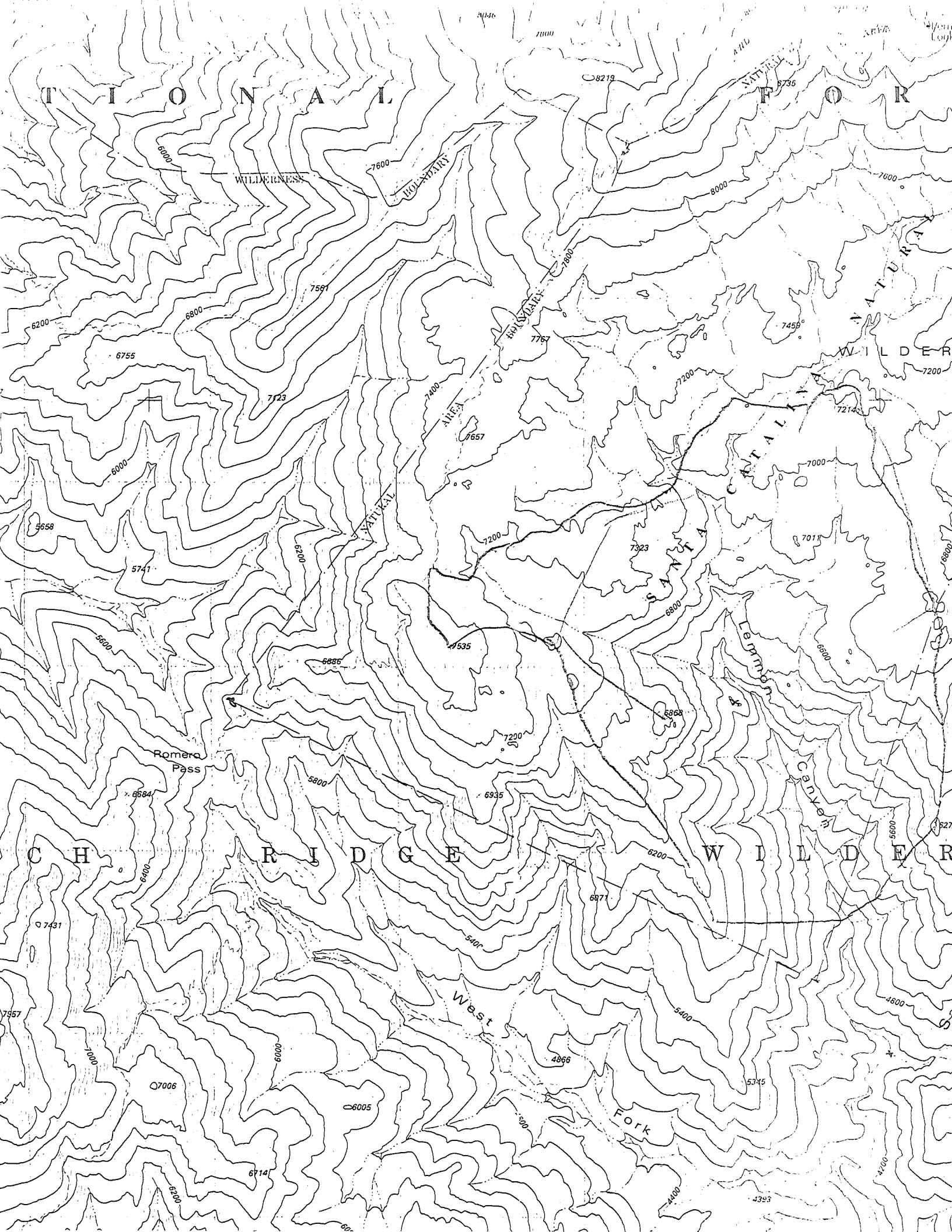
FS -- Santa Catalina R.N.A. *Cinabo*

- 121.3 Rocky Mountain Subalpine Conifer Forest
- 122.3 Rocky Mountain Montane Conifer Forest
- 123.3 Madrean Evergreen Forest & Woodland
- 123.5 Relict Conifer Forest & Woodland
- 133.3 Interior Chaparral
- 143.1 Scrub-Grassland
- 154.1 Sonoran Desertscrub
- 154.12 Paloverde-Mixed Cacti Series
- 223.2 Interior Southwestern Riparian Deciduous Forest & Woodland
(Also Many Associated Wetlands)

FS -- Butterfly Peak N.A.

(See Santa Catalina R.N.A.)





UNITED STATES
DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Southwestern Region
Albuquerque, New Mexico

MINERAL REPORT
(For Administrative Use Only)

2860 Withdrawals
Coronado

Office Report

Date of Examination

Jack McK. Pardee
Mineral Examiner

July 18, 1973

Date of Report

Category: Mineral character

Area Name: Santa Catalina Natural Area

Land Office and Serial Number:

Brief of Conclusions: A supplementary mineral report based on further examination is indicated.

Approved:

Jack McK. Pardee
Chief Mineral Examiner

7/19/73
Date

Approved:

John J. Koen
Assistant Regional Forester

7/19/73
Date

INTRODUCTION

The Santa Catalina Natural Area has been recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended, by authority of Executive Order 10355 of May 26, 1952 (17 F.R. 4831) for the purpose of preserving the land as a research natural area.

The withdrawal application and justification statement have been prepared and were transmitted to the Regional Forester by the Supervisor, Coronado National Forest.

The land involved is a single tract described by metes and bounds comprising parts of unsurveyed Sections 34, 35, and 36, T. 11 S., R. 15 E., and unsurveyed Sections 1, 2, 3, 4, 8, 9, 10, 11, 15, and 16, T. 12 S., R. 15 E., G&SRM, Pima County, Arizona, and aggregates 4,131 acres on the Santa Catalina Ranger District, Coronado National Forest. The general location of the area is sufficient for the purpose of this mineral report, therefore, reference is made to the justification statement for the survey description and plat.

The purpose of this report is to express the opinion of a Forest Service mineral examiner on the mineral character of the lands proposed for withdrawal.

GEOLOGY AND MINERALIZATION

The Santa Catalina Mountains is one of the principal ranges of the Mountain Region of the Basin and Range Province in Arizona. Mount Lemmon is the highest peak in the Santa Catalinas, rising to an elevation above 9,000 feet.

Bromfield^{1/} quotes C. F. Talman's resume (1915) of the geology of the Santa Catalinas:

"The central feature of the range is a great post-Carboniferous intrusive mass of siliceous muscovite granite modified to a gneissic rock near its margins, surrounded by a zone of intense contact metamorphism in which rocks of widely different kinds have been affected. The oldest rock cut by the granite is a coarse porphyritic biotite granite which apparently as a result of later granite intrusion grade into augen gneiss, and locally into thinly fissile schist."

^{1/} Bromfield, Calvin S., Geology of the Maudina Mine Area, Northern Santa Catalina Mountains, Pinal County, Arizona, Thesis, University of Arizona, 1950.

The granite is mapped as Laramide,^{2/} the period of mountain-building deformation, uplift, and igneous activity which began in Late Cretaceous and extended into Cenozoic time. The intense Laramide igneous activity in the Basin and Range Province is marked by batholiths, stocks, dikes, plugs, and volcanic rocks.^{3/} Laramide geology plays a most important role in the mining history of Arizona. Mineralization associated with Laramide monzonite stocks formed many orebodies in older rocks, and the stocks also were host rocks for mineralization of the great porphyry copper deposits at Morenci, San Manuel, Miami-Inspiration, Ray, Esperanza-Sierrita, Silver Bell, Bagdad, and others.

The Santa Catalina Natural Area is situated almost entirely on the Laramide granite, except for an embayment of the Younger Precambrian Apache group of sedimentary and metamorphic rocks on about 200 acres near the northeast end.

There are no known mining claims within the natural area, and Forest Officers have observed no recent evidence of mineral prospecting, however, several groups of mining claims, totaling 1,662 acres, lying to the north and northeast within a distance of 4 miles were patented from 1915 to 1953. Although recent investigation has revealed no mineral production from several of the claims lying adjacent to the natural area near Lemmon Rock Lookout during the 30 years since patent issued, the Control Mine, less than 3 miles distant near Marble Peak produced about 130,000 tons of copper ore^{4/} during the period 1937 to 1946. The same reference, RI 5630, also describes several tungsten mines and prospects in the vicinity of Marble Peak, which have produced small amounts of scheelite (CaWO_4) intermittently until the Government purchase program ended in 1956. Continental Materials Corporation is reported currently to be engaged in a prospect drilling program at the Control Mine. The mineral deposits in the vicinity of Marble Peak are found near the contacts of intrusive Laramide igneous rocks with sedimentary limestone and quartzite formations.

On the basis of a study of the published works and reports at hand related to the geology and mining in the Santa Catalinas, and on limited personal knowledge of the exact area, the writer recognizes

^{2/}Geologic Map of Pima and Santa Cruz Counties, Arizona, Scale 1/375,000, Arizona Bur. of Mines, 1960.

^{3/}Wilson, E. D., A Resume of the Geology of Arizona, Arizona Bur. of Mines, Bull. 171, 1962.

^{4/}Dale, V. B. et al., Tungsten Deposits of Cochise, Pima, and Santa Cruz Counties, Arizona, U.S.B.M. RI 5630, 1960.

that further examination will be necessary in order to form an opinion as to the mineral character of lands embraced in the Santa Catalina Natural Area. Although nothing was found in this preliminary study to indicate that the land meets the criterion of the Department of the Interior for lands of mineral character,^{5/} it is the writer's opinion that further examination is necessary before reaching a definite conclusion that the land is nonmineral for these reasons:

1. There are references in the literature to a number of geological reports on the Catalina Mountains that should be reviewed.
2. The classification of the natural area in 1927 probably led the public to believe that the land was closed to mineral entry resulting in less attention from prospectors than it would have received otherwise during the intervening 46 years.

A supplementary mineral report will be submitted at an early date.

Jack McK. Pardee

 JACK MCK. PARDEE
 Chief Mining Engineer

^{5/}75 I.D. 176: "To establish the mineral character of lands. . . , it must be shown that conditions are such as reasonably to engender the belief that the lands contain mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end."

Forest Supervisor
 Coronado N. F.

3

April 5, 1977

SUBJECT

2860 Withdrawals - Santa
 Catalina Research Natural Area

FROM

R. O.
 Lands Status Section
 Albuquerque

MESSAGE

For various reasons, including differences with BLM concerning preparation of land and staff reports, and the new BLM Organic Act, very few withdrawals have been processed in the past year or so. It is anticipated that we may soon be able to send these cases to the Washington Office for further processing.

Upon reviewing the file in the above proposed withdrawal, it appears that the signed EAR is missing. Your letter of 4/29/75 states that the EAR was enclosed. I would appreciate receiving a signed copy from your files.

Thanks.

SIGNATURE

REPLY

SIGNATURE

DATE

UNITED STATES DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 Coronado NF

MAY 05 1975

REGION 3
 LANDS

REPLY TO: 2860 Withdrawals

April 29, 1975

SUBJECT: Santa Catalina Research Natural Area



TO: Regional Forester, R-3

Under letter dated June 14, 1973, we transmitted a draft justification statement for withdrawal of the Santa Catalina Research Natural Area.

Enclosed is an Environmental Analysis Report and draft letter to the Secretary of Interior and suggested press release.

J. L. Perry

JAMES L. PERRY
 Recreation & Lands

Enclosures

LANDS 9513		Action		
		Initiate	Review	Discontinue
DIRECTOR	R. L. BARBER			
Secretary	CAROL A. GARCIA			
Class. R/W	F. W. GALLEY			
	H. C. BERNOLDS			
Exch.	E. G. JOHNSON			
	T. W. SELGER			
	A. E. MUMFORD			
Stat.	D. R. PERK			
	R. C. FORTNA			
	E. BEAL			
Mn.	J. McK. FARDEE			
	P. J. ALEXANDER			
Office Serv.				

D R A F T
RS:JLPerry:fm

2860
R-3 Coronado National Forest
Santa Catalina RNA

Honorable _____
Secretary of Interior
Through the State Director
Bureau of Land Management
Phoenix, Arizona

Dear Mr. Secretary:

This is a request for the withdrawal of approximately 3,141 acres of National Forest land from location and entry under the mining laws only, subject to existing valid rights, in accordance with the authority vested in you by Executive Order 10355 of May 26, 1952 (17FR4831).

The subject parcel is classified as a Research Natural Area by the Secretary of Agriculture under authority of 36CFR251.23. The purpose of the classification is to protect the land so as to permit scientific studies of the Forest growth by the Natural History Society of Tucson, Arizona and other like scientific organizations.

The accompanying information is furnished in compliance with 43CFR2351.2 and expresses the reasons why this area should be withdrawn from mineral location and entry.

It will be appreciated if the State Director will notify the Regional Forester in Albuquerque, New Mexico when receipt of this application

-2-

has been noted in the tract books or the official plats in accordance with 43CFR2351.3.

Sincerely,

Enclosures

cc: R-3 w/enclosures (3)
Secretary's Records (1)
Lands w/enclosures (1)

BUREAU OF LAND MANAGEMENT

STATE DIRECTOR, State of Arizona

For Release

NATIONAL FOREST WITHDRAWAL FROM MINING
LOCATIONS PROPOSED

Proposed withdrawal of 4,131 acres of public lands in the Coronado National Forest from operation of the mining laws was announced by _____, State Director of the Bureau of Land Management at Phoenix, Arizona.

The application for the withdrawal, which was filed by the Secretary of Agriculture, was recorded on the public land records in the Land Office at Phoenix, Arizona, on _____. Effect of the recordation was to temporarily ban prospecting and locating of mining claims in the affected areas, pending action on the application by the Department of the Interior.

A 30-day waiting period is provided during which written comments or objections may be submitted by the general public to State Director, Bureau of Land Management, Billings, Montana.

The public lands involved are classified for use as the Santa Catalina Research Natural Area for scientific study of Forest Growth.

A detailed description of the public lands involved in the proposed withdrawal will appear shortly in the Federal Register and will be

-2-

posted in the Land office at Phoenix, Arizona.

The Coronado National Forest is under the supervision of the Regional Forester, Region 3, U.S. Department of Agriculture in Albuquerque, New Mexico.

UNITED STATES
DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Southwestern Region
Albuquerque, New Mexico

MINERAL REPORT
(For Administrative Use Only)

2860 Withdrawals
Coronado

Office Report

Date of Examination

Jack McK. Pardee
Mineral Examiner

July 18, 1973

Date of Report

Category: Mineral character

Area Name: Santa Catalina Natural Area

Land Office and Serial Number:

Brief of Conclusions: A supplementary mineral report based on further examination is indicated.

Approved: _____

Jack McK. Pardee
Chief Mineral Examiner

7/19/73
Date

Approved: _____

John J. Koen
Assistant Regional Forester

7/19/73
Date

INTRODUCTION

The Santa Catalina Natural Area has been recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended, by authority of Executive Order 10355 of May 26, 1952 (17 F.R. 4831) for the purpose of preserving the land as a research natural area.

The withdrawal application and justification statement have been prepared and were transmitted to the Regional Forester by the Supervisor, Coronado National Forest.

The land involved is a single tract described by metes and bounds comprising parts of unsurveyed Sections 34, 35, and 36, T. 11 S., R. 15 E., and unsurveyed Sections 1, 2, 3, 4, 8, 9, 10, 11, 15, and 16, T. 12 S., R. 15 E., G&SRM, Pima County, Arizona, and aggregates 4,131 acres on the Santa Catalina Ranger District, Coronado National Forest. The general location of the area is sufficient for the purpose of this mineral report, therefore, reference is made to the justification statement for the survey description and plat.

The purpose of this report is to express the opinion of a Forest Service mineral examiner on the mineral character of the lands proposed for withdrawal.

GEOLOGY AND MINERALIZATION

The Santa Catalina Mountains is one of the principal ranges of the Mountain Region of the Basin and Range Province in Arizona. Mount Lemmon is the highest peak in the Santa Catalinas, rising to an elevation above 9,000 feet.

Bromfield^{1/} quotes C. F. Talman's resume (1915) of the geology of the Santa Catalinas:

"The central feature of the range is a great post-Carboniferous intrusive mass of siliceous muscovite granite modified to a gneissic rock near its margins, surrounded by a zone of intense contact metamorphism in which rocks of widely different kinds have been affected. The oldest rock cut by the granite is a coarse porphyritic biotite granite which apparently as a result of later granite intrusion grade into augen gneiss, and locally into thinly fissile schist."

^{1/} Bromfield, Calvin S., Geology of the Maudina Mine Area, Northern Santa Catalina Mountains, Pinal County, Arizona, Thesis, University of Arizona, 1950.

The granite is mapped as Laramide,^{2/} the period of mountain-building deformation, uplift, and igneous activity which began in Late Cretaceous and extended into Cenozoic time. The intense Laramide igneous activity in the Basin and Range Province is marked by batholiths, stocks, dikes, plugs, and volcanic rocks.^{3/} Laramide geology plays a most important role in the mining history of Arizona. Mineralization associated with Laramide monzonite stocks formed many orebodies in older rocks, and the stocks also were host rocks for mineralization of the great porphyry copper deposits at Morenci, San Manuel, Miami-Inspiration, Ray, Esperanza-Sierrita, Silver Bell, Bagdad, and others.

The Santa Catalina Natural Area is situated almost entirely on the Laramide granite, except for an embayment of the Younger Precambrian Apache group of sedimentary and metamorphic rocks on about 200 acres near the northeast end.

There are no known mining claims within the natural area, and Forest Officers have observed no recent evidence of mineral prospecting, however, several groups of mining claims, totaling 1,662 acres, lying to the north and northeast within a distance of 4 miles were patented from 1915 to 1953. Although recent investigation has revealed no mineral production from several of the claims lying adjacent to the natural area near Lemmon Rock Lookout during the 30 years since patent issued, the Control Mine, less than 3 miles distant near Marble Peak produced about 130,000 tons of copper ore^{4/} during the period 1937 to 1946. The same reference, RI 5630, also describes several tungsten mines and prospects in the vicinity of Marble Peak, which have produced small amounts of scheelite (CaWO₄) intermittently until the Government purchase program ended in 1956. Continental Materials Corporation is reported currently to be engaged in a prospect drilling program at the Control Mine. The mineral deposits in the vicinity of Marble Peak are found near the contacts of intrusive Laramide igneous rocks with sedimentary limestone and quartzite formations.

On the basis of a study of the published works and reports at hand related to the geology and mining in the Santa Catalinas, and on limited personal knowledge of the exact area, the writer recognizes

^{2/}Geologic Map of Pima and Santa Cruz Counties, Arizona, Scale 1/375,000, Arizona Bur. of Mines, 1960.

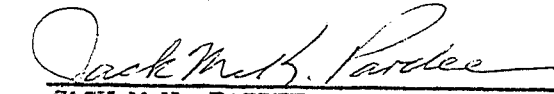
^{3/}Wilson, E. D., A Resume of the Geology of Arizona, Arizona Bur. of Mines, Bull. 171, 1962.

^{4/}Dale, V. B. et al., Tungsten Deposits of Cochise, Pima, and Santa Cruz Counties, Arizona, U.S.B.M. RI 5630, 1960.

that further examination will be necessary in order to form an opinion as to the mineral character of lands embraced in the Santa Catalina Natural Area. Although nothing was found in this preliminary study to indicate that the land meets the criterion of the Department of the Interior for lands of mineral character,^{5/} it is the writer's opinion that further examination is necessary before reaching a definite conclusion that the land is nonmineral for these reasons:

1. There are references in the literature to a number of geological reports on the Catalina Mountains that should be reviewed.
2. The classification of the natural area in 1927 probably led the public to believe that the land was closed to mineral entry resulting in less attention from prospectors than it would have received otherwise during the intervening 46 years.

A supplementary mineral report will be submitted at an early date.


JACK MCK. PARDEE
Chief Mining Engineer

^{5/}75 I.D. 176: "To establish the mineral character of lands. . ., it must be shown that conditions are such as reasonably to engender the belief that the lands contain mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end."

I.
Recreation-Coronado
Santa Catalina Natural Area

Tucson, Arizona
January 25, 1927

REPORT

TUCSON NATURAL HISTORY SOCIETY

This is an organization formed in 1923 by a number of residents of Tucson, Arizona. The membership is composed of scientists connected with the University of Arizona and the Carnegie Desert Laboratory, nature lovers, sportsmen and public spirited citizens who are interested in conservation of natural resources, natural history, game preservation and so forth. The active membership now numbers about 100. An annual program is prepared, copy of which is attached in order to give some idea of the scope and activities of the Society. The objectives of the Society are the stimulation of interest in and appreciation of nature including both plants and animals; the popularization of the out-doors; the gaining of information regarding wild life; conservation of natural resources.

In November 1925, the Society made the proposal that a "natural area" be set aside by the Forest Service within the Santa Catalina division of the Coronado National Forest. No specific area was suggested but upon examination, an area of approximately 200 acres was tentatively designated and mapped which upon further consideration was enlarged to include the present area as shown on the attached map. A tentative set of rules to govern the area was drawn up by the Society as follows:

TEMPERATIVE RULES, SANTA CATALINA NATURAL AREA

(U. S. Forest Service and Tucson Natural History Society,
sponsors)

The area shall be known as the Santa Catalina Natural Area.

The bounds of the area shall be as indicated on the accompanying map.

It is agreed that the area may at any time be enclosed with a fence of construction suitable to keep out livestock either by the U. S. Forest Service or the Tucson Natural History Society or both.

Grazing by any kind of domestic livestock shall be absolutely prohibited on the area.

No buildings shall be erected on the area except for protection and study.

Only such roads, trails and telephone lines shall be built and maintained on the area as are necessary for purposes of administration and protection of the area from fire.

No firearms shall be carried on the area except under seal or special permit.

No hunting, trapping nor fishing, except under permit for predatory animals or for the collection of scientific specimens, shall be allowed on the area; it is the object of the area to maintain the original condition of the region as far as possible undisturbed for any reason whatever.

There shall be no cutting of trees or shrubs, or clearing away of logs, stumps, brush or any other modification of the original conditions, except as necessary for fighting fires.

Extraordinary care must be exercised to protect the area, which, as the years go by, will be increasingly valuable as a scientific natural object lesson, from the ravages of fire.

Suitable signs, with the name of the area, and bearing the following or similar instructions, shall be posted at all points of entrance of trails into the area:

SANTA CATALINA NATURAL AREA

"For the preservation of natural conditions undisturbed for all time. Designed for study by foresters, livestock men, naturalists, scientists, and the general public. Please give us your cooperation in being especially careful with fires, and by leaving the soil, rocks, plants, animals, and all other modifiable features in an undisturbed and natural condition."

FOREST SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE
TUCCOON NATURAL HISTORY SOCIETY.

LOCATION AND AREA

In portions or in whole of unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 S., R. 15 E. and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, T. 12 S., R. 15 E., G. & S.R.M., containing

4,404 acres more or less. The area is located about 60 miles north of Tucson, Arizona by a highway and is adjacent to the Mt. Lemmon Recreational Area on the Coronado National Forest.

ELEVATION

The elevation varies from 9,150 feet on Mt. Lemmon to about 5,500 feet on the southern portion of the area.

TOPOGRAPHY

The area for the most part includes an extremely rough and precipitous section and is practically inaccessible in some portions. The so-called "Wilderness of Rocks" is included within the area and the entire area is within a basin about one mile wide by three miles long with a generally southwest exposure. The area is within the Marshall Gulch and Lemmon Creek drainages.

COVER

The cover consists of western yellow pine, with a scattering stand of Douglas fir, white pine, Engelmann spruce and cork-bark fir with aspen on the higher elevations; in the stream bottoms such hardwoods as sugar maple, boxelder, alders and associated types occur; on the easterly exposures, the cover is mostly of the browse type chiefly netleaf and silver leaf oak with an admixture of juniper and Arizona cypress. In all, approximately 2000 acres include conifers yielding approximately 12 ft. B.M. per acre, 400 acres of deciduous types yielding about 5 cords per acre and 1800 acres of brush types which would yield about 3 cords per acre. In fact a very wide range of native flora is contained within the area from the semi-desert to the alpine type. This timber is almost wholly inaccessible from a commercial standpoint and any management plan would of necessity eliminate this area from exploitation due to its inaccessibility. Accordingly, the setting aside of the area for the purpose indicated would not conflict with management plans existing or proposed or with any working circle in connection therewith.

LAND CLASSIFICATION

The entire area has been classified as non-forestable under the Acts of June 11, 1906 or August 10, 1912 and is chiefly valuable for forest purposes.

SPECIAL USES AND RIGHTS OF WAY

None in existence. While the demand for recreational use in the way of summer houses adjacent to this area is considerable, there is ample room for expansion on other portions of the Catalina Division for this purpose. The water power possibilities are negligible or wholly lacking.

GRAZING

The greater part of the area is closed to grazing at present by reason of the exclusion from grazing of the existing Mt. Lemmon Recreational Area. The remainder of the area has never been grazed by domestic stock as it is practically inaccessible from any point due to the topography. Accordingly the factor of grazing will not cause any disturbance to range management plans.

FIRE AND FOREST SERVICE IMPROVEMENTS

The fire hazard is high but the area is included with the fire protection system in force on the Catalina Division and Forest Service trails have been constructed within the past few years to provide for access in the event of fire. Other than possible additional trails and ways or telephone lines for protection purposes, no improvements are contemplated. Existing Forest Service improvements consist of a cabin for housing a fire guard and a fire lookout tower on Mt. Lemmon.

GAME

The entire area, and in fact, the entire Catalina Division, is within a State Game Refuge. Many deer are found within the area of the white-tail species and one of the few remaining bands of Rocky Mountain sheep are contained within or adjacent to this area.

RECOMMENDATIONS

It is recommended that the proposed rules of the Society be approved with modifications and that the area be set aside under the procedure for the dedication of recreation areas as a special measure of preservation of recreational resources under formal order by the Secretary.

There follows a draft of the proposed order:

RESERVATION FOR RECREATIONAL PURPOSES OF LANDS WITHIN THE COCHADO NATIONAL FOREST ADJACENT TO TUBSON, ARIZONA

*Pursuant to an Act of Congress directing the Secretary of Agriculture to select, classify, and segregate lands within the

Boundaries of National Forests that may be opened to homestead entry, certain lands aggregating 4,454 acres more or less within the Coronado National Forest, situated adjacent to Tucson, Arizona as indicated upon the diagram hereto attached, have been duly examined, and, being found to comprise natural resources susceptible of many public uses and possessing much scenic beauty which should be available to the public, were classified and segregated on _____ as not chiefly valuable for agriculture and therefore not subject to segregation under the Act of August 10, 1912.

It appears that these lands are not only of great value for national forest purposes but should also be permanently retained in Government ownership in order to provide for their protection, development, use and enjoyment by the general public, and can be so administered by the Forest Service without additional expense to the Government."

Approved:

January 25, 1927
(Date)

Fred Winn
Forest Supervisor

Approved:

January 26, 1927
(Date)

John D. Jones
Acting District Forester

EXHIBIT #2

SANTA CATALINA NATURAL AREA

Boundary Modification

Coronado National Forest
(Santa Catalina Ranger District)

T. 11 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

Relocation of Cor. # 1, 10 & 11

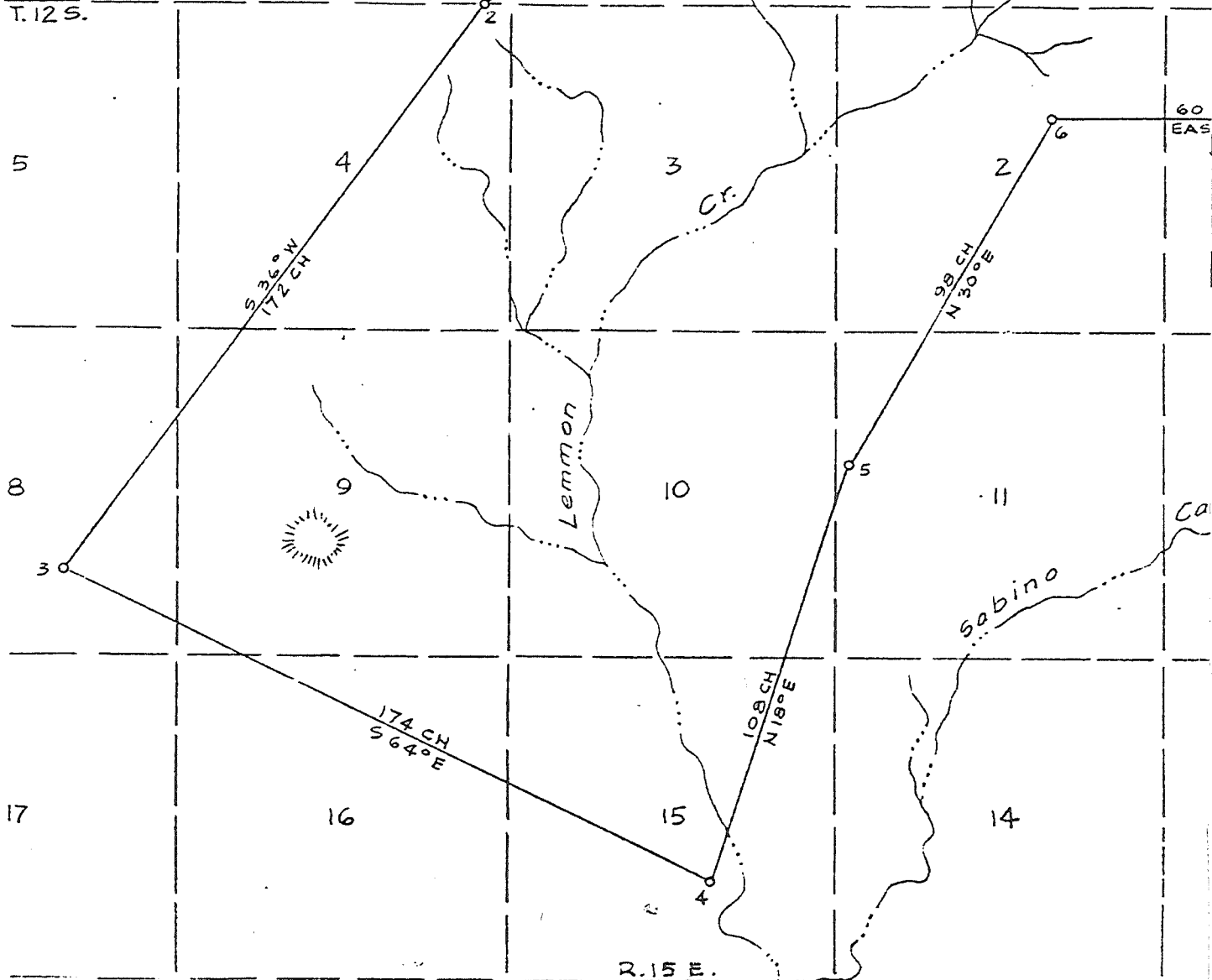
Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

U.S.G.S. 1
CATALINA
1955 RELOCATION

MT. LEMMON

T. 11 S.
T. 12 S.



4000 Research

(Prepared February 1950 Div. 22)

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon, unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

- N. 88° 30' W., 33 chains to Corner #1
- S. 50° W., 65 chains to Corner #2
- S. 36° W., 172 chains to Corner #3
- S. 64° E., 174 chains to Corner #4
- N. 18° E., 108 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- Th. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10, Thence:
- S. 7° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

REPLY TO: 2860 Withdrawal From Mineral Entry

July 18, 1973

SUBJECT: Coronado - Santa Catalina Natural Area

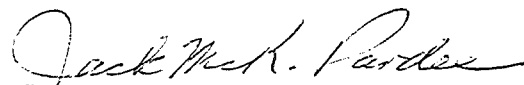


TO: Assistant Regional Forester, R&L

The large size of the proposed withdrawal makes it subject to FSM 2861.4, Discussion with Interested Groups. Responses may be expected from the Southwestern Minerals Exploration Association, and several of the exploration offices maintained in Tucson by established mining companies. Also, the Arizona Small Mine Operators Association will probably enter an adverse statement.

For the record, the various acreage figures should be reconciled now to avoid questions later. The 4,131-acre figure is used in the justification statement; however, the attached field map, dated August 21, 1959, shows 4,244 acres. According to the Secretary's land classification order of March 23, 1927, designating the natural area, it contained "4,464 acres, more or less." The Regional Office status book lists 1,064 acres of the area in T. 11 S., R. 15 E., and 3,086 acres in T. 12 S., R. 15 E. for a total of 4,150 acres.

The mineral report is enclosed for your signature.


JACK MCK. PARDEE
Chief, Minerals Branch

Enc.

B

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-3

REPLY TO: 2860 Withdrawals

June 26, 1973

SUBJECT: Santa Catalina Research Natural Area and Butterfly
Peak Research Natural Area (Ref. your ltr. 6/14/73)



TO: Forest Supervisor, Coronado

In addition to the information sent with your memorandum, we will need environmental analyses reports prepared in accordance with the outline in E.D. #1, FSM 2131.

Enclosed are copies of the memorandum from the Chief's Office concerning the Goudy Canyon Research Natural Area withdrawal. You will note that it has been returned to us for further information on the environmental analysis report and correlation of acreages.

1/3/73 Ivan L. Fish

f JOHN T. KOEN
Assistant Regional Forester
Recreation and Lands

Enclosure

xc: Coronado

DDCutler:jee

Wald

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Coronado National Forest

RECEIVED USFS
JUN 18 1973
REGION 3
RECREATION & LANDS

REPLY TO: 2860 Withdrawals

June 14, 1973

SUBJECT: Santa Catalina Research Natural Area, and
Butterfly Peak Research Natural Area



TO: Regional Forester, R-3

Enclosed are answers to paragraphs (1) - (11) of 43 CFR 2311.1-1 and
a Draft Justification Statement for withdrawal of the Santa Catalina
and Butterfly Peak Research Natural Areas.

Charles R. Ames
CHARLES R. AMES
Acting Forest Supervisor

Enclosures

R & L		Information	Action	Initials
ARF	John T. Koen			
MAKES	R. C. Gandy			
Exc.	AGC			
	FCG			
	ECU			
Civ.	JMS			
	HCR			
Stat	WRP			
	ER			
Min.	JMP			
REC.	M. L. Safran			
Rec.	TAR			
	DMD			
	WEP			
	JLH			
	CRJ			
L.A.	IIF			
	DAF			
	KBL			
S.U.	ERT			
	RWB			
Adm. S.	MM			

2860 Withdrawal from Mineral Entry
Coronado N. F. - R-3;
Santa Catalina Research Natural Area

Answers to Paragraphs (1)-(11) of 43 CFR ^{2351.2} 2311.1-1
Bureau of Land Management (where applicable)

1. Applicant Agency - Department of Agriculture, Washington, D.C.
Using Agency - Forest Service, Coronado
National Forest.
2. Land Descriptions - Enclosed.
3. Act of February 28, 1958 - Not applicable here.
4. Gross and Net Acreage - 4,131 acres.
5. Purpose - Research natural area.
6. Contamination - No increase will be caused by this use.
7. Tenure - Permanent.
8. Effect of Use - The area will be utilized only to the extent
that is consistent with the natural area.
9. Use of Water - The right to use of water for National Forest
purposes on lands described in this proposal
for withdrawal was reserved to the United States
upon establishment of the Santa Catalina Forest
Reserve in 1902 which was later incorporated
with other Forest Reserves to become the
Coronado National Forest.
10. Justification - Statements enclosed.
11. Authority - Executive Order 10355 of May 26, 1952
(17 F.R. 4831).

Jan 13 - 1973
 REGION 3
 RECREATION & LANDS

UNITED STATES DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 Washington, D.C. 20250

2860
 REPLY TO: Withdrawal from Mineral Entry

June 8, 1973

SUBJECT: Goudy Canyon Research Natural Area
 Coronado National Forest



TO: Regional Forester, R-3

Enclosed is the application for withdrawal from mineral entry of the Goudy Canyon Research Natural Area in the Coronado National Forest.

An environmental analysis report (E.D. No. 1, FSM 2131) includes a summary sheet as well as the body of the report. The Manual provides that the general outline in the Emergency Directive will be followed. The analysis report you submitted seems to combine some of the summary sheet information into the body of the report and omit other summary information. Item VII on the summary sheet, "Significant Environmental Impact" has been omitted. An answer to whether or not a significant environmental impact will occur must be clearly shown.

The acreage mentioned in the environmental analysis report (600A) does not agree with that in the mineral examiners report (560A) or the Answers to Paragraphs (1)-(11) of 43 CFR 2351.2 Bureau of Land Management (where applicable) (560A) portion of the withdrawal.

Please resubmit your application for withdrawal with all of the information required by the summary sheet in the environmental analysis report and resolve the discrepancy in the number of acres involved.

T. B. Glazebrook
 T. B. GLAZEBROOK
 Director of Watershed Management

Enclosure

R & L		Information	Status	Initials
ARP	John T. Keen			
LANDS	R. C. Gentry			
Exc.	AG			
	FWG			
	WCI			
Cls.	WCI			
	WCI			
	WCI			
Stat	DRP			
	FR			
Min.	JMP			
REC.	R. J. Soeran			
Rec.	WCI			
	WCI			
	WCI			
	JEM			
	CEP			
L.A.	ILF			
	DRP			
	LVC			
S.U.	DRP			
	RCP			
Adm. S.	WCI			
	WCI			

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R. O.

REPLY TO: 2860 withdrawal from Mineral Entry

October 3, 1972

SUBJECT: Research Natural Areas

TO: Forest Supervisor, Coronado N. F.



Enclosed is a copy of Washington Office memorandum of January 18, 1971, requesting that action be taken to initiate withdrawal from mineral entry for designated Research Natural Areas.

Please prepare and submit applications necessary to withdraw the below-listed Natural Areas from mineral entry under authority of E. O. 10355, 6/26/52 (17 F.R. 4831):

Butterfly Peak Natural Area
Pole Bridge Canyon Natural Area
Santa Catalina Natural Area

The applications should be submitted in rough draft and conform to Forest Service Manual instructions. Copies of reports and orders for the above areas are enclosed for your information.

JOHN T. KOEN

JOHN T. KOEN
Assistant Regional Forester
Division of Recreation and Lands

Enclosures

3cc: 4060 File

EReed:er

Rel
WP
E.A.

WO

RECEIVED USES

REPLY TO: 4060 Research Facilities

JAN 29 1971

JAN 18 1971

*all
 copy*

SUBJECT: Research Natural Area Establishment Reports

REGION 3
 RECREATION & LANDS



TO: Regional Foresters and Directors (except FPL)

Three small changes are needed in FSM 4063 to bring it up to date. Under 4063.5 - Procedure for Establishment, the second paragraph should be amended to delete "and Land Uses" from the line "... for approval by the Director, Division of Recreation and Land Uses...".

The second change is in 4063.51.3 - Designation Order. The first line of the Designation Order should be revised to read, "By virtue of the authority vested in me by the Secretary of Agriculture under 36 CFR 251.23, I hereby designate as the ...". ^{1/}

Finally, FSM 4063.49 - Mineral Entry reads "Research natural areas should be withdrawn from mineral entry (FSM 2762)." The parenthetical reference should be changed to "(FSM 2860)".

We are taking steps to amend the Forest Service Manual to reflect these changes. Please make the necessary corrections in any Research Natural Area establishment reports you may be preparing.

We also take this opportunity to urge prompt action to initiate withdrawal from mineral entry procedures for all existing Research Natural Areas where withdrawal is possible.

R. Keith Arnold

R. KEITH ARNOLD
 Deputy Chief

*done 2/3/71
 KAC*

WDC has this portion of Manual.

		Ini- tials
APP. <i>John T. Koon</i>		
Landownership		
Land Classif. and Status		<i>WDC</i>
Minerals and Uses		
Recreation		
Landscape Architecture		
Chief Clerk		

^{1/} The regulation, expanded, is Title 36, Section 251.23 of the Code of Federal Regulations.

MODIFICATION OF LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands Within the
Santa Catalina Mountains, Coronado National Forest

WHEREAS by land classification order dated March 23, 1927, the Acting Secretary of Agriculture gave public notice that certain lands adjacent to the Mt. Lemmon Recreational Area, in unurveyed sections, containing 4,444 acres, more or less, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were designated as the Santa Catalina Natural Area, and that all national forest lands therein should be so managed as to permit scientific studies of the forest growth by the Natural History Society of Tucson, Arizona, and other like scientific organizations; and

WHEREAS it is desired to modify said land classification order by correcting errors in the original survey, eliminating that portion of the natural area needed and used by the Department of Defense (Air Force) for radar purposes in the interest of national defense and other special use permits, and establishing the boundary using geographic features to enhance administrative and protection requirements; and

WHEREAS the modification will simplify administration and protection and promote the most useful purposes of natural area establishment;

NOW, THEREFORE, the aforesaid land classification order dated March 23, 1927, is hereby modified and amended to include in the Santa Catalina Natural Area certain lands located in unurveyed sections 34, 35 and 36, T. 11 S., R. 15 E., and unurveyed sections 1, 2, 3, 4, 8, 9, 10, 11, 15 and 16, T. 12 S., R. 15 E., C. & S.R.R.A.M., containing 4,121 acres, as shown on the attached map designated "Santa Catalina Natural Area Boundary Modification, S/21/58." Corner number 11 as designated on the attached map is the Lemmon Peak Lockout. The new corners numbered 1 and 10 are marked on the ground with appropriately stamped steel stakes and witness trees.

In all other respects the aforesaid land classification order remains unchanged.

In Testimony Whereof, I have hereunto set my hand at Washington, D.C., this 14th day of June, 1962.

Orville L. Freeman
SECRETARY

I
Classification-Coronado
Santa Catalina Natural Area

LAND CLASSIFICATION ORDER

Designation for Retaining in Natural Condition Lands within the
Santa Catalina Mountains, Coronado National Forest.

Pursuant to the Act of Congress of August 10, 1912 (37 Stat., 287), directing the Secretary of Agriculture to select, classify, and segregate lands within the boundaries of National Forests that may be opened to homestead entry, certain lands adjacent to the Mt. Lemmon Recreational Area, in unsurveyed Sections 25, 26, 34, 35 and 36, T. 11 N., R. 15 E., and unsurveyed Sections 2, 3, 4, 9, 10, 11 and 15, in T. 12 N., R. 15 E., G. & C. R. N., containing 4,654 acres, more or less, as shown by a survey made by Forest Ranger J. A. Frierhorn in July, 1926, located in the Santa Catalina Mountains, within the Coronado National Forest, Arizona, were duly examined, classified and segregated as not being chiefly valuable for agriculture and, therefore, not subject to segregation under said Act.

It now appears that these lands are not only of value for timber production and streamflow protection, but also that they contain cover of such a character that it would be in the public interest to keep this in its present status in so far as practicable, to the end that the flora may be made the subject of study by the Natural History Society of Tucson, Arizona, and other like scientific organizations.

Now, therefore, I, R. W. Dunlap, Secretary of Agriculture, do hereby give public notice that the above-mentioned area is hereby designated as the Santa Catalina Natural Area and that all National Forest lands therein shall be so managed as to permit scientific studies of the forest growth. The administration and use of this area shall be governed by the spirit of this order and no use shall be allowed or permitted that will interfere with the broad public purposes herein set forth.

In Testimony Whereof, I have hereunto set my hand and official seal at Washington, D. C., this 23rd day of March, 1927.

Secretary's Fin. Secy.
(Signed)

R. W. Dunlap
R. W. Dunlap, Secretary of Agriculture.

(Seal)

Orig. 1 copy sent Coronado

III. Summary

- A. The present and future use of this area to be withdrawn is higher for recreation and scientific study than for minerals.
- B. The area is not adequately protected by Public Law 167 (69 Stat. 367 30 U.S.C. 601 et seq.) and would be significantly disrupted by mining location or mining activities.
- C. The acreage requested is reasonable in terms of present and expected use.

Answers to Paragraphs (1)-(11) of 43 CFR 2311.1-1
Bureau of Land Management (where applicable)

1. Applicant Agency - Department of Agriculture, Washington, D.C.
Using Agency - Forest Service, Coronado National Forest.
2. Land Descriptions - Enclosed.
3. Act of February 28, 1958 - Not applicable here.
4. Gross and Net Acreage - 4,131 acres.
5. Purpose - Research natural area.
6. Contamination - No increase will be caused by this use.
7. Tenure - Permanent.
8. Effect of Use - The area will be utilized only to the extent that is consistent with the natural area.
9. Use of Water - The right to use of water for National Forest purposes on lands described in this proposal for withdrawal was reserved to the United States upon establishment of the Santa Catalina Forest Reserve in 1902 which was later incorporated with other Forest Reserves to become the Coronado National Forest.
10. Justification - Statements enclosed.
11. Authority - Executive Order 10355 of May 26, 1952
(17 F.R. 4831).

D.F.

Under the rules governing "recreation in relation to National Forest Management" issued early in 1923, page 3, under the caption "Special forms of Dedication for Preservation of Recreational Resources," I believe this area can and should be withdrawn as a "National Area."

Fortunately the area has been pretty well protected for several years, being within the boundaries of the Catalina Game Refuge and forming a part of the Sabino Canyon watershed on which grazing is already prohibited.

I recommend approval of this withdrawal.

Very truly yours,


C. W. MCKENZIE, Acting Forest Supervisor.

TENTATIVE RULES, SANTA CATALINA NATURAL AREA

(U. S. Forest Service and Tucson Natural History Society, sponsors).

The area shall be known as the Santa Catalina Natural Area.

The bounds of the area shall be as indicated on the accompanying map.

It is agreed that the area may at any time be inclosed with a fence of construction suitable to keep out livestock either by the U. S. Forest Service or the Tucson Natural History Society or both.

Grazing by any kind of domestic livestock shall be absolutely prohibited on the area.

No buildings shall be erected on the area.

No roads shall be constructed on the area without the written consent of both the U. S. Forest Service and the Tucson Natural History Society.

Only such trails and telephone lines shall be built ~~and~~ and maintained on the area as are necessary for purposes of administration and protection of the area from fire.

No firearms shall be carried on the area except under seal or special permit.

No hunting, trapping nor fishing, except under permit for predatory animals or for the collection of scientific specimens, shall be allowed on the area; it is the object of the area to maintain the original conditions of the region as far as possible undisturbed for any reason whatever.

There shall be no cutting of trees or shrubs, or clearing away of logs, snags, brush or any other modification of the original conditions, except as necessary for fighting fires.

Extraordinary care must be exercised to protect the area, which, as the years go by, will be increasingly valuable as a scientific natural object lesson, from the ravages of fire.

Suitable signs, with the name of the area, and bearing the following or similar instructions, shall be posted at all points of entrance of trails into the area:

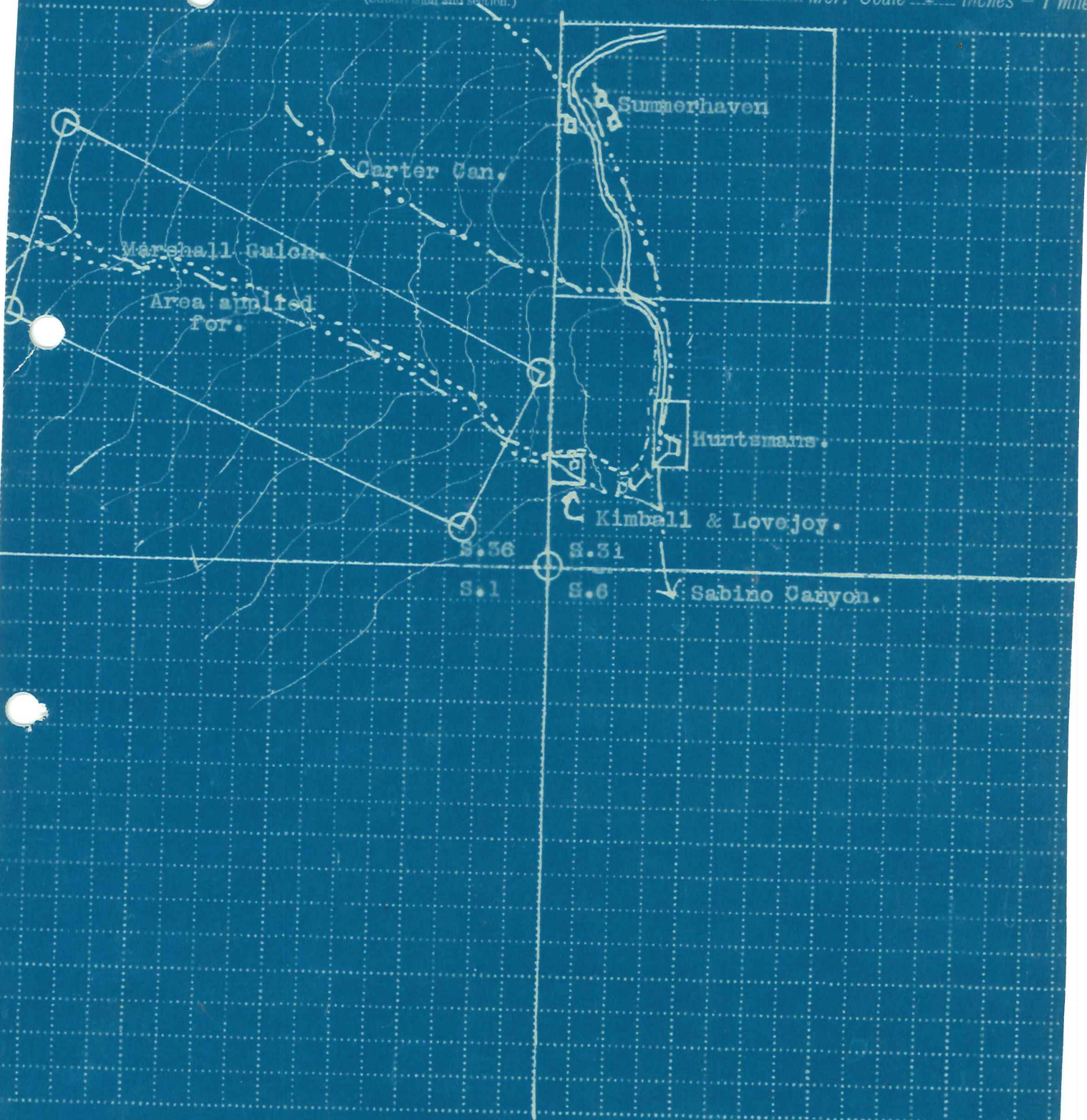
SANTA CATALINA NATURAL AREA

"For the preservation of natural conditions undisturbed for all time. Designed for study by foresters, livestock men, naturalists, scientists, and the general public. Please give us your cooperation in being especially careful with fires, and by leaving the soil, rocks, plants, animals, and all other modifiable features in an undisturbed and natural condition."

FOREST SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE

TUCSON NATURAL HISTORY SOCIETY

L. Phoenix Land District. Mag. Declin. 15°30' Area 200 appx. Acres
Uses-Coronado, Santa Catalina Natural Area. Sec 36
(Case designat.) (Subdivision and section.) T. 11S R. 14 E. Mer. Scale 4 inches = 1 mile



Field work by McKenzie & Frieborn. Date September 16/25 Platted by

Remarks: This area includes the entire watershed of Marshall Gulch.

NOTES OF SURVEY
 on
 SANTA CATALINA NATURAL AREA, CORONADO NATIONAL FOREST.

#3

Beginning at U.S.G.S. Bench Mark on Mt. Lemmon in unsurveyed
 Sec. 26 T. 11 S. R. 15 E. G. & S.R.M. which also serves
 as Station No. 1.

Thence S. 46 deg. W. 120 chains to	Station #2
Thence S. 36 " W. 172 " "	" #3
Thence S. 64 " E. 174 " "	" #4
Thence N. 18 " E. 108 " "	" #5
Thence N. 30 " E. 98 " "	" #6
Thence East - - - - 60 " "	" #7
Thence North - - - - 90 " "	" #8
Thence N. 65 deg. W. 35 " "	" #9
Thence N. 82 " W. 88 " "	place of beginning.

Containing 4464 Acres more or less.
 Scale 2" to 1 mile -- Variation, 13 deg. 30' E.
 July 1926. Ranger J. A. Frieborn, Ass't Ranger A. D. Melchon,
 Surveyors.

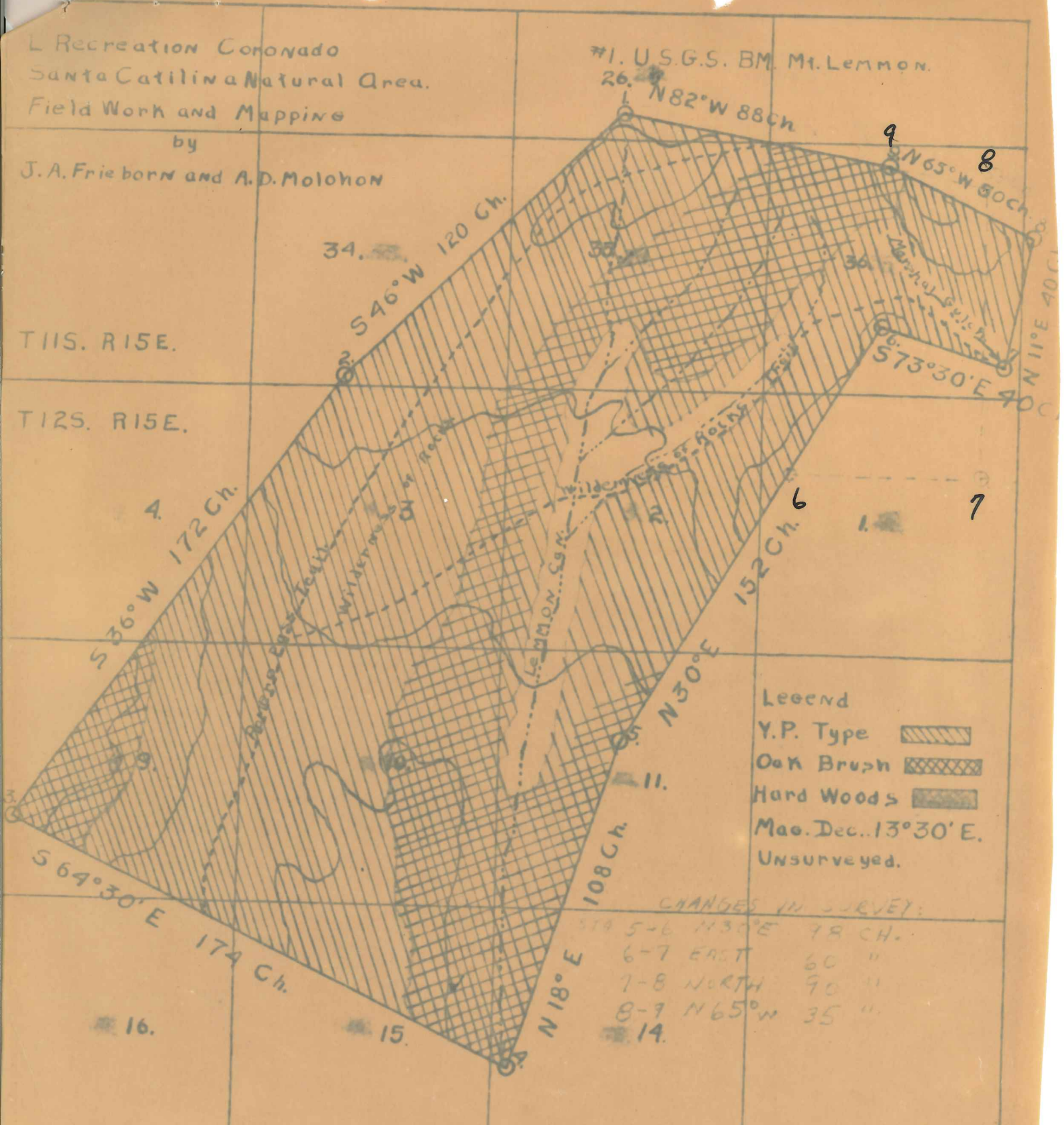
L Recreation Coronado
 Santa Catalina Natural Area.
 Field Work and Mapping

by
 J. A. Frieborn and A. D. Molohon

T11S. R15E.

T12S. R15E.

#1. U.S.G.S. BM. Mt. Lemmon.



Legend

- Y.P. Type
- Oak Brush
- Hard Woods
- Mag. Dec. 13° 30' E.
- Unsurveyed.

CHANGES IN SURVEY:

5-6	N 30° E	78 Ch.
6-7	EAST	60 "
7-8	NORTH	90 "
8-9	N 65° W	35 "

AREA OF THIS ENCLOSURE IS APPROX. 4,195 ACRES
 APPARENTLY WAS ADJUSTED LATER AS PER
 ATTACHED SHEET. AREA OF ENCLOSURE ON
 ATTACHED SHEET - 4464 ACRES. (DMD) FAR

NOTES OF SURVEY

on

SANTA CATALINA NATURAL AREA, CORONADO NATIONAL FOREST.

Beginning at U.S.G.S. Bench Mark on Mt. Lemmon in unsurveyed
 Sec. 26 T. 11 S. R. 15 E. G. & S.R.M. which also serves
 as Station No. 1.

Thence S. 46 deg. W. 120 chains to Station	#2
Thence S. 36 " W. 172 " " "	#3
Thence S. 64 " E. 174 " " "	#4
Thence N. 18 " E. 108 " " "	#5
Thence N. 30 " E. 98 " " "	#6
Thence East - - - - 60 " " "	#7
Thence North - - - - 90 " " "	#8
Thence N. 65 deg. W. 35 " " "	#9
Thence N. 82 " W. 88 " " "	place of beginning.

Containing 4464 Acres more or less.

Scale 2" to 1 mile -- Variation, 13 deg. 30' E.

July 1926. Ranger J. A. Frieborn, Ass't Ranger A. D. Melchon,
 Surveyors.

L Recreation Coronado
 Santa Catalina Natural Area.
 Field Work and Mapping

by

J. A. Frieborn and A. D. Molohon

T11S. R15E.

T12S. R15E.

#1. U.S.G.S. BM. Mt. Lemmon.

26. N82°W 88Ch

9
8

N65°W 50Ch

N11°E 40Ch

S73°30'E 40Ch

34. S46°W 120 Ch.

4. S36°W 172 Ch.

6
152 Ch.




7

3. S64°30'E 174 Ch.

11. N18°E 108 Ch.

5. N30°E

Legend

- Y.P. Type 
- Oak Brush 
- Hard Woods 
- Mac. Dec. 13°30'E.
- Unsurveyed.

CHANGES IN SURVEY:

- 5-6 N30°E 98 Ch.
- 6-7 EAST 60 "
- 7-8 NORTH 90 "
- 8-9 N65°W 35 "
- 14.

16.

15.

AREA OF THIS ENCLOSURE IS APPROX. 4,195 ACRES
 APPARENTLY WAS ADJUSTED LATER AS PER
 ATTACHED SHEET. AREA OF ENCLOSURE ON
 ATTACHED SHEET - 4464 ACRES. (DMD) JHR

Recreation Coronado
 Santa Catalina Natural Area.
 Field Work and Mapping

by

J. A. Frieborn and A. D. Molohon

#1. U.S.G.S. BM. Mt. Lemmon

26. N82°W 88 Ch.

9. N65°W 50 Ch.

34. S46°W 120 Ch.

66. S73°30'E 400

T. 6S. R. 15E.


T. 12S. R. 15E.

4. S36°W 172 Ch.

Legend

Y.P. Type 

Oak Brush 

Hard Woods 

Mag. Dec. 13°30' E.

Unsurveyed.

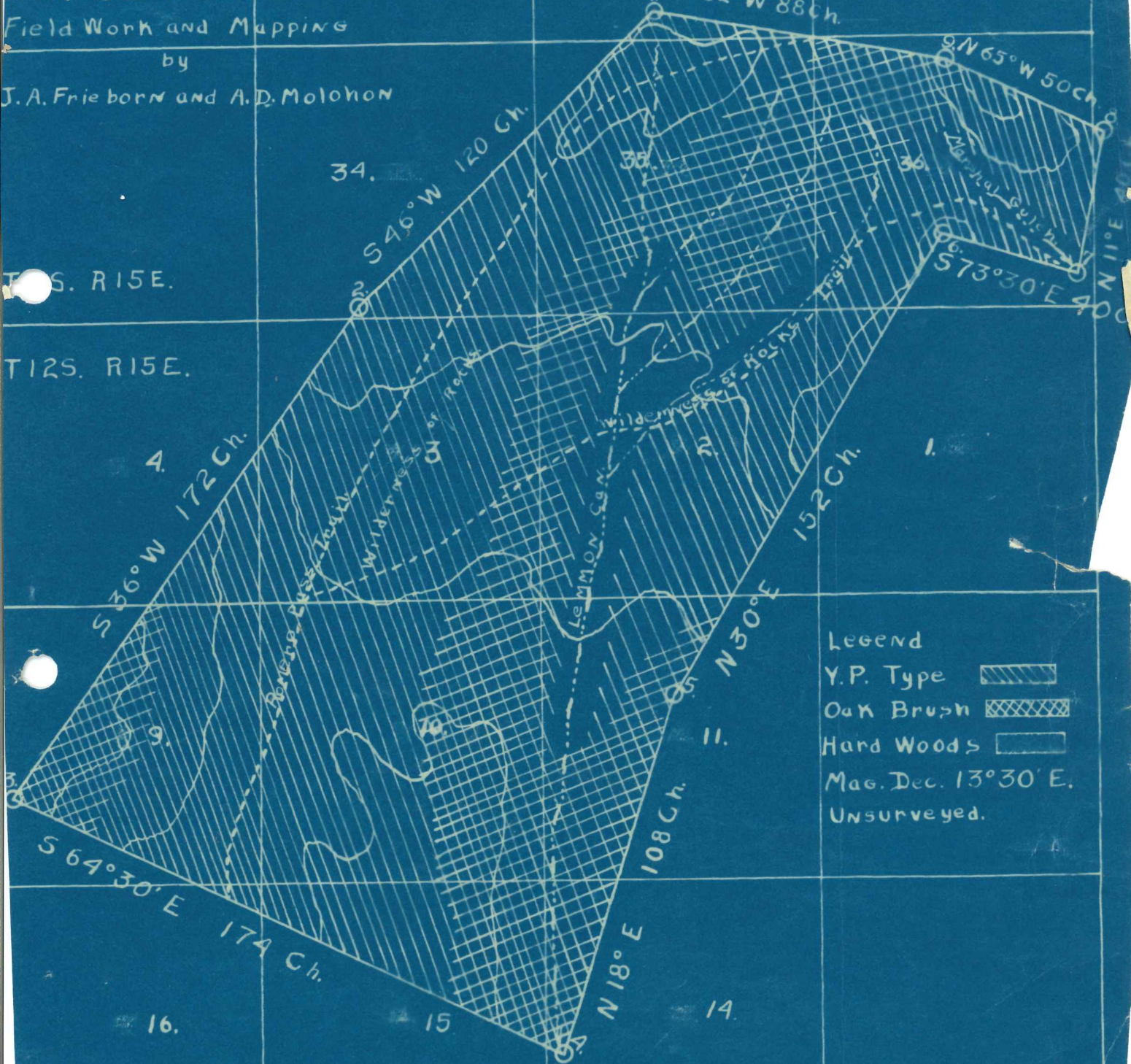
3. S64°30'E 174 Ch.

11. N30°E 152 Ch.

16.

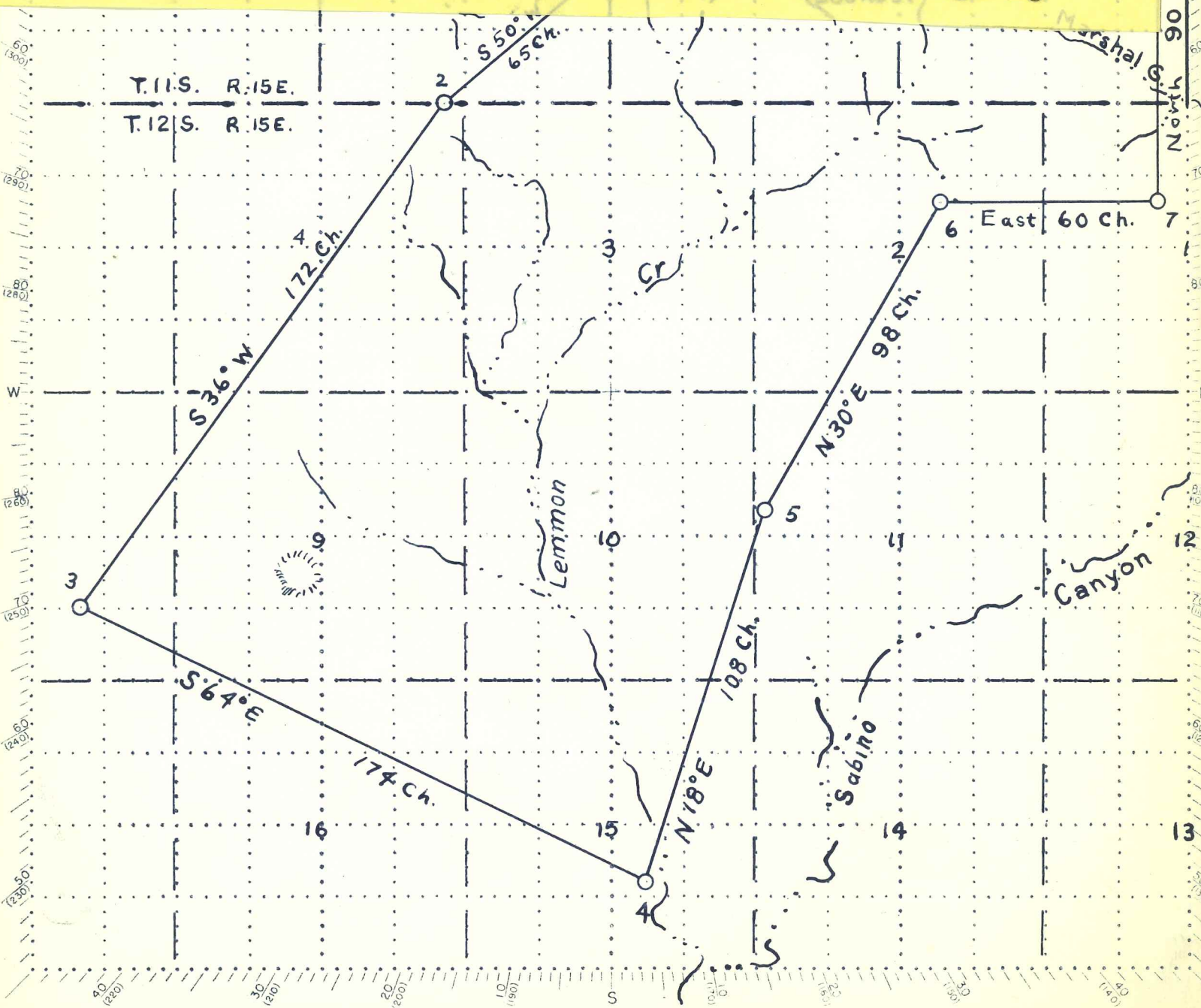
15

14.



The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 re-location) on Mt. Lemmon in unreserved Sec. 26, T. 11S., R. 15 E., SB&M:

- Thence S. 7° W, 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area
- Thence N. 88° 30' W, 33 chains to Corner #1
- Thence S. 50° W, 65 chains to Corner #2
- Thence S. 36° W, 172 chains to Corner #3
- Thence S. 64° E, 174 chains to Corner #4
- Thence N. 18° E, 108 chains to Corner #5
- Thence N. 30° E, 98 chains to Corner #6
- Thence E. 60 chains to Corner #7
- Thence N. 90 chains to Corner #8
- Thence N. 65° W, 35 chains to Corner #9
- Thence S. 86° 30' W, 36 chains to Corner #10
- Thence S. 54° 30' W, 57 chains to Lemmon Rock Lookout, the point of beginning.



Field work by Relocation of Cor. #1, 10, + 11 Dat 8/21/59
by J. Waters and W. Nelson

Platted by J.W.W.

Remarks

Approved

Form 878a
(Rev. May 1948)

MODIFICATION REPORT FOR THE SANTA CATALINA NATURAL AREA

The Santa Catalina Natural Area is located within the Coronado National Forest, Pima County, Arizona, and was established by land classification order signed by Acting Secretary of Agriculture, R. W. Dunlap, March 23, 1927.

Purpose of the modification is to eliminate that portion of the Natural Area invaded by the Department of the Air Force and other special use permittees and to establish a new boundary using the rough terrain to discourage future encroachment. The modification will not affect the purpose for which the area was established. The change was discussed and agreed to on the ground by Ranger John W. Waters with Roger D. Morris, Secretary of the Tucson Natural History Society.

Field work for the modification was done by Ranger Waters and Assistant Ranger William D. Nelson. The new area shown on the attached map, designated Santa Catalina Natural Area, Boundary Modification, 8/21/59, is located in unsurveyed Sections 34, 35 and 36, T 11 S, R 15 E, and unsurveyed Sections 1, 2, 3, 4, 8, 9, 10, 11, 15 and 16 in T 12 S, R 15 E, G S & R M and will contain 4,131 acres (area calculated by the Double Meridian Distance method). Corner #11 is the Lemmon Rock Lookout. The new corners #1 and #10 are marked on the ground with appropriately stamped steel stakes with witness trees.

The modification will simplify administration and protection.

The Tucson Natural History Society agrees with this modification and no public opposition is contemplated.

I recommend the proposed modification.

1/13/59
Date

J. H. Richardson
Forester

APPROVED:

1/13/59
Date

J. H. Richardson
Forest Supervisor

Date

Director

Date

Regional Forester

SUMMER RAINFALL OVER THE SANTA CATALINA MOUNTAINS¹

Louis J. Battan and Christine R. Green
The University of Arizona
Tucson, Arizona 85721

During the summers of the years 1957 through 1960 the Institute of Atmospheric Physics of the University of Arizona operated a network of 29 recording rain gages distributed over the Santa Catalina Mountains. The locations of the gages are shown in Figure 1. The rainfall data were being collected for the evaluation of a series of cloud seeding experiments (See Battan, 1966)².

After the first set of measurements, some rain gages were moved and six more stations were added. The new network was composed of 35 gages located as shown in Figure 2. Measurements were made during three summers, 1961, 1962 and 1964.

For the most part the rainfall was from showers and thunderstorms of a local nature. The clouds generally formed over the mountain ridges in the late morning and early afternoon, rained during the afternoon and evening and then dissipated. Occasionally the area experienced a wide-spread rainstorm associated with an easterly wave or a dissipating west Pacific hurricane.

This brief report has been written to summarize some features of the average summer rainfall over the mountains.

¹Research supported in part by the National Science Foundation under Grants GP-3884 and GA-310.

²Battan, L. J., 1966: Silver iodide seeding and rainfall from convective clouds. J. Appl. Meteor., 5, 669-683.

Figure 3 shows a plot of the average daily, July and August, rainfall at each station operated over the seven-year period. The quantity in parentheses indicates the number of years of record. As would be expected there is a high correlation with station altitude. The rainfall above the 8,000 foot elevation was about 0.18 inches/day which was about twice as large as the rainfall in surrounding lowlands at elevations below 4,000 feet.

Figures 4 and 5 give the average 12-hourly summer rainfall during the periods 0801-1900 MST and 1901-0800 MST, respectively. The first map, which can be called the "daytime precipitation" again shows an excellent correlation with elevation, highest rainfall being at highest elevation. The nighttime rainfall was less than that during the day and the maxima were somewhat shifted towards regions of lower elevation.

The relationships of elevation to the mean rainfall and the coefficient of variation of rainfall (i.e., the mean divided by the standard deviation) are illustrated in Figures 6 and 7, respectively. The pronounced relationship of altitude and precipitation amount is evident. There also is a small but distinct increase of the coefficient of variation with altitude. The variance of the daily rainfall increased with altitude, but by a smaller amount than the increase in mean rainfall.

Figure 8 shows the change of hourly rainfall as a function of time of day for rainfall data collected during the years 1957 to 1960. There is a distinct minimum in the early morning hours and a pronounced maximum during the late afternoon and evening. A smaller secondary maximum is evident at about midnight. It is not clear if this maximum was a

peculiarity of the particular four years of record or a common feature. This point needs to be checked by an analysis of additional data.

It is also seen in Figure 8 that rainfall at stations at lower elevations lagged some two to three hours behind rainfall at higher stations.

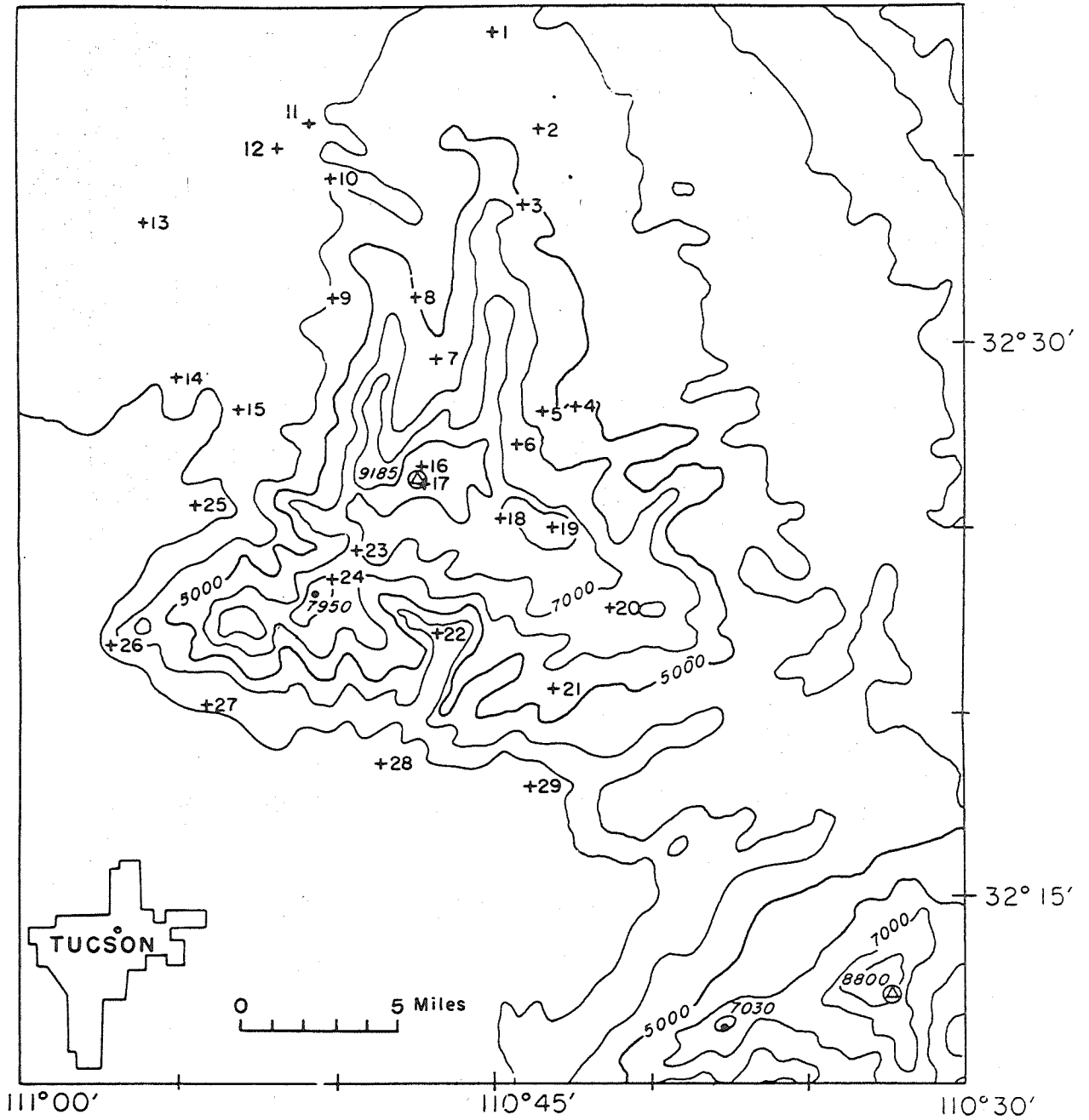


Figure 1

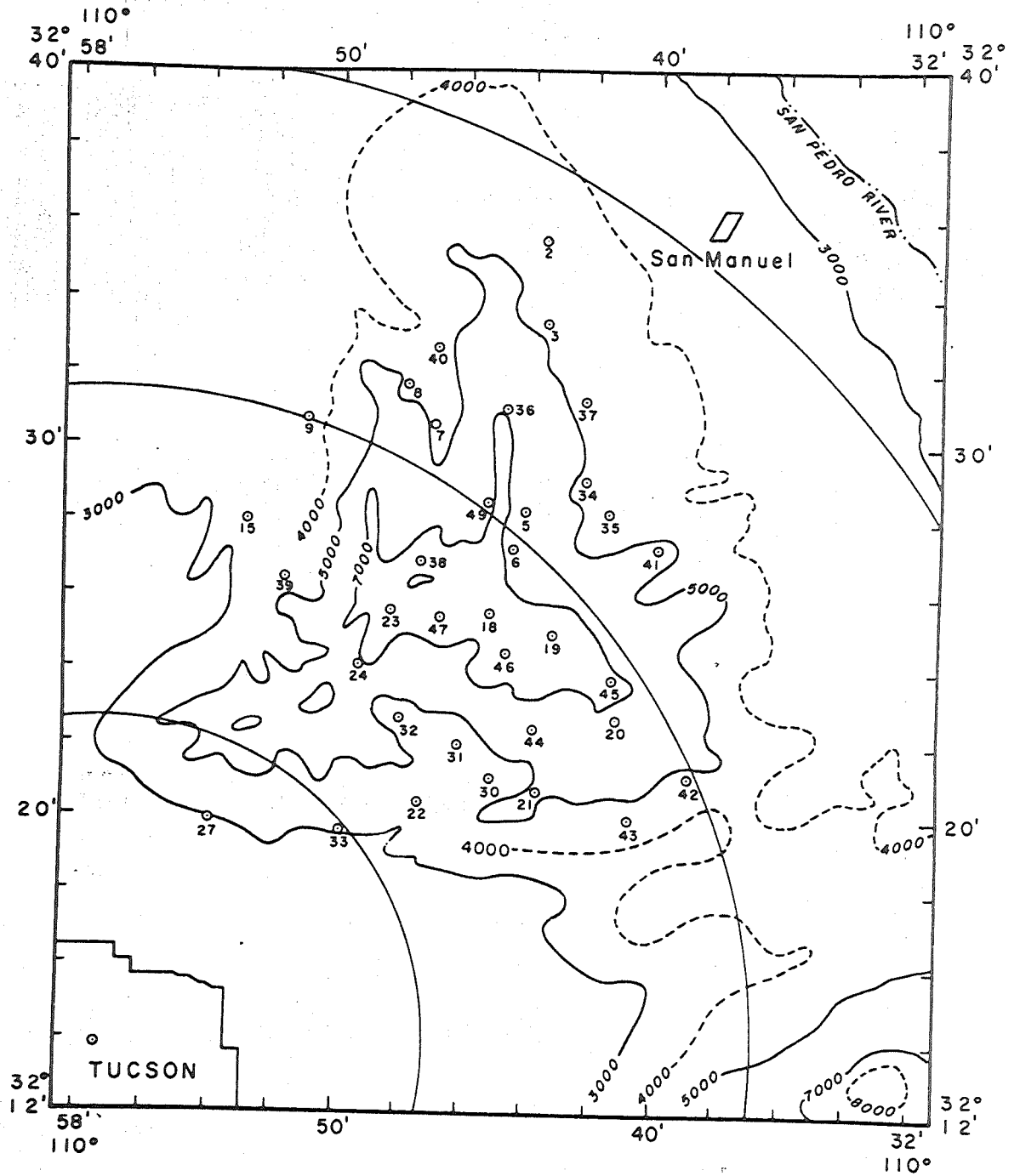


Figure 2

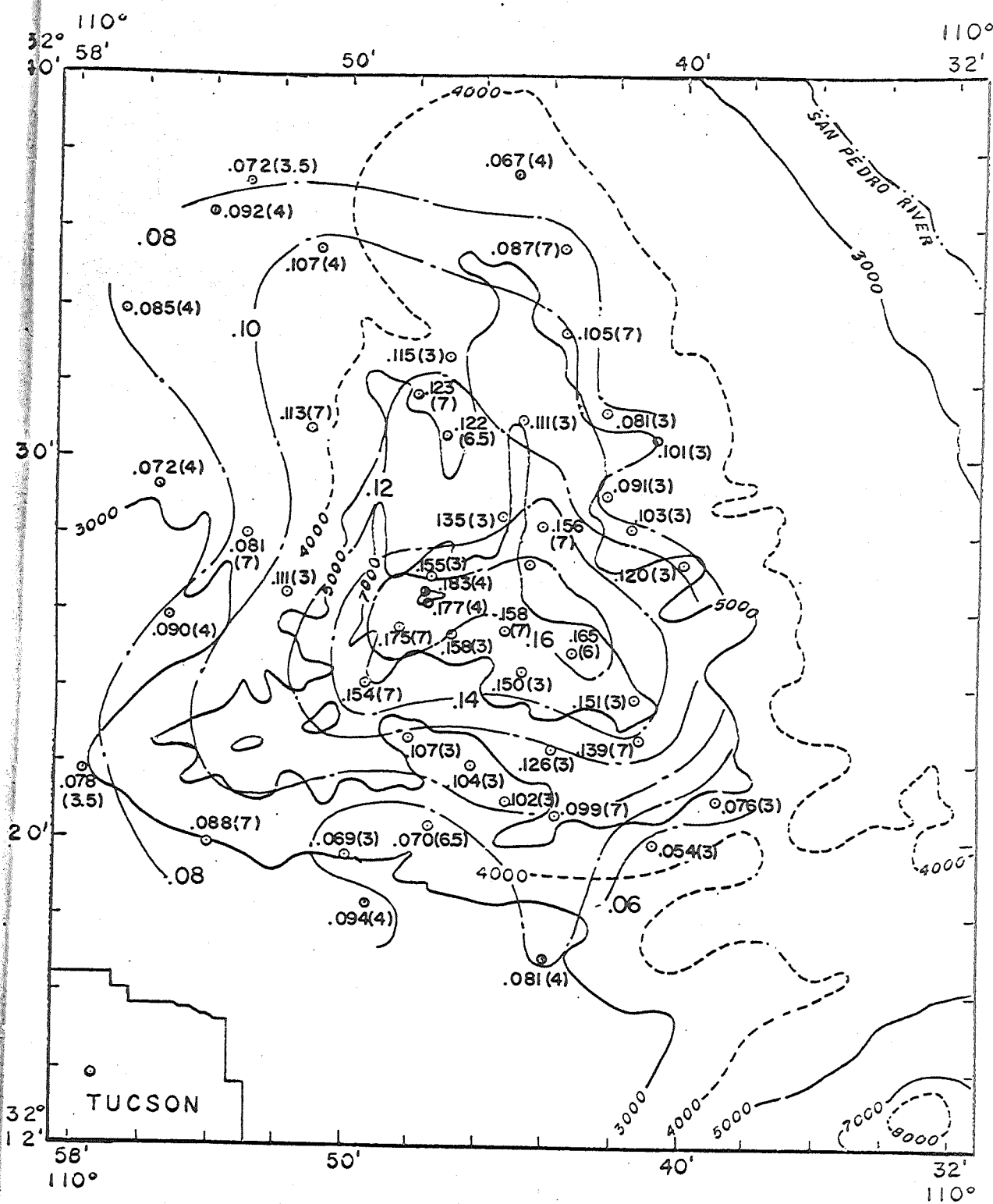


Figure 3

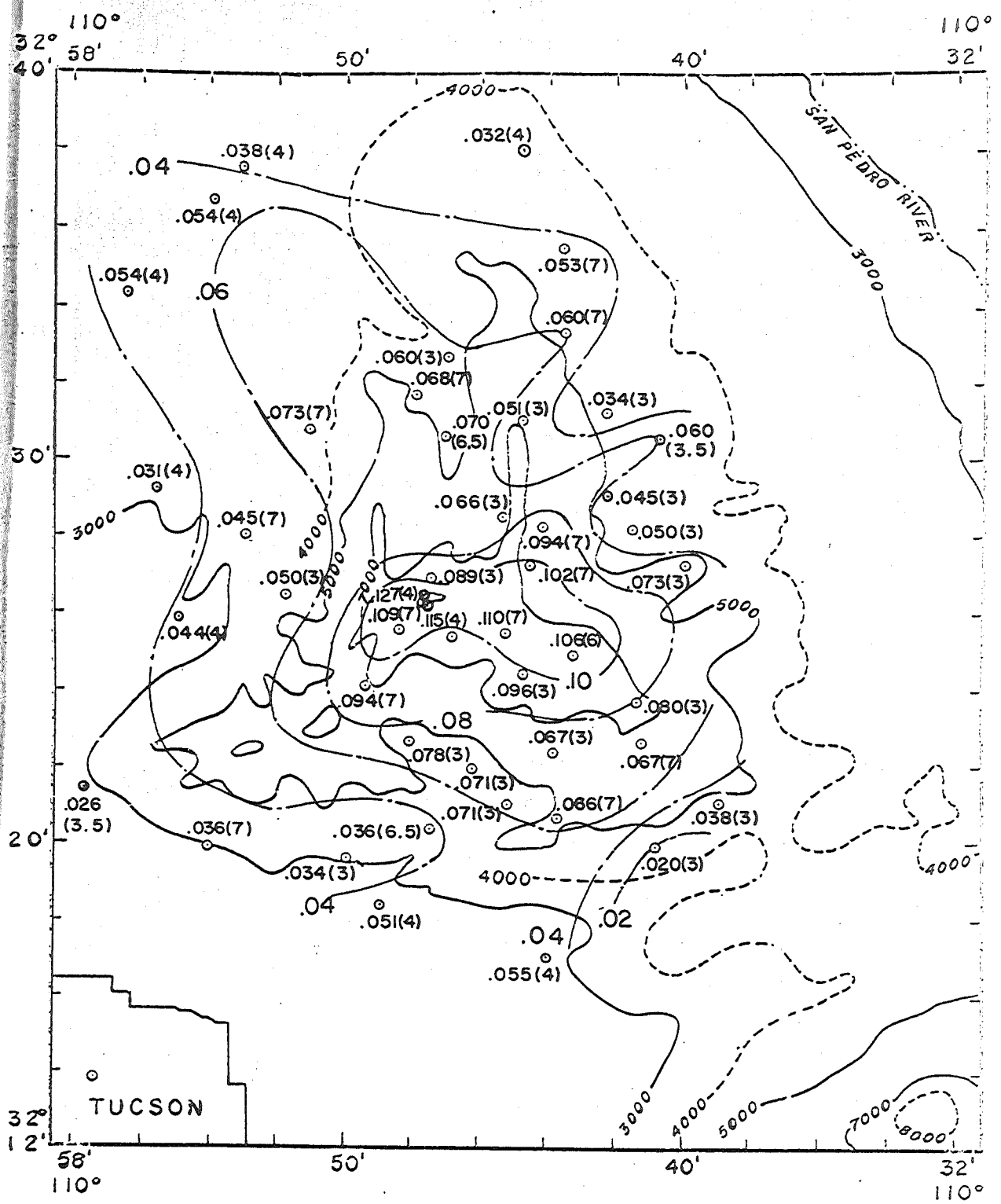


Figure 4

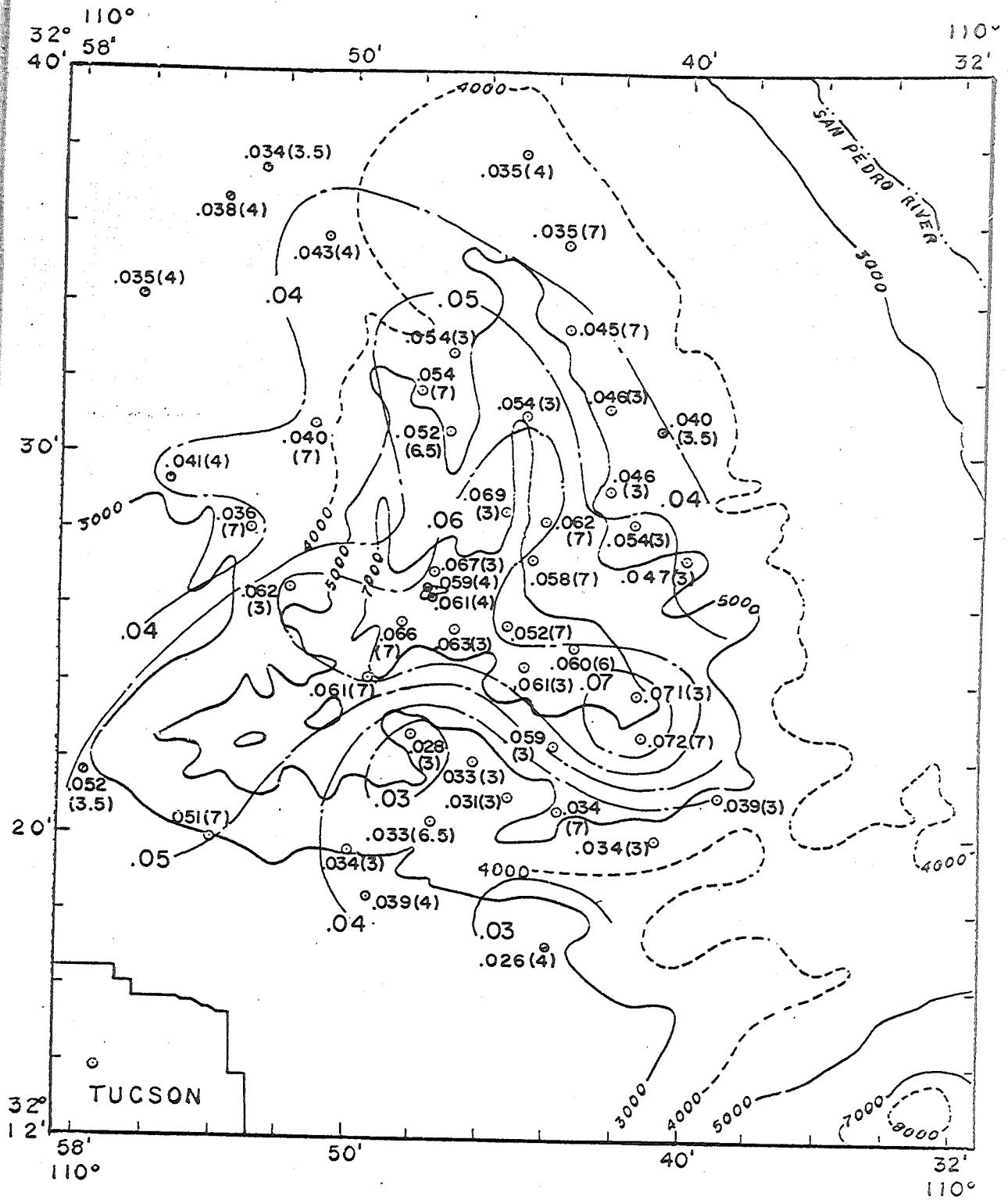


Figure 5

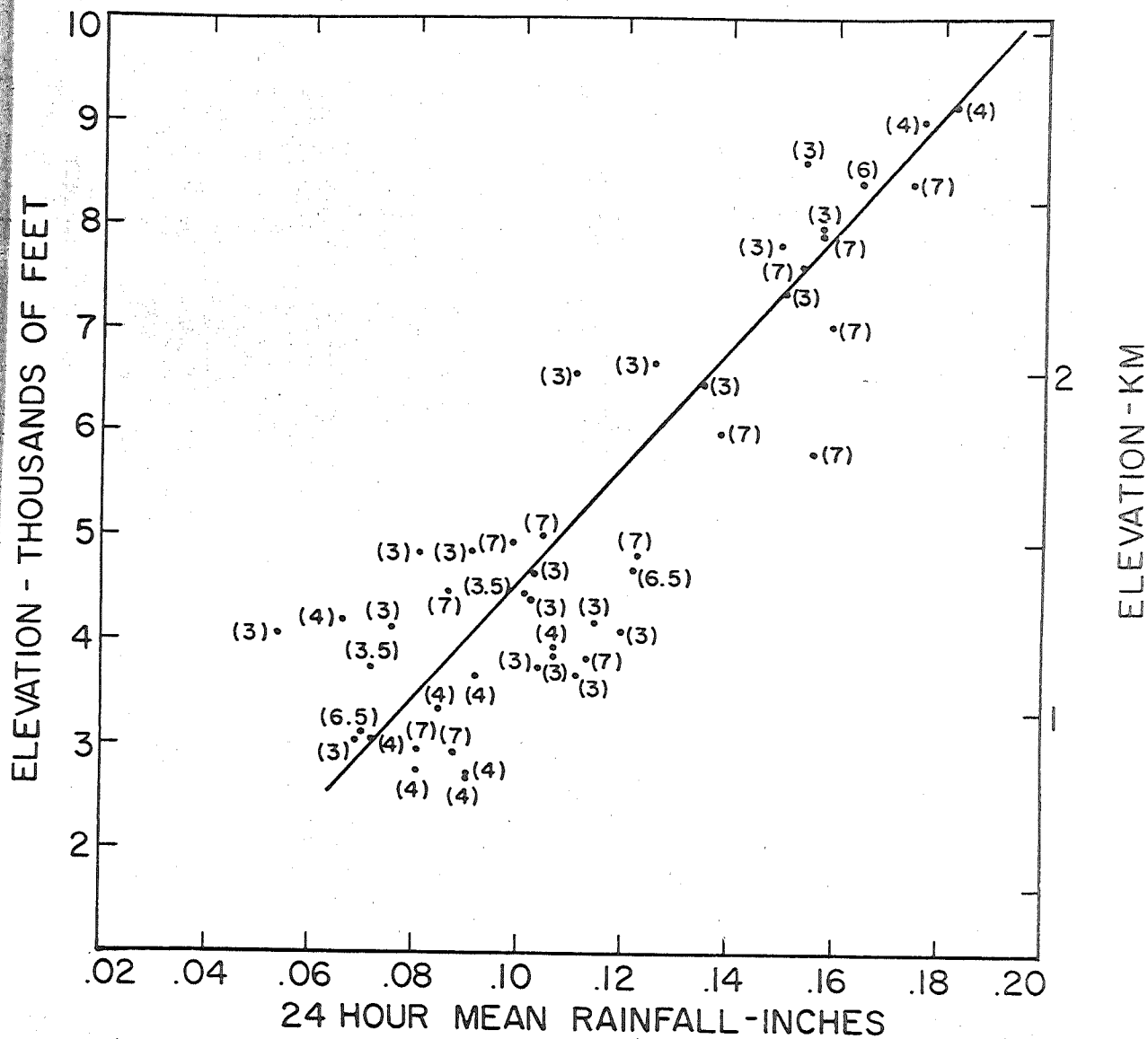


Figure 6

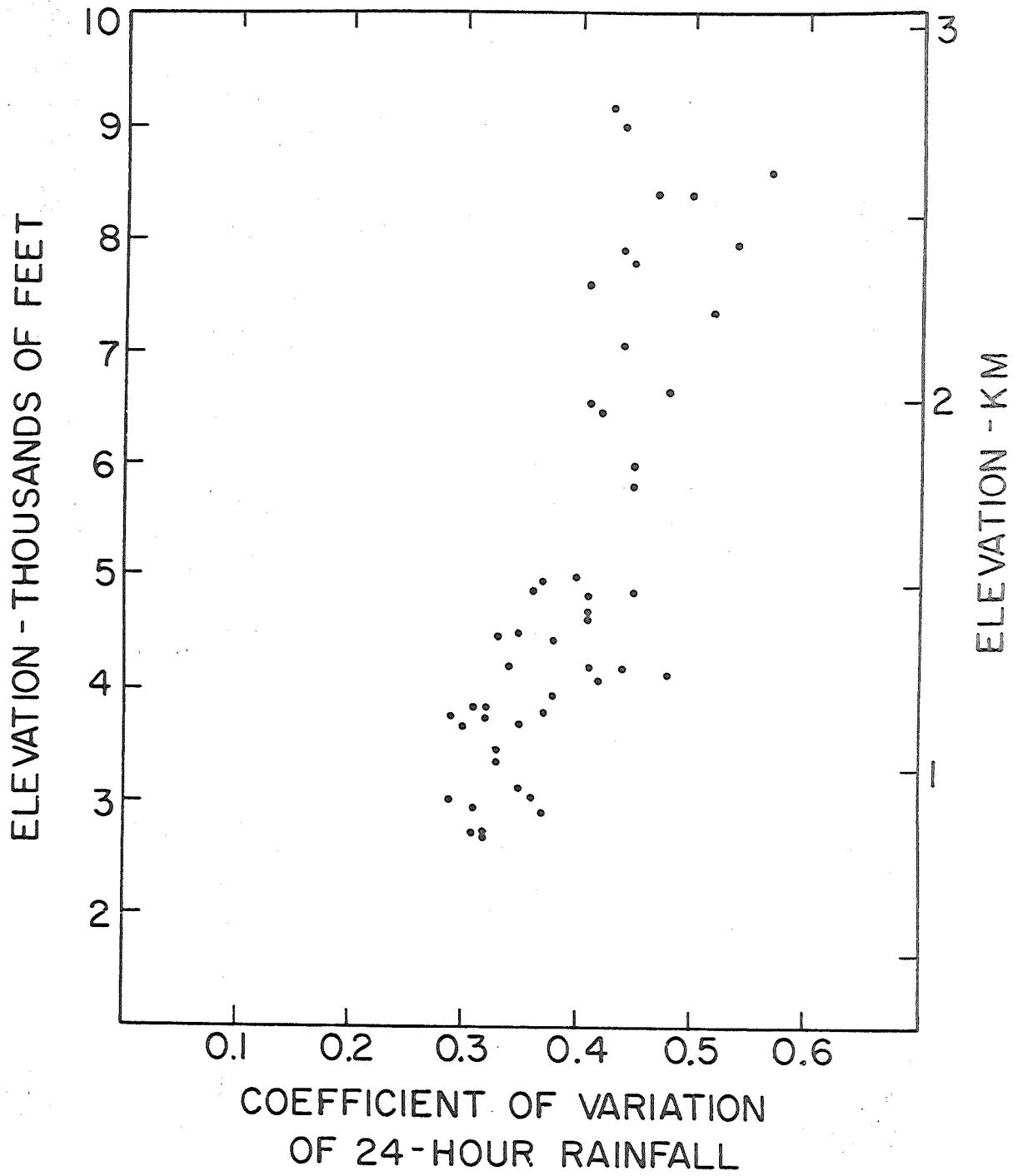


Figure 7

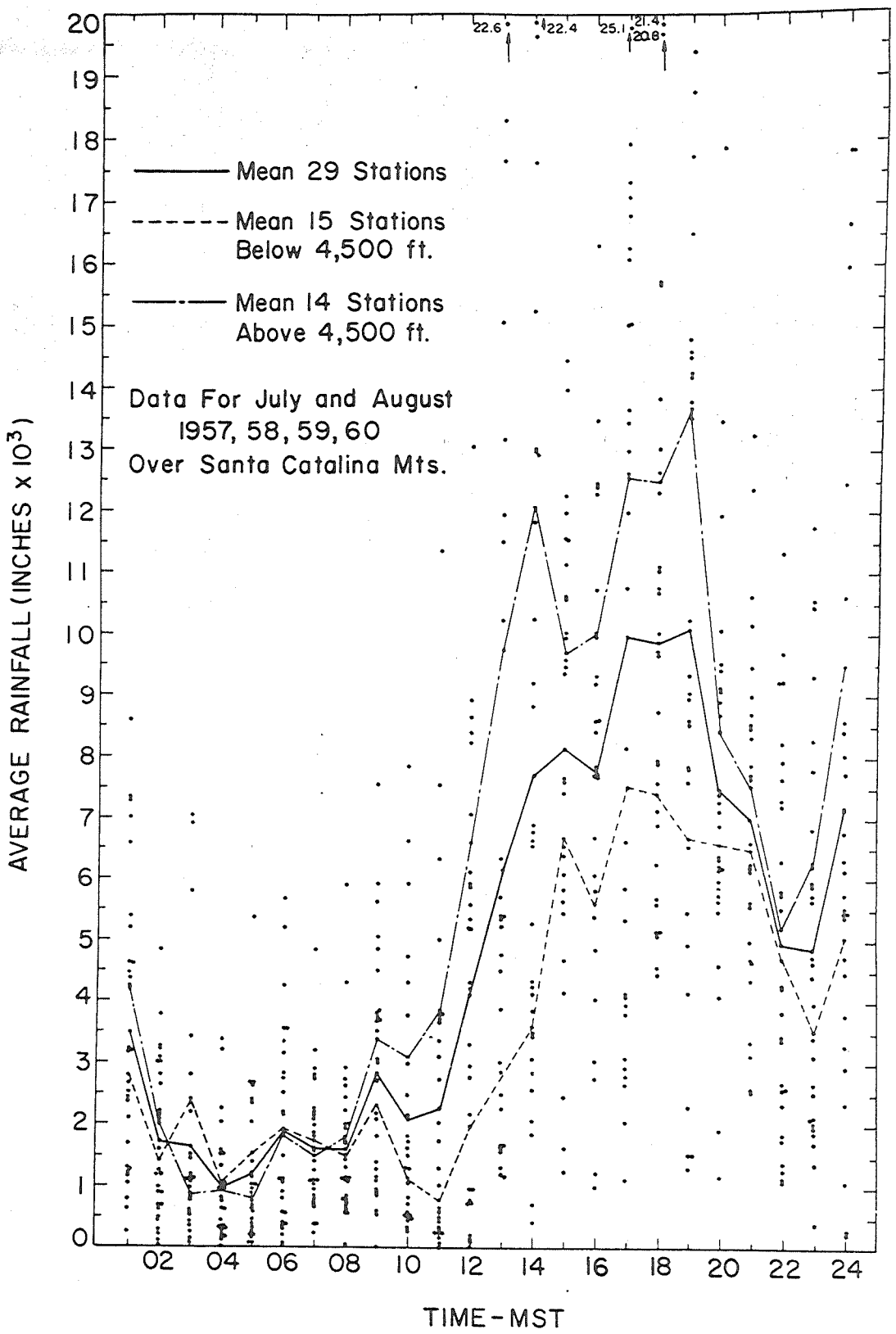


Figure 8

2860 Withdrawal from Mineral Entry
Coronado N. F. - R-3;
Santa Catalina Research Natural Area

Answers to Paragraphs (1) - (11) of 43 CFR 2351.2
Bureau of Land Management (Where Applicable)

1. Applicant Agency - Department of Agriculture, Washington, D. C.
Using Agency - Forest Service, Coronado
National Forest.
2. Land Descriptions - Enclosed.
3. Act of February 28, 1958 - Not applicable here.
4. Gross and Net Acreage - 4,131 acres.
5. Purpose - Research Natural Area.
6. Contamination - No increase will be caused by this use.
7. Tenure - Permanent.
8. Effect of Use - The area will be utilized only to the extent
that is consistent with the natural area.
9. Use of Water - The right to use of water for National Forest
purposes on lands described in this proposal
for withdrawal was reserved to the United States
upon establishment of the Santa Catalina Forest
Reserve in 1902 which was later incorporated with
other Forest Reserves to become the Coronado
National Forest.
10. Justification - Statements enclosed.
11. Authority - ~~Executive Order 10355~~ of May 26, 1952 (17 F.R. 4831).

SECTION 26

SANTA CATALINA TURAL AREA

Boundary Modification

Coronado National Forest

(Santa Catalina Ranger District)

T. 11 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

Relocation of Cor. #1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

U.S.G.S. BENCH MARK CATALINA #2 1955 RELOCATION

T. 11 S.
T. 12 S.

5

8

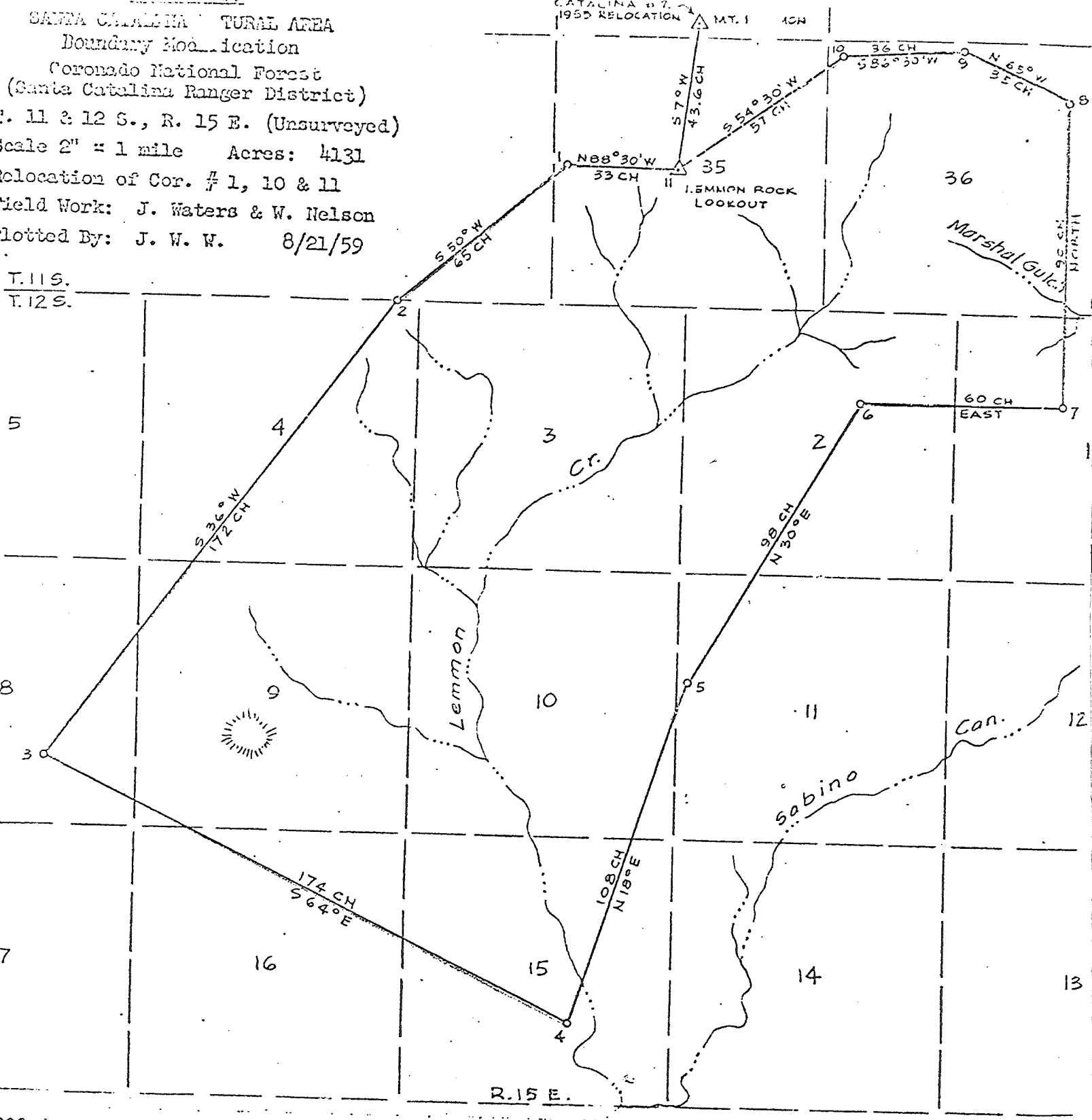
17

R. 15 E.

000 Research

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

- 88° 30' W., 33 chains to Corner #1
- 50° W., 65 chains to Corner #2
- 36° W., 172 chains to Corner #3
- 64° E., 174 chains to Corner #4
- 18° E., 108 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10, Thence
- S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning.



SANTA CATALINA NATURAL AREA
Boundary Modification

Coronado National Forest
(Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

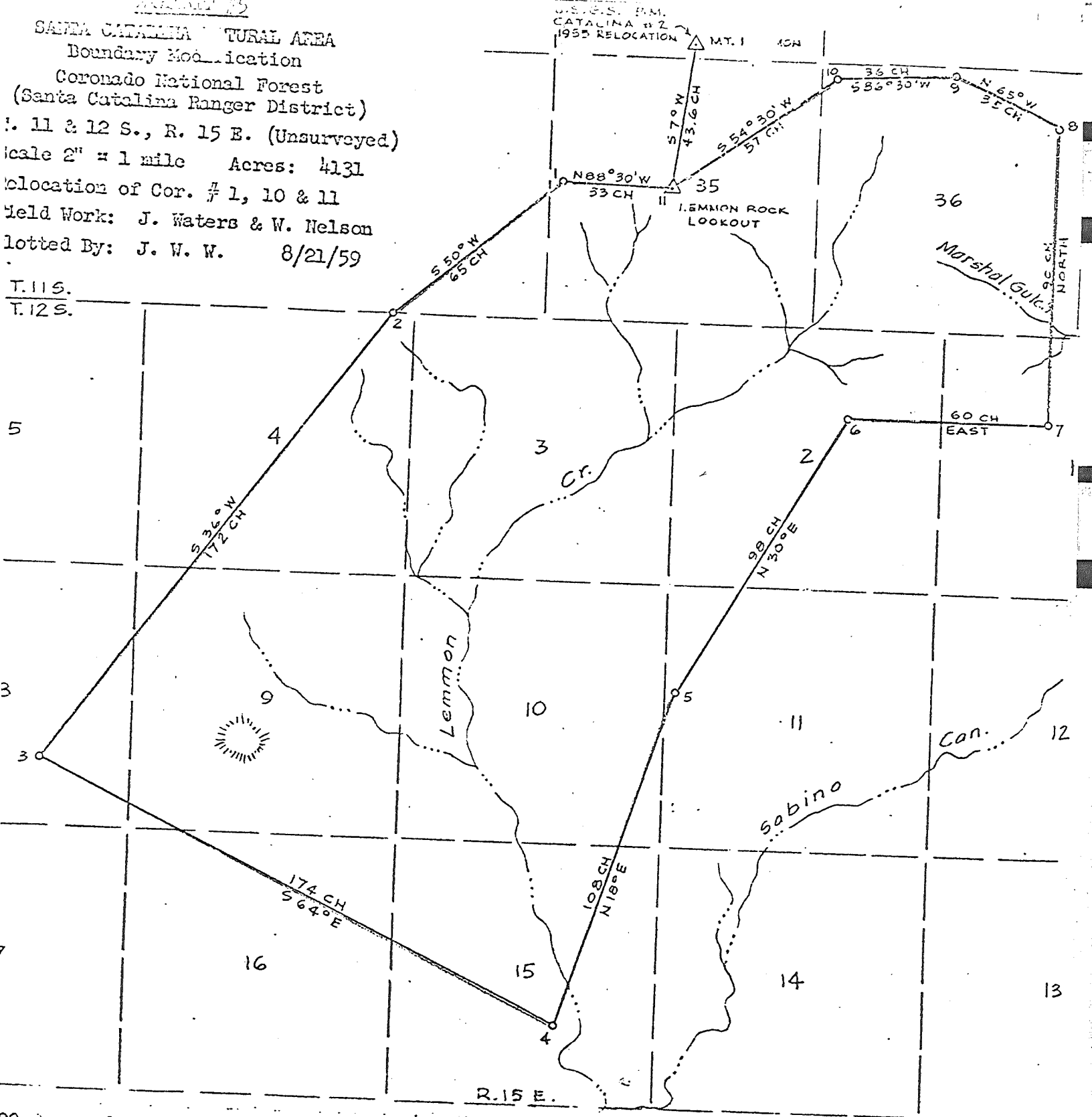
Relocation of Cor. # 1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

T. 11 S.
T. 12 S.

U.S.G.S. B.M.
CATALINA #2
1955 RELOCATION



00 Research

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in surveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

- 88° 30' W., 33 chains to Corner #1
- 50° W., 65 chains to Corner #2
- 35° W., 172 chains to Corner #3
- 64° E., 174 chains to Corner #4
- 10° E., 103 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10, Thence
- S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning.

SANTA CATALINA NATURAL AREA Boundary Modification

Coronado National Forest (Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)

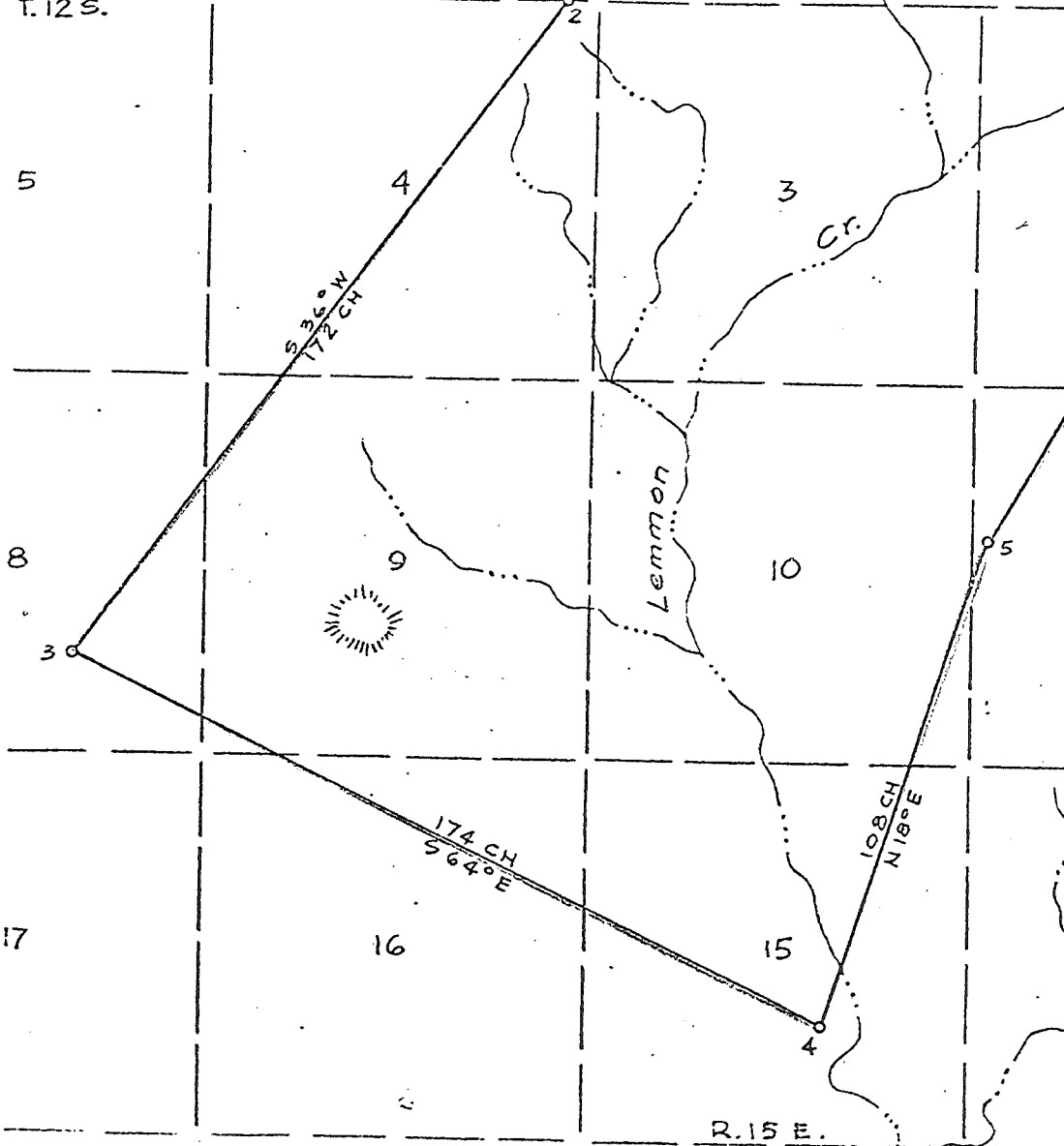
Scale 2" = 1 mile Acres: 4131

Relocation of Cor. # 1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

T. 11 S.
T. 12 S.



4000 Research

(Prepared by)

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 100 chains to Rock Lookout, which is Corner #11, the point of beginning of the area.

- N. 88° 30' W., 33 chains to Corner #1
- S. 50° W., 65 chains to Corner #2
- S. 36° W., 172 chains to Corner #3
- S. 64° E., 174 chains to Corner #4
- N. 18° E., 103 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10
- S. 54° 30' W., 57 chains to Lemmon Rock Lookout, Corner #11

SANTA CATALINA NATURAL AREA

Boundary Modification

Coronado National Forest

(Santa Catalina Ranger District)

T. 11 S. & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

Relocation of Cor. # 1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

T. 11 S.

T. 12 S.

5

4

3

2

7

8

9

10

11

12

17

16

15

14

13

R. 15 E.

U.S.G.S. B.M. CATALINA #2 1955 RELOCATION

MT. 1

Marshal Gulch

LEMMON ROCK LOOKOUT

Lemmon Cr.

Sabino Can.

1000 Research

(Prepared February 1960 Div. REL)

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

- 88° 30' W., 33 chains to Corner #1
- 50° W., 65 chains to Corner #2
- 36° W., 172 chains to Corner #3
- 64° E., 174 chains to Corner #4
- 18° E., 103 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10, Thence
- S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning.

SANTA CATALINA TURAL AREA
 Boundary Modification
 Coronado National Forest
 (Santa Catalina Ranger District)
 T. 11 S., R. 15 E. (Unsurveyed)
 Scale 2" = 1 mile Acres: 4131
 Location of Cor. # 1, 10 & 11
 Field Work: J. Waters & W. Nelson
 Plotted By: J. W. W. 8/21/59

CATALINA #2
 1955 RELOCATION

T. 11 S.
 T. 12 S.

5

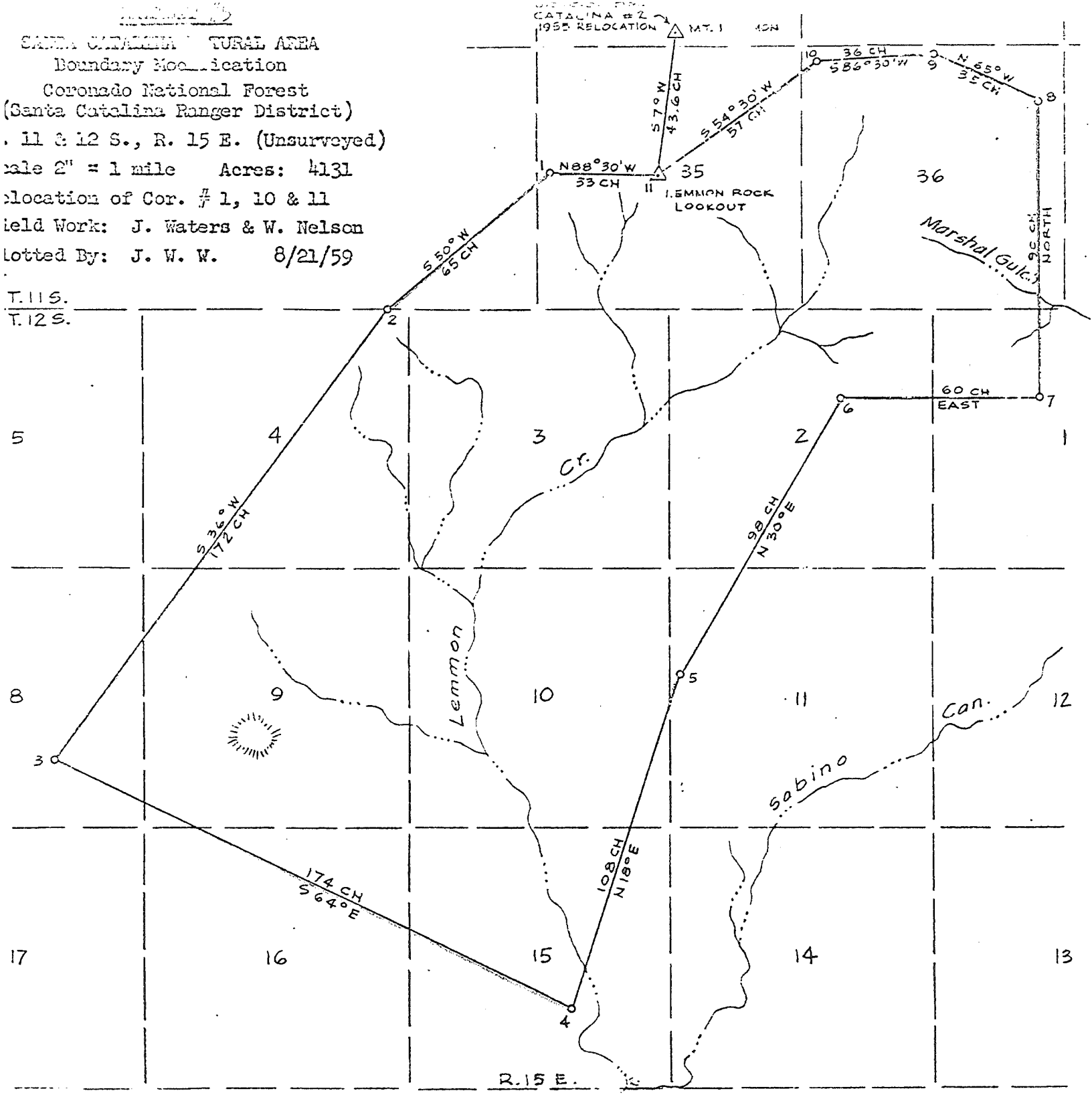
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17

R. 15 E.

4000 Research (Prepared February 1960 Div. R&L)
 The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

N. 88° 30' W., 33 chains to Corner #1	N. 30° E., 98 chains to Corner #6
S. 50° W., 65 chains to Corner #2	E. 60 chains to Corner #7
S. 36° W., 172 chains to Corner #3	N. 90° chains to Corner #3
S. 64° E., 174 chains to Corner #4	N. 65° W., 35 chains to Corner #9
N. 18° E., 103 chains to Corner #5	S. 86° 30' W., 36 chains to Corner #10, Thence
	S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning.



SANTA CATALINA NATURAL AREA

DEPARTMENT OF AGRICULTURE
FOREST SERVICE
FIELD MAP SHEET

Scale 2 inches = 1 mile.

BOUNDARY MODIFICATION

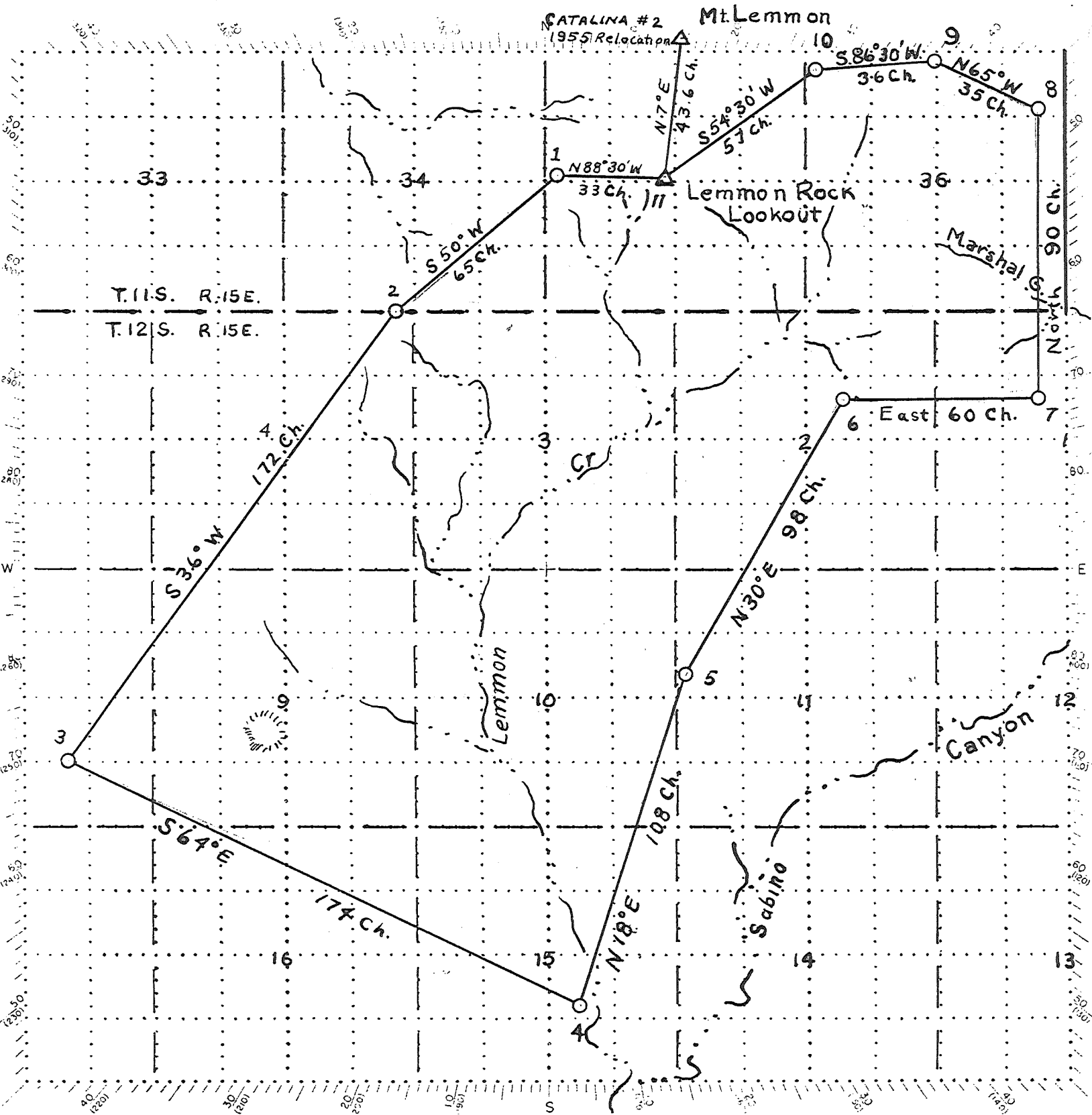
T. 11 S. R. 15 E. Sec.

8/21/59

Unit CORONADO - SANTA CATALINA

Mag. Dec. Acres 4244

(Case designation)



Field work by Relocation of Cor. #1, 10, + 11 Date 8/21/59
by J. Waters and W. Nelson

Platted by J.W.W.

Remarks

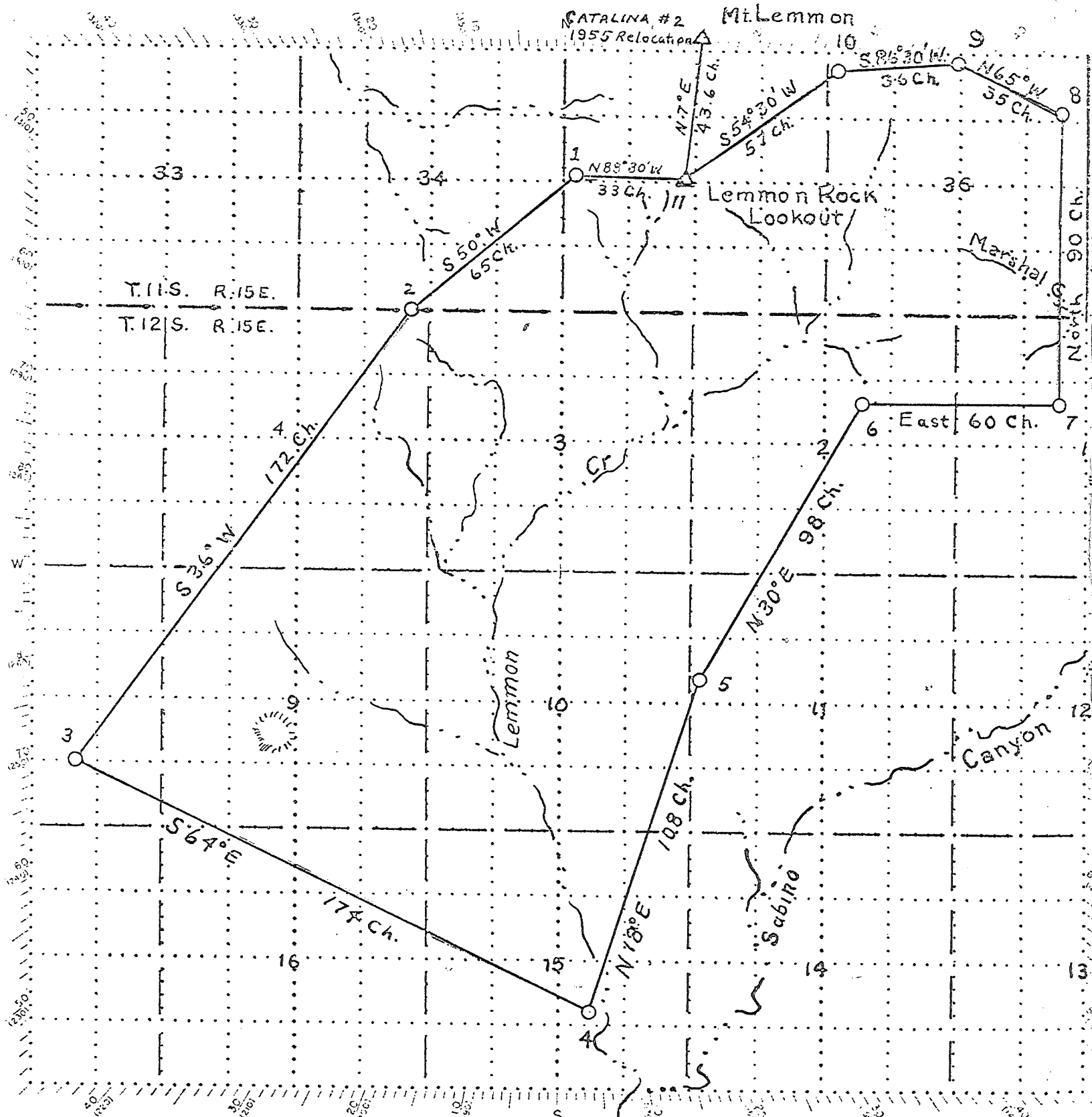
Approved

Form 878a (Rev. May 1948)

8/21/59

Case description

Unit CORONADO - SANTA CATALINA



T. 11 S. R. 15 E.
T. 12 S. R. 15 E.

Field work by Relocation of Cor. #1, 10, + 11 Date 8/21/59
by J. Waters and W. Nelson

Platted by J.W.W.

Remarks

Approved

Form 578a
(Rev. May 1945)

SANTA CATALINA NATURAL AREA

Boundary Modification

Coronado National Forest

(Santa Catalina Ranger District)

1. 11 & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

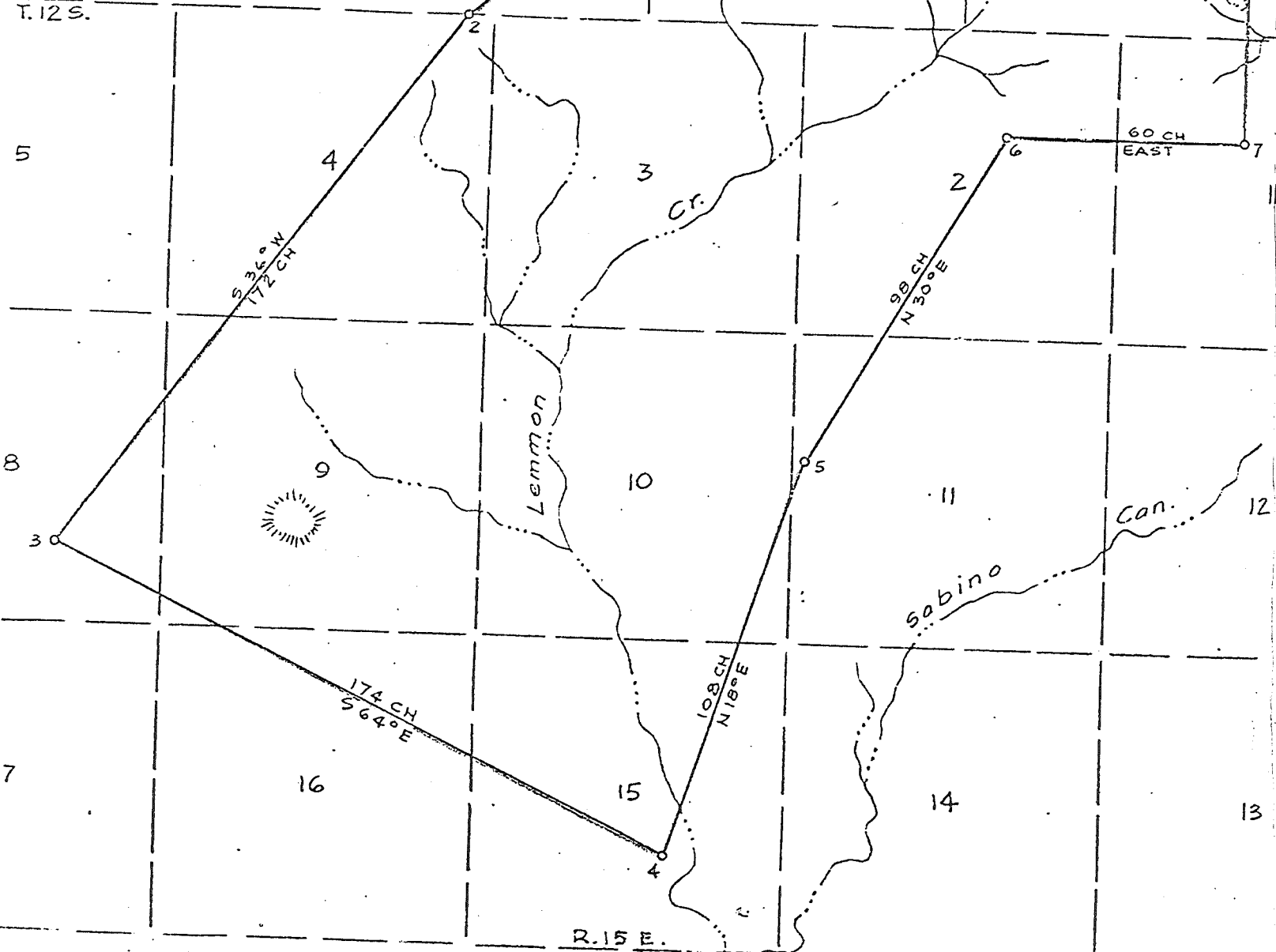
Relocation of Cor. #1, 10 & 11

Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

U.S.G.S. P.M.
CATALINA #2
1955 RELOCATION
MT. 1 45N

T. 11 S.
T. 12 S.



000 Research

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

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- S. 18° E., 103 chains to Corner #5
- N. 30° E., 98 chains to Corner #6
- E. 60 chains to Corner #7
- N. 90 chains to Corner #8
- N. 65° W., 35 chains to Corner #9
- S. 86° 30' W., 36 chains to Corner #10, Thence
- S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning.

2860 Withdrawal from Mineral Entry
Coronado N. F. - R-3;
Santa Catalina Research Natural Area

Answers to Paragraphs (1) - (11) of 43 CFR 2351.2
Bureau of Land Management (Where Applicable)

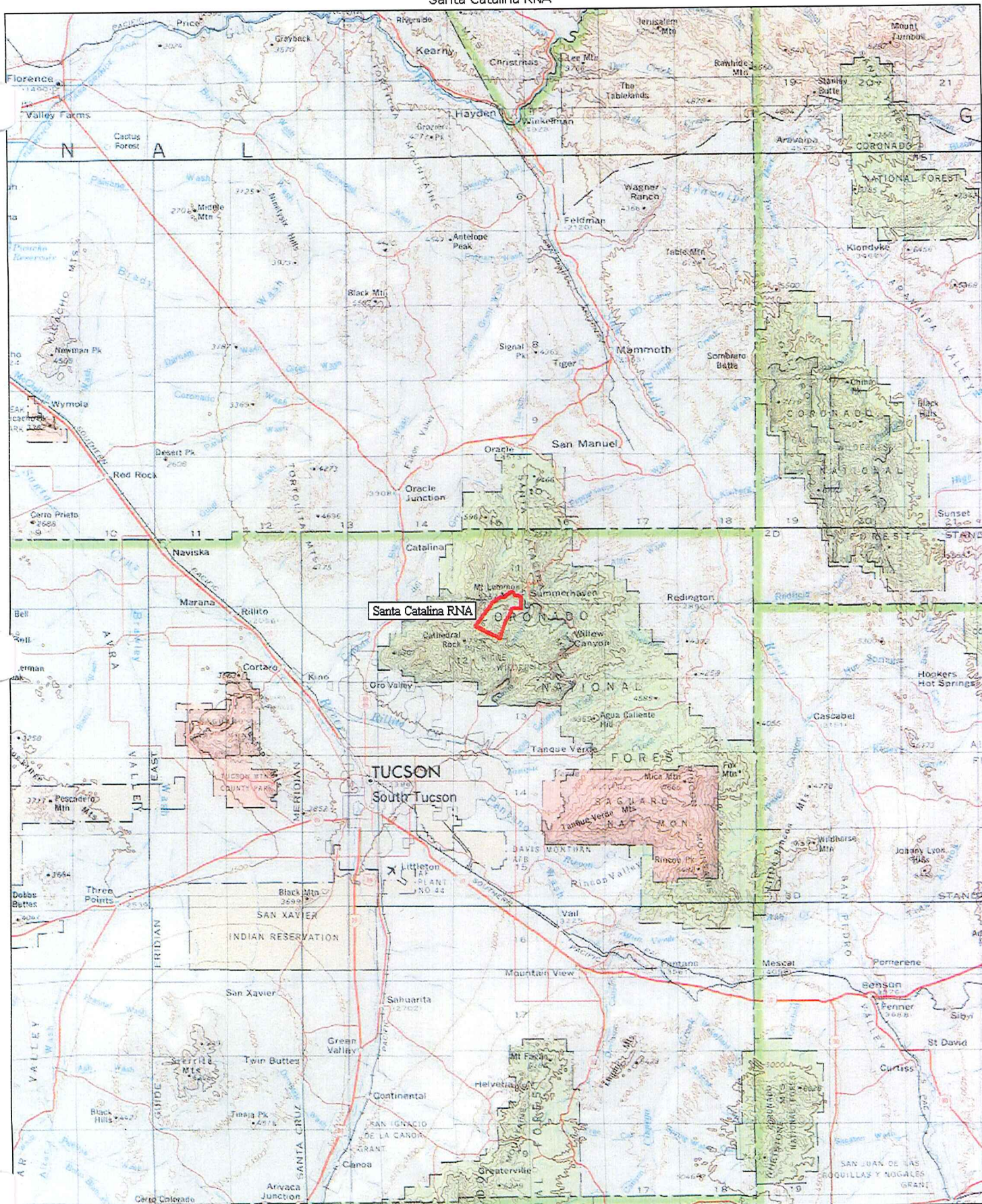
1. Applicant Agency - Department of Agriculture, Washington, D. C.
Using Agency - Forest Service, Coronado
National Forest.
2. Land Descriptions - Enclosed.
3. Act of February 28, 1958 - Not applicable here.
4. Gross and Net Acreage - 4,131 acres.
5. Purpose - Research Natural Area.
6. Contamination - No increase will be caused by this use.
7. Tenure - Permanent.
8. Effect of Use - The area will be utilized only to the extent
that is consistent with the natural area.
9. Use of Water - The right to use of water for National Forest
purposes on lands described in this proposal
for withdrawal was reserved to the United States
upon establishment of the Santa Catalina Forest
Reserve in 1902 which was later incorporated with
other Forest Reserves to become the Coronado
National Forest.
10. Justification - Statements enclosed.
11. Authority - ~~Executive Order 10355 of May 26, 1952 (17 F.R. 4831).~~

2860 Withdrawal from Mineral Entry
Coronado N. F. - R-3;
Santa Catalina Research Natural Area

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Santa Catalina RNA



TN MN
111°

0 5 10 15 20 25 miles
0 5 10 15 20 25 30 35 40 km
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L-RECREATION - Coronado

EXHIBIT #4

SANTA CATALINA NATURAL AREA

Coronado National Forest
(Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile

Field Work and Mapping By:

J. A. Frieborn & A. D. Molohon

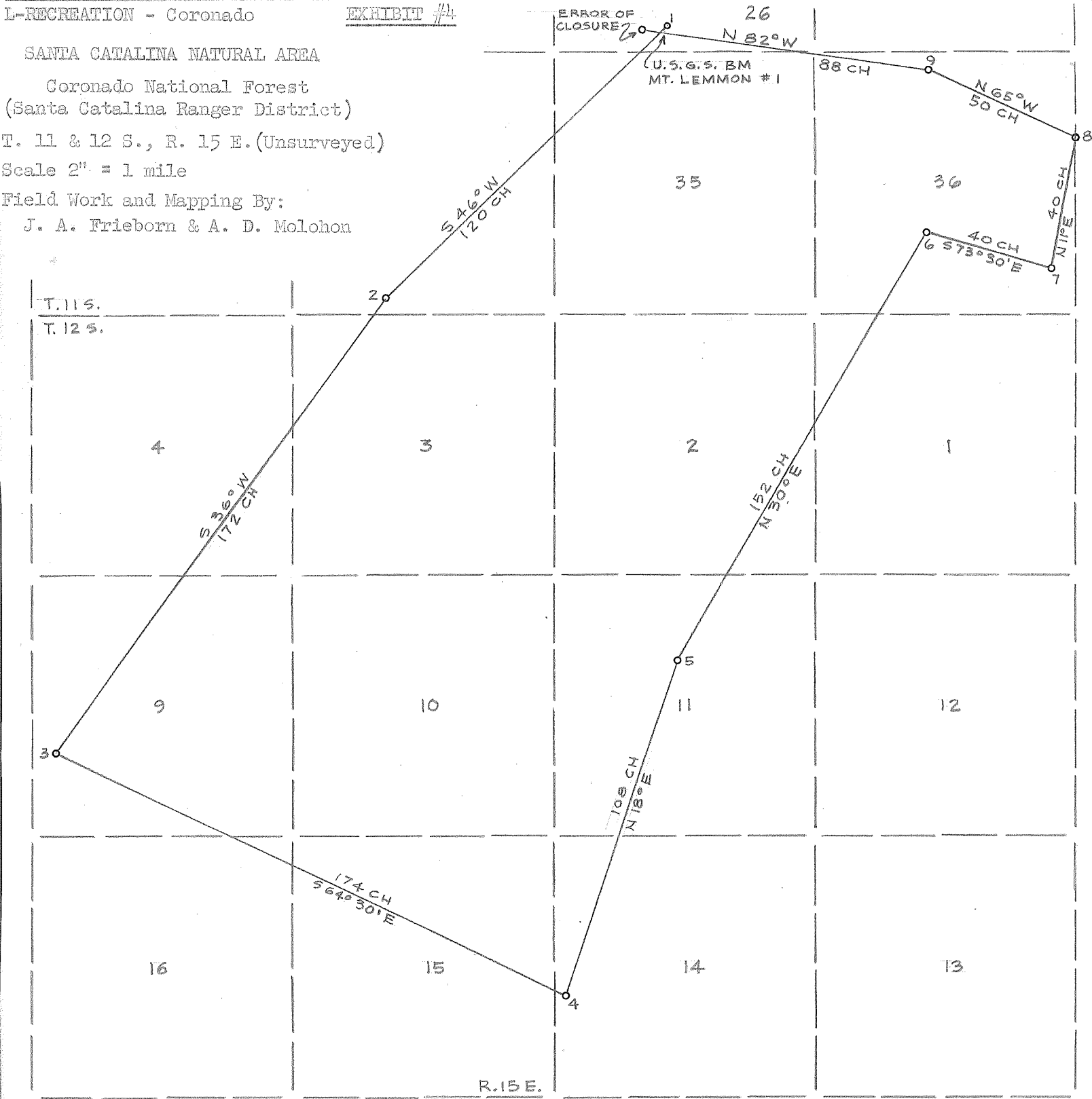


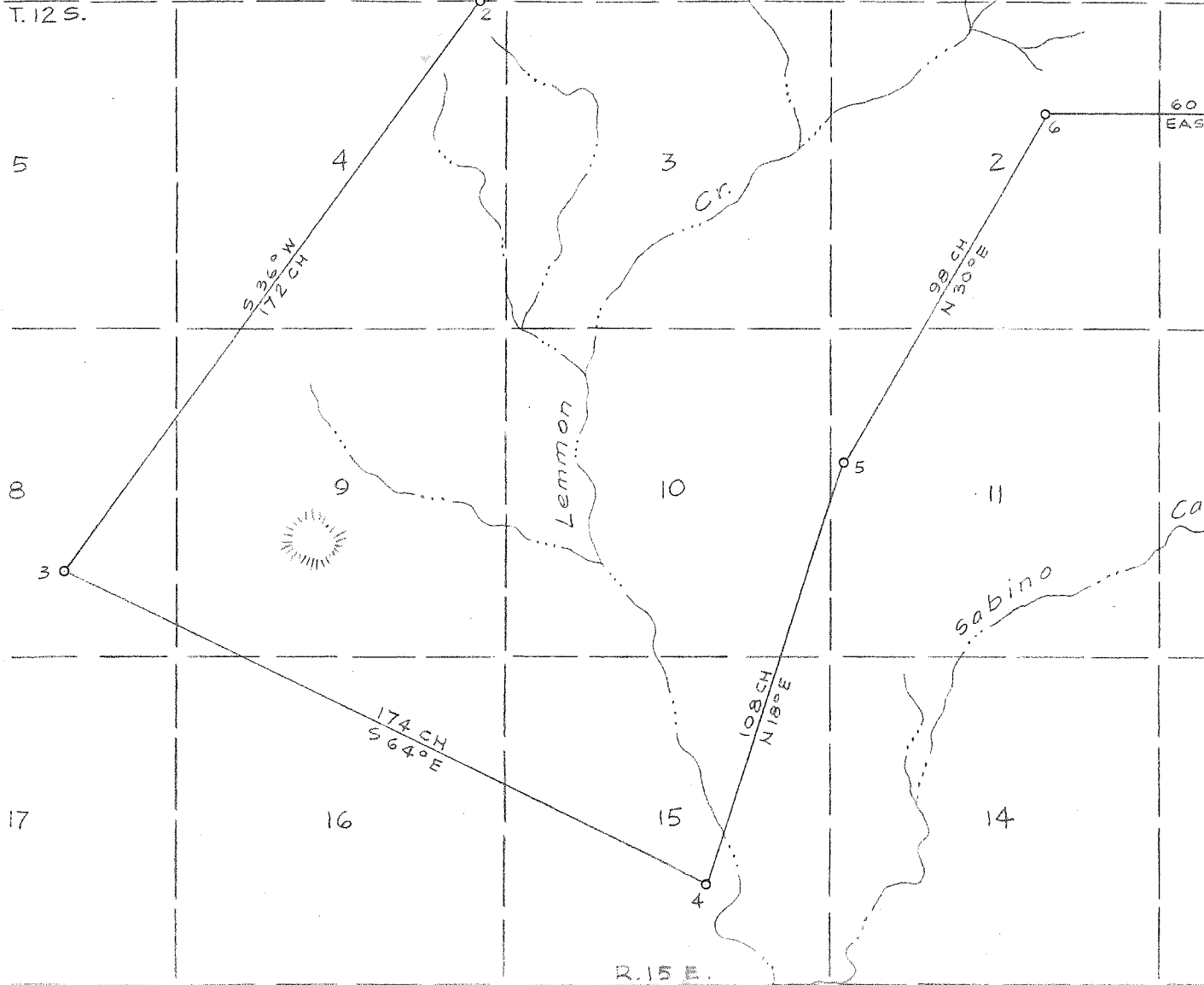
EXHIBIT #5

U.S.G.S. B.M.
CATALINA #2
1955 RELOCATION

SANTA CATALINA NATURAL AREA
Boundary Modification
Coronado National Forest
(Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)
Scale 2" = 1 mile Acres: 4131
Relocation of Cor. # 1, 10 & 11
Field Work: J. Waters & W. Nelson
Plotted By: J. W. W. 8/21/59

T. 11 S.
T. 12 S.



4000 Research

(Prepared February 1960 Div. R&M)

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon, unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

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| S. 64° E., 174 chains to Corner #4 | N. 65° W., 35 chains to Corner #9 |
| N. 18° E., 108 chains to Corner #5 | S. 86° 30' W., 36 chains to Corner #10, Thence |
| S. 54° 30' W., 57 chains to Lemmon Rock Lookout, the point of beginning | |

EXHIBIT #5

SANTA CATALINA NATURAL AREA
Boundary Modification

Coronado National Forest
(Santa Catalina Ranger District)

T. 11 & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

Relocation of Cor. # 1, 10 & 11

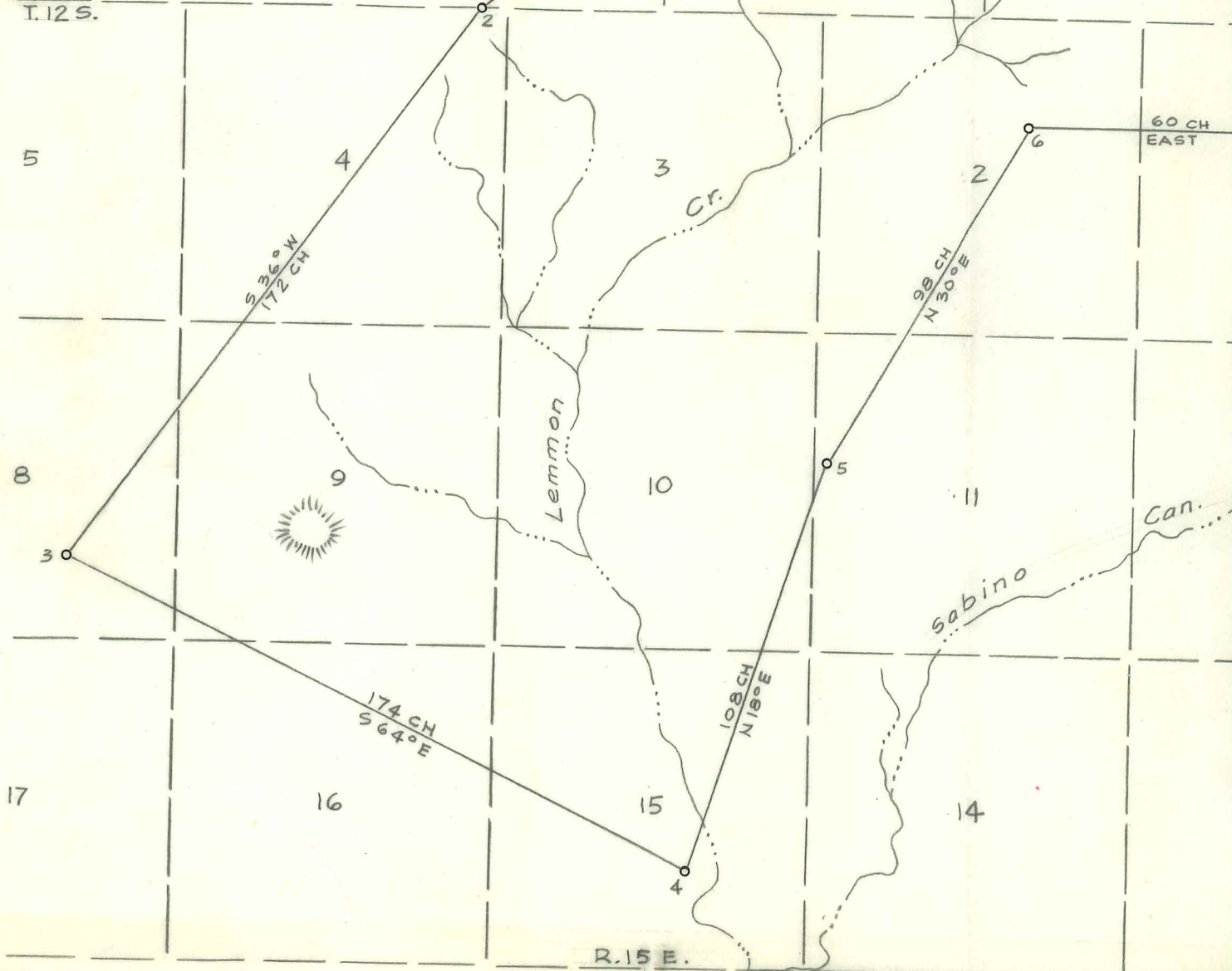
Field Work: J. Waters & W. Nelson

Plotted By: J. W. W. 8/21/59

U.S.G.S. B.M.
CATALINA #2
1955 RELOCATION

MT. LEMMON

T. 11 S.
T. 12 S.



4000 Research

(Prepared February 1960 Div. R&L)

The area is referenced to U.S.G.S. Bench Mark Catalina #2 (1955 relocation) on Mt. Lemmon in unsurveyed Sec. 26, T. 11 S., R. 15 E., G&SRB&M: Thence S. 7° W., 43.6 chains to Lemmon Rock Lookout, which is Corner #11, the point of beginning of the area. Thence:

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SANTA CATALINA NATURAL AREA

Boundary Modification

Coronado National Forest

(Santa Catalina Ranger District)

Sec. 11 & 12 S., R. 15 E. (Unsurveyed)

Scale 2" = 1 mile Acres: 4131

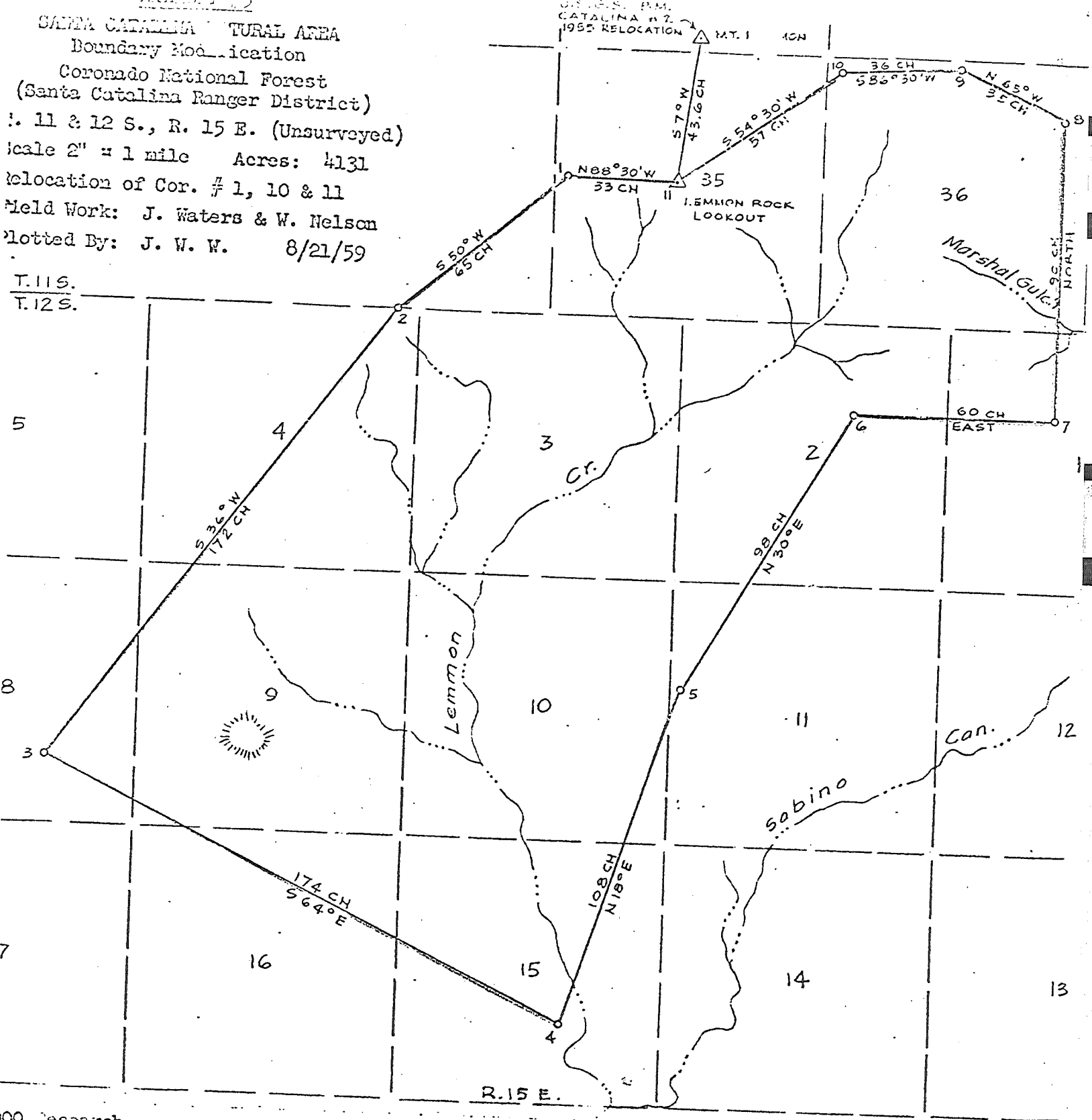
Relocation of Cor. # 1, 10 & 11

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Plotted By: J. W. W. 8/21/59

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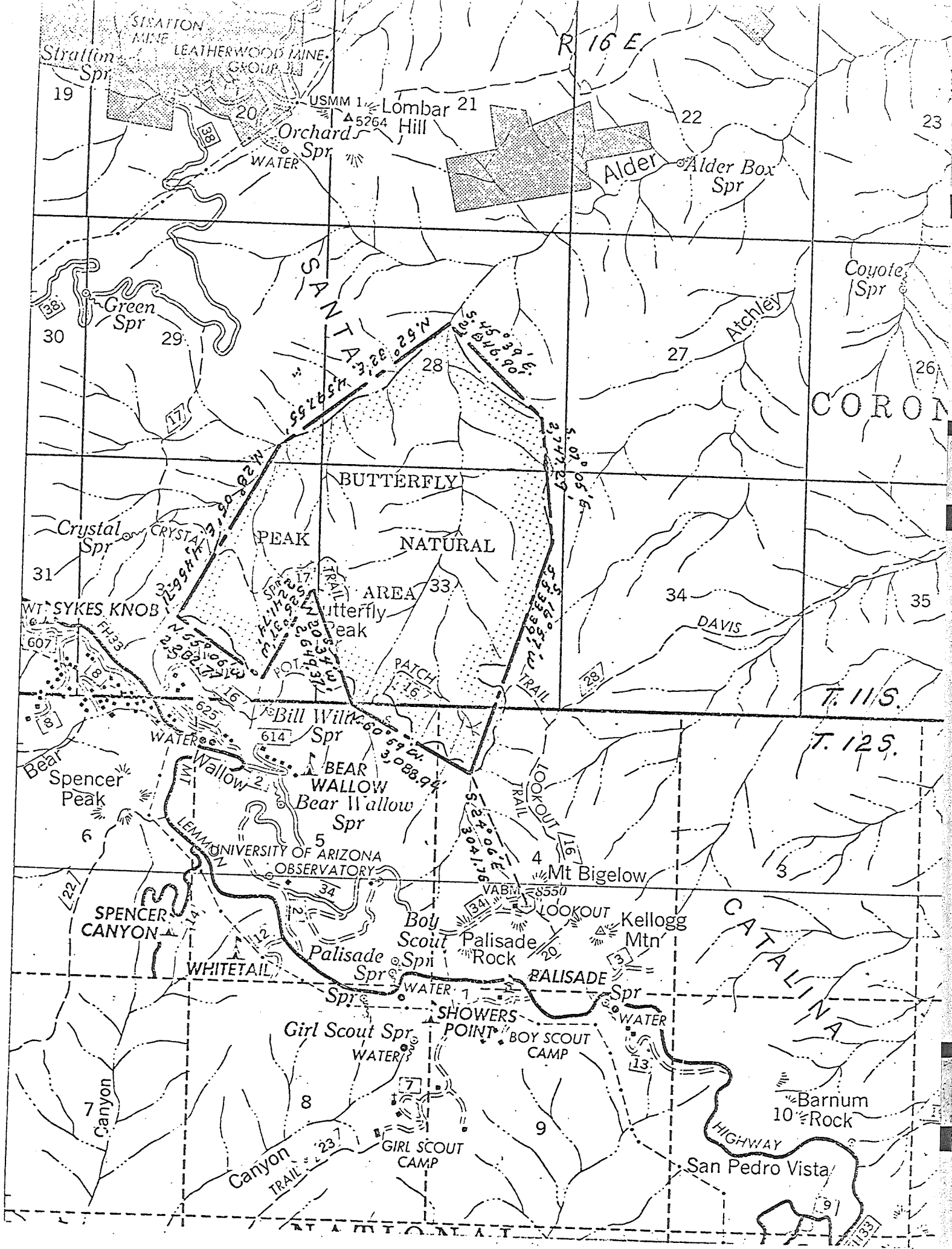
T. 12 S.

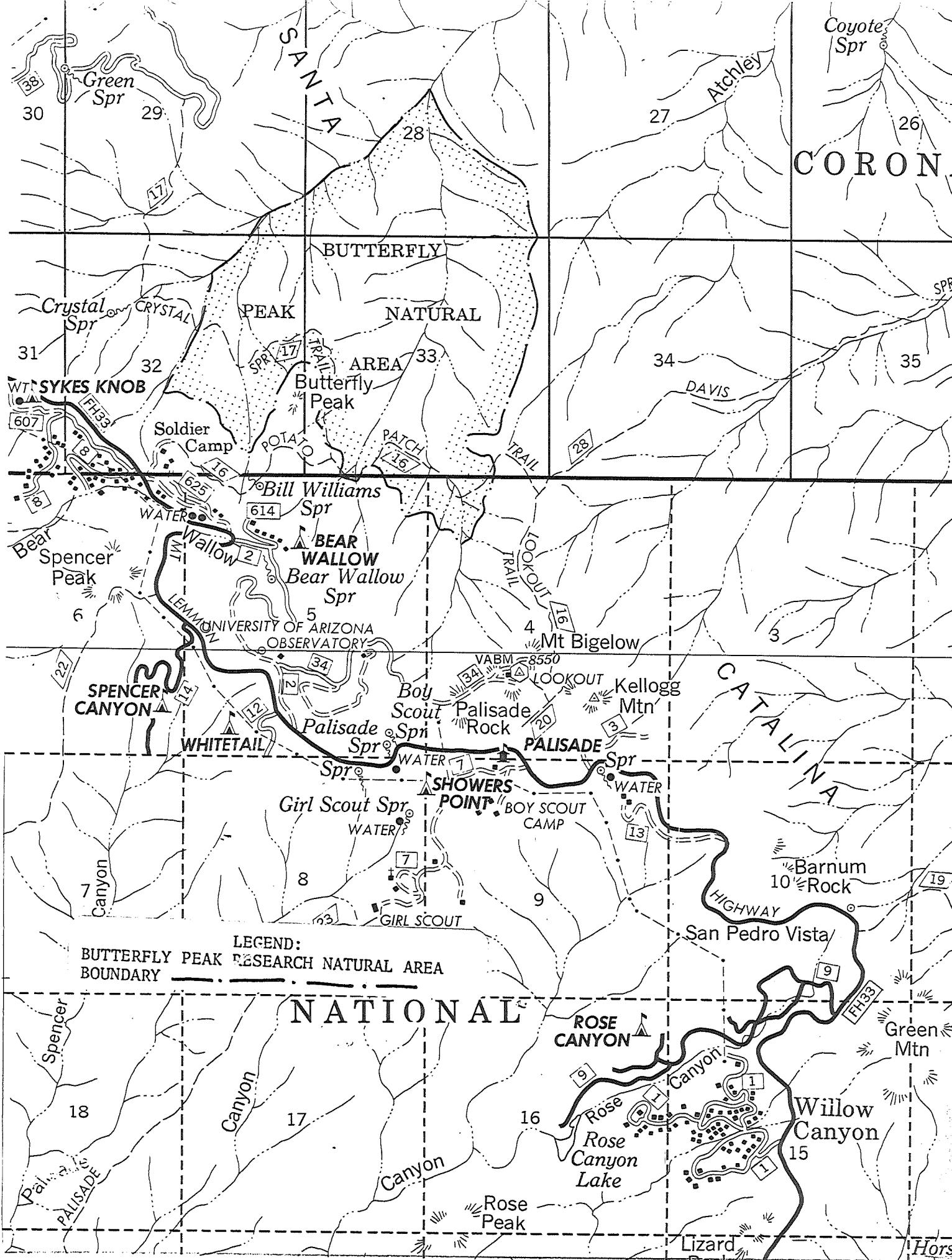


00 Research

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LEGEND:
 BUTTERFLY PEAK RESEARCH NATURAL AREA
 BOUNDARY

NATIONAL

Coyote Spr
 ATCHLEY
 CORON

BUTTERFLY
 PEAK
 NATURAL
 AREA

CATALINA

SPENCER
 CANYON

SHOWER
 POINT
 BOY SCOUT
 CAMP
 GIRL SCOUT

ROSE
 CANYON
 Rose
 Canyon
 Lake

Willow
 Canyon

Crystal
 Spr

WT SYKES KNOB

Soldier
 Camp

Bill Williams
 Spr

BEAR
 WALLOW
 Bear Wallow
 Spr

UNIVERSITY OF ARIZONA
 OBSERVATORY

Mt Bigelow

Boy
 Scout

Palisade
 Spr

PALISADE
 Spr

SHOWER
 POINT

Girl Scout
 Spr

BOY SCOUT
 CAMP

Barnum
 Rock

San Pedro Vista

Green
 Mtn

Rose
 Peak

Lizard

Hors



Head of Lemon Creek
within current Santa
Catalina RNA. Proposal
to reduce the size to
that contained in lower
Lemon Canyon.

Schmidt Stream

2-24-83

Coronado N.E. From Lemon Rock Lookout

Santa Catalina Research Natural Area



Lemon Canyon and Point



Lemon Canyon



Head of Marshall Gulch



Lemon Canyon

rea

Santa Catalina
Research Natural Area



Marshall Gulch

DEMOR 5517

Society of American Foresters
Committee on Natural Areas

Proposed Natural Area

Name of Proposed Natural Area Santa Catalina

Location: State Arizona County Pima

Nearest Town Tucson

Nearest Federal, State or county highway US 80 & 89

Permanence Afforded Through What Means Regulation
(law, regulation, will, endowment,
Board of Directors, etc.)

Name of Administration Unit Coronado Natl Forest
(National Forest, national park, national wildlife
refuge, State, university, etc.)

Listing of Timber Types on Area:

<u>S.A.F. Type No.</u>	<u>Acres</u>	<u>Average Age</u>
<u>237</u>	<u>2350</u>	<u>200</u>
<u>235</u>	<u>200</u>	<u>50</u>
<u>241</u>	<u>1614</u>	<u>50</u>

Barren, water, buffer
zone, etc.

Total: 4164

Range in Elevation: Low 4800 Feet High 9100 Feet

Topography Rough and precipitous
(Level, rolling steep, broken, etc.)

Geology Granitic
(Volcanic, alluvial, moraine, etc.)

Average Height and Diameter of each major species:

<u>Species</u>	<u>Average Height</u>	<u>Average Diameter</u>
<u>Portulaca Pine</u>	<u>45'</u>	<u>30"</u>
<u>Douglas fir</u>	<u>90'</u>	<u>30"</u>

Submitted by _____ Title _____

Mailing Address Forest Supervisor Date 2-10-60
Coronado Natl Forest
Box 551
Tucson, Arizona 85702