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

By Michael E. Brownfield

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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

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.
Figure 1.-- Locations of drill holes in the Craig quadrangle, Moffat County, Colorado.
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^1_4 SE^1_2  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
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^2NW^2 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
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 6-26-76  Elev. (ft) 6690
Location: T. 7 N., R. 91 W., sec. 14 SE 1/4 NW 1/4  Cored: [ ] Yes  [X] 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 60 cps./in.  Logging speed 20 fpm

Remarks: Caliper log run with SP log.

Coal from:
- 115 to 119
- 141 to 146
U.S. GEOLOGICAL SURVEY

Hole No. CR-4 continued

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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  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  Logging speed 20 fpm
   Density (DEN):  T.C. 1  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

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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 CNJS-jr Cored:  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
Coal from: 360 to 362
Coal from: 405 to 409