

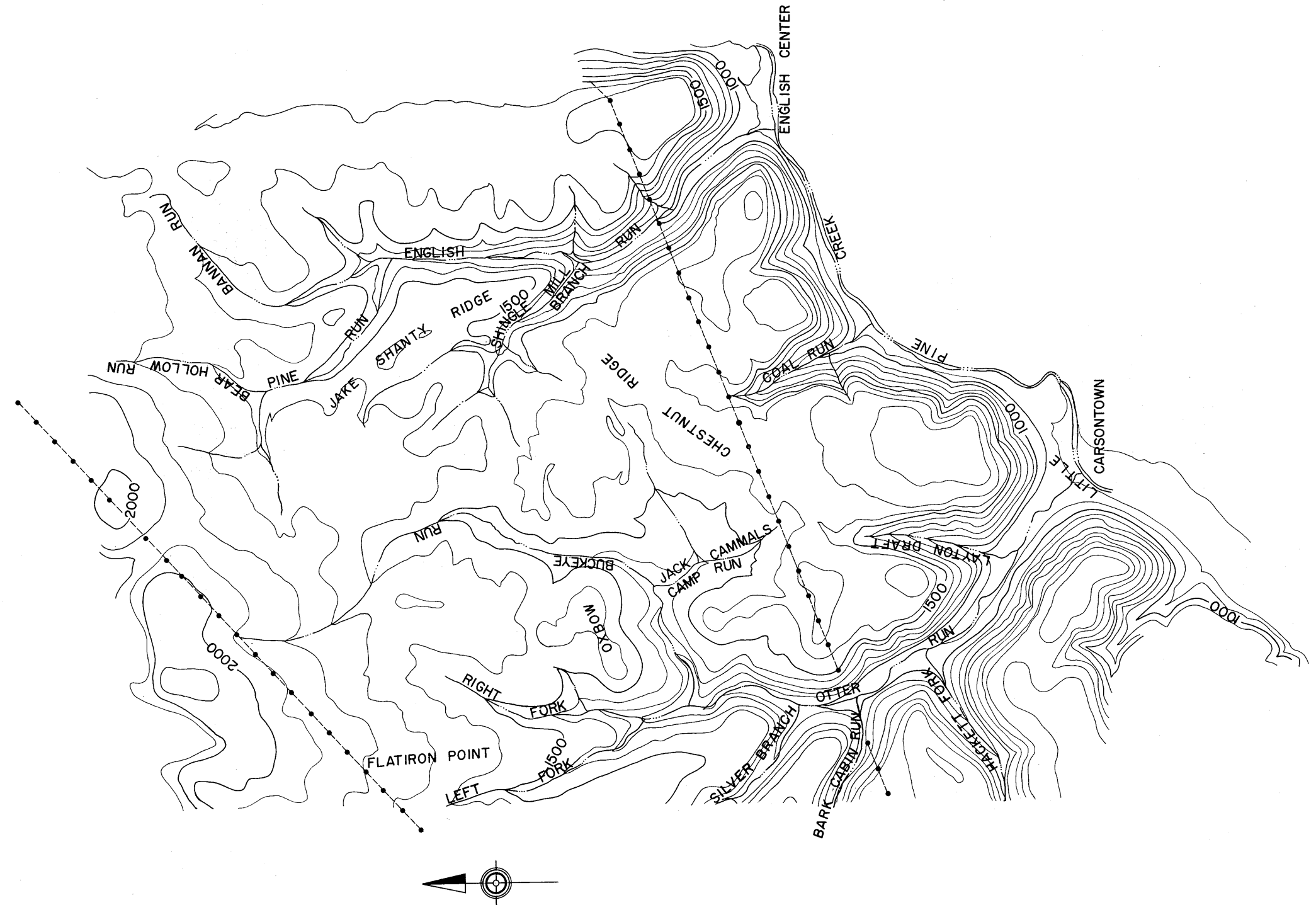
## Topographic Description of Project SL-160 Area

The project area's southern most point is north latitude  $41^{\circ}23'42''$  while the northern boundary runs approximately along north latitude  $41^{\circ}30'00''$ . The eastern demarcation is west longitude  $77^{\circ}17'17''$  moving laterally to a westward longitudinal extreme of  $77^{\circ}25'14''$ . The aforementioned surface identification does not necessarily define the included area as a regular geometric shape, but rather indicates the limits of a somewhat irregularly shaped land surface. (See Map Number 2, Page 8)

The most salient feature of the study area lies in the variety of its topography. This variety can best be understood by noting that the lower extreme of the area is a fairly level valley stream that empties into a recreational dam reservoir, while the upper portion of the study watershed consists of mountainous terrain that serves as a popular winter skiing resort.

Two large streams, English Run to the east and Otter Run to the west, drop rapidly from the upper part of the watershed to spill into Little Pine Creek at the base of the project area. In addition, one smaller stream - Coal Run, drains from the area into Little Pine Creek at a location that is almost midway between the mouths of English Run and Otter Run. Thus, these three streams function as the major channels of surface water run-off for the entire 32,017 acre\* watershed. Numerous smaller streams flow from the many surrounding mountains into both Otter and English Runs, serving as collectors of surface waters within the watershed. On the English Run watershed, consisting of 12,777 acres, \* there are approximately ten small natural streams that feed into the main stream, although only four - Bannan Run, Bear Hollow Run, Pine Run, and Shingle Mill Branch, have been accorded a name. The larger Otter Run watershed, 19,340 acres, \* has approximately six tributaries of its own. Besides Buckeye Run, tributaries to Otter Run are as follows: Layton Draft, Hackett Fork, Bark Cabin Run, Silver Branch, Left Fork and Right Fork.

\* USDA Soil Conservation Service Estimate



COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL RESOURCES

**ENGLISH RUN  
 MINE DRAINAGE STUDY**

**MAP NO. 3 - TOPOGRAPHY**

SCALE 1" = 4 000'	PREPARED BY ENGLISH ENGINEERING CORP. WILLIAMSPORT, PENNSYLVANIA
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The entire project area consists of mountainous terrain interspersed with valleys created by the aforementioned streams. These lands are therefore truly representative of the Northern Plateau Province of the Appalachian Highlands in which they are located. Several of the more prominent ridges are: Chestnut Ridge, Flatiron Pt., Jake Shanty Ridge, and Oxbow Ridge. The three mountains that lie north of and adjacent to Little Pine Creek vary in elevation from 1767 feet to 1853 feet above mean sea level. These mountains, serving as a land barrier along the southern boundary of the watershed, are the highest to be found throughout the project area until the mountains along the northern edge of the watershed are encountered. This group of mountains, varying in mean elevation from 2000 feet to 2146 feet, forms the natural divide between waters flowing south into the project watershed and those drawing north away from the project area.

Roadways within or immediately outside the project watershed are under the supervision of the Pennsylvania Department of Transportation, Bureau of Forestry, Game Commission, affected Townships, and private owners. The inventory of such roads indicates that there are approximately twenty-five miles of negotiable roads available to those persons desiring access to the watershed. In addition, numerous lumber, mining, and gameland trails are interspersed throughout the region, affording easy access to those persons with off-highway vehicles.

Power Line R/O/W There are two major electric power transmission lines crossing the watersheds of English and Otter Runs. The rights of way for these power lines are cleared of trees to a width of 150 feet (the measured R/O/W width). The first constructed line (pre 1964) crosses the southern portion of the two watersheds and intersects township and other roads at four points. This line follows a more or less natural divide across the project area, with water draining from it both to the north and to the south.

The most recently constructed (post 1964) electric transmission line crosses the northern section of the twin watersheds and intersects Game Commission and other roads at three or more points. The location of this power line is such that drainage from it flows entirely

to the south into either the Otter Run or the English Run watershed.

Lumbering The project area, like most of the timberlands in Lycoming County, has been the scene of extensive lumber operations during the past century. English Center, once the center of a thriving lumber industry, had at one time, its own tannery, numerous sawmills, lumber yards, and all of the ancillary trades that are to be found in a thriving lumber town. Those logs that couldn't be handled locally were hauled to the West Branch of the Susquehanna River and placed in the log boom that stretched along the river for more than 20 miles above Williamsport - The then Lumber Capitol of the world. White pine spars, serving as masts for the famous four-master sailing ships of the Yankee Traders of the 1880's and 90's, came almost exclusively from Williamsport by way of the surrounding forests that supplied the needed raw timber. Thus, the remaining timber in the English Center vicinity is mostly third growth, mixed with occasional fourth stand. Some commercial pulp and chip timber operations continue at present in the northeastern corner of the study area, which is the only timber cutting currently in existence on the watersheds, except for selective and browse cutting by the Game Commission and timber removal by mining operations, prior to stripping for coal.

Mining The coal measures of the Little Pine Creek Coal Field have been mined sporadically by shallow drift mining techniques for more than a century. As many as thirty production or exploration drifts have been located throughout the study watersheds. These entryways into the coal measures on state warrants 1519, 1631, 1632, 1634, 4354, 4355, 4358, 4359, 4360, and 4361 represent early attempts to tap the extensive local coal reserves of the area. More recent stripmining operations have left larger scars on the surface of warrants 1519, 1632, 4359, and 4360. Since most of the surface mining took place in the 1950's and 1960's prior to the passage of the Clean Stream and Surface Mining Statutes, the existence of steep unplanted areas of backfill and/or spoil is common place. The results of these unregulated above and below ground attempts to remove the several coal seams in the watershed are

the major source of stream pollution and siltation in the area studied under contract SL-160.