

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY



GEOPHYSICAL LOGS OF SIX COAL DRILL HOLES,
EAST MOUNTAIN AND NORTH HORN MOUNTAIN, UTAH

Chapter C of

Coal drilling during 1979 in Emery County, Utah

By

Thomas R. Abbay

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1979

This report has not been edited for conformity
with U.S. Geological Survey editorial standards
or stratigraphic nomenclature.

CONTENTS

	Page
Introduction-----	1
References-----	2

ILLUSTRATIONS

[Figures 5-10 in pocket]

Figure 1. Index map and generalized geologic sketch map of North Horn Mountain and part of East Mountain, Emery County, Utah, showing locations of drill holes-----	3
2a-2d. Topographic index maps showing locations of proposed and completed drill holes on North Horn Mountain, Emery County, Utah-----	4-7
3. Topographic index map showing locations of drill holes on the "Cottonwood" parcel on East Mountain, Emery County, Utah-----	8
4. Topographic index map showing the location of the completed drill hole on the "Meetinghouse Canyon" parcel on East Mountain, Emery County, Utah-----	9
5-10. Geophysical logs:	
5. Drill-hole MC-45-MP	
6. Drill-hole MC-47-MP	
7. Drill-hole MC-48-MP	
8. Drill-hole MC-57B-TC	
9. Drill-hole MC-58-TC	
10. Drill-hole MC-59-MP	

TABLE

Table 1. Drilling and logging depths and estimated collar elevations for six drill holes on East Mountain and North Horn Mountain, Emery County, Utah-----	2
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COAL DRILLING DURING 1979 IN EMERY COUNTY, UTAH

GEOPHYSICAL LOGS OF SIX COAL DRILL HOLES, EAST MOUNTAIN AND NORTH HORN MOUNTAIN, UTAH

By Thomas R. Abbay

INTRODUCTION

This is the third in a series of reports on the 1979 coal drilling program on North Horn Mountain and East Mountain, Emery County, Utah. Most of the drilling program is within the Wasatch Plateau Known Recoverable Coal Resource Area (KRCRA). The purpose of the program is to evaluate coal resources under three parcels of land which are being considered for possible exchange, as authorized by Public Law 95-554 of 1978, between the Federal government and Utah Power and Light Company. The lands are identified as "North Horn Mountain," "Cottonwood," and "Meetinghouse Canyon" (figs. 1-4).

Tertiary and Cretaceous sedimentary rocks are present in the vicinity of the three tracts (fig. 1). The coal seams of economic interest, Blind Canyon and Hiawatha, are contained in the lower one-third of the Cretaceous Blackhawk Formation. In the drilling area, the strata dip 3°-5° west or northwest. The geology and coal resources of the area were described in Spieker (1931) and Doelling (1972). Geophysical logs of holes drilled previously on North Horn Mountain were presented in a report by Blanchard, Ellis, and Roberts (1977).

Most of the bore holes in the program were rotary drilled and the thicknesses of the coal seams were determined from the geophysical logs. In order to obtain data on the quality of the coal, the coal-bearing section in selected holes was core drilled. When the program is completed, approximately one hole in four will have been cored.

The geophysical logs are being released in order of completion and, therefore, are not necessarily in numerical sequence. This report presents the

logs of drill holes MC-45-MP, MC-47-MP, MC-48-MP, MC-57B-TC, MC-58-TC, and MC-59-MP. Chapter A presented the logs for drill-holes MC-56A-TC, MC-57A-TC, and W-CD-2, and Chapter B presented the logs for drill-holes MC-35-TC, MC-49-MP, MC-50-MP, MC-51A-TC, MC-53-TC, MC-55A-TC, and MC-63-TC.

Table 1.--Drilling and logging depths and estimated collar elevations for six drill holes on East Mountain and North Horn Mountain, Emery County, Utah

[All drill holes penetrated all coal seams and were bottomed in the Star Point Sandstone]

Drill-hole No.	Location			Estimated collar elevation (feet)	Drilling depths (feet)		Logging depth (feet)	
	Sec.	T.S.	R.E.		Rotary	Core		
MC-45-MP	SW $\frac{1}{4}$ SE $\frac{1}{4}$	29	17	7	9,400	1,901	-	1,901
MC-47-MP	NW $\frac{1}{4}$ NW $\frac{1}{4}$	33	17	7	9,320	1,743	-	1,743
MC-48-MP	NE $\frac{1}{4}$ SW $\frac{1}{4}$	3	17	7	7,600	152	152-359	359
MC-57B-TC	NE $\frac{1}{4}$ NW $\frac{1}{4}$	30	18	7	8,260	1,175	-	1,153
MC-58-TC	SE $\frac{1}{4}$ NW $\frac{1}{4}$	24	18	6	8,100	1,340	-	1,337
MC-59-MP	NW $\frac{1}{4}$ SW $\frac{1}{4}$	13	18	6	8,040	1,464	-	1,464

REFERENCES

- Blanchard, L. F., Ellis, E. G., and Roberts, J. V., 1977, Lithologic and geophysical logs of holes drilled in the Wasatch Plateau Known Recoverable Coal Resource Area, Carbon, Emery, and Sevier Counties, Utah: U.S. Geological Survey Open-File Report 77-133, 324 p., 32 figs., 2 tables.
- Doelling, H. H., Central Utah coal fields; Sevier-Sanpete, Wasatch Plateau, Book Cliffs, and Emery: Utah Geological and Mineralogical Survey Monograph Series, no. 3, p. 1-496.
- Spieker, E. M., 1931, The Wasatch Plateau coal field, Utah: U.S. Geological Survey Bulletin 819, 219 p.

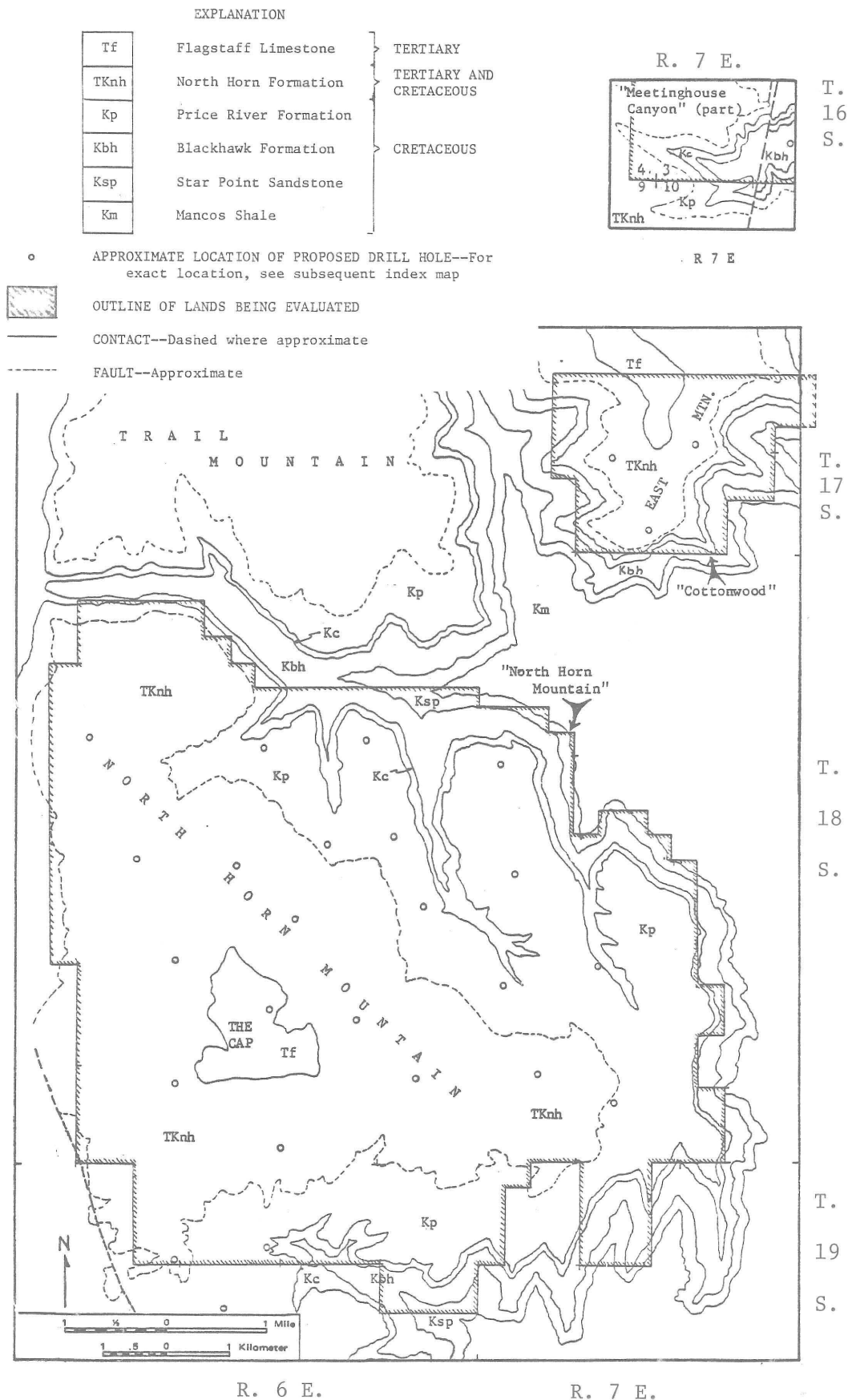
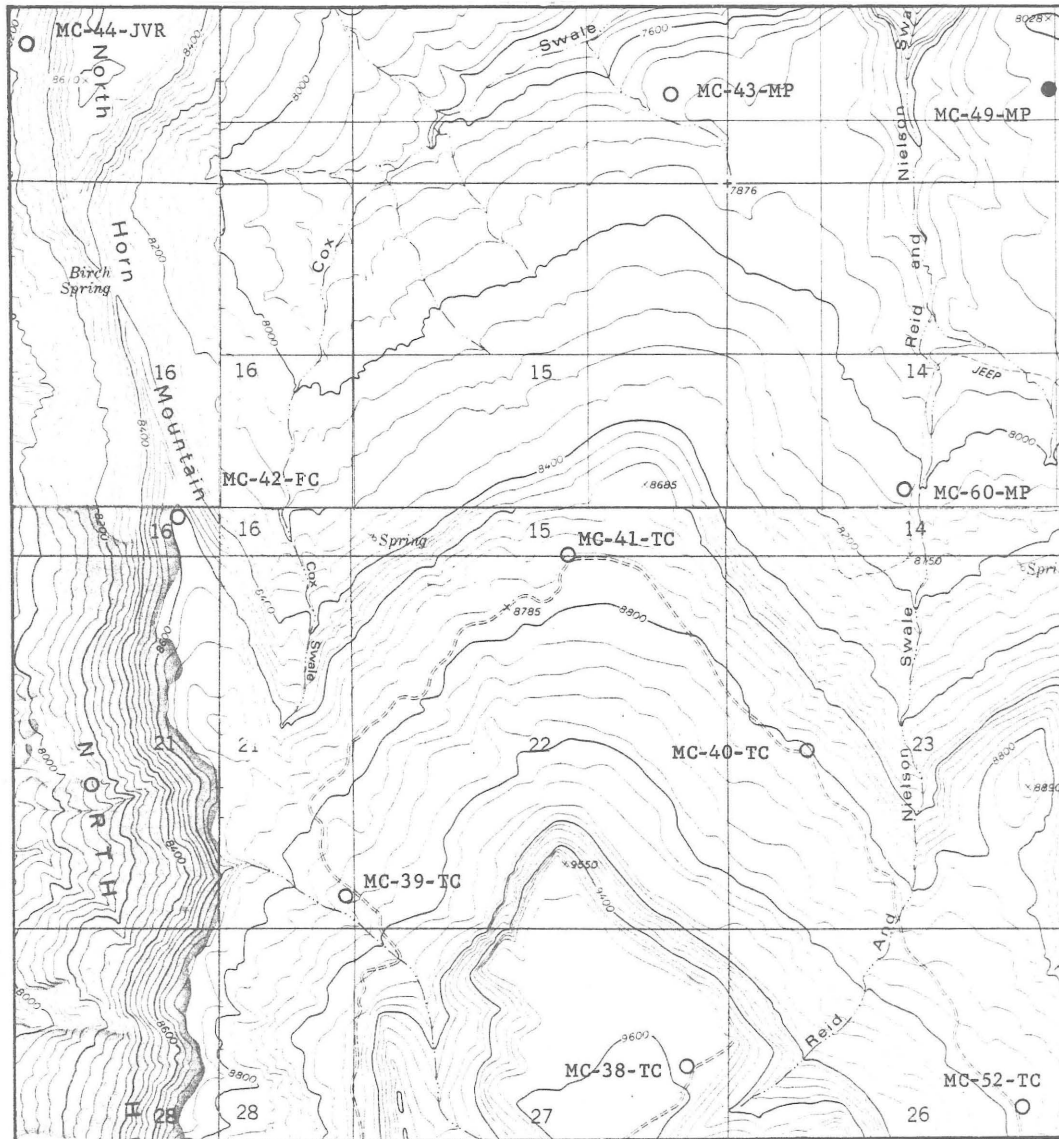
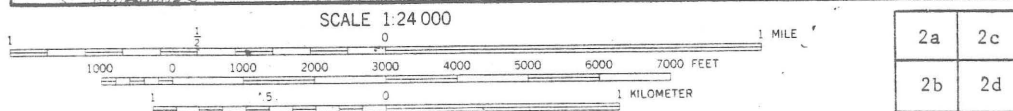


Figure 1.--Index map and generalized geologic sketch map of North Horn Mountain and part of East Mountain, Emery County, Utah, showing approximate locations of drill holes.

R. 6 E.



T.
18
S.

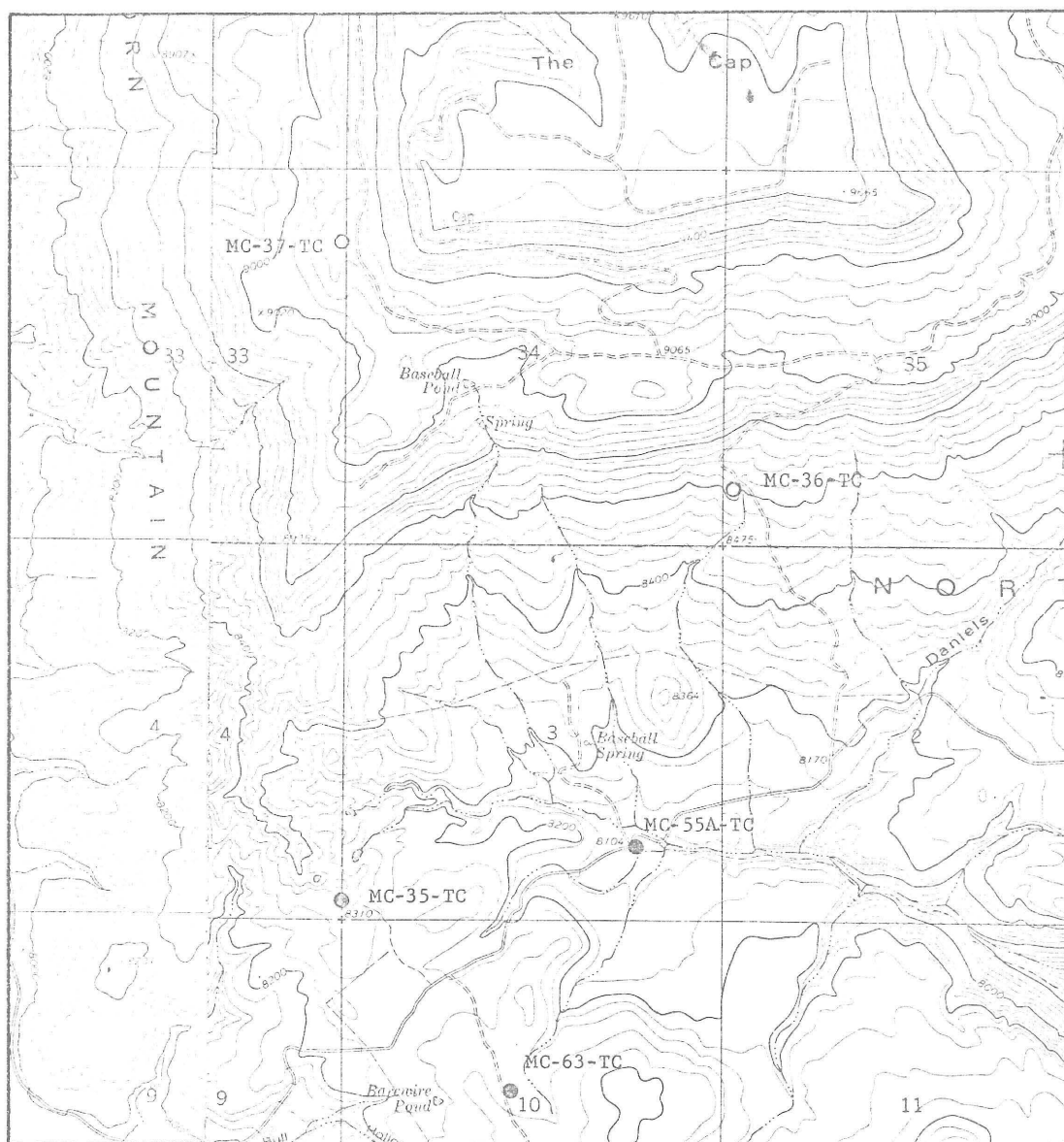


SCALE 1:24 000
CONTOUR INTERVAL 40 FT. (80 FT N1/2)

Figure 2a. Index map showing drill-hole locations, North Horn Mountain, Emery County, Utah.

○ proposed location ● completed drill hole

R. 6 E.



T.
18
S.

T.
19
S.



CONTOUR INTERVAL 40 FT.

2a	2c
2b	2d

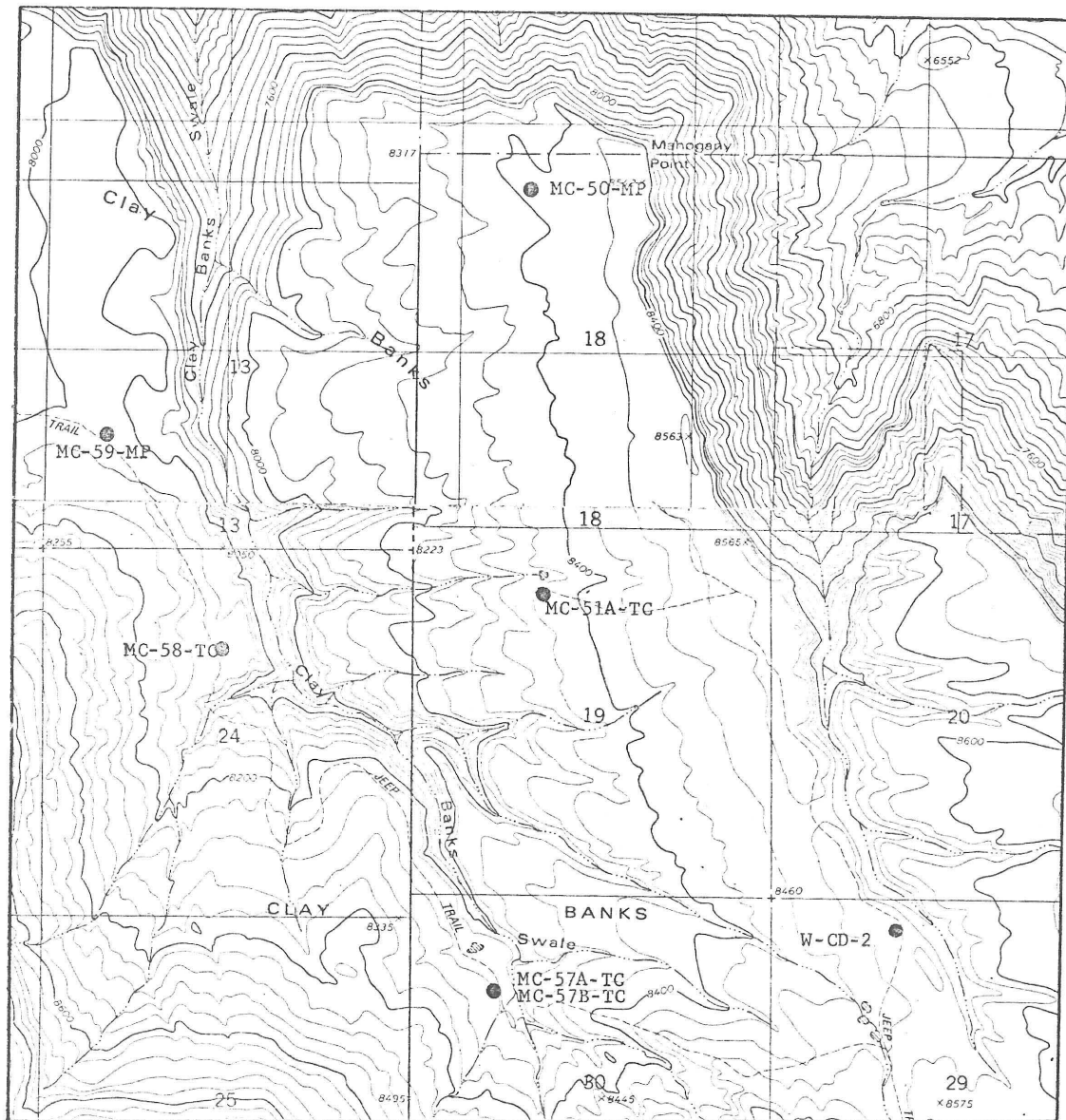
Figure 2b. Index map showing locations of drill holes, North Horn Mountain, Emery County, Utah.

○ proposed location

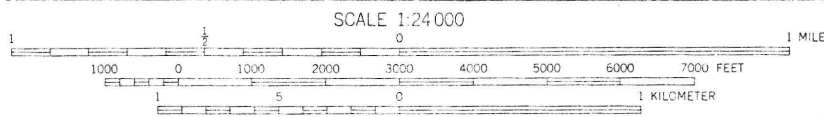
● completed drill hole

R. 6 E.

R. 7 E.



T.
18
S.



CONTOUR INTERVAL 40 FT (80 FT N1/2)

2a	2c
2b	2d

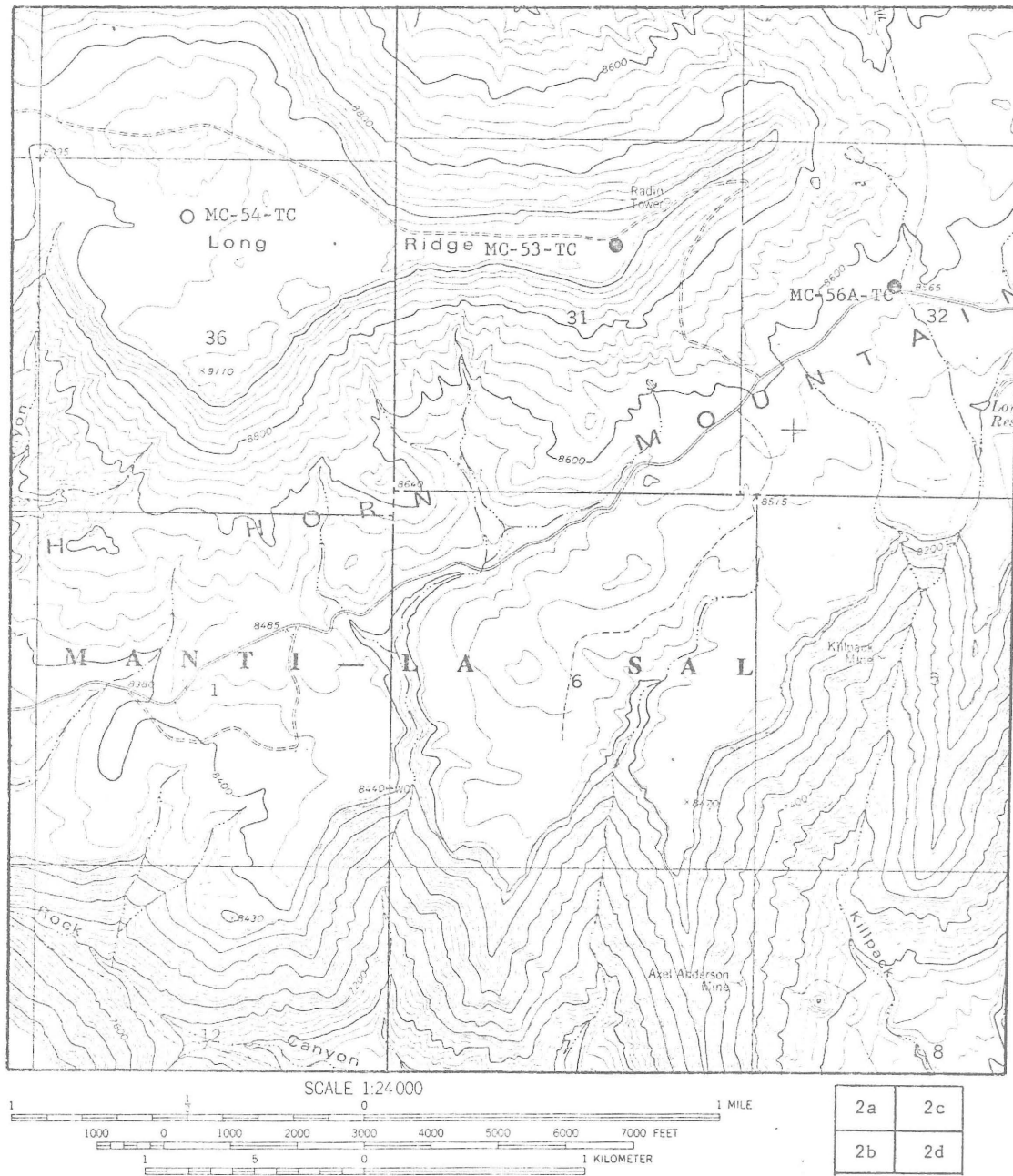
Figure 2c. Index map showing locations of drill holes, North Horn Mountain, Emery County, Utah.

○ proposed location

● completed drill hole

R. 6 E.

R. 7 E.



T.
18
S.

T.
19
S.

Figure 2d. Index map showing locations of drill holes, North Horn Mountain, Emery County, Utah.

○ proposed location

● completed drill hole

R. 7 E.

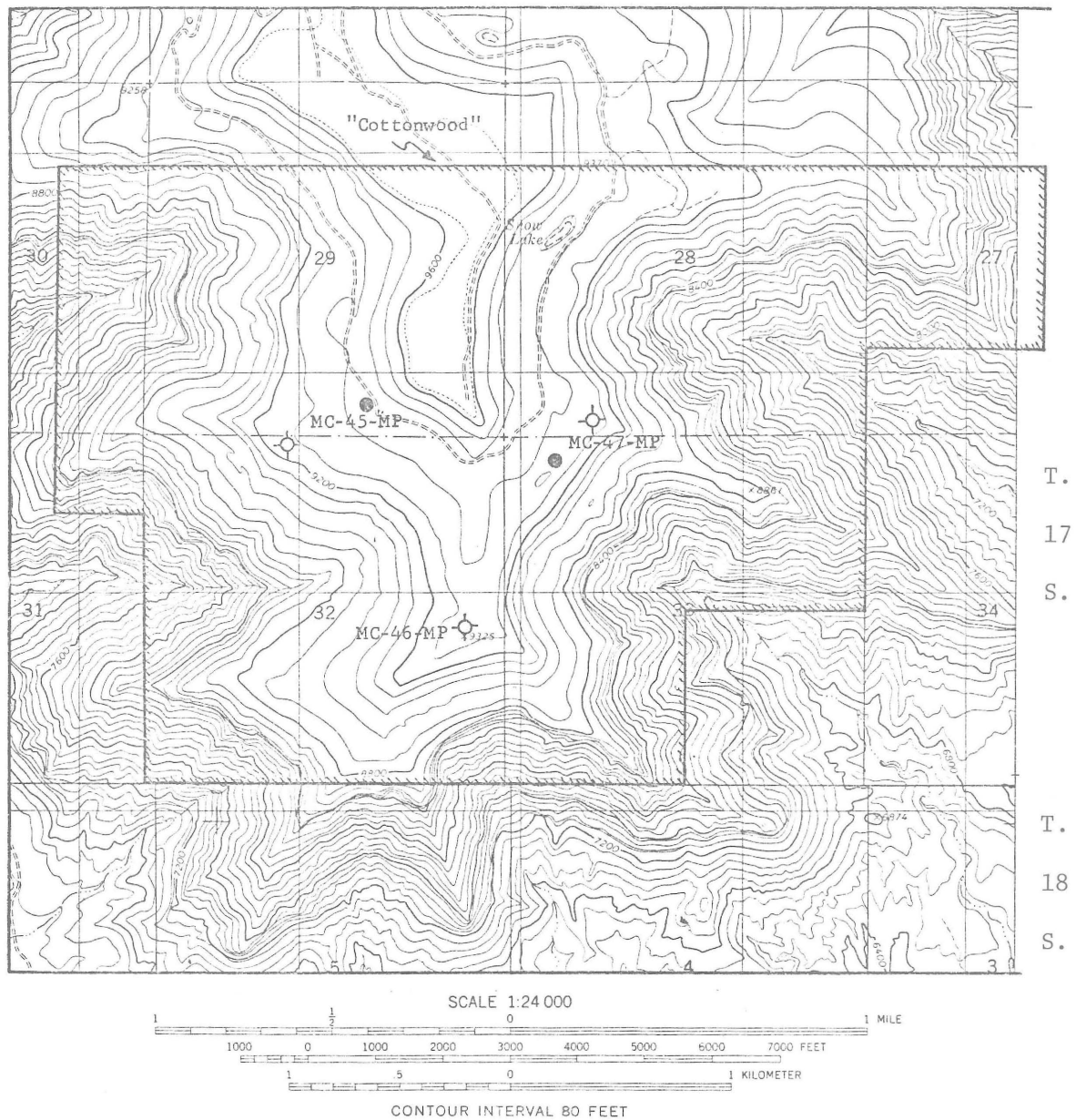


Figure 3. Index map showing locations of drill holes on the "Cottonwood" parcel on East Mountain, Emery Co., Utah.



proposed location shown in
Chapter A



location of completed
drill hole

R. 7 E.

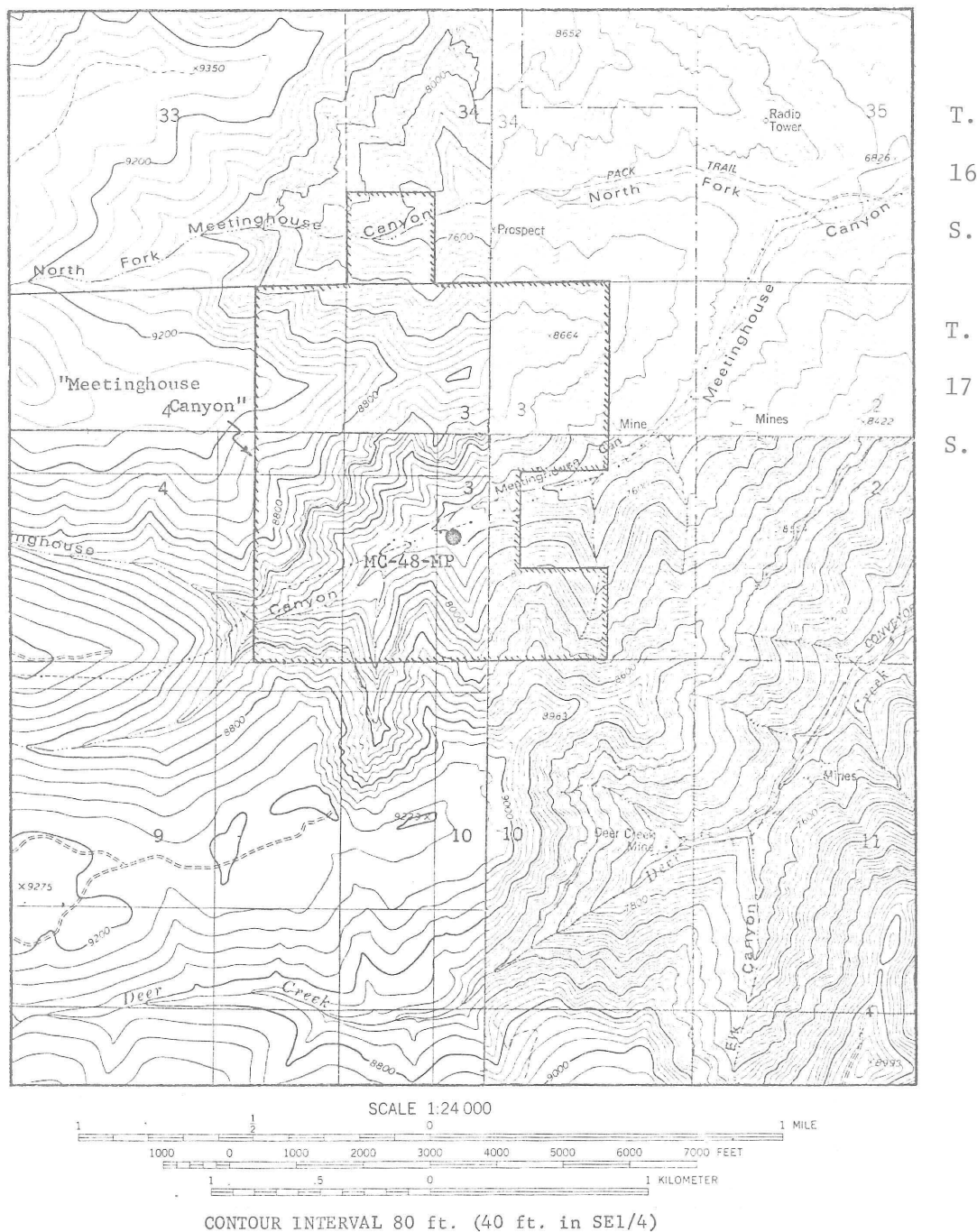


Figure 4. Index map showing the location of the completed drill hole on the "Meetinghouse Canyon" parcel on East Mountain, Emery Co., Utah.