located on map 087-19

J.W. Heinzman No. 4053 Well

Curtis District, Roane County, W.Va.

S.E. Ripley

By United Fuel Gas Company, Charleston, W.Va.

On Frozencamp Creek, 0.3 mi. S.E. of Antioch, 0.2 mi. E. of axis of Flat Fork Anticline.

4.25 mi. E. of 81° 35' and 2.4 mi. N. of 38° 45'-SE-Ripley Quadrangle.

Elevation 823 feet R. Starts about 43 feet above Washington coal horizon (780 foot contour).

This well, the deepest in the state, and the deepest in the world drilled with cable tools, gives a section from the lower part of the Dunkard group of the Permian to 239 feet below the top of the Trenton limestone. Samples of drill cuttings from 1155 to 9055 feet were examined, and the writer's detailed description and interpretation have been published[1]. Only the condensed

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1. R.C. Tucker, West Virginia Geological Survey, Deep Well Records, pp. 407-431, 1936.

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stratigraphic summary is repeated here and a tabulation of minerals observed in several of the formations is included.

Stratigraphic Summary of J.W. Heinzman No. 4053 Well Record

	Top	Bottom	Thickness
Permian and Pennsylvanian (part above 1155 not represented by samples)	0	1840	1840
Greenbrier limestone	1840	1948	108
Pocono formation	1948	2397	449
Devonian shales and sandstone	2397	5210	2813
Huntersville chert	5210	5380	170
Oriskany sandstone	5380	5458	78
Helderberg group	5458	5680	222

	Top	Bottom	Thickness
Salina formation	5680	6550	870
Clinton formation	6650	7040	490
White Medina formation ("Clinton sand of Ohio)	7040	7215	175
Red Medina formation or Queenston shale	7215	7720	505
Martinsburg shale	7720	8865	1145
Trenton limestone	8865	9104	239

Minerals in Huntersville chert, Oriskany, and Helderberg

J. W. Heinzman No. 4055 of United Fuel Gas Company

Curtis District, Roane County

Samples treated with dilute hydrochloric acid.

Depth below top of Huntersville chert	Heavy Minerals										Light Minerals					
	Pyrite	Sphalerite	Barite	Zircon	Rutile	Leucoxene	Tourmaline, brown	Tourmaline, green	Tourmaline, blue	Tourmaline, authigenic	Quartz, syn-gen.	Quartz, sand	Quartz, sec-ondary enlarge-ment	Chalcedony	Potash, feldspar	Glauconite
Huntersville chert Samples.																
40-50	VA	C	S	C	VS	C	S					C		VA		
50-60	C	C		S								C		VA		
60-70	S	C		S		S	S	S			S	A		VA	S	
70-80	C			S		S	S				S	C		VA	S	VS
80-90	C	S		C	VS	S	S				S	C		VA	S	VS
90-100	A	S		S			S				S	C		VA	S	VS
100-110	C	C	S	C		S	S					C		VA	S	VS
110-120	C	C		S		S	S					S		VA		
120-130	A		S	C		S	S	S				A		VA	S	S
130-140	C			S		S	S					C		VA	S	S
140-150	C			S	VS	S	S					A		VA	S	VS
150-160	S	VS										C		VA	S	
160-170	S	S		S		S	S					S		VA	VS	
Oriskany Samples.																
170-180	S		C	A		A	C	C	S	S		VA	S		S	
180-190				A	VS	A	C	C		C		VA	S		S	
190-200				A	VS	A	C	C	VS	S		VA	S	S	S	
200-210	V	S		A	VS	A	C	S		S		VA	A		S	VS
210-230				VA	S	A	C	S		S		VA			S	
230-240				VA		A	C	S		S		VA	S		S	
240-248	V	S	S	VA	VS	A	C	S	VS	S		VA	C	S	S	
Helderberg Samples.																
248-258	A	C		C		C	S					C		VA	S	
258-268	A	S		S	VS	S						S		VA		
268-280	VA	C		C			S					S		VA	VS	
280-290	VA													VA		
290-300	VA	VS		VS								C		A		
300-310	VA	C		C		C	S					A	S	A	S	
310-320	C	C		C		C	S					C	VS	VA	S	
320-330	C	A		A	S	A	C	S				A	VS	VA	C	
330-340	A	C		C	VS	C	C					A		VA	S	
340-350	C	C		C		A	C					C		VA	S	
350-360	VA	S		S		S	S					C		VA		
360-370	VA	S		S		S	S		VS			C		VA		
370-380	VA	C		C			S				S	VA		A		
380-390	VA	C		C		S	S	S				VA				
390-400	VA	C		C		S	S	S				VA			VS	
400-410	VA	S		S		S	S					A		A	S	
410-420	A	S		S			S					C		A		
420-430	VA	S		S			S				S	A		A	C	

Minerals in Salina, Clinton, and Medina Formations.

J. W. Heinsman No. 1 Well

Curtis District, Rosne County

Total depth, feet	Heavy Minerals									Light Minerals				
	Pyrite	Sphalerite	Barite	Zircon	Rutile	Leucoxene	Tourmaline, brown	Tourmaline, green	Tourmaline, blue	Tourmaline, authigenic	Quartz, sec.	Quartz, secondary enlargement	Chalcedony	Potash, feldspar	Glauconite
Salina Samples.															
6620-6630	C			A	VS	A	C	S	S		VA		S		
6630-6640				A		A	C	S	VS		VA		S		
6640-6650				A	VS	A	C				VA				
Clinton Samples.															
6550-6560				VA	S	A	C	S	VS		VA				
6560-6570				VA	S	A	C	S			VA				
White Medina Samples.															
7060-7060	VA			X		X	X				VA	C			
7070-7080	A			C	S	A	C	S	VS		VA	C			
7080-7090	C			C	S	A	C	S	VS		VA	C		VS	
7090-7100	A			C	S	A	C	S	S		VA	C		VS	
7100-7110	A			A	S	A	C	S	S		VA	C			
7110-7120	C			A	S	A	C	S	S		VA	C			
7120-7130	A			A	S	A	C				VA	C			
7130-7140	C			A	S	A	C	S	S		VA	A			
7205-7215	A			VA	S	A	C	S			VA	C			