KINGMAN FIELD OFFICE

COMMUNICATION SITE

MANAGEMENT PLANS

HUALAPAI PEAK

HAYDEN PEAK

POTATO PATCH

COMMUNICATION SITE

MANAGEMENT PLANS

HUALAPAI PEAK

HAYDEN PEAK

POTATO PATCH

BUREAU OF LAND MANAGEMENT

Kingman Resource Area

August, 1985

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SITE MANAGEMENT PLAN FOR HUALAPAI PEAK, POTATO PATCH, AND HAYDEN PEAK COMMUNICATION SITES

I. INTRODUCTION

The following Site Management Plan has been formulated to provide guidance and direction in the Bureau's management of three (3) existing and occupied communication sites. The sites are within the northern range of the Hualapai Mountains situated just south of Kingman, Arizona. The following location map depicts the general location of the sites in relation to the Kingman community.

Two of the three communication sites, Hayden Peak and Potato Patch, were conveyed to the United States from the Mohave County Board of Supervisors and were accepted as public land on August 24, 1984. These sites are occupied by low power users whose rights of occupancy have been recognized by the Bureau. The third site, Hualapai Peak, is occupied by T.V. translator facilities that are strategically located to intercept transmissions from the Phoenix area.

It is the intent of this plan to provide for the future development of the Hayden Peak and Potato Patch communication sites, but to disallow any further development of the Hualapai Peak site. A discussion of the Hualapai Peak site may be found in the Communications Background Section.

Given the existing situations on the Hayden Peak and Potato Patch sites, this plan will evaluate essentially two (2) alternatives.

1. The allowance of high power users on a case-by-case basis. The sites are presently occupied by low power users.

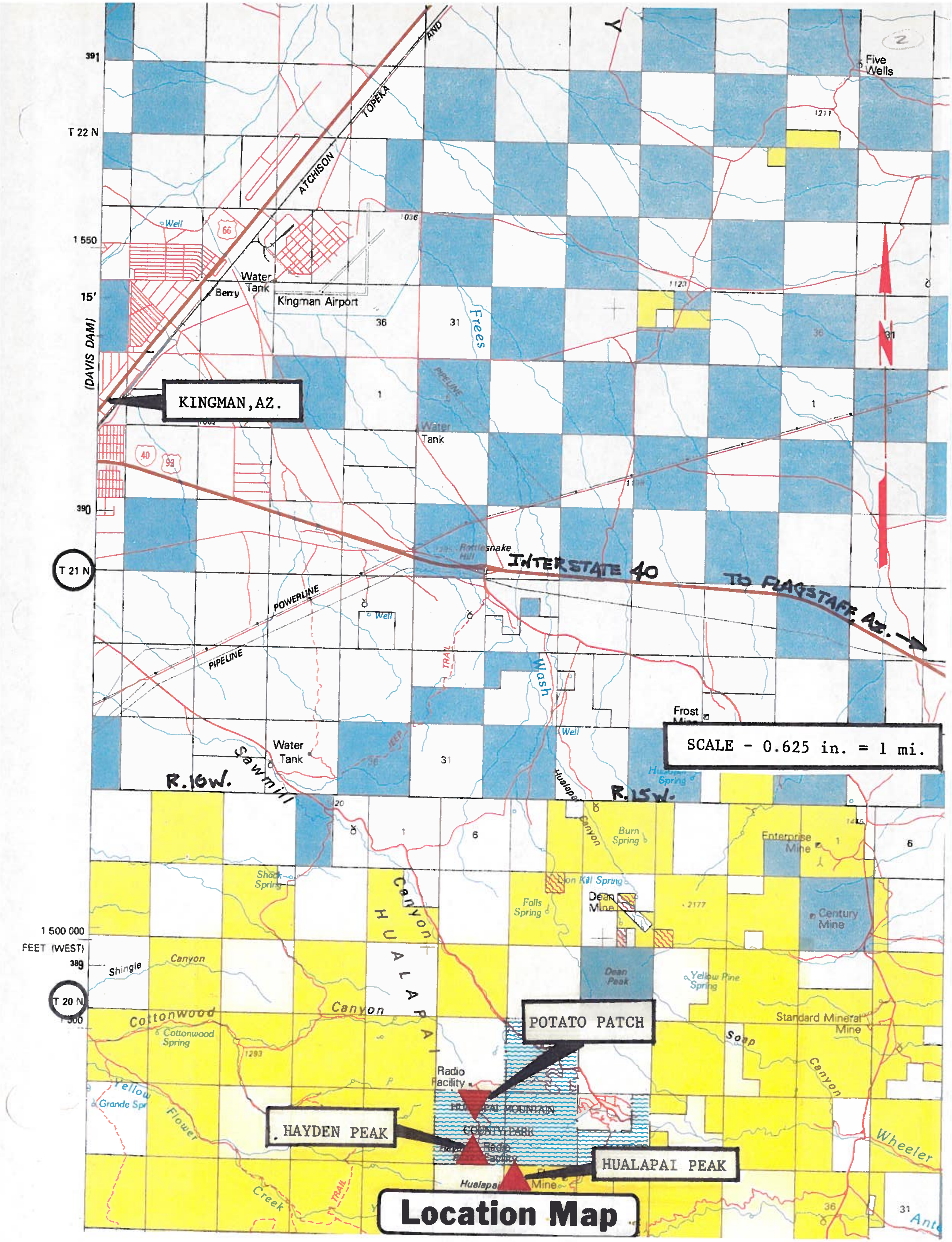
2. Retain the sites exclusively for low power users and identify alternative sites for high power users.

A management decision will be made as to the the type of uses, i.e. low power, high power, or a combination of both, that will be allowed on each site. Public need, electronic compatibility, and environmental concerns will be used as the major criterion in establishing the plan parameters.

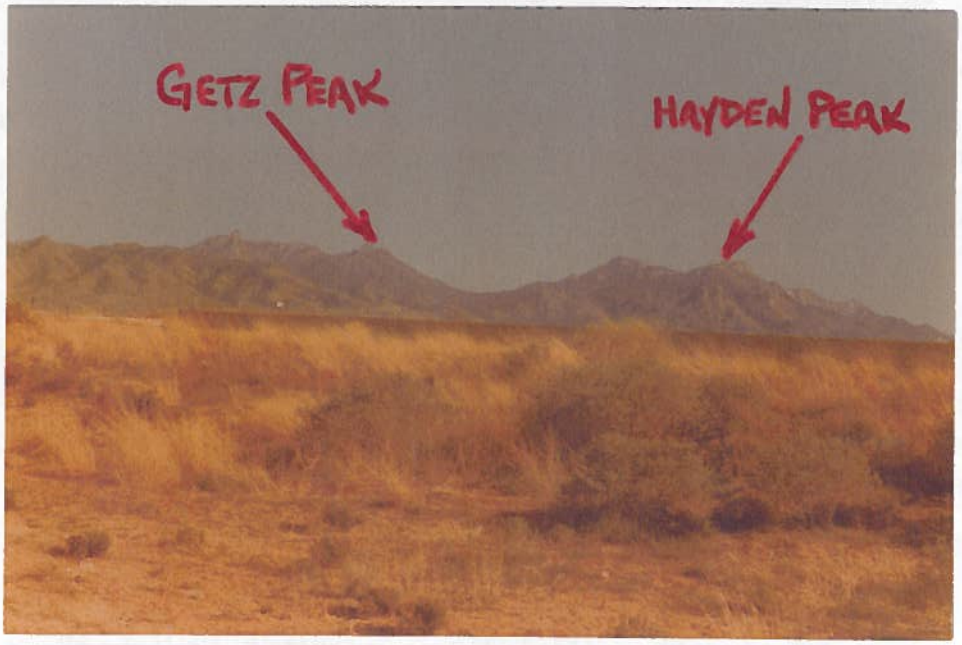
II. DEMOGRAPHIC AND GEOGRAPHIC INFORMATION

The communication sites addressed in this plan generally serve the Mohave County area. Kingman, which is the county seat, lies approximately 11 air miles northwest of the communication sites (Refer to Location Map). Mohave County is the second largest county in the state comprising 13,217 square miles of land surface. In terms of population density, there are 4.3 persons per square mile (1981). The statistic is an indicator of the rural nature of the county.

Between 1971 and 1981, the population of the county nearly doubled from 28,700 to 56,700 (97.6 percent increase). Principal industries include manufacturing, tourism, ranching, and mining, as well as, a number of interstate gas and electric transmission systems. Kingman, being in view of the communication sites, sports a population of 9,355 (1981), but when added to adjacent developed communities comprises a population nearer 25,000.


KINGMAN, AZ.
INTERSTATE 40
TO FLAGSTAFF, AZ.
SCALE - 0.625 in. = 1 mi.
POTATO PATCH
HAYDEN PEAK
HUALAPAI PEAK
Location Map
T 22 N
T 21 N
T 20 N
R. 16 W.
R. 15 W.
(DAVIS DAM)
1 500 000
FEET (WEST)
Kingman Airport
ATCHISON TOPEKA AND
Water Tank
Berry
Five Wells
Frees
POWERLINE
PIPELINE
Rattlesnake Hill
Wash
Frost Mine
Sawmill
Burn Spring
Enterprise Mine
Century Mine
Dean Mine
Lion Kill Spring
Falls Spring
Shack Spring
Dean Peak
Yellow Pine Spring
Standard Mineral Mine
Soap
Canyon
Wheeler
HUALAPAI
Shingle
Cottonwood
Cottonwood Spring
Grande Spr
Flower
Creek
TRAIL
Radio Facility
HUALAPAI MOUNTAIN
COUNTY PARK
Hualapai

Of primary concern, is the integrity of established communication facilities located on the Hayden Peak, Potato Patch, and Hualapai Peak sites. Access and availability of power have dictated the location and degree of development of communication facilities in the northern Hualapai Mountains. The following photo depicts the locations of the Getz Peak private site and the Hayden Peak BLM site looking southeasterly from Kingman.



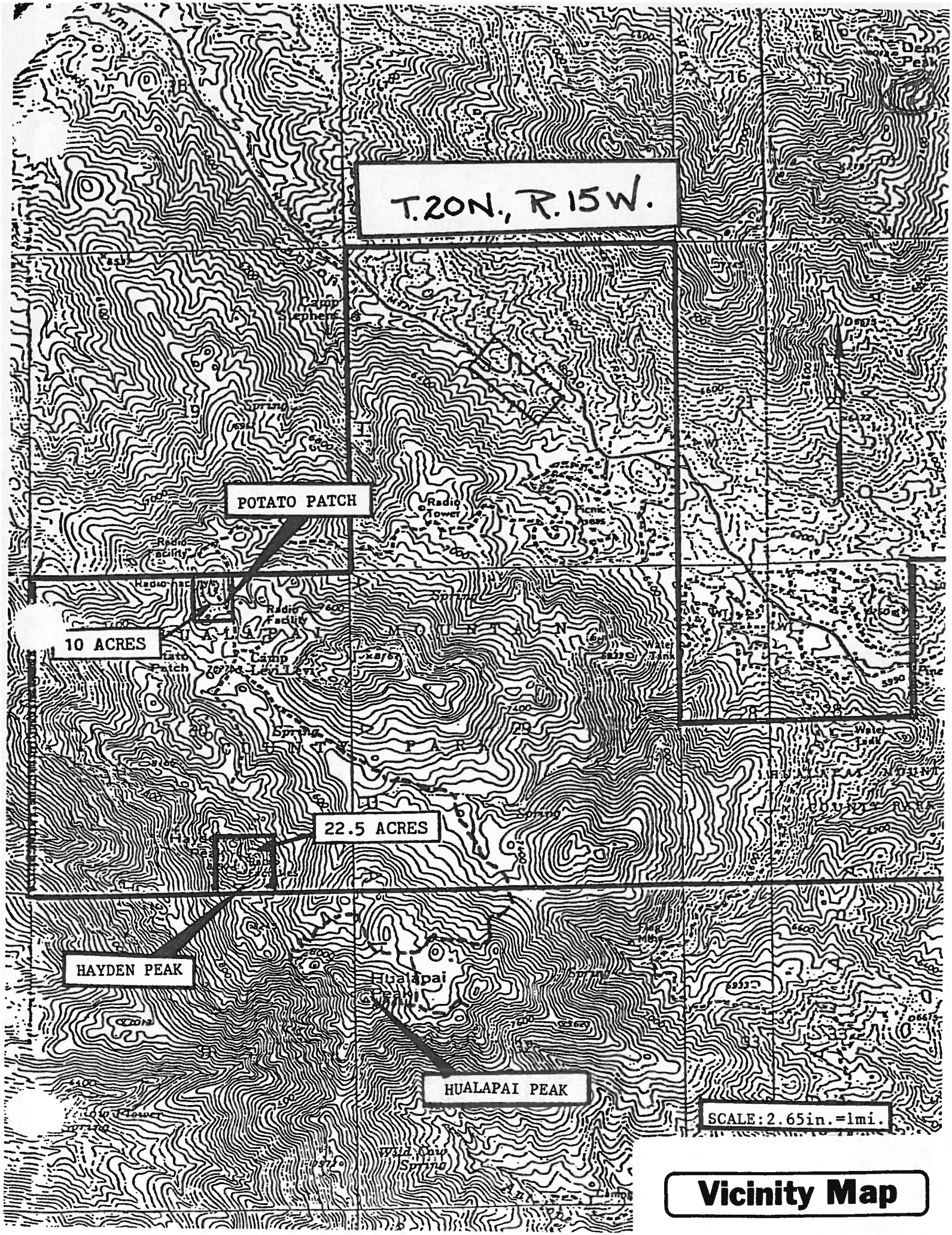
Hualapai Mountains southeast of Kingman

The elevations of the peaks noted in the photo above are 7,680 feet for Getz Peak and 8,390 feet for Hayden Peak. Hualapai Peak, which lies behind Hayden Peak from the photo vantage point, is the highest peak in the mountain range at 8,417 feet above sea level. These peaks provide outstanding vantage points from which electronic signals can be received and transmitted over a fairly expansive area. A discussion of the types of uses occurring on each site will follow in the next section.

III. COMMUNICATION SITES-PRESENT SITUATION

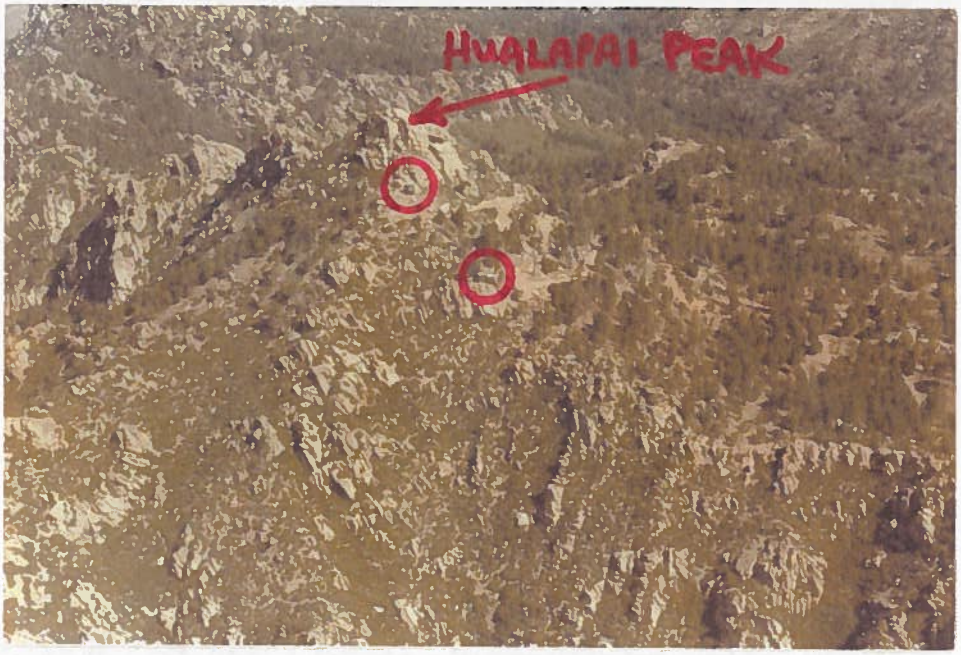
A. Hualapai Peak

Hualapai Peak, as stated, is the tallest peak in the Hualapai Mountain range at 8,417 feet. It is accessible via a maintained dirt road, but is not serviced with power. The site is being utilized for TV translator purposes to receive signals from the Phoenix area and amplify and cable the received signals to translator sites on the Hayden Peak site approximately ½ mile to the northwest. The following vicinity map depicts the location of Hualapai Peak and its relative closeness to the Hayden Peak site.



Vicinity Map

The following photo depicts three (3) of the translator sheds constructed near the base of Hualapai Peak.



Mohave County TV Translators on Hualapai Peak

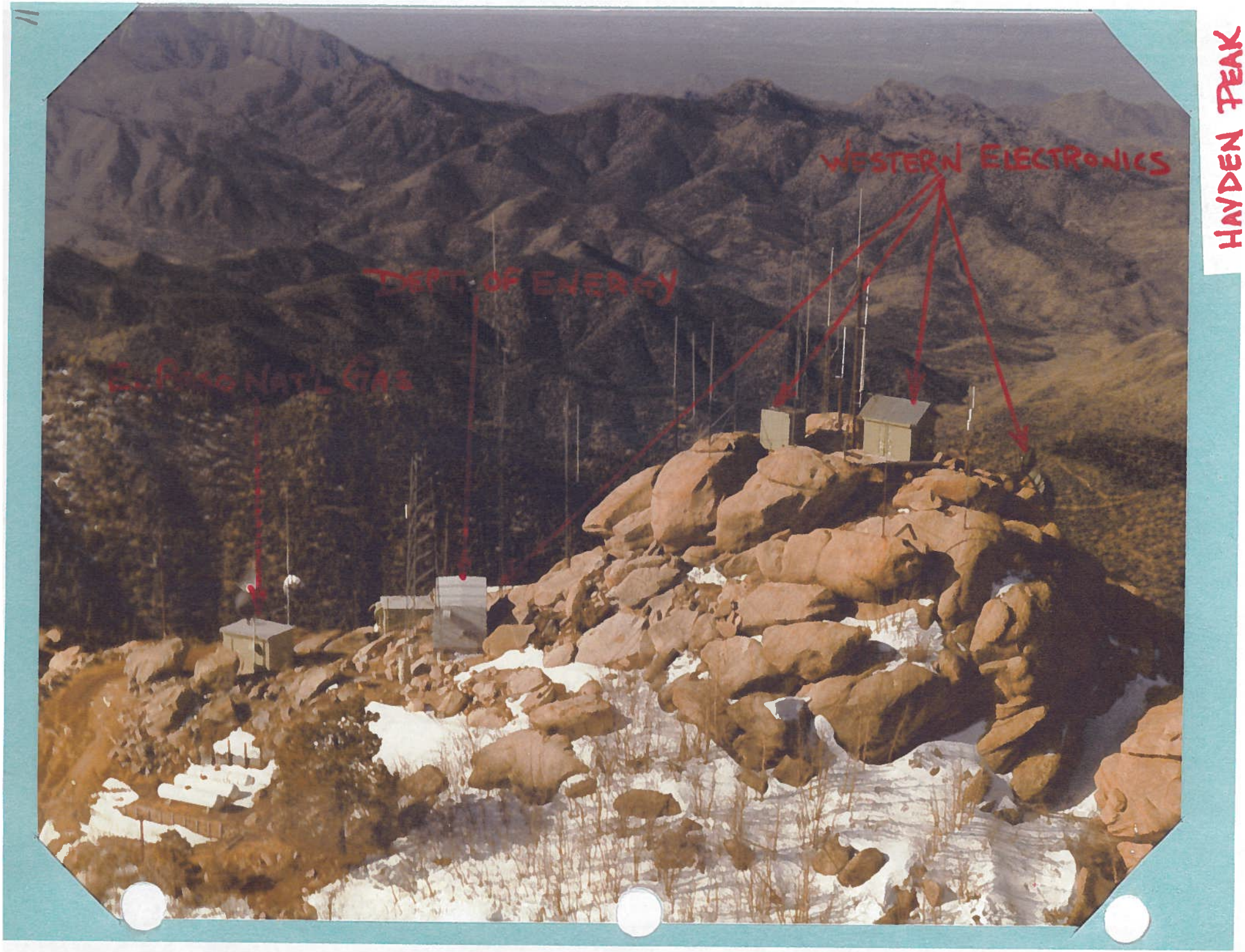
The translator sites were initially established in 1956 to improve the county's broadcast coverage of television signals. Western Electronics and Communications of Kingman, Arizona, is under contract with Mohave County to operate and maintain the translator facilities.

The county had not been issued a right-of-way for the sites established on public land under the administration of the Bureau of Land Management . The county was requested and did submit a right-of-way grant (A-19138) is pending the final recommendations and decisions developed as a result of this plan.

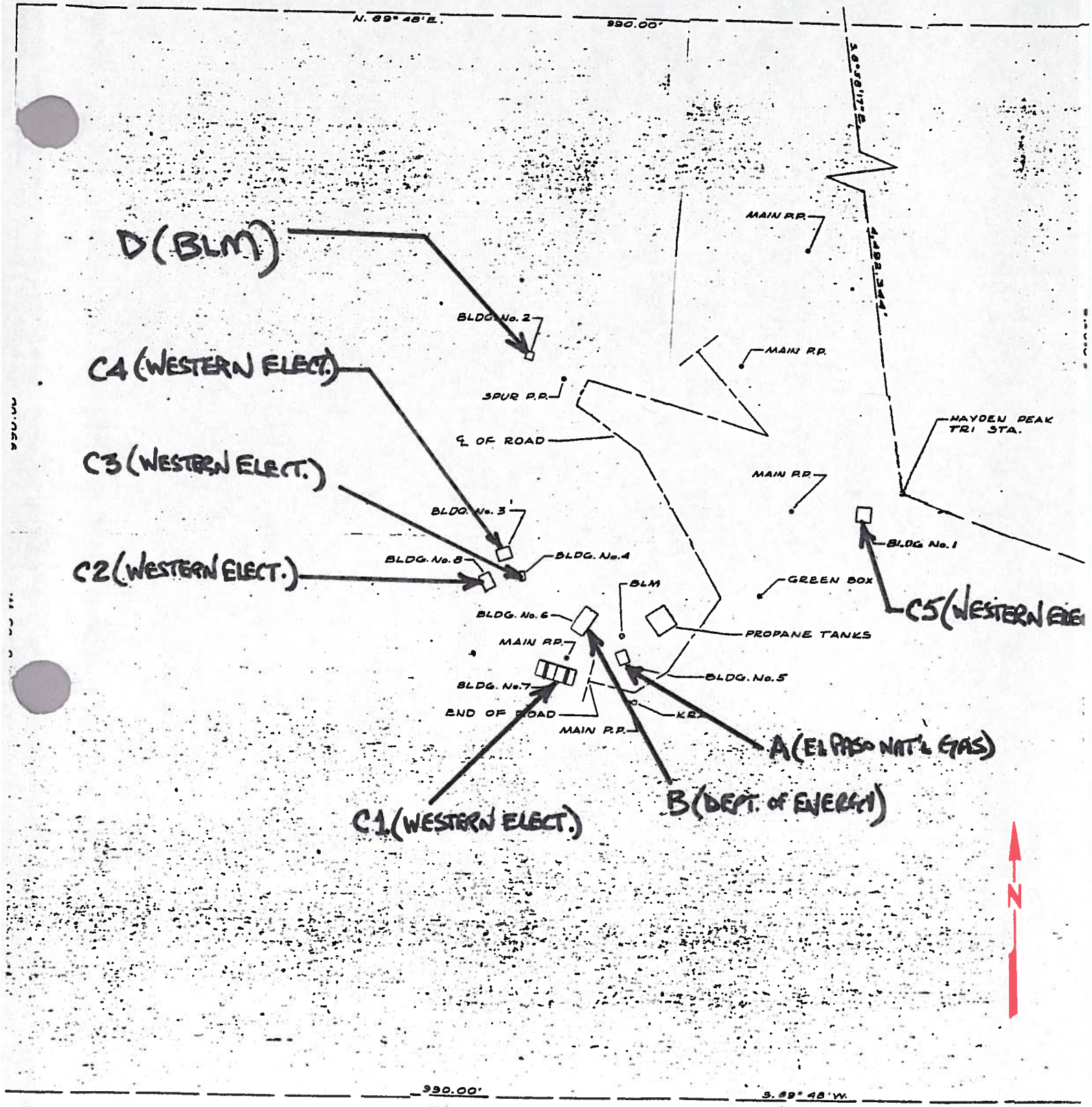
B. Hayden Peak Communication Site

On August 24, 1984, the Bureau of Land Management accepted title to a parcel of land comprising 22.5 acres identified as the Hayden Peak site on the vicinity map. The land was previously deeded to Mohave County as a portion of the Hualapai Mountain Park. However, following the completion of a compliance repot involving improper uses authorized by the county, the Mohave County Board of Supervisors elected to Quit Claim those lands containing communication facilities. The reader should refer to BLM case file PHX-077416 for further information concerning the federal acquisition of the park property.

The following enlarged photo depicts the majority of the facilities presently located on Hayden Peak. The principal users include the Department of Energy, El Paso Natural Gas Company, Western Electronics, and the Bureau of Land Management.



HAYDEN PEAK



HAYDEN PEAK-FACILITIES MAP

Hayden Peak is accessible via a 4-wheel drive, infrequently maintained, dirt/rock base roadway. Whereas, the major portion of the roadway traverses the Hualapai Mountain Park, administered by Mohave County, a Road Use License Agreement was procured from the Mohave County Engineer on May 16, 1985 (Refer to Exhibit A).

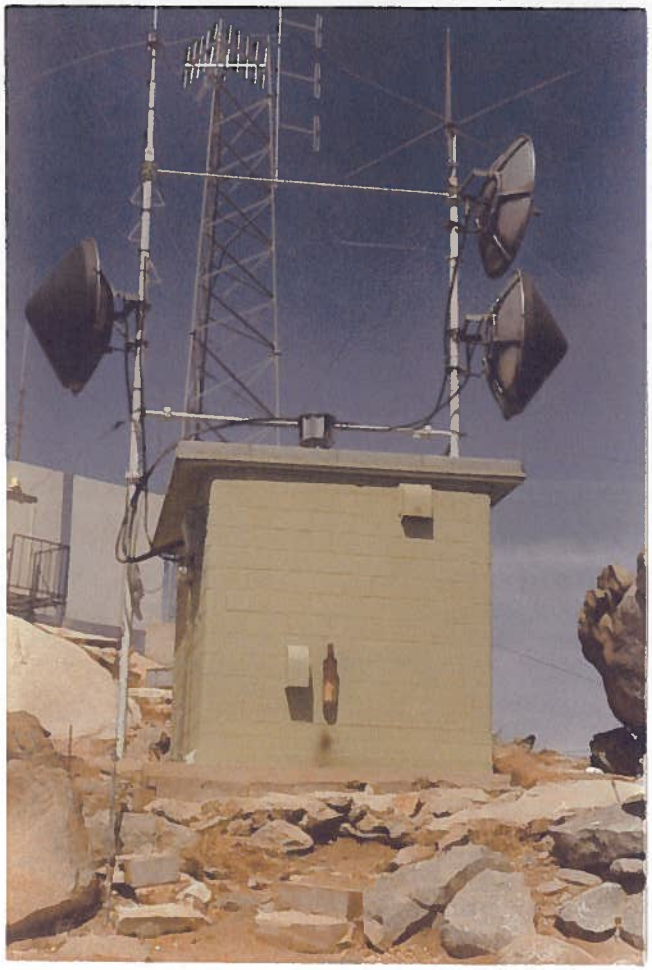
The site is served by a single phase 12.5 KV transmission line owned and operated by Mohave Electroci Cooperative, Inc. In a recent discussion with a Co-op engineer, no service problems were noted and it appears that power is available for further site development needs, whether low or high power users.

From a geographic standpoint, Hayden Peak is an exposed fractured granite structure that experiences extreme wind conditions. Snow accumulation and icing are major considerations that must be recognized when evaluating new facility construction, especially tower height and design.

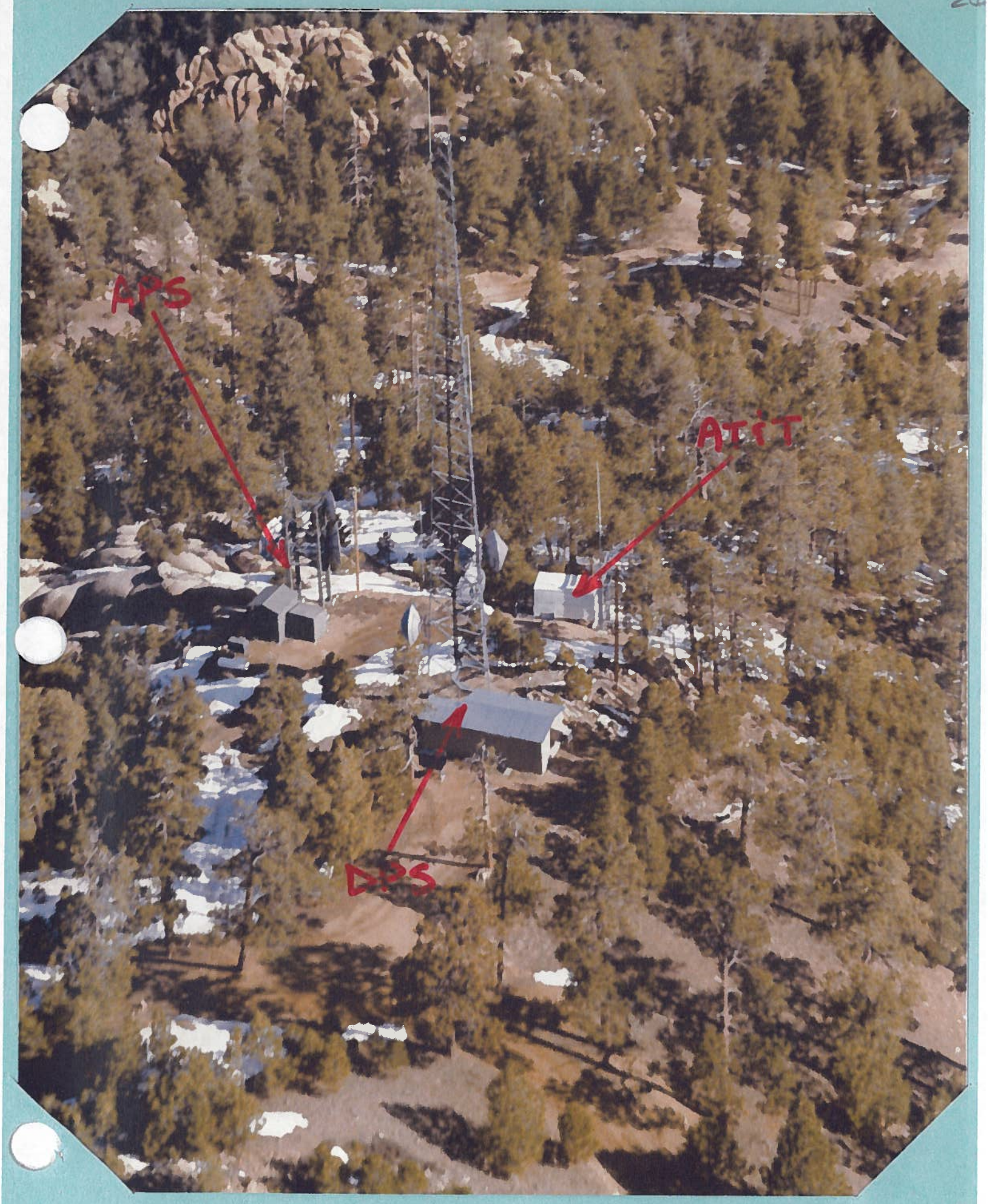
The communication facilities located on the peak were initially licensed by Mohave County. Development began in the 1950's and continued through the date of the land transfer, August 24, 1984.

The following discussion of existing facilities can be tracted as to their location by referencing the Hayden Peak Facilities Map attached to the site photo.

A. El Paso Natural Gas - This facility as shown in the photo below, is used for microwave purposes with a base station link.



El Paso Natural Gas - R/W Application A-20667



POTATO PATCH SITE

El Paso Operates on the following frequencies:

Use	Xmit Freq. (MHz)	Rec. Freq. (MHz)
Microwave Repeater	1875.0	1955.0
Microwave Repeater	1905.0	1985.0
Microwave Repeater	1885.0	1945.0
Base Station	48.74	48.74

El Paso has submitted a right-of-way application at the request of the Bureau. Those additional users to be discussed later were also required to submit right-of-way applications. The applications will be granted following the completion and approval of this management plan.

B. Department of Energy - This site consists of a 9 by 24 foot building with a 55-foot Rohn-guyed tower, a 40-foot free standing tower, and propane storage tanks. These facilities are depicted on the photo below.

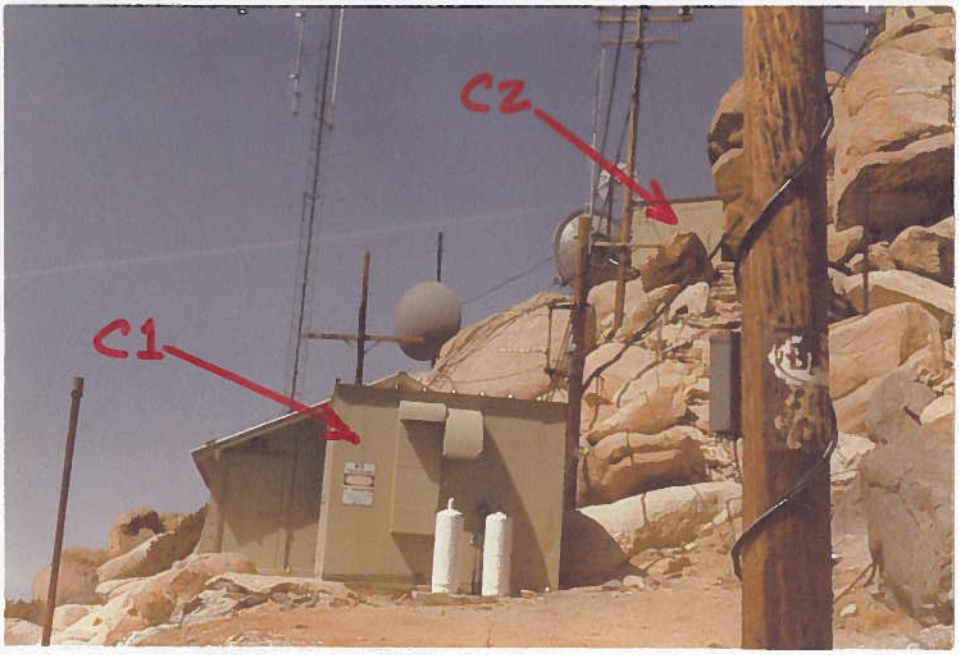
Dept. of Energy Site on R/W
Application A-20920

Western Area Power Administration (DOE) is the primary user providing services to the Bureau of Reclamation as well. The

following is a listing of users and frequencies.

User	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
WAPA	170.075	169.100
WAPA	417.675	414.825
Bur. of Rec. River Control	M417.275	408.575
	M164.575	167.125
Yuma Project Office	M412.375	M419.825
	M164.725	M164.200

C1. Western Electronics - This site, as noted on the facilities map, is operated and maintained by Western Electronics, but contains a number of users, as well as a 10 KW and 15 KW propane fired emergency power system. The photo below depicts the C1 and C2 facilities.



C1 and C2 - Western Electronics Facilities - R/W Application A-19158.

A list of users for the C1 site is as follows:

User	Xmit Freq. (MHz)	Rec. Freq. (MHz)
Mohave Electric Coop	47.74	48.24
Mohave County	45.20	45.20
Mohave County		39.50
Amateur Radio	146.760	146.160
Transwestern Pipeline	153.200	158.280
Southern Union Gas	158.310	153.290
Mohave County Road	159.135	156.045
San Bernardino Sheriff	467.275	462.275
San Bernardino Sheriff	155.970	155.970
Mohave County Sheriff	156.150	155.535
Mohave County Fire	154.355	153.890

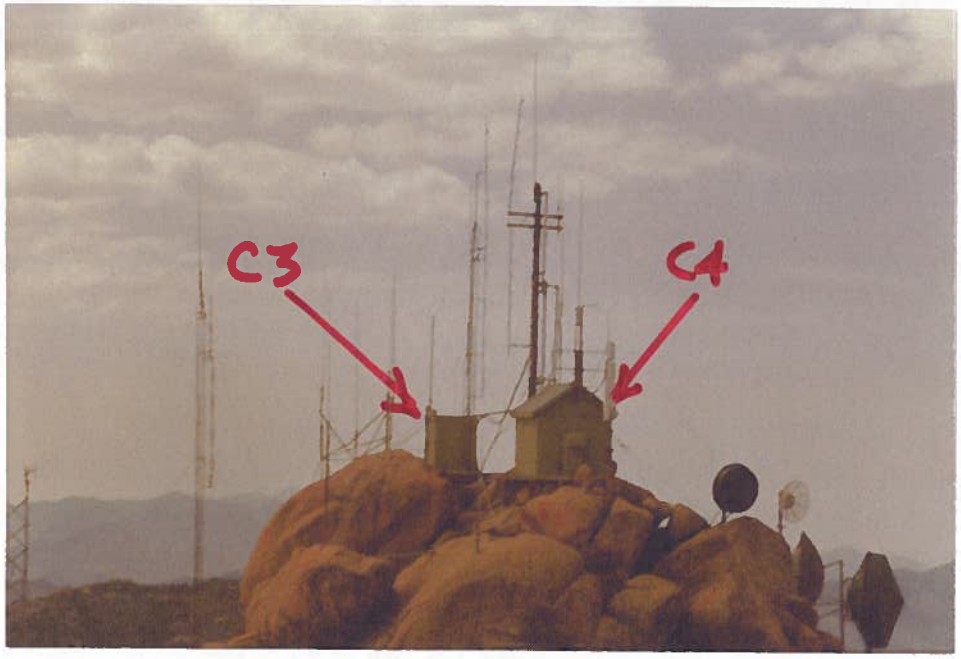
User	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
Citizens Utilities Elect.	47.82	48.38
Citizens Utilities Tele.	35.16	35.16
U. S. Border Patrol	163.675	162.925
USDA Soil Con. Serv.	164.150	164.9375
Federal Aviation	172.950	172.150
U.S. Border Patrol	413.675	408.300
Western Electronics	152.120	158.580
Hancock Farms	451.775	456.775

C2. Western Electronics - This facility contains battery driven microwave equipment that provides closed circuit classroom TV courses for Mohave County (Community College), in addition to an American Cable link up. The following is a listing of users and frequencies involved.

User	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
Mohave Community College	12,530	12,250
Mohave Community College	12,470	12,230
Mohave Community College	12,490	12,270
Mohave Community College	12,510	12,210
Western Electronics	2,118.8	2,168.8
American Cable	12,730	
American Cable	12,900	
American Cable	12,775	
American Cable	12,875	
American Cable	12,925	

Not in Service

C3. Western Electronics - This small building contains four (4) public service repeaters operated by Western Electronics. It is situated at the very top of the peak as noted on the photo below.



C3 Houses Radio Common Carriers While C4 Houses the TV Translator Equipment. Both facilities are atop Hayden Peak.

The Radio Common Carrier (RCC) can provide service to ten customers per each unit or 40 if at capacity. At the time of this evaluation, about 30 customers were on line. The frequencies are as follows:

User	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
Western Electronics	464.400	469.400
Western Electronics	464.600	469.600
Western Electronics	464.700	469.700
Western Electronics	464.850	469.850

C4. Western Electronics - This facility is also located at the top of Hayden Peak as noted on the previous photo. It contains TV translator equipment which serves the residents of Mohave County as a function of the county. Western Electronics is the county contractor who operates and maintains the equipment. The following translators are operated on this site in conjunction with those facilities situated on Hualapai Peak which were discussed earlier.

Xmit Freq.	Rec. Freq.
Channel 50	Channel 12
Channel 60	Channel 58
Channel 66	Channel 5
Channel 68	Channel 8
*Channel 70/50	Channel 12
*Channel 78/44	Channel 3
*Channel 82/48	Channel 10
	Channel 9
	Channel 13
	Channel 15
	Channel 21

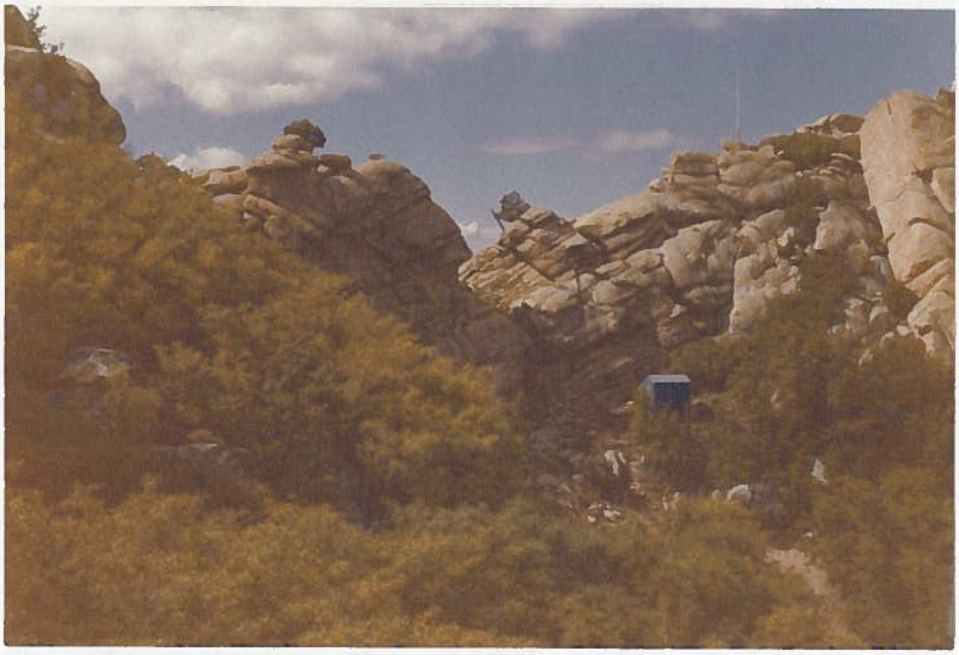
*Footnote - These channels have been converted to a lower range as noted by the "/".

C5. Western Electronics - This facility is situated along the eastern edge of Hayden Peak as depicted on the Facilities Map and shown in the photo below.

C5 houses backup to translator antennas in a stacked configuration.

The building or shed provides protection for a stacked configuration of antennas that are used for backup TV translator purposes.

D. Bureau of Land Management - This facility consists of a small metal shed and two antenna positions. The site has been leased from the county and provides radio relay communications to the BLM Kingman Office. The site is situated as noted on the Hayden Peak Facilities Map and as shown on the following photo.



BLM Hayden Peak radio relay site.

The facility is maintained by a local contractor, Western Electronics, who also operates and maintains facilities on the peak. The following are the uses and frequencies associated with the site.

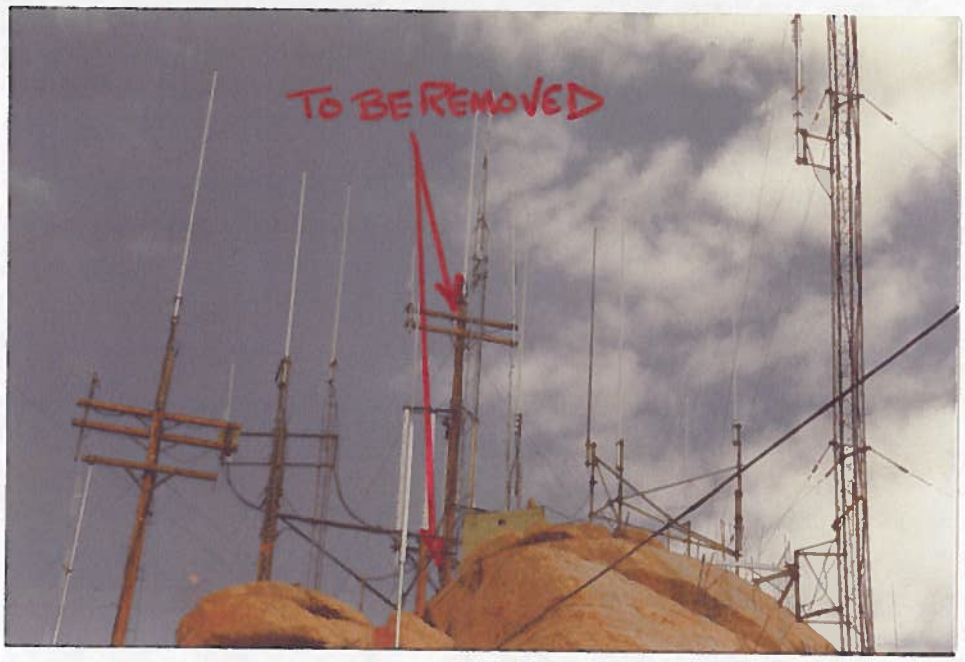
User	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
Radio Ch. 1	168.3	168.3
Radio Ch. 2	169.225	168.3

The Channel 1 to Channel 2 patch is made by a UHF control link (M414.975 link up and M419.775 link down).

In summary, the Hayden Peak site supports facilities for TV translator, microwave, 2-way mobiles, radio relay, ham radio, and public service repeater purposes. All such uses are low power, i.e. than 120 watts generated transmitter power.

The location and elevation of Hayden Peak make it an ideal site for microwave and radio relay facilities that are associated with interstate gas pipeline and electric transmission systems. As in the case of El Paso Natural Gas and the Department of Energy, their radio relay facilities on Hayden Peak are utilized by line personnel conducting maintenance and repairs of such terstate systems. To ensure communication reliability, site sensitivity is onstant problem. In terms of site cleanliness and communication facility structures, it could be said that Hayden Peak is "dirty".

The following photos are indicators of the condition of the site.



This photo depicts the congestion at the top of Hayden Peak where antennas appear to be haphazardly placed. While some may refer to such a concentration of antennas as an "antenna farm", the Hayden Peak site lacks antenna placement planning. The reader should note the numerous guy wires that add to the space problem. The wood support in the center of the photo is to be replaced with a 60 to 80 foot metal antenna to accomodate the TV translator antennas associated with the lowering of the UHF channels.

This photo depicts the recent effort being made to bundle antenna cables where possible. There are still a number of cables that run along the ground and rock ledges that are neither bound or secured.

This particular photo depicts an example of the lack of effort to secure guy tiedowns and to avoid excessive wire wraps at the guy couplings. In addition, there are no shunt wires around the guy couplings to avoid lightning damage.

Given the array of antennas, including the contrast of wood and metal structures, Hayden Peak is highly susceptible to lightning strikes. This problem is further complicated due to the fact that the peak is made up of fractured granite and no common "ground" exists.

A discussion of the electronic problems associated with the Hayden Peak Site will be covered in Section IV to follow.

C. Potato Patch Site

The following photo enlargement depicts the Potato Patch Communication Site that, like the Hayden Peak Site, was transferred to the Bureau of Land Management from Mohave County on August 24, 1984. The site consists of a 10-acre parcel and is occupied by three (3) principal communication site users, AT&T, Department of Public Safety, and Arizona Public Service. It is generally situated with a clear view of the Kingman area, as well as, the Hualapai and Sacramento Valleys with an easterly view of the I-40 corridor to the Truxton area. It is approximately 7680 feet above sea level, is accessible via a frequently maintained dirt road, and is serviced with single phase power (Mohave Electric Coop 12.5 KV).

The following is a listing of principal and secondary users occupying the site. Their location is referenced to the Potato Patch Facilities Map attached to the site photo.

E. Department of Public Safety - This site is operated and maintained by DPS and consists of a 40 by 14 foot building and a 140 foot self-supporting tower. The following photo depicts the building and tower as it is shaded by an 80 foot ponderosa.

DPS site at Potato Patch. Previously licensed by Mohave County who administered the site until August 24, 1984. DPS has submitted a right-of-way application (A-20921) which is pending the completion of the site plan.

The users and frequencies being served in the DPS facility include the following:

User	Xmit Freq. (MHz).	Rec. Freq. (MHz)
AZ, Highway Maint.	156.225	151.010
Az, Law Enforcement	44.66	44.66
AZ, Law Enforcement	151.460	151.145
AZ, Law Enforcement	154.905	154.905
AZ, Law Enforcement	154.935	155.190
AZ, Law Enforcement	453.050	458.050
AZ, Law Enforcement	460.225	465.225
AZ, Law Enforcement	460.275	465.275
AZ, Law Enforcement	460.475	465.475
AZ, Law Enforcement	460.500	465.500
USA, Law Enforcement	163.9375	167.4875
AZ, Emergency Medical	463.000	468.000
AZ, Emergency Medical	463.025	468.025
AZ, Emergency Medical	463.050	468.050
AZ, Emergency Medical	463.075	468.075
AZ, Emergency Medical	463.100	468.100
AZ, Emergency Medical	463.125	468.125
AZ, Emergency Medical	463.150	468.150
AZ, Emergency Medical	463.175	468.175
AZ, Oper. Fixed Microwave	6585.000	6705.000
	6645.000	6845.000
	6665.000	6825.000
	6785.000	6625.000

The uses include microwave and land-mobile transmitters and receivers.

F. Arizona Public Service - This facility is operated and maintained by APS with no other users being serviced. The uses include three (3) microwaves, one UHF control bank, and a high band land mobile transmitter-receiver. The uses and frequencies are noted as follows. /5

Uses	Xmit. Freq. (MHz)	Rec. Freq. (MHz)
Microwave	1915.0	1975.0
Microwave	1855.0	1975.0
Microwave	1855.0	1935.0
Control Station	457.05	452.05
Land Mobile Base	153.59	153.59

APS facility on Potato Patch Communication Site. Previously licensed by Mohave County. APS has submitted a right-of-way application (A-20308) which is pending the completion of the site plan.

G. AT&T Communications - This facility was initially occupied by Mountain States Telephone but was transferred to AT&T before the property was deeded to the United States. AT&T utilizes the site for radio relay purposes on the following frequencies.

Use	Xmit Freq. (MHz)	Rec. Freq. (MHz)
Radio Relay	451.325	456.325

AT&T radio relay site on Potato Patch. AT&T submitted a right-of-way application (A-21093) which is pending the completion of the site plan. The tower, on right, was utilized to support microwave dishes when the site was operated by Mountain States Telephone.

In summary, the Potato Patch site supports facilities for 2-way mobiles, radio relay, and microwave purposes, all low power uses. The facilities are situated so as to allow the greatest amount of coverage obtainable, especially for such uses as Highway Patrol and Public Safety emergency communications throughout the greater Kingman area, as well as the remote outlying areas. The APS facility is utilized to provide maintenance crew communications when repairs are being made on high power transmission lines in northern Mohave County. Overall, the site essentially serves public service type needs.

In terms of cleanliness, the site is generally free of litter and appears to be operating under fairly good electronic practices. Unlike Hayden Peak, the towers on Potato Patch are self-supporting and therefore no guy lines are in use. From an environmental standpoint, Potato Patch does not experience the severe wind and icing problems found on Hayden Peak. Winter access is also easier.

IV. PUBLIC NEEDS/DEMAND AND OTHER CONSTRAINTS

A. Environmental Factors/Constraints

In April of 1985, site inspections were made of the Potato Patch and Hayden Peak Communication sites by an environmental team including a wildlife biologist, archaeologist, and realty specialist. A botanical survey could not be completed as the growing period for the majority of the flowering species does not commence until mid-summer. The results of the field examinations are as follows.

1. Botanical - There are no known federally listed or candidate plant species on or near the subject sites. However, the following two (2) species on the Arizona Natural Heritage Program List may occur in the vicinity.

   Mammillaria Viridiflora
   Cordylanthus Nevinii

   It was therefore recommended that on site botanical clearances be completed on a case-by-case basis when new applications are received or amendments are made (Refer to Exhibit B).

2. Cultural Resources - A complete inspection of both the Hayden Peak and Potato Patch sites was made. No surface evidence of historic or prehistoric use was found. Due to shallowness of the soil and litter depths at both sites, it was determined that no potential exists for subsurface cultural resources. An unconditional clearance was therefore given allowing future development to occur without requiring additional cultural inventories.

3. Wildlife - Of primary importance is the protection of the Hualapai Mexican Vole (Microtus mexicanus hualapaiensis) habitat. The particular species is found in very limited areas generally on northeast and northwest facing slopes in Ponderosa Pine where grass is more predominant. The Potato Patch site may support areas similar to the Vole's habitat needs, however, no signs of vole activity were identified.

It was therefore recommended that on site clearances be required prior to the authorization of new facilities or amendments (refer to Exhibit C). In addition, the following recommendations were made (consolidated).

a.
Clearing should be kept to a minimum, only removing those pines that are absolutely necessary and then leaving the bucked tree(s) on the site for habitat enhancement.

b.
The northeast slope below Potato Patch should be developed last.

4. VRM - On June 21, 1985, on site inspections were made by a landscape architect on loan from the BLM Arizona Strip District. In summation, he determined the following VRM criteria (Refer to Exhibits D & E).

Hayden Peak Site - Scenery Quality - A
Sensitivity - H
VRM Class II

Potato Patch Site -Scenery Quality - A
Class II

It should be noted that Hualapai Peak, which is covered by a Bureau Land Use Plan, is equivalent to Hayden Peak in terms of VRM criteria.

In concluding his evaluation, the architect suggested the following mitigating measures. The measures apply to Potato Patch and Hayden Peak unless so noted.

a. Use non-specular grey color for towers.

b. Use predominant soil or vegetation color for buildings and other structures below tree height.

c. Allow only selective cutting of Ponderosa Pine.

d. Make an effort to locate buildings in low lying areas where natural screening can help to reduce visual contrast.

e. Combine facilities, buildings and towers, whenever possible.

f. Limit tower heights on Potato Patch to 75 feet. (It should be noted that the average tree height is 75 feet with an allowance of an additional 25 feet for a total of 100 feet instead of the 75 feet prescribed in the architect's report).

g. Limit tower heights on Hayden Peak to 80 feet.

5. Land Use Plans - The Hayden Peak and Potato Patch sites are not addressed in Bureau Land Use Plans as they were only acquired from Mohave County in August of 1984. However, the Hualapai/Aquarius Management Frame Work Plan R-G.1 designates Hualapai Peak as a proposed Class III "Natural Environment Area". This recommendation was rejected in favor of establishing environmental constraints and mitigation in VRM, recreation, biological resources, etc.. While the designation was not approved, the concept to retain the peak in a natural state was supported.

B. Hualapai Mountain Park

The Potato Patch and Hayden Peak sites were deeded to the United States on August 24, 1984, voluntarily by the Mohave County Board of Supervisors. When the Bureau accepted title to the 32.5 acres, in total, it made a commitment to include the County in the development of communication site plans involving Hayden Peak and Potato Patch and to develop road use/maintenance agreements. This commitment is specified on Page 3 of an April 12, 1984 letter to the County Administrator (Refer to Exhibit F).

The road use agreement or license has been accomplished as provided in Exhibit A. This plan must, as per the commitment, be reviewed by the Mohave County Parks Director before implementation.

C. Formation of Existing Users Group

On December 19, 1984, the Bureau of Land Management held a user meeting of all those existing users occupying the Hayden Peak and Potato Patch sites, as well as one user who remains within the Hualapai Mountain Park, but who has been required to relocate to one of the two occupied sites. The users were informed of the United State's acceptance of the previously county-owned property and were requested to submit right-of-way applications with a complete list of secondary users in their facility, including all transmit and receive frequencies. In addition, the users were requested to consider the formation of a users association and to present their views in a follow-up meeting scheduled on February 27, 1985.

At the February 27, 1985, user group meeting, the users approved a resolution to form an association and officially named the association as the Hualapai Mountain Users Association. Officers were elected and committees selected to evaluate and make recommendations as to the preparation of Association Constitution and By-Laws and the development of Technical Standards. The reader should refer to Exhibit G for information concerning the user meetings.

By May of 1985, the Association had drafted a Constitution and By-Laws and had developed and approved site technical standards.

The draft constitution, enclosed as Exhibit H, addresses three (3) general purposes involving resolution of electromagnetic interference problems, road maintenance, proportionate costs, and association's role as consultant to the Bureau. The draft constitution specifies both the Hayden Peak and Potato Patch sites and would require that any new users become members of the association as a condition of their authorization from the Bureau.

The draft By-Laws, enclosed as Exhibit H, are in the process of being revised and should be finalized and approved by late August of 1985. A point of discussion in the draft By-Laws concerns the annual assessment for each user for site operational costs, i.e., road maintenance. Article III, Section 2, sets the maximum total assessment, combining all user annual assessments, at an amount not to exceed $5,000.00.

In March of 1985, those remaining road maintenance funds administered by Mohave County were transferred to the Association's account (refer to Exhibit I). Whereas, this amount totalled $2,770.15, the total assessment needs, as provided in the By-Laws, would only require the collection of an additional $2,229.85 for the first year, assuming it will commence by September of 1985. Given the formula proposed in the By-Laws, the primary users would share equally 50 percent of the needed annual assessment while the remaining 50 percent will be allocated by the number of transmitters each primary user operates. Continuing with the example, 50 percent of the $2,229.85 would be approximately $1,115.00 split among eight (8) primary users equally or about $139.00 each. The remaining $1,115.00 would be collected by dividing that figure by the total number of transmitters deriving a unit cost and applying that cost to each user times the number of transmitters he or she operates.

All primary site users, including governmental entities and nonprofit organizations, would be required to pay annually their share of the annual assessment needs.

The proposed Site Technical Standards, prepared by the Association Technical Committee and enclosed as Exhibit K, recommends specific site development limitations. The committee specifies that the transmitter power output shall not exceed 120 watts while Effective Radiated Power (ERP) will not exceed 1,200 watts. Microwave systems would be excluded from these limitations. Given these parameters, it can be assumed that the Hualapai Mountain Users' Association, with the exception of the Bureau as a silent member upon approval of the Constitution and By-Laws, is advocating the continuation of the Hayden Peak and Potato Patch sites as low power user sites.

The committees' recommendations also include transmitter, receiver, antenna, electrical, buildings, equipment, and housekeeping technical standards. The proposal has been submitted to the Bureau for approval. Should it be determined that the proposed standards are acceptable, they would be included in the Bureau's stipulations whether in whole or in part.

D. Public Needs/Demand

On February 26, 1985, the Bureau of Land Management conducted an open public meeting to advise the general public of the recent ownership change of two (2) existing communication sites in the Hualapai Mountains and to solicit comments and proposals associated with the future development of the sites. The reader should refer to Exhibit L for information concerning the public meeting.

While the meeting did not bring forward a clear picture of potential user demand for space on either of the two (2) communication sites, it succeeded to bring the current low power users face-to-face with potential high power users, ie.. F.M. broadcast. The Bureau informed the public that site plans would be developed prior to allowing new users on either the Hayden Peak or Potato Patch sites and that site development proposals should be forwarded to the Kingman Resource Area Office to assist in the Bureau's evaluation of future site needs.

The following proposals were generated as a result of the public meeting. It should be noted that Hayden Peak and Potato Patch were opened to the public land laws on May 8, 1985. The land remained closed to mineral entry.

1. Cactus Radio Club - R/W Apln. A-21071

On June 24, 1985, the above noted applicant submitted a right-of-way application for the purpose of constructing, operating, and maintaining an amateur radio facility in the 144 to 148 and 420 to 450 MHz bands. The proponent requested space on the Hayden Peak Communication Site. However, as of the date of this report, the applicant has not submitted a site location on which they intend to construct their proposed 8x8x20 foot building and 70-foot guyed tower.

Comments were solicited from existing users and Mohave County. Only two responses were received, one indicating that an exact location would be necessary to adequately evaluate the proposal and the other offering no objection (County). The application is being held in suspense pending completion of the site plan.

2. Black Mesa Pipeline Company - R/W Apln. A-20669

On March 14, 1985, the above noted applicant submitted a right-of-way application for the purpose of relocating VHF and UHF facilities from inside the Hualapai Mountain Park to the Potato Patch Communication Site. The relocation was recommended by the Bureau of Land Management and acted on by the Mohave County Parks Director. Black Mesa has been given until September 1, 1989, to relocate off the Park land.

The applicant proposes to construct, operate, and maintain a VHF transmitter operation at 158-430 MHz and one UHF transmitter operating at 452.375 MHz. Black Mesa proposes to house the equipment in a 10x20x10 foot fiberglass building, including a 100-foot self-supporting tower, and 1000 gallon propane tank. The application is being held in suspense until the site plan is completed.

3. Mohave Sun Broadcasting-KZZZ FM-R/W Alpn. A-20919

On May 8, 1985, the above noted applicant submitted a right-of-way application for the purpose of constructing, operating, and maintaining an FM broadcast facility on the Hayden Peak Communication Site. The proposal included the following technical information.

FREQUENCY: 94.7 MHz Channel No. 234

LOCATION: N. Lat. 35 degrees 04' 52" Long. 113 degrees 54' 13"

ERP: 25.226 KW Horizontal and Vertical

ANTENNA HT. RADIATION CENTER: 3640.48 feet HAAT
8502 feet Mean Sea Level
122 feet Above Ground

ANTENNA: 138 feet AGL (110 feet Self Supporting w/pole mounted FM antenna)
3 Element (Gain of 1.5588 Relative Field)

TRANSMITTER: 20 KW Manufactured by Harris-Output of 16.813 KW (Transmission line efficiency of 96.25% for an antenna input power of 16.183 KW)

PHASE CONVERTER: Manufactured by Phase Master

SPACE REQUIREMENTS: Antenna (Tower) at groundlevel 10 to 15 feet per face
Transmitter Building - 15 by 20 feet
Auxillary Power Unit - 4 by 8 feet

Existing site users were notified of the proposal, as well as Mohave County, administrator of the adjacent Hualapai Mountain Park. While the County Parks Director offered no objection, the Bureau received five (5) formal protests. The Federal Communications Commission received three (3) formal protests.

The protests from the low power users generally emphasize that the applicants' (KZZZ) engineering consultant did not make an adequate minimal interference case in his application to FCC. All the users who responded noted that desensitization of the sites will occur and that the use of by-pass devices and isolators cause reductions in the order of 6dB for receivers and/or transmitters. Public service type users have indicated that the current reception is in some cases, at the critical limit in terms of range and sensitivity.

An evaluation of the FM application and the present conditions of the Hayden Peak and Potato Patch sites may be found in Attachments 1 and 2. The evaluation was completed by a private electronics contractor, William F. Lieske, President, EMR Corporation, 22402 N. 19the Avenue, Phoenix, Arizona.

The FM application is being held in suspense pending completion of the site plan. It should be noted that FCC has not yet approved the applicant's modified construction permit (BPH-850308IB). The modification request was dismissed since a preliminary engineering study revealed that KZZZ's proposed operation exceeds the maximum facilities allowed under the United States of America and Mexican Agreement. In querying FCC, the Bureau learned that this meant that the proposal exceeded the power requirements for ERP. FCC stated that at this particular site, a maximum of 14 KW would be allowed.

The Bureau has been advised by the applicant that they have resubmitted their proposal to FCC cutting their ERP from 25.226 KW to 12.5 KW.

4. Advanced Communications - R/W Apln. A-18950

This application pertains to Hualapai Peak the third communication site being addressed in this plan. The applicant, affiliated with Motorola, submitted their right-of-way application on November 14, 1983. The application proposes to place, operate, and maintain a solar driven 460 MHz community repeater at the base of the Hualapai Peak outcrop. It was proposed to secure a 20-foot antenna at the top of the peak. ERP was estimated not to exceed 200 watts.

Mohave County expressed concerns that this facility would interfere with their T.V. translator facilities located in the the immediate area. The application has been held in suspense until the site plan is completed.

5. Other Interested Parties

The following involve inquiries made since the public meeting on a site by site basis.

a. Hayden Peak

-FM Broadcast Facility (High Power)
-TV Broadcast Facility (High Power)
-FM Translators (Low Power)
-Land - Mobile Radio (Low Power)

b. Potato Patch

-FM Translators (Low Power)
-Microwave Point-to-Point (Low Power)
-Land - Mobile Radio (Low Power)
-Community Repeaters (Low Power)
-Two-Way Radios (Low Power)

In summary, the majority of the interest is in low power type uses. The TV Broadcast interest in Hayden Peak involved a construction permit application filed with FCC without knowledge of such a filing by the Bureau. The proponent was requested to visit the BLM Kingman Resource Area Office and was given a tour of the Hayden Peak Site. After visiting the site, the TV proponent indicated he was merely trying to get the permit approved through FCC and would obtain a better site at a later date after his permit was approved. He had no apparent interest in Hayden Peak for construction purposes.

The FM interest in Hayden Peak involves only one proponent. An adequate tower site location on Hayden Peak is his primary concern. He has stated that he will await the completion of the site plan before proceeding with his proposal.

E. Contractor Evaluation

On July 26, 1985, William F. Lieske, President, EMR Corporation, 22402 N. 19th Avenue, Phoenix, Arizona, submitted an evaluation of the Hayden Peak and Potato Patch Communication Sites (Refer to Attachment No. 1). The evaluation was completed under a competitive contract offer prepared by the BLM Kingman Resource Area Office (Refer to Attachment No. 2). The Statement of Work required that the successful bidder provide an evaluation of the development of the Hayden Peak and Potato Patch Communication Sites, as well as an evaluation and recommendation concerning the physical and electronic compatibility of the proposed KZZZ FM application (A-20919) for Hayden Peak.

The contractor visited the Hayden and Potato Patch Sites on July 9, 1985. Access inside each facility was not possible. However, a reading of the existing noise level was made and a preliminary determination made that both sites were "relatively quiet". The report indicates the following findings involving the two communication sites.

Potato Patch Site - Installations appear to meet standards of good remote communication facility practices. Enclosures are clean and secure. Towers are sturdy, grounded and generally well maintained.

Hayden Peak Site - Shows numerous instances of poor site practices. Bent towers and twisted portions of antennas and supports are evidence of adverse environmental conditions, i.e., wind and icing. Renovating all installations at that site to reasonable minimum standards would require the investment of time and money amounting to many times the existing capital value of the existing facilities. A wholesale upgrading of the site would take at least three (3) years.

The contractor begins his evaluation of the KZZZ FM proposal for Hayden Peak on page 5 of his report. Of importance, is the finding that the applicant can provide broadcasting service to the Kingman area at a much lower elevation than 8,390 feet as proposed. The contractor concludes that the applicant wishes to secure the use of Hayden Park to secure an audience far outside the area defined.

His finding appears to be supported on the basis of the dismissal effectuated by FCC concerning the FM applicant's construction permit. The August 5, 1985, dismissal involved an excessive ERP (25.226 KW) where an ERP of 14 KW is considered the upper limit for the Hayden Peak Site. As stated previously, the FM applicant intends to refile at an ERP of 12.5 KW. KZZZ currently services the Kingman area from its station located just south of the community.

The contractor's report further summarized the low power user protests concerning the FM application. The contractor begins his summary of the responses of the low power uses on page 11 of his report and concludes on page 14 that the FM applicant has alternative site possibilities while the low power users are established and risk unknown expenses to mitigate a problem that may be caused by the RF generated from a high power user.

The contractor recommends twelve (12) limitations that, in his opinion, should be imposed on the Hayden Peak and Potato Patch Sites. Limitation is perhaps the most important, as it addresses future site development. The contractor recommends that both sites be limited to a maximum generated transmitter power output of 120 watts, the maximum effective omni-directional radiated power limited to 750 watts, and the directional effective radiated power limited to 2,500 watts.

As in the case of the Hualapai Mountain Users Association power limitations, the Bureau must evaluate the contractor's recommendations and determine which limitations are applicable to the Bureau's preferred or elected site management objectives for each site.

The contractor continues with a discussion of other sites where high power and low power facilities occur. In conclusion and on the basis of the existing conditions on Hayden Peak and Potato Patch, he states on page 21 that...

> "the most logical solution to the problem before the Bureau would be to establish another site, if one exists, on Bureau land for high power installations, and to continue the Hayden Peak and Potato Patch sites as low power, two-way sites".

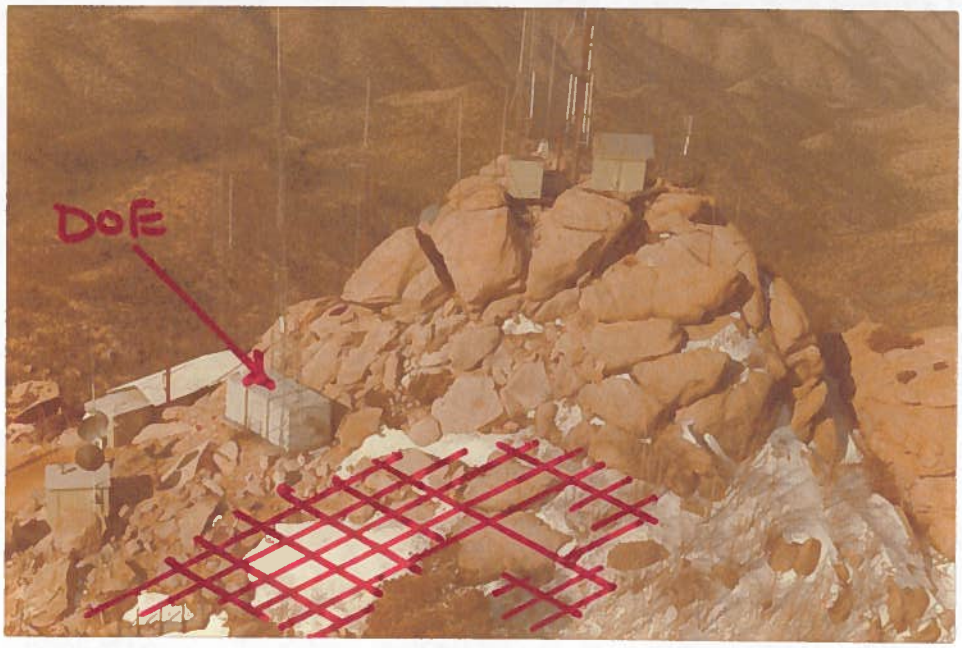
F. Available Development Space

One criteria that must be evaluated prior to opening a communication site to new users, is whether space is available to accomodate the desired facilities, i.e., buildings and towers. An analysis has therefore been completed for each site as follows.

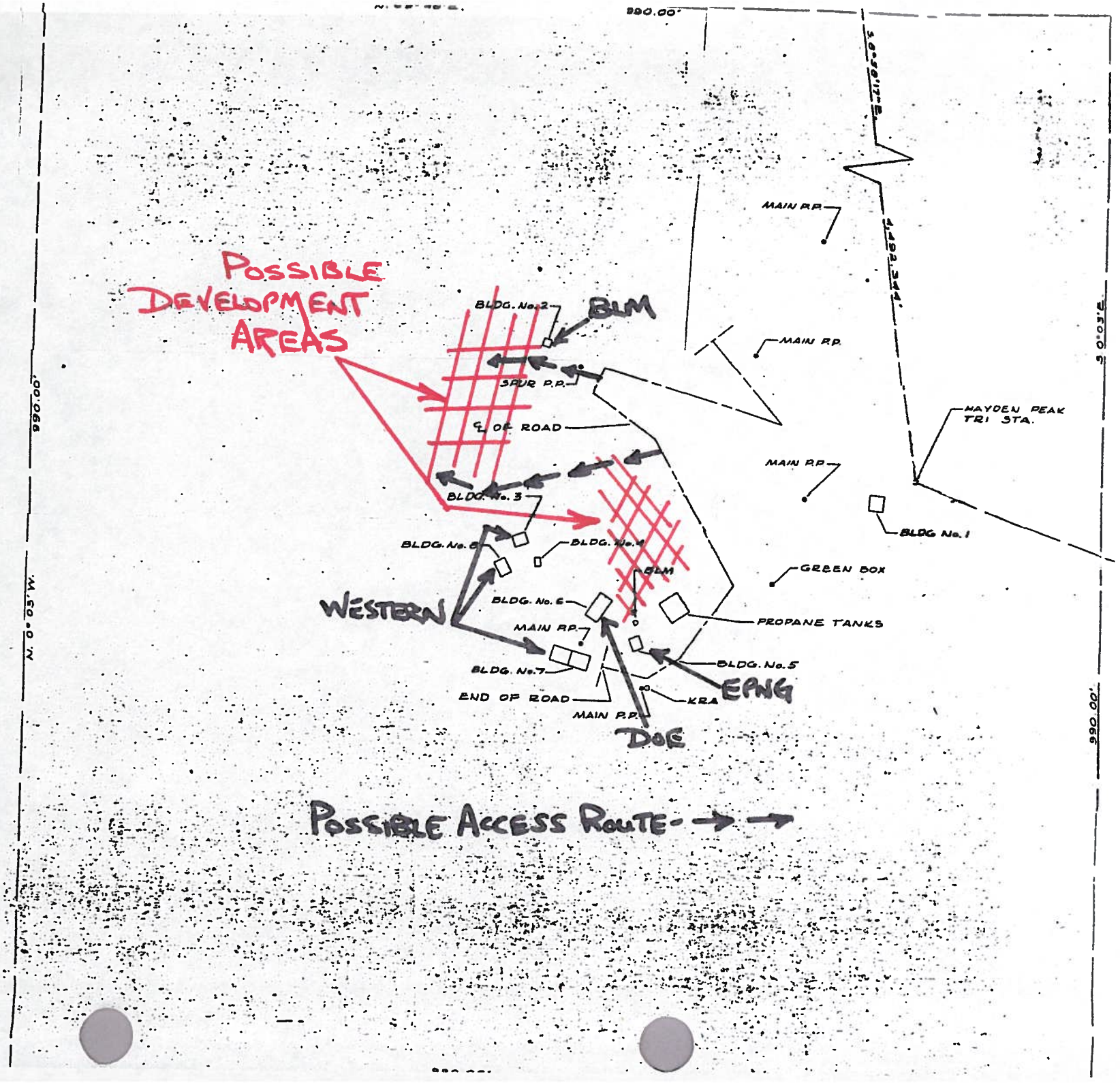
1. Hayden Peak -

Site consolidation would be the most beneficial activity in enhancing the opportunities for new development. Whereas, this action is not readily possible due to economic impacts to the existing users, limited space is, however, available. The following Available Development Space Map for Hayden Peak depicts possible structure placement sites in the cross-hatched areas.

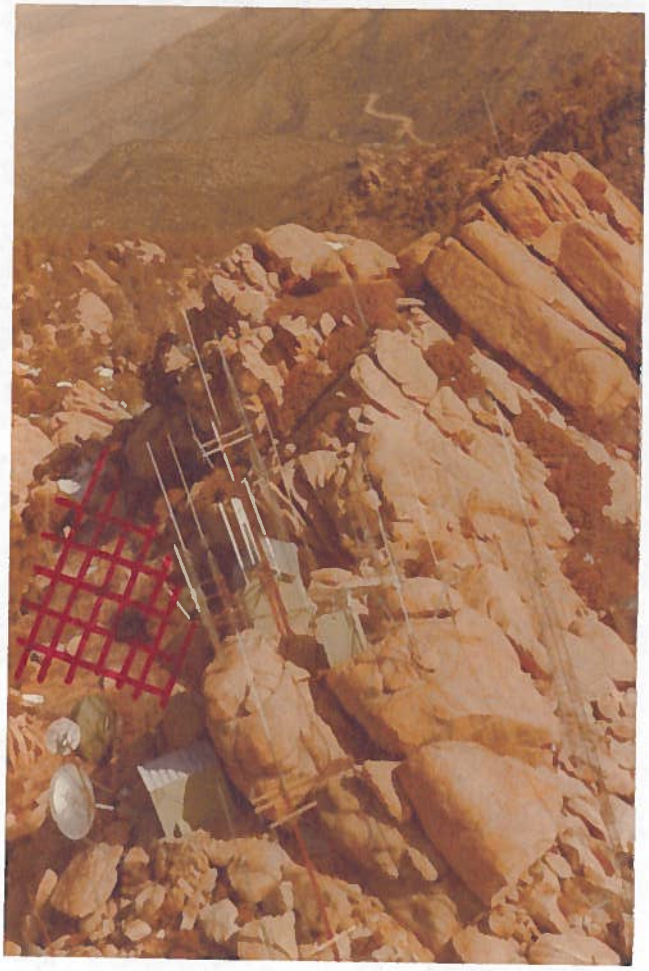
The potential sites are also shown in the following photos.



This photo depicts a limited development area just north of the DOE site on the east side of Hayden Peak. Small buildings could be placed here with antennas set above on the upper end of the peak.



HAYDEN PEAK AVAILABLE DEVELOPMENT SPACE MAP



This photo depicts a possible structure placement site on the west side of Hayden Peak. The swale below the peak is gradual where the cross-hatching is noted. A larger building could be located in this area (20 x 40 feet). However, a vehicle access route would be costly through strongly sloping rock faces. Any such route would be narrow and steep.

2. Potato Patch -

The following available Development Space Map and photo enlargement identify the large area immediately south of the existing facilities on the Potato Patch Site that could be utilized for structural placements, whether large buildings (20x40 feet) and towers or small prefabricated buildings. The hatched area lies along the higher ground and is easily accessed.

G. Policy Guidance/IBLA Decisions

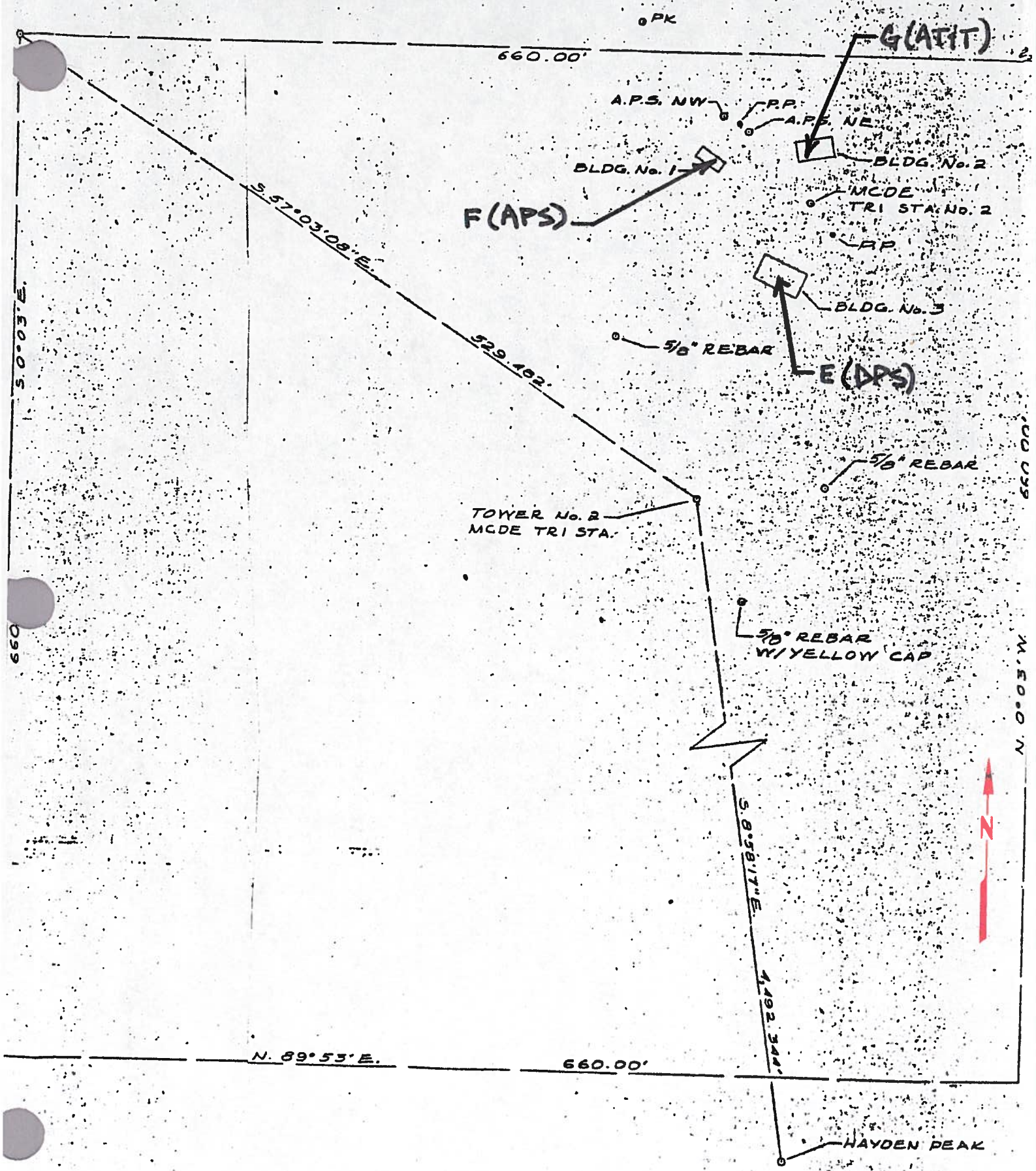
On March 4, 1982, the Interior Board of Land Appeals (IBLA) set aside and remanded a Bureau action rejecting a right-of-way application for a commercial FM broadcast station. The decision, IBLA 91-476, supported an appeal filed by the Peregrine Broadcasting Company (Refer to Exhibit M). The Chief Administrative Judge found that BLM cannot deny a right-of-way application simply because there is a mere possibility of interference or because denial will most easily insure that there is no degradation of existing use (62 IBLA 138).

Of further importance, the decision, also on page 62 IBLA 138,addresses BLM and FCC roles in terms of site-related technical questions, i.e. radio interference. The decision stated that....

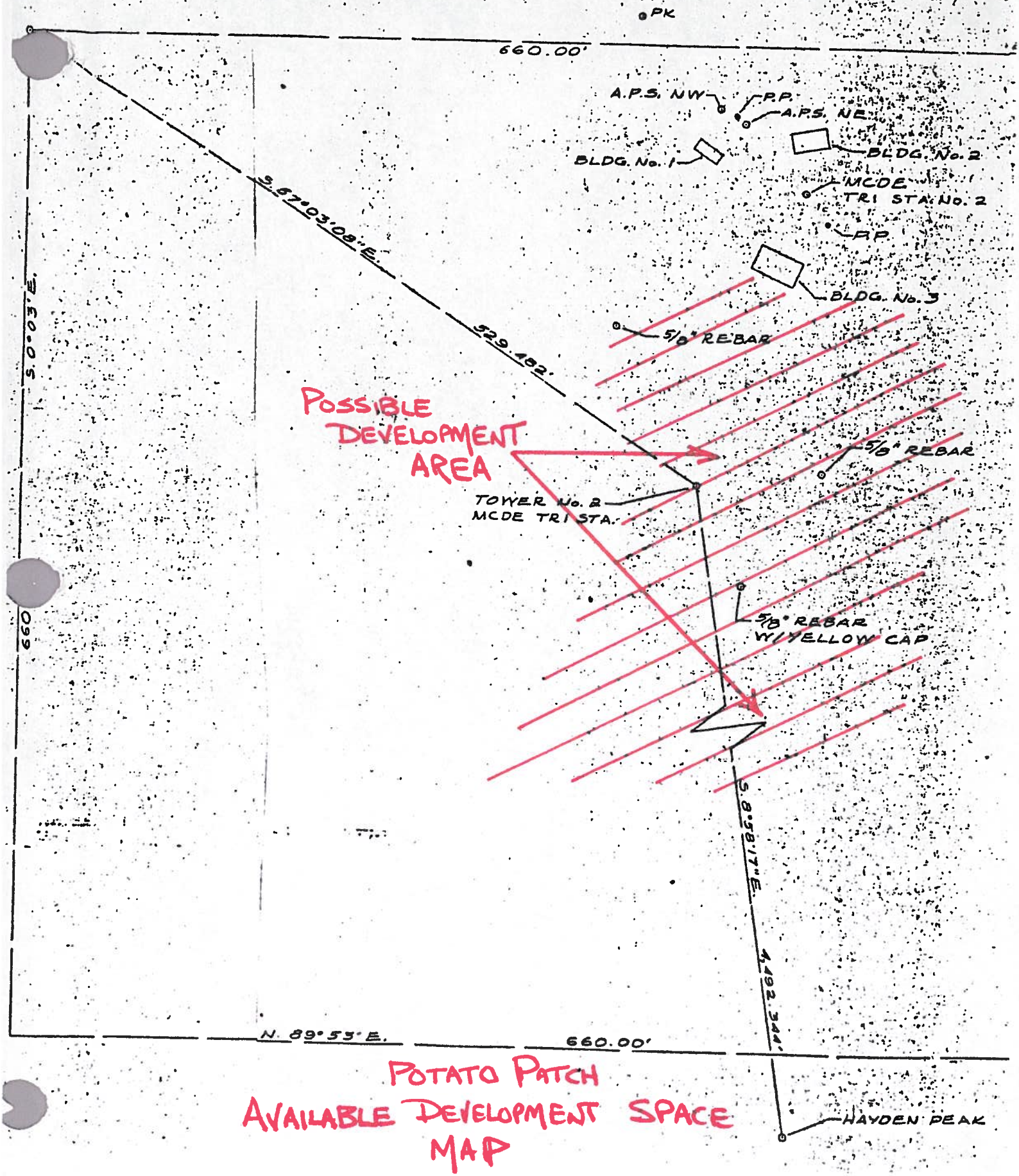
> "We perceive no reason why BLM cannot rule on the question of radio interference caused by multiple broadcasting in close proximity at the site. While, in the past, the Board looked to FCC to resolve technical problems involving BLM communications sites (Northwestern Colorado Broadcasting Co., 18 IBLA 62 (1974)), 2/ the regulation providing for joint FCC and BLM review of these problems, 47 CFR 1.70, has been eliminated. Although BLM has made FCC aware of the possibility of local interference on Grizzly Mountain resulting from appellant's FM license application, FCC did not rule on the question in its proposed rulemaking, and the Solicitor advises us in BLM's answer that FCC's Broadcast Bureau confirms that there is no longer any procedure under which FCC considers information on such site-related technical questions, such as the question of radio interference here, in order to maximize the use of the communication sites under its management."

It should be noted that a dissenting opinion was rendered by a member of the Board affirming BLM's decision to reject an application on the basis of possible interference with public service related existing communication facilities, i.e., fire, search and rescue, and police protection.

On April 10, 1985, IBLA issued decision IBLA 83-327 dismissing an appeal brought forward by a communications user as a result of site development activity. While the background information concerning the case is of no consequence to this site plan, the BLM and FCC roles concerning electromagnetic interference is addressed (Refer to Exhibit N). A concurring Administrative Judge agreed with the decision but stated that....



POTATO PATCH - FACILITIES MAP



POTATO PATCH
AVAILABLE DEVELOPMENT SPACE
MAP

POTATO PATCH
AVAILABLE DEVELOPMENT SPACE
MAP

"..... the role of the Bureau of Land Management (BLM) in policing communication sites to prevent electromagnetic interference with other licensees, may need considerable further examination both by BLM and, ultimately, this Board."

It would appear that as of April 10, 1985, the date of the decision, the role of BLM remains unclear in resolving electromagnetic interference problems. The Judge continues with a reference to the Peregrine decision on page 86 IBLA 81 and concludes with what appears to be a liability problem for the Bureau when no action is taken to correct an interference problem occurring as the result of an approved right-of-way. A summation of his presentation would detract from what appears to be a Bureau management problem, this portion of his text has therefore been included as follows:

"While it is true that in earlier cases such as James W. Smith, 44 IBLA 275 (1979), this Board indicated that concerns about electromagnetic interference should properly be addressed to the Federal Communications Commission (FCC), we subsequently noted in Peregrine Broadcasting Co., 62 IBLA 133 (1982), that the regulation which provided for joint FCC and BLM review of the question of radio interference caused by multiple broadcasting in close proximity at a site, 47 CFR 1.70, had been eliminated. This led the Board in that case to conclude that BLM properly considers such impacts in its issuance of communications site rights-of-ways. Id. at 138."

"Moreover, appellants have submitted a report which indicates that historically neither the FCC nor the IRAC (Interdepartmental Radio Advisory Committee) has dealt with the "problem of electromagnetic compatibility generated by facilities operating in close physical proximity (up to several thousand feet) of each other or the shadowing of coverage of one facility by another due to close proximity," instead focusing on the problems of radio interference between spectrum users involving assumed separations of miles between the facilities. See Skinner Report on "Investigation of Adverse Impacts of Motorola Installation on BLM Land, Buck Mountain Oregon" at 2. Thus, even were the prior regulations still in effect, there is reason to believe that, unless BLM attempted to regulate the situation, no one else would. If such were the case, I think it would be incumbent upon BLM to step into the void."

"While it is recognized that the Federal Government does not normally grant an exclusive right-of-way to an applicant, it is equally clear that the right of the Government to grant subsequent rights-of-way to secondary users is subservient to the right of the initial grantee not to have his permitted use interfered with. Thus, while the Government is free to grant right-of-ways to secondary users, it can do so only where the effect of such grant is not to diminish the rights which it has already granted to earlier applicants. Therefore, if, in point of fact, a secondary use does result in interference with an earlier permitted use, such interference represents an infringement on BLM's earlier grant which BLM is obligated to attempt to ameliorate, even to the point of cancelling a subsequently issued right-of-way."

V. SITE PLAN OBJECTIVES

The following objectives have been formulated as a result of the previous discussions concerning existing and proposed uses and the environmental, physical, electronic, and policy constraints that dictate future management of the Hualapai Peak, Potato Patch, and Hayden Peak Communication Sites. Each specific site, due to its individual characteristics, will be analyzed separately, both in terms of management objectives and future management direction.

A. Hualapai Peak Management Objectives

1. To allow the existing TV translator use to continue on a 10-year basis until such time technology and funding support the location of the facilities to either Hayden Peak or Potato Patch.

2. To disallow any pending or new communication site applications thereby preserving the visual aesthetics of this "A" Quality Scenery area.

B. Hayden Peak Management Objectives

1. To manage Hayden Peak as a low power site to its optimum potential given environmental and electronic compatibility constraints.

2. To recognize the Hualapai Mountain Users' Association and to encourage the Association to assist in the electronics management aspect of the site thereby reducing the burden of overall site management on the Bureau of Land Management.

3. To encourage the consolidation of facilities (buildings and antennas) and to provide incentives for voluntary relocations that benefit the overall management of the site.

4. To commence annual site inspections in conjunction with the annual Hualapai Mountain Users' Association meetings and to seek their participation in such inspections.

5. To bring the site up to minimum site standards within three (3) years of the implementation of this plan.

6. To identify other possible site locations in the Kingman area to accomodate high power users.

C. Potato Patch Management Objectives

1. To manage Potato Patch as a low power site to its optimum potential given environmental and electronic compatibility constraints.

2. To recognize the Hualapai Mountain Users' Association and to encourage the Association to assist in the electronics management aspect of the site thereby reducing the burden of overall site management on the Bureau of Land Management.

3. To encourage the consolidation of facilities (buildings and antennas) and to provide incentives for voluntary relocations that benefit the overall management of the site.

4. To commence annual site inspections in conjunction with the annual Hualapai Mountain User's Association Meetings and to seek their participation in such inspections.

VI. SITE MANAGEMENT PLANS

A. Hualapai Peak Site

1. The site will remain closed to any future communication site development. Those existing TV translator facilities on the site may only be relocated within the site when it has been shown that such a relocation is essential for better TV reception.

2. Mohave County right-of-way application A-19138 shall therefore be approved for a term of ten (10) years, but shall be renewable at the discretion of the Authorized Officer.

3. The grant shall require that the existing buildings be painted as provided in the stipulations presented in this plan.

4. At such time that technology, i.e., satellite link, and funding is available, the right-of-way grant shall be terminated and the T.V. translator facilities relocated to the Hayden Peak or Potato Patch Communication Sites.

5. The grant to be authorized to Mohave County will be further subject to those stipulations addressing governmental users as specified in this Plan in Section VII to follow.

6. Advanced Communications, Inc. pending right-of-way application A-18950 shall be rejected on the basis of this site plan and the applicant given an opportunity to apply for a site on either Hayden Peak or Potato Patch.

B. Hayden Peak Site

1. The site standards submitted to the Bureau of Land Management on April 15, 1985, by the Hualapai Mountain Users' Association Technical Standards Committee is hereby approved and shall be incorporated in this plan.

2. Transmitter power output for existing and new users shall not exceed 120 watts and the Effective Radiated Power shall not exceed 1,200 watts (Microwave point-to-point systems shall be excluded from this requirement).

3. The following pending right-of-way applications submitted by existing users, shall be processed and shall be subject to those site specific stipulations addressed in this plan in Section VII to follow.

-A-19158 Western Electronics
-A-20667 El Paso Natural Gas
-A-20920 Department of Energy
-A-21085 Bureau of Land Management

4. The existing users shall be allowed a period of three (3) years from the date of their grant to bring their facilities up to minimum site standards.

5. Antenna height shall not exceed 80 feet as provided in the VRM study conducted by the Bureau of Land Management. Antennas may be self-supporting or guyed. Guyed antenna proposals will, however, be reviewed on a case-by-case basis to assure maximum potential utilization of the site.

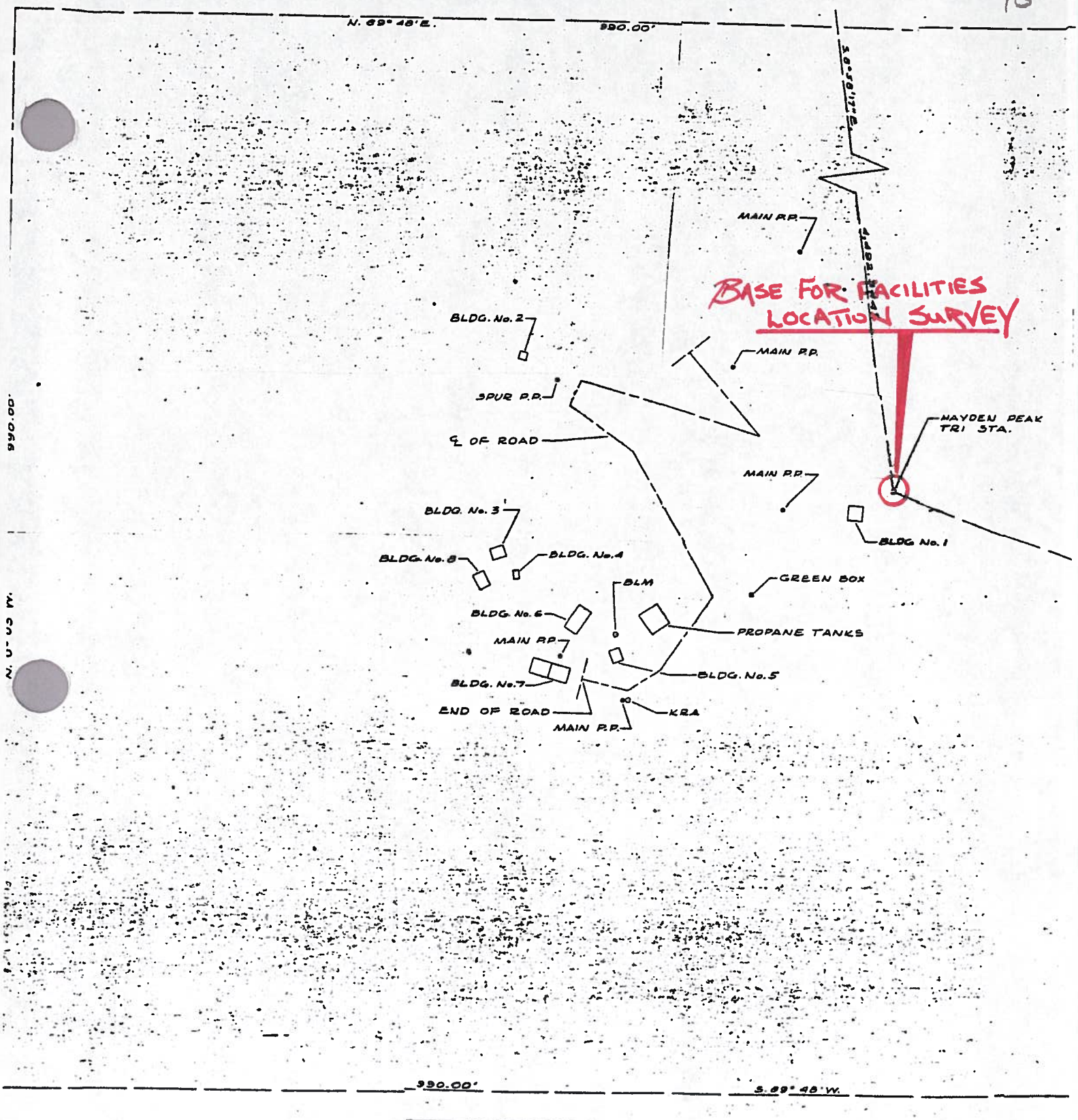
6. All primary users will be required to become a member of the Hualapai Mountain Users' Association and must remain a member in good standing as a condition of their use authorization. The primary users will be responsible for their sublessees and must bear the responsibility of paying the required annual site assessment for operational expenses, i.e., road maintenance.

7. Existing and new users will <u>not</u> be granted a spatial authorization, i.e., lot or specific tract or parcel of land. Instead, users will be required to survey their facility locations tying same to the Hayden Peak Triangulation Station as noted on the following site map.

8. The BLM Authorized Officer may require future applicants to provide a surety bond in the amount of $2,500.00 or 10 percent of the value of the proposed facility whichever is greater. Such funds may be used to resolve any interference problems created by the new user, or to relocate users where problems cannot be corrected. Existing users will not be removed unless they initiate the request to move and consider the move to be in their best interest.

9. Prior to the authorization of new development that would result in surface disturbance, wildlife and botanical clearances will be obtained.

10. The BLM Authorized Officer shall not recognize interference complaints from users who fail to meet minimum site standards established in this management plan and attached hereto as Enclosure No. 1.



HAYDEN PEAK SITE

11. The BLM Authorized Officer may require new site applicants to furnish an intermodulation study or other data before accepting a communications right-of-way application. All applications shall be submitted to the Hualapai Mountain Users' Association for review and comment prior to any action by the Bureau of Land Management.

12. Right-of-way numbers of primary grantees and subsequent grantees shall be stencilled in two-inch letters on the door to each facility pertaining to that grant to facilitate the location of each users facilities.

13. Primary grantees may sublease their equipment and/or building space upon a filing of a grant amendment and a finding by the BLM Authorized Officer that the amendment is acceptable and will result in minimal land acceptable interference to existing users. Lessees shall be required to comply with the requirements as set forth in this site plan, as well as those stipulations imposed by the Authorized Officer upon approval of the grant amendment.

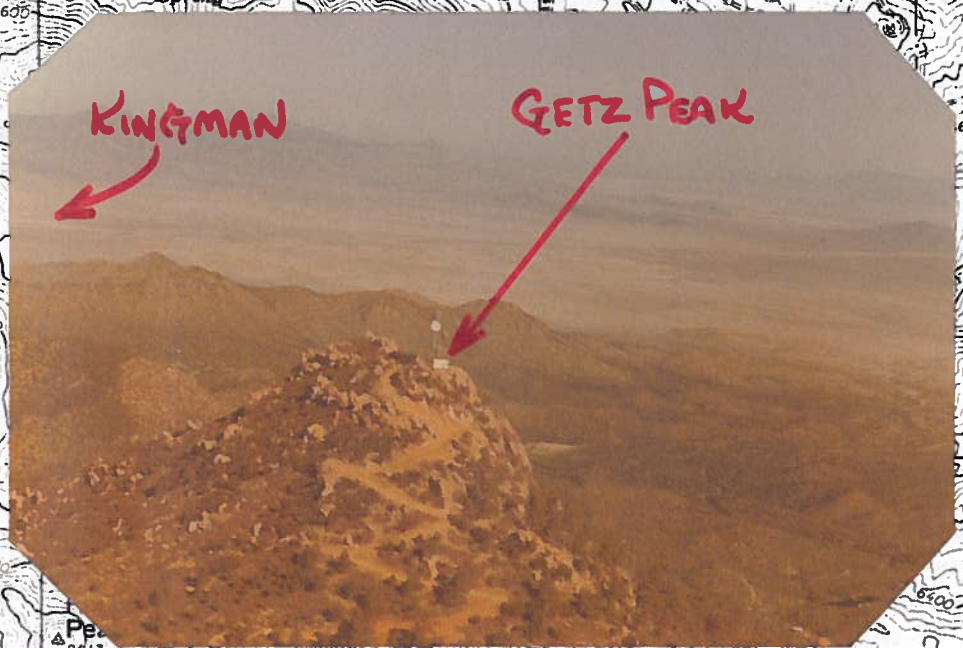
14. The BLM Authorized Officer shall take action to reject Mohave Sun Broadcasting (KZZZ) right-of-way application A-20919 on the basis of the development parameters established in this site plan. As an alternative, Mohave Sun Broadcasting should be advised to consider the following alternative sites.

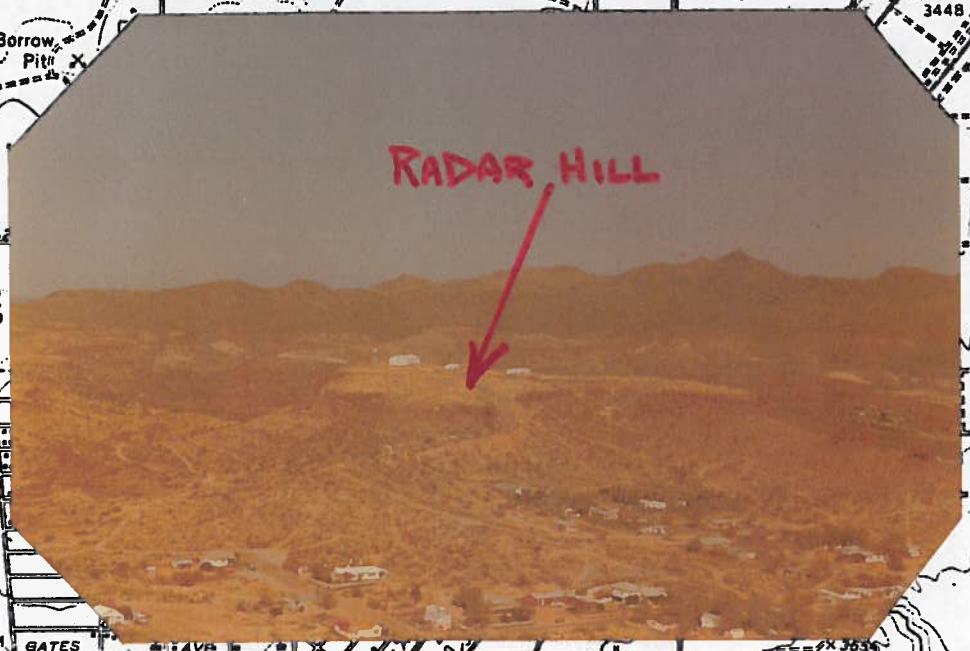
    a. Getz Peak - A privately-owned developed site located in the northern Hualapai Mountains approximately 10 miles south of Kingman at an elevation near 7,680 feet above sea level. The following map and photo illustrate the Getz Peak location. now BLM

    b. Radar Hill - A privately-owned developed site within the Kingman City Limits. This site is situated approximately 3,780 feet above sea level and is depicted on the following location map.

    c. Bull Mountain - This undeveloped potential site is located on public land administered by the Bureau of Land Management. Development would require road construction, easement acquisition, and approximately one mile of power line right-of-way. The site is situated approximately 3 miles northwest of the Kingman City Limits at an elevation of 5,144 feet above sea level. The potential site is shown on the following location map.

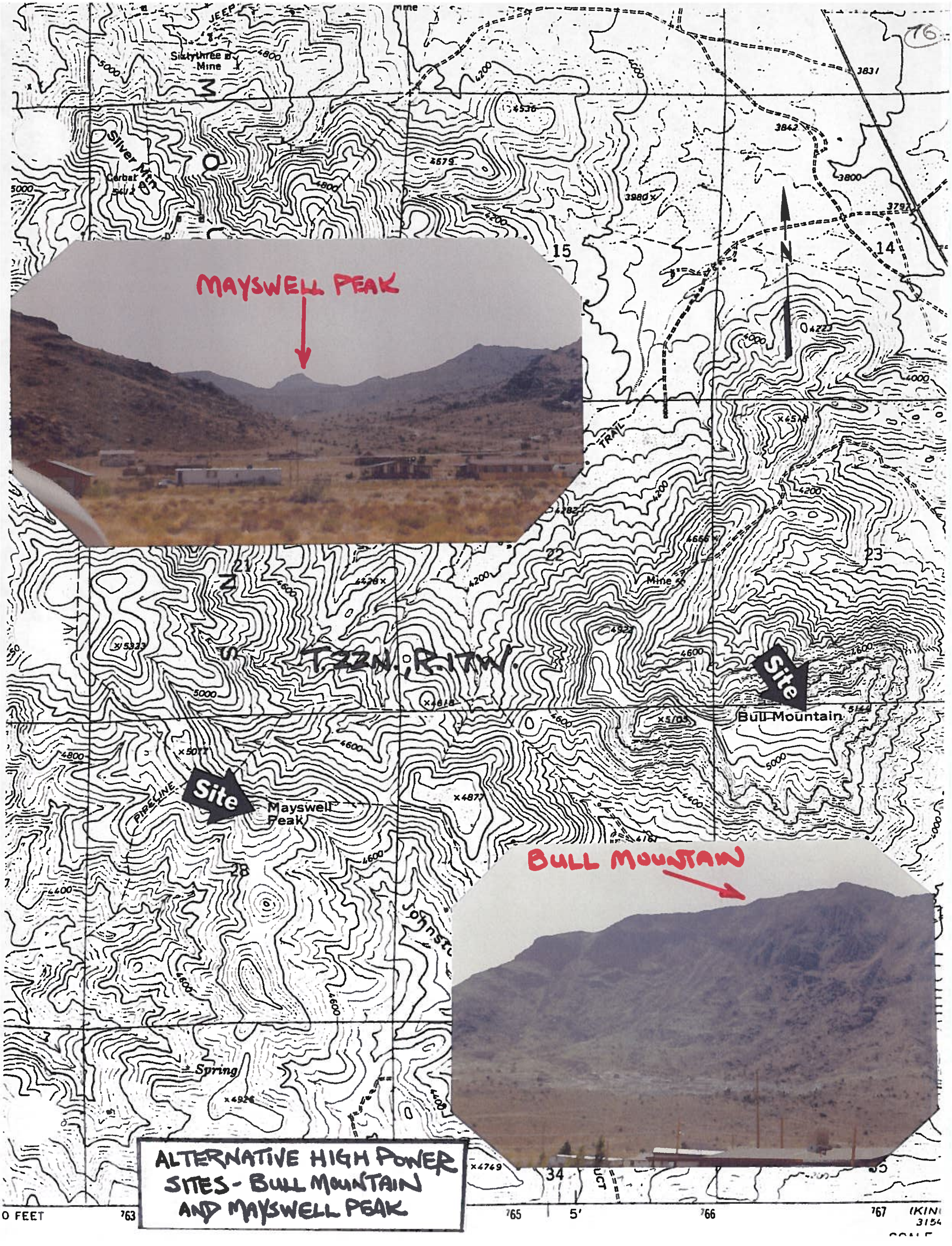
    d. Mayswell Peak - This undeveloped potential site is also located on public land approximately 3 miles northwest of Kingman. Development would require road construction, easement acquisition, and approximately 3 miles of powerline right-of-way. It is pictured on the Bull Mountain location map and is situated at an elevation of 5,160 feet above sea level.


KINGMAN
GETZ PEAK

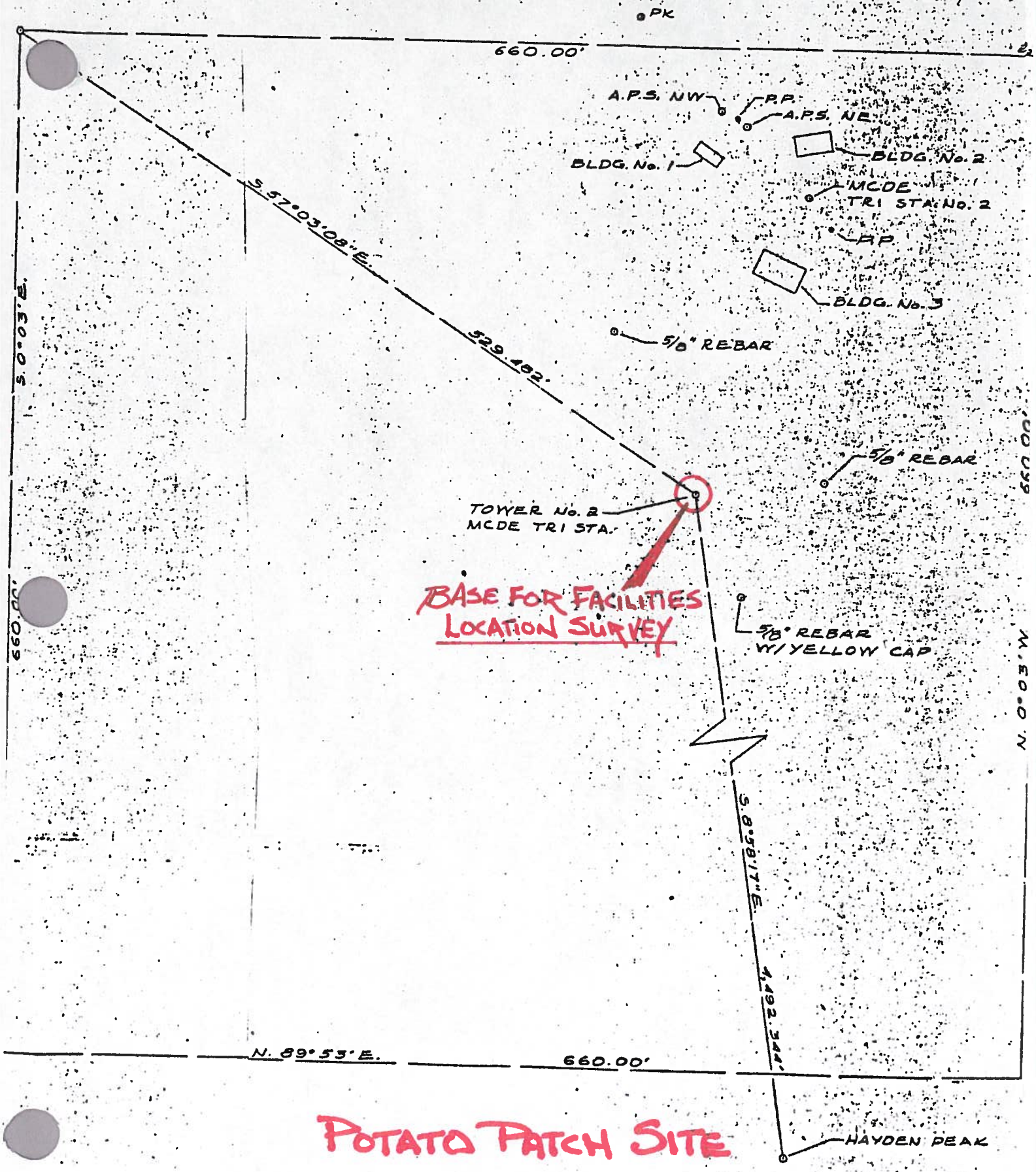


Site

ALTERNATIVE HIGH POWER SITE - RADAR HILL



ALTERNATIVE HIGH POWER SITES - BULL MOUNTAIN AND MAYSWELL PEAK


PK
660.00'
A.P.S. NW
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BLDG. No. 1
BLDG. No. 2
MCDE
TRI STA. No. 2
P.P.
BLDG. No. 3
S. 57°03'08" E.
529.482'
5/8" REBAR
5/8" REBAR
TOWER No. 2
MCDE TRI STA.
BASE FOR FACILITIES
LOCATION SURVEY
5/8" REBAR
W/ YELLOW CAP
S. 89°59'17" E.
4,492.344'
N. 89°55' E.
660.00'
HAYDEN PEAK
POTATO PATCH SITE

The determination to develop Hayden Peak as only a low power site is based on the following findings:

- High power operations generate an allowable level of RF that will result in a degree of desensitization of immediately adjacent low power uses. Whereas, it has been shown that a number of these existing low power users are public service related, i.e., U.S. Border Patrol, Sheriff & Fire Departments, desensitization of these operations may be life threatening.

- Hayden Peak is physically limited when considering the potential for further site development. Utilization for high power facilities would further limit future low power uses in terms of space and lifting of the site noise level. The Bureau recognizes the value of Hayden Peak as an outstanding vantage point for community service communications. However, since alternative sites may be available for high power development, the potential for development on Hayden Peak is deemed more important for low power users where compatibility is better assured.

- In Exhibit 230, page 4, of Mohave Sun Broadcasting's application to FCC, the applicant recognizes 15 products involving fundamental, second, and third harmonics where interference may occur. The applicant proposes to substantially reduce or eliminate any such interference by the judicious use of appropriate filtering apparatus. Such apparatus, i.e., notch filters and band pass filters, have a negative impact on low power receivers and transmitters by reducing the sensitivity range. Due to the types of uses currently on Hayden Peak, such a desensitization may be detrimental to public service communications.

- IBLA 83-327 (page 86 IBLA 82) specifies that . . .

  > . . ."While the Government is free to grant rights-of-ways to secondary users, it can do so only where the effect of such grant is not to diminish the rights which it has already granted to earlier applicants." (Refer to Exhibit N)

The FM applicant has stated in their FCC application that interference will occur. The Bureau's determination is further supported by an electronics contractor who conducted an independent study of the FM application and the communication sites (See Attachment 1).

15. All new site applications for Hayden Peak shall be forwarded to the Mohave County Parks Director for review and comment prior to the grant or amendment being approved by the BLM Authorized Officer. Review by the County will assure conformity with the County's management of the adjacent Hualapai Mountain Park.

16. Due to the limited space on Hayden Peak, it is highly desirable to consolidate facilities where possible. As an incentive for existing users to consolidate, the BLM Authorized Officer may elect to waive rental for a period of time or allow a discount to off-set the cost of any such beneficial consolidation efforts.

17. All grants authorized for Hayden Peak shall be subject to the stipulations addressed in Section VII to follow.

C. Potato Patch Site

1. The site standards submitted to the Bureau of Land Management on April 15, 1985, by the Hualapai Mountain Users' Association Technical Standards Committee is hereby approved and shall be incorporated in this plan.

2. Transmitter power output for existing and new users shall not exceed 120 watts and the Effective Radiated Power shall not exceed 1,200 watts (Microwave point-to-points systems shall be excluded from this requirement).

3. The following pending right-of-way applications submitted by existing users, shall be processed and shall be subject to those site specific stipulations addressed in this plan in Section VII to follow.

   - A - 20308 - Arizona Public Service

   - A - 20921 - Dept. of Public Safety

   - A - 21093 - AT&T

4. Antenna height shall not exceed 100 feet as provided in the VRM study conducted by the Bureau of Land Management. Antennas may be self-supporting or guyed. Guyed antenna proposals will, however, be reviewed on a case-by-case basis to assure maximum potential utilization of the site.

5. All primary users will be required to become a member of the Hualapai Mountain Users' Association and must remain a member in good standing as a condition of their use authorization. The primary users will be responsible for their sublessees and must bear the responsibility of paying the required annual site assessment for operational expenses, i.e., road maintenance.

6. Existing and new users will not be granted a spatial authorization, i.e., lot or specific tract or parcel of land. Instead, users will be required to survey their facility locations tying same to the Mohave County Dept. Engineering Triangulation Station as noted on the following site map.

7. The BLM Authorized Officer may require future applicants to provide a surety bond in the amount of $2,500.00 or 10 percent of the value of the proposed facility whichever is greater. Such funds may be used to resolve any interference problems created by the new user or to relocate users where problems cannot be corrected. Existing users will not be removed unless they initiate the request to move and consider the move to be in their best interest.

8. Prior to the authorization of new development that would result in surface disturbance, wildlife and botanical clearances will be obtained.

9. The BLM Authorized Officer shall not recognize interference complaints from users who fail to meet minimum site standards established in this management plan and attached hereto as Enclosure No. 1.

10. The BLM Authorized Officer may require new site applicants to furnish an intermodulation study or other data before accepting a communications right-of-way application. All applications shall be submitted to the Hualapai Users' Association for review and comment prior to any action by the Bureau of Land Management.

11. The BLM Authorized Officer may elect to solicit multi-user site development proposals from the general public for the Potato Patch sites. Any such proposals received would be reviewed on the basis of available building space, type of users to be served, and subleasing charges. The successful applicant would be bound by all conditions specified in this site plan.

12. Right-of-way numbers of primary grantees and subsequent grantees shall be stencilled in two-inch letters on the door to each facility pertaining to that grant to facilitate the location of each users facilities.

13. Primary grantees may sublease their equipment and/or building space upon a filing of a grant amendment and a finding by the BLM Authorized Officer that the amendment is acceptable and will result in minimal and acceptable interference to existing users. Lessees shall be required to comply with the requirements as set forth in this site plan, as well as those stipulations imposed by the Authorized Officer upon approval of the grant amendment.

14. All new site applications for Potato Patch shall be forwarded to the Mohave County Parks Director for review and comment prior to the grant or amendment being approved by the BLM Authorized Officer. Review by the County will assure conformity with the County's management of the adjacent Hualapai Mountain Park.

15. All grants authorized for Potato Patch shall be subject to the stipulations addressed in Section VII to follow.

16. The determination to develop Potato Patch as a low power site is based on the same criteria discussed in the Hayden Peak Plan. The Potato Patch Site presents a further problem due to its physical location. It sets below ridgelines to the east and south which can cause refraction of RF back into the site. High power operations would cause a much greater refraction problem than low power uses and consequently have a greater negative impact on the overall site operation.

VII. STIPULATIONS FOR GRANT HOLDERS

A. General

1. The Holder shall operate within the parameters of the Site Management Plan, all regulations governing rights-of-way in Part 2800, Title 43 Code of Federal Regulations and all special terms and conditions attached hereto.

2. The Holder shall indemnify the United States against claims for injury to persons or damages to property due to development, operation and use under the site management plan.

3. No signs or advertising devices shall be placed on the premises or on adjacent public lands, except those posted by or at the direction of the Authorized Officer.

4. The Holder shall not allow the operation of any electronic transmitting equipment in the building or on the site unless and until the user has obtained a license from the FCC or the Interdepartmental Radio Advisory Committee (IRAC).

5. The Holder agrees that the right is reserved to the Department of the Interior to declare the terms of a grant terminated in whole or in part and to revest in the United States possession to the property herein during the term of a grant.

6. The Holder agrees that in the event of a violation or failure to comply with the stipulations imposed herein, the United States may seek judicial enforcement of all legal requirements.

B. Licensing

1. Each transmitting station authorized by a grant shall be operated only in conformity with the requirements of the FCC, or in the case of federal government installation operations, in accordance with IRAC agreements. Licensee permits shall become null and void if the respective authority for operation of the installation expires, is revoked or otherwise terminated. Should a FCC or IRAC permit become null and void, it will be the responsibility of the Holder of a grant to promptly terminate the user's occupancy of the facility.

2. Each electronic type station installation covered by a grant is to be operated only in conformity with the requirements of the FCC, or in the case of Federal Government installations operations, in accordance with IRAC agreements.

3. The Holder shall furnish the Authorized Officer with a copy of the currently valid FCC license or IRAC radio frequency assignment, as the case may be, within 10 days after issuance of the license or assignment of the frequency.

C. Inspection

1. There will be non-scheduled inspections to confirm that site standards are complied with. The Authorized Officer or his/her delegated representative shall have the right to inspect the site jointly with the holder or his/her representative at any reasonable time to insure compliance with the terms, conditions and stipulations of the right-of-way grant.

2. Bureau personnel or other governmental agencies will be granted access into the building upon request, to inspect the building and facilities for cleanliness, safety features (including compliance to safety codes), general appearance and compliance with the terms of the grant.

3. The grant is subject to immediate cancellation at any time for violation of any one or more of these stipulations, for violation of any one or more of these regulations under 43 CFR, Parts 2800 or for the failure to comply with any county state or federal laws applicable to the facilities for which the right-of-way is approved.

4. BLM will enforce building, road and structure maintenance conditions of the grant and may cancel the R/W upon infraction of these conditions.

D. Site Users

1. Primary grantee has the right to remove equipment which is causing troublesome interference to other users of the site. The right to remove can only be for the installation and operation of electronic equipment, the installations constructed and operated by the Holder. Utility and service facilities constructed by the holder, including but not limited to, power and phone lines, roads and fences, within the reasonable capacity of such facilities, shall be available for use by the United States for the construction and operation of electronic facilities installed by the United States without any contribution for construction costs of such facilities. The United States agrees to pay the fair market rental, as determined by a mutually acceptable appraiser, for any use made of buildings, antenna towers or other structures belonging to the licensee.

2. The Bureau of Land Management reserves the right to authorize joint use by another radio type station(s) of the site, together with the roads and the power, telephone and other auxiliary utility service lines installed and operated by the Holder, upon payment by such users to the Holder of a just and equitable portion of the costs of installation, maintenance and operation; provided that such joint use will conform to sound engineering practices.

3. The Holder shall furnish the Authorized Officer a current price schedule for all services provided by said Holder to other users, both to such other users using the equipment owned by the Holder and other users using their own equipment.

E. Charges

1. Primary grantee shall make a reasonable, uniform charge for space, services and equipment, to all users of the facility.

2. Primary and subsequent grantees shall be fully responsible to BLM for the payment of rentals for use of the site. The rental for a primary grantee will be a minimum of fair market value. Definition of "fair market value" as it applies to communication sites as stated in IBLA, A.T.&T June 30, 1976.

3. "Fair Market Value", as it applies to a communication site, is the amount in case, or terms reasonably equivalent to cash, for which in all probability the right to use s site would be granted by a knowledgeable owner willing but not obligated to grant to a knowledgeable user who desired it but is not obligated to do so.

F. Modification of Existing Facility

1. Before modification of previously authorized facilities will be approved by the Bureau of Land Management (where an FCC construction permit was required), copies of any amended FCC construction permit or license, together with corrected diagrams must be filed with the appropriate Authorized Officer.

2. Any and all subsequent changes of the installation, including antenna systems, shall require advance notification and approval of the Authorized Officer.

3. Holder shall not install nor allow the installation of any other organization's electronic equipment in the Holder's building, or attachment to the Holder's antenna support structures without requiring the third party to comply completely with the requirements of these stipulations.

4. Any and all subsequent changes in or additions to the specified operating frequencies, types emission, band widths, R.F. power outputs, class of service, type of antenna, or the named FCC licenses will require advance notification to the Holder by the third party.

5. Holder agrees not to install or allow the installation of any other types of radio-electronic-type equipment not specified in a grant on or within the structure or on the premises authorized and covered by a grant.

6. Holder must construct any improvements to the existing building according to plans approved in advance by the Authorized Officer. Plans for any future modification or construction of improvements on the right-of-way site must be submitted to the Authorized Officer of the Bureau of Land Management for written approval before such changes can be made.

G. Site Development Requirements

1. Site Clearing - Remove only the minimum amount of vegetation necessary for placement of the approved facilities. Any topsoil shall be stockpiled during construction and redistributed over the disturbed area to provide a natural seed bed for natural revegetation. Ponderosa Pine and Aspen may be trimmed, however, removal of Ponderosa Pine and Aspen must be approved by the Authorized Officer prior to commencing construction activities.

2. Excavation, Filling, and Grading - Limit excavation to the areas of construction. No borrow areas for fill material will be permitted on the site. All borrow areas must be approved by the Authorized Officer in advance of excavation.

3. Roads and Parking - All roads and parking shall be constructed to provide drainage and minimize erosion. Culverts shall be installed if necessary to maintain drainage. New users are expected to support road maintenance as outlined in the Hualapai Mountain Users' Association Constitution and By-Laws.

4. Fences - Fences not directly related to the security of the telecommunication equipment or structures are not permitted. Any fencing material shall be medium grey or a neutral color blended to match the building and surrounding environment. Steel fencing shall be grounded and all chain-link fences will be vinyl-clad to prevent electrical interference.

5. Exterior Finishes - Antennas shall be of a non-specular grey color. Buildings are to be painted flat colors and shall comply to the following site requirements.

   a. Hualapai Peak and Hayden Peak Sites -

      Option No. 1 - Smoke Grey (22 x 9)
      Kansas Paint & Color Company
      132 North Mosley
      Wichita, Kansas 67202
      (316-264-6353)

      Option No. 2 - Mesquite (2327)
      Southwest Paint & Varnish Company
      3850 East Speedway Boulevard
      Tucson, Arizona

   b. Potato Patch Site -

      Option No. 1 - Flint Ridge Grey (22 x 15)
      Kansas Paint & Color Company
      132 North Mosley
      Wichita, Kansas 67202
      (316-264-6353)

      Option No. 2 - Mohave Sage (2304)
      Southwest Paint & Varnish Company
      3850 East Speedway Boulevard
      Tucson, Arizona

      Option No. 3 - Canebrake (Q7-62U)
      Deer-O Paints
      Havasu Paints & Interiors
      2127 McCulloch Boulevard
      Lake Havasu City, Arizona 86403
      (602-855-6858)

Should any of these paints not be obtainable or the Holder identifies a similar colored paint, the Authorized Officer must approve the paint prior to commencing construction activities.

6. Signs - Only signs as required for public safety may be installed, and must have prior approval of the Authorized Officer. Maximum size 12" x 12".

7. Maintenance - Holder shall maintain the communication sites to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Authorized Officer. If deficiencies are found, BLM will give Holder written notice outlining the necessary corrections and specify a time in which the Holder must make such corrections.

8. Design - The Area Manager, Bureau of Land Management, Kingman Resource Area, shall approve the design and locations of all facilities prior to construction. Other facilities not directly related to telecommunication are not permitted.

9. Drawings -

   a. Sufficient drawings shall be submitted for approval to allow complete evaluation of all the proposed structures and facilities for design compliance and visual compatibility with the site. These drawings will become the construction documents and must show dimensions, materials, finished details, etc., to indicate compliance with all design requirements.

   b. As-Built Drawings - Holder shall, within 10 days following completion of the facility and prior to final approval of construction, submit "as built" drawings of site construction, location of building, towers, roads, utility lines, and an "as built" of the building showing all changes from the approved design. Final approval and occupancy will not be allowed until these "as built" drawings are approved by the Area Manager, Kingman Resource Area.

10. Codes - All structures shall meet the requirements of the latest codes governing designs of facilities as outlined in the Uniform Building Codes. All structures shall be designed to meet minimum loads for wind velocity of 120 mph and snow load of 500 lbs/ft^2.

11. Building Height - Maximum of 12 feet for all future users.

12. Antennas - Maximum of 80 feet for the Hayden Peak Site and 100 feet for the Potato Patch Site.

a. Antenna support structures (towers) shall be galvanized steel. Towers shall reflect uniformity of design and materials for the entire site. Antenna towers shall be jointly used when electronically compatible. If the location of towers and guy wires will create conflicts with ground personnel, vehicles, and equipment, or any other safety hazard, towers shall be self-supporting.

b. All installations, antenna supports, etc., shall be constructed and maintained in a sightly and safe condition which shall be in accordance with good engineering practices as accepted by industry and laws applicable thereto. Antenna supports, if necessary, shall conform to the installation specifications of the tower manufacturer. Any variance from these standards shall only be the minimum required due to local terrain or obstructions at the specific site and then the difference shall conform to good engineering practice. All structures will be maintained to the satisfaction of the Authorized Officer.

c. All antennas and transmission lines, including those not in immediate use, shall be terminated in their characteristic impedance (Z^{O}) to prevent re-radiation of intercepted signals or noise.

d. All towers shall meet EIA Standard RS-222-C, Structural Standards for Steel Antenna Towers.

e. All tower construction shall meet manufacturers recommended specifications for ice and wind loading for this area.

f. All metallic structural materials shall be galvanized, plated, or coated. Dissimilar metals will not be placed in contact with each other in such a manner that could create a galvanic junction.

g. Anti-climb devices, removable steps, or other means to discourage unauthorized climbing of the towers are highly recommended.

13. Electrical

a. All electric facilities, equipment, and their installation shall conform to the current National Electrical Safety Code, local laws, and/or regulations.

b. New installations shall include an effective lightning ground for protection of personnel and equipment. All electrical outlets shall be of the three conductor grounding receptacle type. All electrical or electronic equipment cabinets shall be properly connected to the system ground. Structures shall be designed for maximum lightning protection through bonding and a grounding system.

c. For new construction standards and specifications for raceways, switching, grounding, and wiring methods, and materials shall be the equivalent to those issued by the National Fire Protection Association in its most current National Electrical Code.

d. Combining electronic features is required where technically feasible to minimize apparent overall antenna mass and height.

14. Mechanical

a. Adequate ventilation shall be provided for the protection of personnel and to prevent the accumulation of explosive gasses and heated stagnant air.

b. Maximum protection against dust is required. Ventilation systems will be provided with removable filters for servicing.

H. Electromagnetic Compatibility

1. Holder shall cooperate with FCC and/or IRAC on all applications, so as to avoid licensing of stations that will cause interference to other users of the site. Holder shall also cooperate with the FCC and/or IRAC to eliminate interference caused by users. If the interference continues, Holder shall cooperate with the licensing authority in any action to suspend a license.

2. The BLM reserves the right to require the Holder to take necessary measures to eliminate interference to another user. If the Holder does not eliminate the interference within 10 days after receipt of notice from the BLM, the R/W may be terminated forthwith. The responsibility of other electronic users in the vicinity to prevent interference to the facilities authorized by a grant shall be limited to compliance with the appropriate FCC or IRAC operating standards.

3. Holder will at all times operate its electronic type equipment in such manner as not to cause interference with electronic type operations of the Bureau of Land Management or other existing communication facilities in the area. If such interference results from Holder's operations, Holder will promptly, at its own expense and without cost to the United States, modify its equipment and operations, or shut it down if necessary, to eliminate or reduce the interference to the satisfaction of the Bureau of Land Management.

4. It will be the responsibility of the existing primary grantees when he/she receives a Notice of Site Availability from the BLM to make an evaluation, within 30 days of receipt, of the proposed application or right-of-way amendment on how the new operation or function will affect their existing operation and submit letters of comment to the Area Manager, Kingman Resource Area, with appropriate technical documentation. Copies will be sent to the Chairman of the Hualapai Mountain Users' Association for their recommendation. Letters of comment must reach the BLM office at 2475 Beverly Avenue, Kingman, Arizona 86401, no later than 30 days from the date of the Notice of Site Availability. The new user or applicant will accept operations, i.e., frequencies, emission, power output, radiation fields, antenna arrays, etc., of existing facilities on the same or adjacent sites, provided such operations are consistent with the regulations of the Federal Communications Commission, if a non-federal government use, and standards of the Interdepartment Radio Advisory Committee if a federal government use.

5. A subcommittee will be appointed by the Hualapai Mountain Users' Association to identify as many of the current interference problems as possible and to document same. They will contact each primary grantee and inquire of their present interference problems. The subcommittee will report their findings to the Hualapai Mountain Users' Association which will make recommendations to the Area Manager for solutions to the interference problems.

6. In general the responsibility for correcting proximity interference will be upon an applicant. Any existing user affected will be expected to extend all reasonable cooperation in reaching a satisfactory solution. The minimum standards adopted in this plan outlines how interference may be overcome. When radio interference occurs, notch filters and dual ferrite isolators and/or band pass devices may be required. The need for additional filtering equipment will be considered by the Hualapai Mountain Users' Association on a case-by-case basis (Authority IBLA 81-476 page 138 (2).)

7. All transmitters will be FCC Type/Accepted or meet Type Acceptance Criteria.

8. All transmitters will have protective devices, designed into or externally installed, to prevent interference to other users.

   a. Direct radiation of out-of-band emmissions (i.e. transmitter wide-band noise, spurious emmissions, harmonics) shall be reduced to a noninterfering level by the use of band-pass, low-pass or harmonic filtering. Band-reject filtering may be required in special applications.

   b. Re-radiation of signals (intermod) for a transmitter and its associated antenna system will be prevented through the installation of appropriate devices (i.e. Ferrite isolators), with a minimum return loss of 25dB.

9. All receivers must comply with all applicable parts of FCC Rules, including Parts 2 and 15.

10. All receivers shall have sufficient "front end" preselection to prevent receiver spurious response. The use of band-pass, band-reject cavities or crystal filters may be required to prevent receiver-produced intermodulation or adjacent channel interference.

VIII. SIGNATURES

Preparer:

Realty Specialist — Date: August 18, 1985

Reviewed:

Mohave County Parks Director — Date: 10/23/85

ENVIRONMENTAL COMPLIANCE

Approved: Based on the environmental analysis contained herein, it has been determined that implementing the communication site management plans would not significantly effect the human environment and an environmental statement is not required.

Area Manager, Kingman — Date: Oct 15, 1985

Approved:

District Manager, Phoenix — Date: October 11, 1985

LIST OF EXHIBITS

ADDENDUM