# UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY 

GEOPHYSICAL LOGS OF TEST HOLES FROM THE HENRY MOUNTAINS COAL FIELD, GARFIELD AND WAYNE COUNTIES, SOUTHEASTERN UTAH

## By

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Open-file report 77-41
1977

This report has not been edited for conformity with Geological Survey editorial standards or Stratigraphic nomenclature

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Geophysical logs of test holes from the Henry Mountains coal field, Garfield and Wayne Counties, southeastern Utah

By Ben E. Law

## Introduction

Under Contract No. 14-08-0001-15098, awarded by the U.S. Geological Survey, the Hayden Farmer Company drilled and geophysically logged 28 test holes in the Henry Mountains coal field in Garfield and Wayne Counties, Utah (figure 1). The objectives of the project were to obtain information regarding thickness, distribution, and correlation of coal beds. Natural-gamma, density, caliper, logs, and spontaneous-potential, resistivity logs were made for most of the drill holes. Spontaneous-potential, resistivity logs are not available for drill-holes ME-1, ME-10, and ME-11. Geophysical logs were not made for drill-hole $\mathrm{MP}-3$. The drill-hole locations were selected by the U.S. Geological Survey. Drill-hole reclamation was performed according to the specifications of the U.S. Bureau of Land Management.

Drill-hole ground locations, surface elevations, and total depths are shown in table 1.


CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

Table 1.--Drill-hole locations, elevations, and drilling and logging depths
[A11 measurements are in feet; to convert to meters, multiply by 0.3048]

| $\begin{aligned} & \hline \text { Drill- } \\ & \text { hole } \\ & \text { No. } \\ & \hline \end{aligned}$ | Location | - | Surface elevation |  | Total depth drilled | Total <br> Depth <br> Logged |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

FB-1 $\mathrm{NW}^{1} 4 \mathrm{NE}_{4}^{\frac{1}{4}} \sec .25, \mathrm{~T} .27 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} .44,858168$
FB-2 NE $\frac{1}{4} \mathrm{SW}^{\frac{1}{4}} \mathrm{sec} .24$, T. $27 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 4,828 \mathrm{l} 140 \mathrm{l}$
FB-3 SE $\frac{1}{4} \mathrm{SE}_{\frac{1}{4}} \mathrm{sec} .3$, T. $27 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 4,806196$
FB-4 SE $\frac{1}{4}$ NE $\frac{1}{4} \sec .36$, T. 27 S., R. $9 \mathrm{E} \quad 4,745 \quad 120118$
FB-5 NW $\frac{1}{4}$ NE $\frac{1}{4} \mathrm{sec} .10$, T. 28 S., R. 9 E. 4,745420
FB-6 SE $\frac{1}{4} \mathrm{NW}^{\frac{1}{4}} \mathrm{sec} .30$, T. $28 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 4,59266156$
FB-7 SW $\frac{1}{4} \mathrm{SW}^{\frac{1}{4}} \mathrm{sec} .21$, T. 28 S., R. 9 E .40440
FB-8 SE $\frac{1}{4} \mathrm{NW}^{\frac{1}{4}} \mathrm{sec} .22$, T. $28 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} .4,506140$
FB-9 NW $\frac{1}{4} \mathrm{NW}^{\frac{1}{4}} \sec .32$, T. $29 \mathrm{~S} ., \mathrm{R} .10 \mathrm{E} .4,950140$
ME-1 NE $\frac{1}{4} \mathrm{NW}^{\frac{1}{4}}$ sec. 25, T. 31 S., R. 8 E. 5,608 162159
ME-2 SW $\frac{1}{4} \mathrm{SW}^{\frac{1}{4}} \sec .21$, T. 31 S., R. 9 E. 6,031 300
ME-3 NE $\frac{1}{4} \mathrm{NE}^{\frac{1}{4}} \mathrm{sec} .17$, T. 32 S., R. 9 E. 5,916 320
ME-4 $\mathrm{NE}_{\frac{1}{4}}^{\mathrm{SE}} \frac{1}{4} \mathrm{sec} .15$, T. $32 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 6,225180176$
ME-5 NE $\frac{1}{4} \mathrm{SE}_{\frac{1}{4}} \mathrm{sec} .23$, T. 32 S., R. 9 E. 6,760 240232
ME-6 $\mathrm{NW}^{\frac{1}{4}} \mathrm{SW}^{\frac{1}{4}} \sec .13$, T. 32 S., R. $9 \mathrm{E} . \quad 6,475 \quad 300298$
ME-7 NW $\frac{1}{4} \mathrm{NW}^{\frac{1}{4}} \mathrm{sec} .5$, T. $30 \mathrm{S}$. R. 10 E. 5,034 296
ME-8 SE $\frac{1}{4} \mathrm{SW}^{1} \frac{1}{4} \mathrm{sec} .8$, T. $30 \mathrm{~S} ., \mathrm{R} .10 \mathrm{E} . \quad 5,232376$
ME-10 SW $\frac{1}{4} \operatorname{SE} \frac{1}{4} \sec .10$, T. 31 S., R. $9 \mathrm{E} . \quad 6,1635003$
ME-11 SE $\frac{1}{4} \mathrm{SW}^{\frac{1}{4}} \sec .35$, T. 31 S., R. $9 \mathrm{E} . \quad 6,74366061$
ME-12 SE $\frac{1}{4} \mathrm{SE}^{\frac{1}{4}} \mathrm{sec} .18$, T. $31 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 5,845316$
ME-13 SW $\frac{1}{4} \operatorname{SE} \frac{1}{4} \sec .19$, T. 31 S., R. 9 E. 5,745 220
MP-1 NW $\frac{1}{4} \mathrm{SW}^{\frac{1}{4}} \mathrm{sec} .26, \mathrm{~T} .32 \mathrm{~S} ., \mathrm{R} .9 \mathrm{E} . \quad 6,870$ 1,034 1,034

Table 1.--Drill-hole locations, elevations, and drilling and logging depths--continued

| Drill- <br> hole <br> No. | Location | $\begin{gathered} \text { Surface } \\ \text { eleva- } \\ \text { tion } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { depth } \\ \text { drilled } \end{gathered}$ | Total depth logged |
| :---: | :---: | :---: | :---: | :---: |
| MP-2 | NW六SW $\frac{1}{4}$ sec. $33, \mathrm{~T} .32 \mathrm{S.}, \mathrm{R}$.9 E . | 6,718 | 1,100 | 1,098 |
| *MP-3 |  | 6,470 | 1,110 | ---- |
| MP-4 | SW ${ }^{\frac{1}{4} \text { NE } \frac{1}{4} \mathrm{sec} .26, ~ T . ~} 34 \mathrm{S}$. , R. 10 E . | 5,200 | 300 | 294 |
| MP-5 |  | 6,468 | 1,077 | 1,074 |
| N-2 | NE $\frac{1}{4} \mathrm{SW} \frac{1}{4}$ sec. $27, \mathrm{~T} .31 \mathrm{S}$. , R. 8 E . | 5,425 | 1,010 | 1,008 |
| WB-1 | SW $\mathrm{W}_{4}^{1} \mathrm{NE}^{\frac{1}{4}} \mathrm{sec} .3, \mathrm{~T} .33 \mathrm{S}$. , R. 8 E . | 6,262 | 1,120 | 1,118 |

* No geophysical log on this hole.

