

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEEDLES RESOURCE AREA

6-23-95

ENVIRONMENTAL ASSESSMENT

REQUESTED DUE DATE: 6/23/95

DISK/FILE CODE: Range; EA5-14

1. CONTROL NUMBER: CA-069-EA5-14
2. CASE FILE / SERIAL NUMBER: 4700
3. PROPONENT: Bureau of Land Management (BLM)/National Park Service (NPS)
4. PROJECT: Clark Mountains Herd Management Area Burro Management
5. LOCATION: Clark Mountain Herd Management Area and adjacent lands.

Collection & corral locations:

A). Proposed areas outside of BLM administered wilderness areas to collect and hold burros at existing corrals:

- 1) Corral, RIP# 169580, located T.16N, R.11E, Sec. 13.
- 2) Corral, RIP# 169633, located T.18 1/2N, R.12E, Sec. 25, unsurveyed.
- 3) Corral, RIP# 169124, located T.18N, R.13E, Sec. 8.
- 4) Corral, RIP# 169643, located T.18N, R.13E, Sec. 23.
- 5) Corral, RIP# 169533, located T.17N, R.15E, Sec. 18.

B). Proposed areas near of BLM administered wilderness areas to collect and hold burros at existing corrals:

- 1) Corral, RIP# 169581, located T.17N, R.12E, Sec. 17.

C). Proposed areas inside Mojave National Preserve (MNP) and outside of wilderness areas to collect and hold burros at existing corrals:

- 1) Corral, RIP# 169635, located T.17N, R.13E, Sec. 5.
- 2) Corral, RIP# 169583, located T.16N, R.14E, Sec. 34.

D). Temporary corral locations (noted on exhibit as points T1- T9):

- 1) T.16N, R.10E, Sec. 28, unsurveyed.
- 2) T.15N, R.10E, Sec. 14.
- 3) T.16N, R.10E, Sec. 25, unsurveyed.
- 4) T.15N, R.11E, Sec. 2.
- 5) T.16N, R.11E, Sec. 23-24.

**BUREAU OF LAND MANAGEMENT - NEEDLES RESOURCE AREA
NATIONAL PARK SERVICE - MOJAVE NATIONAL PRESERVE**

**Capture Plan for Wild Burros
for the
Clark Mountain Herd Management Area**

I. INTRODUCTION AND BACKGROUND

The purpose of this capture plan is to outline the objectives, methods and procedures for the reduction of burro populations in the Clark Mountain Herd Management Area (HMA) within the eastern Mojave Desert. The proposed reductions are in accordance with the:

- Wild Free Roaming Horse and Burro Act of 1971 (Public Law 92-195)
- Federal Land Policy and Management Act of 1976 (Public Law 94-579)
- Public Rangelands Improvement Act of 1978 (Public Law 95-514)
- Codes of Federal Regulations (43 CFR 4700 - Protection, Management, and Control of Wild Free-Roaming Horses and Burros)
- California Desert Conservation Area (CDCA) Resource Management Plan of 1980
- Eastern Mojave Herd Management Area Plan of 1984 (EMHMP)
- NPS Organic Act (16 U.S.C. 3)
- California Desert Protection Act (16 U.S.C. 410aaa)

The burro population in the Clark Mountains area has been very prolific and requires a large removal to reduce the burro numbers down to acceptable levels. They are currently expanding their range to areas outside of the historical range, including areas outside of the HMA. The area of the management contains prime desert bighorn sheep habitat and critical desert tortoise habitat. Utilization monitoring and use pattern mapping based on the key forage plant method of the Clark Mountains HMA indicate overall heavy utilization levels of forage species. The area is receiving excessive amounts of trailing and formation of dirt wallows. The burro population is currently estimated to be 174 burros. The management level set by the CDCA Management Plan is 44 burros. The EMHMP objectives provide that burro numbers will be reduced to the levels prescribed by the CDCA Management Plan. Maintenance of that level, +/- 30%, will be sustained by periodic removals.

II. AREA DESCRIPTION

The area is located in Southern California in the upper eastern portion of San Bernardino County. It encompasses the area just north of the recently established Mojave National Preserve, mostly north of Interstate 15 with a small area just south of Interstate 15 in the Mountain Pass area. The area ranges from the high mountains to the low dry lake and valley regions. It is located within the boundaries of the Needles Resource Area of the Bureau of Land Management's California Desert District with the National Park Service (NPS) controlling part of the Clark Mountain area, within the Mojave National Preserve.

The Clark Mountain HMP is divided into two parts the retention area and the non retention area. The retention area encompasses the area west of the Excelsior Mine Road including the Turquoise and Squaw Mountain area. The non retention area encompassed the area east of the Excelsior Mine Road including the Clark Mountain and Mesquite Dry Lake area, see exhibit. The area contains prime desert bighorn sheep habitat and critical desert tortoise habitat and is within the Valley Wells and Clark Mountain Grazing Allotments. The prime desert bighorn sheep habitat is located in the Clark Mountains and the critical desert tortoise habitat is located in the Shadow Mountain area. The HMA is receiving excessive amounts of trailing and formation of dirt wallows by burros. Utilization maps of the area confirm utilization of forage plants above recommended levels. Cattle have been reduced in numbers in the Valley Wells allotment and almost entirely removed from the Shadow Mountain and Clark Mountain areas due to poor forage availability. The adjoining area south of Mountain Pass in the Valley View allotment is outside any HMA. This area does not have a retention level and burros from this area have in the past become hazardous to Interstate 15 and Nipton Highway travelers. The area around Clark Mountain area and adjacent area south of Mountain Pass was covered in detail in Programmatic Burro Removal Environmental Assessment, CA-069-EA1-08.

III. JUSTIFICATION

The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195) as amended, Section 3(b)(2) requires that if an overpopulation exists on a given area of public lands and that action is necessary to remove excess animals, excess animals shall be immediately removed from the range so as to achieve the appropriate management level. The NPS Organic Act authorizes the Secretary to remove detrimental animals from units of the National Park System.

The following table lists the estimated existing burro population, the appropriate management level and the goals for management in the Clark Mountain HMA.

Herd Management Area	Appropriate Management Level	Estimated Population Fall 94	Excess Above Management Level	Goal To Gather Initially
Clark Mountains	44	174	130	100

The burro population in the Clark Mountain HMP has been very prolific and requires routine reductions to maintain the burro population at acceptable levels and to remove burros from the non retention area. Populations can increase by 15 percent to 25 percent annually. Taking a conservative reproductive estimate, population numbers could double in five years. Delays in removal of burros would increase the cost and time needed to meet multiple use and sustained yield objectives. Currently, excess burros from herd areas are colonizing areas outside of existing herd areas. Population estimates are and will be based on aerial survey data, ground observations, projected yearly increases, and removals.

Herd Management Area	Population Estimate Method and Date	Reliability (High,Good,Fair,Poor)
Clark Mountains	aerial 1993, ground ongoing	Fair

The proposed action is to comply with federal statutes and the Bureau of Land Management and National Park Service policies in managing wild burros in the Clark Mountain HMA. The proposed action is to initially helicopter assisted and or water trap 100 burros. It is estimated that after this initial removal approximately 74 burros would still be within the HMA. If future censuses,

conducted after initial removal, confirm that there are more than 44 burros in the HMA, the excess burros would be removed in a like manner. Also all burro on public land south of Mountain Pass would be removed. The operation will generally take place between late spring and late fall or until the targeted number of burros are gathered.

IV. CAPTURE SITES

Locations --

Proposed collection holding/water traps areas utilizing existing corrals:

A). Corrals outside of BLM administered wilderness areas:

- 1) Corral, RIP# 169580, located T.16N, R.11E, Sec. 13.
- 2) Corral, RIP# 169633, located T.18 1/2N, R.12E, Sec. 25, unsurveyed.
- 3) Corral, RIP# 169124, located T.18N, R.13E, Sec. 8.
- 4) Corral, RIP# 169643, located T.18N, R.13E, Sec. 23.
- 5) Corral, RIP# 169533, located T.17N, R.15E, Sec. 18.

B). Corrals near of BLM administered wilderness areas:

- 1) Corral, RIP# 169581, located T.17N, R.12E, Sec. 17.

C). Corrals inside Mojave National Preserve (MNP) that are outside of wilderness areas:

- 1) Corral, RIP# 169635, located T.17N, R.13E, Sec. 5.
- 2) Corral, RIP# 169583, located T.16N, R.14E, Sec. 34.

D). Temporary corral locations (noted on exhibit as T1- T9):

:

- 1) T.16N, R.10E, Sec. 28, unsurveyed.
- 2) T.15N, R.10E, Sec. 14.
- 3) T.16N, R.10E, Sec. 25, unsurveyed.
- 4) T.15N, R.11E, Sec. 2.
- 5) T.16N, R.11E, Sec. 23-24.
- 6) T.16N, R.12E, Sec. 22.
- 7) T.16N, R.12 1/2E, Sec. 12.
- 8) T.15 1/2N, R.14E, Sec. 31.
- 9) T.17N, R.14E, Sec. 27.

V. METHODS OF CAPTURE

Methodology

Helicopter Assisted Trapping

Proposed activities include use of a helicopter, 4 to 5 wranglers on horseback, temporary corrals to hold the burros, and trucks and trailers to remove the captured animals (see

Appendix 2: *Capture Plan for Wild Burros for the Clark Mountain Herd Management Areas Fiscal Year 1995-2000*). All work would be conducted by personnel experienced in gathering operations, mostly the Wild Horse and Burro crew. Any given gathering operation may last from 2 to 14 days.

A B-1 Jet Ranger, or other similar helicopter would be used to direct burros to the nearest corral. Flight time would not exceed 8 hours a day. The helicopter would normally fly at heights from 50 to 100 feet, although it would drop as low as 5 or 6 feet when turning burros. This latter action would be brief (2 to 4 minutes), and generally occur within 600 feet of the corral. The helicopter would usually pass over any given point only one time as it herds the burros. Refueling would involve one fuel truck and would be restricted to an area within existing roads. Refueling would occur up to four times a day at flat disturbed areas near the corral.

Generally less than 15 burro would be herded or moved at one time. Burros would be herded a distance of up to six miles by the helicopter. Burros would not be moved at more than 10 miles an hour and would be given a chance to rest as necessary. The rate of movement and distance traveled may be adjusted downward depending upon the terrain, weather, condition of the animals and other factors. An individual herding effort would be terminated if fatigue or undue stress is noted in any of the animals being herded.

Burros would be moved to temporary corrals constructed for this purpose or existing livestock corrals. Existing corrals would be cleaned up to remove all sharp objects. If no wings are present at the corrals, then a temporary wing may be built. The wing panel would be constructed of jute and held up along tee posts over a 300 foot span. This would provide a visual barrier and would help guide animals to the corral.

Temporary corrals would be located in previously disturbed areas. The temporary corrals would be approximately 60 feet on a side. They would be made out of portable steel panels and would be self supporting or supported by metal fence posts. Each temporary corral would be in place for no more than three days, and would be visited daily. All temporary corrals would be removed upon completion of capture episode in that area.

Water would be provided to all burros held at the corrals for more than 4 hours and food would be provided for any animals held over 10 hours. Burro handling would be kept to a minimum in order to minimize trauma to the burros. A veterinarian would be on call at all times.

As the helicopter herds the burros to the corral, the wranglers would be concealed. Four to five wranglers on horseback would move in behind the burros and maneuver them into the corral. This generally requires the burros to be roped and then lead into the corral. At corrals sites within critical desert tortoise habitat, burros would be roped before entering critical habitat or in an area within 600 feet of the corral to minimize disturbance of critical habitat.

Approximately 8 to 10 horses would be used in each operation. The horses would be kept in an existing corral or the temporary corral overnight. Those horses not being used during the day would be kept tied to or left inside of the horse trailer during the roundup. Temporary corrals at collection points that are not prime deer or bighorn water sources will not have the height or minimum size restrictions.

Within wilderness areas, applicable to alternative one and allowable in preferred action if trapping is not effective, the helicopter would be used almost exclusively to herd burros to herd burros to wrangler waiting near collection points, see Locations section and maps. The resulting disturbance would be minimal in wilderness areas and primarily consisting of disturbance in solitude due to helicopter operation.

Wranglers Only

This method involves wranglers traveling on horseback up to several miles from the corral to herd or rope burros and bring them to the corral locations, without the assistance of a helicopter. This operation would require 4 to 15 wranglers and 8 to 60 horses. All other aspects would be similar including the use of corrals to hold the burros and horses, and trucks and trailers to remove the captured animals.

Water/Bait Trapping

The BLM and the Lessee of the Clark Mountain and Valley Wells allotments may work together to water/bait trap burros in order to remove excess burros from the Clark Mountains HMA. Water trapping is the easiest, least expensive and safest for both the personnel and burros involved in the gathering operation. Water trapping involves the following: 1) excluding burros at waters where no trap is set, and 2) setting a one way gate (trigger) at watering site(s). Bait trapping is similar except hay is placed in the trap as bait.

It would involve the use of existing corrals and when needed temporary corrals or devises to trap or limit animal access to water. The temporary corral or devises required for each specific project will be address in short environmental assessments tiered off this document. Temporary corrals designed to limit burro access to waters of prime importance to deer will be at least 60 foot long on a side and not over 60 inches tall at any point with opposite sections 42 inches or less in height for escape, while those for bighorn sheep will have several bighorn sheep panels per corral to allow sheep access to the water while excluding burros. Lessee must work under a current cooperative agreement for burro removal and can only trap burros within their allotment. Lessee(s) would be required to work under the guidelines of a cooperative agreement for burro removal (see appendix 1).

Traps

The corrals used to trap burros will contain adequate water and fencing. There will be no exposed barbed wire in any of the corral facilities. Any objects potentially injurious to the animals will be removed or made safe. Water troughs are located inside each corral. The corrals that are used to trap burros will be temporarily modified using portable steel pipe panels (5 feet high) that are self supporting to divide the corral into a trapping area and a holding area. The dimensions of the trap and holding areas will vary with the dimensions of the corral. Both areas are designed so that animals have access to water. This area will be constructed entirely within existing disturbance. No new surface disturbances would occur. The trapping area consists of placing a finger trigger gate at the entrance way of the corral. This allows the animals to enter to drink, but not exit. The size of the trap area will be approximately 400 square feet, but will vary with the size of corral. A

swing gate will be placed between the holding area and the trap area so that trapped burros can be moved into the holding pen. The holding area will be approximately 40 feet by 40 feet. The traps will be checked daily for any trapped animals. Trapped burros will be moved to the holding area. In the case that other animals are trapped besides burros, the burros will be sorted into the holding area, if this can be done without harming any animals. If it is not possible to sort without harming animals, the trigger gate will be opened allowing the animals to escape. The BLM plans to load and transport the burros within 48 hours of being notified of capture. If the BLM is unable to transport burros within 5 days they must be released, unless authorized otherwise. If the holding facility becomes too crowded, the trigger gate will be locked open, until extra panels are set up to expand the holding facility or until the animals are removed. If the burros are to be transported by truck and trailer by the Lessee to a holding corral, the Lessee will notify the BLM prior to such action. The holding corral must meet the same standards of the capture corral. The Lessee will feed good quality grass hay, supplied by the BLM, to the captured burros.

The related structures will be installed by hand using hand tools and will be removed upon completion of the gather in the area. A new site may then be set up according to the location of any other herds. When the traps are not in service, the trap gates will be locked open.

Limiting Burro Access To Other Available Water Sources

The other existing water sources may be closed off to burros. This may include turning off the water to troughs, closing corrals, or temporarily placing steel fence posts around water sites and running one to three strands of wire between them and then attaching flags to the wire. The flags flapping in the breeze repel burros from the watering area. A temporary barrier fence would be installed at Indian Spring, using prefabricated fence panels and metal T-stakes, so no burros can use the water source. The temporary fence would be as small as practical. Water sites that are fenced off are generally difficult to access with stock trailers or are located where setting up traps would result in new disturbance. The temporary barriers at waters of prime importance to deer will be at least 60 foot long on a side and not over 60 inches tall at any point with opposite sections 42 inches or less in height for escape. Those barriers around bighorn sheep waters will include several bighorn sheep panels to allow sheep access to the water, while excluding burros. The disturbance would be temporary in nature and consist of steel fence post holes in sand. The related structures will be installed by hand using hand tools and will be removed upon completion of the gather in the area.

VI. Transporting and Sorting

Horse trailers pulled by heavy duty four wheel drive trucks will be necessary to transport the materials and captured animals, thus trapping locations will be limited to those areas where suitable access exists. All vehicular access would be by existing routes. Any travel into wilderness areas will be authorized and restricted to existing routes and no off road travel will occur.

Captured burros will be counted as they are loaded into the horse trailer. Jennies and foals will be kept as pairs, jacks will be kept separate from pairs, and when practical, jennies and jacks will be kept separate.

All burros removed will be transported to the Ridgecrest Corrals by BLM personnel. Captured burros are very sensitive to people. Because of this, the number of team members to handle the animals shall be limited to essential personnel to alleviate stress on the animals. Handling of the animals would be kept to a minimum in order to avoid traumatizing the animals any more than necessary. A veterinarian will be on call at all times. The number of animals will be counted as they come off the trailer. The first consideration after unloading will be to determine which animals, if any, need special attention for injuries, illnesses or any other problems requiring prompt attention. Any orphans shall be separated and provisions made to feed and care for them. The jacks will be separated from the pairs and jennies.

VII. RESPONSIBILITIES

It will be the responsibility of the Lead Range Conservationist from the Needles Resource Area Office to locate all trap sites and to assure that the capture is being conducted in accordance with applicable regulations and BLM policies. He will also insure that the animals are humanely treated, work is conducted in a safe manner and guidelines set forth in the capture plan are followed. The Needles Range Conservationist will consult with the Wildhorse and Burro Technician from the Ridgecrest Resource Area Office regarding any sick or injured animals. If for some reason the Wildhorse and Burro Technician is unavailable, the Ridgecrest Resource Area Supervisory Range Conservationist or the Ridgecrest Wild Horse and Burro Specialist will act in his absence. The Lessee may assist in the water trapping of burros if he coordinates with the BLM and follows this capture plan and the Cooperative Agreement between the Lessee and the BLM (see appendix 1).

The Needles Lead Range Conservationist will keep the Ridgecrest Resource Area Supervisory Range Conservationist and Capture Crew Leader advised of progress and of any problems in implementing the capture plan. The Range Conservationists in turn will keep the Resource Area Managers informed.

VIII. INJURIES AND DISEASE

For injuries and disease not requiring destruction, the Wildhorse and Burro technician will determine if the animal can be transported to the Ridgecrest Corrals without further injury, harm or undue pain to the animal. If the animal can be transported, the animal will be treated upon arrival at the Ridgecrest Corrals. If the animal cannot be transported, or if the Wildhorse and Burro Technician is uncertain, a veterinarian will examine the injured or sick animal at the trap site.

IX. DESTRUCTION OF INJURED OR SICK ANIMALS

Any severely injured or sick animal shall be destroyed in accordance with 43 CFR 4740.31. Such animals shall be destroyed only when a definite act of mercy is needed to alleviate pain and suffering. When the Wildhorse and Burro Technician is unsure as to the severity of an injury or sickness, a veterinarian will make the final determination. Destruction shall be done in the most humane method available.

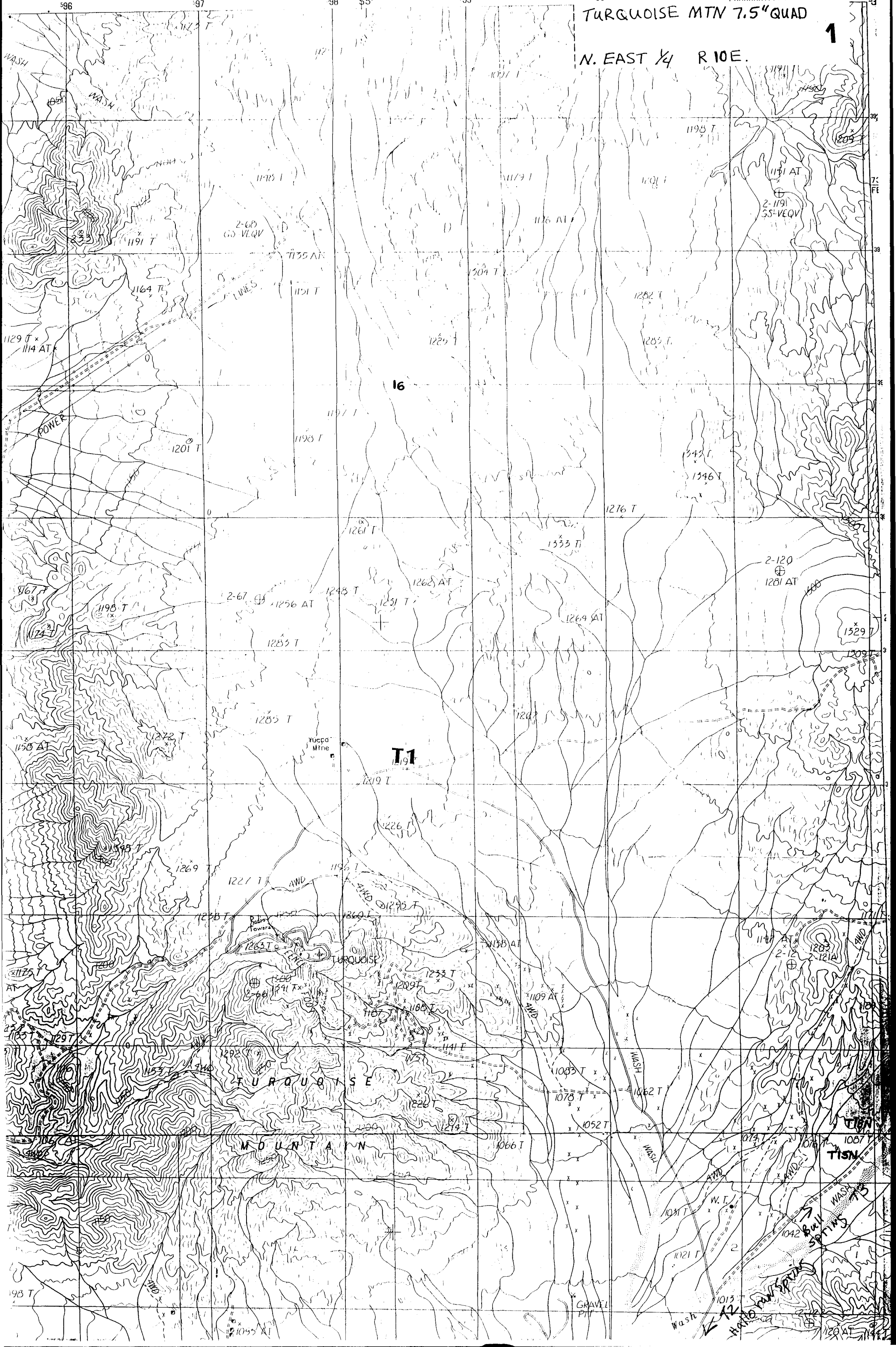
X. SAFETY

All capturing and handling of the animals shall be done in the safest manner possible for the wild animal and personnel.

TURQUOISE MTN 7.5" QUAD

N. EAST 1/4 R 10E.

1



16

T1

12

Hole in Spring

2-68
G.S. VEQV

2-1191
G.S. VEQV

2-120
G.S. VEQV

Padley
Towers

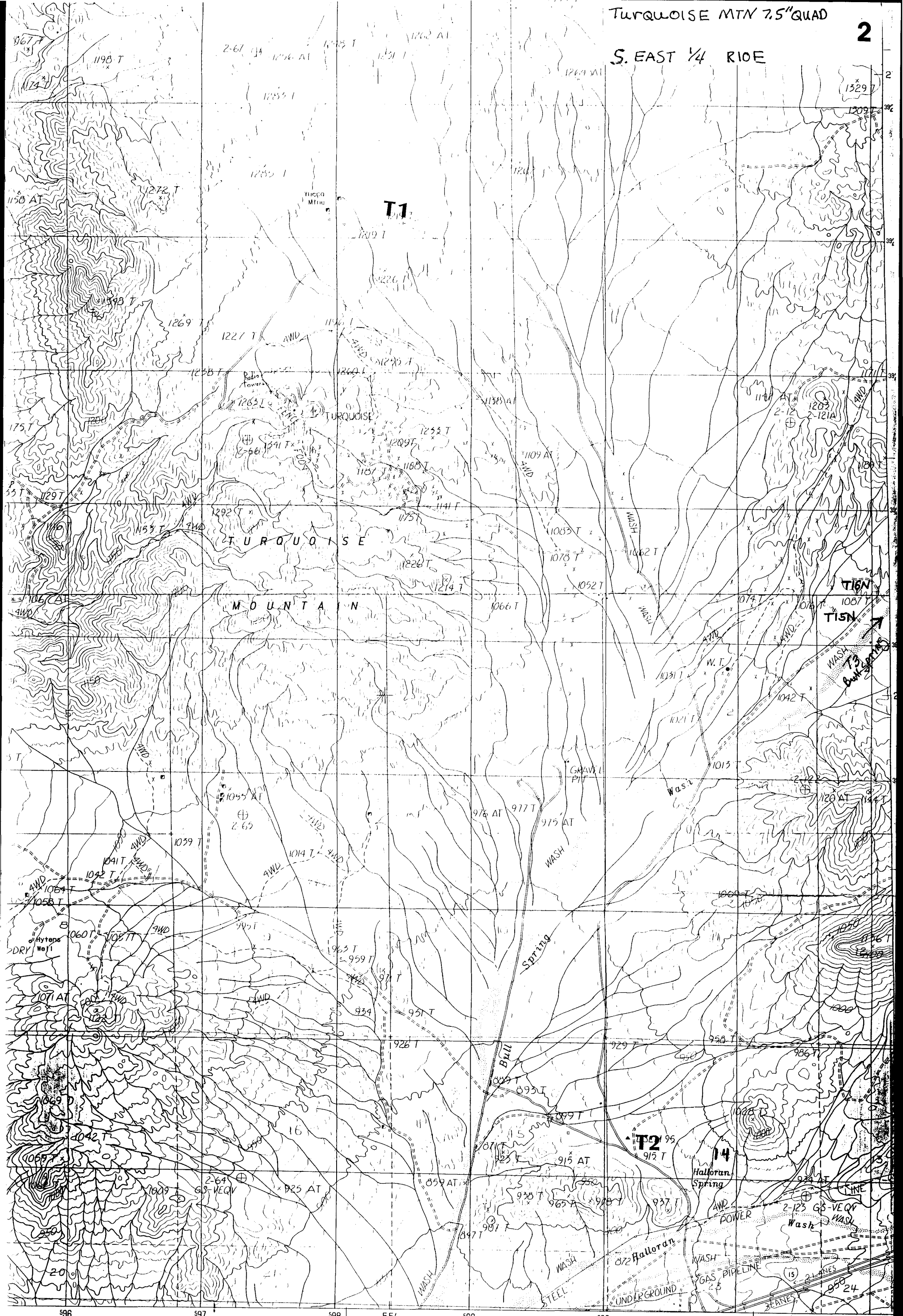
TURQUOISE

MOUNTAIN

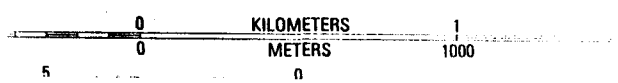
GRAVEL
PIT

1042
BULL
SPRINGS

1015
Hole in Spring



SCALE 1:24 000



INTERIOR GEOLOGICAL SURVEY RESTON VIRGINIA 1983 1984



CONTOURS AND ELEVATIONS IN METERS

ROAD LEGEND Improved Road.....

Valley Wells, CA
7.5" Quad.
N WEST, 14

5

R 11 E
R 12 E

VEQV
1-388
12

WT
CORRAL
WEST
A1

13

1-387

24

25

x 1133 AT
1-386

37

1-385
1171 AT

1183 T

3

1047 T

1050

x 1059 AT

105

x 1083 AT

1100

x 1133 AT

1144 T

T 16 N
T 15 N

1168 AT

1161

1-487 B
1059

1071

x 1091 T

1103 T

x 1141 T

1138 AT

1146 T

1147

1166

x 1059 AT

x 1059 AT

1071

x 1083 AT

1096 T

x 1125 AT

1135

1146 T

1154 AT

1161

1096 T

1103 T

x 1141 T

1135

1146 T

1154 AT

1161

1070 AT

1083 T

1084

1088

1137 T

1128 AT

1171 T

1168 AT

1166

VEQV
1-488

1083 T

1084

1088

1137 T

1128 AT

1171 T

1168 AT

1166

1093.8

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1128 T

1113 T

1113 T

1113 T

1113 T

1128 AT

1171 T

1168 AT

1166

1104 T

x 1133 AT

1144 T

1171 AT

1183 T

1161

1100

x 1133 AT

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1104 T

x 1133 AT

1144 T

1171 AT

1183 T

1161

1100

x 1133 AT

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

1097 AT

x 1141 T

1144 T

1171 AT

1183 T

1161

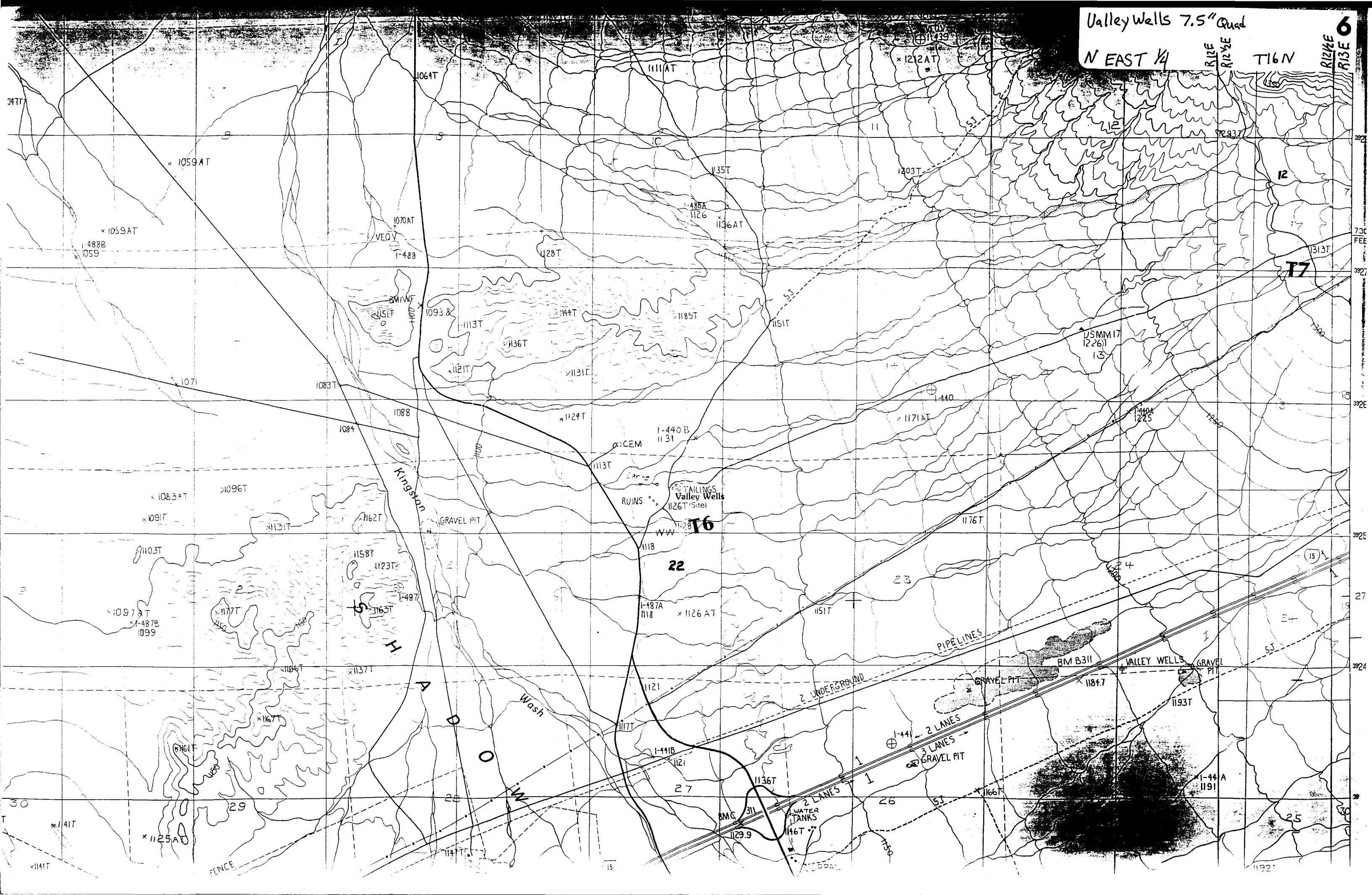
1097 AT

x 1141 T

1144 T

1171 AT

1183 T



Valley Wells
Tailings Site
1126T (Site)

Kingston

GRAVEL PIT

CEM

RUINS

22

PIPELINES

BM B311

VALLEY WELLS

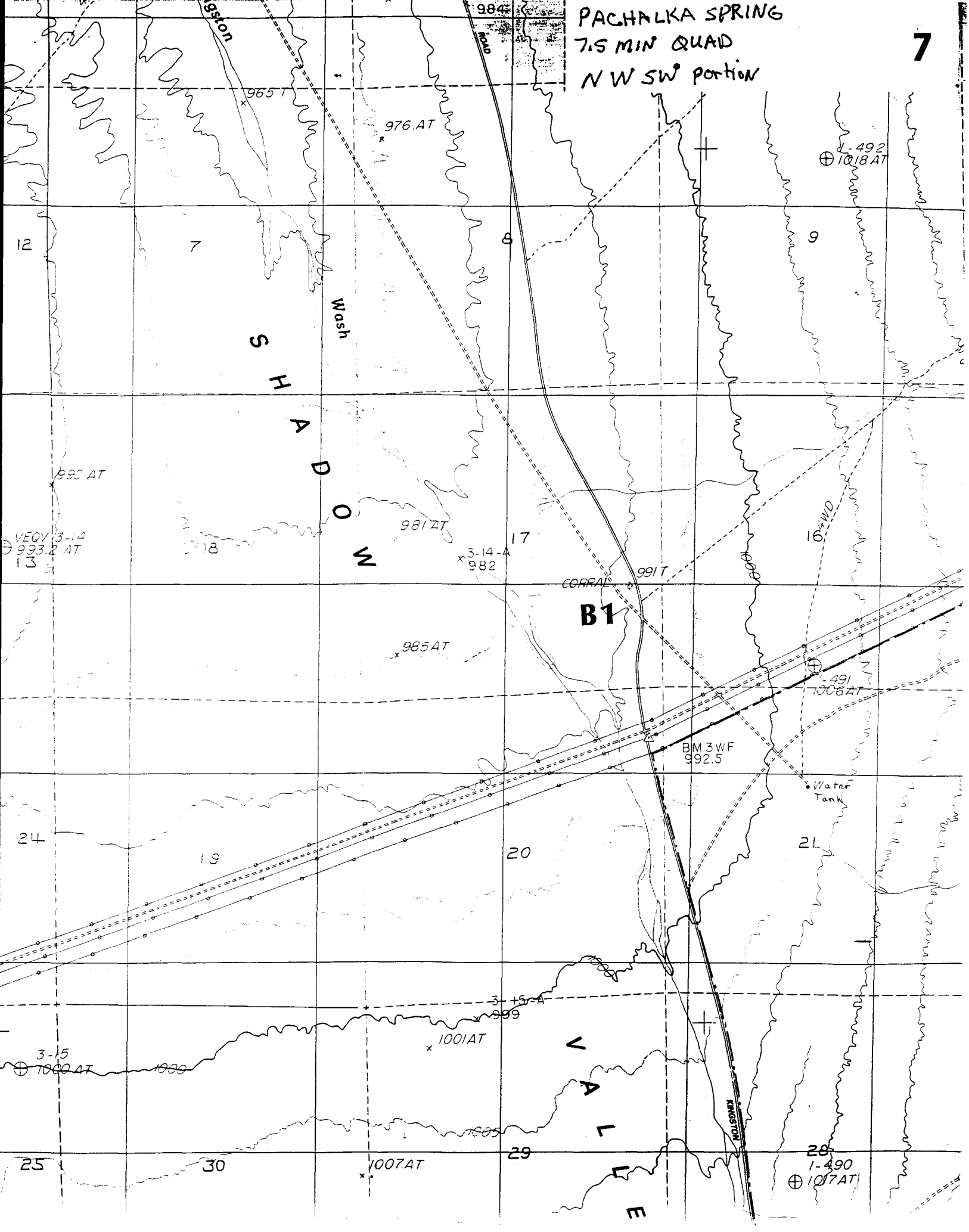
GRAVEL PIT

WATER TANKS

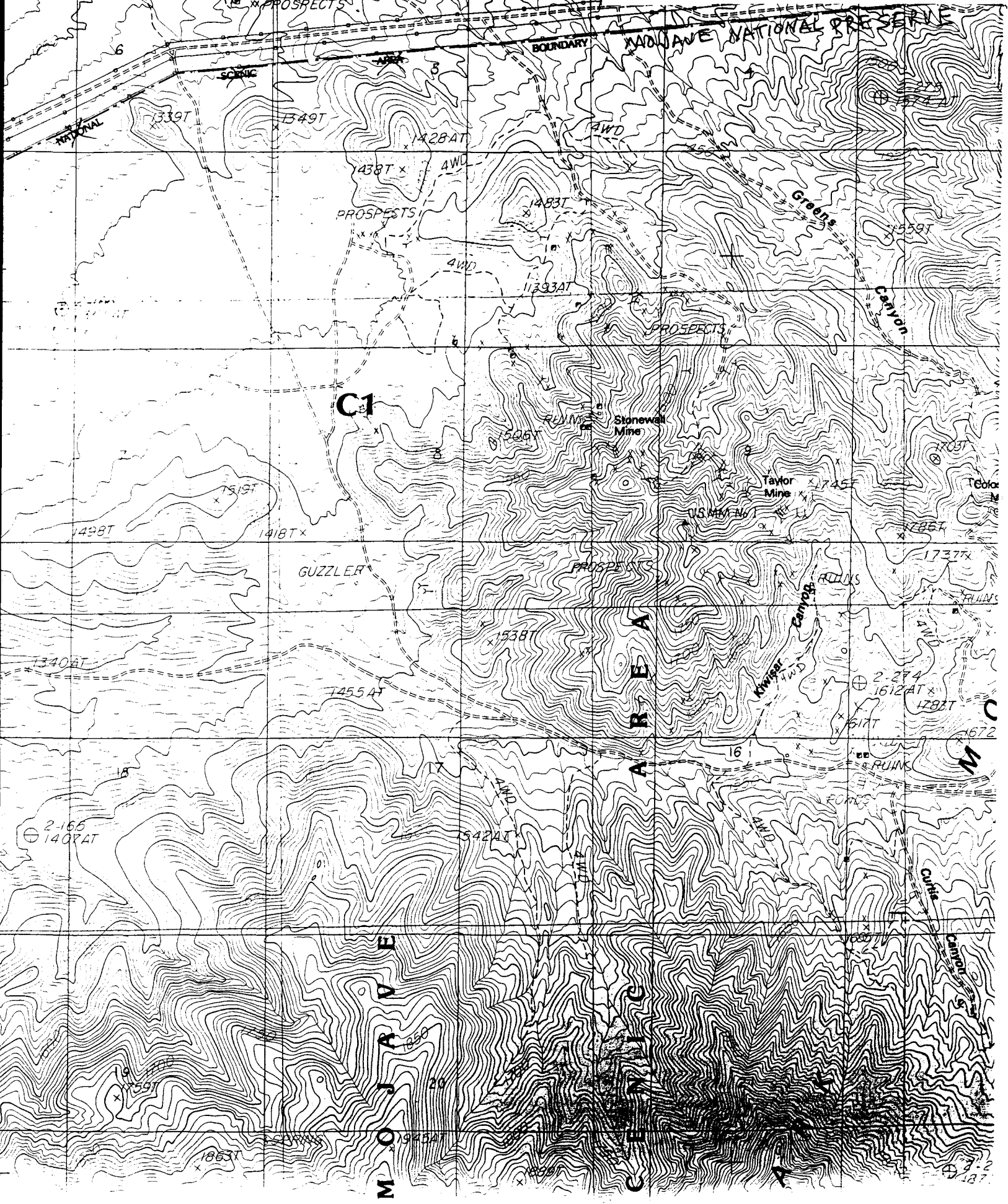
FENCE

PACHALKA SPRING
7.5 MIN QUAD
NW SW portion

7



7.5" QUAD
N WEST ¼

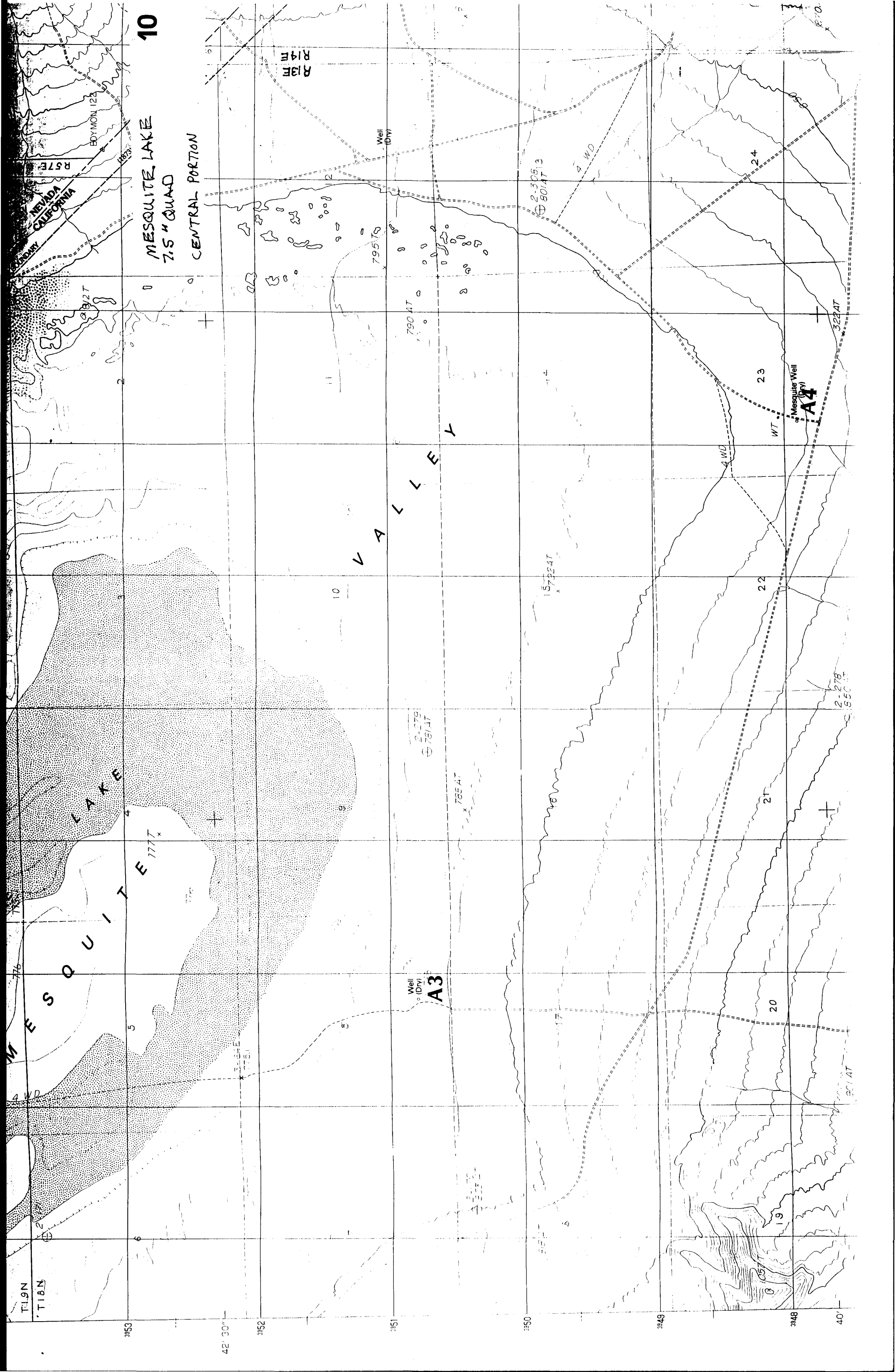


10

MESQUITE LAKE

7.5" QUAD

CENTRAL PORTION



T19N
T18N

3953

42' 30"

3952

3951

3950

3949

3948

40'

M E S Q U I T E
L A K E

V A L L E Y

Well (Dry)
A3

Mesquite Well (Dry)
A4

NEVADA
CALIFORNIA

R57E
EDYMON 124

R13M
R14M

Well (Dry)

2-308
801 AT

24

23

22

21

20

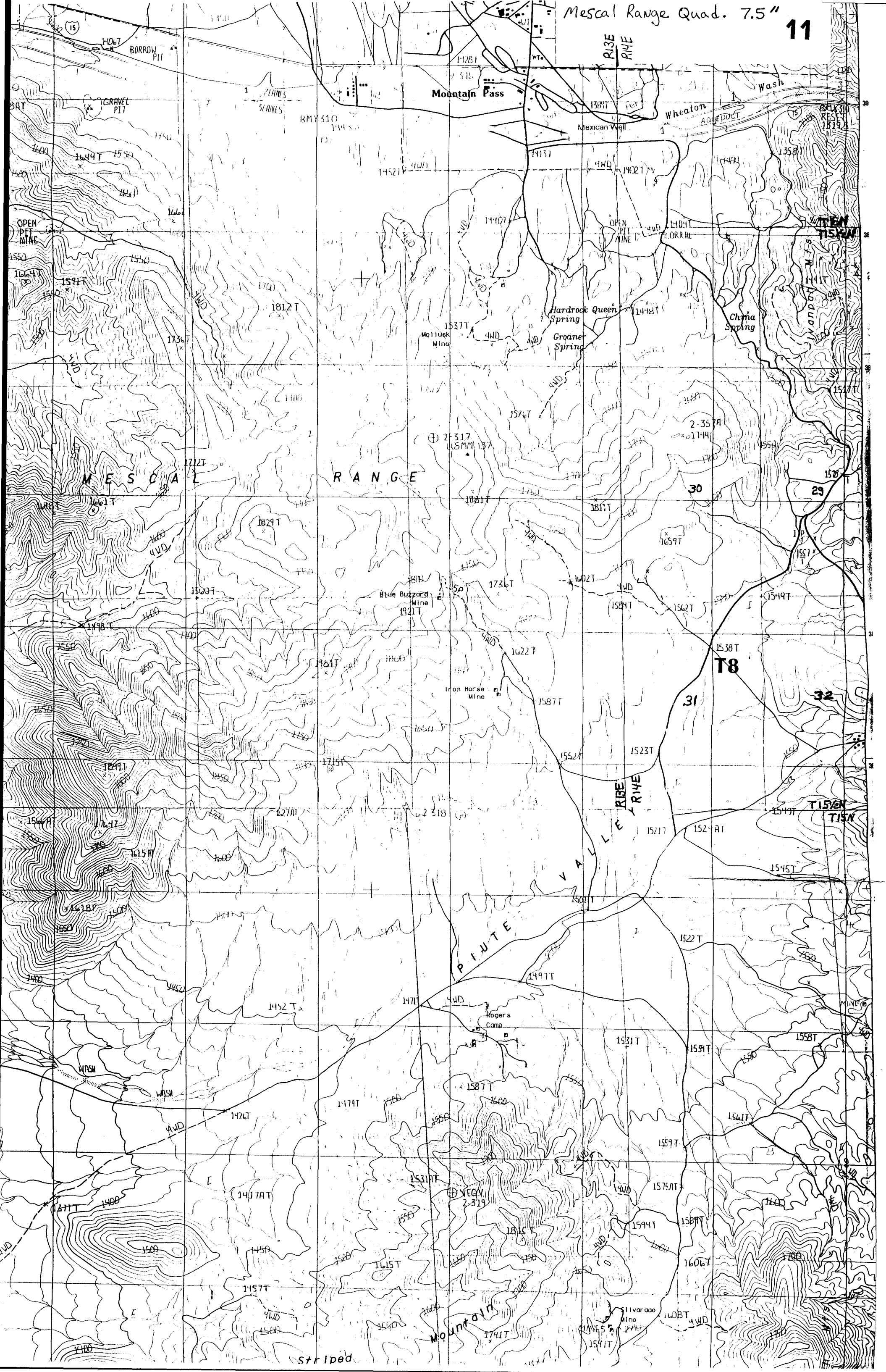
19

322 AT

2-278
850 AT

801 AT

1037



Mountain Pass

RIZE RIVE

Wheaton Aqueduct

Hardrock Queen
Groaner Spring

Chama Spring

MESCAL RANGE

PIUTE VALLEY

Rogers Camp

Mountain

striped

BORROW PIT

GRAVEL PIT

OPEN PIT MINE

Mexican Well

OPEN PIT MINE

Blue Buzzard Mine

Iron Horse Mine

T15 1/2
T15 3/4

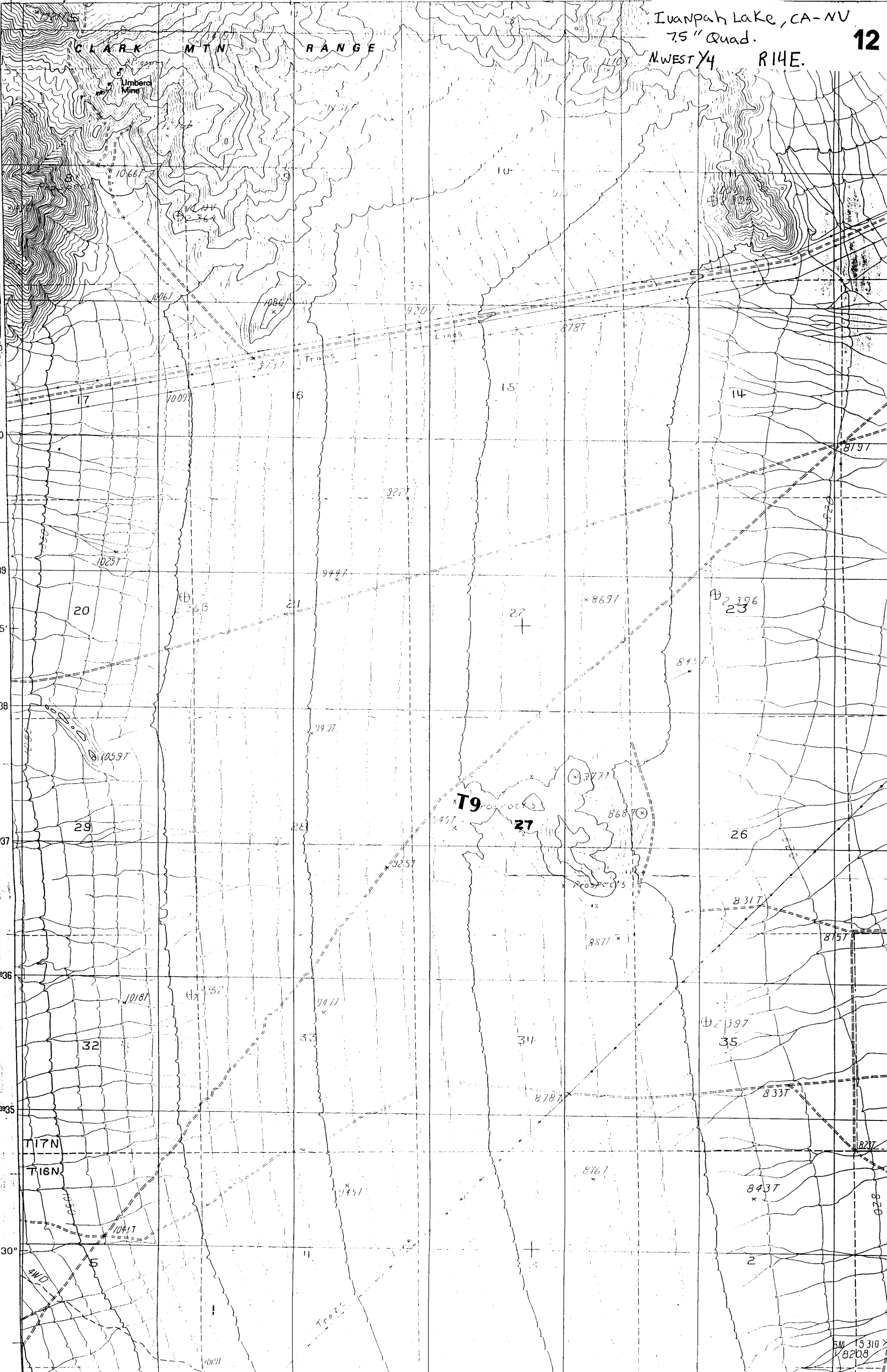
Silverado Mine

Ivanpah Lake, CA-NV
7.5" Quad.

12

N. WEST 1/4 R14E.

CLARK MTN RANGE



Umbert Mine

CLAY

Trans

Lines

T9

27

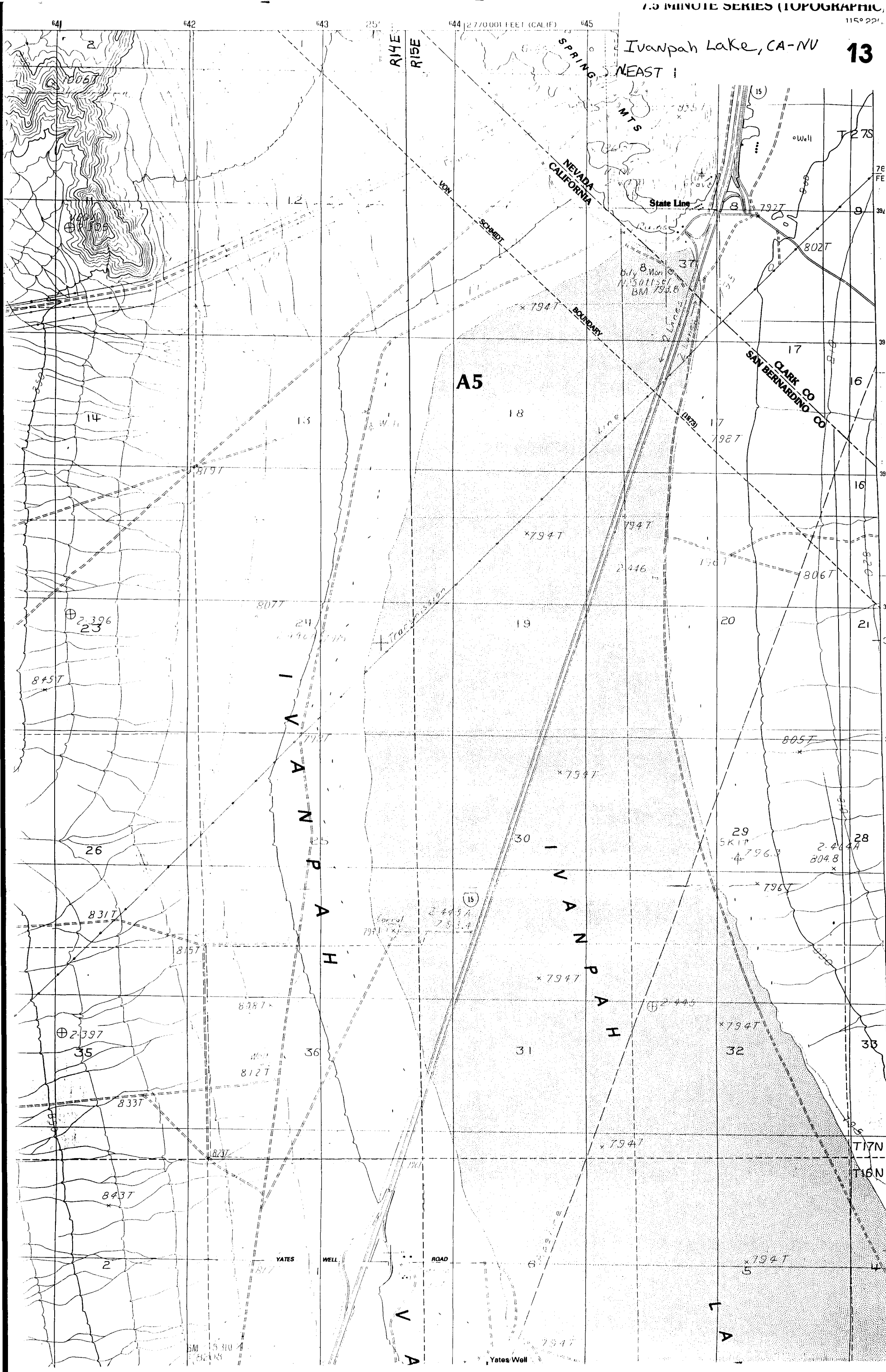
T17N

T16N

AND

BM 15310
8208

Ivanpah Lake, CA-NV NEAST 1



14
MINERAL HILL QUADRANGLE
CALIFORNIA—SAN BERNARDINO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

TERIOR
BY

