Samples examined by Warren J. Souder

Virginia Division of

Mineral Resources

June 1965

Operator: New York Mining and Manufacturing Company Farm: Graham Well No: 1 (one) Location: Wise County 12,950 North of 36°55' approximate 1,550 West of 82°40' Elevation: 2136' Total Depth: 6057' (Samples); 6070' (corrected driller's measurement) Commenced: December 1950 Completed: December 1951 Result: Dry and Abandoned Structural Feature Drilled On: Buck Knob Anticline

## Formation Tops

Samples are available from 25' to total depth 6057' (samples)

## Formation

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<u>Depth</u>

Pennsylvanian Wise formation

(The surface formation at the well site is that of the Pennsylvanian Wise formation, according to the Virginia Geological Survey map. (Hessin states, "Our spudding point was just below the Norton Coal seam ....")

2103'

Base of Pennsylvanian Lee sandstone and top of Mississippian Bluestone formation

(V.G.S. Bull. 52, p. 403; V.G.S. Bull. 1027L, p. 539, states, "The base of the Pennsylvanian system ... has been drawn at the base of the first massive sand-stone above the red shales.")

2596'

Mississippian Princeton sandstone

(V.G.S. Bull. 52, p. 401, states, "The Princeton conglomerate lies between the Pennington formation below and the Bluestone formation above and forms the only recognizable horizon between them." Drillers top is 2596').

2725'

Mississippian Pennington formation

28561

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Mississippian Pennington formation, Stony Gap sandstone member

(V.G.S. Bull. 52, p. 399, states, "The Stony Gap sandstone is persistent as the basal member of the Pennington ... " V.G.S. Bull. 1027L, p. 543, states, "... a thick sandstone that is approximately in the proper stratigraphic position is identified as the Stony Gap sandstone member." 3037'-3075' is probably a sandstone belonging to the Stony Gap. V.G.S. Bull. 1027L, p. 543, states, "... it is possible to include one or more sandstones in the Stony Gap sandstone ....")

3075'

## Mississippian Bluefield formation

(V.G.S. Bull. 1027L, p. 544, states, "The Bluefield formation ... are correlated on the basis of position between the Stony Gap sandstone ... and the Greenbrier limestone")

3301'

3684'

3829'

Mississippian Greenbrier limestone

(V.G.S. Bull. 1027L, p. 544, states, "The top of the Greenbrier limestone is placed at the top of the massive limestone".)

Mississippian Greenbrier limestone, Taggard limestone member

(V.G.S. Bull. 1027L, p. 545, states, "Red limestone and shale... have been called the Taggard limestone ...." This unit has red limestone.)

Mississippian Greenbrier limestone Hillsdale limestone member

(V.G.S. Bull. 60, p.158-159, states, "The Hillsdale limestone is composed of nearly black, medium-grained cherty beds." and, "The Hillsdale appears to correspond exactly to the unit called the St. Louis limestone by Butts in southwestern Virginia." This limestone is black and cherty).

3865

## Mississippian Price sandstone

(The Little Valley limestone or Maccrady shale appears to be absent in this well. V.G.S. Bull. 1027L, p. 546, states, "According to present definition, the Maccrady shale is identified by the presence of red beds." Although there is a show of "red" color the sandstones suggest the Price sandstone rather than either the Little Valley limestone or the Maccrady shale."

4855'	Mississippian Price sandstone coal member	
	(V.G.S. Bull. 1027L, p. 546-547, states, " The Price sandstone with thin beds of coal near the middle." and, "Coal is unusual in the lower part of the Price sandstone but coal is more unlikely in the Upper Devonian.")	
4965'	Devonian ?	
	(V.G.S. 1027L, p. 547, states, "the contact between the Price sandstone and the Upper Devonian was selected at the first change in lithology below the coal." (in the Price sandstone). These directions are followed here. Fossil evidence should be used for the separation.)	
5544'	Devonian Middle shale ?	
	(Having the stratigraphic position above the Huntersville chert and being distinctive in color, (black) slickensidedness, and lumpy due to fractures, the unit appears to be mappable. Although thinner, the same unit appears at Early Grove, Scott County. V. G. S. Bull. 24, p. 40-43. There is described 35' of fissile black shale above chert).	
5603'	Devonian Huntersville Chert	
	(V.G.S. Bull. 60, p. 132, states, "The Huntersville is composed of white, buff-gray and black-stained chert, glauconitic siltstone and greenish-gray siliceous shale." and "averages about 50 feet." (in thickness.) The formation is recognizable by the chert, glauconitic silts and sandstones, stratigraphic position and general thickness.)	
5644' ?	Silurian Cayuga dolomite	
	(V.G.S. Bull. 1027L, p. 550, states, "The name Cayuga dolomite is ised for Silurian rocks because this term indicates less-precise correlation" The usuage and name is employed here for the same reason.	
6035'	Silurian Clinton formation ?	
	(The top of the Clinton and/or the Clinton's presence is based entirely on finding the reddish colored shales.)	

6057' T. D. samples

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Gas shows: Reported by Hessin in his drilling reports and completion report

Footage	<u>Amount of Gas</u>	Formation and Comments
642' 690' 1407' 1541' 2618'-2623' 3692	Not Gauged """ 15,000 Cu.ft. per day 6,000 """" 1,000 """"	Silty shale and coal Sandy shale Sandstone Sandstone, Lee Formation Sandstone, Princeton sandstone Limestone, Taggard limestone
3944'-3952' 4347'-4365'	18,000 " " " " 9,000 " " " "	member Sandstone, Price sandstone Shale, Price sandstone

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Note: In the VDMR files there are two reports on this well, both by Mr. Thomas D. Hessin.

- Daily drilling record
  Completion record

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