

Montana Bureau of Mines and Geology  
Open File No. 389

Geologic and Structure Contour Maps of the Malta  
30' x 60' Quadrangle, Northeastern Montana

Compiled and mapped by Robert N. Bergantino

1999

To view a full scale version of this map, [click here](#).

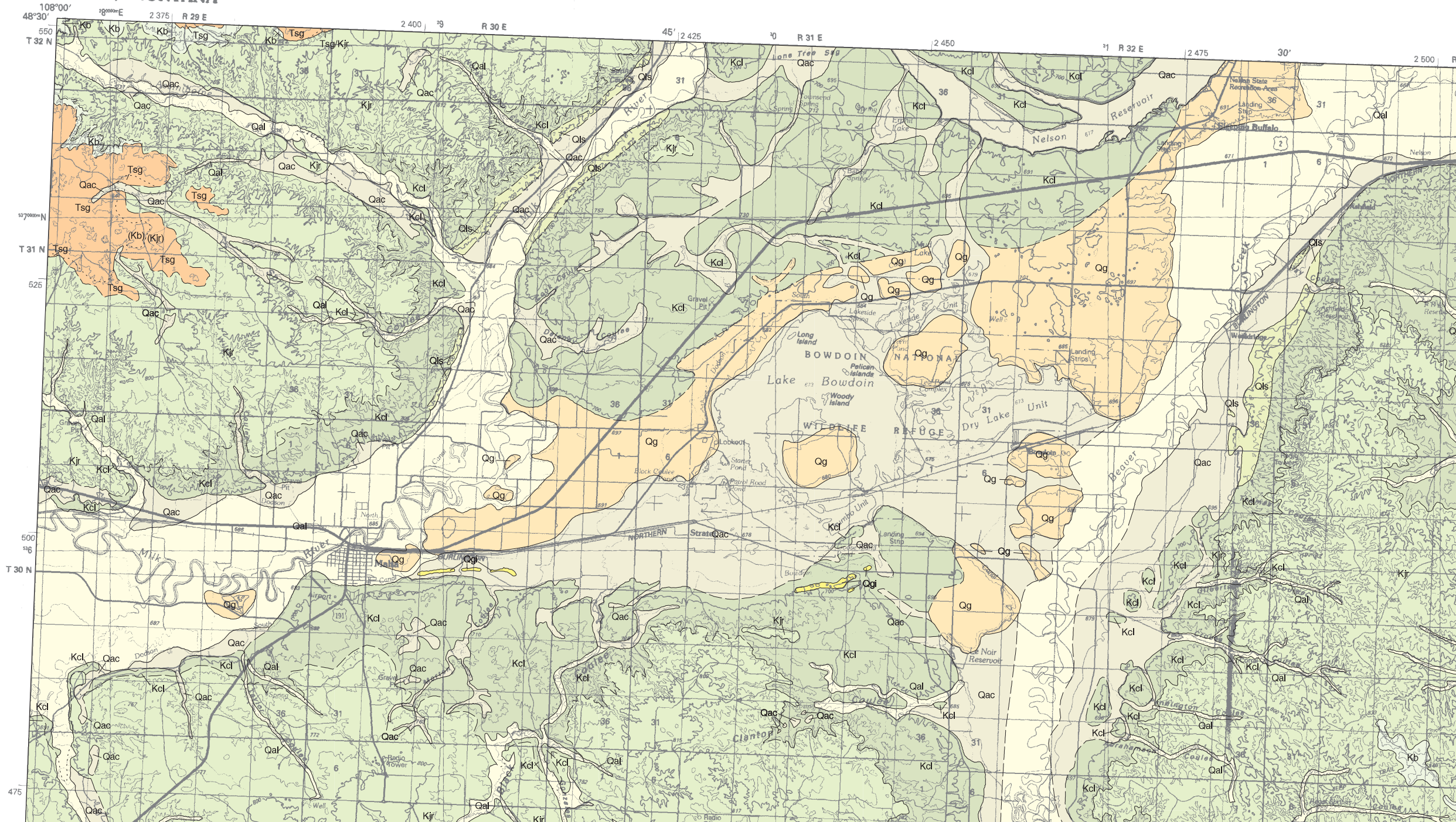
For the text files with the map information, [click here](#).

[Digital data link](#)

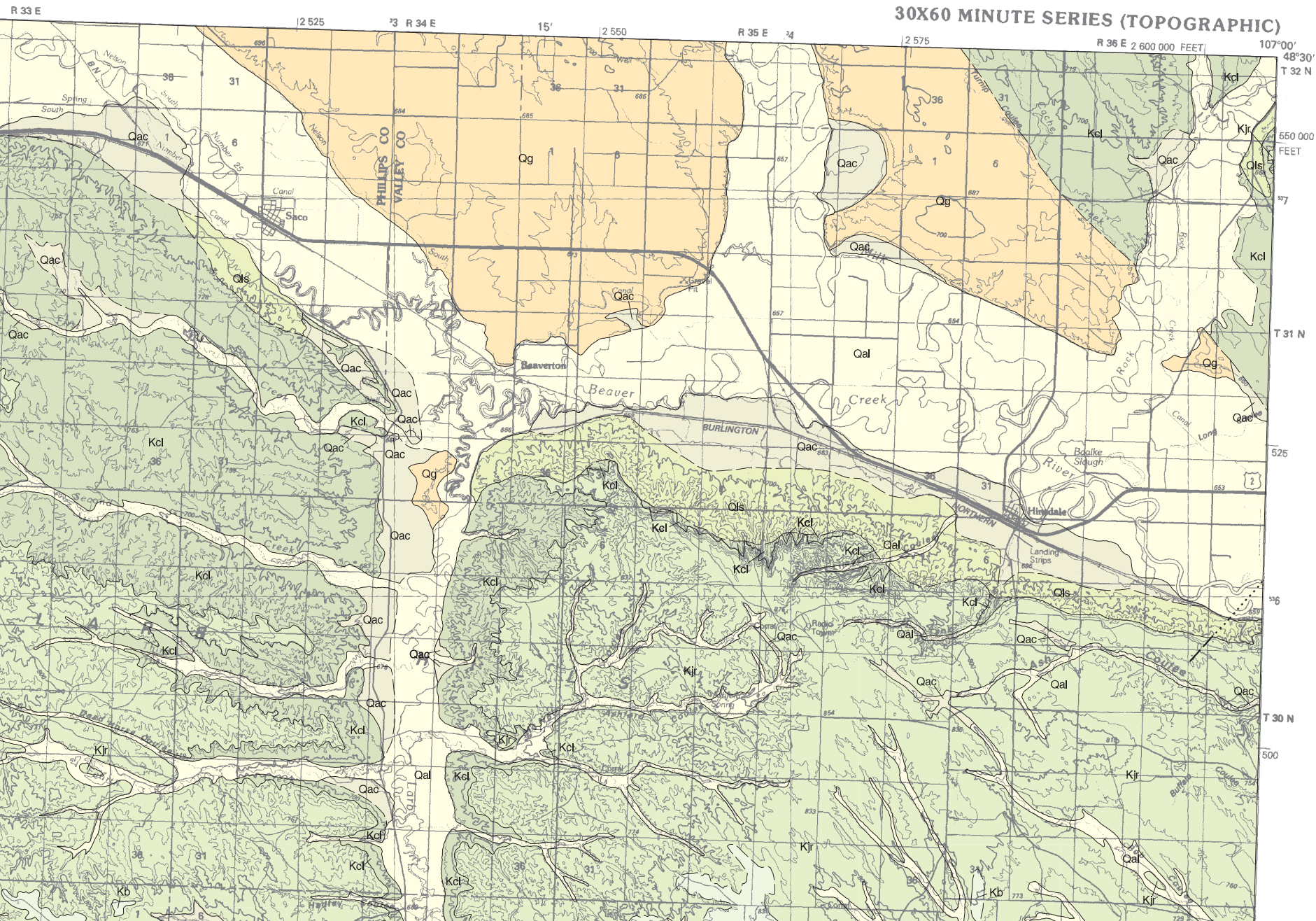
Note — This map was originally published at a scale of 1:100,000 but the page sizes have been modified to fit average printer capabilities (8½ x 14; legal size paper). There is an eighth inch overlap on these pages. A full sized colored print of this map can be ordered from the MBMG Publication Sales Office, 1300 West Park Street, Butte, MT, 59701-8997.

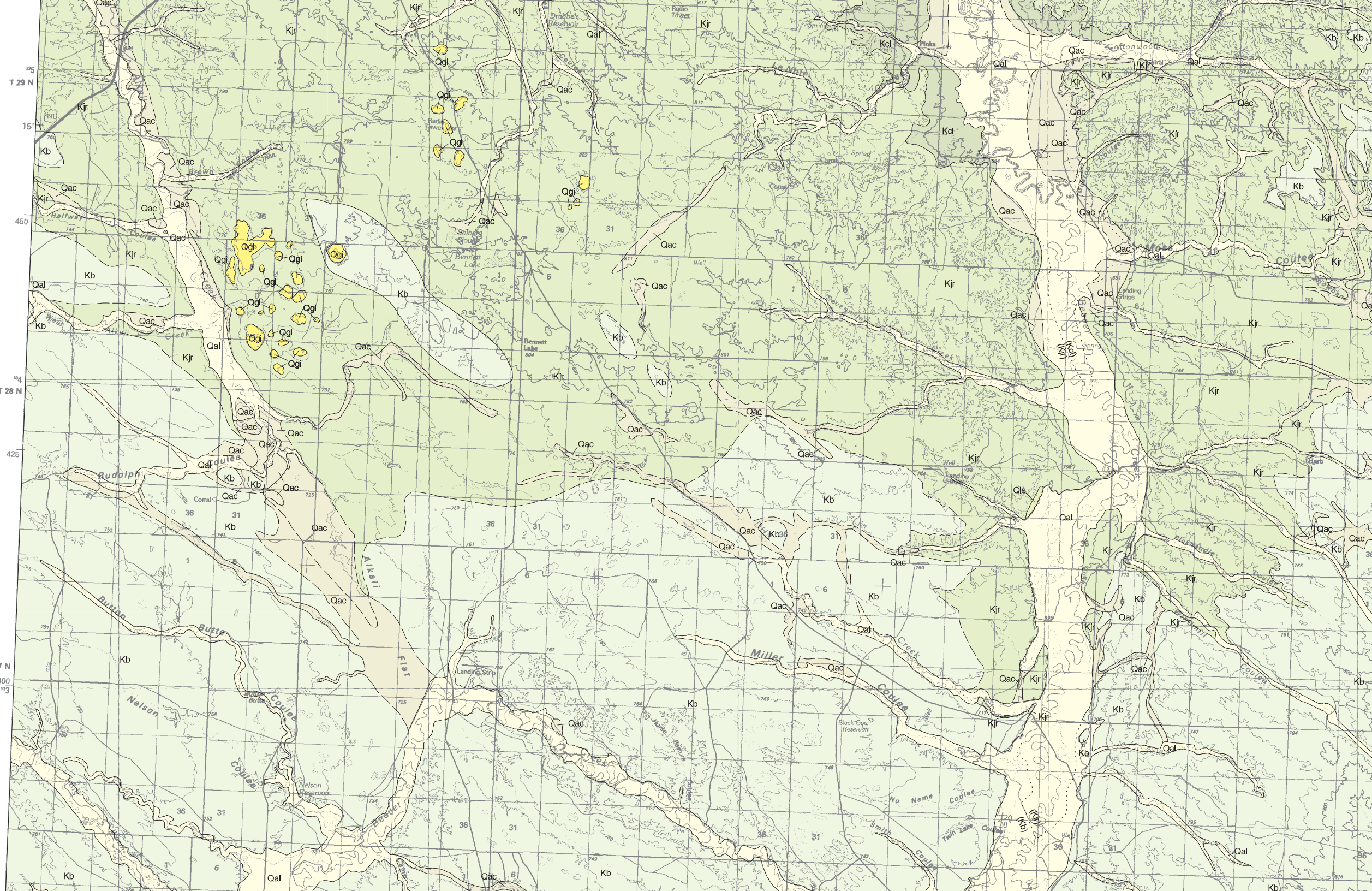
Open File MBMG 389, Plate 1 of 2  
Geologic Map, Malta 30'x60' Quadrangle

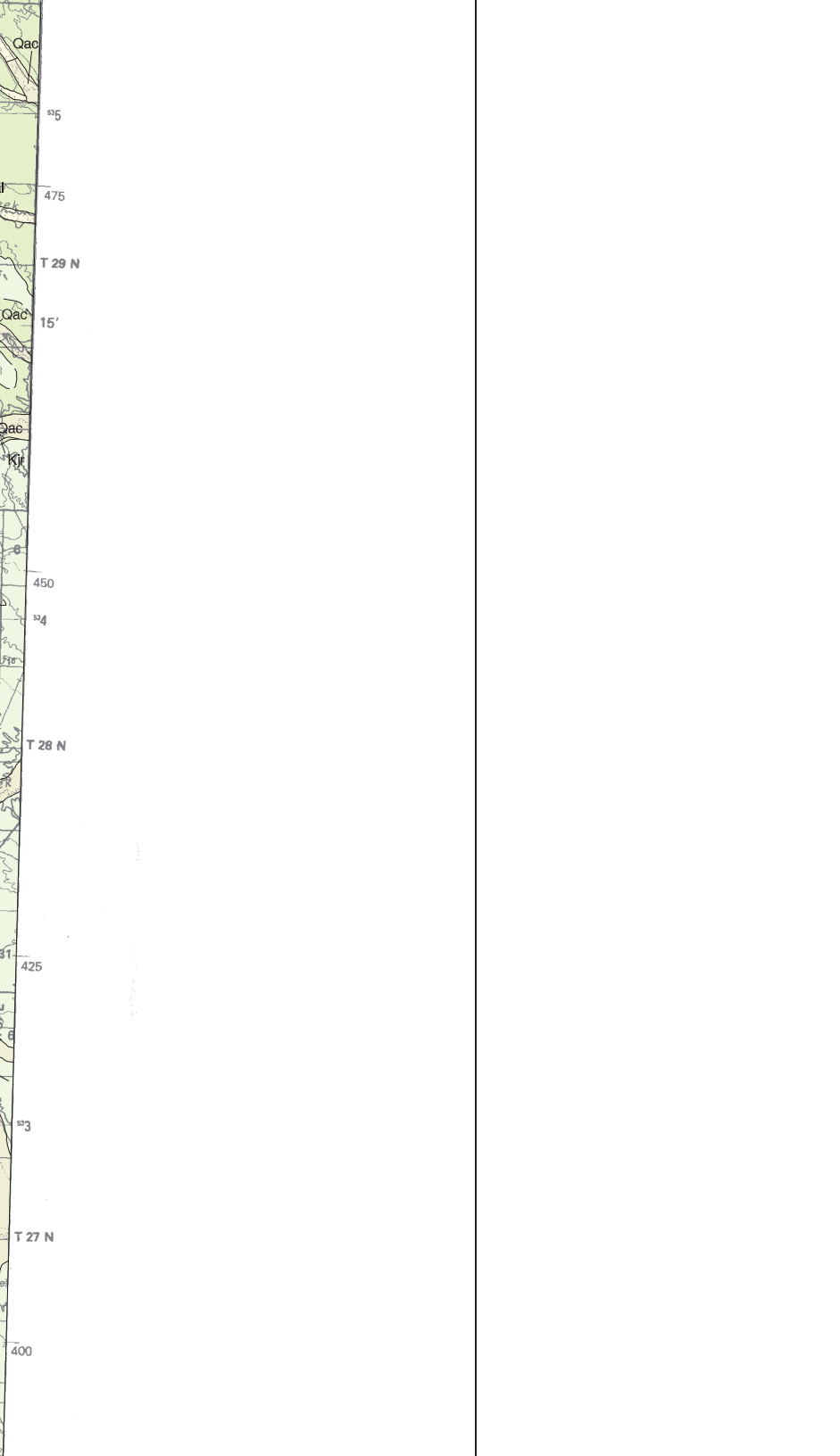
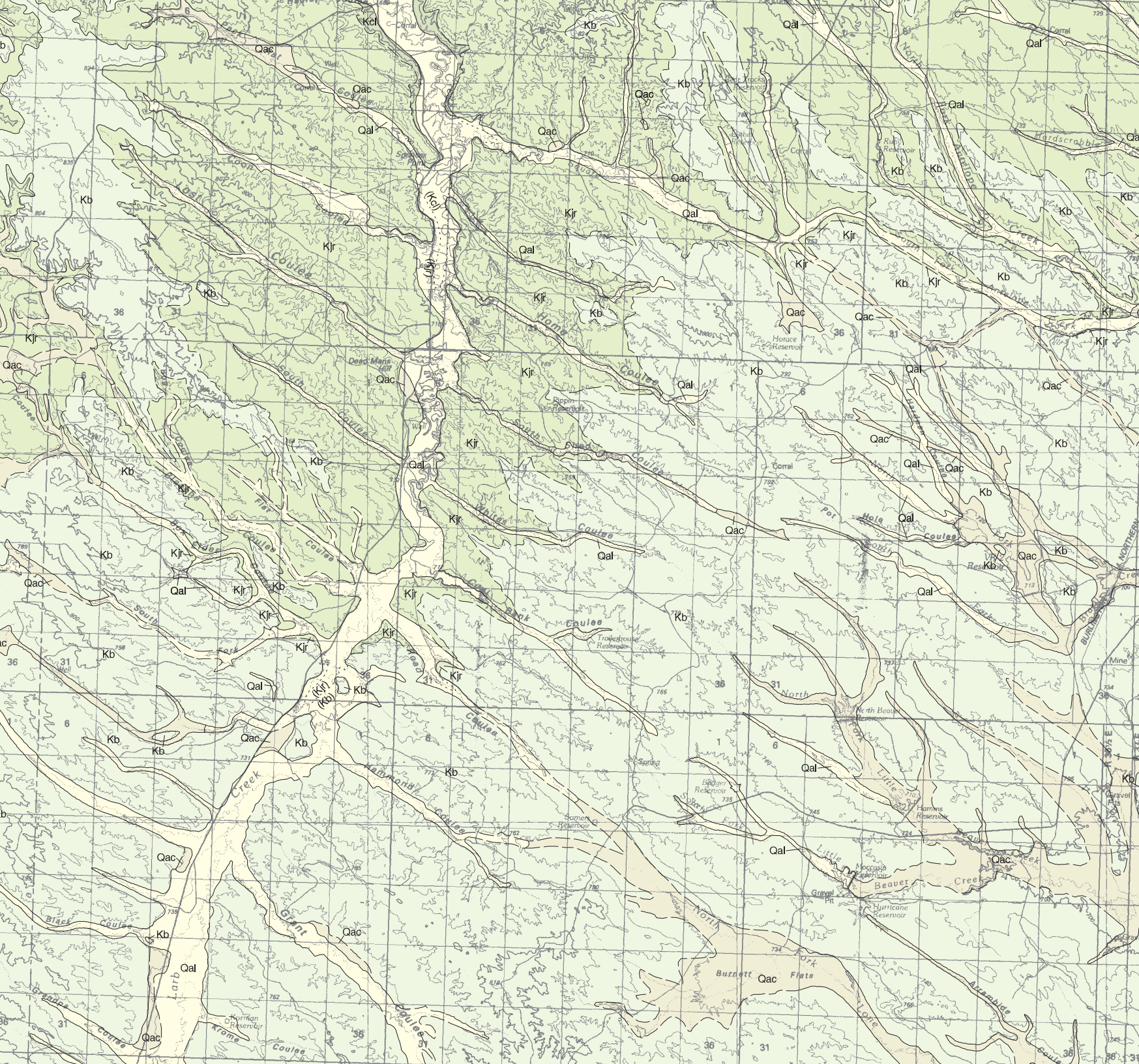
### MALTA, MONTANA

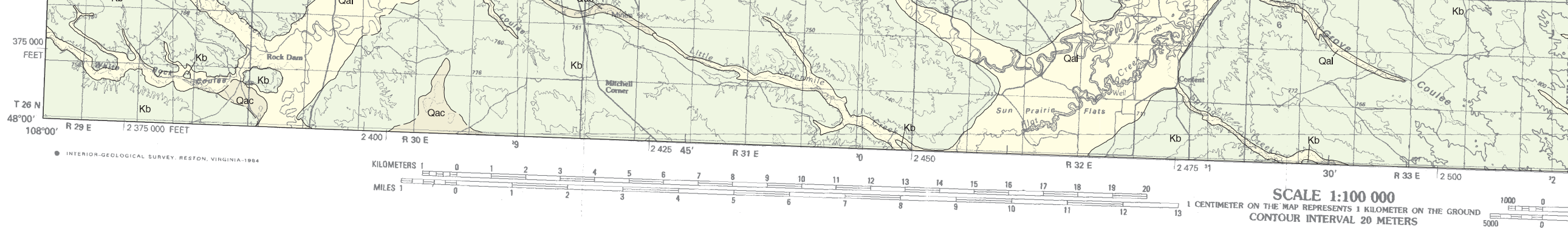


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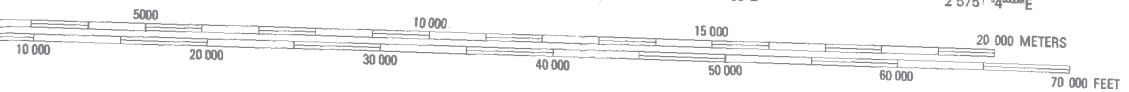
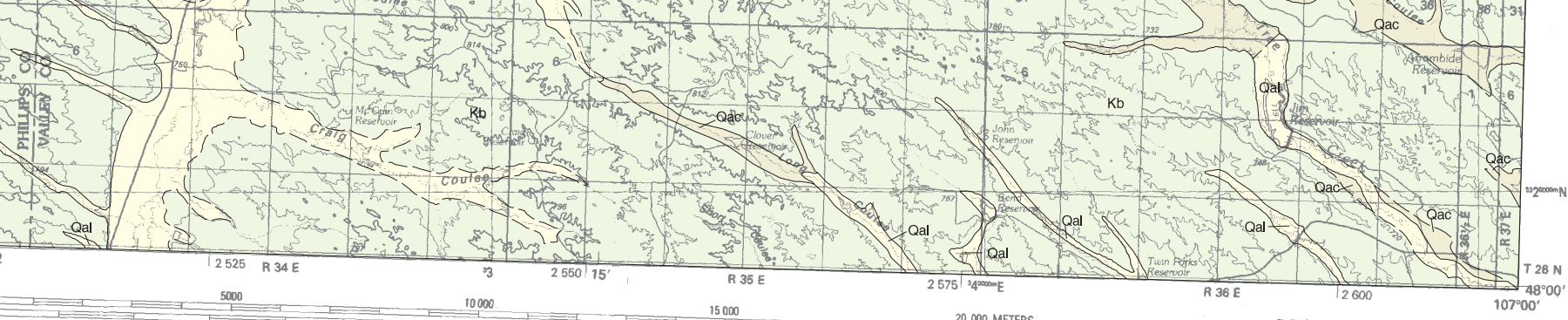
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# Geologic and Structure Contour Maps for the Malta 30' x 60' Quadrangle Northeastern Montana

Robert N. Bergantino

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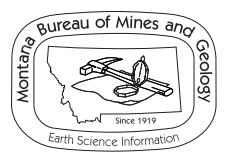
Partial support has been provided by the STATEMAP component of the National Co  
Mapping Program of the U.S. Geological Survey under Contract Number 98-HQ-AC



**MALTA, MONTANA**  
**48107-A1-TM-100**  
**1984**

**MAP UNITS**

Qac	Alluvium-colluvium
Qal	Alluvium of modern channels and floodplains
Qg	Glacial deposits, undivided
Qgi	Glacial ice-contact deposit
Qls	Landslide deposit
Tsg	Sand and gravel
Kb	Bearpaw Shale
Kjr	Judith River Formation
Kcl	Claggett Shale



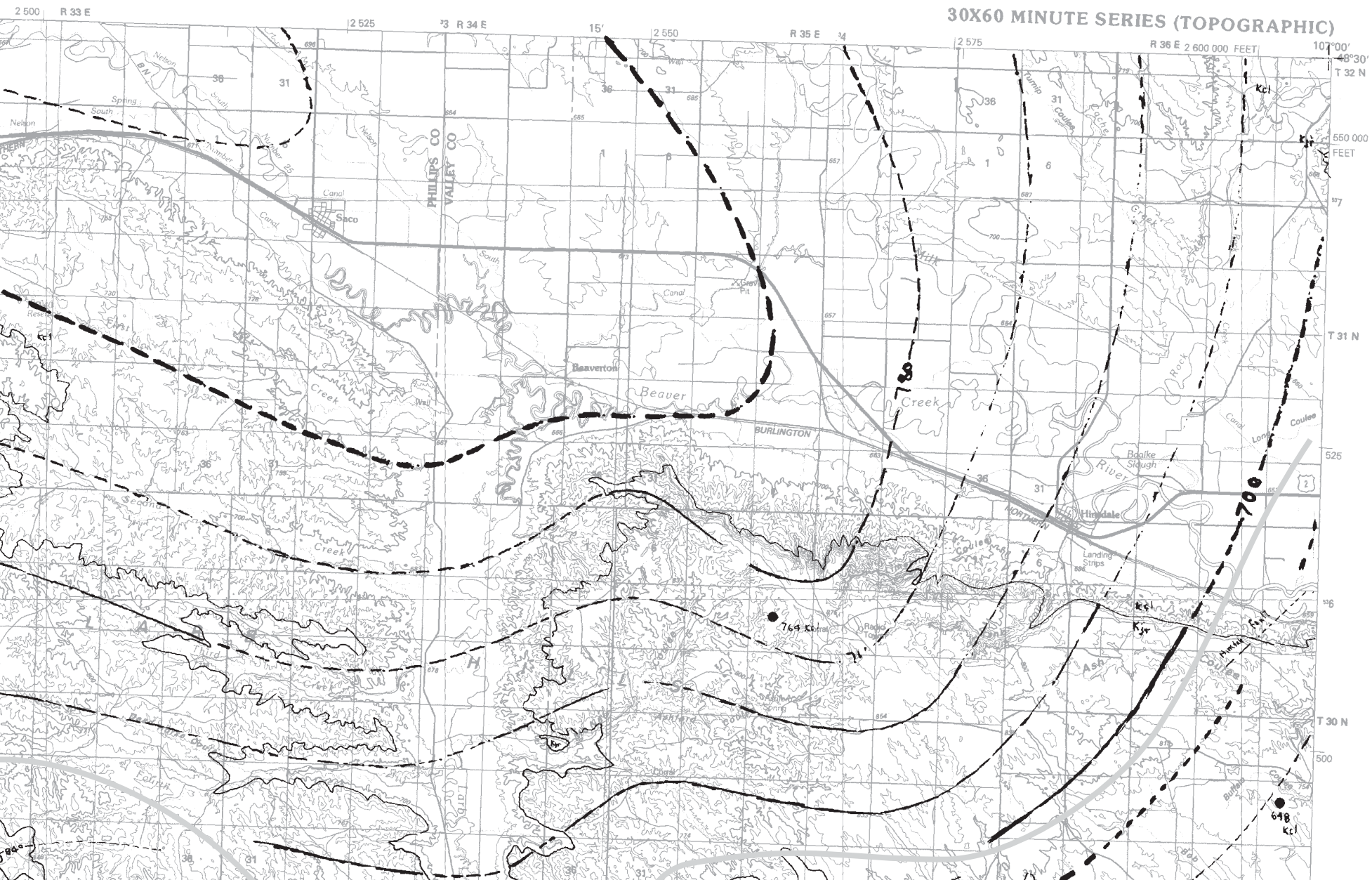
Maps may be obtained from  
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<http://www.mbm.mtech.edu>

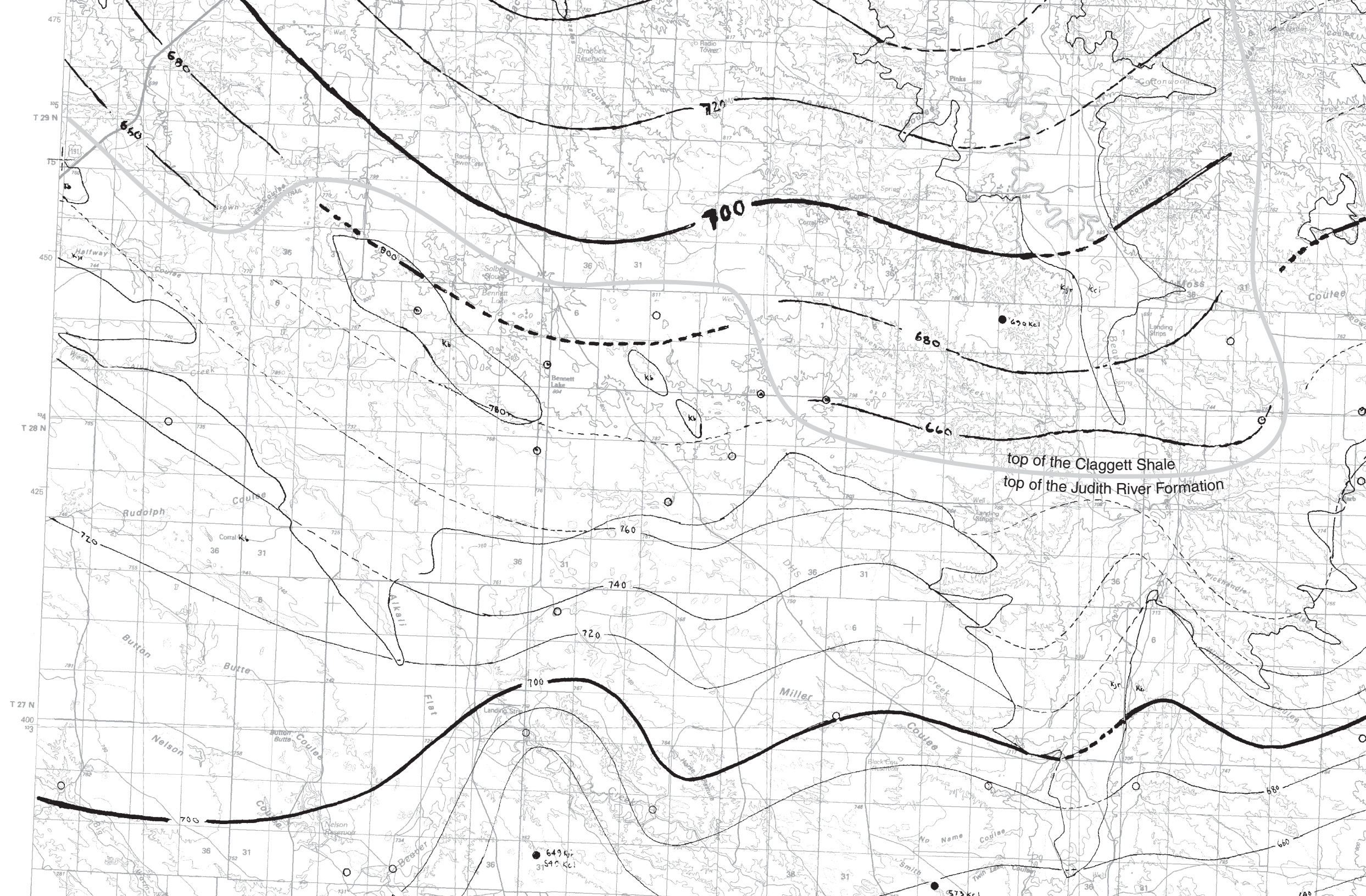
Open File MBMG 389, Plate 2 of 2  
Structure Contour Map, Malta 30'x60' Quadrangle





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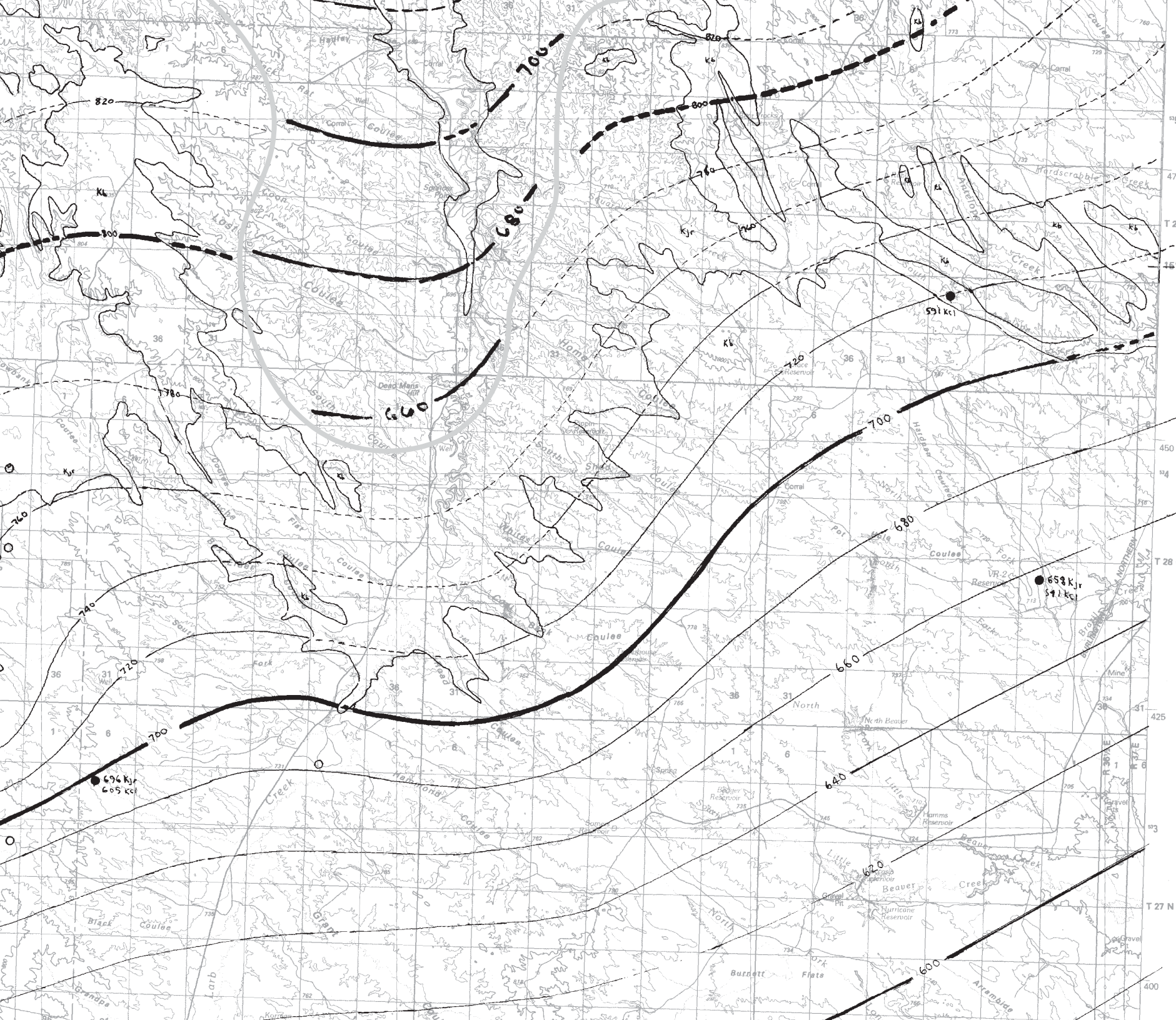


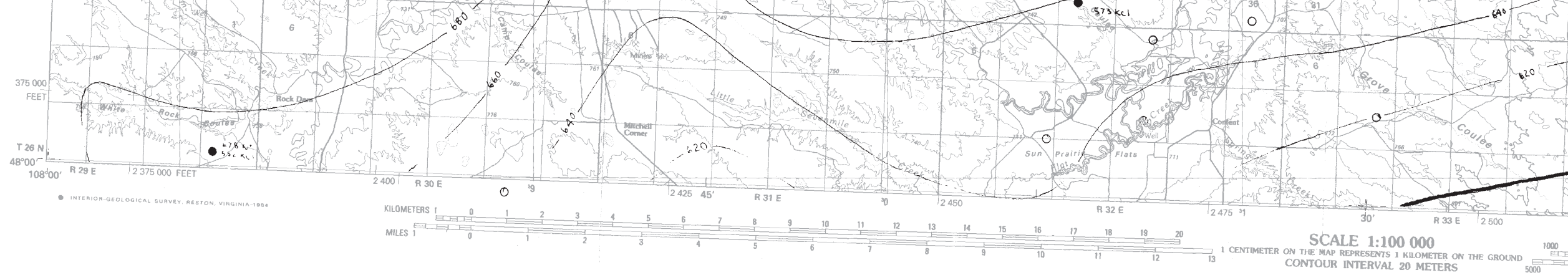


top of the Claggett Shale  
top of the Judith River Formation

649 Kc  
31 S4 C Kc

573 Kc








## LEGEND

- kb** Bearpaw Shale
- Kjr** Judith River Formation
- kc1** Claggett Shale
- water well, approximate data only, altitudes not given
- control well, Feltis and others 1981

Contour Interval: 20 meters

-  contours on top of the Judith River Formation
-  contours on top of the Claggett Shale
-  restored contours

Contours (in Meters)  
River Formation

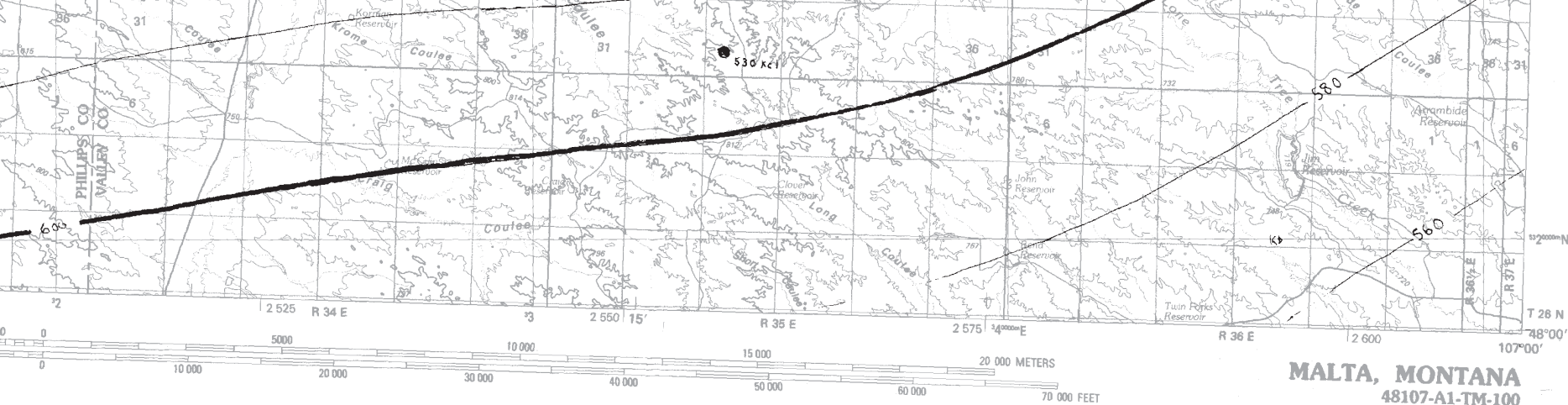
 division between the Judith River Formation and top of the Claggett Shale

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 1984

) on the Top of the Judith  
 n and Claggett Shale

between contours of the top of  
 n River Formation, below the line,  
 of the Claggett Shale, above the line

## SOURCES

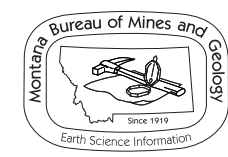
Feltis, R.D. and others, 1981, Selected geologic data from the northern Great Plains area of Montana: U.S. Geological Survey Open-file Report 81-415.

Additional contour information from:

Collier, A.J., 1917, The Bowdoin dome, U.S. Geological Survey Bulletin 661, p. 193-209, plate 9, map scale 1:375,000.

Erdmann, C.E. and Schwabrow, J.R., 1932, Structural contour map of the central part of the Bowdoin dome, [unpublished map]: U.S. Geological Survey, map scale 1:125,000

Osterkamp, W.R., 1968, Occurrence of ground water in the Judith River Formation, north central Montana: U.S. Geological Survey Hydrologic Investigations Atlas HA-306, map scale 1:250,000.



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