

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GEOPHYSICAL LOGS OF 15 COAL TEST HOLES DRILLED IN THE
KEMMERER COAL FIELD, UINTA COUNTY, WYOMING

By
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Open-File Report 78- 658

1978

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

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INTRODUCTION

During the summer of 1977, the U.S. Geological Survey drilled 15 coal test holes on Federal lands in the Kemmerer coal field, Uinta County, Wyoming (Tps. 16 and 17 N., Rs. 117 and 118 W.). The purpose of this project was to obtain information on the thickness and lateral extent of coal beds for the classification and evaluation of federally owned coal lands. The holes were drilled by two U.S. Geological Survey crews using truck-mounted drilling rigs. Drilling fluids were air, air-water-biodegradable foam, and mud. Cuttings were sampled and logged in the field for some of the holes to help determine the depth and thickness of the coal beds. Hole locations are shown in figures 1-4.

The holes were geophysically logged by U.S. Geological Survey personnel. Logs include natural gamma, gamma-gamma density, neutron, and sometimes caliper. Many holes tended to close soon after being drilled, making it necessary to run the nuclear logs through the drill pipe. These logs are attenuated and spikes occur at pipe joints on the density logs.

All coal beds are in the Upper Cretaceous Adaville Formation and are shown on a strip log adjacent to the geophysical logs. This strip log, at a reduced scale of 1 inch to 50 feet, represents the best information available on the thickness and depth of the coal beds, based on drill-

hole cuttings and geophysical logs. However, because of the poor quality of some of the logs, incomplete sample data from some drill holes, and the variable nature of many of the coal beds, some thickness and depth information contained in this report may not be accurate.

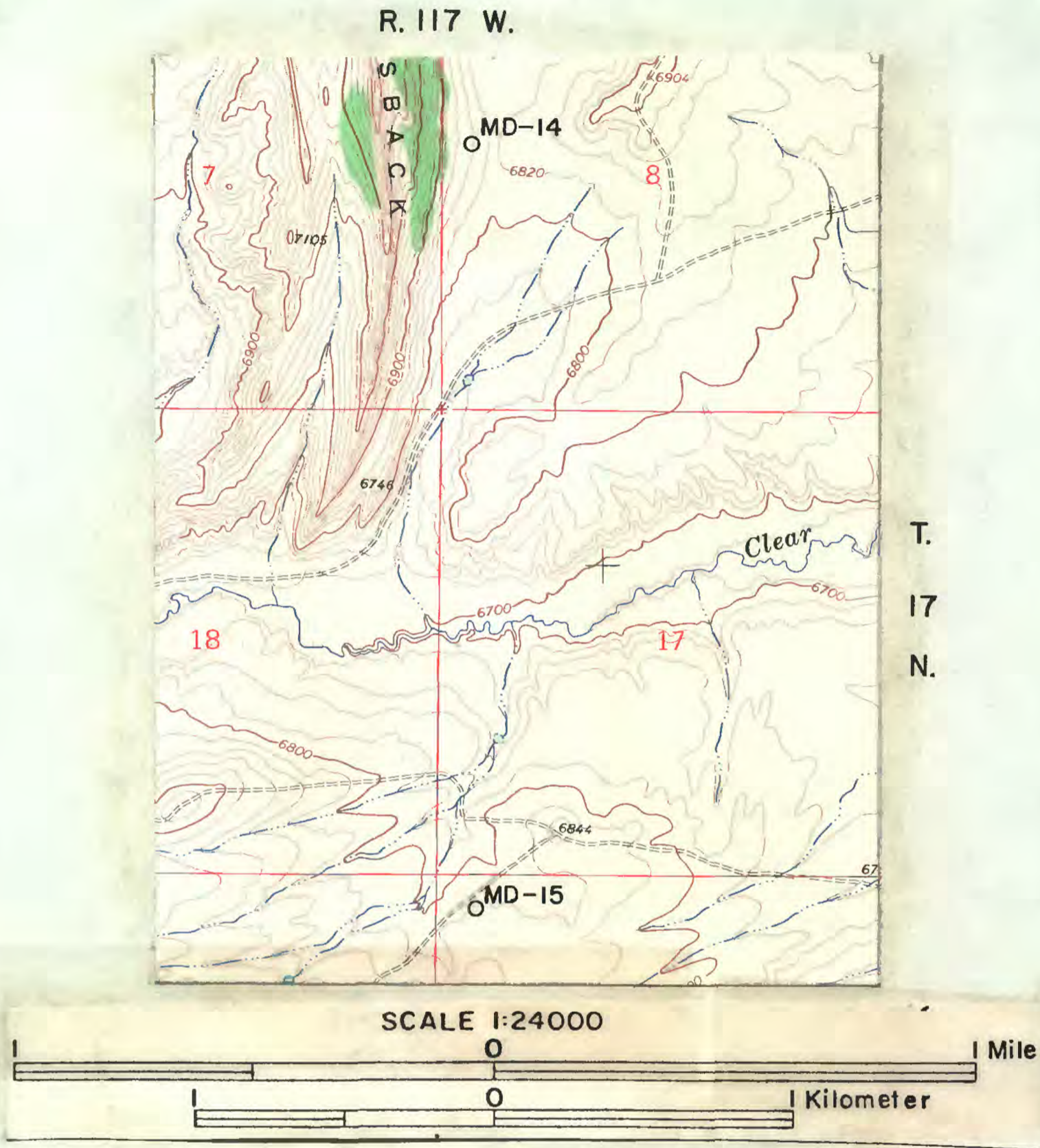
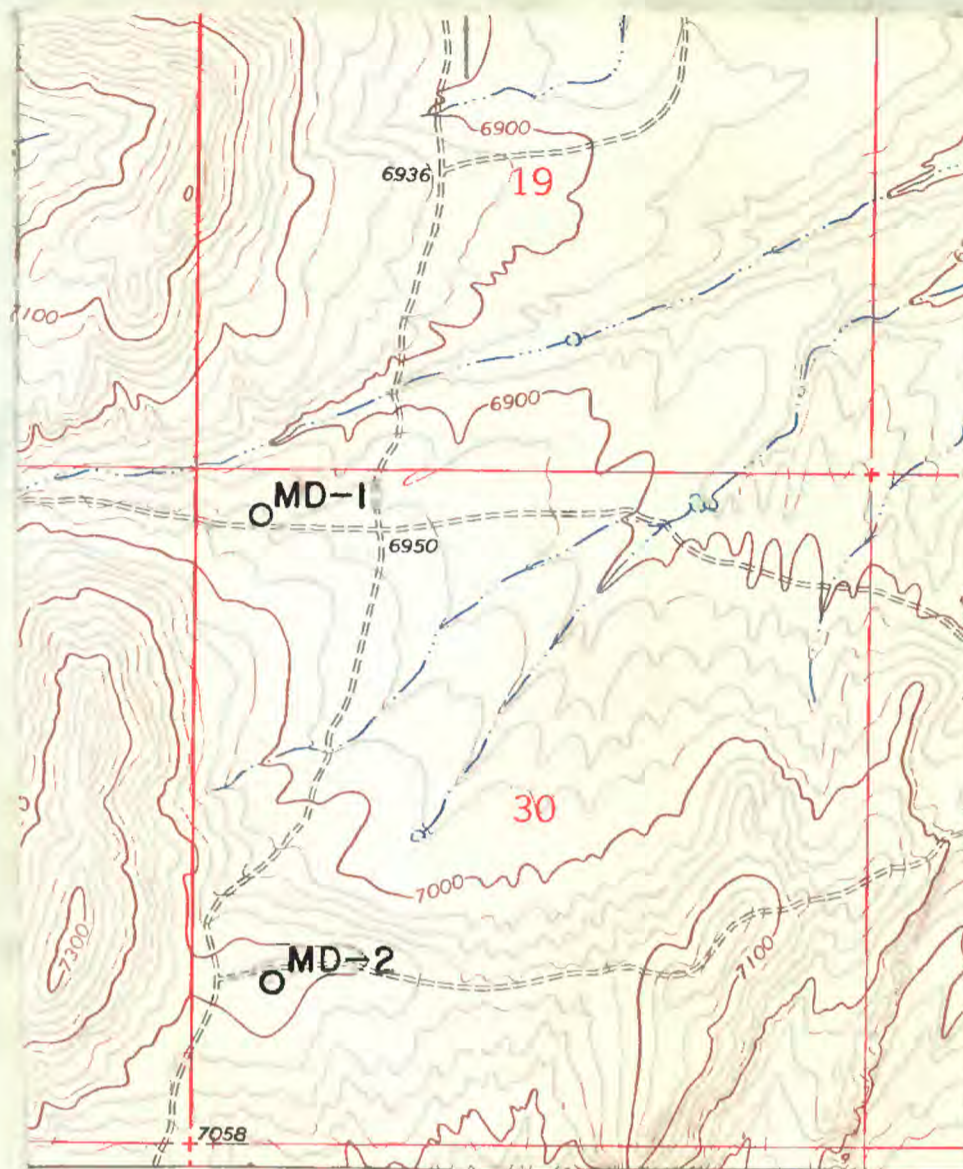


Figure 1.--Drill-hole locations in the north-central part of the Meadow Draw quadrangle, Uinta County, Wyo.

R. 118 W.

R. 117 W.



T.
17
N.

SCALE 1:24000

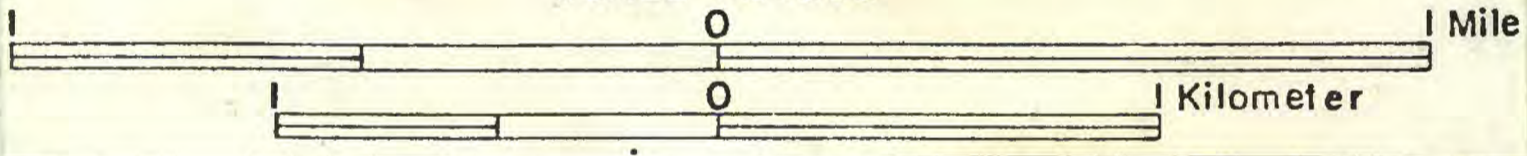


Figure 2.--Drill-hole locations in the central part of the Meadow Draw quadrangle, Uinta County, Wyo.



Figure 3.--Drill-hole locations in the south-central part of the Meadow Draw quadrangle, Uinta County, Wyo.

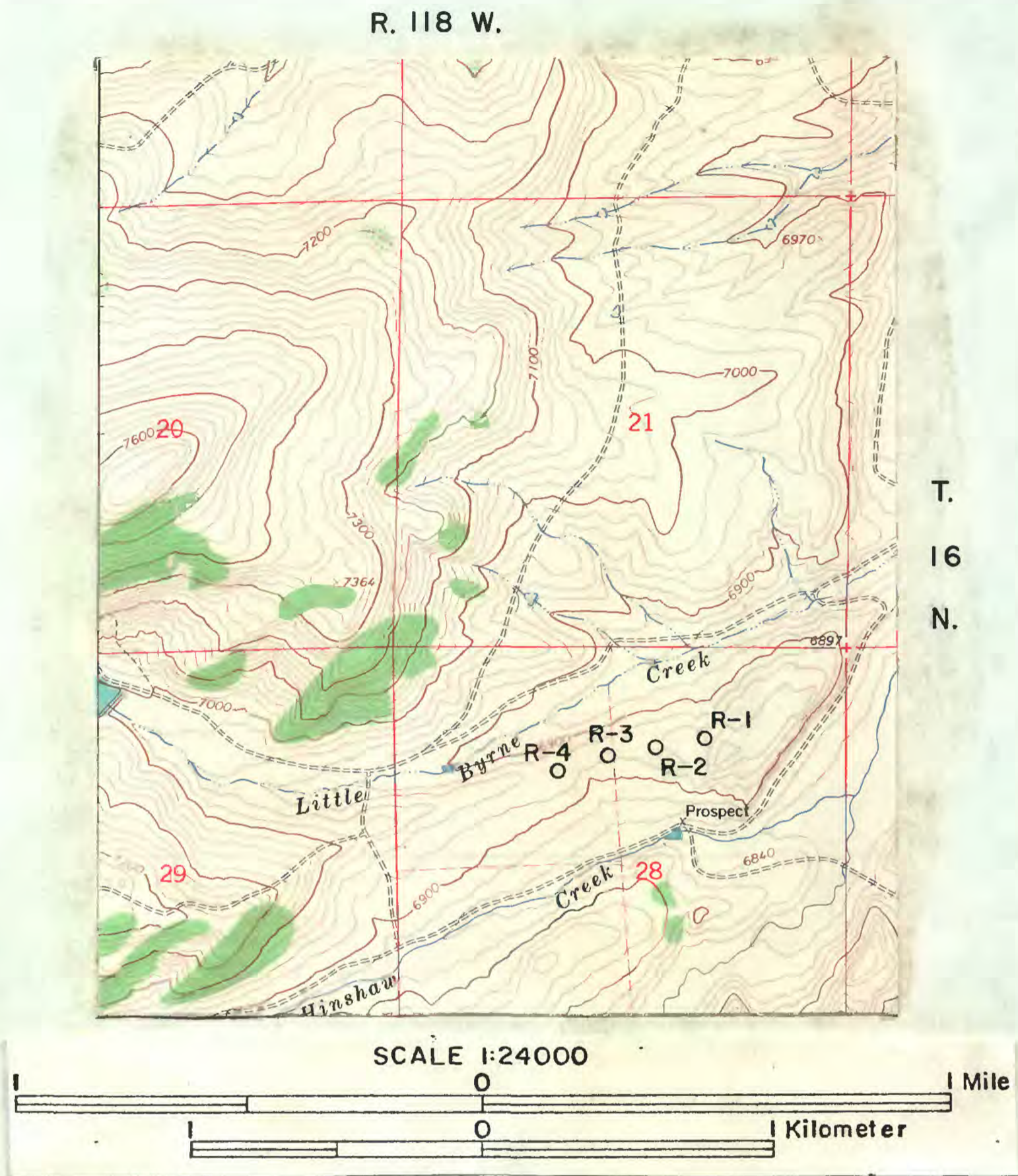
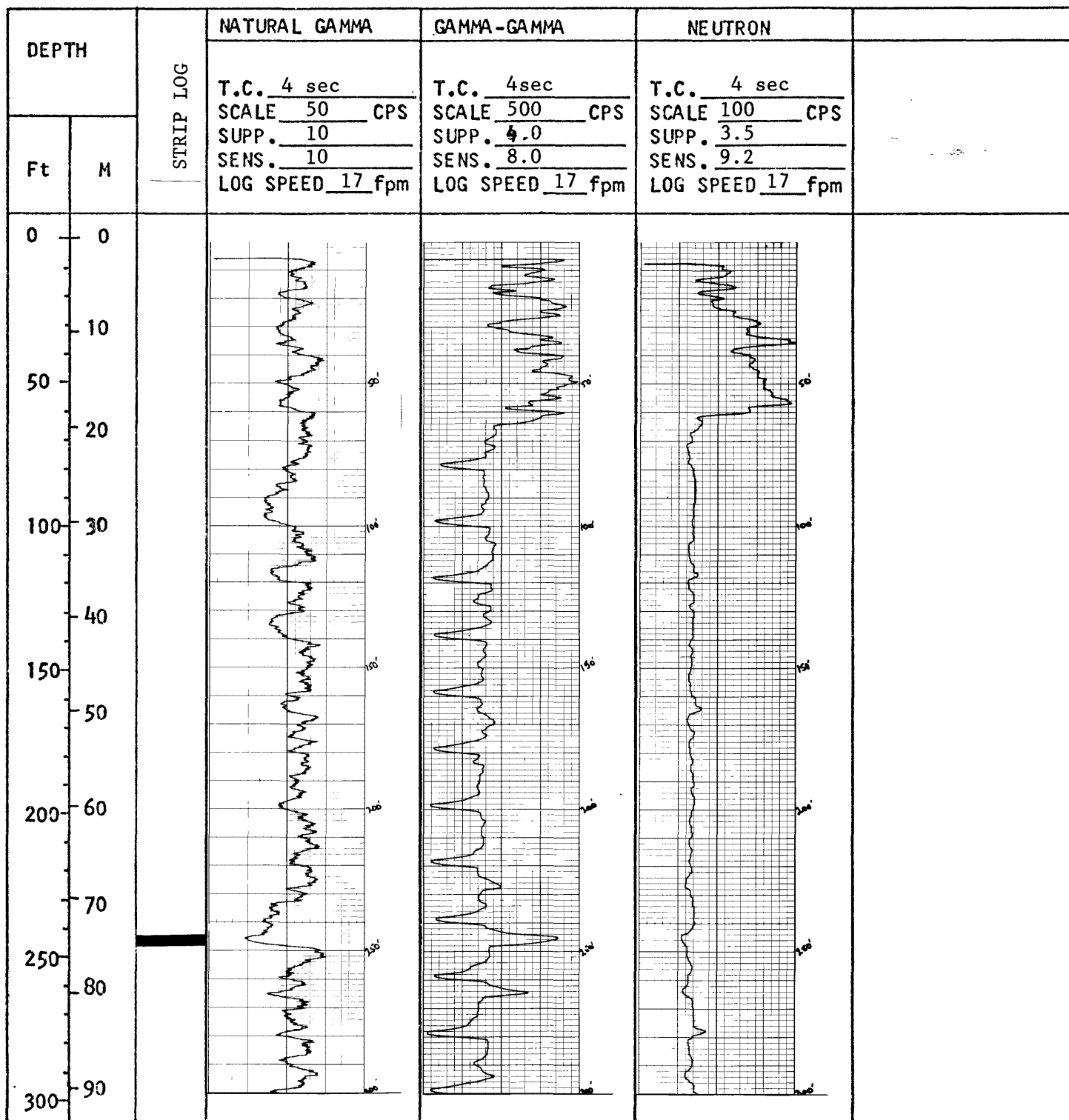


Figure 4.--Drill-hole locations in the south-central part of the Ragan quadrangle, Uinta County, Wyo.

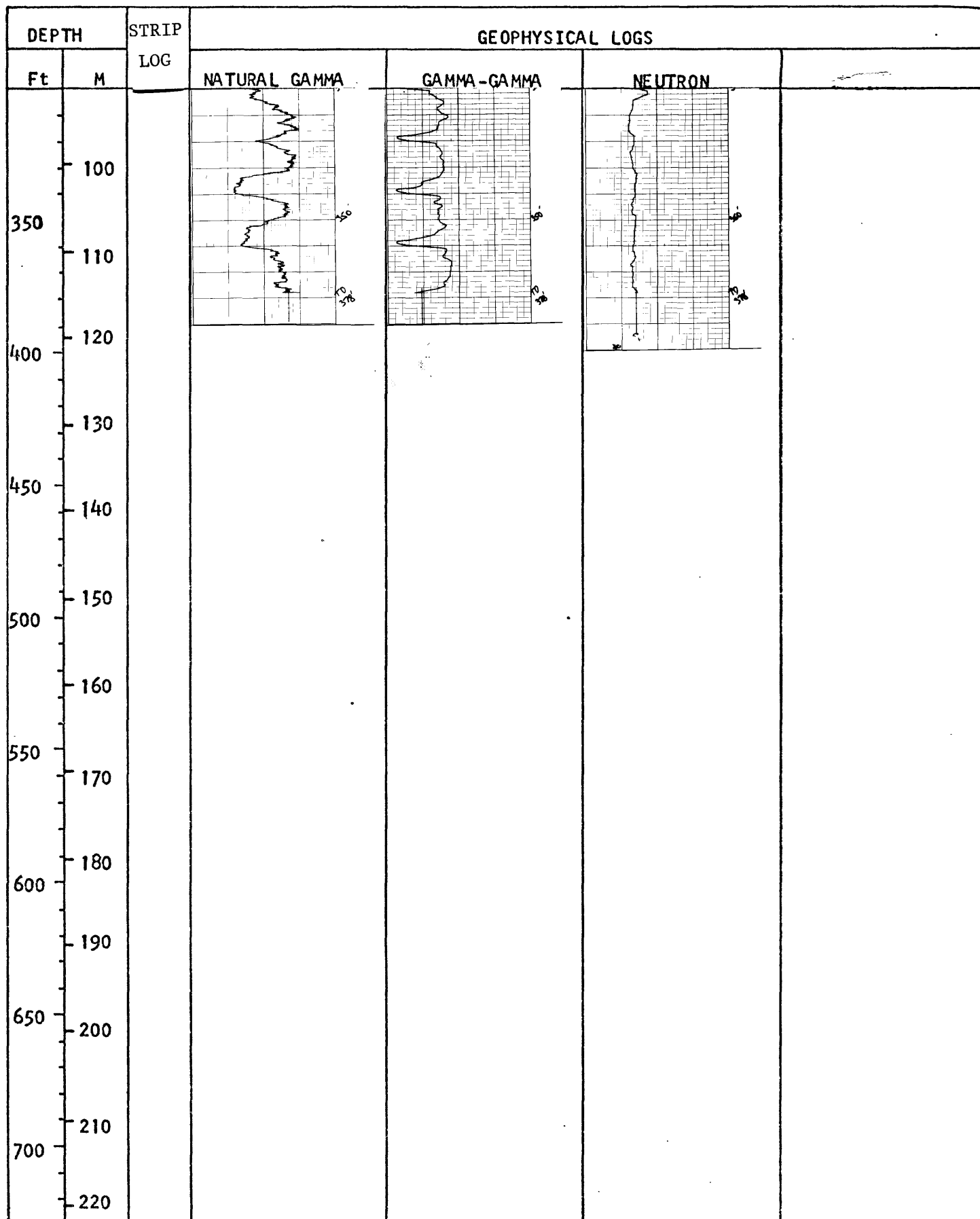
**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

HOLE No. MD-1 STATE Wyoming COUNTY Uinta DATE LOGGED 8/7/77 ELEV. 6960 ft.
 LOCATION: T. 17 N., R. 117 W., SEC. 30 ; 350 FNL; 500 FWL; DATE DRILLED 8/7/77
 DRILLED DEPTH 410' LOGGED DEPTH 378' DRILLING MEDIUM _____ FLUID LEVEL 60 ft
 HOLE SIZE 5-1/8"
 REMARKS: Logged through steel.



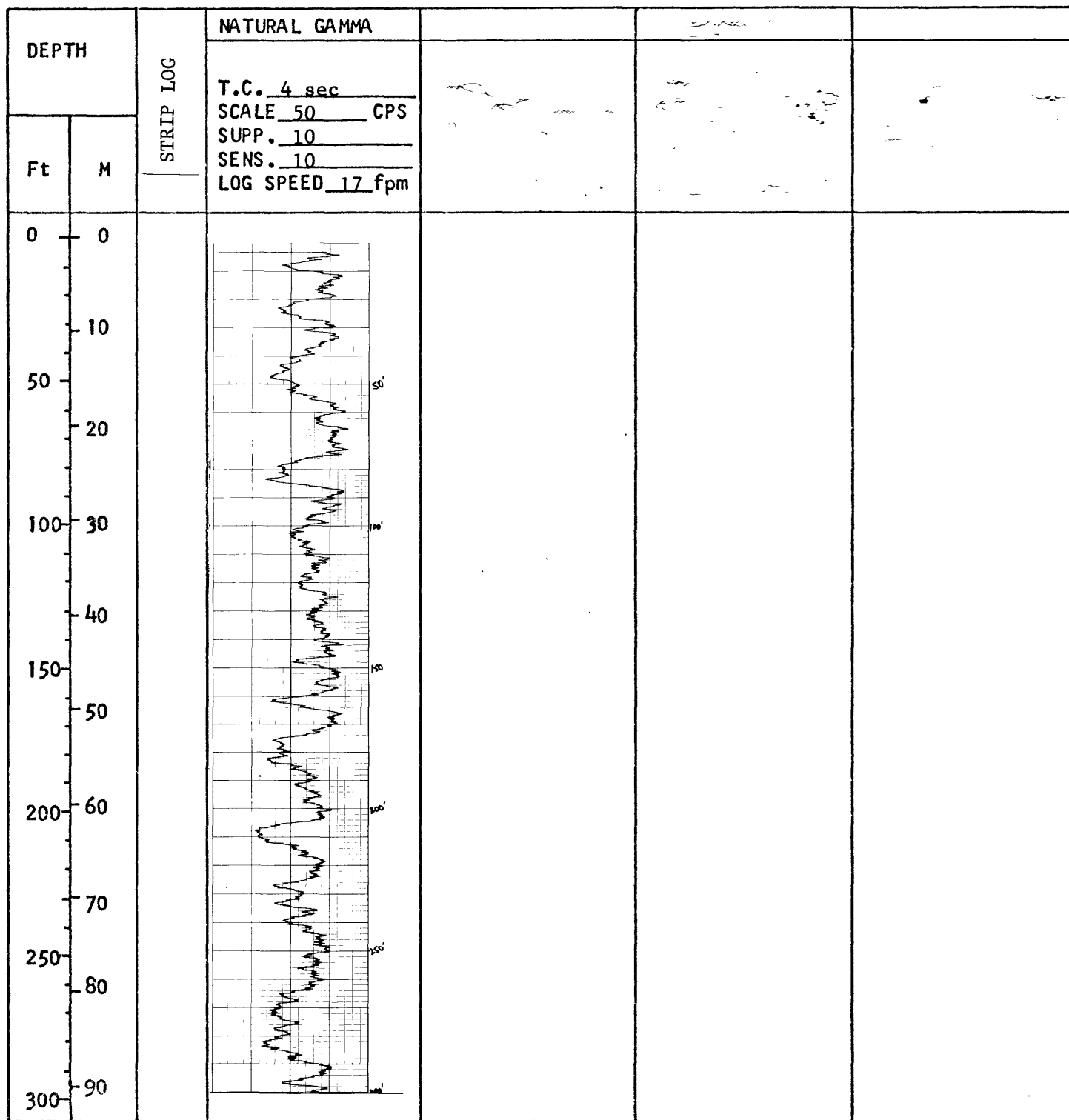
U.S. GEOLOGICAL SURVEY

HOLE No. MD-1 continued



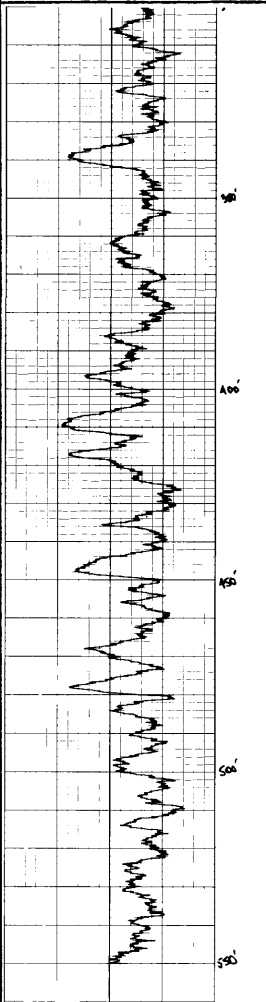
U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

HOLE No. MD-2 STATE Wyoming COUNTY Uinta DATE LOGGED 7/14/77 ELEV. 7120 ft.
 LOCATION: T. 17 N., R. 117 W., SEC. 30; 1300 FSL; 600 FWL; DATE DRILLED 7/9/77
 DRILLED DEPTH 710' LOGGED DEPTH 550' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"
 REMARKS: _____



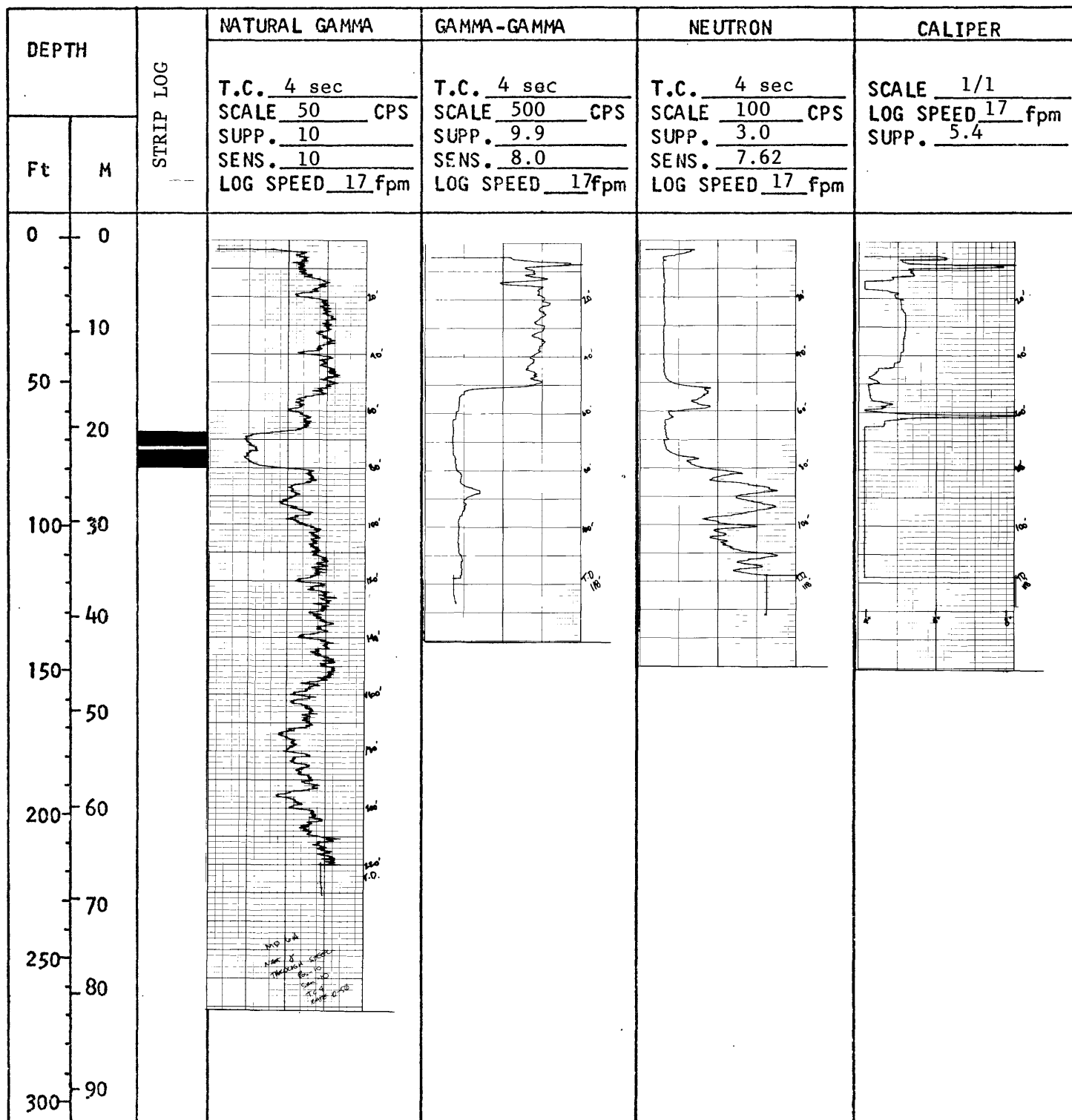
U.S. GEOLOGICAL SURVEY

HOLE No. MD-2 continued

DEPTH		STRIP LOG	GEOPHYSICAL LOGS			
Ft	M		NATURAL GAMMA			
						
	100					
350						
	110					
	120					
400						
	130					
	140					
450						
	150					
500						
	160					
	170					
550						
	180					
600						
	190					
650						
	200					
	210					
700						
	220					

U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

HOLE No. MD-6A STATE Wyoming COUNTY Uinta DATE LOGGED 7/22/77 ELEV. 7860 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 10 ; 2100 FNL; 825 FEL; DATE DRILLED 7/22/77
 DRILLED DEPTH 230' LOGGED DEPTH 220' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"
 REMARKS: Natural gamma logged through steel to 220 ft.



**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

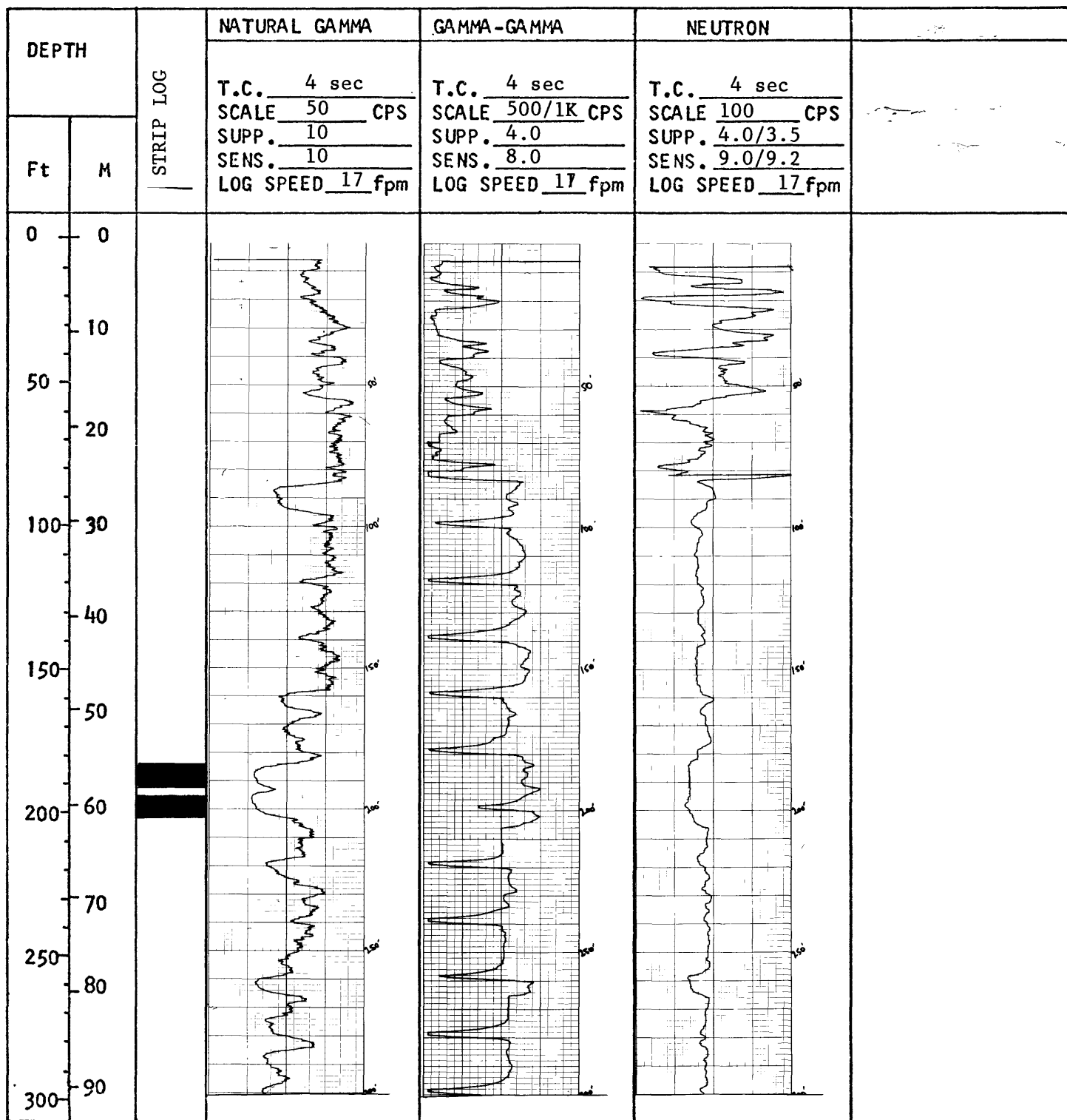
HOLE No. MD-6B STATE Wyoming COUNTY Uinta DATE LOGGED 8/8/77 ELEV. 6830 ft.

LOCATION: T. 16 N., R. 118 W., SEC. 10 ; 1900 FNL; 300 FEL; DATE DRILLED 8/8/77

DRILLED DEPTH 530' LOGGED DEPTH 520' DRILLING MEDIUM water FLUID LEVEL 80'

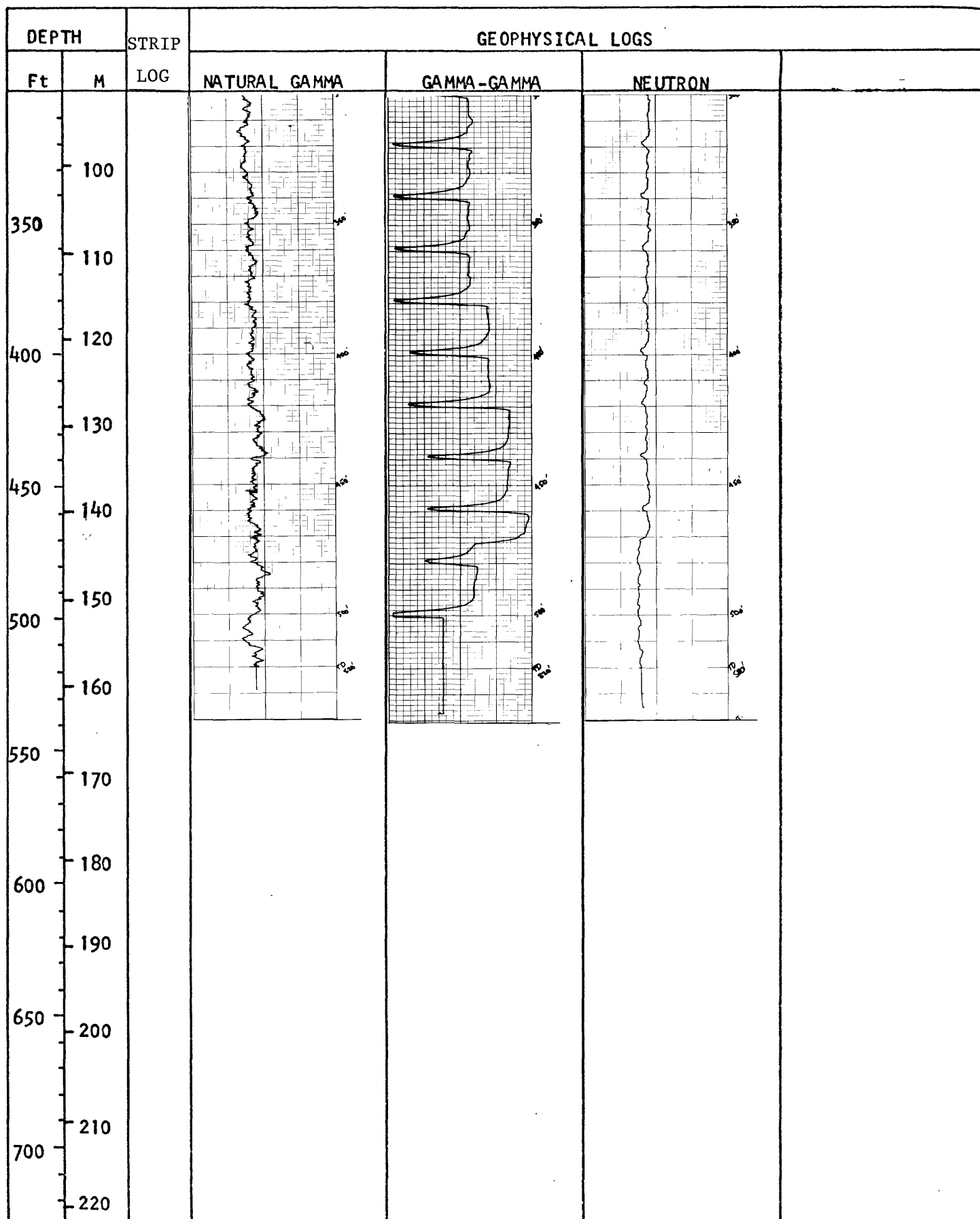
HOLE SIZE 5-1/8"

REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY

HOLE No. MD-6B continued



U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

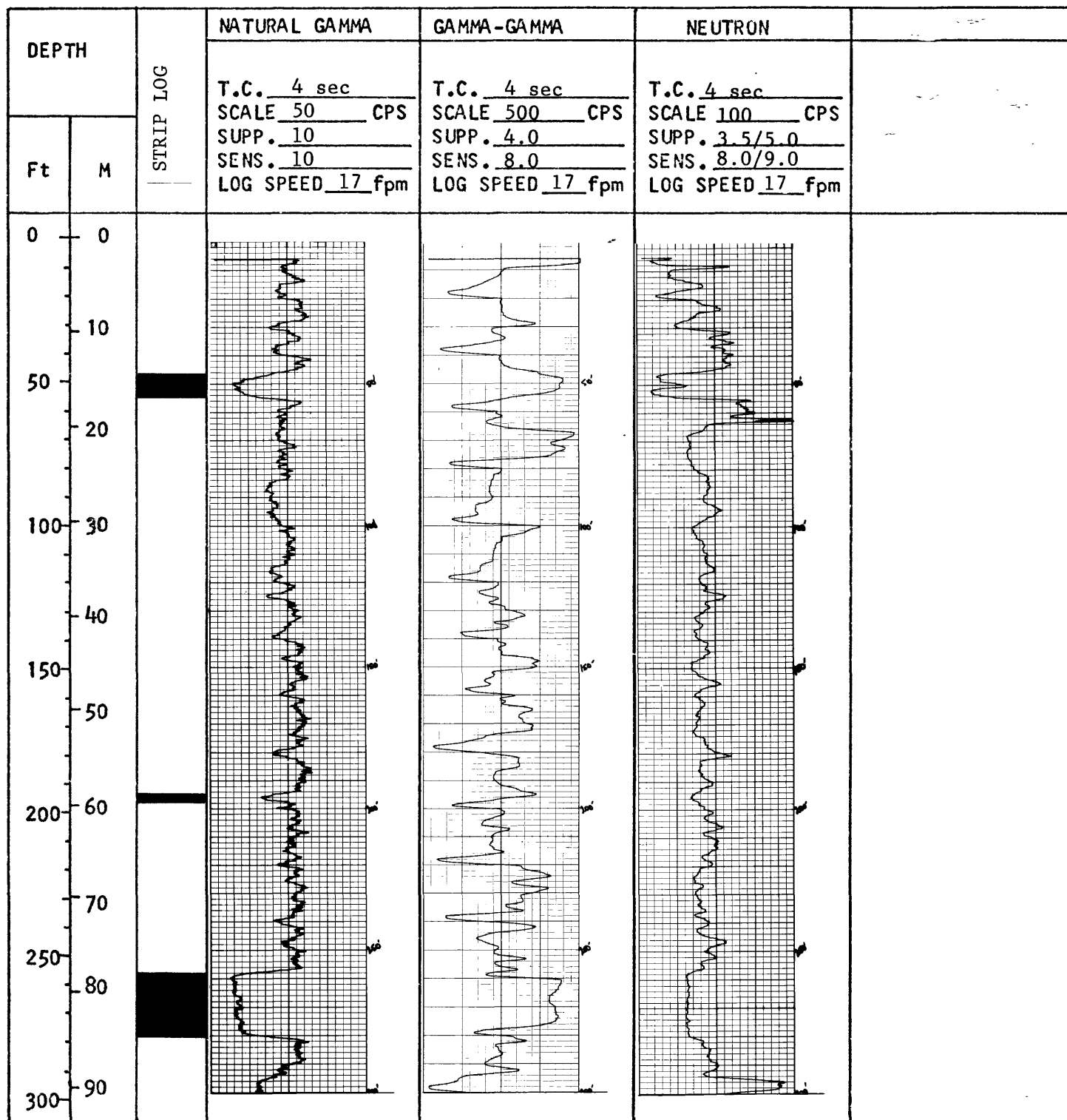
HOLE No. MD-7 STATE Wyoming COUNTY Uinta DATE LOGGED 7/25/77 ELEV. 6905 ft.

LOCATION: T. 16 N., R. 118 W., SEC. 10 ; 2450 FNL; 1700 FEL; DATE DRILLED 7/25/77

DRILLED DEPTH 730' LOGGED DEPTH 720' DRILLING MEDIUM water FLUID LEVEL 62'

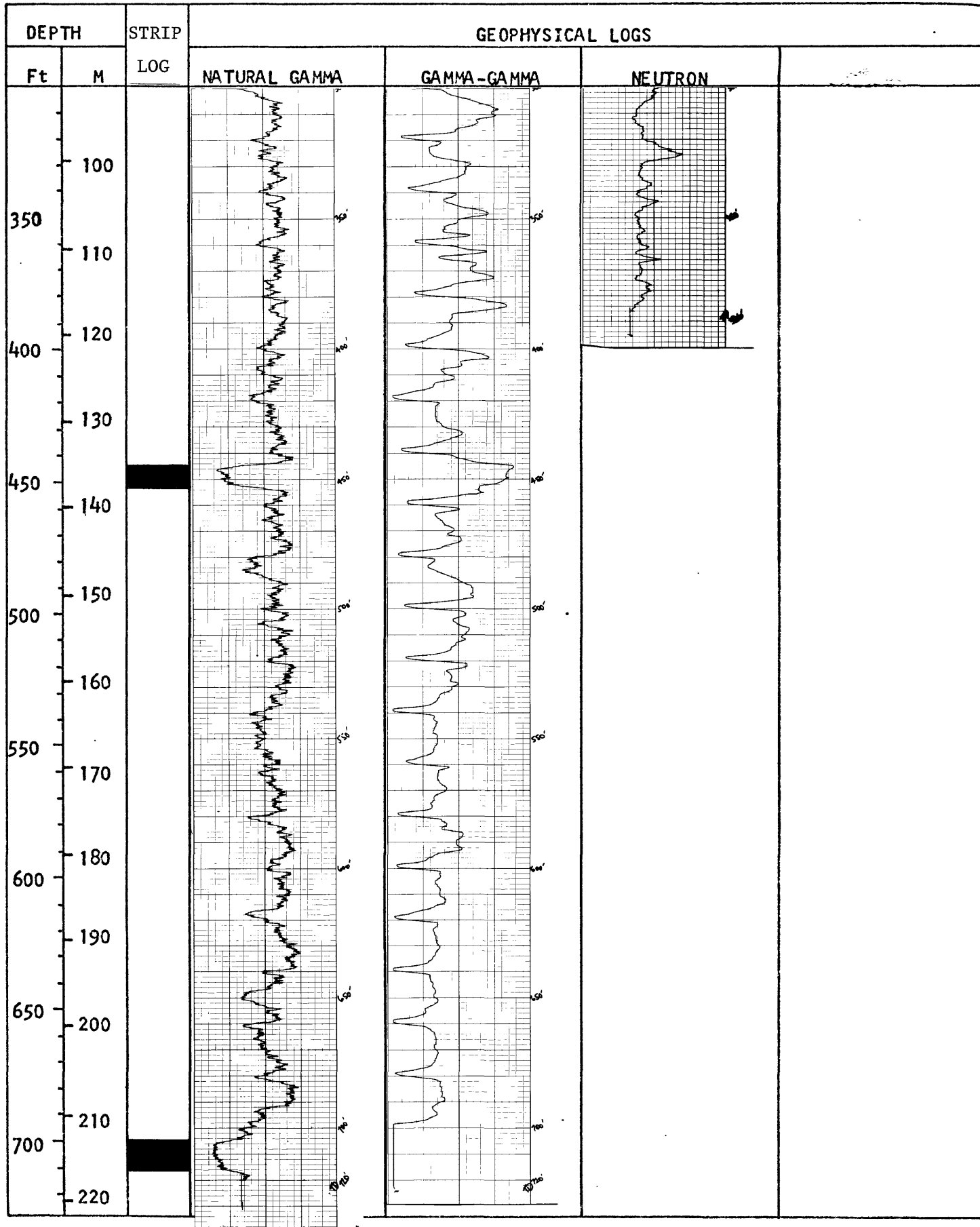
HOLE SIZE 5-1/8"

REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY

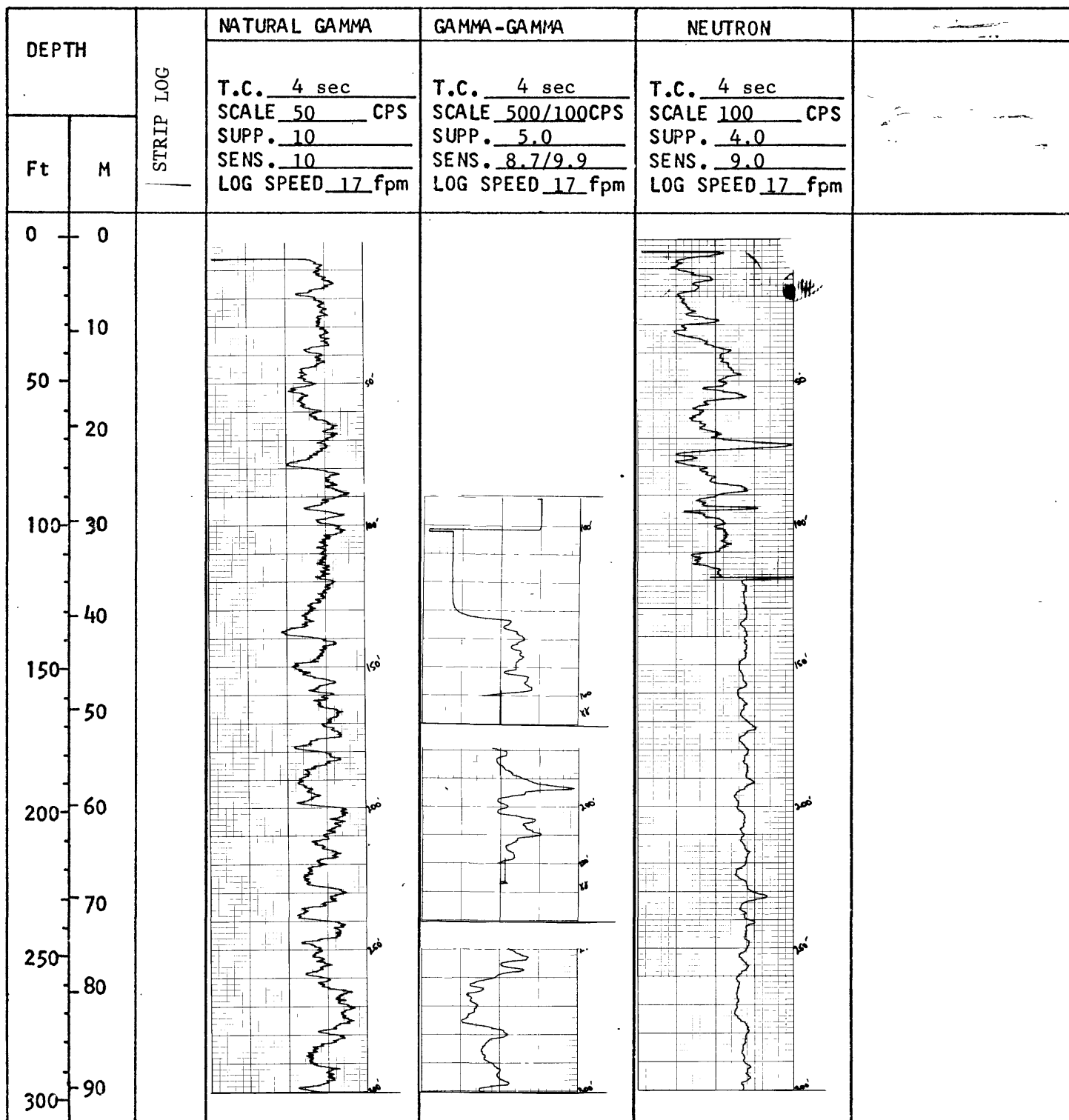
HOLE No. MD-7 continued



U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

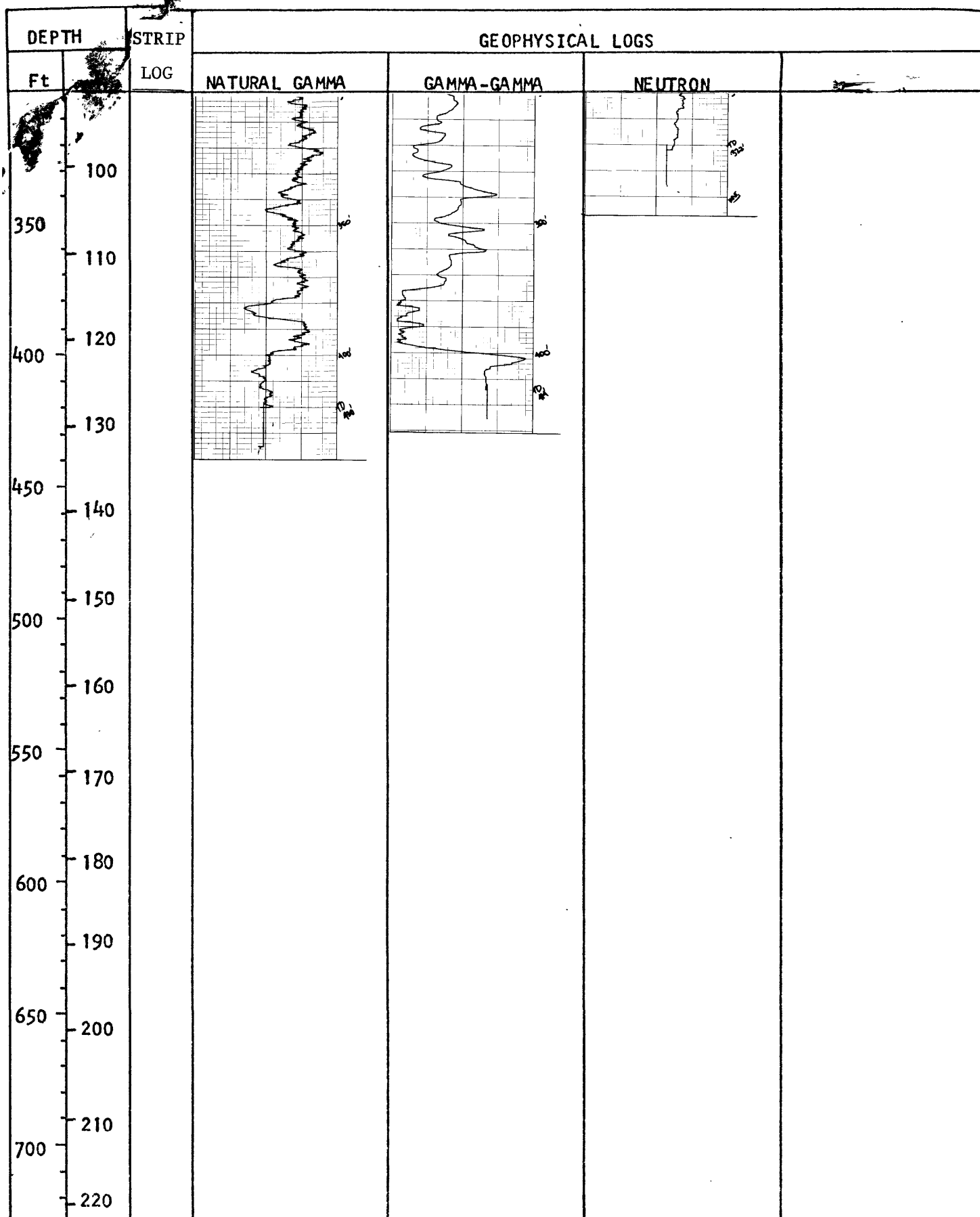
HOLE No. MD-8A STATE Wyoming COUNTY Uinta DATE LOGGED 8/10/77 ELEV. 6,920 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 10 ; 2450 FNL; 2400 FWL; DATE DRILLED 8/9/77
 DRILLED DEPTH 430' 4 LOGGED DEPTH 420 DRILLING MEDIUM _____ FLUID LEVEL 119'
 HOLE SIZE 5-1/8"

REMARKS: Logged through steel. Equipment malfunction on gamma-gamma density log



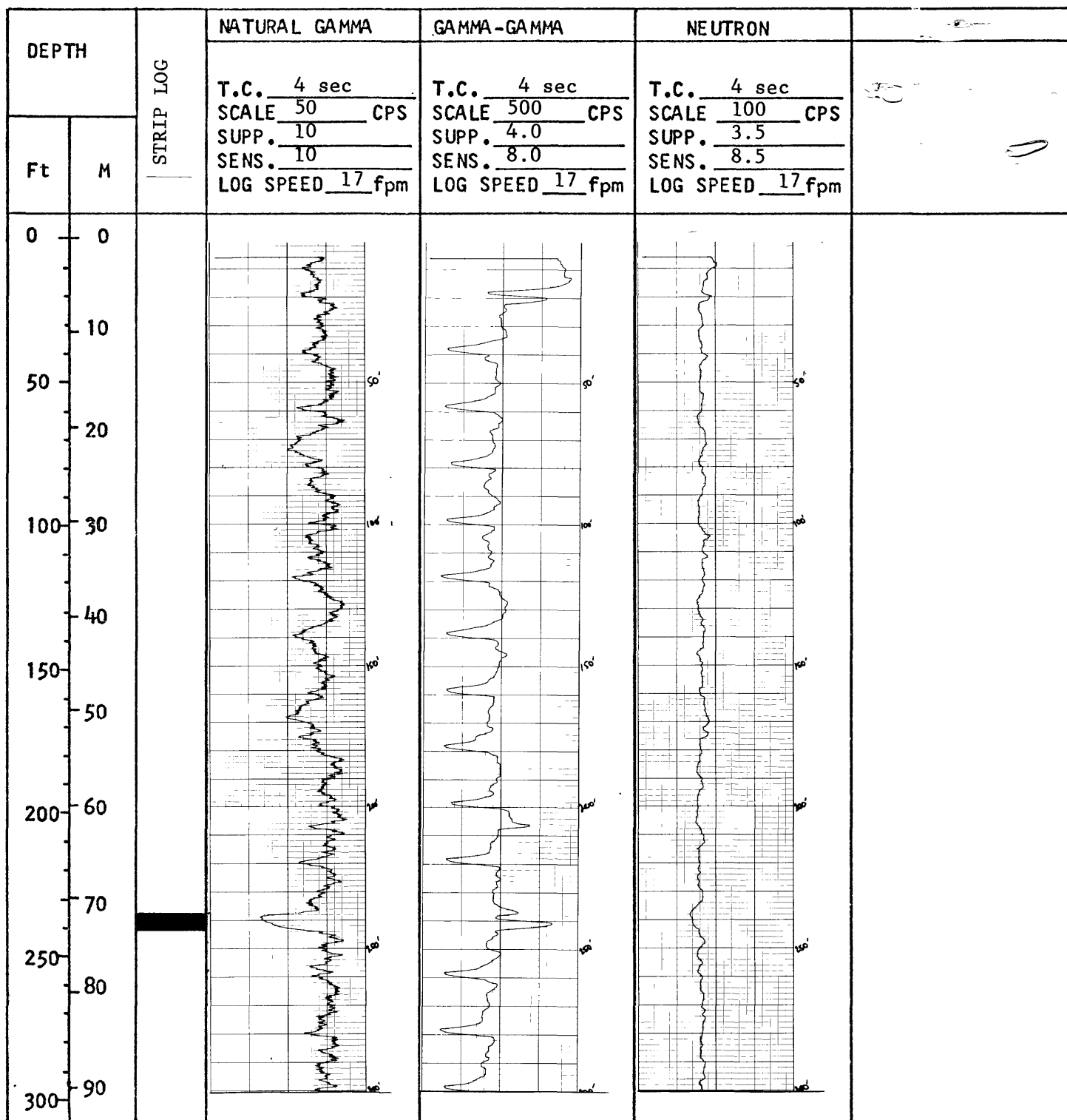
U.S. GEOLOGICAL SURVEY

HOLE No. MD-8A continued



**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

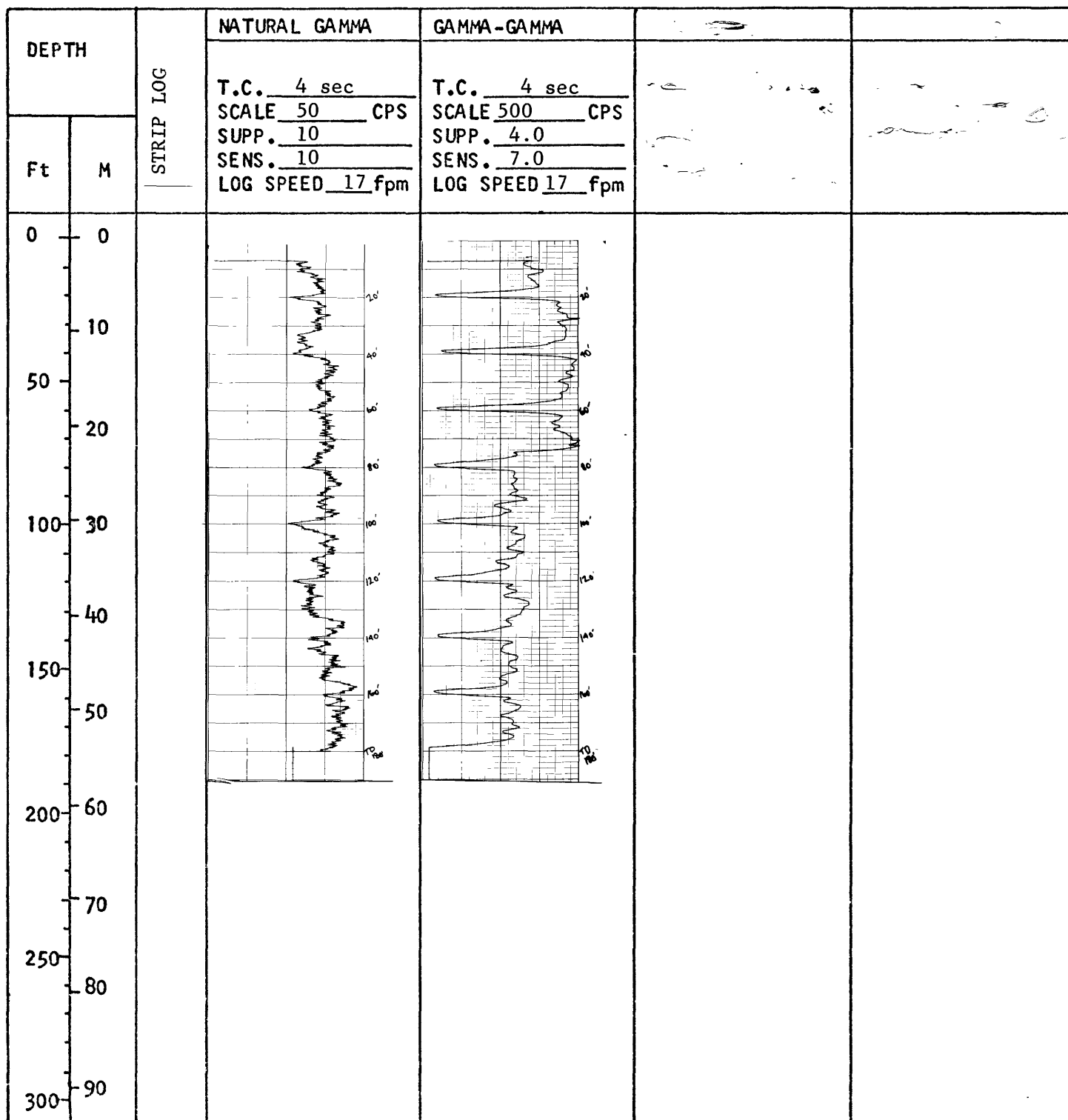
HOLE No. MN-8B STATE Wyoming COUNTY Uinta DATE LOGGED 7/27/77 ELEV. 6915 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 10; 2500 FNL; 2325 FEL; DATE DRILLED 7/27/77
 DRILLED DEPTH 350' LOGGED DEPTH 340' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"
 REMARKS: Logged through steel.



HOLE No. MD-8B continued19

U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

HOLE No. MD-9A STATE Wyoming COUNTY Uinta DATE LOGGED 7/24/77 ELEV. 6980 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 10; 2300 F_{NL}; 1400 F_{WL}; DATE DRILLED 7/23/77
 DRILLED DEPTH 230' LOGGED DEPTH 180' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"
 REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

HOLE No. MD-9B STATE Wyoming COUNTY Uinta DATE LOGGED 8/10/77 ELEV. 6931 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 10 ; 1900 FN; 2300 FWL; DATE DRILLED 8/10/77
 DRILLED DEPTH 185' LOGGED DEPTH 84' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"

REMARKS: Hole caved in.

DEPTH		STRIP LOG	NATURAL GAMMA			
Ft	M		T.C. <u>4</u> sec SCALE <u>50</u> CPS SUPP. <u>10</u> SENS. <u>10</u> LOG SPEED <u>17</u> fpm			
0	0					
10						
20						
30						
40						
50						
60						
70						
80						
90						
100	30					
150						
200	60					
250						
300	90					

U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

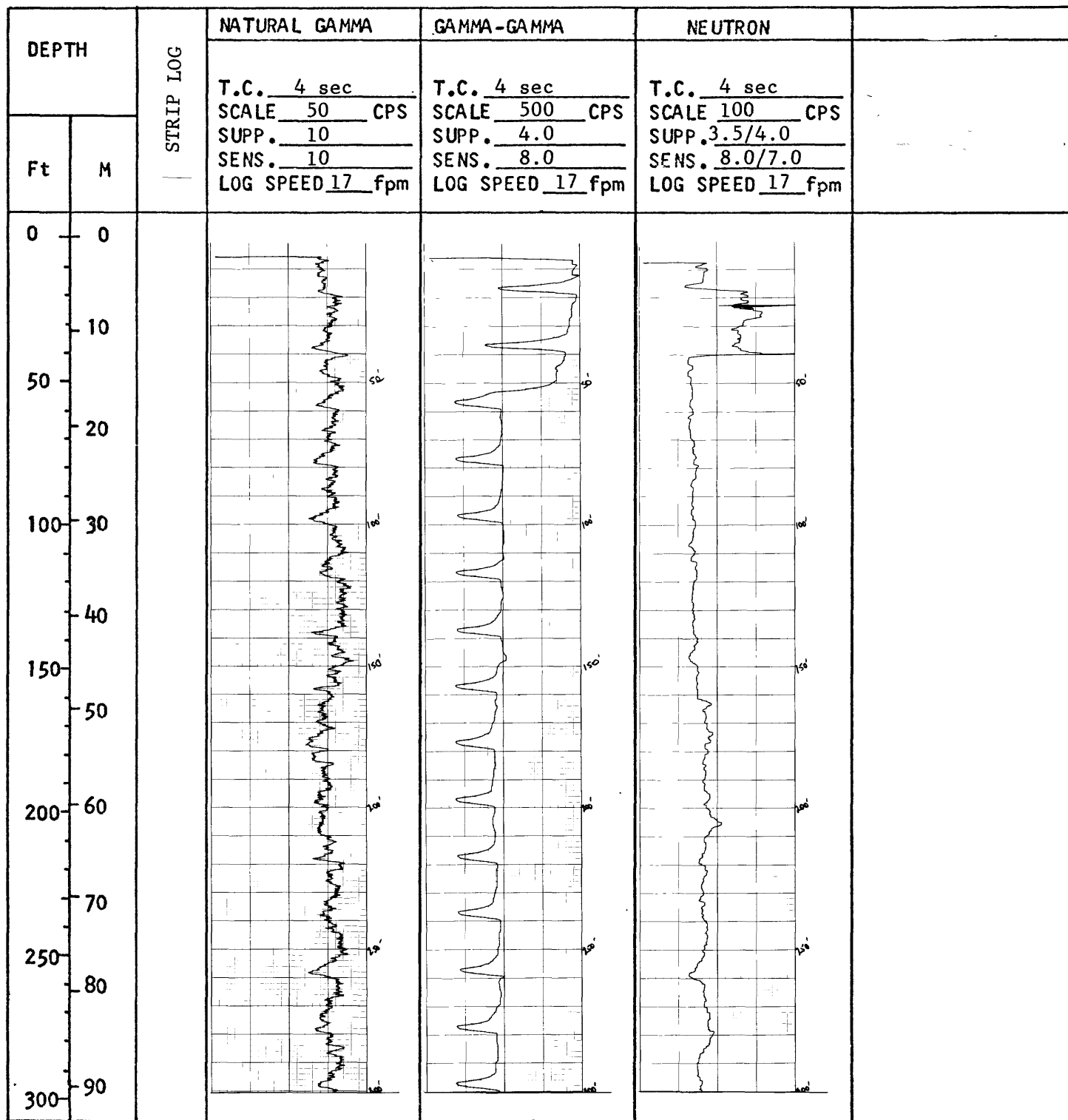
HOLE No. MD-14 STATE Wyoming COUNTY Uinta DATE LOGGED 8/5/77 ELEV. 6830 ft.

LOCATION: T. 17 N., R. 117 W., SEC. 8; 2325 FNL; 425 FWL; DATE DRILLED 8/5/77

DRILLED DEPTH 530' LOGGED DEPTH 498' DRILLING MEDIUM water-mud FLUID LEVEL 40'

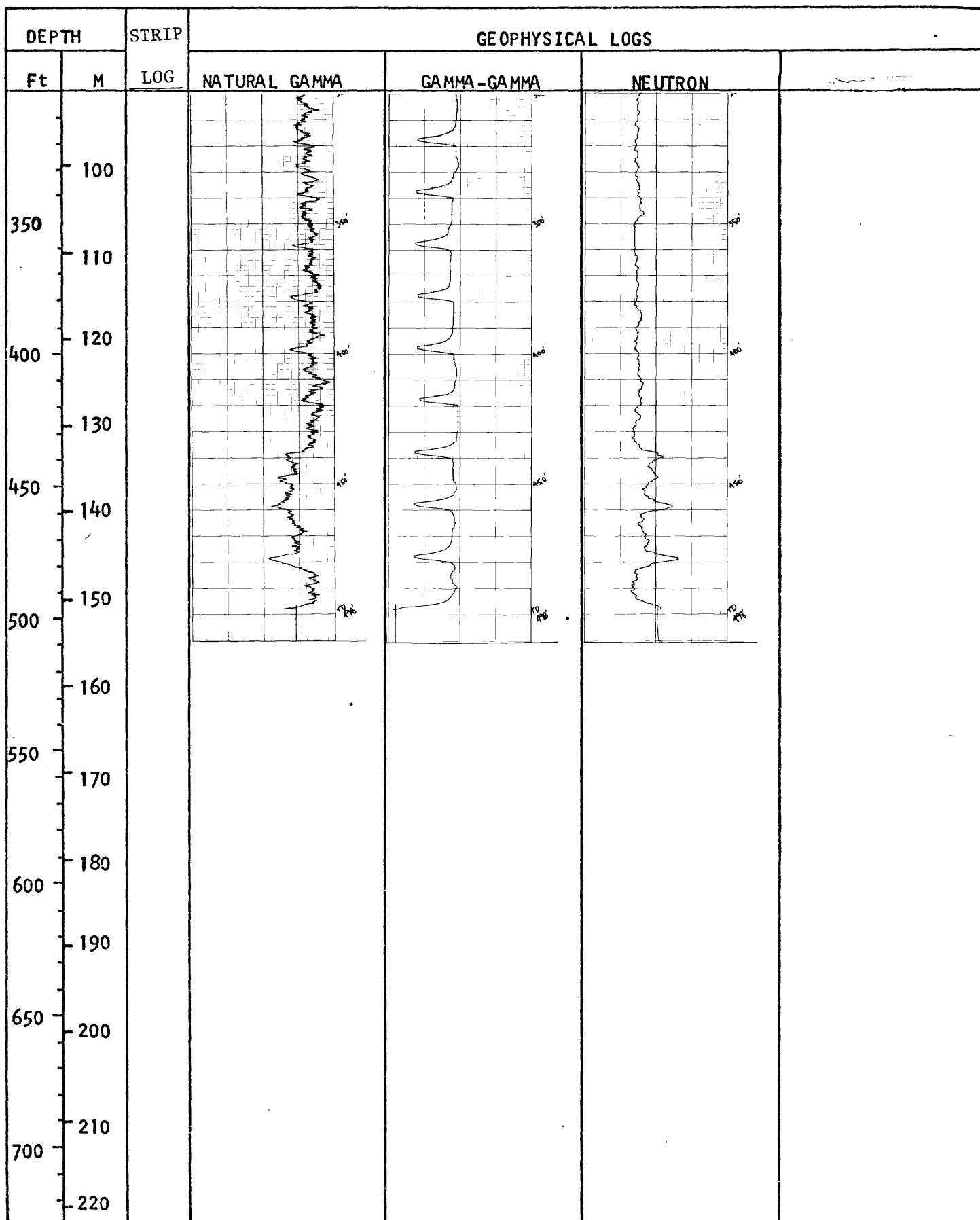
HOLE SIZE 5-1/8"

REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY

HOLE No. MD-14 continued



**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

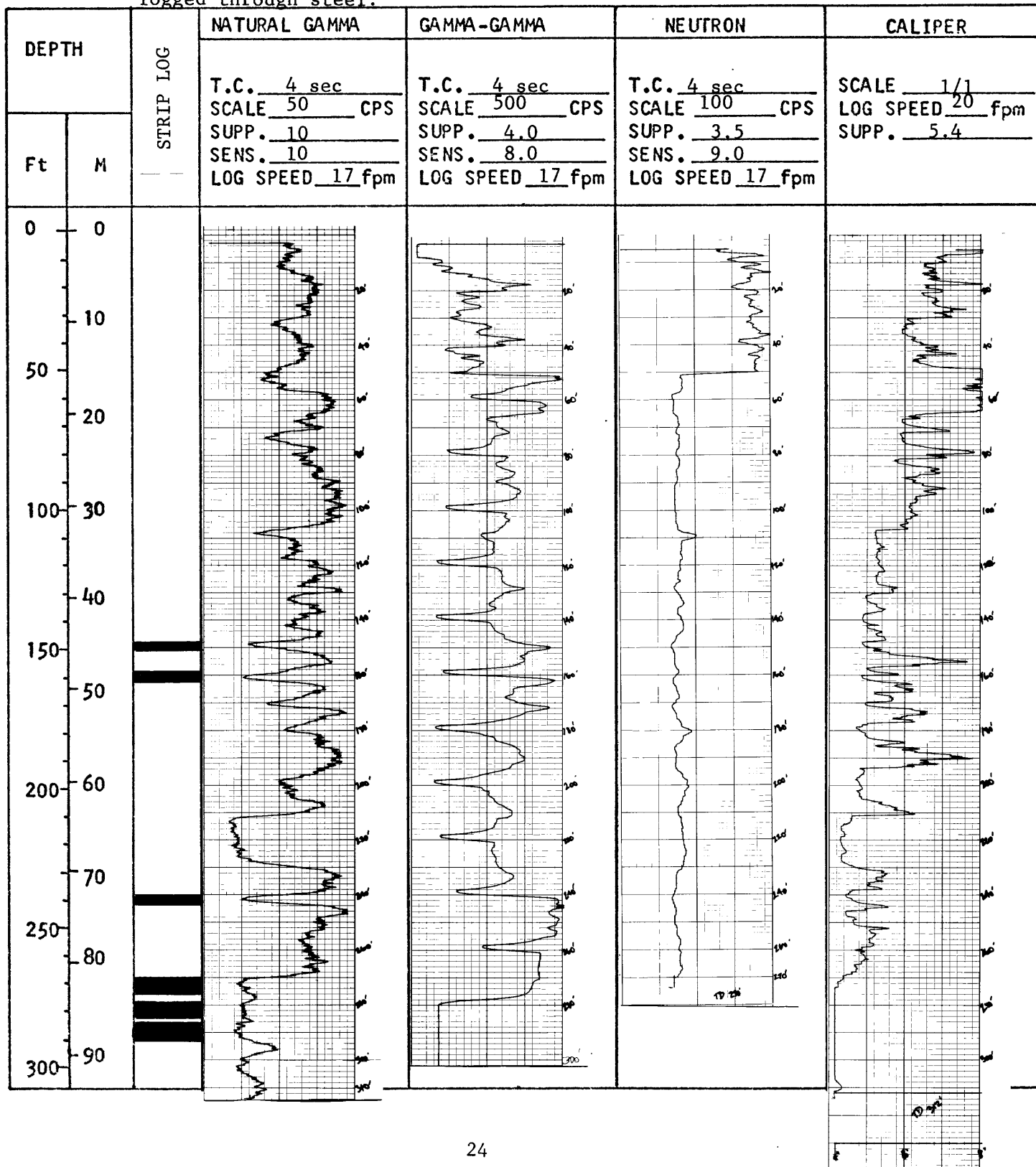
HOLE No. MD-15 STATE Wyoming COUNTY Uinta DATE LOGGED 7/13/77 ELEV. 6820 ft.

LOCATION: T. 17 N., R. 117 W., SEC. 20; 400 FNL; 525 FWL; DATE DRILLED 7/13/77

DRILLED DEPTH 330' LOGGED DEPTH 270' DRILLING MEDIUM _____ FLUID LEVEL 50 ft

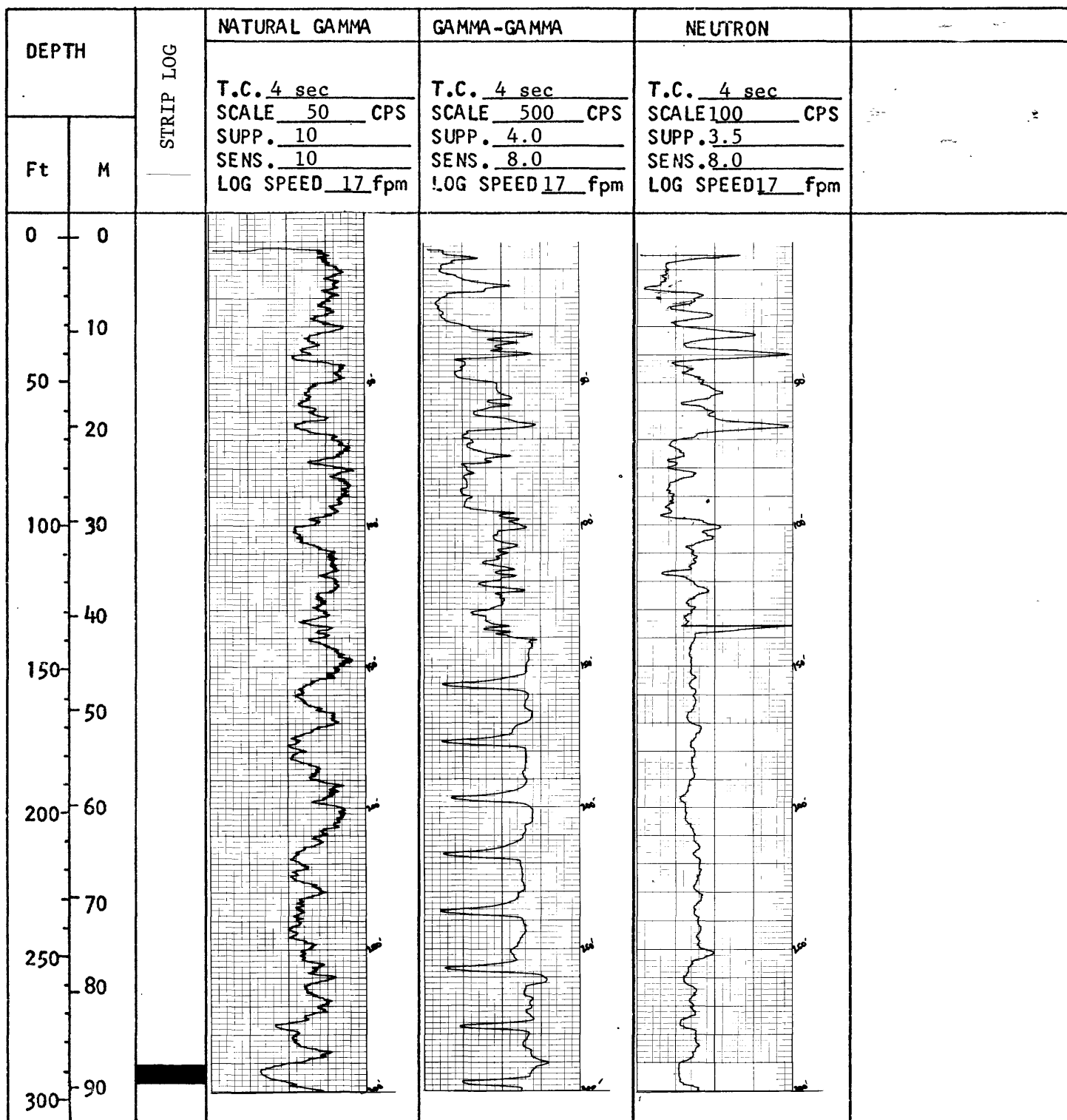
HOLE SIZE 5-1/8"

REMARKS: Natural gamma logged after steel pulled, the gamma-gamma and neutron
logged through steel.



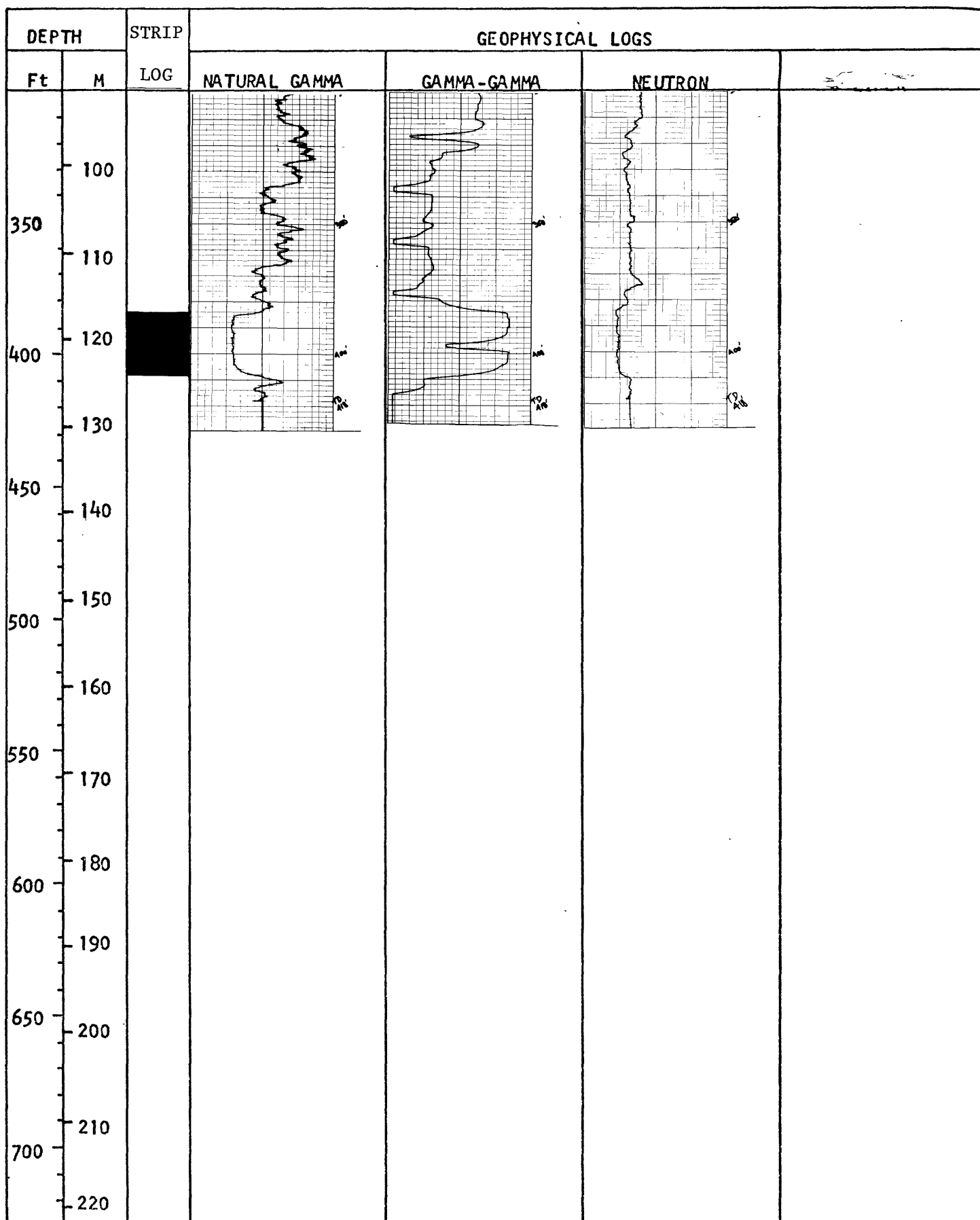
U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

HOLE No. R-1 STATE Wyoming COUNTY Uinta DATE LOGGED 8/16/77 ELEV. 6950 ft.
 LOCATION: T. 16 N., R. 118 W., SEC. 28 ; 1100 FNL; 1650 FEL; DATE DRILLED 8/16/77
 DRILLED DEPTH 450' LOGGED DEPTH 418' DRILLING MEDIUM _____ FLUID LEVEL 136
 HOLE SIZE 5-1/8"
 REMARKS: Logged through steel



U.S. GEOLOGICAL SURVEY

HOLE No. R-1 continued



**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

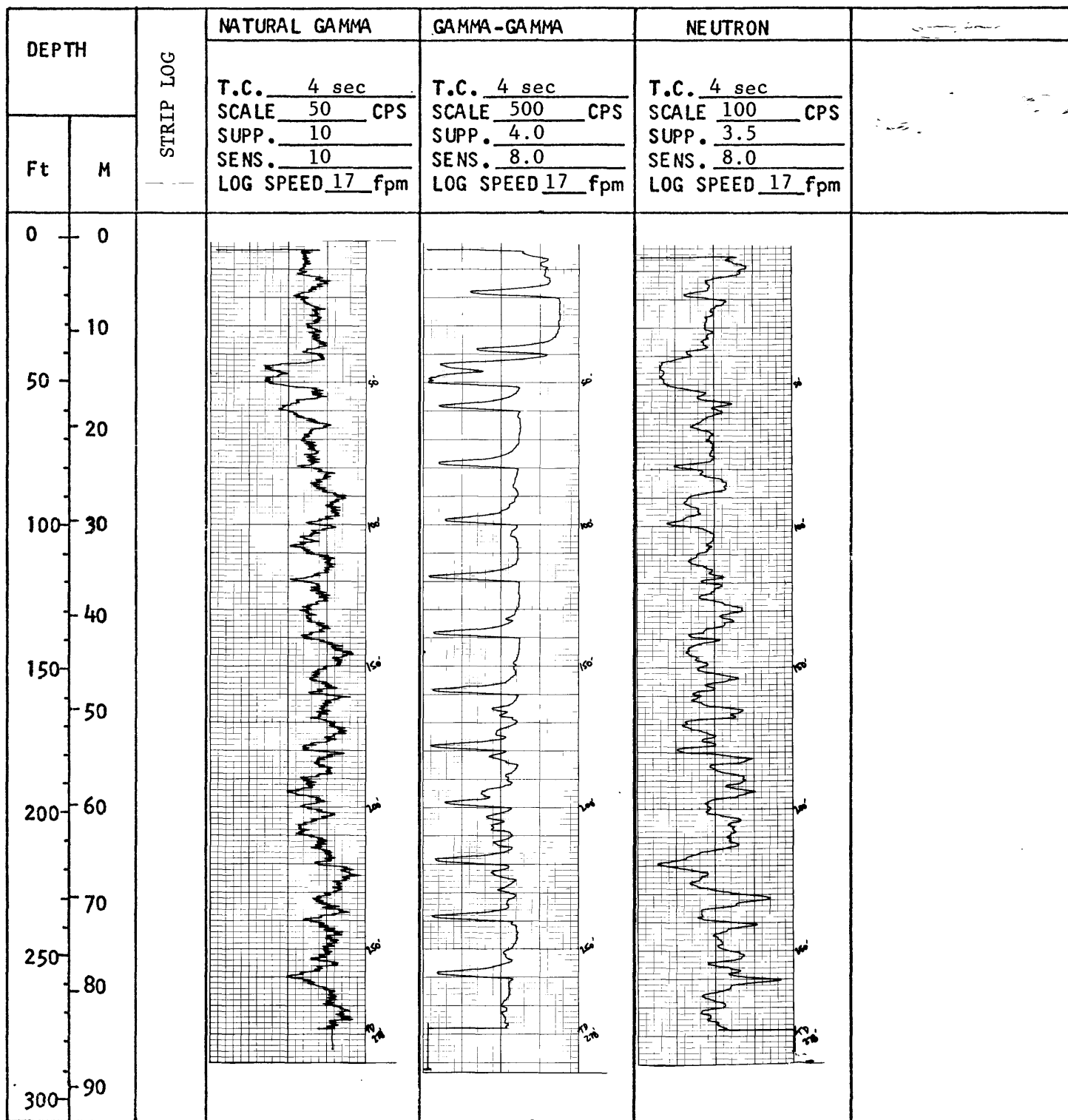
HOLE No. R-2 STATE Wyoming COUNTY Uinta DATE LOGGED 8/17/77 ELEV. 6940 ft.

LOCATION: T. 16 N., R. 118 W., SEC. 28; 1150 FNL; 2200 FEL; DATE DRILLED 8/17/77

DRILLED DEPTH 310 LOGGED DEPTH 278 DRILLING MEDIUM _____ FLUID LEVEL _____

HOLE SIZE 5-1/8"

REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG

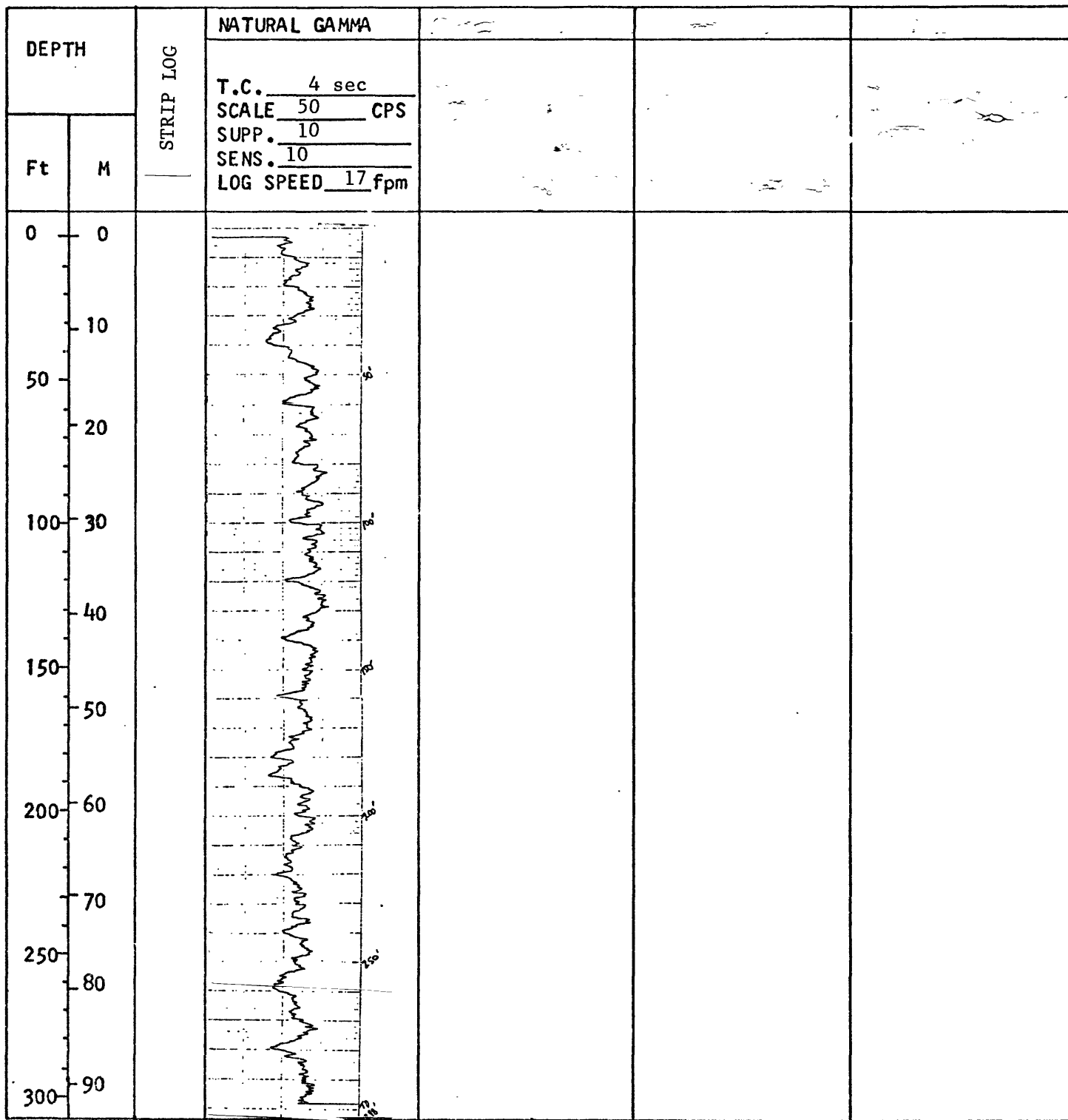
HOLE No. R-3 STATE Wyoming COUNTY Uinta DATE LOGGED 8/18/77 ELEV. 6930 ft.

LOCATION: T. 16 N., R. 118 W., SEC. 28; 1250 F.M.; 2550 F.W.; DATE DRILLED 8/18/77

DRILLED DEPTH 330' LOGGED DEPTH 298' DRILLING MEDIUM _____ FLUID LEVEL _____

HOLE SIZE 5-1/8"

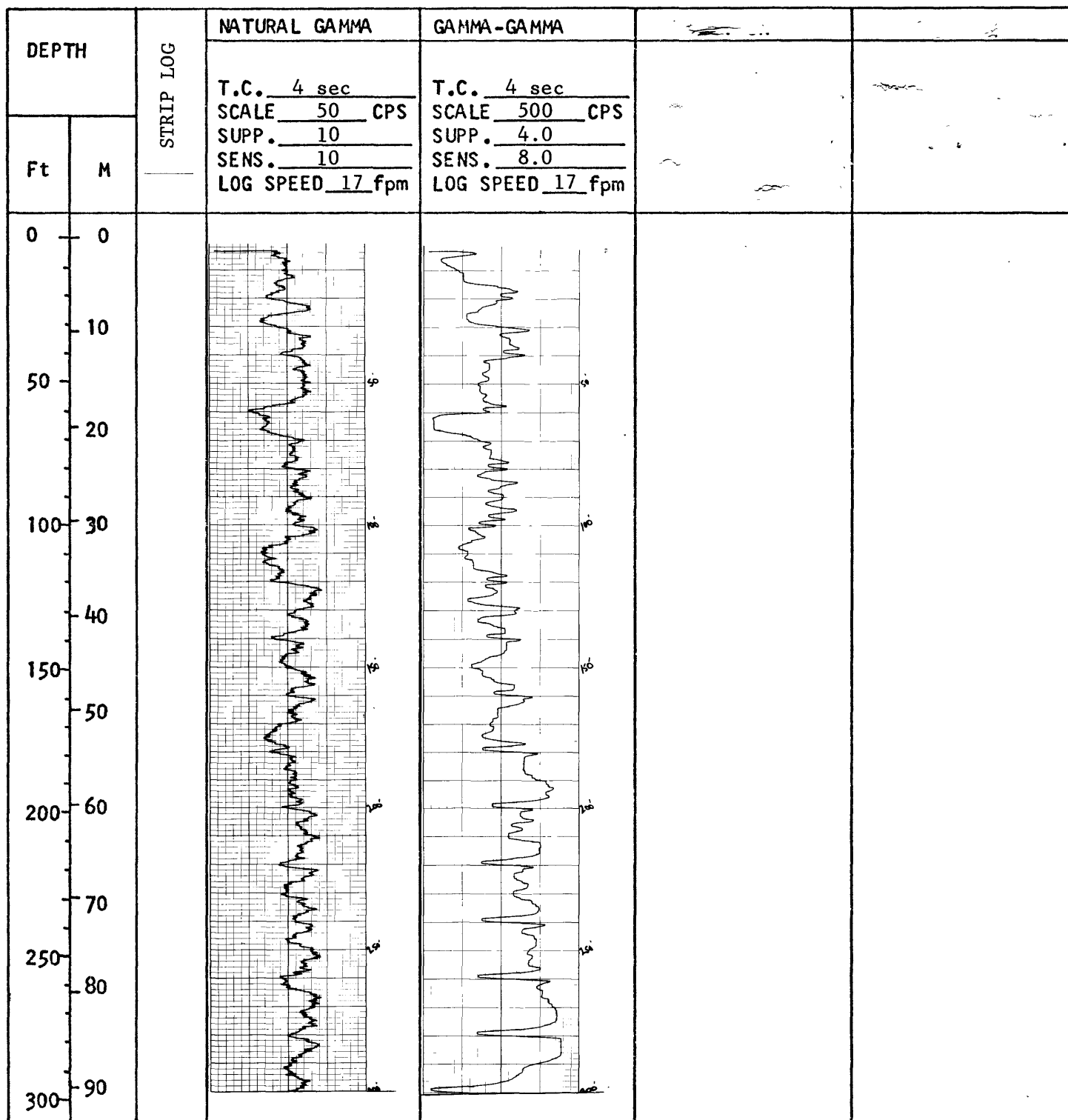
REMARKS: Logged through steel.



**U.S. GEOLOGICAL SURVEY
DRILL-HOLE LOG**

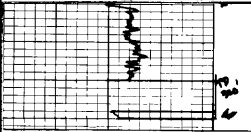
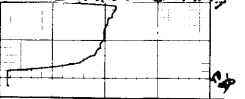
HOLE No. R-4 STATE Wyoming COUNTY Uinta DATE LOGGED 8/21/77 ELEV. 6930 ft.
 LOCATION: T. 16 N., R. 118 W., SEC 28 ; 1400 FNL; 1950 FWL; DATE DRILLED 8/21/77
 DRILLED DEPTH 350' LOGGED DEPTH 320' DRILLING MEDIUM _____ FLUID LEVEL _____
 HOLE SIZE 5-1/8"

REMARKS: Logged through steel.



U.S. GEOLOGICAL SURVEY

HOLE No. R-4 continued

DEPTH		STRIP LOG	GEOPHYSICAL LOGS			
Ft.	M		NATURAL GAMMA	GAMMA-GAMMA		
						
100						
350						
110						
120						
400						
130						
450						
140						
150						
500						
160						
550						
170						
180						
600						
190						
650						
200						
210						
700						
220						