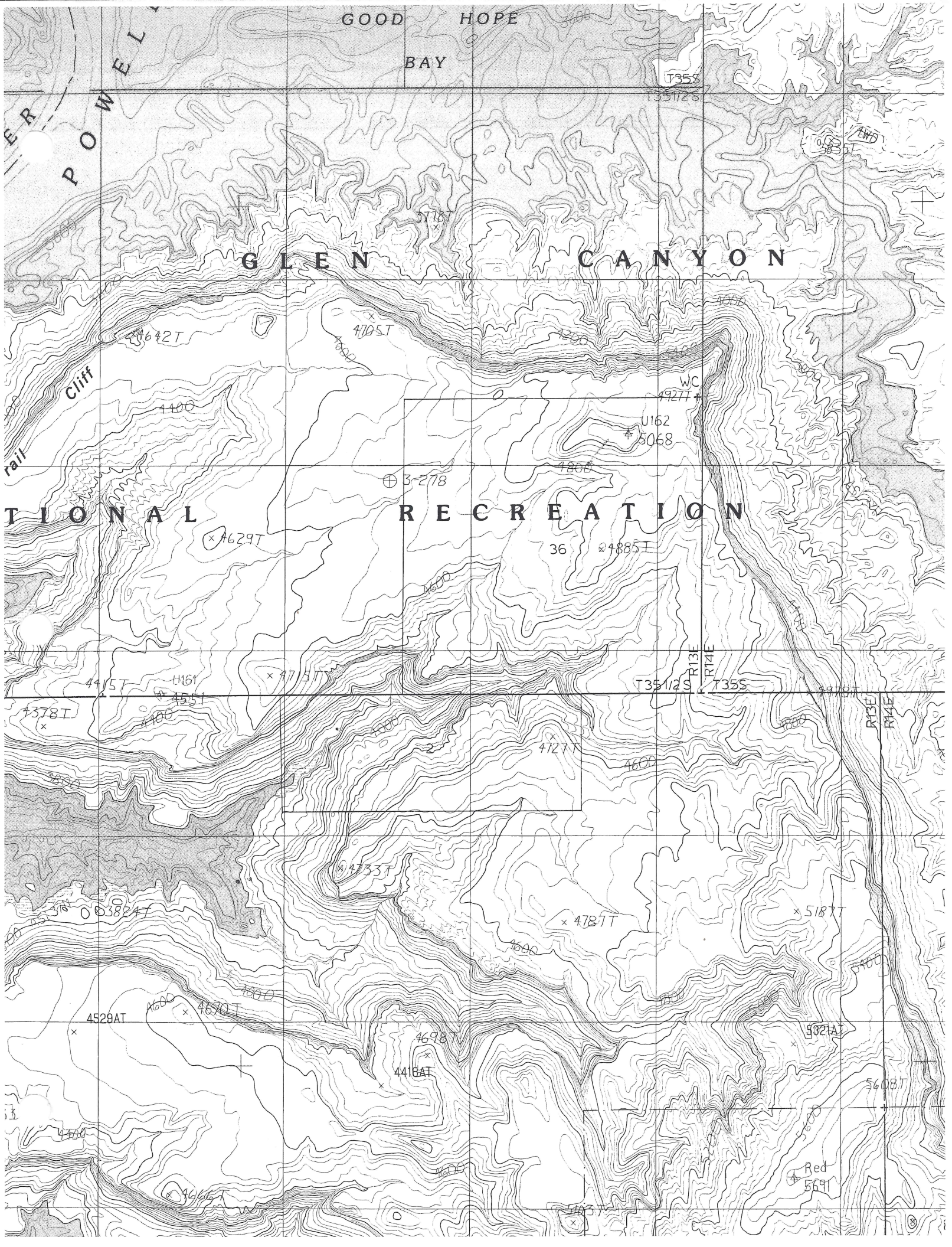
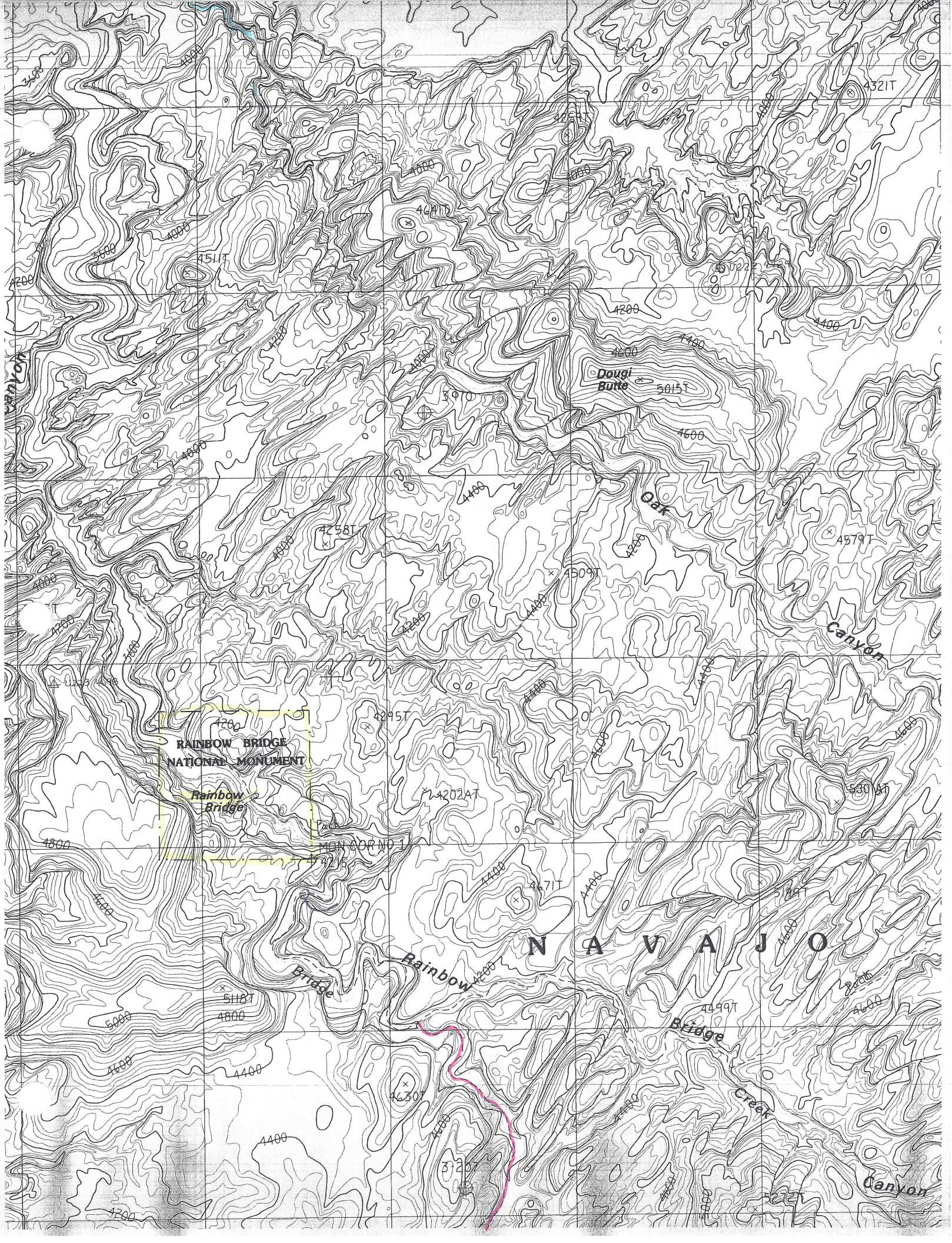

25AT
4402T
RIVE
P O
3718T
GLEN
4642T
4105T
Cliff
Trail
3-277
3-278
NATIONAL
RECRE
4629T
36
COLORADO
LAKE
4415T
4551
4378T
4715T
4727T
4733T
3824T
3739T
4529AT
4610T
4698T
4418AT
4334T
3752T
4666T
CO
CO
JUAN
16
WL 3700

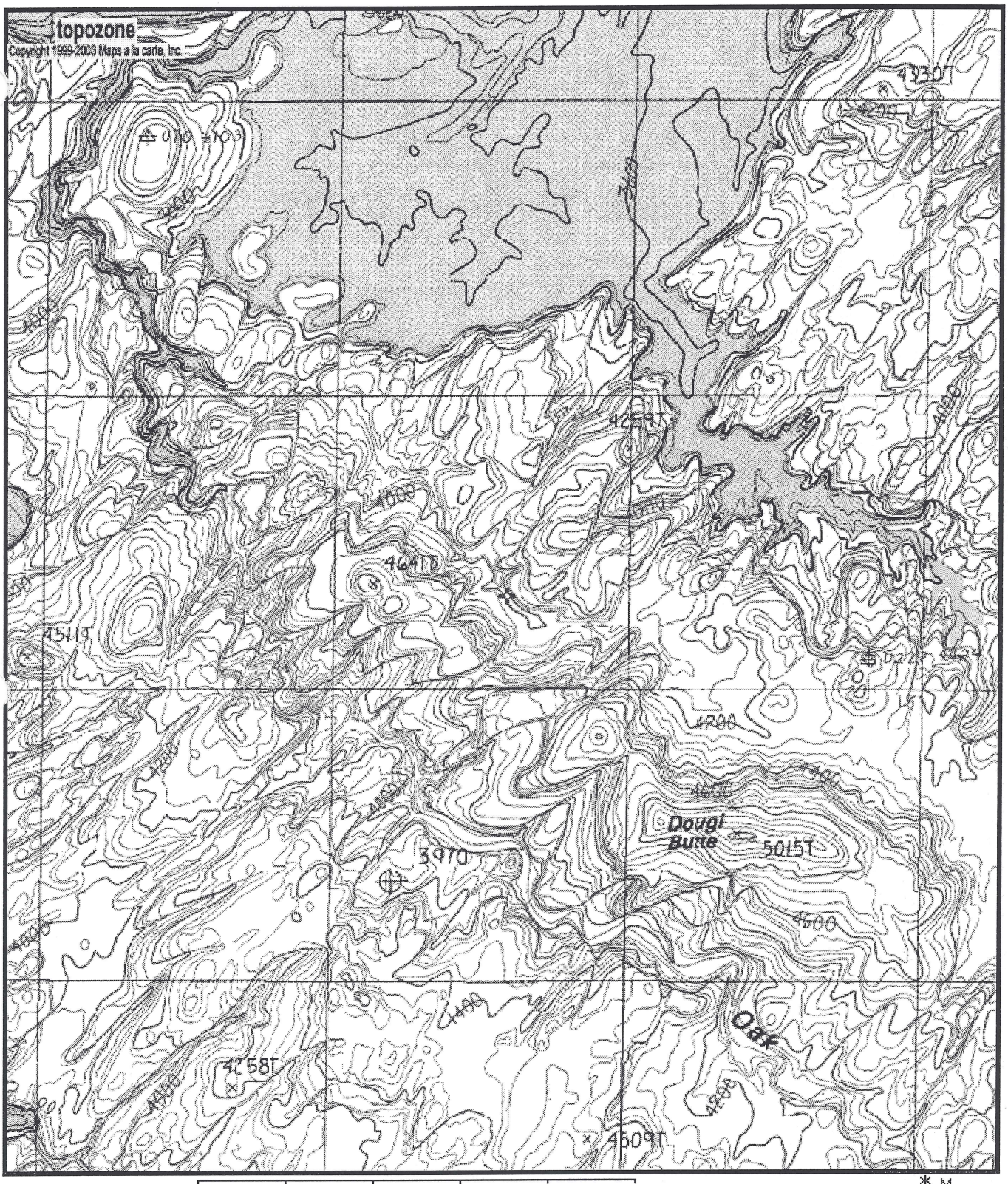

GOOD HOPE
BAY
T35S
T35 1/2 S
GLEN CANYON
NATIONAL RECREATION
Cliff
rail
WC
U162
5068
3-2278
36
R13E
R14E
4642T
4705T
4927T
4629T
4885T
4455T
4378T
4727T
4733T
4787T
5187T
4529AT
4670T
4698T
4418AT
5321AT
5608T
Red
5691
4966T


RECREATION AREA
"SECTOP"
Secret Canyon
Moepitz
Canyon
Dougi Butte
5015T
Oak
Canyon
RAINBOW 6059
MON.COR NO 1
N A V A J O
Rainbow
Bridge
Bridge

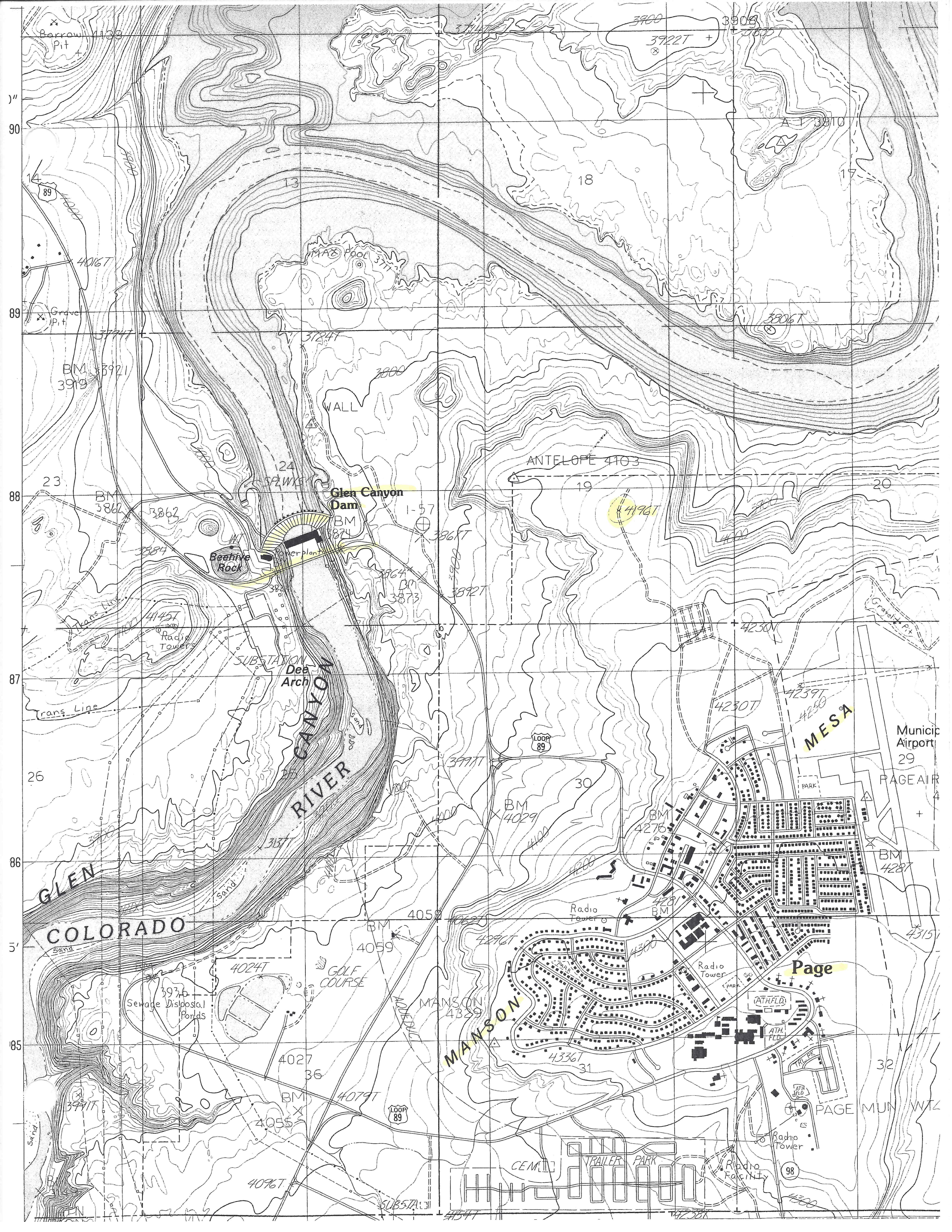
SECTOP = 12S 0504110
4105845 NAD27

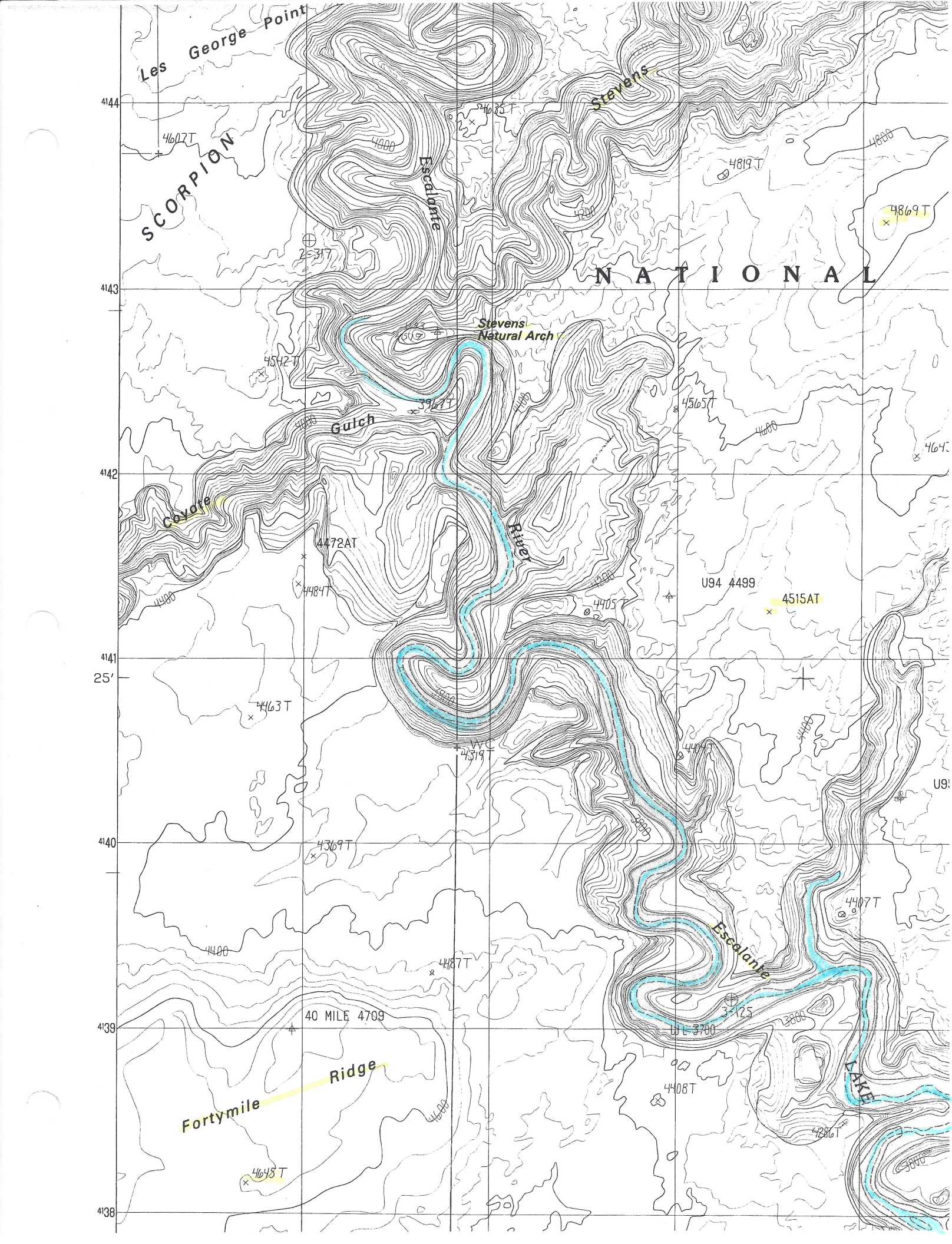
Dougi Butte (Topozone) =
505336
4105499 NAD27


RAINBOW BRIDGE
NATIONAL MONUMENT
Rainbow Bridge
MONUMENT
Dougi Butte
5015T
4202AT
4295T
4258T
4509T
4579T
4671T
4499T
4630T
5118T
5301T
4511T
4611T
4321T
3970
Oak Canyon
Canyon
Rainbow Bridge Creek
Canyon
N A V A J O



Map center is UTM 12 504487E 4106521N (WGS84/NAD83)
Rainbow Bridge quadrangle
Projection is UTM Zone 12 NAD83 Datum


Borrow Pit
Gravel Pit
BM 3919
WALL
ANTELOPE 4103
Glen Canyon Dam
Beehive Rock
Powerplant
Radio Towers
SUBSTATION
Trans Line
Dee Arch
GLEN
CANYON
COLORADO
RIVER
Sand
MESA
Municipal Airport
PAGE AIR
Radio Tower
Page
MANSON
MANSON 4329
GOLF COURSE
Sewage Disposal Ponds
PARK
ATH. FLD.
TRL PK
PAGE MUN WTR
Radio Facility
CEM
TRAILER PARK
SUBSTA
LOOP 89
89
98


Les George Point
SCORPION
Escalante
Stevens
NATIONAL
Stevens Natural Arch
Gulch
Coyote
River
Escalante
LAKE
Fortymile Ridge
40 MILE 4709
4144
4143
4142
4141
25'
4140
4139
4138
4607T
4819T
4869T
4542T
4565T
4472AT
4484T
4463T
4319T
4369T
4487T
4515AT
4407T
4408T
4645T
U94 4499

AERIAL PHOTOGRAPHS

The majority of the aerial photographs in this lab manual come from the National High Altitude Photography (NHAP) and National Aerial Photography Program (NAPP) collections at the EROS Data Center. These two series of images were taken from airplanes flying at altitudes of 20,000 to 40,000 ft along transects which systematically criss-crossed the entire United States. The spacing between exposures along these transects was sufficiently close so that there is approximately 60 percent overlap between adjacent images. The images are all **vertical** images, in which the center of the photograph is directly beneath the plane rather than at an **oblique** angle to it (Fig. 5–11). The remaining photographs were taken from the space shuttle and the Landsat satellites during Earth orbit.

Some of the color aerial photographs in this laboratory manual were taken with special lens filters and films which are sensitive to ultraviolet and infrared wavelengths of light (which are not visible to the human eye). This nonvisible radiation is recorded in **false-color images**, in which the true colors of surficial features are replaced with other colors. For example, the type and density of vegetation are usually indicated by various shades of red; water bodies are colored various shades of blue (light blue when they are muddy, dark blue when they are clear); and deserts and cities appear in dark gray and black shades. False-color images are also useful for identifying and mapping soil and rock types, prospecting for water and mineral resources, measuring areas of urbanization and deforestation, and other similar purposes.

STEREOPHOTOGRAPHS

The aerial photographs in this laboratory manual are usually presented in the form of **stereophotographs**, an example of which is shown in Figure 5–12. A stereophotograph consists of a pair or triplet of overlapping aerial photographs taken at the same altitude. When such overlapping images are viewed through a specially designed pair of glasses called a **stereoscope**, the slight difference in their angles of perspective (Fig. 5–12) allows the eyes to sense their depth and perceive the relief of the surface. The brain processes this information by merging the two separate flat images into a single three-dimensional image, giving the viewer the amazing perspective of looking straight down at the ground from an airplane.

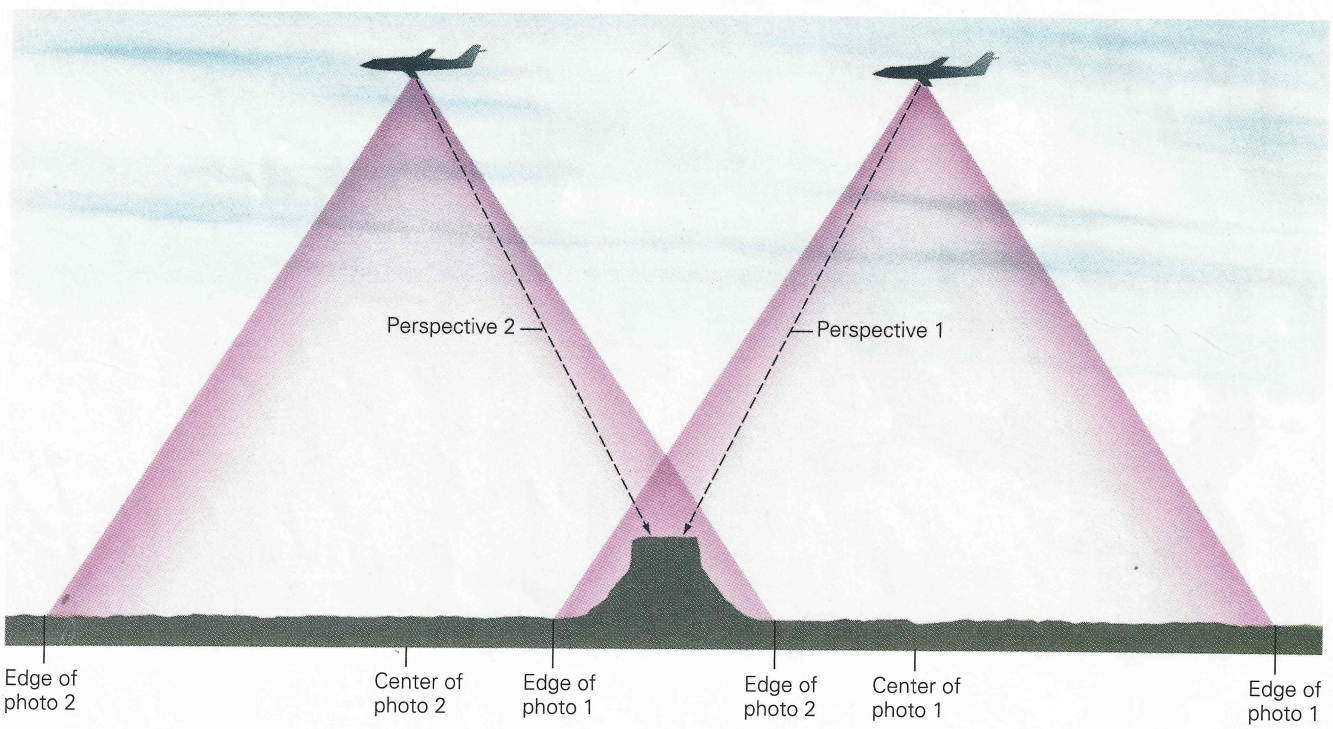


Figure 5–11 The perspective and overlapping of adjacent aerial photographs along an aerial transect. The two different perspectives on the feature of interest will produce a three-dimensional image when the photographs are viewed with a stereoscope.

nc. expressly disclaims
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locally about current

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ey can be corrected on