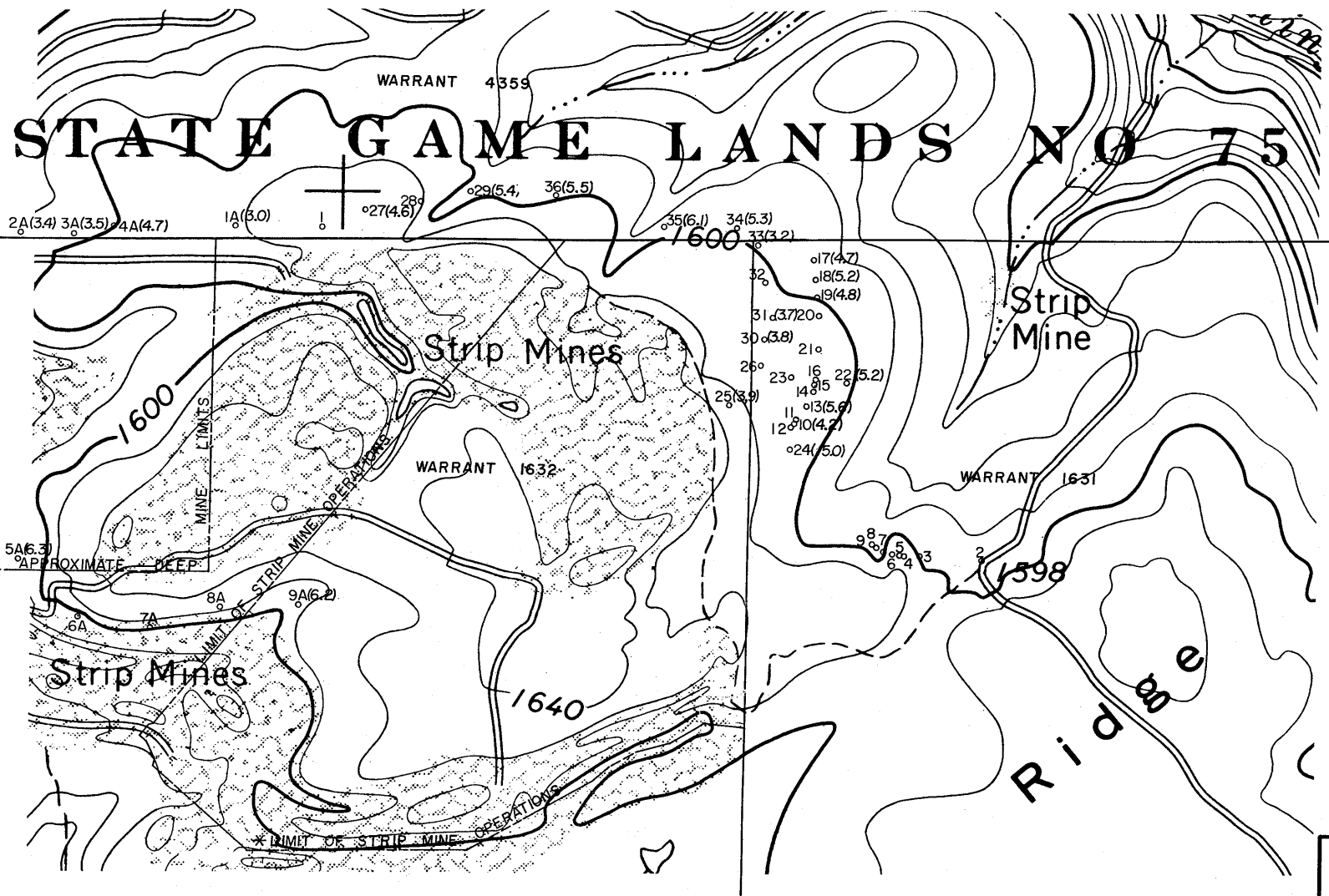
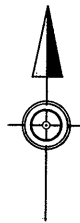


Prospect Drilling on State Game Lands No. 75

In cooperation with a local strip-mine operator, a drilling program was carried out in an attempt to determine certain essential factors relating to the present condition of coals underlying state warrants 1631, 1632, and 4359. Several areas within these warrants have been deep mined for specific coal seams; however, the almost complete absence of mine maps and related information concerning these operations made it imperative to utilize some alternative method to obtain the desired data. A truck-mounted air-rotary drill (8" -diam.), used by a regional mine operator for drilling overburden, was employed in the program whenever it could be spared from its normal production drilling. Although no cores were obtained, accurate drilling logs were forthcoming on the basis of penetration rates, drill cuttings, and general geological knowledge of the prospected area. (see Appendix C) From these drill logs has come the following:

1. The elevations for the various local coals.
2. The nature and extent of these coals and their partings.
3. The coal-bed-to-coal-bed sequence of the strata associated with the coals.
4. The general outline of specified underground mine workings.
5. The dip and strike of the several coal beds encountered.
6. The ground water table elevations for specific points in time.
7. The existence of water table pressures equal to those exerted by the drill.



HOLE	WATER ELEV.	DATE
1A	1539.84'	7-28-71
2A	1502.48	7-28-71
3A	1502.77	7-28-71
4A	1502.44	7-28-71
5A	1542.61	7-29-71

HOLE	WATER ELEV.	DATE
10	1551.79'	6-10-71
	1558.29	6-17-71
13	1541.44	6-10-71
	1543.44	6-17-71
17	1563.66	6-21-71
18	1564.86	6-21-71
19	1565.10	6-21-71
22	1537.69	6-21-71
24	1553.85	6-17-71
25	1561.19	6-21-71
27	1578.80	6-24-71
29	1591.69	6-24-71
30	1532.54	6-23-71
31	1565.24	6-23-71
33	1512.71	6-24-71
34	1548.65	6-24-71
35	1555.37	6-24-71

* PERMIT APR. NO. 4770BSMIO

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES

**ENGLISH RUN
 MINE DRAINAGE STUDY**

**MAP NO.9-PROSPECT DRILL HOLES
 & STRIPMINE PERMIT AREA**

SCALE 1" = 800'	PREPARED BY ENGLISH ENGINEERING CORP. WILLIAMSPORT, PENNSYLVANIA
OCT. 1971	

In addition, water samples were taken from many of the holes and analyzed in the same fashion as were the stream, mine outfall, and surface run-off samples. The pH values of these samples as well as the elevation of the ground water from which they were taken is shown on Map No. 9, Page 61.

One of the primary reasons for probing the earth along the boundaries of the specific warrants involved (1631, 1632, 4359) was to determine the feasibility of integrating certain portions of abandoned deep-mine workings into a strip-mining program under consideration on warrant 1632. The mineral rights in the area of abandoned workings (1631) being held by the Game Commission, and the mineral rights in the area of proposed stripping (1632) under lease to a mining concern. The waters draining from the drift mouths in the northwest corner of warrant 1631 (see Map - Area No. 1, Page 67, Appendix A) present a problem of acid mine drainage similar to that discussed earlier (page 37) concerning the Thomas Mine. That is, abandoned shallow cover drift mines serving as natural drainage courses for surface mining spoil areas. The E-coal (nearest to the surface) has been removed from the area of warrant 1632 adjacent to warrant 1631, thereby setting up a remarkably similar set of physical conditions to those encountered at the Thomas Mine on Buckeye Run. In the present instance however it is hoped that all vestiges of former drift mines may be removed at the time of stripping for deeper coal seams and the entire area

made a part of a successful reclamation program.