

TEM

404

PHOTOGEOLOGIC MAP,

SETSILTSO SPRINGS - 4 QUADRANGLE,

NAVAJO INDIAN RESERVATION,

APACHE COUNTY, ARIZONA

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Trace Elements Memorandum Report 404

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 14 1952

AEC - 137/3

Dr. Phillip L. Merritt, Assistant Director  
Division of Raw Materials  
U. S. Atomic Energy Commission  
P. O. Box 30, Ansonia Station  
New York 23, New York

Dear Phil:

Transmitted herewith for your information are two copies of Trace Elements Memorandum Report 404, "Photogeologic map, Setsiltso Springs-4 quadrangle, Navajo Indian Reservation, Apache County, Arizona," by R. G. Ray, August 1952. This map of part of the Colorado Plateau area is one of the series of 7½ minute photogeologic quadrangle maps that are being prepared.

Geologic contacts and structural data are believed reasonably reliable.

Planimetry for this map was taken from aerial photographs and adjusted to positions taken from existing photo-mosaics. To hold these positions some adjustment was necessary; therefore, this map cannot be considered reliable as to scale or bearing. Relative positions, however, should be reasonably accurate.

On recent maps by the U. S. Geological Survey the Wingate sandstone is divided into two units. These are locally recognizable on aerial photographs, but in this area the Wingate sandstone is mapped only as a single unit.

Because the Hoskinnini tongue of the Cutler formation is generally very thin in this area and because its appearance on aerial photographs is somewhat similar to the Moenkopi formation, it has been included with the Moenkopi formation.

In order to make the information available to the public, we plan to place this map on open file. We are asking Mr Hosted whether the Commission has any objection to this plan.

Sincerely yours,

for  
W. H. Bradley  
Chief Geologist

UNCLASSIFIED

Geology - Mineralogy

This document consists of 2 pages,  
plus 2 figures.  
Series A

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

PHOTOGEOLOGIC MAP, SETSILTZO SPRINGS -4 QUADRANGLE,  
NAVAJO INDIAN RESERVATION, APACHE COUNTY, ARIZONA\*

By

R. G. Ray

August 1952

Trace Elements Memorandum Report 404

This preliminary report is distributed  
without editorial and technical review  
for conformity with official standards  
and nomenclature. It is not for pub-  
lic inspection or quotation.

\*This report concerns work done on behalf of the Division  
of Raw Materials of the U. S. Atomic Energy Commission

## USGS - TEM Report 404

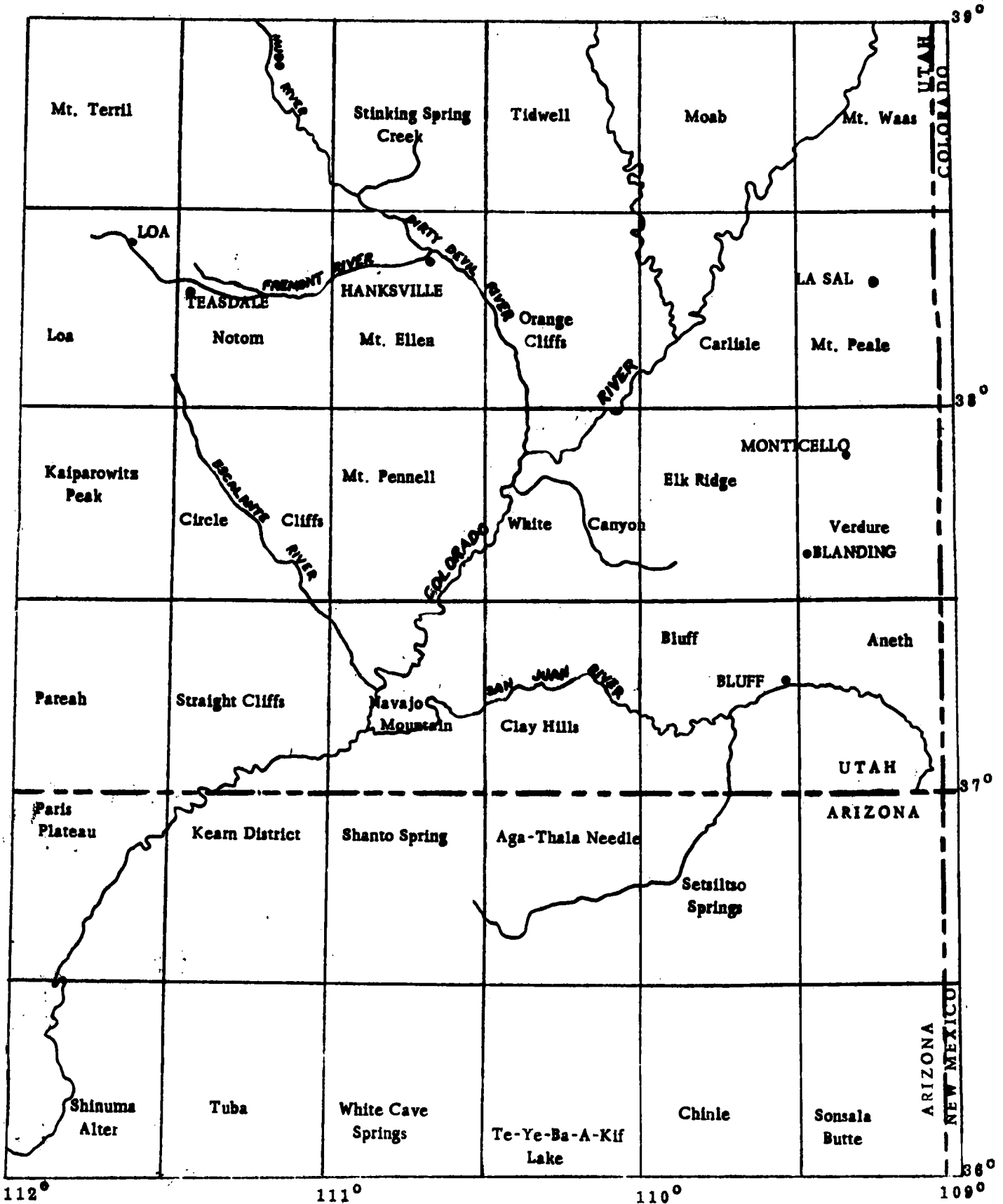
## GEOLOGY - MINERALOGY

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INDEX MAP OF PART OF THE COLORADO PLATEAU AREA, SHOWING  
LOCATION OF PHOTOGEOLOGIC QUADRANGLE MAPS





EXPLANATION

SEDIMENTARY ROCKS

- Qal  
Alluvium and wind-blown sand
- Jn  
Navajo sandstone
- Jk  
Kayenta formation
- Jw  
Wingate sandstone
- Rc  
Chinle formation  
(Present in this area but covered by alluvium and wind-blown sand)
- Rs  
Shinarump conglomerate
- Rm  
Moenkopi formation
- Pcd  
Cutler formation
- Pcor  
DeChelly sandstone member, Pcd;  
Organ Rock tongue, Pcor, Cedar Mesa sandstone member, Pcc;  
Halgaito tongue, Pcha;
- Pcc  
Pcha
- Ti  
IGNEOUS ROCKS
- Dikes

- Contact  
(Can be accurately located within 30 feet horizontally)
- Contact  
(Can be approximately located within 30 to 200 feet horizontally)
- Contact  
(Cannot be located accurately; probable error greater than 200 feet)
- Probable or doubtful contact
- Strike and dip of beds  
(Based on photo-interpretation)
- Horizontal beds
- Strike of approximately vertical joint system  
(Based on photo-interpretation)
- Mine or quarry
- Secondary road
- Trail
- Uninterpretable linear feature on photograph  
(May be geologically significant)

Note: In this area the Wingate sandstone formation is composed of an upper calcareous and a lower thin-bedded sandstone-siltstone facies. Although these two units can be differentiated on aerial photographs they are mapped here as a single formation.

The Hoskins tongue of the Cutler formation, generally thin in this area, is here included in the Moenkopi formation.

Planimetric base map compiled by U. S. Geological Survey from photo-mosaics prepared by Fairchild Aerial Surveys and from other aerial photographs.



PHOTOGEOLOGIC MAP  
SETSILTZO SPRINGS-4  
NAVAJO INDIAN RESERVATION  
APACHE COUNTY, ARIZONA

PHOTOGEOLOGY BY R G RAY  
PHOTOGEOLOGY UNIT, ALASKAN GEOLOGY BRANCH  
SCALE 1:24,000

Stratigraphic column for this area modified from U. S. Geol. Survey Bull. 665 and U. S. Geol. Survey unpublished maps.

JUNE 1952





