

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GEOPHYSICAL LOGS AND COAL SECTIONS FOR FOUR HOLES DRILLED IN THE
EMERY EAST QUADRANGLE, EMERY COUNTY, UTAH

By

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

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INTRODUCTION

Four holes, for a total of 2,330 feet, were drilled in the Emery coal field, Utah, in April 1980 by the U.S. Geological Survey (fig. 1). Two of the holes were partially cored. The purpose of the drilling was to obtain information on the thickness, quality, and extent of the coal in the Cretaceous Ferron Sandstone Member of the Mancos Shale, and on the lithology of the surrounding rocks. Core samples were obtained to be used for coal quality and trace element analyses. The project is in support of the U.S. Geological Survey's continuing program to evaluate and classify Federal coal resources and lands in the public domain.

The holes were drilled in the Emery East quadrangle, Emery County, Utah, using the U.S. Geological Survey's truck-mounted rotary drilling and coring rigs. Drilling media were air and injected water for the rotary drilling and injected water for the coring. Permission to drill was granted by officials of the U.S. Bureau of Land Management, Price, Utah.

Drill hole EN-1 was logged by Strata Surveys, Grand Junction, Colorado. all other holes were logged by Minerals Service Company, Corpus Christi, Texas (table 1). Gamma-ray, density, caliper, resistance, and digital logs were run for all holes except EN-1, for which only gamma-ray, density, and resistance logs were run. Detail gamma-ray and density logs were run on all drill holes, and core samples were taken from drill holes Q12 and EN-3.

Coal sections of the two major coal zones, the C and J beds (Lupton, 1916), are shown in figures 2 and 3. The C bed was cored at site Q12A by drilling a second hole 23.5 feet from Q12 on a bearing of N. 75° E. The J bed was cored at site EN-3.

Copies of the geophysical logs are presented as figures 4-13.

All measurements are in feet; to convert to meters, multiply by 0.3048.

REFERENCE

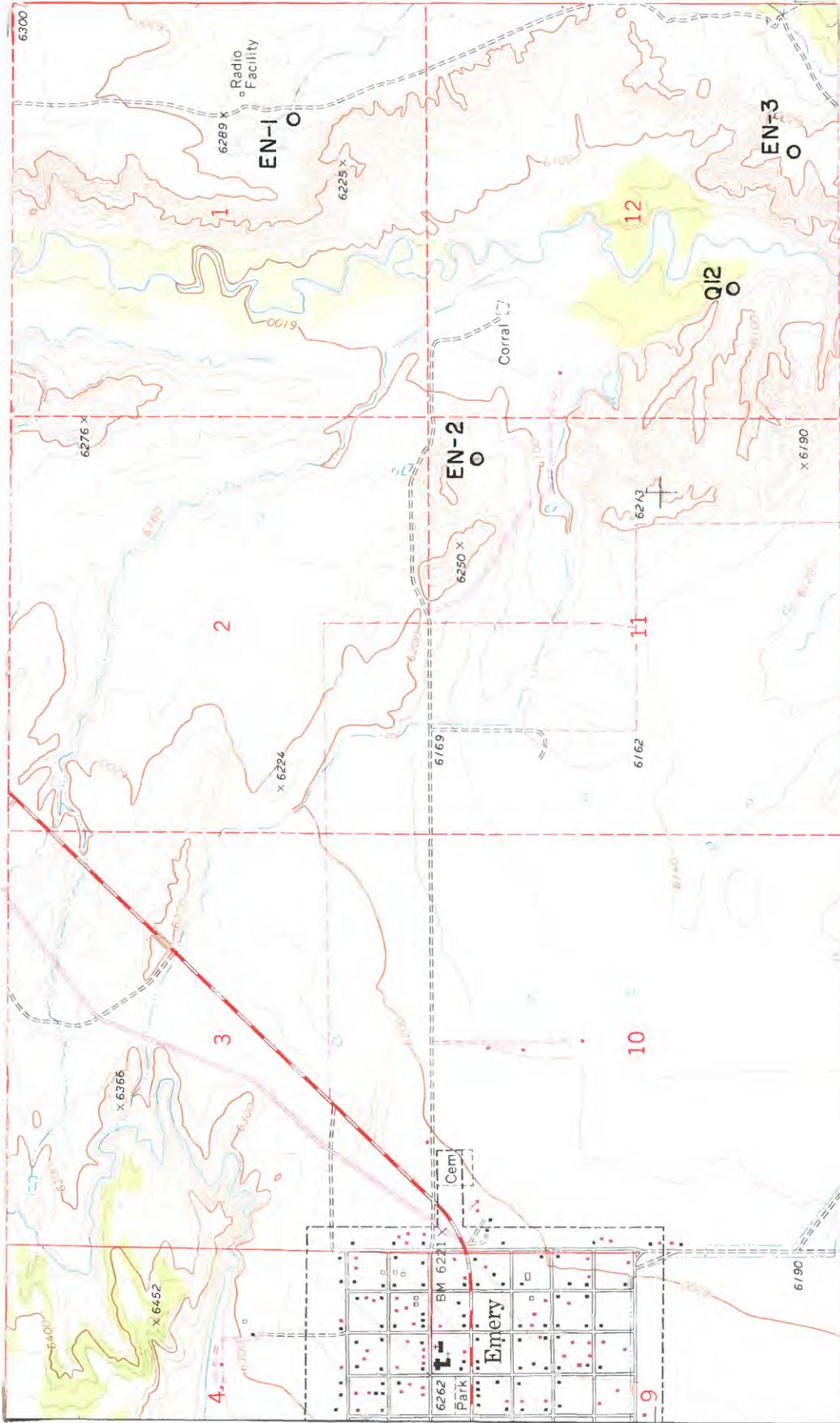
Lupton, C. T., 1916, Geology and coal resources of Castle Valley in Carbon, Emery, and Sevier Counties, Utah: U.S. Geological Survey Bulletin 628, 88 p.

Table 1.--Summary of information for four holes drilled in the Emery coal field, Emery East quadrangle, Emery County, Utah

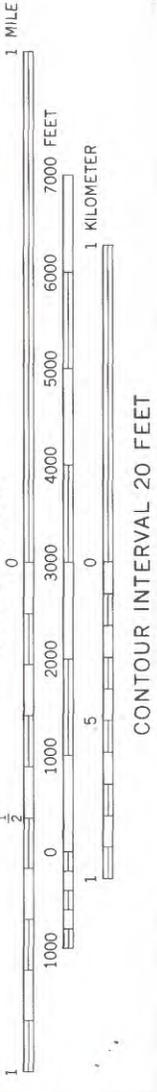
Drill hole No.	Total depth drilled (feet)	Total depth logged (feet)	Interval cored (feet)	Detail log intervals ¹ (feet)	Digital log intervals ¹ (feet)
EN-1	695	692	-----	370-400 600-660	-----
EN-2	795	793	-----	355-385 590-635	355-394 590-644
Q12	465	462	266-291.5	30- 60 270-300	30- 69 270-309
EN-3	375	373	100-121.5	100-125 305-345	100-134 305-354

¹Applies only to gamma-ray and density logs.

R. 6 E.



SCALE 1:24 000



T. 22 S.

Figure 1.--Drill-hole locations in the Emery coal field, Emery East quadrangle, Utah.

T. 22 S., R. 6 E.

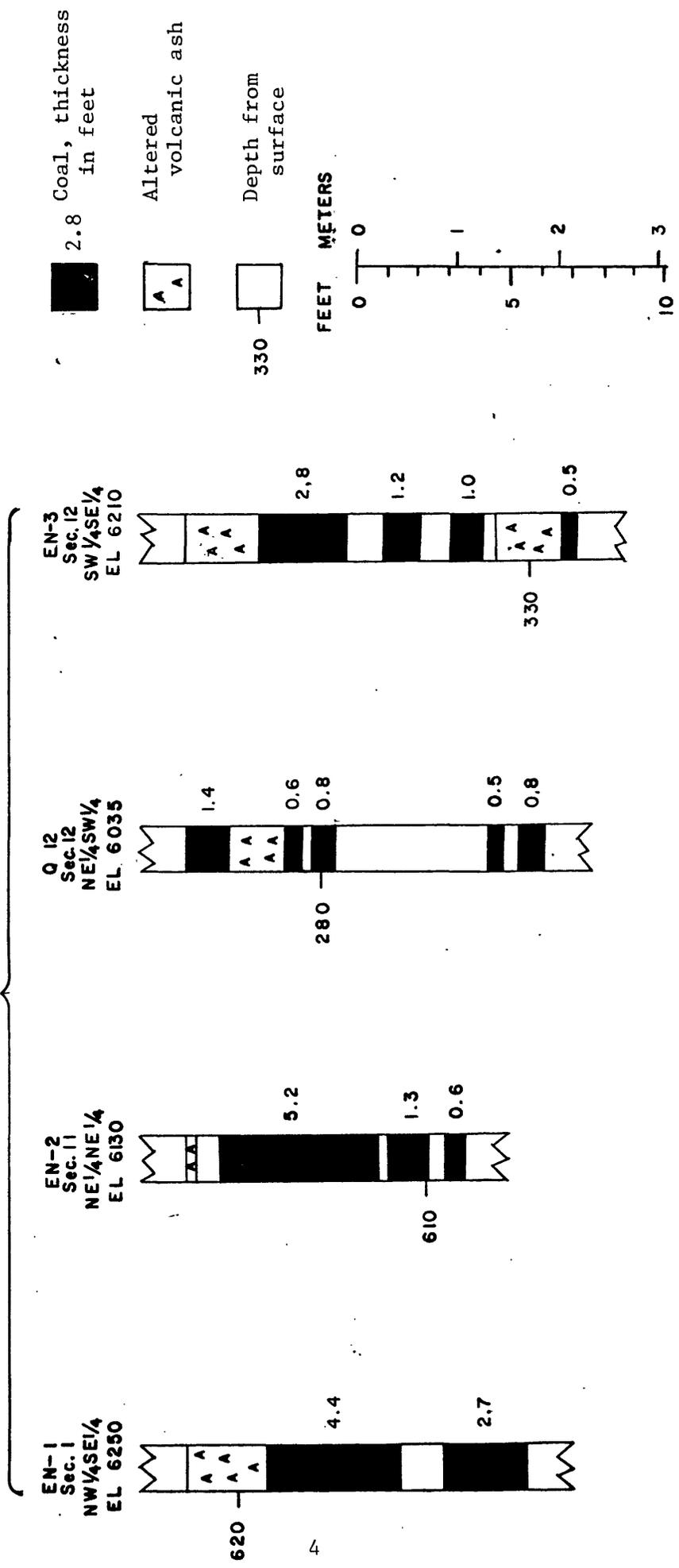


Figure 2.--Coal sections of the C bed (Lupton, 1916) of four holes drilled in the Emery coal field, Emery East quadrangle, Emery County, Utah.

T. 22 S., R. 6 E.

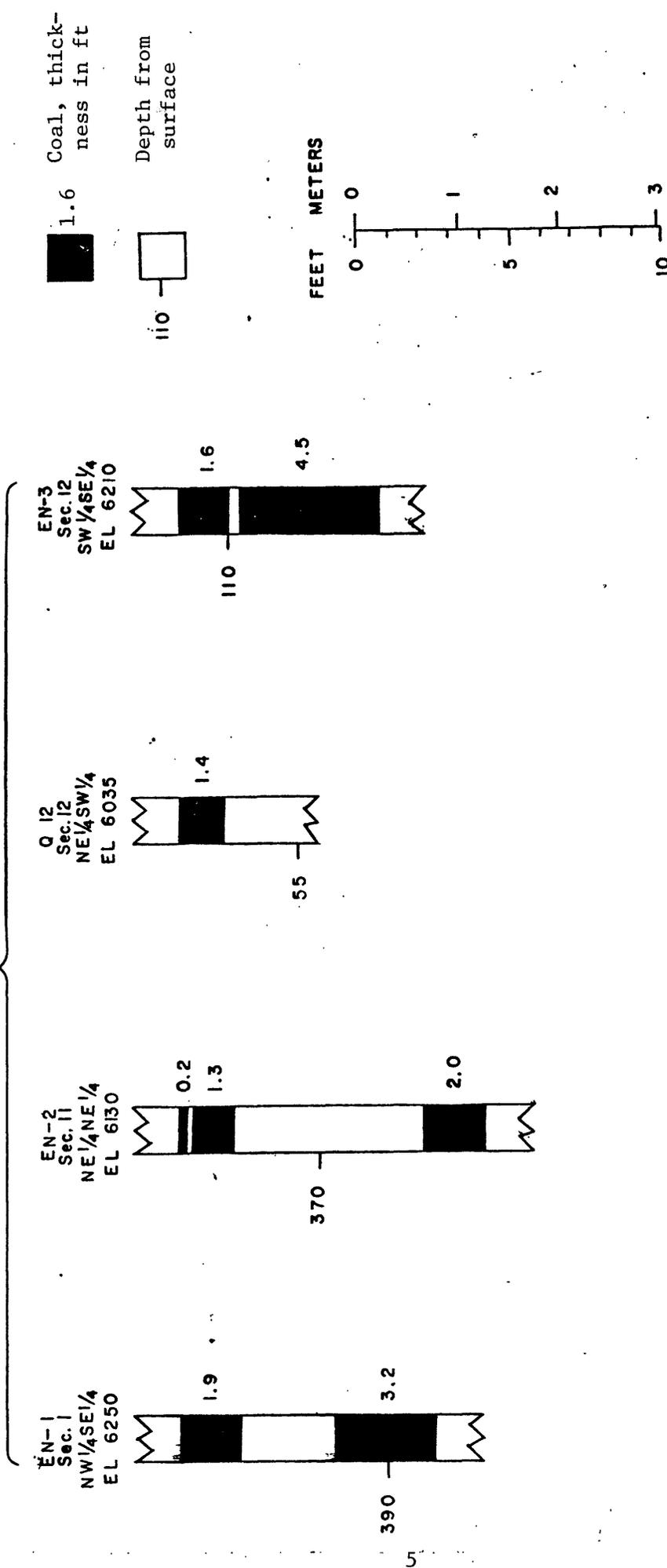


Figure 3.--Coal sections of the J bed (Lupton, 1916) of four holes drilled in the Emery coal field, Emery East quadrangle, Emery County, Utah.