

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

RECONNAISSANCE DRILLING DURING 1978 IN THE CRAIG QUADRANGLE,  
MOFFAT COUNTY, COLORADO

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By Michael E. Brownfield

Open-File Report 78-1039

1978

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

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INTRODUCTION

Under contract no. 14-08-0001-17329, awarded by the U.S. Geological Survey on May 12, 1978, McCabe Brothers Drilling, Inc. drilled 5 test holes in the Craig quadrangle, Moffat County, Colorado, as part of a larger regional drilling program. The purpose of the drilling was to obtain information on the quality, thickness, and extent of the coal in the area. The drilling within the Craig quadrangle was done to test the coal potential of the Fort Union Formation of Paleocene age. Holes were spudded in both the Fort Union Formation and the Eocene Wasatch Formation. Holes were logged using natural gamma, gamma-gamma (density), resistance, and spontaneous-potential logs. The logging was done by Digilog, Inc. All holes were drilled on Federal coal lands and the locations are shown on figure 1. The logs were originally run at a vertical scale of 1 inch to 10 feet, but for convenience of reproducing this report, they were reduced in scale to 1 inch to 50 feet and the horizontal logging scales were reduced accordingly. (To convert feet to meters, multiply by 0.3048.)

Drill-hole locations, selected by Geological Survey personnel, met the following criteria: (1) geologically favorable for the possible occurrence of coal at depth, (2) federally owned coal, (3) accessibility by existing roads or trails, (4) absence of archeological or historical sites, (5) nearly level drill sites with minimal reclamation problems, and (6) permission of the surface land owner.



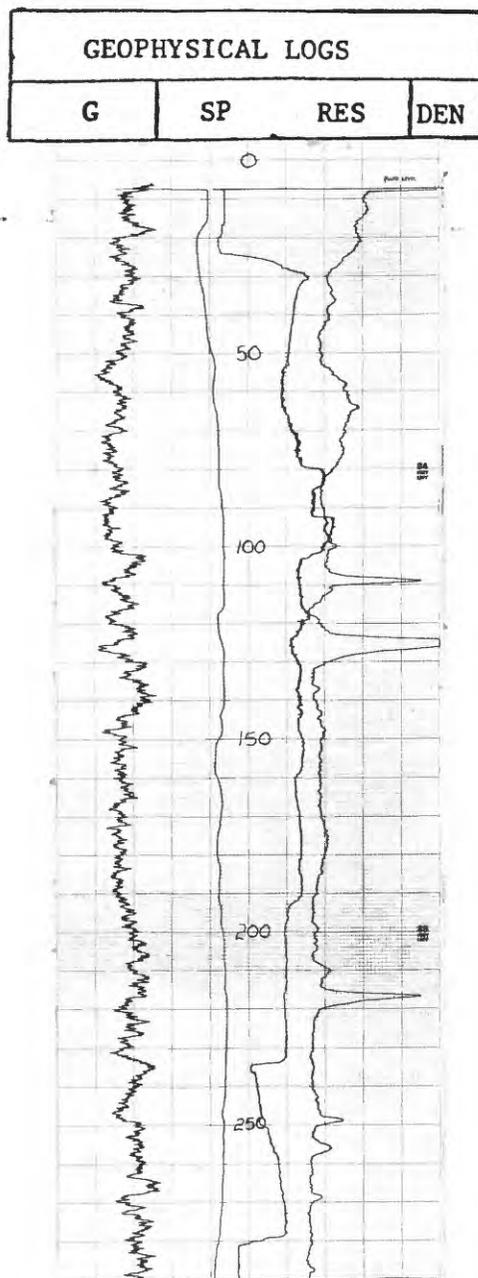
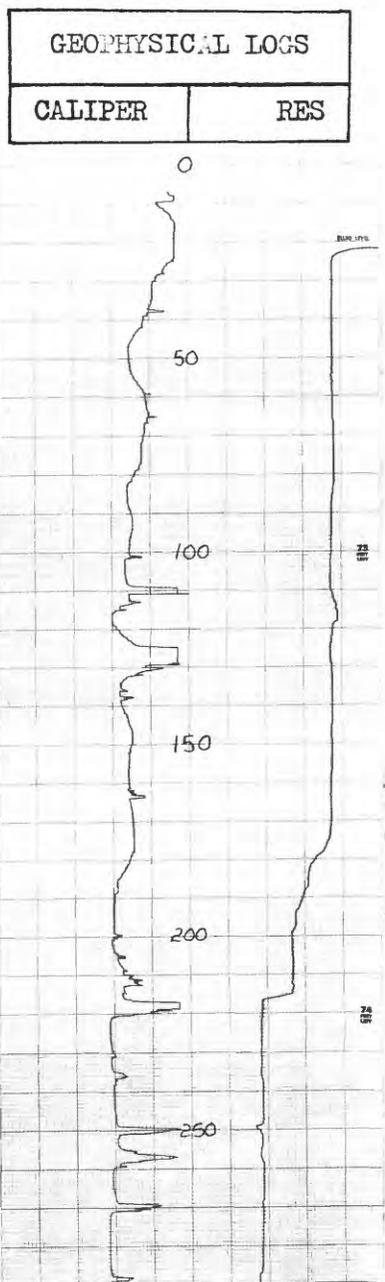
U.S. GEOLOGICAL SURVEY  
DRILL-HOLE LOG, YAMPA COAL FIELD

Hole No. CR-1 State Colorado County Moffat Date logged 6-14-78 Elev.(ft) 6420  
 Location: T. 7 N., R. 90 W., sec. 7 SE $\frac{1}{4}$ SE $\frac{1}{4}$  Cored:  Yes  No  
 Drilled depth 1025' Logged depth 1019' Drilling medium Air Fluid level 8'

Geophysical logs:

Spontaneous potential (SP): Scale 20 mv/in. Logging speed 20 fpm  
 Resistance (RES): Scale 50 ohms/in. Logging speed 20 fpm  
 Gamma (G): T.C. 2 Scale 10 cps./in. Logging speed 20 fpm  
 Density (DEN): T.C. 1 Scale 50 cps./in. Logging speed 20 fpm

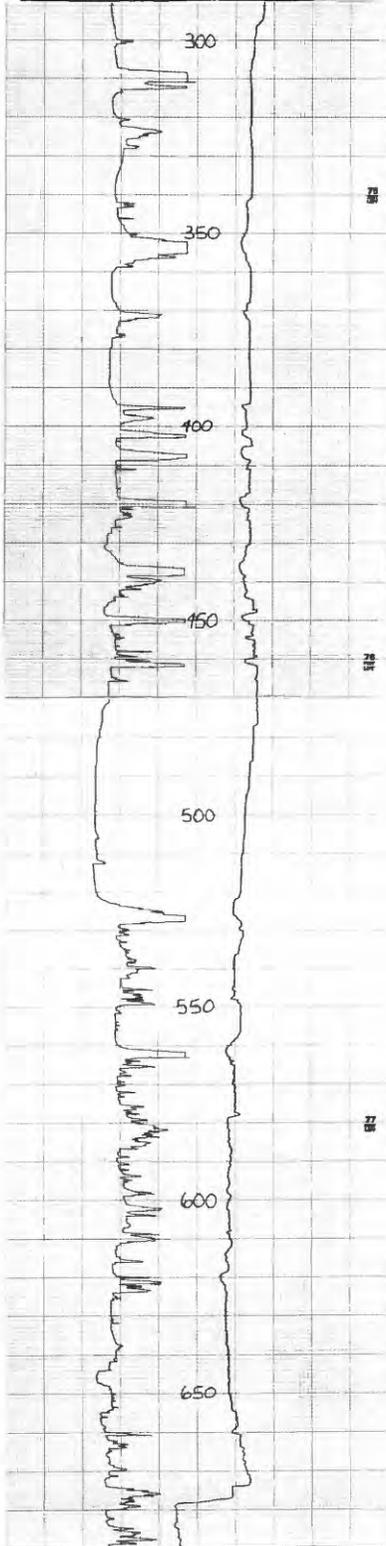
Remarks: Caliper log run with resistance log



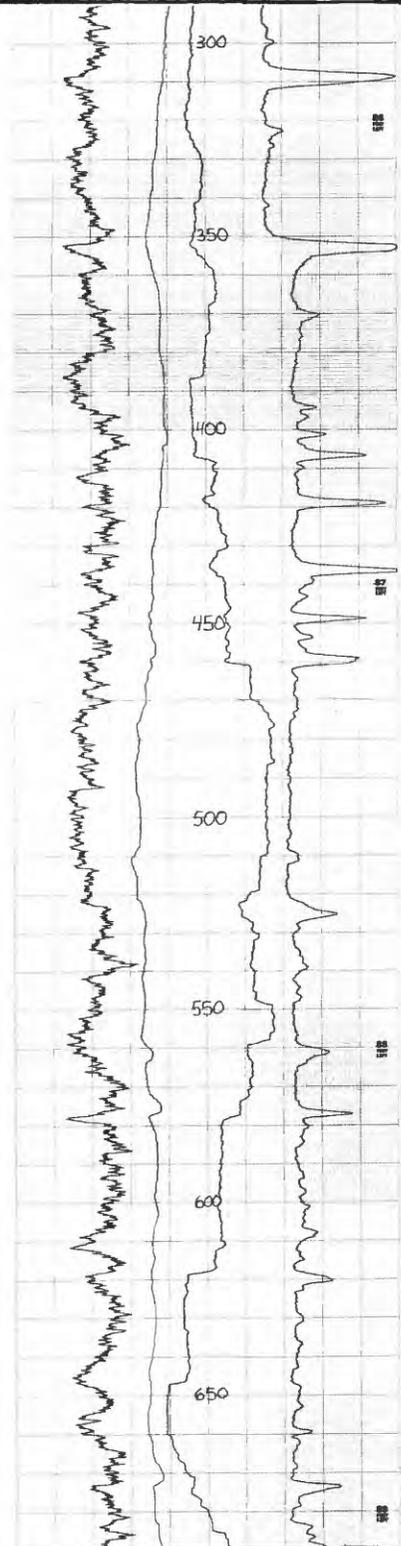
U.S. GEOLOGICAL SURVEY

Hole No. CR-1 continued

GEOPHYSICAL LOGS	
CALIPER	RES

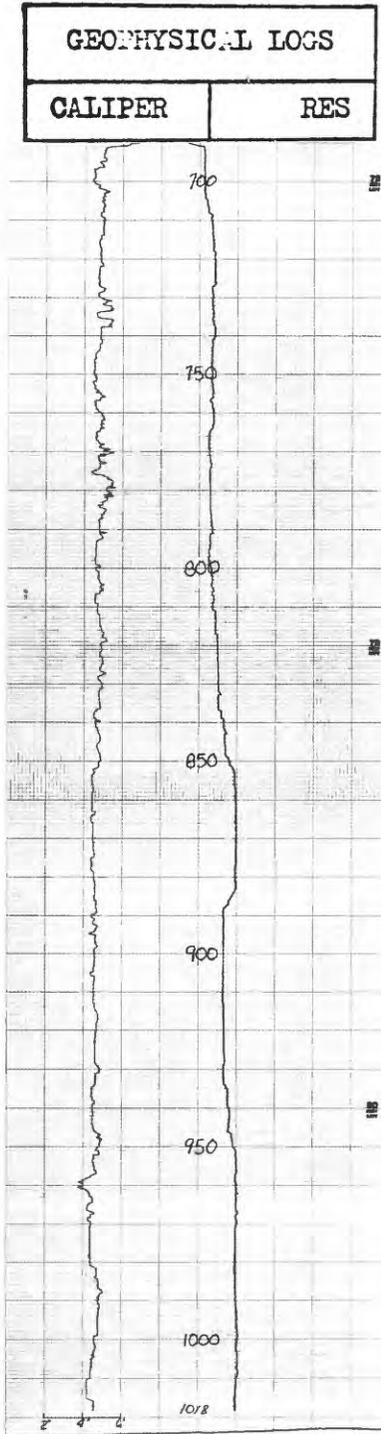


GEOPHYSICAL LOGS			
G	SP	RES	DEN

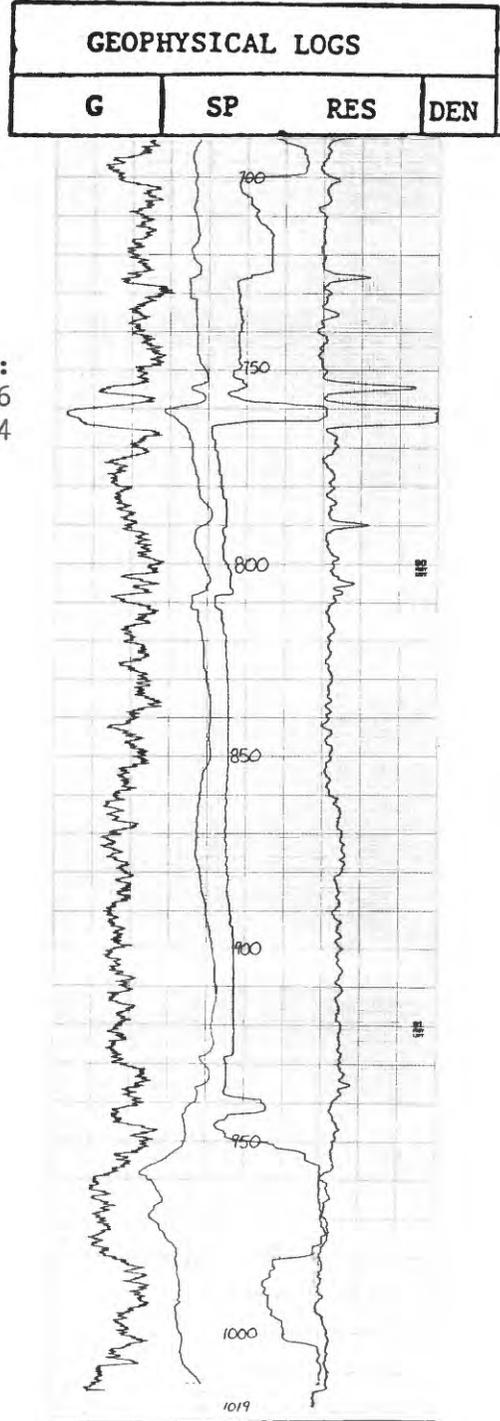


U.S. GEOLOGICAL SURVEY

Hole No. CR-1 continued



Coal from:  
753 to 756  
759 to 764



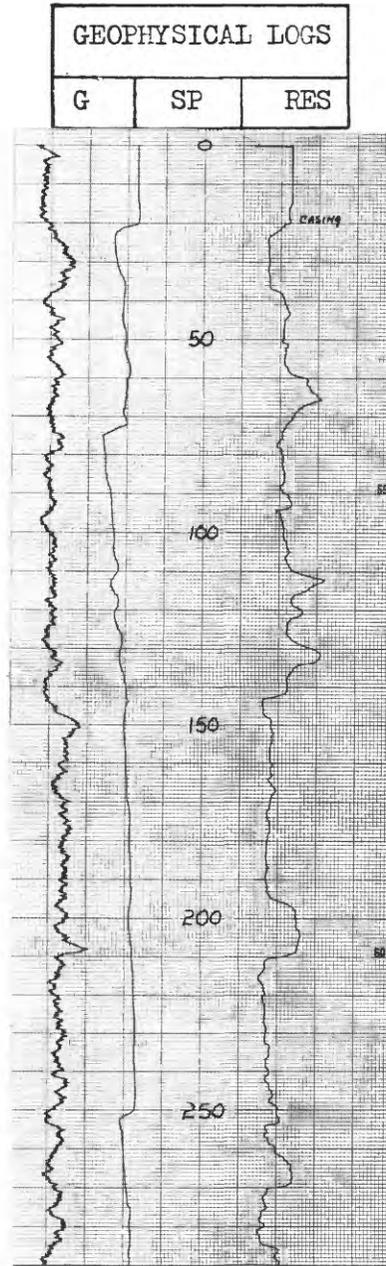
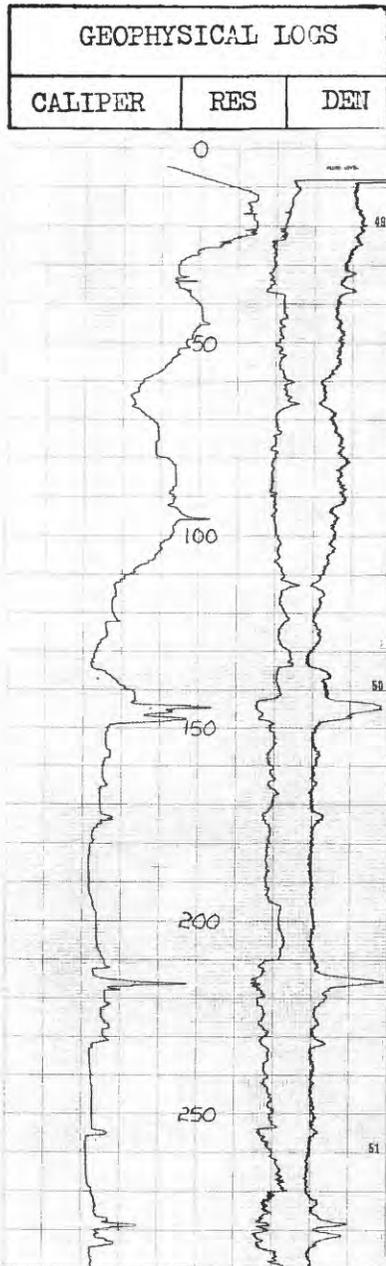
U.S. GEOLOGICAL SURVEY  
DRILL-HOLE LOG, YAMPA COAL FIELD

Hole No. CR-2 State Colorado County Moffat Date logged 6-17-78 Elev.(ft) 6420  
 Location: T. 7 N., R. 90 W., sec. 7 SE $\frac{1}{4}$ NW $\frac{1}{4}$  Cored:  Yes  No  
 Drilled depth 1043' Logged depth 898' Drilling medium Air Fluid level 8'

Geophysical logs:

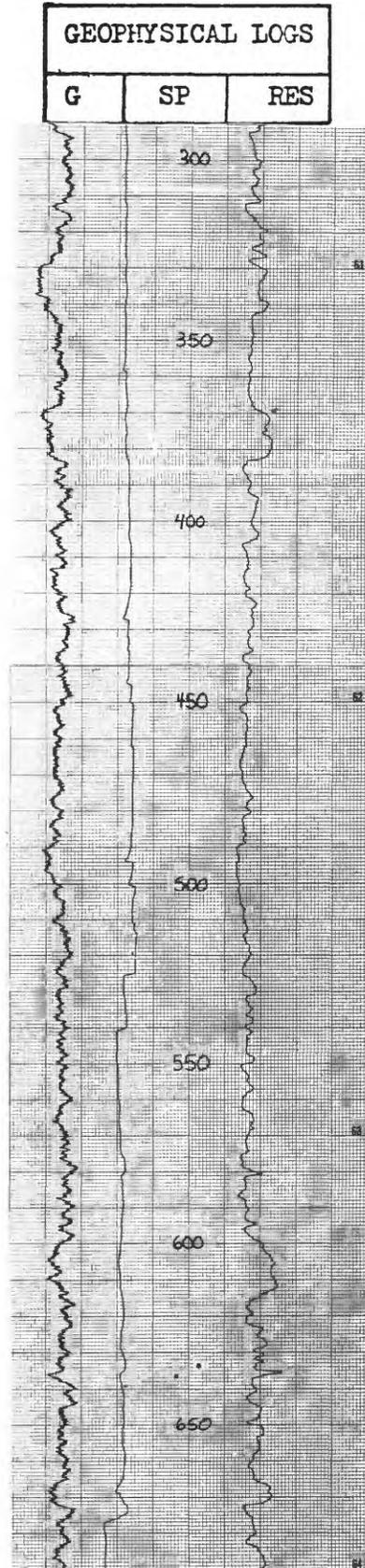
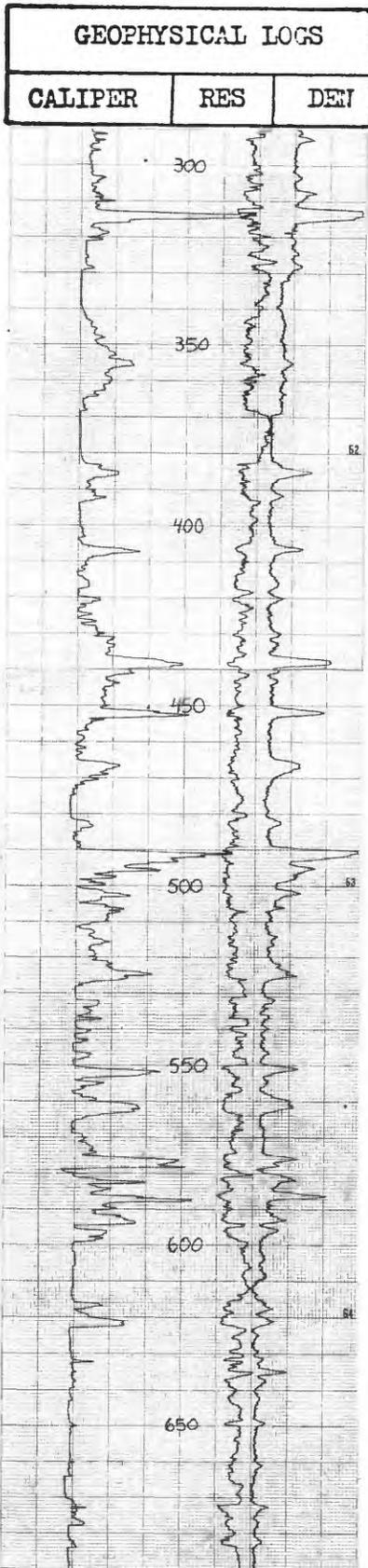
Spontaneous potential (SP): Scale 30 mv/in. Logging speed 20 fpm  
 Resistance (RES): Scale 10 ohms/in. Logging speed 20 fpm  
 Gamma (G): T.C. 2 Scale 10 cps./in. Logging speed 20 fpm  
 Density (DEN): T.C. 1 Scale 80 cps./in. Logging speed 10 fpm

Remarks: Caliper log run with Resistance and Density logs



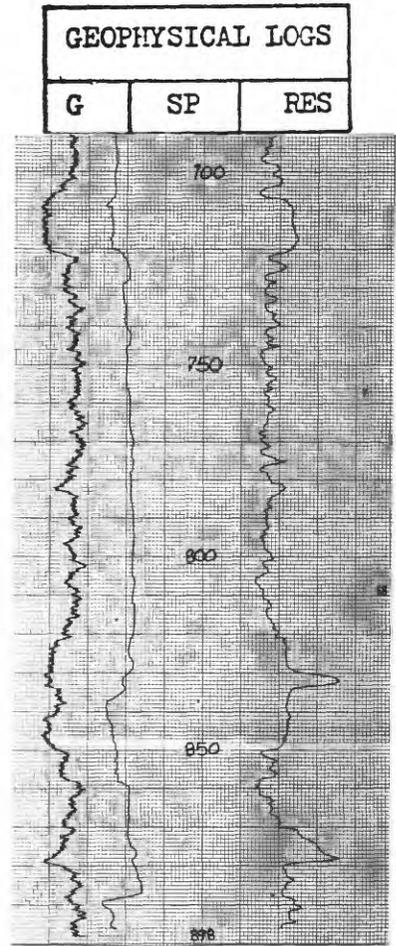
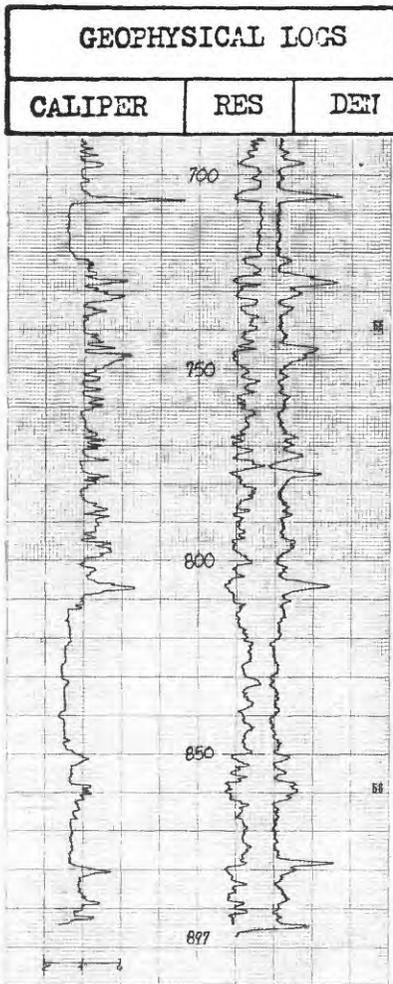
U.S. GEOLOGICAL SURVEY

Hole No. CR-2 continued



U.S. GEOLOGICAL SURVEY

Hole No. CR-2 continued



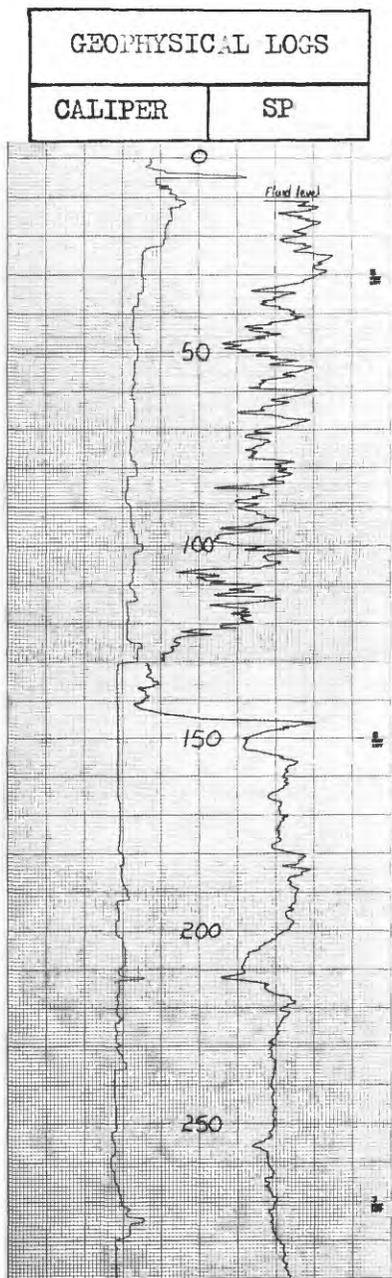
U.S. GEOLOGICAL SURVEY  
DRILL-HOLE LOG, YAMPA COAL FIELD

Hole No. CR-4 State Colorado County Moffat Date logged 6-26-78 Elev.(ft) 6690  
 Location: T. 7 N., R. 91 W., sec. 14 SE $\frac{1}{4}$ NW $\frac{1}{4}$  Cored:  Yes  No  
 Drilled depth 820' Logged depth 816' Drilling medium Air Fluid level 33'

Geophysical logs:

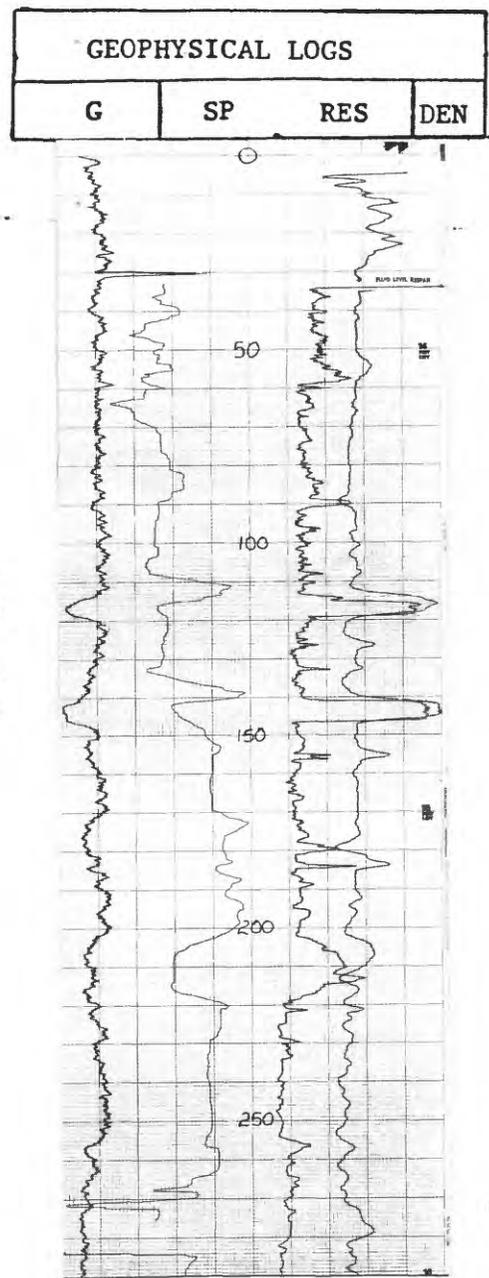
Spontaneous potential (SP): Scale 20 mv/in. Logging speed 20 fpm  
 Resistance (RES): Scale 10 ohms/in. Logging speed 20 fpm  
 Gamma (G): T.C. 2 Scale 20 cps./in. Logging speed 20 fpm  
 Density (DEN): T.C. 2 Scale 160 cps./in. Logging speed 20 fpm

Remarks: Caliper log run with SP log



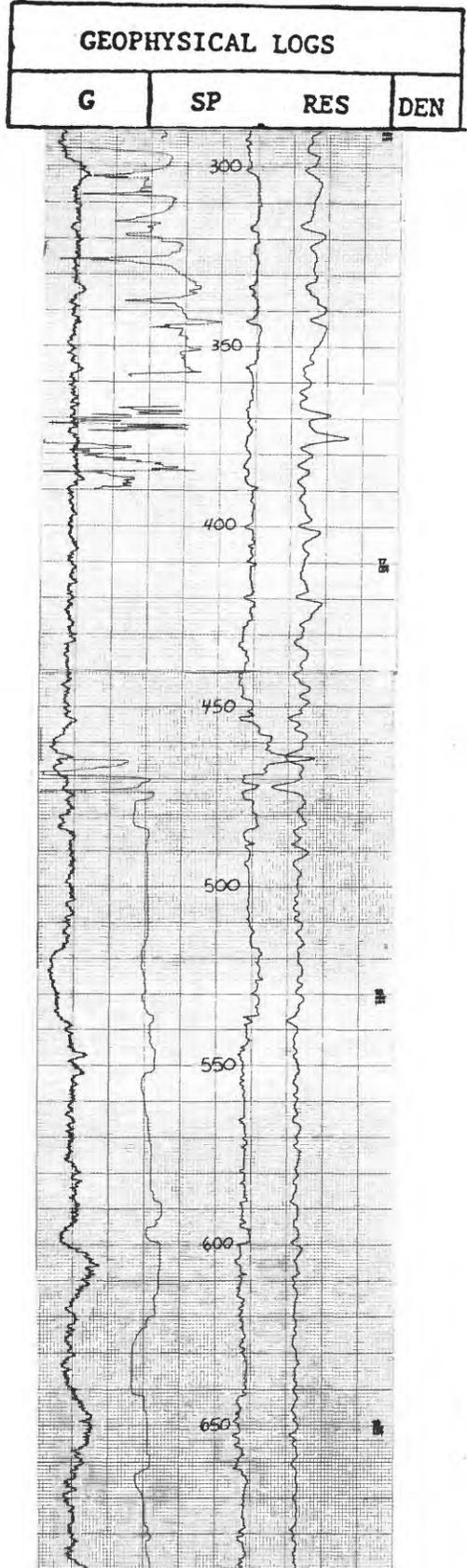
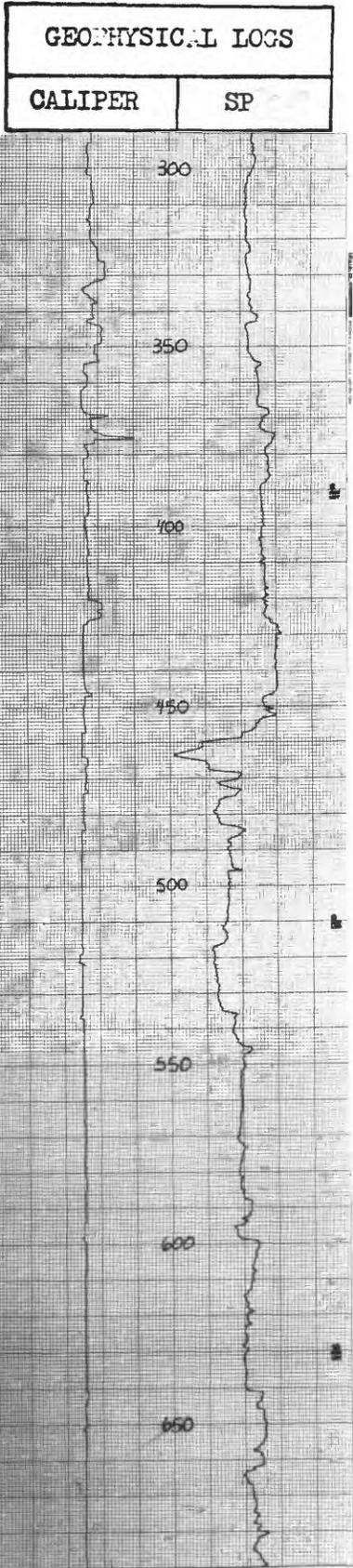
Coal from:  
115 to 119

Coal from:  
141 to 146



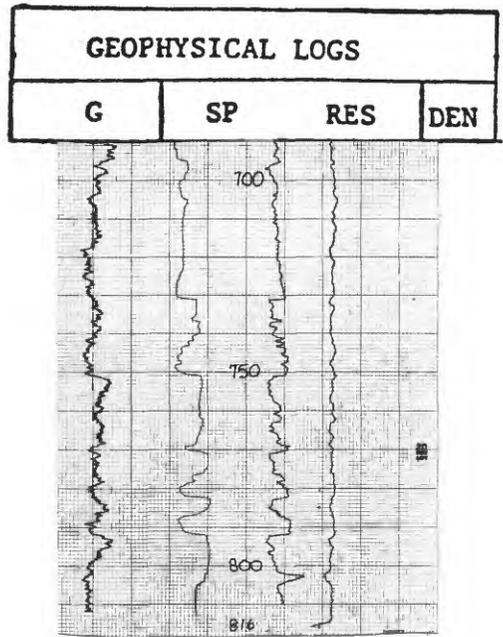
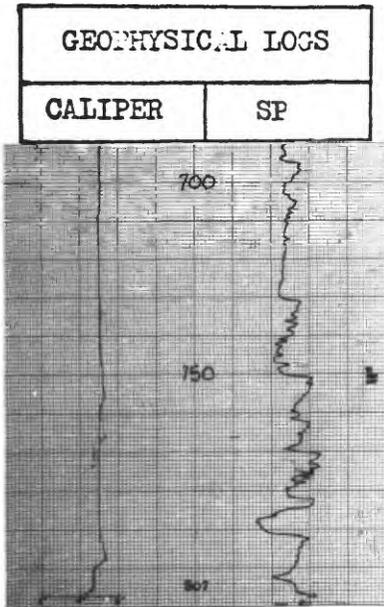
U.S. GEOLOGICAL SURVEY

Hole No. CR-4 continued



U.S. GEOLOGICAL SURVEY

Hole No. CR-4 continued

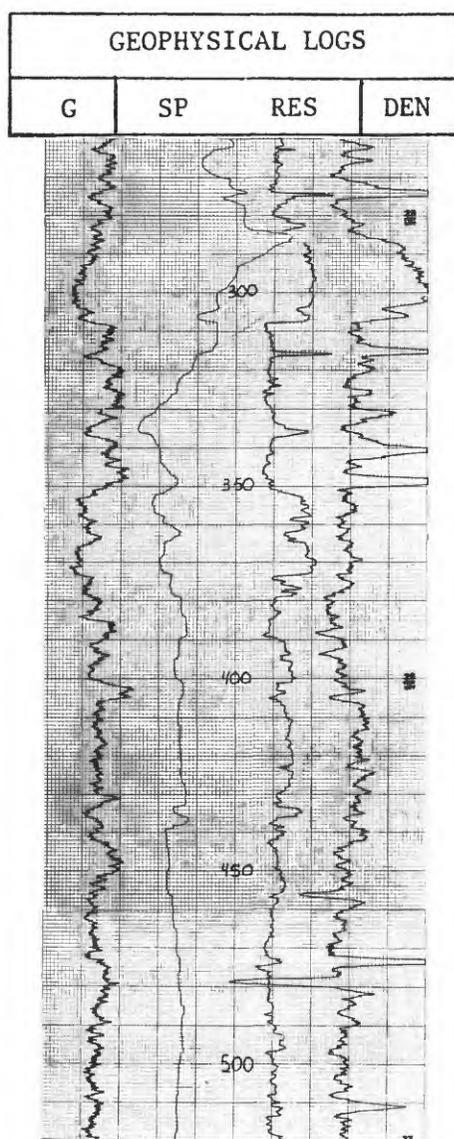
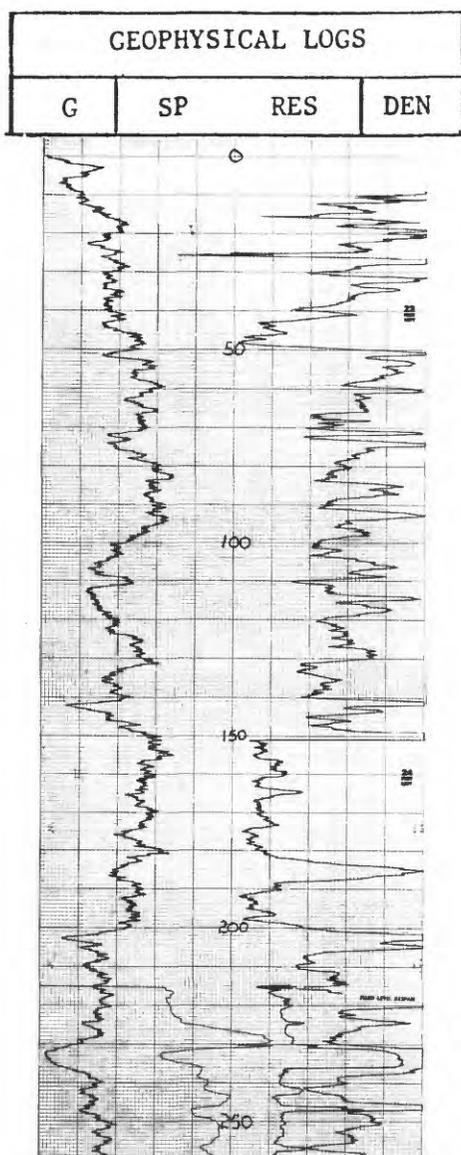


U.S. GEOLOGICAL SURVEY  
DRILL-HOLE LOG, YAMPA COAL FIELD

Hole No. CR-5 State Colorado County Moffat Date logged 6-25-78 Elev. (ft) 6625  
 Location: T. 7 N., R. 91 W., sec. 14 SE $\frac{1}{4}$ NE $\frac{1}{4}$  Cored:  Yes  No  
 Drilled depth 750' Logged depth 726' Drilling medium Air Fluid level 221'

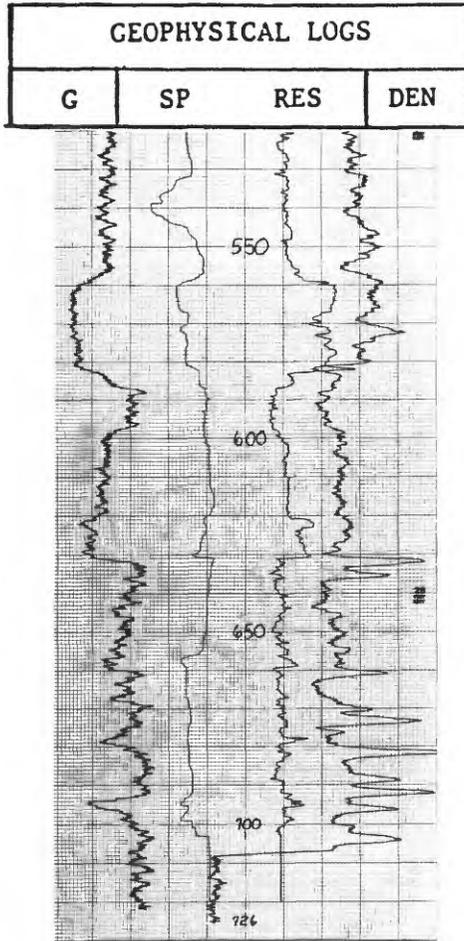
Geophysical logs:

Spontaneous potential (SP): Scale 30 mv/in. Logging speed 20 fpm  
 Resistance (RES): Scale 10 ohms/in. Logging speed 20 fpm  
 Gamma (G): T.C. 2 Scale 10 cps./in. Logging speed 20 fpm  
 Density (DEN): T.C. 1 Scale 10 cps./in. Logging speed 20 fpm  
 Remarks: SP reversed at 285' due to salinity



Coal from:  
231 to 236

U.S. GEOLOGICAL SURVEY  
Hole No. CR-5 Continued



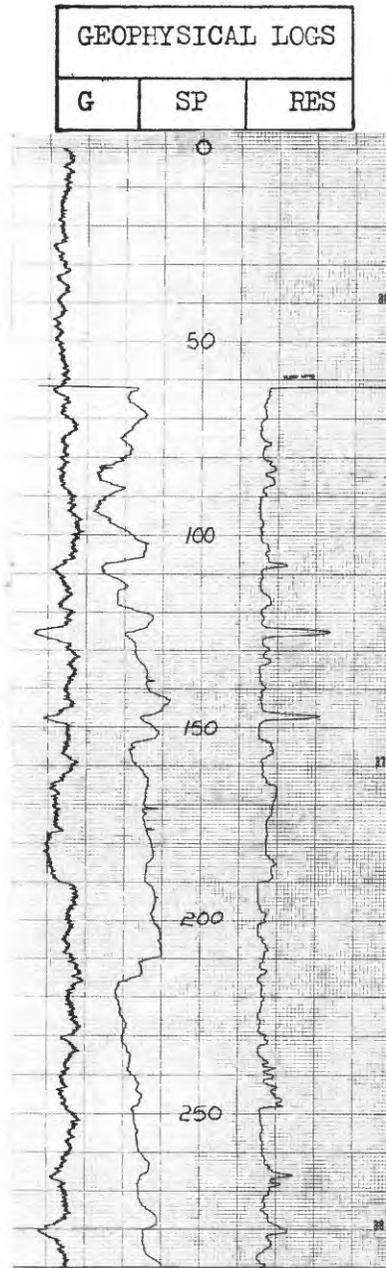
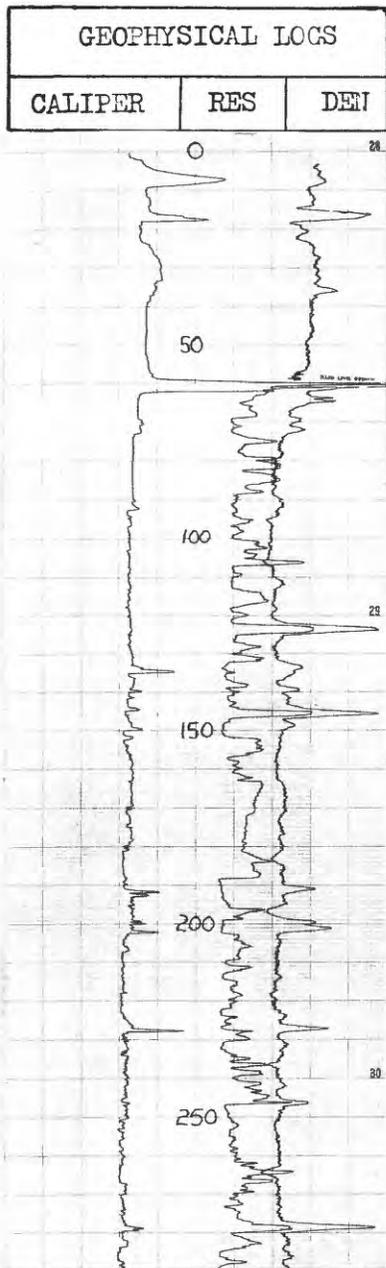
U.S. GEOLOGICAL SURVEY  
 DRILL-HOLE LOG, YAMPA COAL FIELD

Hole No. CR-6 State Colorado County Moffat Date logged 6-18-78 Elev.(ft) 6440  
 Location: T. 7 N., R. 90 W., sec. 18 CN<sup>1</sup>SS<sup>1</sup> Cored:  Yes  No  
 Drilled depth 1030' Logged depth 826' Drilling medium Air Fluid level 62'

Geophysical logs:

Spontaneous potential (SP): Scale 30 mv/in. Logging speed 20 fpm  
 Resistance (RES): Scale 10 ohms/in. Logging speed 20 fpm  
 Gamma (G): T.C. 2 Scale 10 cps./in. Logging speed 20 fpm  
 Density (DEN): T.C. 1 Scale 80 cps./in. Logging speed 10 fpm

Remarks: Caliper log run with Resistance and Density logs

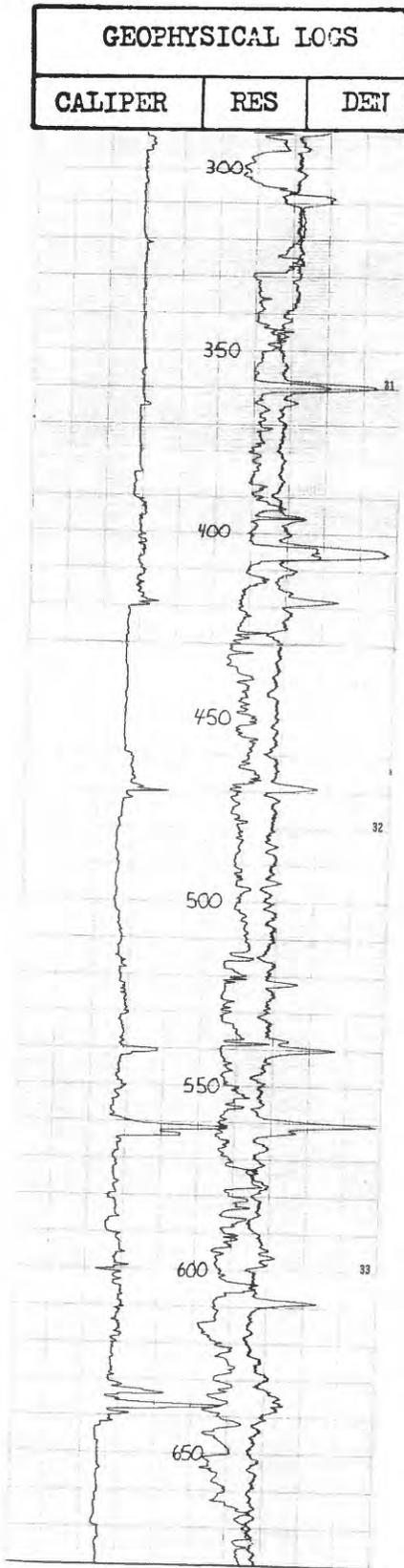


Coal from:  
122 to 125

Coal from:  
145 to 146.5

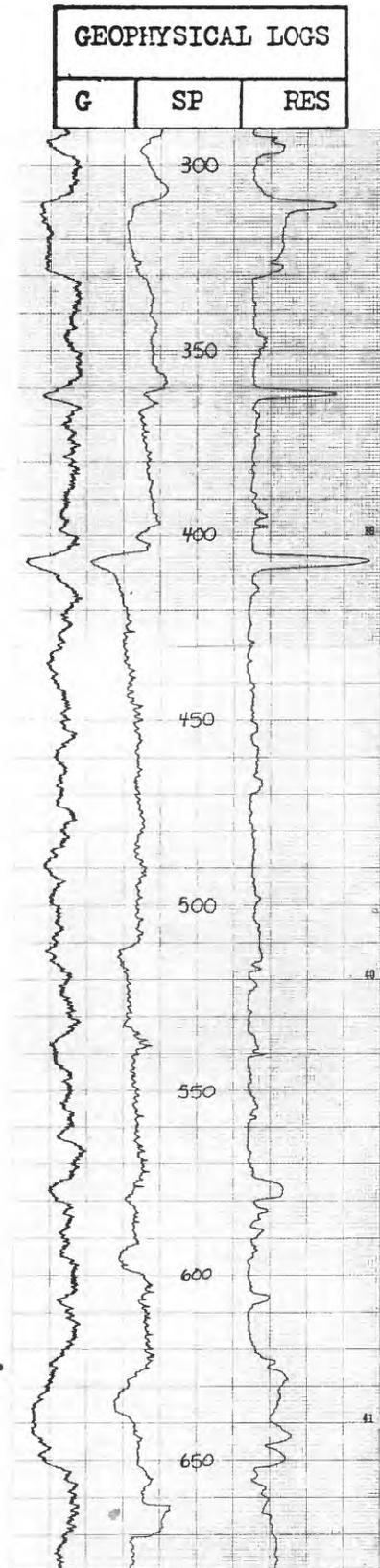
U.S. GEOLOGICAL SURVEY

Hole No. CR-6 continued



Coal from:  
360 to 362

Coal from:  
405 to 409



U.S. GEOLOGICAL SURVEY

Hole No. CR-6 continued

