

III BASIN DESCRIPTION

A. Location, Area and Drainage

The headwaters of Blacklegs Creek originate near Parkwood in Indiana County approximately eight (8) miles west of Indiana, Pennsylvania. The main stream continues in a southwesterly direction for fifteen (15) miles where it discharges into the Kiskiminetas River at the Village of North Saltsburg. At Saltsburg, Pennsylvania, the Conemaugh River and Loyalhanna Creek join together and form the Kiskiminetas River that flows north and receives Blacklegs Creek approximately 1.1 miles from that confluence. The Kiskiminetas River then flows northwest for twenty-five (25) miles and empties into the Allegheny River near Freeport, Pennsylvania.

The percentage of the drainage basin that lies within the confines of Indiana County is 88%. The headwaters of Big Run and Whisky Run, which is 12% of the total drainage basin, lies in Armstrong County. The entire drainage basin is forty-five (45) square miles in area.

The principal tributaries of Blacklegs Creek that enter directly into the main stream as it flows southwest are: Whisky Run, Hooper Run, Unnamed Run, Nesbit Run, Harpers Run, Marshall Run and Big Run.

Table 1 on the following page lists the information relating to each of the major tributaries: (1) total areas, (2) main stream length (excluding tributaries), (3) total stream length including all tributaries, and (4) total miles of stream length affected by mine drainage.

TABLE I
Area and Stream Length
Major Watersheds
Blacklegs Creek Drainage Basin

<u>Major Tributary</u>	<u>Total Area Square Miles</u>	<u>Main Stream Length (Miles)</u>	<u>Total Stream Length</u>	<u>Miles of Stream Polluted By Mine Drainage</u>
1. Upper Blacklegs	8.6	7.6	21.6	2
2. Whisky Run	5.1	4.3	9.8	5.9
3. Hooper Run	3.4	4.1	7.5	0
4. Unnamed Run	2.5	2.5	6.8	0
5. Nesbit Run	1.9	3.2	3.7	0
6. Harpers Run	2.5	3.6	5.0	0
7. Marshall Run	4.0	3.4	8.9	0
8. Big Run	8.7	7.1	21.3	3.8
9. Lower Blacklegs	8.6	7.4	22.5	4.4
Total	45.3	43.2	107.1	16.1

(See Analysis of Individual Watersheds for more specific information relating to each of the above watersheds.)

The basin is somewhat square in shape with Blacklegs Creek flowing generally near the southeastern perimeter of the basin; and consequently, the bulk of the tributaries and the watershed area lies to the north of the main stream.

B. Stream Condition

Certain waters within the Blacklegs Creek Watershed are continuously degraded by mine drainage pollution. The polluted waters are shown as acid streams on Plate I,
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The acid streams are classified as severely acid (178 mg/L or greater) and moderately acid (13 - 178 mg/L).

The waters classified as severely acid are: a 1.3 mile sector of Big Run ending approximately a mile from its confluence with Blacklegs Creek, and .3 of a mile off an unnamed tributary to Whisky Run at the site of the abandoned Iselin #5 Mine.

Moderately acid waters are: two tributaries and a mile of main stream on Big Run; six tributaries and two miles of main stream on Whisky Run.

The bulk of mine drainage entering Blacklegs is concentrated in the northwestern portion of the watershed, south of Elders Ridge and West Lebanon, respectively, where most of the mining activity has been centered over the years.

Stream conditions of the major watersheds within the Blacklegs Creek Basin are defined in detail in the Analysis of Individual Watersheds section of this report.

IV THE GEOLOGICAL STRUCTURE OF THE BLACKLEGS CREEK WATERSHED

A. General

The geological structure of the Blacklegs Creek Watershed is one of extreme simplicity. (See following page for structure and geology map.) Briefly stated, it consists of two anticlinal and one synclinal folds of the strata, or broad rock waves, the crest lines of which run nearly parallel to each other across the map in a northeast-southwest direction. The three strong geologic features are named from localities where they are strongly developed or from places near which they pass. The first of these (talking them in the order in which they occur from east to west) is the Jacksonville anticline, which passes near Jacksonville (Kent Post Office). The next is the Elders Ridge syncline, which brings the Pittsburgh coal down so that it lies in the hills under several square miles of this territory. The Roaring Run anticline parallels this syncline on the west for short distance, but is broken up near the Village of Idaho.

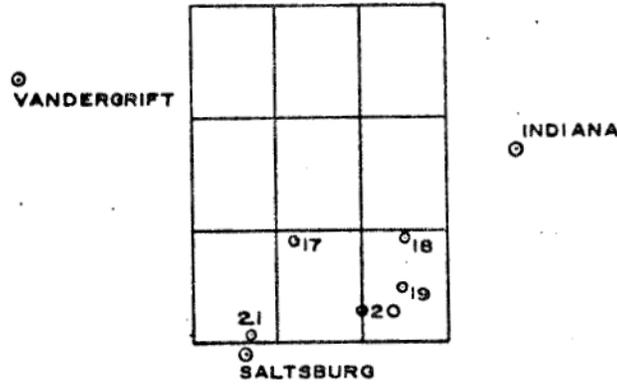
These folds and basins in rock structure are represented on the structure and economic geology map by contour lines using the floor of the Upper Freeport coal, as datum. This coal, which is used as a reference horizon, outcrops for number of miles on Aultman's Run and in the region north of Jacksonville. Besides representing the depth of the reference stratum below the surface or its elevation above sea level, the contour lines show with some degree of accuracy the relation of the various mine slopes to one another and the approximate grade of the mining operations.

Northeast from the Kiskiminetas River the width of the Saltsburg subbasin is steadily diminished by the convergence of the anticlinal sides, thus giving to the trough in this latitude a width of nearly nine (9) miles. From this it can be seen that the Elders Ridge synclinal forms a canoe shaped basin.

Moreover the bed has been so frequently opened up in this basin that allusion here can only be made to how many openings existed. The deep ravines dividing, this coal area in separate belts furnish long lines of outcrop, by means of which practically all the coal in the basin has been mined by either deep or surface mining methods.

WELL SECTIONS

DIAGRAM SHOWING LOCATION OF DEEP WELLS IN THE ELDERS RIDGE QUADRANGLE AND VICINITY



No. 17
Smith Bros.
Near Elders Ridge

No. 21
Sheet Steel Mill
Mouth of
Blacklegs

SECTIONS OF DEEP WELLS IN THE ELDERS RIDGE QUADRANGLE AND VICINITY

SCALE: 1" = 400'

